

**STATEMENT OF WORK
(SOW)
CONFERENCE ROOM RENOVATION PROJECT**

1. INTRODUCTION

On the request of the Management Section, the United States Embassy in Santo Domingo has been directed to procure the construction services for the renovation of a Conference Room.

- 1.1 The work consists of, but is not limited to, the following: consolidating three (3) conference rooms into one medium size Conference Room. The contractor has to follow the layout and specifications provided. The demolition work consists of existing sheetrock walls and dismantling the granite counter top, cabinets, soundproof panels, wooden wall base and rubber baseboards that must be carefully removed for reuse. The contractor must proceed to repair all walls affected by the demolition. One of the three doors will be removed and closed with drywall fire rated partitions and plywood (5/8" thick). Including renovation of lighting and electrical system, HVAC registries ceiling tiles, carpet tiles, complete painting of the area and final cleaning.
- 1.2 The Contractor shall complete all work, including furnishing all labor and materials required under this contract for renovation of the Conference Room. The price offered shall include all labor, materials, overhead (including cost of Workers' Compensation and Liability Insurance, which shall not be a direct reimbursement) and profit. The contractor shall provide all materials to be used in this project, with the exception of the ceiling tiles, rubber baseboards, carpet tiles and its glue and sound proof panels. All materials purchased for this project need to be previously inspected before arrival. The Contractor is responsible to provide the transport, tools and submission of workers ID'S and electrical installation experience of each worker. The Contractor shall provide minimum 2 year warranty.
- 1.3 All prices are in local currency and the US Government will make payment in local currency.

1.4 EXECUTION

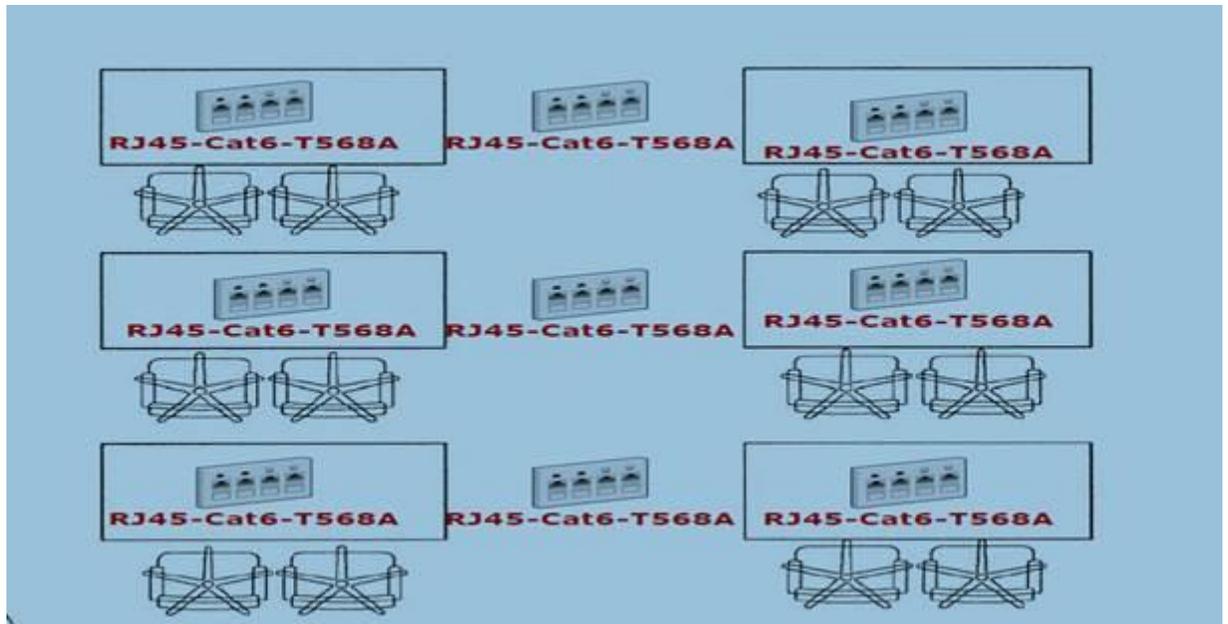
- 1.4.1 **Removal.** The Contractor shall remove all soundproof panels, the wooden base from the wall, the granite counter tops from the two (2) smaller conference rooms (see layout) and the cabinets from underneath, as well as all rubber baseboards from the walls to be demolished. They must be removed carefully in other to avoid any damages.
- 1.4.2 **Electrical and Data work.** The Contractor shall be responsible of removing and relocating all electrical, data and phone outlets and connections in the

existing partition walls and floor. New electrical outlets, light switches and data and phone connections need to be installed as indicated in the drawings. All the electrical lines and power conduits must be located inside the drywall partitions and within the floor. The TV's outlets and connections will be removed and all lines will be relocated and determined by the drawings. The contractor is responsible for all electrical and data materials and labor to be used in this project, as specified by the Electrical Engineer and the Telecomm Engineer in the drawings. The Contractor has to fulfill the requirements of NFPA 70 for the complete execution of this project. Cables must be THHN no. 12 USA. Install conduits from junction box located in the middle of the room going to the south wall. Conduit must be not less than ¾ inch and must be EMT. Install Junction Box near the wall. Junction box should not be less than 10 X 10 X 4. The breakers for each circuit are to be G.E and match with breakers panels inside the electrical room.

1.4.3 **TVs.** The TV's outlets and connections will be removed and all lines will be relocated except for one TV that will remain as is (see drawings). Behind the screen of the projector one TV will be installed and a smart board, using the connections from the wall to be demolished as well as a VGA line, HDMI, audio, video and power connections must be installed. All connections and wires must be inside the wall and through the ceiling. The smart board's manual will be provided for installation and specs.

1.4.4 **Data and telephone outlets and wiring.** A total of 27 lines of Cat6 Systemax cable will be installed in the floor, enclosed in sealed receptacles. The wiring should be done through the floor in pipes, go into the wall, to the ceiling, and on the data rails to be terminated in existing modular patch panels located in the North Telecom closet. Out of the 27 outlets, 9 jacks should be of color solid orange and wired with cable of the same color, 9 others should be of color solid green wired with a like colored wire, and the rest of the jacks (9) should be of color solid blue and wired with same color wires. Refer to the table below for the specification of the wiring standard and graphical guide to be used, as well as the outlet types, model and manufacturer.

Item name	Wiring standard	Part number	Manufacturer
CAT 6 SL 110 JACK	TIA/EIA-568A	1375055-5	AMPTE Connectivity
Faceplate triple	TIA/EIA-568A	2111009-3	AMPTE Connectivity



- 1.4.5 **Demolition work.** The Contractor shall demolish the dividing drywall wall partitions between the three (3) conference rooms (2 walls in total). After the demolition is completed the remaining intersecting walls need to be repaired and smoothed, the rubber baseboard needs to be completed in those walls.
- 1.4.6 **Ceiling Tiles.** Since three (3) rooms are now consolidated into one, the ceiling tiles need to be slightly modified to be adequate for the new layout and will have to be adapted to look like a continuous ceiling; the dimensions will be verified on site. Post will supply the ceiling tiles and all existing tiles will be reused, the metal support will be provided by the Contractor. There is a screen that comes from the ceiling that needs to be relocated. The contractor is responsible of this movement and to adjust the ceiling tiles in order to fit the screen frame.
- 1.4.7 **Lighting, Smoke Detectors, Occupancy sensors and projector and screen.** The lighting, smoke detectors, occupancy sensors and projector of the offices will be all uninstalled and relocated per the drawing. Since three (3) spaces will be consolidated, the screen and projector need to be centered within the new space as specified in the drawings.
- 1.4.8 **HAVC Diffuser, thermostats and Fire Sprinklers.** The Contractor shall leave in place the Fire Sprinklers Head, Fire Alarm and thermostats. After the Ceiling tile reconfiguration the HVAC supply diffuser and return grills must be relocated to the closest ceiling tile space, it should not affect the fire sprinkler head and lighting (see drawing).

- 1.4.9 **Doors.** The Contractor will remove one of the three existing doors (according to the layout) and will proceed to close down the opening with fire rated drywall of 5/8" thickness and in between the drywall panels, install fire rated plywood, similar to the drywalls demolished. The removal of the door and glass frame next to it must be done so carefully to avoid any damage to them, as they will be reused in another location.
- 1.4.10 **Paint.** When the final work is completed, the area must be painted in the color determined by the COR or Facilities Architect. Inside the Conference Room and outside where the door was removed, that entire wall must be painted.
- 1.4.11 **Carper tiles.** As with the ceiling tiles, the carpets will have to be modified as well to fit the new layout. Post will provide the carpet tiles and glue and all existing carpet tiles in good condition will be reused. The carpets in bad condition will be replaced.
- 1.4.12 **Cleaning.** The Contractor shall clean and prepare surfaces for follow on work according to the drawings. The Contractor shall ensure that during construction there are measures for control of unnecessary noise, dust and other contaminants. Also, the contractor shall ensure that personnel will observe safety measures in accordance with local regulations and norms.
- 1.4.13 **Additional work.** The contractor shall install the removed door into a new office on the second floor of the compound. This work will include, removing the existing door of the office and expanding the opening on the drywall to fit the new door and glass partition and relocating the Fire Alarm of the wall. Repair the wall, paint and final cleaning as required above.
- 1.4.14 **Other.** Contractor personnel shall not wander outside of the work area at any time, and they will be escorted at all times. The contractor will be responsible to remove prior approval of the Contracting Officer Representative (COR) all furniture that may be disrupting their work and put it back in place later on. They are responsible to cover and protect all equipment to avoid any damages.

END OF STATEMENT OF WORK

NOTE SMARTBOARD Information:

<http://www.touchboards.com/smart/sb685ix2/?Source=googleshopping&gclid=CO3W1Z3fuMACFaTm7AodolcA2Q>

The model is a **SMARTBOARD SB685ix2**

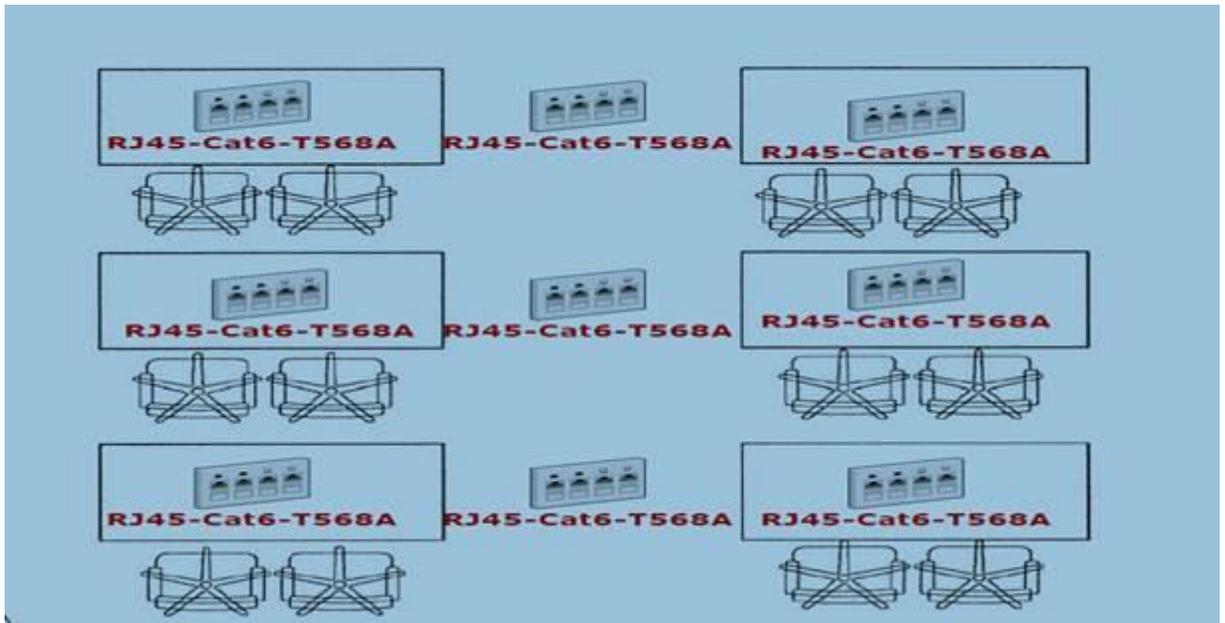
Smartboard SB685ix2 Product Specifications Summary:

(for full specs please see the full specs tab or the data sheet and manual)

Interactive Screens / Whiteboards Attributes	
Screen Size What's This?	87 IN
Touchboards Surface Durability What's This?	2
Interface What's This?	Touch Sensitive
Aspect Ratio What's This?	Wide (16:10)
Board Surface Features What's This?	Regular Matted Surface
General Attributes	
Unique Features	Includes the Smart UX80 ultra short throw projector
Product Weight	42 LBS
Warranty	2 YEARS
Product Height	86.25 IN
Product Length	5.5 IN
Product Width	54 IN
Shipping Weight	70 LBS

Addition to the Conference Room SOW
2nd Floor office set up

Data work and phone work. The Contractor shall be responsible for the installation of eighteen (18) data and phone outlets on the existing walls. The new data and phone connections need to be installed as indicated in the drawings. All the conduits used to install the new data and phone connections must be located inside the drywall partitions. The contractor is responsible for all data materials and labor to be used in this project, as specified by the in the drawings. Conduit must be not less than ¾ inch and must be EMT.



Data and telephone outlets and wiring. A total of 18 lines of Cat6 Systemax cable will be installed in the walls. The wiring should be done through the conduits which will be installed inside the drywall partition, go to the ceiling and on the data rails to be terminated in existing modular patch panels located in the North Telecom closet. Out of the 18 outlets, 6 jacks should be of color solid orange and wired with cable of the same color, 6 others should be of color solid green wired with a like colored wire, and the rest of the jacks (6) should be of color solid blue and wired with same color wires. Refer to the table below for the specification of the wiring standard and graphical guide to be used, as well as the outlet types, model and manufacturer.

Item name	Wiring standard	Part number	Manufacturer
CAT 6 SL 110 JACK	TIA/EIA-568A	1375055-5	AMPTE Connectivity
Faceplate triple	TIA/EIA-568A	2111009-3	AMPTE Connectivity

Electrical. The Contractor shall be responsible installing 4 receptacle outlets and 5 data outlets in the work shop room. New electrical and data/ phone outlets need to be installed as indicated in the drawings. All the electrical lines and power conduits must be located inside the drywall partitions and within the floor. The contractor is responsible for all electrical and data materials and labor to be used in this project, as specified by the Electrical Engineer and the Telecomm Engineer in the drawings. New Circuit feeding to panel N2NUL3 will be determined during contractor visit for bidding

Contractor has to fulfill the requirements of NFPA 70 for the complete execution of this project.

Contractor is to provide 2 years of warranty.

Materials are to be previously inspected before arrival.

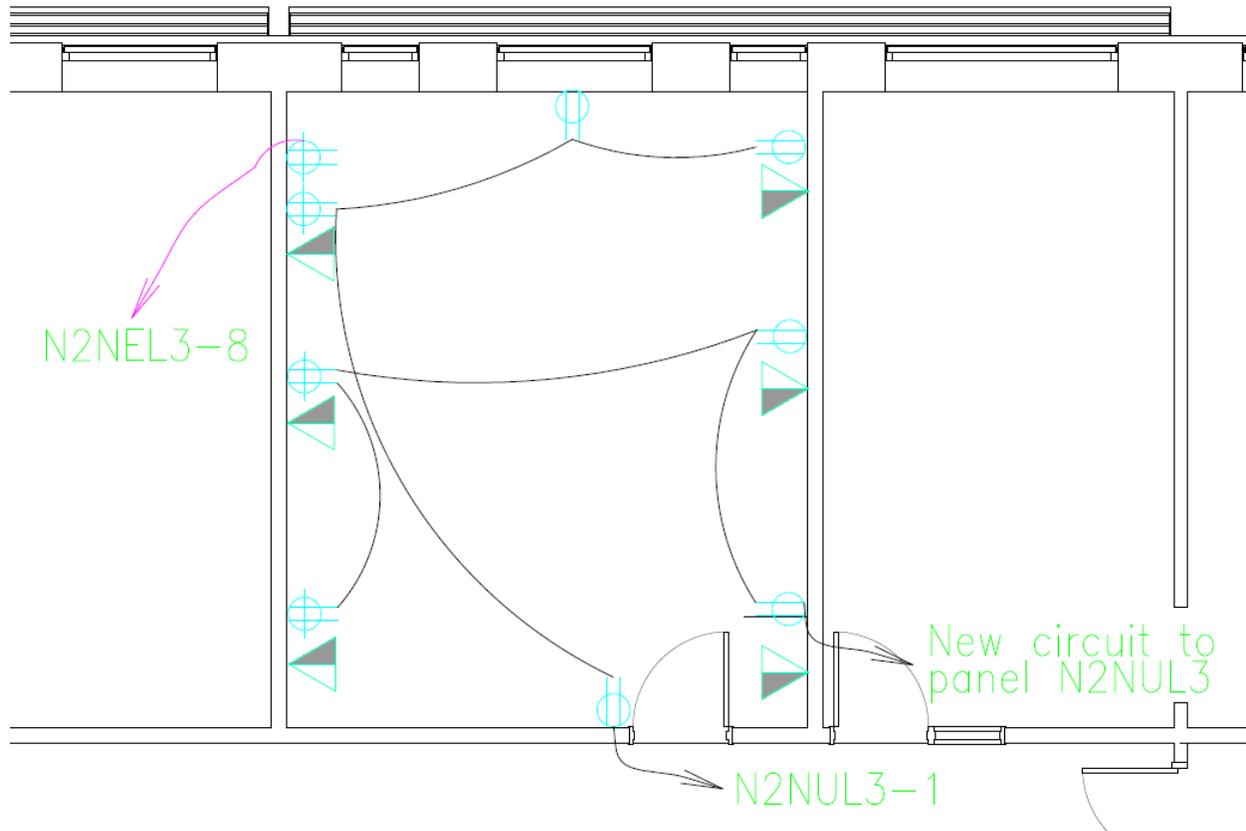
Contractor is to provide transport, tools and submission of workers ID'S and installation experience of each worker.

Cables must be THHN no. 12 USA.

Install conduits from junction box located in the middle of the room going to the south wall.

Conduit must be not less than 3/4 inch and must be EMT.

Breaker for this circuit are to be G.E and match with breakers panels inside the electrical room.

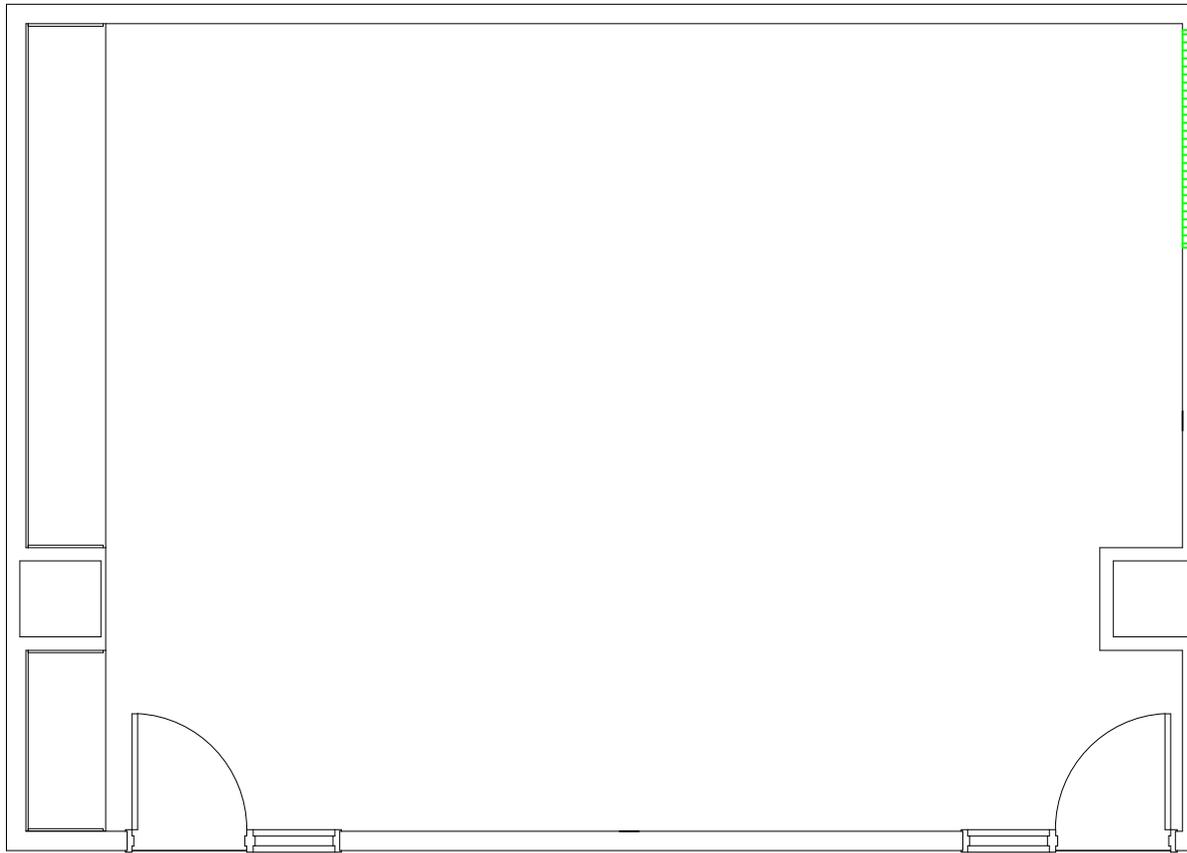


Drywall. All electrical, data and voice lines will go inside the drywall. The wall would need to be repaired and smoothed.

Paint. When the final work is completed, the area must be painted in the color determined by the COR or Facilities Architect.

Cleaning. The Contractor shall clean and prepare surfaces for follow on work according to the drawings. The Contractor shall ensure that during construction there are measures for control of unnecessary noise, dust and other contaminants. Also, the contractor shall ensure that personnel will observe safety measures in accordance with local regulations and norms.

END OF STATEMENT OF WORK




Conference Room Infill Layout


 Door to be removed and opening to be closed down.

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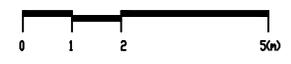


United States Department of State
OFFICE OF OVERSEAS BUILDINGS OPERATIONS
Washington, D.C.

**U.S. EMBASSY - SANTO DOMINGO
FACILITY MANAGEMENT**

Av. Republica de Colombia #57, Altos de Arroyo Hondo
Santo Domingo, Republica Dominicana
tel: 809-567-7775

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Project Title: **GROUND FLOOR CONFERENCE ROOM**

Drawing Title: **INFILL LAYOUT**

Drawing Number: **160**

Date: May, 2016 Prepared by: Checked by: Drawn by: Title: 160 Description:	Scale: 1/4" = 1'-0" UNCLASSIFIED
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United States Department of State
OFFICE OF OVERSEAS BUILDINGS OPERATIONS
Washington, D.C.

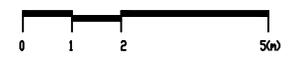
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**PROPOSED CEILING
DISTRIBUTION LAYOUT**

Project Name	
Project Number	
Revision	



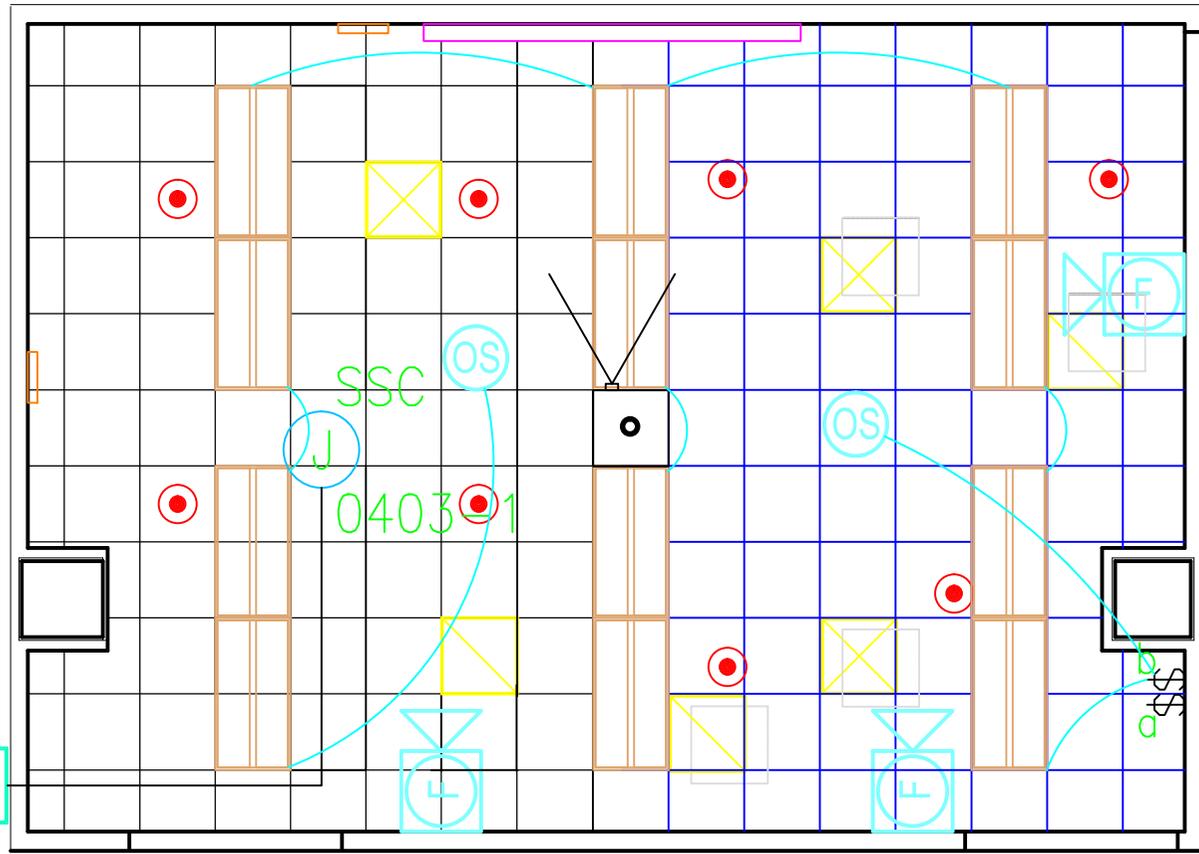
Project Title: **GROUND FLOOR CONFERENCE ROOM**

Project Description: **PROPOSED CEILING
DISTRIBUTION LAYOUT
Sprinklers, lighting, HVAC**

Revision Number:

DATE	May, 2016	Drawn by	
REVISION		Checked by	
DATE		Approved by	
DATE		Scale	1:60
DATE		Author	

- CEILING HEIGHT A.F.F. OR CEILING FINISH MATERIAL
- EXPOSED STRUCTURE (PAINTED PT2 U.N.O.)
- HEAT DETECTOR
- SMOKE DETECTOR
- OCCUPANCY SENSOR
- RETURN DIFFUSER
- SUPPLY DIFFUSER
- CEILING HATCH
- FIRE ALARM
- FIRE SPRINKLER HEAD
- RECESSED CAN LIGHT
- FLUORESCENT LIGHT FIXTURES
- SPEAKER
- EXIT LIGHT
- PROJECTOR



Conference Room Proposed Ceiling Distribution with sprinklers, lighting, HVAC grills Layout



Electrical Outlets Distribution Legend

ELECTRICAL LEGEND:

- ① RECEPTACLE FOR CEILING MOUNTED PROJECTOR.
- ② DEDICATED SINGLE PHASE 20A CIRCUIT FOR DRINKING FOUNTAIN CHILLER.
- ③ WALL/FLOOR J-BOX WITH FLEX CONNECTION TO FURNITURE PARTITION. MAXIMUM 2 WORKSTATIONS PER CIRCUIT. MINIMUM 2 CIRCUITS PER WORKSTATION: 1 FOR COMPUTERS, 1 FOR LIGHTS AND GENERAL PURPOSE RECEPTACLES. 10-WIRE SYSTEM. SEE .
- ④ J-BOXES FOR FINGERPRINT STATION PENETRATION. SEE PENETRATION DETAIL #2 ON SHEET NOB E5.504.

- ⑤ J-BOX AND POWER FOR QUEUING SYSTEM TICKET PRINTER. COORDINATE INSTALLATION REQUIREMENTS WITH MANUFACTURER.
- ⑥ LIGHT AND ACCESSORY CIRCUIT FOR AHU.
- ⑦ GFCI PROTECTED RECEPTACLE IN ELEVATOR PIT.
- ⑧ NOT USED.
- ⑨ PROVIDE 120V POWER CONNECTION FOR DOOR RELEASE DEVICE.
- ⑩ RECEPTACLE FOR TV MOUNTED AT +1676mm AFF.
- ⑪ RECEPTACLE MOUNTED IN KNEE SPACE.
- ⑫ QUEUING SYSTEM EQUIPMENT (AMPLIFIER, MAIN POWER SUPPLY, VOICE INTERFACE, ETC.) LOCATED IN UPPER CABINET. COORDINATE REQUIREMENTS WITH MANUFACTURER. MOUNT ELECTRICAL OUTLET AT +1727mm AFF AND (2) STACKED JUNCTION BOXES AT +1727mm AFF. SEE .
- ⑬ QUEUING SYSTEM MATRIX DISPLAY MOUNTED ABOVE WINDOW. COORDINATE REQUIREMENTS WITH ARCHITECT/MANUFACTURER.

- ⑭ PROVIDE 120/1/60 ELECTRICAL CONNECTION TO TPV-2. SEE PLUMBING PLANS FOR DETAILS.
- ⑮ SEE PENETRATION DETAILS ON SHEETS NOB E5.503 & E5.504.
- ⑯ RECEPTACLE MOUNTED AT STAIR LANDING.
SAME DEVICE SHOWN ON CORRESPONDING SY SHEET.
NOT USED.
- ⑰ MOTORIZED PROJECTION SCREEN. VERIFY REQUIREMENTS WITH EQUIPMENT RECEIVED.
- ⑱ RECEPTACLE SHALL BE RECESSED IN ACOUSTICAL PANEL.
- ⑲ REFER TO DETAIL 2 ON SHEET NOB E5.507 FOR ELEVATOR INTERFACE DIAGRAM. SEE DRAWINGS VT01 THROUGH VT03 FOR ALL REQUIREMENTS.
- ⑳ COORDINATE EXACT SWITCH REQUIREMENTS WITH MOTORIZED PROJECTION SCREEN VENDOR PRIOR TO ORDERING/INSTALLATION.



Caddell Construction Co., Inc.
P.O. Box 21009 (36121)
2700 Lagoon Park Drive
Montgomery, Alabama 36109
Phone: 334-272-7723
Fax: 334-394-0270

SUBMITTAL TYPE: Product Data

Floor Boxes

SPECIFICATION SECTION: 16130 2.7, D

NOTED SPECIFICATION DEVIATIONS: None

CADDELL (NEC) PROJECT #: 92042

Fully Adjustable, Multiple Service, Floor Boxes



Wiremold® OmniBox™ Series Floor Boxes provides an excellent activation solution when multiple services are required in open space areas. OmniBox™ Series Floor Boxes offer one-, two-, and three-gang multiservice boxes that are fully adjustable before and after the concrete pour.

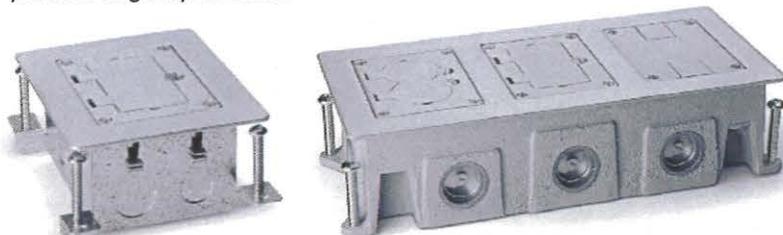
Available in both stamped steel and cast iron fabrications, they meet a wide range of workstation requirements for today's and tomorrow's service needs. These floor boxes have many applications, some of which include schools, financial institutions, and commercial office buildings.

Two-gang OmniBox Series Floor Box Installation with an aesthetically pleasing flush activation cover.



FEATURES & BENEFITS

- **Fully adjustable box.** Fully adjustable both before and after concrete pour. Reduces installation costs.
- **Two Fabrications: Stamped Steel** – Lower cost concrete-tight construction option for above grade applications. **Cast-Iron** – Watertight construction for on or below grade applications.
- **Available in two depths.** Economical alternatives when pour depths are limited.
- **Flush activation assemblies for carpet and tile.** Aesthetically pleasing assemblies are interchangeable in both cast-iron and stamped steel box models.
- **Available in one-, two-, and three-gang configurations.** Removable dividers increase capacity. More configurations to support multiservice applications.
- **Triple service boxes.** Accommodates power, communication and/or audio/video devices which reduces the need for multiple boxes.
- **New brushed aluminum covers for power applications.** 830CK Series Aluminum Covers redesigned to accept threaded conduit when passing through power cables.
- **New brass and brushed aluminum covers accept single locking power receptacles.** New 828DLR Series provides single flip lid cover.
- **New 828COMTC Series Cover Kit in brass and brushed aluminum.** Allows communication devices to be recessed into 880S and 880CS Series Floor Boxes.
- **New partition support kit for 3-gang tile flanges.** The 838TAL-880 Series Flanges provide partition supports in tile applications for added strength and durability.
- **TopGuard protection.** All cover assemblies for the OmniBox Floor Box Series have TopGuard protection. An integral design which keeps out water, dirt, and debris from the power and communication compartments.
- **Boxes and covers have been listed by Underwriters Laboratories Inc. to their standard UL514A, 514C, 514D, and Canadian standard C22.2**
- **Datacom connectivity options.** Accepts industry standard and proprietary devices from a wide range of manufacturers to provide a seamless and aesthetically pleasing interface for voice, data, audio, and video applications at the point-of-use. A wide selection of data and adapter options available for use with Ortronics® TracJack® and Series II devices.

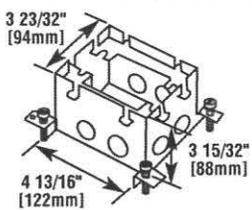
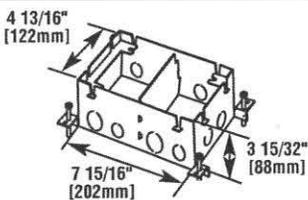
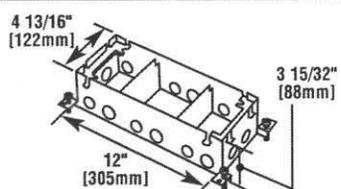
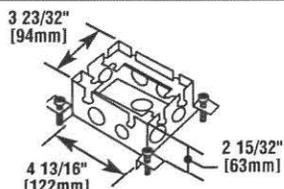
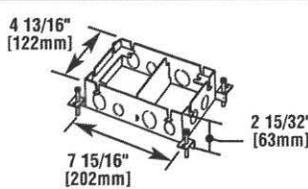
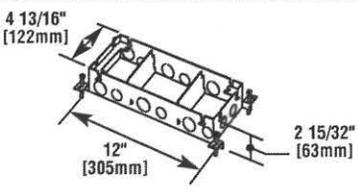


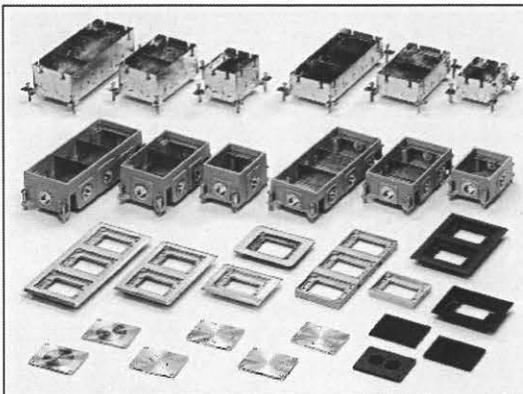
Single-gang stamped steel and triple-gang cast iron models of OmniBox Series Floor Boxes.



Protection from water, dirt, and debris.

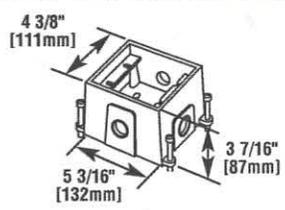
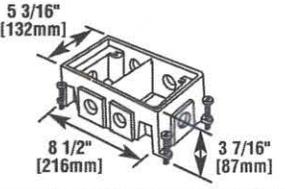
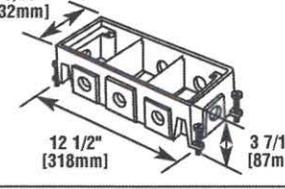
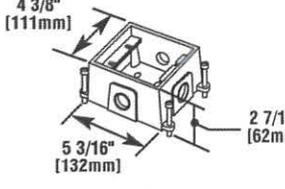
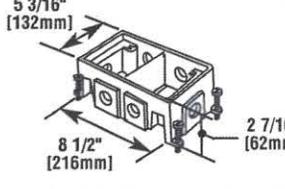
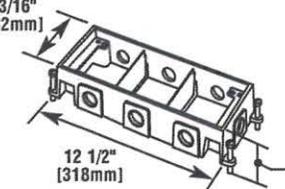
OmniBox Series Stamped Steel Floor Boxes Ordering Information

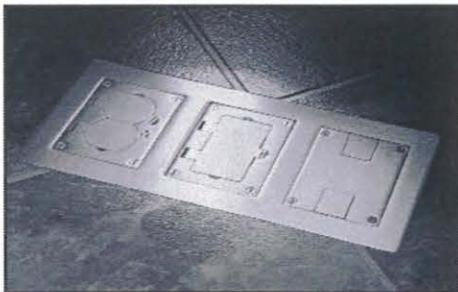
Catalog No./Item	Description/Specifications				
880S1 	One-Gang Stamped Steel Floor Box – Fully Adjustable.	TECHNICAL SPECIFICATIONS			
		Conduit Openings	Cubic Inch Capacity	Adjustment Before Pour	Adjustment After Pour
		(3) 1/2" [12.7mm], (5) 3/4" [19.1mm] (2) 1" [25mm]	53	1 3/4" [44mm]	1/2" [12.7mm]
880S2 	Two-Gang Stamped Steel Floor Box – Fully Adjustable.	TECHNICAL SPECIFICATIONS			
		Conduit Openings	Cubic Inch Capacity	Adjustment Before Pour	Adjustment After Pour
		(4) 1/2" [12.7mm], (8) 3/4" [19.1mm] (4) 1" [25mm]	117 (58/59)	1 3/4" [44mm]	1/2" [12.7mm]
880S3 	Three-Gang Stamped Steel Floor Box – Fully Adjustable.	TECHNICAL SPECIFICATIONS			
		Conduit Openings	Cubic Inch Capacity	Adjustment Before Pour	Adjustment After Pour
		(5) 1/2" [12.7mm], (11) 3/4" [19.1mm] (6) 1" [25mm]	180 (56/68/56)	1 3/4" [44mm]	1/2" [12.7mm]
880M1 	One-Gang Shallow Stamped Steel Floor Box – Fully Adjustable.	TECHNICAL SPECIFICATIONS			
		Conduit Openings	Cubic Inch Capacity	Adjustment Before Pour	Adjustment After Pour
		(5) 1/2" [12.7mm], (5) 3/4" [19.1mm]	37	1 3/4" [44mm]	1/2" [12.7mm]
880M2 	Two-Gang Shallow Stamped Steel Floor Box – Fully Adjustable.	TECHNICAL SPECIFICATIONS			
		Conduit Openings	Cubic Inch Capacity	Adjustment Before Pour	Adjustment After Pour
		(8) 1/2" [12.7mm], (8) 3/4" [19.1mm]	80 40/40	1 3/4" [44mm]	1/2" [12.7mm]
880M3 	Three-Gang Shallow Stamped Steel Floor Box – Fully Adjustable.	TECHNICAL SPECIFICATIONS			
		Conduit Openings	Cubic Inch Capacity	Adjustment Before Pour	Adjustment After Pour
		(11) 1/2" [12.7mm], (11) 3/4" [19.1mm]	126 39/48/39	1 3/4" [44mm]	1/2" [12.7mm]



OmniBox Series Floor Boxes are available in a full range of box sizes, depths, and capacities with activation covers that enhance any decor and provide a full range of connectivity options.

OmniBox Series Cast Iron Floor Boxes Ordering Information

Catalog No./Item	Description/Specifications												
880CS1-1 	One-Gang Cast Iron Floor Box – Fully Adjustable. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: left;">TECHNICAL SPECIFICATIONS</th> </tr> <tr> <th style="width: 30%;">Conduit Openings</th> <th style="width: 15%;">Cubic Inch Capacity</th> <th style="width: 15%;">Adjustment Before Pour</th> <th style="width: 15%;">Adjustment After Pour</th> </tr> </thead> <tbody> <tr> <td>(4) 1" [25mm]</td> <td style="text-align: center;">48</td> <td>1 3/4" [44mm]</td> <td>1/2" [12.7mm]</td> </tr> </tbody> </table>	TECHNICAL SPECIFICATIONS				Conduit Openings	Cubic Inch Capacity	Adjustment Before Pour	Adjustment After Pour	(4) 1" [25mm]	48	1 3/4" [44mm]	1/2" [12.7mm]
TECHNICAL SPECIFICATIONS													
Conduit Openings	Cubic Inch Capacity	Adjustment Before Pour	Adjustment After Pour										
(4) 1" [25mm]	48	1 3/4" [44mm]	1/2" [12.7mm]										
880CS2-1 	Two-Gang Cast Iron Floor Box – Fully Adjustable. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: left;">TECHNICAL SPECIFICATIONS</th> </tr> <tr> <th style="width: 30%;">Conduit Openings</th> <th style="width: 15%;">Cubic Inch Capacity</th> <th style="width: 15%;">Adjustment Before Pour</th> <th style="width: 15%;">Adjustment After Pour</th> </tr> </thead> <tbody> <tr> <td>(6) 1" [25mm]</td> <td style="text-align: center;">94 (45/49)</td> <td>1 3/4" [44mm]</td> <td>1/2" [12.7mm]</td> </tr> </tbody> </table>	TECHNICAL SPECIFICATIONS				Conduit Openings	Cubic Inch Capacity	Adjustment Before Pour	Adjustment After Pour	(6) 1" [25mm]	94 (45/49)	1 3/4" [44mm]	1/2" [12.7mm]
TECHNICAL SPECIFICATIONS													
Conduit Openings	Cubic Inch Capacity	Adjustment Before Pour	Adjustment After Pour										
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880CS3-1 	Three-Gang Cast Iron Floor Box – Fully Adjustable. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: left;">TECHNICAL SPECIFICATIONS</th> </tr> <tr> <th style="width: 30%;">Conduit Openings</th> <th style="width: 15%;">Cubic Inch Capacity</th> <th style="width: 15%;">Adjustment Before Pour</th> <th style="width: 15%;">Adjustment After Pour</th> </tr> </thead> <tbody> <tr> <td>(8) 1" [25mm]</td> <td style="text-align: center;">160 (53/54/53)</td> <td>1 3/4" [44mm]</td> <td>1/2" [12.7mm]</td> </tr> </tbody> </table>	TECHNICAL SPECIFICATIONS				Conduit Openings	Cubic Inch Capacity	Adjustment Before Pour	Adjustment After Pour	(8) 1" [25mm]	160 (53/54/53)	1 3/4" [44mm]	1/2" [12.7mm]
TECHNICAL SPECIFICATIONS													
Conduit Openings	Cubic Inch Capacity	Adjustment Before Pour	Adjustment After Pour										
(8) 1" [25mm]	160 (53/54/53)	1 3/4" [44mm]	1/2" [12.7mm]										
880CM1-1 	One-Gang Shallow Cast Iron Floor Box – Fully Adjustable. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: left;">TECHNICAL SPECIFICATIONS</th> </tr> <tr> <th style="width: 30%;">Conduit Openings</th> <th style="width: 15%;">Cubic Inch Capacity</th> <th style="width: 15%;">Adjustment Before Pour</th> <th style="width: 15%;">Adjustment After Pour</th> </tr> </thead> <tbody> <tr> <td>(4) 1" [25mm],</td> <td style="text-align: center;">34</td> <td>1 3/4" [44mm]</td> <td>1/2" [12.7mm]</td> </tr> </tbody> </table>	TECHNICAL SPECIFICATIONS				Conduit Openings	Cubic Inch Capacity	Adjustment Before Pour	Adjustment After Pour	(4) 1" [25mm],	34	1 3/4" [44mm]	1/2" [12.7mm]
TECHNICAL SPECIFICATIONS													
Conduit Openings	Cubic Inch Capacity	Adjustment Before Pour	Adjustment After Pour										
(4) 1" [25mm],	34	1 3/4" [44mm]	1/2" [12.7mm]										
880CM2-1 	Two-Gang Shallow Cast Iron Floor Box – Fully Adjustable. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: left;">TECHNICAL SPECIFICATIONS</th> </tr> <tr> <th style="width: 30%;">Conduit Openings</th> <th style="width: 15%;">Cubic Inch Capacity</th> <th style="width: 15%;">Adjustment Before Pour</th> <th style="width: 15%;">Adjustment After Pour</th> </tr> </thead> <tbody> <tr> <td>(6) 1" [25mm],</td> <td style="text-align: center;">76 36/40</td> <td>1 3/4" [44mm]</td> <td>1/2" [12.7mm]</td> </tr> </tbody> </table>	TECHNICAL SPECIFICATIONS				Conduit Openings	Cubic Inch Capacity	Adjustment Before Pour	Adjustment After Pour	(6) 1" [25mm],	76 36/40	1 3/4" [44mm]	1/2" [12.7mm]
TECHNICAL SPECIFICATIONS													
Conduit Openings	Cubic Inch Capacity	Adjustment Before Pour	Adjustment After Pour										
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880CM3-1 	Three-Gang Shallow Cast Iron Floor Box – Fully Adjustable. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: left;">TECHNICAL SPECIFICATIONS</th> </tr> <tr> <th style="width: 30%;">Conduit Openings</th> <th style="width: 15%;">Cubic Inch Capacity</th> <th style="width: 15%;">Adjustment Before Pour</th> <th style="width: 15%;">Adjustment After Pour</th> </tr> </thead> <tbody> <tr> <td>(8) 1" [25mm],</td> <td style="text-align: center;">118 39/40/39</td> <td>1 3/4" [44mm]</td> <td>1/2" [12.7mm]</td> </tr> </tbody> </table>	TECHNICAL SPECIFICATIONS				Conduit Openings	Cubic Inch Capacity	Adjustment Before Pour	Adjustment After Pour	(8) 1" [25mm],	118 39/40/39	1 3/4" [44mm]	1/2" [12.7mm]
TECHNICAL SPECIFICATIONS													
Conduit Openings	Cubic Inch Capacity	Adjustment Before Pour	Adjustment After Pour										
(8) 1" [25mm],	118 39/40/39	1 3/4" [44mm]	1/2" [12.7mm]										



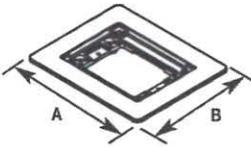
Cover Plates for OmniBox Series Floor Boxes provide access to a wide range of connectivity and are available in both metal and nonmetallic fabrications.

OmniBox Series Floor Boxes Cover Plate Flanges Ordering Information

Catalog No./Item **Description/Specifications**

817B
818TCAL

One-Gang Brass or Brushed Aluminum Combination Carpet and Tile Flange – Accepts Ortronics® MAB6TJ TracJack and MAB3S2 Series II adapters, Pass & Seymour® Activate CM-MAB adapters, and Wiremold CM Series inserts, sold separately.

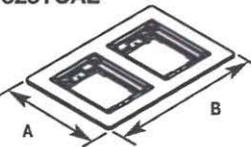


FLANGE	Inches	A [mm]	Inches	B [mm]
817B	6.080	[154.4]	5.060	[128.5]
818TCAL	5.940	[150.9]	4.920	[125.0]

NOTE: Brushed aluminum flanges come with beveled edges.

827B
828TCAL

Two-Gang Brass or Brushed Aluminum Combination Carpet and Tile Flange – Accepts Ortronics® MAB6TJ TracJack and MAB3S2 Series II adapters, Pass & Seymour® Activate CM-MAB adapters, and Wiremold CM Series inserts, sold separately.

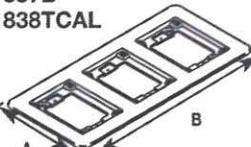


FLANGE	Inches	A [mm]	Inches	B [mm]
827B	6.080	[154.4]	9.185	[233.3]
828TCAL	5.940	[150.9]	9.045	[229.7]

NOTE: Brushed aluminum flanges come with beveled edges.

837B
838TCAL

Three-Gang Brass or Brushed Aluminum Combination Carpet and Tile Flange – Accepts Ortronics® MAB6TJ TracJack and MAB3S2 Series II adapters, Pass & Seymour® Activate CM-MAB adapters, and Wiremold CM Series inserts, sold separately.



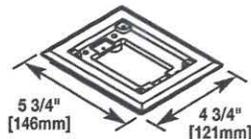
FLANGE	Inches	A [mm]	Inches	B [mm]
837B	6.080	[154.4]	13.310	[338.1]
838TCAL	5.940	[150.9]	13.170	[334.5]

NOTE: Brushed aluminum flanges come with beveled edges.

817C

One-Gang Brass Carpet Flange – For use on 880S1, 880M1, 880CS1-1, and 880CM1-1 Floor Boxes.

NOTE: Not available in Brushed Aluminum finish.

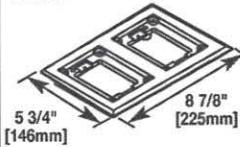


Catalog No./Item **Description/Specifications**

827C

Two-Gang Brass Carpet Flange – For use on 880S2, 880M2, 880CS2-1, and 880CM2-1 Floor Boxes.

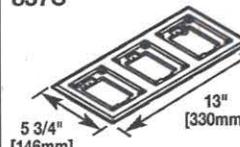
NOTE: Not available in Brushed Aluminum finish.



837C

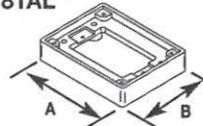
Three-Gang Brass Carpet Flange – For use on 880S3, 880M3, 880CS32-1, and 880CM3-1 Floor Boxes.

NOTE: Not available in Brushed Aluminum finish.



817T
818TAL

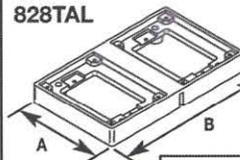
One-Gang Brass or Brushed Aluminum Tile Flange – For use on 880S1, 880M1, 880CS1-1, and 880M1-1 Floor Boxes.



FLANGE	Inches	A [mm]	Inches	B [mm]
817T	4.524	[107.0]	3.48	[88.4]
818TAL	4.550	[115.6]	3.530	[89.7]

827T
828TAL

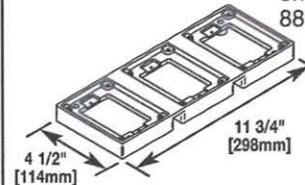
Two-Gang Brass or Brushed Aluminum Tile Flange – For use on 880S2, 880M2, 880CS2-1, and 880CM2-1 Floor Boxes.



FLANGE	Inches	A [mm]	Inches	B [mm]
827T	4.524	[114.9]	7.624	[193.7]
828TAL	4.550	[115.6]	7.655	[118.2]

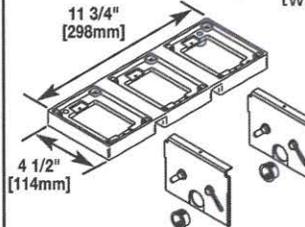
837T

Three-Gang Brass or Brushed Aluminum Tile Flange – For use on 880S3, 880M3, 880CS3-1, and 880CM3-1 Floor Boxes.



838TAL-880S3
838TAL-880M3
838TAL-880CS3
838TAL-880CM3

Kit – The 838TAL-880 Series flanges provide additional load support for 3-gang tile flanges. Kit includes 838TAL Flange and two support dividers.



NOTE: Order kit for specific box type: 880S3, 880M3, 880CS3, or 880CM3.

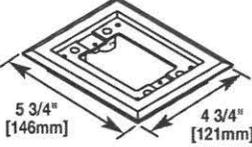
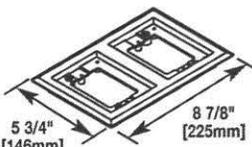
NOTE: UL Listed for tile, terrazzo, and carpet floors.

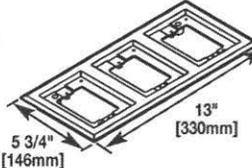
Brass covers and flanges are not interchangeable with aluminum or nonmetallic covers and flanges. Nonmetallic covers are interchangeable with aluminum flanges.

All cover assemblies for the OmniBox Floor Box Series have TopGuard protection.



OmniBox Series Floor Boxes Cover Plate Flanges Ordering Information (Continued)

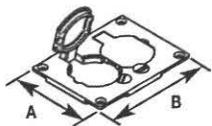
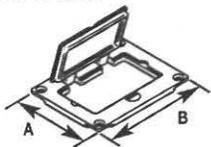
Catalog No./Item	Description/Specifications
817PCC-BLK 817PCC-BRN	One-Gang Nonmetallic Carpet Flange – Available in black or brown. For Ortronics connectivity use with 829PFLRT Cover. For Activate connectivity use with 829PFL Cover. Accepts Ortronics® MAB6TJ TracJack and MAB3S2 Series II adapters, Pass & Seymour® Activate CM-MAB adapters, and Wiremold CM Series inserts, sold separately.
	
827PCC-BLK 827PCC-BRN	Two-Gang Nonmetallic Carpet Flange – Available in black or brown. For Ortronics connectivity use with 829PFLRT Cover. For Activate connectivity use with 829PFL Cover. Accepts Ortronics® MAB6TJ TracJack and MAB3S2 Series II adapters, Pass & Seymour® Activate CM-MAB adapters, and Wiremold CM Series inserts, sold separately.
	

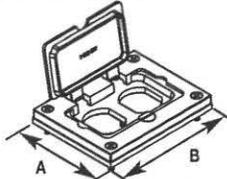
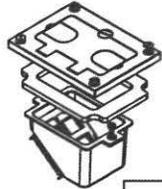
Catalog No./Item	Description/Specifications
837PCC-BLK 837PCC-BRN	Three-Gang Nonmetallic Flange – Available in black or brown. For Ortronics connectivity use with 829PFLRT Cover. For Activate connectivity use with 829PFL Cover. Accepts Ortronics® MAB6TJ TracJack and MAB3S2 Series II adapters, Pass & Seymour® Activate CM-MAB adapters, and Wiremold CM Series inserts, sold separately.
	

NOTE: UL Listed for tile, terrazzo, and carpet floors.

Brass covers and flanges are not interchangeable with aluminum or nonmetallic covers and flanges. Nonmetallic covers are interchangeable with aluminum flanges.

OmniBox Series Floor Boxes Metal Cover Plates Ordering Information

Catalog No./Item	Description/Specifications															
828R 828R-TCAL	Brass or Brushed Aluminum Duplex Cover Plate – Flip lids. Can also be used with a 106 type communication adapter.															
																
	<table border="1" style="margin: auto;"> <thead> <tr> <th>COVER</th> <th>Inches</th> <th>A [mm]</th> <th>Inches</th> <th>B [mm]</th> </tr> </thead> <tbody> <tr> <td>828R</td> <td>3.156</td> <td>[80.2]</td> <td>4.182</td> <td>[106.2]</td> </tr> <tr> <td>828R-TCAL</td> <td>3.290</td> <td>[83.6]</td> <td>4.310</td> <td>[109.5]</td> </tr> </tbody> </table>	COVER	Inches	A [mm]	Inches	B [mm]	828R	3.156	[80.2]	4.182	[106.2]	828R-TCAL	3.290	[83.6]	4.310	[109.5]
COVER	Inches	A [mm]	Inches	B [mm]												
828R	3.156	[80.2]	4.182	[106.2]												
828R-TCAL	3.290	[83.6]	4.310	[109.5]												
828GFITC 828GFITCAL	Brass or Brushed Aluminum GFI Cover Plate – May be used with Activate and Ortronics Connectivity Systems in conjunction with 817B, 827B, and 837B Flanges.															
																
	<table border="1" style="margin: auto;"> <thead> <tr> <th>COVER</th> <th>Inches</th> <th>A [mm]</th> <th>Inches</th> <th>B [mm]</th> </tr> </thead> <tbody> <tr> <td>828GFITC</td> <td>3.156</td> <td>[80.2]</td> <td>4.182</td> <td>[106.2]</td> </tr> <tr> <td>828GFITCAL</td> <td>3.290</td> <td>[83.6]</td> <td>4.310</td> <td>[109.5]</td> </tr> </tbody> </table>	COVER	Inches	A [mm]	Inches	B [mm]	828GFITC	3.156	[80.2]	4.182	[106.2]	828GFITCAL	3.290	[83.6]	4.310	[109.5]
COVER	Inches	A [mm]	Inches	B [mm]												
828GFITC	3.156	[80.2]	4.182	[106.2]												
828GFITCAL	3.290	[83.6]	4.310	[109.5]												

Catalog No./Item	Description/Specifications															
828DPGFITC 828DPGFITCAL	Brass or Brushed Aluminum Rectangular Cover Plate – Allows for mounting of a duplex style receptacle with a rectangular style flip lid cover.															
																
	<table border="1" style="margin: auto;"> <thead> <tr> <th>COVER</th> <th>Inches</th> <th>A [mm]</th> <th>Inches</th> <th>B [mm]</th> </tr> </thead> <tbody> <tr> <td>828DPGFITC</td> <td>3.156</td> <td>[80.2]</td> <td>4.182</td> <td>[106.2]</td> </tr> <tr> <td>828DPGFITCAL</td> <td>3.290</td> <td>[83.6]</td> <td>4.310</td> <td>[109.5]</td> </tr> </tbody> </table>	COVER	Inches	A [mm]	Inches	B [mm]	828DPGFITC	3.156	[80.2]	4.182	[106.2]	828DPGFITCAL	3.290	[83.6]	4.310	[109.5]
COVER	Inches	A [mm]	Inches	B [mm]												
828DPGFITC	3.156	[80.2]	4.182	[106.2]												
828DPGFITCAL	3.290	[83.6]	4.310	[109.5]												
828COMTC 828COMTCAL	Brass or Brushed Aluminum Communication Cover Plate – Allows for up to four communication devices to be mounted in a recessed position within the 880 Floor Box. The 828COM Cover Plate has removable slides for cable egress.															
																
	<table border="1" style="margin: auto;"> <thead> <tr> <th>COVER</th> <th>Inches</th> <th>A [mm]</th> <th>Inches</th> <th>B [mm]</th> </tr> </thead> <tbody> <tr> <td>828COMTC</td> <td>3.156</td> <td>[80.2]</td> <td>4.182</td> <td>[106.2]</td> </tr> <tr> <td>828COMTCAL</td> <td>3.290</td> <td>[83.6]</td> <td>4.310</td> <td>[109.5]</td> </tr> </tbody> </table>	COVER	Inches	A [mm]	Inches	B [mm]	828COMTC	3.156	[80.2]	4.182	[106.2]	828COMTCAL	3.290	[83.6]	4.310	[109.5]
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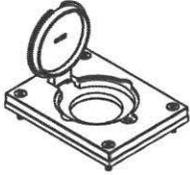
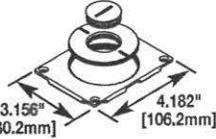
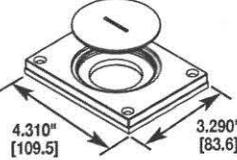
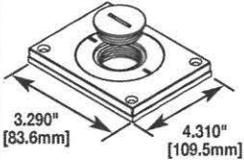
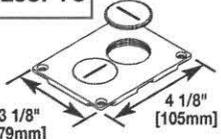
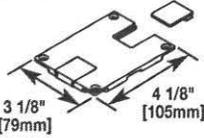
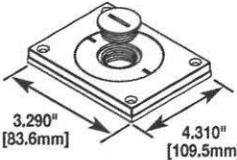
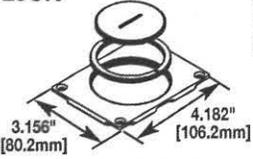
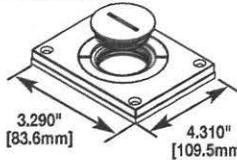
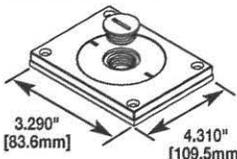
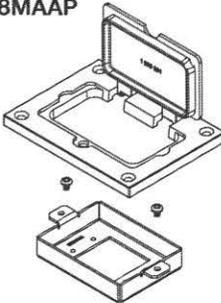
NOTE: For use with 880S and 880CS Series Boxes only.

NOTE: Brass covers and flanges are not interchangeable with aluminum or nonmetallic covers and flanges. Nonmetallic covers are interchangeable with aluminum flanges.

All cover assemblies for the OmniBox Floor Box Series have TopGuard protection.



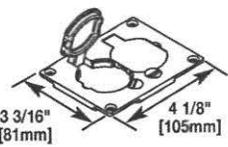
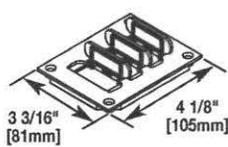
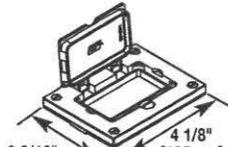
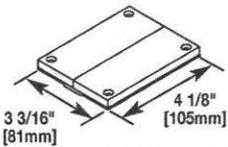
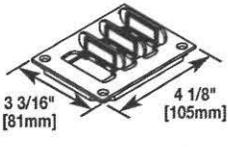
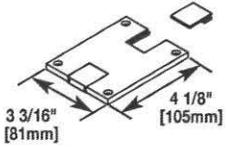
OmniBox Series Floor Boxes Metal Cover Plates Ordering Information (Continued)

Catalog No./Item	Description/Specifications	Catalog No./Item	Description/Specifications
828DLR 828DLRAL 	Brass or Brushed Aluminum Single Locking Receptacle Cover Plate – Single flip lid cover for 20A or 30A single locking receptacles. Device opening is 2 5/8" [67mm]. For use with maximum female locking device of 1.58" diameter, and maximum male plug face of 2.25" diameter	829CK-1 	Brass Communication Cover Plate – 2 5/8" and 1" [67mm and 25mm] plugs.
830CKTCLAL 	Brushed Aluminum Single Locking Receptacle Cover Plate – Single screw plug cover for 20A or 30A single locking receptacles. Screw plug opening is 2 5/8" [67mm]. For use with maximum female locking device of 1.58" diameter, and maximum male plug face of 2.25" diameter. NOTE: Acceptable for use with threaded conduit when passing through power cables.	830CKTCAL-1 	Brushed Aluminum Cover Plate – Power or communication plate with 2" [51mm] and 1" [25mm] plugs. NOTE: Acceptable for use with threaded conduit when passing through power cables.
828SPTC 	Brass Duplex Cover Plate – Screw plugs. Screw plugs are 1 1/2" [38mm] in diameter. NOTE: Not available in Brushed Aluminum finish.	829CK-3/4 	Brass Communication Cover Plate – 2 5/8" and 3/4" [67mm and 19.1mm] plugs.
829STC 	Brass Communication Cover Plate – Data slides. Feed through only, not for use with a mounting plate for communication jacks. NOTE: Not available in Brushed Aluminum finish.	830CKTCAL-3/4 	Brushed Aluminum Cover Plate – Power or communication plate with 2" [51mm] and 3/4" [19.1mm] plugs. NOTE: Acceptable for use with threaded conduit when passing through power cables.
829CK 	Brass Communication Cover Plate – 2 5/8" and 2 1/4" [67mm and 57mm] plugs.	829CK-1/2 	Brass Communication Cover Plate – 2 5/8" and 1/2" [67mm and 12.7mm] plugs.
830CKTCAL 	Brushed Aluminum Cover Plate – Power or communication plate with 2" [51mm] and 1 1/4" [32mm] plugs. NOTE: Acceptable for use with threaded conduit when passing through power cables.	830CKTCAL-1/2 	Brushed Aluminum Cover Plate – Power or communication plate with 2" [51mm] and 1/2" [12.7mm] plugs. NOTE: Acceptable for use with threaded conduit when passing through power cables.
		828MAAP 	A/V Adapter Plate – Sheet metal adapter plate that accepts two (2) Extron® Electronics MAAP style device plates (sold separately). For use with 828GFITC or 828GFITCAL cover plates. (Sold separately)

*Replacement flip lids can be ordered under Cat. No. PFL-BLK and PFL-BRN. Each Cat. No. comes with three flip lids. The above cover plates are listed for tile, terrazzo, and carpet floors.

NOTE: Brass covers and flanges are not interchangeable with aluminum or nonmetallic covers and flanges. Nonmetallic covers are interchangeable with aluminum flanges.

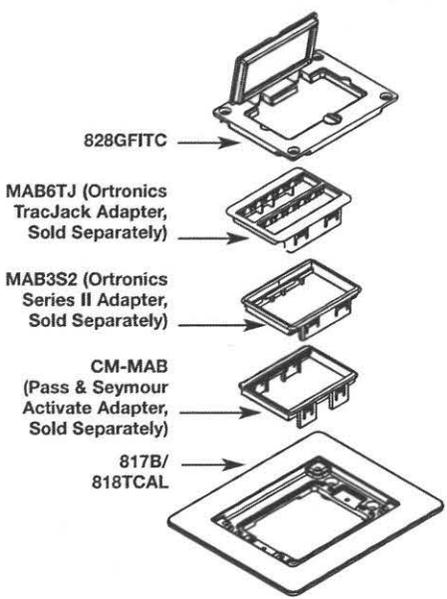
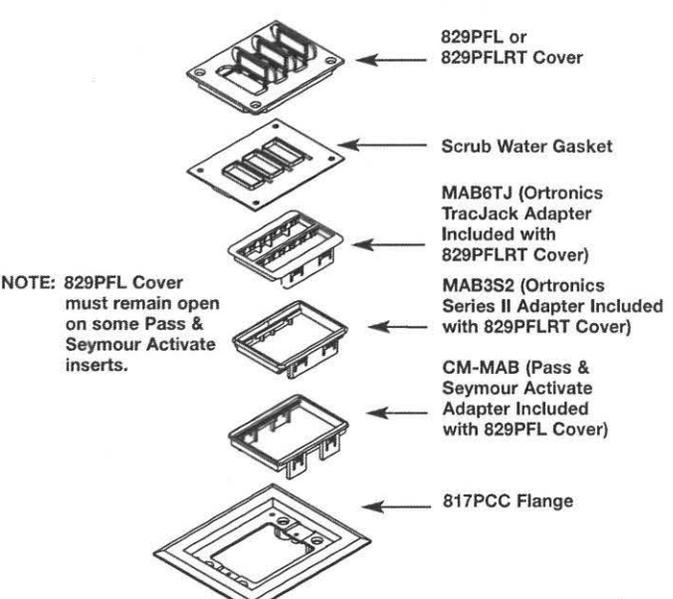
OmniBox Series Floor Boxes Nonmetallic Cover Plates Ordering Information

Catalog No./Item	Description/Specifications	Catalog No./Item	Description/Specifications
828PR-BLK 828PR-BRN	Nonmetallic Duplex Cover Plate – Flip lids. Available in black or brown. Can also be used with a 106 type communication adapter. 	829PFLRT-BLK 829PFLRT-BRN	Nonmetallic Communication Cover Plate – Individual flip lids.* Available in black or brown. Gasket included. Ortronics® MAB6TJ TracJack and MAB3S2 Series II adapters included. 
828PRGFI-BLK 828PRGFI-BRN	Nonmetallic GFI Cover Plate – Available in black or brown. May be used with Pass & Seymour® Activate and Ortronics® Connectivity systems in conjunction with 817, 827 and 837PCC Series flanges. 	829PCK-BLK 829PCK-BRN	Nonmetallic Communication Cover Plate – Breakouts. Available in black or brown. Feed through only, not for use with a mounting plate for communication jacks. 
829PFL-BLK 829PFL-BRN	Nonmetallic Communication Cover Plate – Individual flip lids.* Available in black or brown. Gasket included. Pass & Seymour® Activate CM-MAB adapter and Wiremold CM Series inserts included. 	829PSTC-BLK 829PSTC-BRN	Nonmetallic Communication Cover Plate – Data slides. Available in black or brown. Feed through only, not for use with a mounting plate for communication jacks. 

*Replacement flip lids can be ordered under Cat. No. PFL-BLK and PFL-BRN. Each Cat. No. comes with three flip lids. The above cover plates are listed for tile, terrazzo, and carpet floors.

NOTE: Brass covers and flanges are not interchangeable with aluminum or nonmetallic covers and flanges. Nonmetallic covers are interchangeable with aluminum flanges.

Mounting Options for Connectivity Inserts

Brass Cover Plate Mounting Option	Nonmetallic Cover Plate Mounting Option
 <p>828GFITC</p> <p>MAB6TJ (Ortronics TracJack Adapter, Sold Separately)</p> <p>MAB3S2 (Ortronics Series II Adapter, Sold Separately)</p> <p>CM-MAB (Pass & Seymour Activate Adapter, Sold Separately)</p> <p>817B/ 818TCAL</p>	 <p>829PFL or 829PFLRT Cover</p> <p>Scrub Water Gasket</p> <p>MAB6TJ (Ortronics TracJack Adapter Included with 829PFLRT Cover)</p> <p>MAB3S2 (Ortronics Series II Adapter Included with 829PFLRT Cover)</p> <p>CM-MAB (Pass & Seymour Activate Adapter Included with 829PFL Cover)</p> <p>817PCC Flange</p>
<p>NOTE: The 828GFITC Cover must remain open on some connectivity inserts.</p> <p>Pass & Seymour Activate and Ortronics inserts sold separately. Mounting methods typical for two- and three-gang versions.</p>	<p>NOTE: 829PFL Cover must remain open on some Pass & Seymour Activate inserts.</p> <p>Pass & Seymour Activate and Ortronics inserts sold separately. Mounting method typical for two- and three-gang versions. Part is scrub water approved for use on tile floors. To maintain scrub water resistance, blank connectivity inserts must be inserted in unused openings.</p>

DATACOM CONNECTIVITY OPTIONS

Now you have a wide range of options for providing datacom connectivity into Wiremold/Legrand Pathways. They are:

- Ortronics® TracJack® and Series II Modular Connectivity Solutions
- Pass & Seymour Activate™ Modular Inserts
- Open System Communication Modules

Ortronics® Connectivity

TracJack® Individual Jack System

- Front-loading, snap-in design supports future moves adds and changes
- Inserts for voice, data, audio, and video
- Available Category 3, 5e, 6, USOC 6-position, and other media
- Flat or angled 45° exit configurations
- Choice of 13 colors and color matched to Wiremold Systems
- Universal T568A/B wiring format



Series II Front-Loading, Module System

- Module design features easy snap-in front-loading design
- Linear 110 punch down format for easy termination
- Inserts for voice, data, audio, and video
- Available Category 3, 5e, 6, USOC 6-position, and other media
- Available in flat or angled 45° exit configurations
- Color matched to Wiremold Systems

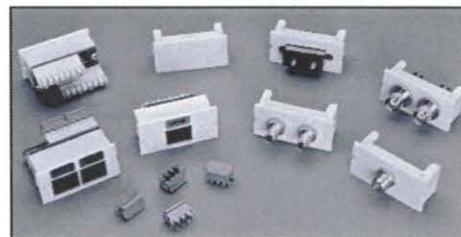


For detailed product selection refer to the Ortronics Catalog or visit www.ortronics.com.

Pass & Seymour Legrand Network Wiring

Activate™ Series Front-Loading Inserts

- Modular inserts for voice, data, audio and video applications
- Front-load, snap-in design
- Color and texture matched to Wiremold Systems
- Available Category 3, 5e, 6, as well as 6-position USOC
- Universal T568A/B wiring format



For detailed product selection refer to the Pass & Seymour Network Wiring Catalog or visit www.passandseymour.com.

Open Connectivity Solutions

Wiremold Open System Communications Modules

- Accommodate a wide range of manufacturers' communications outlets including keystone jacks, as well as proprietary solutions from Avaya (Systemax) and NORDX
- Modules insert into a wide range of Wiremold Systems
- Pre-punched faceplates accept common communication devices



NOTE: For more information on integrating connectivity into Wiremold Cable Management Systems contact the Wiremold Applications Engineering Team or your local Wiremold Sales Representative.



Wiremold

WIREMOLD

U.S. and International:

60 Woodlawn Street • West Hartford, CT 06110
1-800-621-0049 • FAX 860-232-2062 • Outside U.S. 860-233-6251

Canada:

570 Applewood Crescent • Vaughan, Ontario L4K 4B4
1-800-723-5175 • FAX 905-738-9721

ED772R10 – Updated August 2009 – For latest specs visit www.wiremold.com





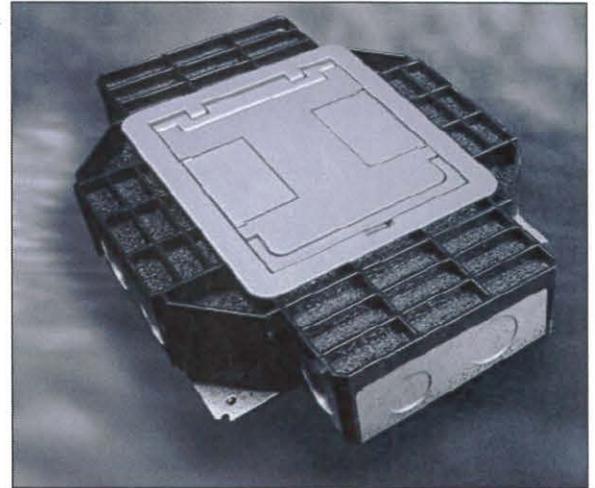
Wiremold

Resource RFB® Series Floor Boxes

Recessed Floor Boxes for Wood & Concrete Floors



Wiremold® Resource RFB® Series of Floor Boxes are versatile activation solutions that provide power, communication and/or audio video services to open space areas or directly to workstations. RFB Series Floor Boxes are now available with new FloorPort™ Activation Covers as well as Evolution™ Series Poke-Thru Covers for the RFB6E and RFB6E-OG Floor Boxes. These covers incorporate TopGuard™ protection to prevent water, dirt, and debris from entering the power and communication device compartments. **FloorPort Activation Covers are UL Listed to U.S. and Canadian safety standards for tile, terrazzo, carpet, and wood floors.** RFB Series Floor Boxes have many applications, some of which include schools, financial institutions, commercial office buildings, and residences.



RFB4 Series Floor Box with the new FloorPort Activation Cover.

FEATURES & BENEFITS

- Independent wiring compartments allow capacity for up to six duplex receptacles and/or communication services. Reduces overall cost by providing for most cabling requirements.
- The RFB4 has three versions for various applications. A cast iron version to meet on grade requirements, a steel version to reduce installation cost on above grade floors, and a shallow steel version that provides flexibility with varying concrete depths.
- Fully adjustable before and after the concrete pour. Labor savings by adapting to various pour depths and conditions.
- Range of conduit sizes. Allows for most conduit schemes, even feed through capability, which saves time and money during installation.
- Triple service boxes. Accommodates power, communication and/or audio/video devices which reduces the need for multiple boxes.
- Accepts round Evolution™ Series Covers. RFB6E Series Floor Box has been designed to accept the round 8" Evolution™ Series Covers increasing the ability to match aesthetics throughout the building.
- Shallow version allows pass-around tunneling. Flexibility in design to have adjacent compartments wired together.
- Redesigned FloorPort Activation Covers. Provides TopGuard protection from water, dirt and debris and added strength and durability. Now available in brushed aluminum and plated brass finishes for better aesthetics.
- Wide variety of mounting brackets. Can adapt to most power and communication needs. Reduces overall life cycle cost.
- RFB6E and RFB6E-OG available for bare concrete and terrazzo floors. By using RFB6E-CTR Ring (sold separately) these boxes can be installed into bare concrete or terrazzo floors with a clean, aesthetic finish.
- UL Listed to U.S. and Canadian safety standards for tile, terrazzo, carpet and wood floors.
- Datacom connectivity options. Accepts industry standard and proprietary devices from a wide range of manufacturers to provide a seamless and aesthetically pleasing interface for voice, data, audio, and video applications at the point-of-use. A wide selection of data and adapter options are available for use with Ortronics® TracJack™ and Series II devices.

RFB2, RFB6 Additional Features & Benefits

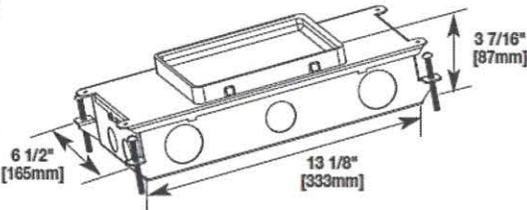
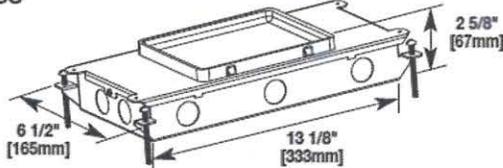
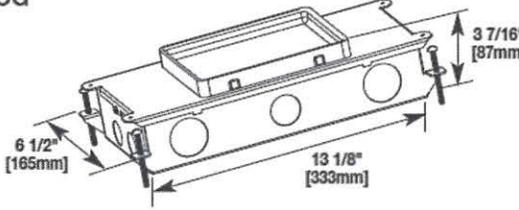
- Installs in both concrete and wood floors. Provides the first recessed wood floor box for both commercial and residential applications.
- Lightweight "slab-on-grade" version. Special fusion-bonded epoxy corrosion resistant paint finish allows for slab-on-grade use without the weight of cast iron material.
- Accepts Floorport™ Activation Covers. Allows a consistent aesthetic finish for the RFB4, RFB2 & RFB6 Series Recessed Floor Boxes.



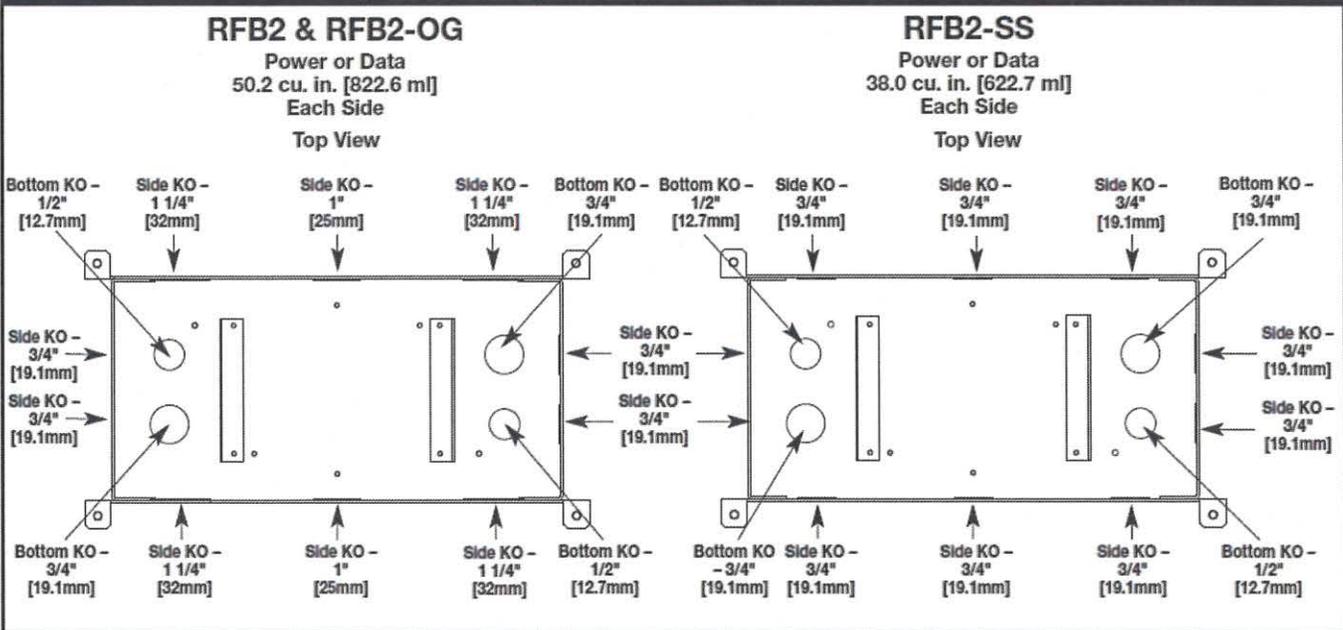
Protection from water, dirt, and debris.



RFB2 Series Multiservice Steel Recessed Floor Box Ordering Information

Catalog No./Item	Description/Specifications
<p>RFB2</p> 	<p>Two-Compartment Box – For use in either concrete or wood floors. Fully adjustable with tunnel compartment. Supplied with one (1) duplex receptacle, mounting plate, and one (1) communication mounting plate (RFB22AB). Other device plates sold separately.</p>
<p>RFB2-SS</p> 	<p>Two-Compartment Shallow Stamped Steel Floor Box – For use in either concrete or wood floors. Fully adjustable with tunnel compartment. Supplied with one (1) duplex receptacle, mounting plate, and one (1) communication mounting plate (RFB22AB). Other device plates sold separately.</p>
<p>RFB2-OG</p> 	<p>Two-Compartment Box – For use On Grade. Fully adjustable with tunnel compartment. Supplied with one (1) duplex receptacle, mounting plate, and one (1) communication mounting plate (RFB22AB). Other device plates sold separately.</p> <p>NOTE: RFB2-OG for on-grade applications is painted with a fusion-bonded epoxy designed for use on metal reinforcement bar and related accessories before encapsulating in concrete.</p>

Compartment Capacities / Knockout Locations & Sizes



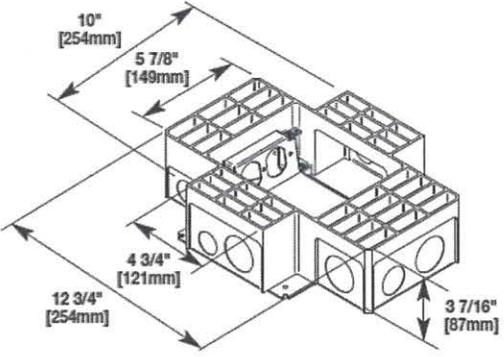
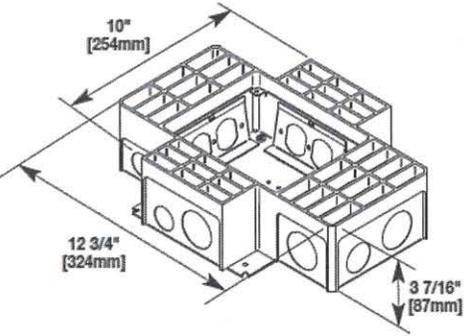
RFB2 Series Multiservice Steel Recessed Floor Box Accessories

Catalog No./Item	Description/Specifications	Catalog No./Item	Description/Specifications
RFB2DP	<p>Internal Duplex Receptacle Bracket – Accepts standard 15 Amp & 20 Amp Duplex Receptacles.</p> <p>NOTE: For RFB2 Series Floor Boxes only.</p>	RFB2RT	<p>Internal Communication Bracket – Includes Two (2) adapters to accept Ortronics® TracJack devices, and Two (2) adapters to accept Ortronics® Series II devices (sold separately).</p> <p>NOTE: For RFB2 Series Floor Boxes only.</p>
RFB2B	<p>Internal Blank Bracket – Plate used to close off unused Gangs.</p> <p>NOTE: For RFB2 Series Floor Boxes only.</p>	RFB2EXT	<p>Internal Audio Video Bracket – Accepts two (2) Extron® Electronics MAAP Series devices. (Sold separately)</p> <p>NOTE: For RFB2 Series Floor Boxes only.</p>
RFB2GFI	<p>Internal GFI or Decorator Style Receptacle Opening – Accepts standard GFCI or Decorator Style Receptacles, Communication or Audio/Video Devices.</p> <p>NOTE: For RFB2 Series Floor Boxes only.</p>	RFB2-AAP	<p>Internal Audio Video Bracket – Accepts Two (2) Extron® Electronics AAP Series devices. (Sold separately)</p> <p>NOTE: For RFB2 Series Floor Boxes only.</p>
RFB22AB	<p>Internal Communication Bracket – Includes two (2) adapters to accept Wiremold CM Series Open System communication inserts (sold separately).</p> <p>NOTE: For RFB2 Series Floor Boxes only.</p>		



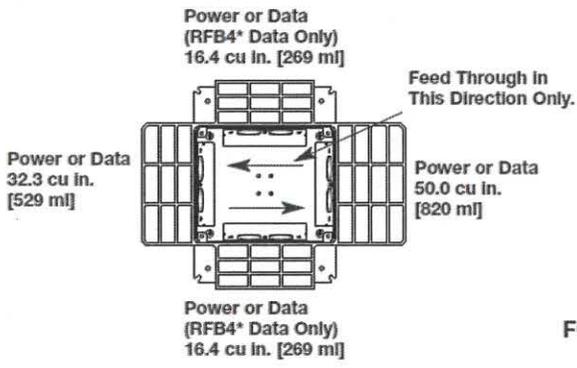
RFB2 Series Floor Boxes with FloorPort Activation Covers.

RFB4 Series Multiservice Steel Recessed Floor Box Ordering Information

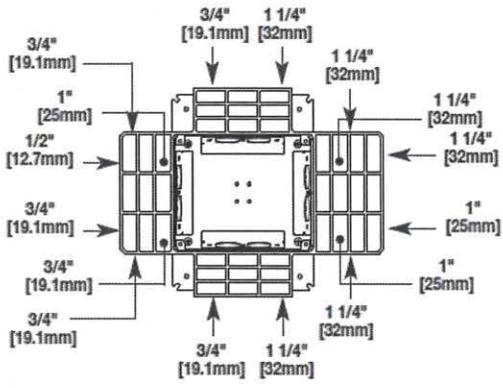
Catalog No./Item	Description/Specifications
<p>RFB4</p> 	<p>Four-Compartment Combination Box – 12 3/4" L x 10" W x 3 7/16" D [324mm x 254mm x 87mm]. Fully adjustable with tunnel compartment and two receptacle brackets. Tunneling from end power compartment to end power compartment only. Communication brackets not included. See "Accessories".</p> <p>NOTE: Only for use in concrete floors.</p>
<p>RFB4-4DB</p> 	<p>Four-Compartment Box – Includes four duplex receptacle brackets. 12 3/4" L x 10" W x 3 7/16" D [324mm x 254mm x 87mm]. Fully adjustable. Tunneling from adjacent or opposite compartments only, (not cross compartments). Tunneling can be set to feed all four compartments from one conduit in a single-service application.</p> <p>NOTE: Only for use in concrete floors.</p>

NOTE: All boxes and activations are sold separately.

RFB4 Series Compartment Capacities and Knockout Locations and Sizes



Feed Through in This Direction Only.

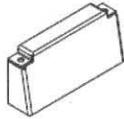
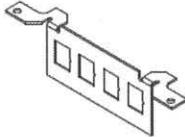
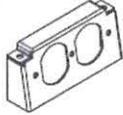
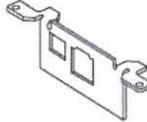
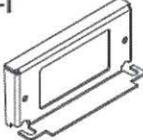
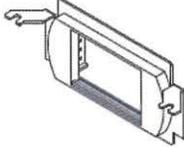
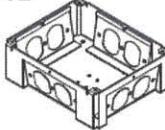
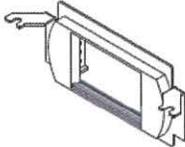
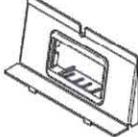
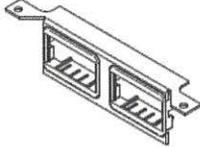
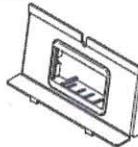
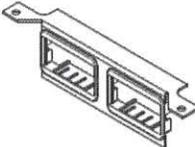
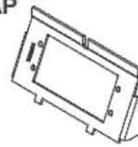
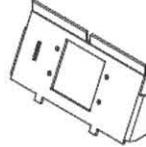


FOR RFB4

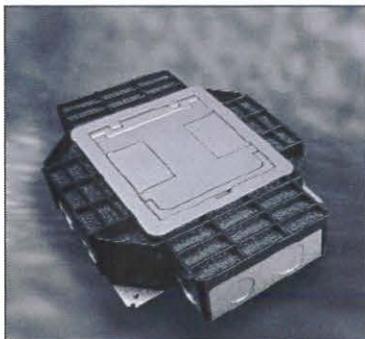
Indicates Bottom KO.

No feed through to opposite data compartment on RFB4.

RFB4 Series Multiservice Steel Recessed Floor Box Accessories

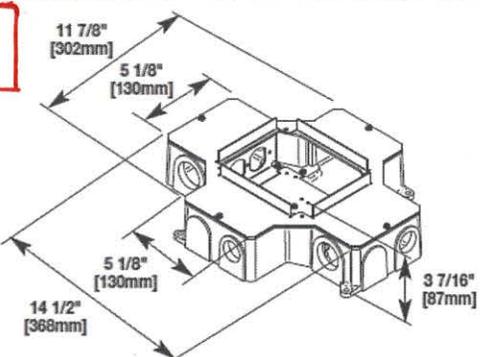
Catalog No./Item	Description/Specifications	Catalog No./Item	Description/Specifications
RFB-B 	Internal Blank Bracket – Power compartments only. Used to close off unused gangs. NOTE: For RFB4 only.	DTB-2-4TKO 	Communication Bracket – Four (4) RJ keystone opening knockouts. Use as blank plate or for up to four (4) RJ openings. NOTE: For RFB4 only. Opening dimension is 9/16" x 3/4" [14.3mm x 19.1mm].
RFB-DR 	Internal Duplex Bracket – Accepts standard 15 Amp & 20 Amp Duplex Receptacles. NOTE: For RFB4 only.	DTB-2-DT 	Communication Bracket – With IBM Type II opening (devices not included). NOTE: For RFB4 only.
RFB-GFI 	Internal GFI Bracket – Accepts standard GFCI or Decorator Style Receptacles, Communication or Audio/Video Devices. NOTE: For RFB4 only.	DTB-2-SD 	Communication Bracket – With duplex opening (devices not included). NOTE: For RFB4 only.
RFB4-LPB 	Communication Bracket – Activate™ low profile adapter included. Wiremold CM Series Open System inserts sold separately. NOTE: For RFB4 only.	RFB-WTB 	Conversion Kit – To convert the RFB4 Box to a RFB4-4DB Box. NOTE: For RFB4 only.
RFB4-LPBS2 	Communication Bracket – Ortronics® Series II Low profile adapter included. NOTE: For RFB4 only.	WTB-2-AB 	Communication Bracket – One 2A size Pass & Seymour® Activate adapter included. Wiremold CM Series Open System inserts sold separately. NOTE: For RFB4 only.
DTB-2-2AB 	Communication Bracket – Two 2A size Pass & Seymour® Activate adapters included. Wiremold CM Series Open System inserts, sold separately. NOTE: For RFB4 only.	WTB-2-RT 	Communication Bracket – Ortronics® AB2TJ TracJack and ABS2 Series II adapters included. NOTE: For RFB4 only.
DTB-2-2RT 	Communication Bracket – Ortronics® AB2TJ TracJack and ABS2 Series II adapters included. NOTE: For RFB4 only.	WTB-AAP 	Internal Audio Video Bracket – Accepts two (2) Extron® Electronics AAP Series Devices. (Sold separately) NOTE: For RFB4-4DB Series Floor Boxes only.
		WTB-MAAP 	Internal Audio Video Bracket – Accepts two (2) Extron® Electronics MAAP Series Devices. (Sold separately) NOTE: For RFB4-4DB Series Floor Boxes only.

Additional configurations available. Please consult your Wiremold Field Sales Representative for more information.

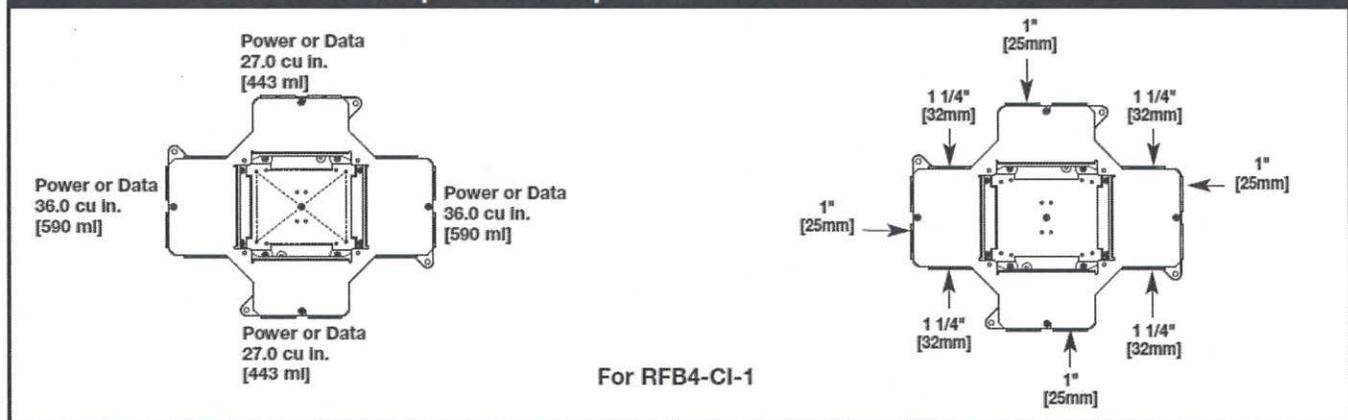


RFB4 Series Floor Box with FloorPort Activation Cover.

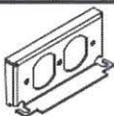
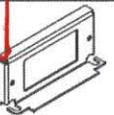
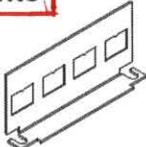
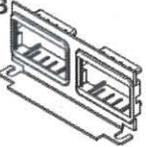
RFB4 Series Multiservice Cast Iron Recessed Floor Box Ordering Information

Catalog No./Item	Description/Specifications
RFB4-CI-1 	<p>Four-Compartment Cast Iron Box – 14 1/2" L x 11 7/8" W x 3 7/16" D [368mm x 302mm x 87mm]. Fully adjustable with tunnel compartment and two receptacle brackets. Feed through from adjacent or opposite compartments only, (not cross compartments). Communication brackets not included. See "Accessories".</p> <p>NOTE: Only for use in concrete floors. All boxes and activations are sold separately.</p>

RFB4 Series Compartment Capacities and Knockout Locations and Sizes

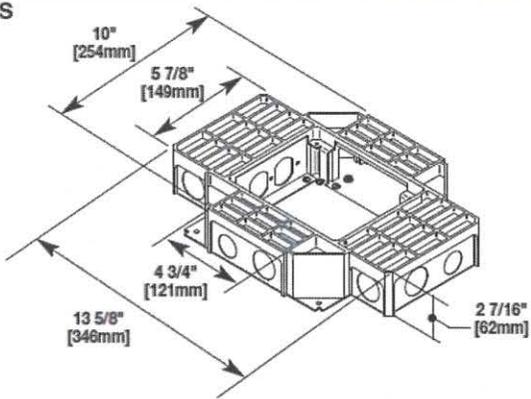


RFB4 Series Multiservice Cast Iron Floor Box Accessories

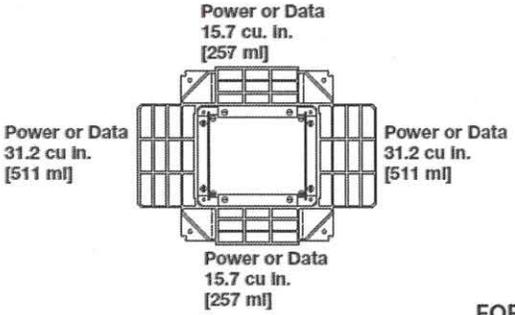
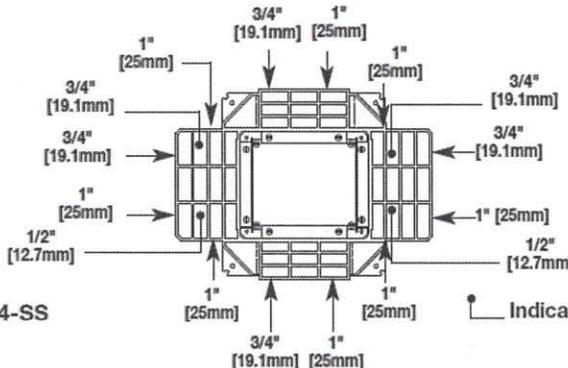
Catalog No./Item	Description/Specifications	Catalog No./Item	Description/Specifications
CIHT-D 	Internal Duplex Receptacle Bracket – Accepts standard 15 Amp & 20 Amp Duplex Receptacles.	CIHT-GFI 	Internal GFI Device Bracket – Accepts standard GFCI or Decorator Style Receptacles, Communication or Audio/Video Devices.
CIH/LT-B 	Internal Blank Bracket – Used to close off unused Gangs.	CIHT-4TKO 	Communication Bracket – Communication bracket with four (4) RJ opening knockouts. Use as blank plate or for up to four RJ openings.
CILT-2AB 	Communication Bracket – Communication bracket with two 2A size Activate adapters included. Accepts Wiremold CM Series Open System communication modules and Pass & Seymour® Activate Series inserts, sold separately.	<p>NOTE: Opening dimension is 9/16" x 3/4" [14.3mm x 19.1mm].</p>	

Additional configurations available. Please consult your Wiremold Field Sales Representative for more information.

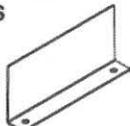
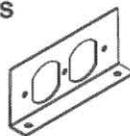
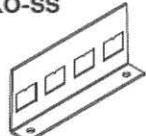
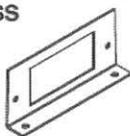
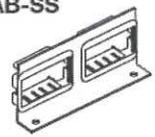
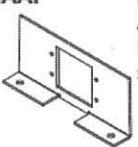
RFB4 Series Multiservice Shallow Steel Recessed Floor Box Ordering Information

Catalog No./Item	Description/Specifications
<p>RFB4-SS</p> 	<p>Four-Compartment Shallow Stamped Steel Box – 13 5/8" L x 10" W x 2 7/16" D [346mm x 254mm x 62mm]. Fully adjustable with tunnel compartment and two receptacle brackets.</p> <p>Feed through tunneling to adjacent compartments only. Tunneling can be set to feed all four compartments from one conduit in a single-service application. Communication brackets not included. See "Accessories".</p> <p>NOTE: Only for use in concrete floors. All boxes and activations are sold separately.</p>

RFB4 Series Compartment Capacities/Knockout Locations & Sizes

	 <p style="text-align: center;">FOR RFB4-SS</p> <p style="text-align: right;">⬤ Indicates Bottom KO</p>
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RFB4 Series Multiservice Shallow Steel Floor Box Accessories

Catalog No./Item	Description/Specifications	Catalog No./Item	Description/Specifications
<p>RFB-B-SS</p> 	<p>Internal Blank Bracket – Used to close off unused Gangs.</p>	<p>RFB-2-SSRT</p> 	<p>Communication Bracket – Ortronics® AB2TJ TracJack and ABS2 Series II adapters included.</p>
<p>RFB-RB-SS</p> 	<p>Internal Duplex Receptacle Bracket – Accepts standard 15 Amp & 20 Amp Duplex Receptacles.</p>	<p>RFB-4TKO-SS</p> 	<p>Internal Bracket – Four RJ Keystone opening knockouts. Use as blank plate or for up to four RJ openings.</p> <p>NOTE: Opening dimension is 9/16" x 3/4" [14.3mm x 19.1mm].</p>
<p>RFB-GFI-SS</p> 	<p>Internal GFI Receptacle Bracket – Accepts standard GFCI & Decorator style Receptacles Communication or Audio/Video Devices.</p>	<p>RFB4-SS-AAP</p> 	<p>Internal Audio Video Bracket – Accepts two (2) Extron® Electronics AAP Series Devices. (Sold separately)</p> <p>NOTE: For RFB4-SS Series Floor Boxes only.</p>
<p>RFB-2AB-SS</p> 	<p>Internal Bracket – Two Pass & Seymour® Activate adapters included. Wiremold CM Series Open System inserts sold separately.</p>	<p>RFB4-SS-MAAP</p> 	<p>Internal Audio Video Bracket – Accepts two Extron® Electronics MAAP Series Devices. (Sold separately)</p> <p>NOTE: For RFB4-SS Series Floor Boxes only.</p>

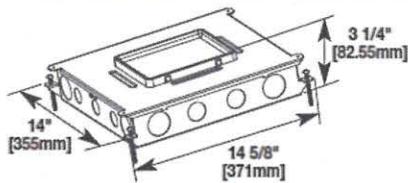
Additional configurations available. Please consult your Wiremold Field Sales Representative for more information.

RFB6 Series Multiservice Steel Recessed Floor Box Ordering Information

Catalog No./Item

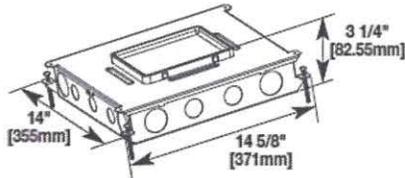
Description/Specifications

RFB6



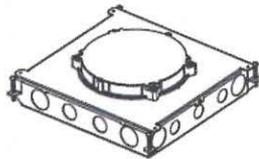
Six-Compartment Box – For use in either concrete or wood floors. Fully adjustable with tunnel compartment. Supplied with two (2) duplex mounting plates, two (2) communication mounting plates (RFB62A), and (2) blank mounting plates. Other plates sold separately.

RFB6-OG



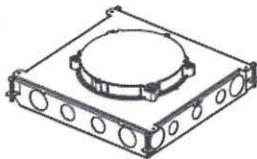
Six-Compartment On-Grade Box – For use in either concrete or wood floors. Fully adjustable with tunnel compartment. Supplied with two (2) duplex mounting plates, two (2) communication mounting plates (RFB62A), and (2) blank mounting plates. Other plates sold separately.

RFB6E



Six-Compartment Box – For use in concrete floors. For use with the round Evolution cover. Fully adjustable with tunnel compartments. Supplied with two (2) duplex mounting plates. Other plates sold separately.

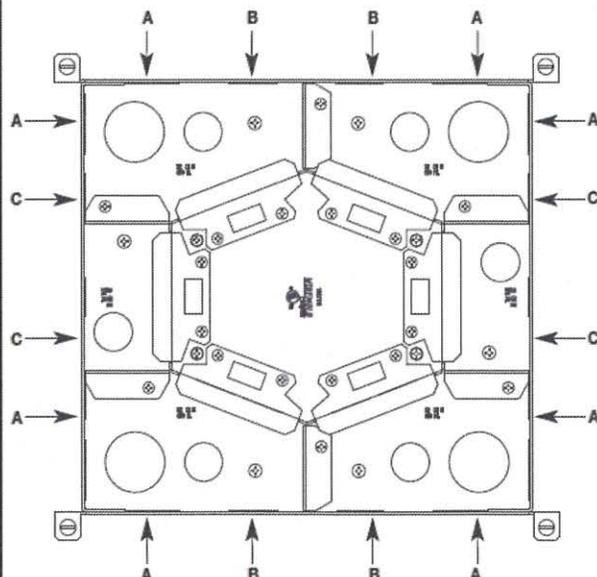
RFB6E-OG



Six-Compartment On-Grade Box – For use in concrete floors. For use with the round Evolution cover. Fully adjustable with tunnel compartments. Supplied with two (2) duplex mounting plates. Other plates sold separately.

RFB6 Series Compartment Capacities/Knockout Locations & Sizes

Side Knockout Locations

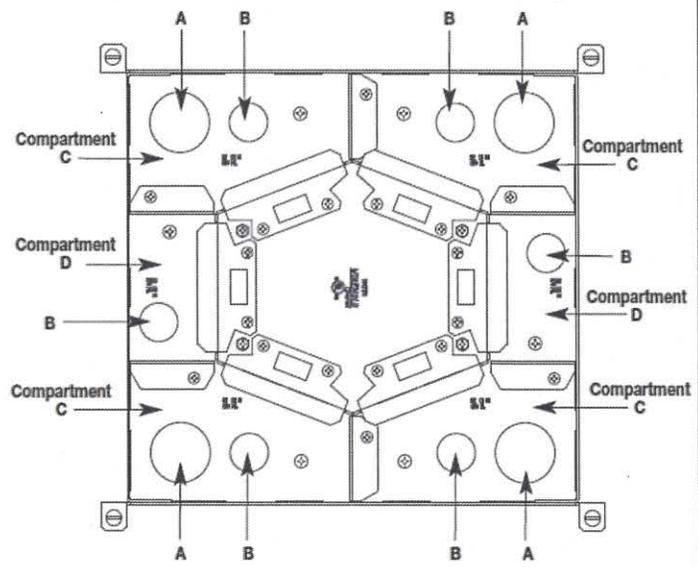


KNOCKOUTS

- A = Side KO 1 1/4" [32mm]
- B = Side KO 1" [25mm]
- C = Side KO 3/4" [19.1mm]

Feed through is accomplished through removable plugs.

Bottom Knockout Locations
Compartment Wire and Communication Capacities



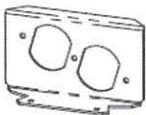
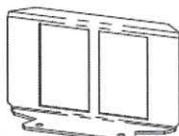
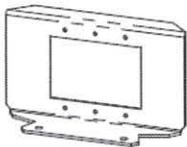
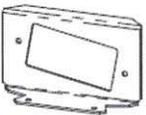
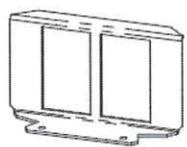
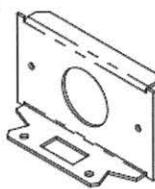
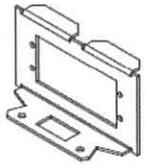
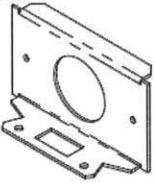
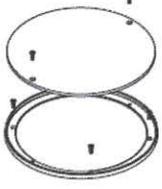
KNOCKOUTS

- A = Bottom KO 1 1/4" [32mm]
- B = Bottom KO 3/4" [19.1mm]

COMPARTMENT CAPACITIES

- C = Power or Data 52 in² [852ml]
- D = Power or Data 23 in² [376ml]

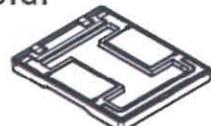
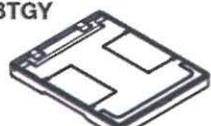
RFB6 Series Multiservice Steel Recessed Floor Box Accessories

Catalog No./Item	Description/Specifications	Catalog No./Item	Description/Specifications
RFB6DP 	Internal Duplex Receptacle Bracket – Accepts standard 15 & 20 Amp Duplex Receptacles. NOTE: For RFB6 Series Floor Boxes Only.	RFB6RT 	Internal Communication Bracket – Includes one (1) adapter to accept Ortronics® TracJack devices, and one (1) adapter to accept Ortronics® Series II devices (sold separately). NOTE: For RFB6 Series Floor Boxes Only.
RFB6B 	Internal Blank Bracket – Closes off unused gangs. NOTE: For RFB6 Series Floor Boxes Only.	RFB6EXT 	Internal Audio Video Bracket – Accepts three (3) Extron® Electronics MAAP Series devices (sold separately). NOTE: For RFB6 Series Floor Boxes Only.
RFB6GFI 	Internal GFI or Decorator Style Receptacle Opening – Accepts standard GFCI & Decorator Style Receptacles, Communication or Audio/Video Devices. NOTE: For RFB6 Series Floor Boxes Only.	RFB62A 	Internal Communication Bracket – Includes two (2) adapters to accept Wiremold CM Series Open System communication inserts (sold separately). NOTE: For RFB6 Series Floor Boxes Only.
RFB6S1 	Internal Single Receptacle Bracket – Receptacle opening 1 3/8" [35mm]. NOTE: For RFB6 Series Floor Boxes Only.	RFB6-AAP 	Internal Audio Video Bracket – Accepts two (2) Extron® Electronics AAP Series Devices. (Sold separately) NOTE: For RFB6 Series Floor Boxes Only.
RFB6S2 	Internal Single Receptacle Bracket – Receptacle opening 1 9/16" [40mm]. NOTE: For RFB6 Series Floor Boxes Only.	RFB6E-CTR 	Bare Concrete & Terrazzo Ring – Nonmetallic ring for use with bare concrete and terrazzo floor applications. NOTE: Only for use on RFB6E and RFB6E-OG Floor Boxes.

RFB6 Floor Box with FloorPort Activation Cover and RFB6E Floor Box with Evolution Series Cover.



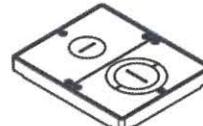
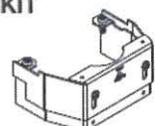
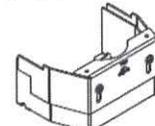
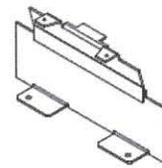
FloorPort Series Cover Assemblies for RFB2, RFB4 & RFB6 Series Floor Boxes

Catalog No./Item	Description/Specifications
FPCTCBK FPCTCBS FPCTCNK FPCTCAL FPCTCGY	Cutout Cover Assembly – Flanged cover for use in tile or carpet installation. Die-cast aluminum assembly available in black (BK), bronze (BZ), brass (BS), nickel (NK), gray (GY), or brushed aluminum (AL). Insert in lid allows for carpet or tile cutouts to match finished floor.
	
FPBTCBK FPBTCBZ FPBTCBS FPBTCNK FPBTCAL FPBTCGY	Blank Cover Assembly – Flanged cover for use in tile or carpet installation. Die-cast aluminum assembly available in black (BK), bronze (BZ), brass (BS), nickel (NK), gray (GY), or brushed aluminum (AL). Lid area is flush with the finished floor, no cutouts provided.
	
FPCTBK FPCTBZ FPCTBS FPCTNK FPCTAL FPCTGY	Cutout Cover Assembly – Flangeless cover for use in tile installation. Die-cast aluminum assembly available in black (BK), bronze (BZ), brass (BS), nickel (NK), gray (GY), or brushed aluminum (AL). Insert in lid allows for tile cutouts to match finished floor.
	
FPBTBK FPBTBZ FPBTBS FPBTNK FPBTAL FPBTGY	Blank Cover Assembly – Flangeless cover for use in tile installation. Die-cast aluminum assembly available in black (BK), bronze (BZ), brass (BS), nickel (NK), gray (GY), or brushed aluminum (AL). Lid area is flush with the finished floor, no cutouts provided.
	

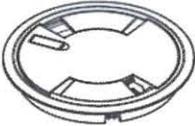
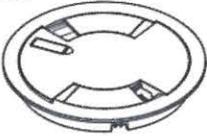
Load Capacities for FloorPort Cover Assemblies	
Catalog Numbers	Maximum Load in Pounds
FPCTC	1000
FPBT	750
FPFFTC	1000
FPCT	1000
FPBT	750
FPFFT	1000

NOTE: Load applied through a 2" [51mm] mandrel in center of service fitting.

NOTE: Loads above are static loads only and do not pertain to rolling loads.

Catalog No./Item	Description/Specifications
FPFFTCBK FPFFTCBZ FPFFTCBS FPFFTCNK FPFFTCAL FPFFTCGY	Furniture Feed Cover Assembly – Flanged cover for use in tile or carpet installation. Die-cast aluminum assembly available in black (BK), bronze (BZ), brass (BS), nickel (NK), gray (GY), or brushed aluminum (AL). Provided with one 1" trade size screw plug for power or communication type cabling and one combination 1 1/4" and 2" trade size screw plug for communication type cabling. Allows for feeding both power and communication cabling.
	
FPFFTBK FPFFTBZ FPFFTBS FPFFTNK FPFFTAL FPFFTGY	Furniture Feed Cover Assembly – Flangeless cover for use in tile installation. Die-cast aluminum assembly available in black (BK), bronze (BZ), brass (BS), nickel (NK), gray (GY), or brushed aluminum (AL). Provided with one 1" trade size screw plug for power or communication type cabling and one combination 1 1/4" and 2" trade size screw plug for communication type cabling. Allows for feeding both power and communication cabling.
	
RFBKIT	Barrier Kit – Barrier kit used to separate power and communication wires in partition feed covers. Supplied with base and three extensions to adjust to cover height. Kit should be used on RFB4 and RFB4-SS Floor Boxes. Kits are sold separately.
	
RFBCKIT	Barrier Kit – Barrier kit used with RFB4-CI Floor Boxes. Kits are sold separately.
	
RFB6KIT	Barrier Kit – Barrier kit used to separate power and communication wires in partition feed covers. FloorPort Partition Feed Covers sold separately. NOTE: For use with RFB6 Series Floor Boxes only.
	

Evolution Series Cover Assemblies for RFB6E & RFB6E-OG Floor Boxes

Catalog No./Item	Description/Specifications	Catalog No./Item	Description/Specifications
<p>8CTCGY* 8CTCBK* 8CTCBS* 8CTCBZ* 8CTCNK*</p>	<p>Surface Style Cover Assembly – Die-cast aluminum cover assembly. Cover assembly is available in the following finishes: painted black (BK), painted gray (GY), nickel (NK), brass (BS), and bronze (BZ). 8CTC Series Cover Assemblies designed for use with 8STC and 8STCP Poke-Thru Stem Assemblies.</p>	<p>8TS</p>	<p>TILE Shim – Used for floor coverings greater than 5/16" [7.9mm]. The 8TS will allow the top surface of the cover to be flush with the finished floor. Includes: two (2) 1/8" [3.2mm] thick shims and two (2) 1/16" [1.6mm] thick shims. Up to a total of 3/8" [9.5mm] of adjustment.</p>
	<p>Flush Style Cover Assembly – Die-cast aluminum cover assembly. Cover assembly is available in the following finishes: painted black (BK), painted gray (GY), nickel (NK), brass (BS), and bronze (BZ). 8CTC Series Cover Assemblies designed for use with 8STC and 8STCP Poke-Thru Stem Assemblies. Includes one (1) 8TS Tile Shim.</p>		
<p>8CTGY* 8CTBK* 8CTBS* 8CTBZ* 8CTNK*</p>	<p>Flush Style Cover Assembly – Die-cast aluminum cover assembly. Cover assembly is available in the following finishes: painted black (BK), painted gray (GY), nickel (NK), brass (BS), and bronze (BZ). 8CTC Series Cover Assemblies designed for use with 8STC and 8STCP Poke-Thru Stem Assemblies. Includes one (1) 8TS Tile Shim.</p>		
			

* Add suffix "TR" to the end of the part number to indicate tamper-resistant cover assembly. Tamper-resistant versions are secured with a single tamper-resistant screw.

DATACOM CONNECTIVITY OPTIONS

Now you have a wide range of options for providing datacom connectivity into Wiremold/Legrand Pathways. They are:

- Ortronics® TracJack® and Series II Modular Connectivity Solutions
- Pass & Seymour Activate™ Modular Inserts
- Open System Communication Modules

Ortronics® Connectivity

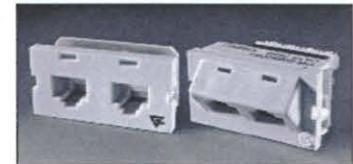
TracJack® Individual Jack System

- Front-loading, snap-in design supports future moves adds and changes
- Inserts for voice, data, audio, and video
- Available Category 3, 5e, 6, USOC 6-position, and other media
- Flat or angled 45° exit configurations
- Choice of 13 colors and color matched to Wiremold Systems
- Universal T568A/B wiring format



Series II Front-Loading, Module System

- Module design features easy snap-in front-loading design
- Linear 110 punch down format for easy termination
- Inserts for voice, data, audio, and video
- Available Category 3, 5e, 6, USOC 6-position, and other media
- Available in flat or angled 45° exit configurations
- Color matched to Wiremold Systems



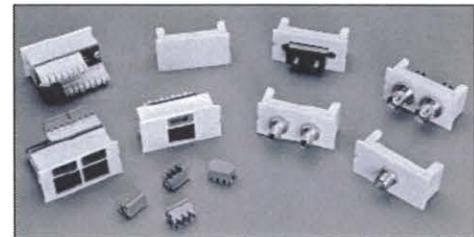
For detailed product selection refer to the Ortronics Catalog or visit www.ortronics.com.

Pass & Seymour Legrand Network Wiring

Activate™ Series Front-Loading Inserts

- Modular inserts for voice, data, audio and video applications
- Front-load, snap-in design
- Color and texture matched to Wiremold Systems
- Available Category 3, 5e, 6, as well as 6-position USOC
- Universal T568A/B wiring format

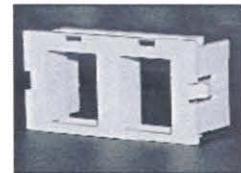
For detailed product selection refer to the Pass & Seymour Network Wiring Catalog or visit www.passandseymour.com.



Open Connectivity Solutions

Wiremold Open System Communications Modules

- Accommodate a wide range of manufacturers' communications outlets including keystone jacks, as well as proprietary solutions from Avaya (Systemax) and NORDX
- Modules insert into a wide range of Wiremold Systems
- Pre-punched faceplates accept common communication devices



NOTE: For more information on integrating connectivity into Wiremold Cable Management Systems contact the Wiremold Applications Engineering Team or your local Wiremold Sales Representative.



Wiremold

WIREMOLD

U.S. and International:

60 Woodlawn Street • West Hartford, CT 06110
1-800-621-0049 • FAX 860-232-2062 • Outside U.S. 860-233-6251

Canada:

570 Applewood Crescent • Vaughan, Ontario L4K 4B4
1-800-723-5175 • FAX 905-738-9721

Sold by:



QUESTION REGARDING (SOW) CONFERENCE ROOM RENOVATION PROJECT

Order Number: SDR86016M0521

Conference Room Ground Floor Renovation

1. INTRODUCTION

1.1

1.2

1.3

1.4 EXECUTION

1.4.1

NO LAYOUT IS INCLUDED WITH SOW. DIMENSIONS ARE NEEDED

1.4.2 **Electrical and Data work.** The Contractor shall be responsible of removing and relocating all electrical, data and phone outlets and connections in the existing partition walls and floor. New electrical outlets, light switches and data and phone connections need to be installed as indicated in the drawings..

For UTP cable

It is not indicated the distance between the workplace to the Facilities/Control Room (Telecommunications North Room, where we will finish the installation of the cables). Nor do we see the code part, if they have one, for the cable specifications you are requiring

Distance: The distance between the work place to the Facility/Control Room does not exceed 300 feet.

Cable Specifications:

Commscope/Systimax - 23-4P C6 CMP ORN 1RL GIGASPEED XL 23-4P C6 CMP ORN 1RL GIGASPEED (MIN QTY 27,000 FT) (CSC Number: 586218) - Orange cable box

Commscope/Systimax - 23-4P C6 CMP GRN 1RL GIGASPEED XL 2071 004EGN R1000 (CSC Number: 586221) - Green cable box

COMMSCOPE SYSTIMAX SOLUTIONS | 2071E BL 4/23 W1000 | 700208093

GigaSPEED XL 2071E ETL Verified Category 6 U/UTP Cable, Plenum, Blue Jacket, 4 Pair Count, 1000 FT (305 m) Length, WE TOTE box Blue cable box

GigaSPEED XL® 2071E ETL Verified Category 6 U/UTP Cable, plenum, slate jacket, 4 pair count, 1000 ft (305 m) length, reel - Gray

Tyco - AMP 1375055-5 Cat6 Jack Insert Orange \$8.50

Tyco - AMP 1375055-9 Cat6 Jack Insert – Green 8.50

Tyco - AMP 1375055-6 Cat6 Jack Insert Blue \$8.50

Tyco - AMP 1375055-4 Cat6 Jack Insert Gray

To work with this kind of Jack the vendor may need to buy AMP connect termination tool 1725150-1

https://www.google.com/shopping/product/8257734904869251912?sclient=psy-ab&biw=1603&bih=903&q=amp+netconnect+tool+price&oq=crimp+tool+AMP+1375055-5+Cat6+Jack+Insert&pbx=1&bav=on.2,or.&bvm=bv.125596728,d.eWE&tch=1&ech=1&psi=uplyV_LuI8OEmwHkhagI.1467128360748.9&prds=hsec:online&sa=X&ved=0ahUKEwiM54uch8vNAhVERSYKHTtNCtoQviQImQE

Note: the scope of work indicates that **27 cables** will be installed, 9 orange, 9 blue and 9 green. However, after carefully checking the total number of data and voice cables to be install/run is **53**. They will be distributed as follows: 14 grey, 15 orange, 15green and 9 blue. Cable specification is provided above.

For faceplates

We see the part number but we could identify reviewing the web page of the manufacturer (SYSTIMAX) that this faceplate is two (2) outputs data not three (3) as you specify. **To be 3 outputs should be the faceplate with code 2111010-3? Please confirm.**

The faceplates needed for the second floor and for connections that will be installed on the wall on the ground floor can be purchased from Network Analysis SCS, INC. This is a four outputs face plate. Three will be used and the fourth one will be left covered.

Tyco - AMP 406185-3 **4 Port A**ngled Faceplate White 2.08

<http://www.nascars.com/search.asp?pg=1&stext=406185-3+&sprice=&stype=&scat=&sfil0=>

The jack insert can be purchased from the following location:

http://www.nascars.com/products/Tyco_AMP_Cat6_Jacks

	<p>Tyco - AMP 1375055-5 Cat6 Jack Insert Orange</p> <p>BRAND NEW AMP</p>	<p>\$8.50</p>	<p>32</p>	<p>1</p>	<p>Buy</p>
	<p>Tyco - AMP 1375055-6 Cat6 Jack Insert Blue</p> <p>BRAND NEW AMP</p>	<p>\$8.50</p>	<p>75</p>	<p>1</p>	<p>Buy</p>
	<p>Tyco - AMP 1375055-7 Cat6 Jack Insert Red</p> <p>BRAND NEW AMP</p>	<p>\$8.50</p>	<p>75</p>	<p>1</p>	<p>Buy</p>
	<p>Tyco - AMP 1375055-8 Cat6 Jack Insert Yellow</p> <p>BRAND NEW AMP</p>	<p>\$8.50</p>	<p>38</p>	<p>1</p>	<p>Buy</p>
	<p>Tyco - AMP 1375055-9 Cat6 Jack Insert - Green</p> <p>BRAND NEW AMP</p>	<p>\$8.50</p>	<p>75</p>	<p>1</p>	<p>Buy</p>



Tyco - AMP 1375055-4 Cat6 Jack Insert Gray

Ground data/voice connections



Single-gang stamped steel and trip

This is the enclosure that should be used for the data/voice connection

legrand®

Wiremold

WI REMOLD

u.s. and International:

60 Woodlawn street • West Hartford, CT 06110

1-800-0049 • FAX 860-232-2062 • outside U.S. 860-233-6251

canada:

570 Applewood Crescent • vaughan, Ontario L4K 4G4

1-800-723-5175 • FAX 905-738-9721

ED771R16 - Updated November 2009 - For latest specs visit www.legrand.us/wiremold

Series II Front-Loading, Module System

- Module design features easy snap-in front-loading design
- Linear 110 punch down format for easy termination
- Inserts for voice, data, audio, and video
- Available Category 3, 5e, 6, USOC 6-position, and other media
- Available in flat or angled 45° exit configurations
- Color matched to Wiremold Systems



For detailed product selection refer to the Ortronics Catalog or visit www.ortronics.com

These are the type of connectors that will be used. There will be a total of 7 connections (Jacks); six for data and one for voice. The data connections should 2 orange, 2 green and 2 gray cables. The voice will be the blue cable. Uniformity should be maintained during the installation of the connectors.

For Patch Cords

We see that the patch cords to be used are indicated, assuming that they would be of the same colors of each wire to be used, **can confirm the color of the patch cords to be used and that long would be both the user side as side equipment room? You have the manufacturer code of patch cords to use?**

On the equipment, telecommunications closet, side the colors will be orange and green. The lengths are listed below. On the users side, orange, green and blue (VOICE) and the lengths are listed below.

Patch Cords 7feet

Systemax GigaSPEED XL GS8E Cat6 Patch Cable - **Orange** 7 Foot Part# CPC3312-06F007

Systemax GigaSPEED XL GS8E Cat6 Patch Cable - **Green** 7 Foot Part# CPC3312-04F007

Systemax CPC3312-0ZF007 GigaSPEED XL GS8E Cat6 Patch Cable - **Dark Blue** 7 Foot

Patch Cords 10 feet

Systemax GigaSPEED XL GS8E Cat6 Patch Cable - **Orange** 10 Foot Part# CPC3312-06F010

Systemax GigaSPEED XL GS8E Cat6 Patch Cable - **Green** 10 Foot Part# CPC3312-04F010

Systemax CPC3312-0ZF010 GigaSPEED XL GS8E Cat6 Patch Cable - **Dark Blue** 10 Foot

Patch Cords 15 feet

Systemax GigaSPEED XL GS8E Cat6 Patch Cable - **Green** 15 Foot Part# CPC3312-04F015

Systemax GigaSPEED XL GS8E Cat6 Patch Cable - **Green** 15 Foot Part# CPC3312-04F015

Systemax CPC3312-0ZF015 GigaSPEED XL GS8E Cat6 Patch Cable - **Dark Blue** 15 Foot

Systemax GigaSPEED XL GS8E Cat6 Patch Cable - **Gray 5 Foot** Part# CPC3312-03F005

Systemax GigaSPEED XL GS8E Cat6 Patch Cable - **Gray 7 Foot** Part# CPC3312-03F007

Systemax CPC3312-03F010 GigaSPEED XL GS8E Cat6 Patch Cable - **Gray 10 Foot**

Systemax GigaSPEED XL GS8E Cat6 Patch Cable - **Gray 15 Foot** Part# CPC3312-03F015

For Patch Panels.

The cables will be installed in the northern telecommunications room. There is enough space for 27 new outlets to be installed and if they have more modular patch panel, otherwise? **You have the manufacturer's patch panel code to be used?**

The cables will be installed in the northern telecommunications room. There is enough space for 27 new outlets to be installed and if they have more modular patch panel, otherwise? **You have the manufacturer's patch panel code to be used?**

Patch Panel Jacks

COMMSCOPE BNS | 1375187-9

SL Series 110Connect Category 6 Modular Jack, T568A/T568B Wiring, Unshielded, With Dust Cover, **Green**

COMMSCOPE BNS | 1375187-5

SL Series 110Connect Category 6 Modular Jack, T568A/T568B Wiring, Unshielded, With Dust Cover, **orange**

Jacks for Patch Panels: 1375187-4 | JACK/DC,SL110,RJ45,CAT6 ,GRaY

1.4.3 TVs. The TV's outlets and connections will be removed and all lines will be relocated except for one TV that will remain as is (see drawings). **Behind the screen of the projector one TV will be installed and a smart board,...**

THE LINK TO SMART BOARD'S INSTALLATION MANUAL IT'S NOT FOUND

The face plate to be used for the connection of the TV, coax – HDMI and Ethernet , can be purchased from

Recessed HDMI Wall Plate, with 1* HDMI F/F Adapter, 1*RJ45 Cat5e Coupler & 1* F Connector, Gold Plated QTY =4

http://www.monoprice.com/Product?p_id=12097&gclid=CLvNwaj-zc0CFcUmhgodWo0AAg

Horizontal Organizers.

This is the type to be used? Do you have manufacturer's code for these organizers ?

We need the route and distance between workplace and Electric Control Rooms. Also it's needed the breakers specifications, availability of conduit room for new circuits.

1.4.3 TVs. The TV's outlets and connections will be removed and all lines will be relocated except for one TV that will remain as is (see drawings). **Behind the screen of the projector one TV will be installed and a smart board,...**

THE LINK TO SMART BOARD'S INSTALLATION MANUAL IT'S NOT FOUND

1.4.4 Data and telephone outlets and wiring.

1.4.5 Demolition work.

Ceiling Tiles. Since three (3) rooms are now consolidated into one, the ceiling tiles need to be slightly modified to be adequate for the new layout and will have to be adapted to look like a continuous ceiling...

We need the specifications of new ceiling tiles to be installed. Should we consider to change the whole area or just the necessary ones? [Please see below ceiling tiles specifications](#)

Edge Profile	Grid Drawings Cat. pgs. 226-228 or armstrong.com/ catdwg	Item No.	Dimensions	UL Classified		Fire Rating	Light Reflect	Sag Resist	Anti-Microbial	Durable					Recycle Program		
				Acoustics NRC	CAC					Wash	Scrub	Water Repel	Impact	Scratch		Soil	Yes
ULTIMA Tegular																	
9/16" Beveled Tegular	31-34, 54	1916 1916M	1' x 2' x 3/4" 300 x 600 x 19mm		N/A	N/A	Class A	0.90	HumiGuard+	BioBlock+	Wash	Scrub	Water Repel	Impact	Scratch	Soil	Yes
	31-34, 54	1912* 1912M 1912HRC	2' x 2' x 3/4" 600 x 600 x 19mm 2' x 2' x 3/4"		0.70	35	Class A	0.90									
	31-34, 54	1952 1952M	2' x 2' x 3/4" 600 x 600 x 19mm		0.60	40	Class A	0.90									
	31-34, 54	1915 1915M 1915HRC	2' x 4' x 3/4" 600 x 1200 x 19mm 2' x 4' x 3/4"		0.70	35	Class A	0.90									
	31-34, 54	1905 1905M	30" x 30" x 3/4" 750 x 750 x 19mm		0.70	35	Class A	0.90	Standard								
	15/16" Beveled Tegular	12	1917 1917M	1' x 2' x 3/4" 300 x 600 x 19mm		N/A	N/A	Class A	0.90								
15/16" Beveled Tegular	12	1911 1911M 1911HRC	2' x 2' x 3/4" 600 x 600 x 19mm 2' x 2' x 3/4"		0.70	35	Class A	0.90									
	12	1951 1951M	2' x 2' x 3/4" 600 x 600 x 19mm		0.60	40	Class A	0.90									
	12	1914 1914M 1914HRC	2' x 4' x 3/4" 600 x 1200 x 19mm 2' x 4' x 3/4"		0.70	35	Class A	0.90									
ULTIMA Health Zone™ (see Health Zone Ultima, CS-4066)																	
9/16" Beveled Tegular	31-34, 54	1936*	2' x 2' x 3/4"		0.70	35	Class A	0.86									
15/16" Beveled Tegular	12	1937	2' x 2' x 3/4"		0.70	35	Class A	0.86									
* Ultima® Create!™ custom images and colors available for this item (see Ultima Create! Brochure CS-4374 for details). armstrong.com/ceilings (search: ultimacreate)																	
Suspension Systems																	
15/16"		9/16"						Item 1912 - CAC 33 on Interlude, Sonata, Suprafine									
	Prelude®		Interlude® XL*	Silhouette® XL 1/4" or 1/8" Reveal	Sonata® XL	Suprafine®	Trimlok® Screw-Slot										
Physical Data																	
Material Wet-formed mineral fiber with DuraBrite® acoustically transparent membrane 1936, 1937 - Wet-formed mineral fiber with DuraBrite acoustically transparent water-repellent membrane				standing water and outdoor applications. (Excludes item 1905)				Application Considerations (All items except HRC) 1' x 2' products intended for use with 1' x 2' recessed lighting fixtures and are not UL Classified for acoustics.									
Surface Finish DuraBrite with factory-applied latex paint				VOC/Formaldehyde Emissions Meets CA Dept. of Health Services Standard Practice for the testing of VOC Emissions and is listed on CHPS High Performance Products Database for Low-Emitting Materials.				Cleaning Recommendations (Items 1936, 1937 only) To clean panel, use a clean, white cloth with water or a mild detergent and wipe surface. To disinfect panel, lightly spray surface and wipe clean with a clean, white cloth. Acceptable colorless disinfectants include:									
Fire Performance ASTM E84 and CAN/ULC S102 surface burning characteristics. Flame Spread Index 25 or less. Smoke Developed Index 50 or less. (UL labeled)				Anti-Mold/Mildew & Bacteria BioBlock® Plus contains an anti-microbial treatment and provides guaranteed resistance against growth of mold/mildew and Gram-positive and Gram-negative odor/stain-causing bacteria for 30 years.				• Sodium hypochlorite • Hydrogen peroxide • Isopropyl alcohol • Quaternary ammonium									
ASTM E1264 Classification Type IV, Form 2, Pattern E Fire Class A				Insulation Value R Factor - 2.2 (BTU units) R Factor - 0.39 (Watts units)				Weight; Square Feet/Carton 1905 - 1.05 lbs/SF; 62.5 SF/ctn 1911, 1912, 1914, 1915 - 1.05 lbs/SF; 48 SF/ctn 1916, 1917 - 1.05 lbs/SF; 24 SF/ctn 1936, 1937 - 1.08 lbs/SF; 48 SF/ctn 1951, 1952 - 1.31 lbs/SF; 48 SF/ctn									
Sag Resistance HumiGuard® Plus - superior resistance to sagging in high humidity conditions up to, but not including,				30-Year Performance Guarantee & Warranty Information Details in back of catalog or at armstrong.com/warranty													

MINERAL FIBER

Figure 1 Ceiling tiles specs

1.4.6 **Lighting, Smoke Detectors, Occupancy sensors and projector and screen.**

1.4.7 HAVC Diffuser, thermostats and Fire Sprinklers

1.4.8 Doors.

1.4.9 **Paint.** When the final work is completed, the area must be painted in the color determined by the COR or Facilities Architect. Inside the Conference Room and outside where the door was removed, that entire wall must be painted... **SPECIFICATIONS FOR PAINT ARE NEEDED.**

DOMINICAN BRAND PAINTS TO BE USED ? Sherwin William satinated paint:

- Grey 7045 + ¼ Formula

- white 7008

- Door frame: 6376

1.4.10 **Carper tiles.** As with the ceiling tiles, the carpets will have to be modified as well to fit the new layout. Post will provide the carpet tiles and glue and all existing carpet tiles in good condition will be reused. The carpets in bad condition will be replaced...

WE ONLY NEED TO PROVIDE LABOR FOR THIS ITEM?? Yes, only labor.

1.4.11 Cleaning.

1.4.12 Additional work.

1.4.13 **Other.** Contractor personnel shall not walk outside of the work area at any time, and they will be escorted at all times. The contractor will be responsible to remove prior approval of the Contracting Officer Representative (COR) all furniture that may be disrupting their work ...

HOW DISTANT IS THE AREA FOR FURNITURES STORAGE FROM ROOMS TO BE INTERVENED ??? here we're referring to topics 1.4.1 and 1.4.14 where is stated that removed furnitures (cabinets, sound proof panels, ceiling and rug tiles) should be protected of damages. As some works implying floor cuts , we consider the available space in those rooms is critical. **we will have an available storage space near the site**

For your reference (*Other. Contractor personnel shall not wander outside of the work area at any time, and they will be escorted at all times. The contractor will be responsible to remove prior approval of the Contracting Officer Representative (COR) **all furniture that may be disrupting their work and put it back in place later on.** They are responsible to cover and protect all equipment to avoid any damages.*)

1.4.2 Electrical and Data work. The Contractor shall be responsible of removing and relocating all electrical, data and phone outlets and connections in the existing partition walls and floor. New electrical outlets, light switches and data and phone connections need to be installed as indicated in the drawings..

1.- There are additional pipes for electrical circuits and data? If not exist, can be installed in existing pipes and having only one circuit , new additional circuits circuits **No, the new additional circuits will go to the electrical rooms in the existing circuits.**

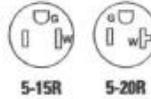
2.- Please provide specifications for electric faceplates and accesories. You have any local supplier identified for this accesories? **Specs detailed below:**

Electrical:

Wall receptacles

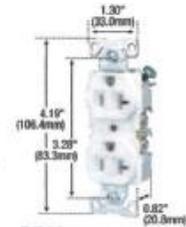
Commercial Specification Grade Straight Blade Receptacles

2-Pole, 3-Wire Grounding
15A, 125V/AC
20A, 125V/AC
NEMA 5-15R, 5-20R

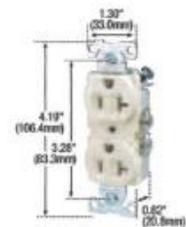


Commercial Grade Receptacles

Back Wire & Side Wire	15A, 125V NEMA 5-15R		20A, 125V NEMA 5-20R	
Description	Catalog No. Color Suffix		Catalog No. Color Suffix	
Duplex Receptacle	<input type="checkbox"/> BR15 A, B, BK, GY, LA, V, W		<input checked="" type="checkbox"/> BR20 GY A, B, BK, GY, LA, RD, V, W	
Side Wire	15A, 125V NEMA 5-15R		20A, 125V NEMA 5-20R	
Description	Catalog No. Color Suffix		Catalog No. Color Suffix	
Duplex Receptacle	<input type="checkbox"/> CR15 A, B, BK, GY, LA, V, W		<input type="checkbox"/> CR20 A, B, BK, GY, LA, V, W	
Single Receptacle	<input type="checkbox"/> 817 A, B, BK, LA, V, W		<input type="checkbox"/> 1877 A, B, BK, LA, V, W	



BR20

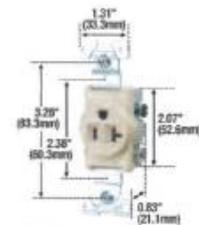


CR20

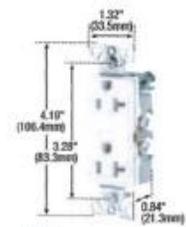
Decorator Commercial Grade Receptacles

Back Wire & Side Wire	15A, 125V NEMA 5-15R		20A, 125V NEMA 5-20R	
Description	Catalog No. Color Suffix		Catalog No. Color Suffix	
Duplex Receptacle	<input type="checkbox"/> 6252 † A, B, BK, GY, LA, V, W		<input type="checkbox"/> 6352 A, B, BK, GY, LA, RD, V, W	
Single Receptacle	<input type="checkbox"/> 6250 V, W		<input type="checkbox"/> 6350 † A, B, V, W	

† Not NOM certified



1877



6352

Color Ordering Information

For ordering receptacles, include Cat. No. followed by the color code: A (Almond), B (Brown), BK (Black), BL (Blue), GY (Gray), LA (Light Almond), RD (Red), RN (Orange), V (Ivory), W (White)

Icon Key

- Build-To-Spec Customizable Devices - see page A-4
- NAFTA Compliant - see page O-30

Accessories for Commercial Grade NEMA 5-15 & 5-20 Receptacles

Description	Catalog No.	
2-Gang standard size duplex receptacle wallplate, brown	<input type="checkbox"/> 5150B	
1-Gang mid-size single receptacle wallplate, 1.4" hole, gray	<input type="checkbox"/> PJ7GY	

Duplex Receptacle				
Description	Material	Catalog No.	Colors	 
1-Gang Duplex	Nylon	□ 5132__	A, B, BK, GY, LA, RD, V, W	•
	Thermoset	□ 2132__	A, B, LA, V, W	•
	* 302/304 Stainless Steel	▣ 93101	—	•
	REPEL 302/304 Stainless Steel	□ 93101AM	—	• •
2-Gang Duplex	Nylon	□ 5150__	A, B, BK, GY, LA, RD, V, W	•
	Thermoset	□ 2150__	A, B, LA, V, W	•
	* 302/304 Stainless Steel	▣ 93102	—	•
	REPEL 302/304 Stainless Steel	□ 93102AM	—	• •
3-Gang Duplex	302/304 Stainless Steel	□ 93103	—	•
	REPEL, 302/304 Stainless Steel	□ 93103AM	—	• •
	Brass	□ 94101	—	•



1-Gang



2-Gang



3-Gang

Single Receptacle				
Description	Material	Catalog No.	Colors	 
1-Gang Toggle with 1.406" (35.712mm) Hole	Nylon	□ 5131__	A, B, BK, GY, LA, V, W	•
	Thermoset	□ 2131__	A, B, LA, V, W	•
	302/304 Stainless Steel	□ 93091	—	•
	REPEL, 302/304 Stainless Steel	□ 93091AM	—	• •
	Brass	□ 94091	—	•



1-Gang

Color Ordering Information

For ordering wallplates, include Cat. No. followed by the color code: A (Almond), B (Brown), BK (Black), BL (Blue), GY (Gray), LA (Light Almond), RD (Red), RN (Orange), V (Ivory), W (White)

Icon Key

-  NAFTA Compliant - see page O-30
-  REPEL Wallplates - see page J-1

Certifications

2000 series wallplates are cULus certified
 5000 series wallplates are cULus certified
 9000 series wallplates are UL and CSA certified

Specification Information:

Wallplates: J-21



Category 6 Products

SL Series Category 6 Modular Jacks

02



- Thin profile improves outlet density
- Modular Jacks available with integral dust covers
- 180° or 90° cable dress for easy termination
- Universal wiring label permits wiring to T568A or T568B
- Meets or exceeds all TIA and ISO component performance requirements
- Bend-limiting strain relief included with unshielded jacks
- UL Listed: E81956
- 8-Position RJ45 Modular Jacks for 1, 2, 3 and 4-Pair applications
- Can be terminated with either SL Series Modular Jack Termination Tool (1725150-1) or standard 110 punch-down tools, see Chapter 22
- RoHS compliant
- Bulk packaging is 25 jacks per bag, 4 bags per carton
- Colors in table are approximate
- For unbedded patch panels see Chapter 15

Description	Shielding	Cable Color	Without Dust Cover	With Dust Cover	Without Dust Cover	
			Part Number	Part Number	Bulk Packaged	
SL Series Category 6 Modular Jacks	Unshielded	90° (Side) or 180° (Rear)	Almond	1375055-1	1375187-1	2-1375055-1
			Black	1375055-2	1375187-2	2-1375055-2
			White	1375055-3	1375187-3	2-1375055-3
			Gray	1375055-4	1375187-4	2-1375055-4
			Orange	1375055-5	1375187-5	2-1375055-5
			Blue	1375055-6	1375187-6	2-1375055-6
			Red	1375055-7	1375187-7	2-1375055-7
			Yellow	1375055-8	1375187-8	2-1375055-8
			Green	1375055-9	1375187-9	2-1375055-9
			Violet	1-1375055-0	1-1375187-0	3-1375055-0
	Electrical Ivory	1-1375055-1	1-1375187-1	3-1375055-1		
	Alpine White	1-1375055-3	1-1375187-3	3-1375055-3		
	Shielded	180° (Rear) 90° (Side)	Black	1375188-1*	-	-
			Black	1479552-1*	-	-

*Note: Shielded jacks are not available in colors, or with dust covers and do not accept strain reliefs. Colors are approximate and for reference only.

SL Series Modular Jack Strain Reliefs



- Provide strain relief for terminated cables in the Work Area
- For use with unshielded SL Series Modular Jacks only

Description	Color	Figure	Part Number
Bend-Limiting Strain Relief	Smoked Gray	A	1375200-1
Strain Relief	Clear	B	1375157-1

SL Series Multimedia Inserts



- May be used in straight or angled faceplates, SL Series faceplate modules, surface mount modules, mounting strips and SL Series patch panels
- Inserts easily snap into place
- RCA 110 termination multimedia jack:
 - Use where distances are less than 130 ft
 - For audio and video signals
 - Uses one pair of twisted-pair cable
 - White, red or yellow dielectrics to match home theater equipment
 - Not recommended for component DVD connections
- S-Video 110 termination multimedia jack:
 - Use where distances are less than 130 ft
 - For S-Video Y/C (Luminance/Chrominance Black and White/Color) signals
 - Uses two pairs of a standard twisted-pair cable

06

Insert Type		16761 - ITEM 04	Black	White	Gray	Electrical Ivory	Alpine White	
3.5 mm Stereo, Mini-Headphone	Solder Termination	A	1479086-1	1479086-2	1479086-3	1479086-4	1-1479086-1	
	Screw Terminal	B	1933582-1	1933582-2	1933582-3	1933582-4	1-1933582-1	
Blank		C	1116412-1	1116412-2	1116412-3	1116412-4	1-1116412-1	
BNC Coupler		D	1339124-1	1339124-2	1339124-3	1339124-4	1-1339124-1	
F-Connector Coupler 2 GHz	Red Dielectric	E	1499855-1	1499855-2	1499855-3	1499855-4	1-1499855-1	
	White Dielectric	F	1479230-1	1479230-2	1479230-3	1479230-4	1-1479230-1	
RCA to 110 Punch Down	White Dielectric	G	1479231-1	1479231-2	1479231-3	1479231-4	1-1479231-1	
	Yellow Dielectric	H	1479232-1	1479232-2	1479232-3	1479232-4	1-1479232-1	
	Red Dielectric	I	1375361-1	1375361-2	1375361-3	1375361-4	1-1375361-1	
RCA Coupler	White Dielectric	J	1375362-1	1375362-2	1375362-3	1375362-4	1-1375362-1	
	Yellow Dielectric	K	1375363-1	1375363-2	1375363-3	1375363-4	1-1375363-1	
	Green Dielectric	L	1933192-1	1933192-2	1933192-3	1933192-4	1-1933192-1	
	Blue Dielectric	M	1933193-1	1933193-2	1933193-3	1933193-4	1-1933193-1	
	Orange Dielectric	N	1933194-1	1933194-2	1933194-3	1933194-4	1-1933194-1	
RCA to F-Connector		O	1933096-1	1933096-2	1933096-3	1933096-4	1-1933096-1	
RCA to Solder Termination	Red Dielectric	P	1375364-1	1375364-2	1375364-3	1375364-4	1-1375364-1	
	White Dielectric	Q	1375365-1	1375365-2	1375365-3	1375365-4	1-1375365-1	
	Yellow Dielectric	R	1375366-1	1375366-2	1375366-3	1375366-4	1-1375366-1	
ST Coupler	Multimode	S	1339123-1	1339123-2	1339123-3	1339123-4	1-1339123-1	
Speaker Post	Single-mode	T	1479181-1	1479181-2	1479181-3	1479181-4	1-1479181-1	
	Black Stripe		M	1479190-1	1479190-2	1479190-3	1479190-4	1-1479190-1
SC Simplex Coupler	Red Stripe		N	1479191-1	1479191-2	1479191-3	1479191-4	1-1479191-1
	Single-mode/Multimode		O	1499836-1	1499836-2	1499836-3	1499836-4	1-1499836-1
S-Video			P	-	1375149-2	-	-	
USB A to A Coupler			Q	1933659-1	1933659-2	1933659-3	-	
USB B to A Coupler			R	1933661-1	1933661-2	1933661-3	-	
HDMI Coupler				-	2111500-2	-	-	
LC Duplex Coupler	Beige, OM1 (62.5 μm) Multimode	S	-	-	-	1-1933286-2	-	
	Black, OM2 (50 μm) Multimode	T	-	-	-	1-1933286-1	-	
	Aqua, OM3 and OM4 (50 μm) Multimode		-	-	-	1933286-6	-	
	Green, Single-mode APC		-	-	-	1933286-3	-	
	Blue, Single-mode		-	-	-	1933286-4	-	

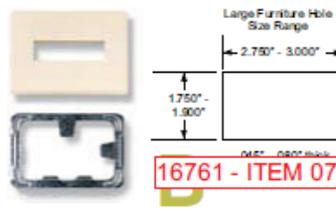
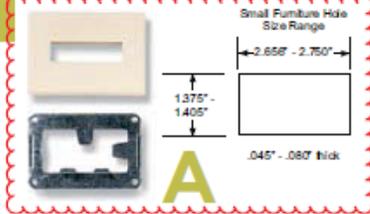
Note: APC (Angle Polish Connector) couplers are for use with angle polished connectors.



Work Area Outlets

SL Series Furniture Outlets

06

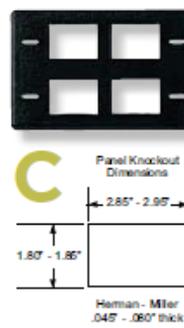
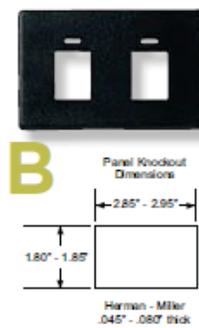
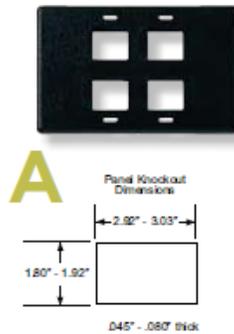


- Accept up to 4 unshielded SL Series jacks, MT-RJ outlet jacks and SL Series multimedia inserts
- Two bases adapt to a wide range of hole sizes
- Tabs on base fold over and crimp to furniture raceway cover
- "invisible" icon holes stay hidden until used

16761 - ITEM 07

Description		Figure	Almond	Black	White	Gray
SL Series Furniture Outlet	Small opening	A	1375005-1	1375005-2	1375005-3	1375005-4
	Large opening	B	1375006-1	1375006-2	1375006-3	1375006-4

Faceplates for HERMAN MILLER Furniture



- Flush faceplates:
 - Accepts unshielded 110Connect jacks, all SL Series jacks and MT-RJ outlet jacks
 - Jacks fit flush with front of faceplate
 - No backup plate required
- Standard faceplates:
 - Accepts unshielded 110Connect Jacks, all SL Series Jacks, MT-RJ Outlet Jacks, and 110Connect and SL Series Multimedia Inserts
 - May require backup plates depending on furniture style

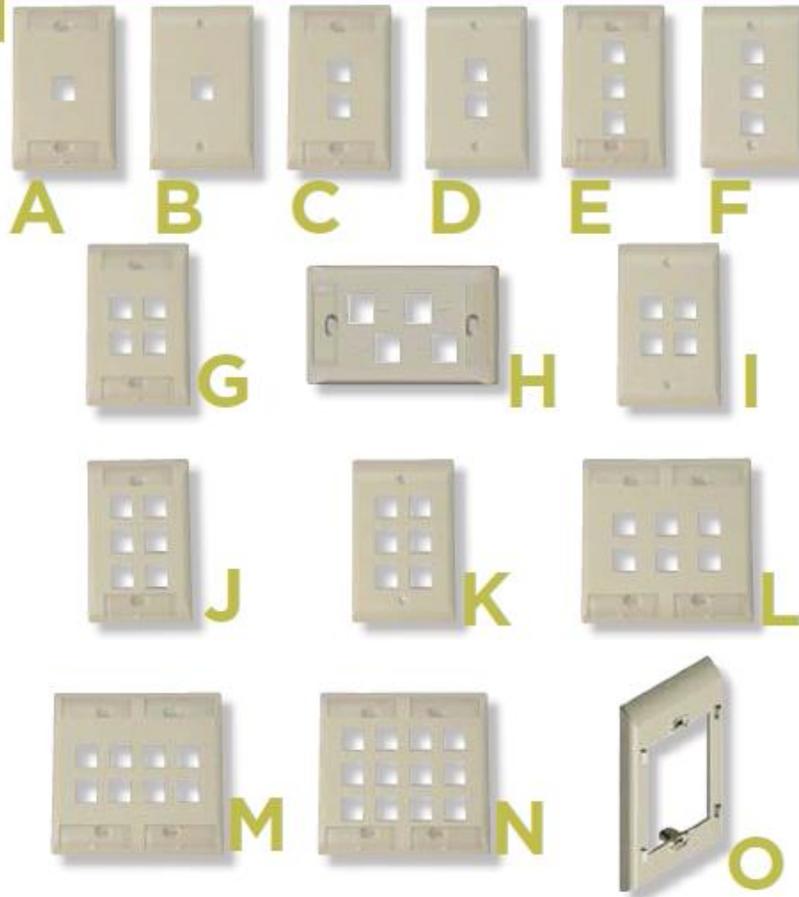
Description		Port Count	Figure	Almond	Black	Gray
Faceplate for HERMAN MILLER Furniture	Flush	4	A	558357-2	558357-1	558357-4
		2	B	569127-2	569127-1	569127-4
	Standard	4	C	558191-2	558191-1	558191-4



Work Area Outlets

Faceplates and Accessories

06



- Accepts all AMP-TWIST jacks, SL Series jacks, 110Connect jacks, MT-RJ outlet jacks and SL Series inserts
- Single gang dimensions:
– 2.75 in [69.85 mm] x
– 4.5 in [114.30 mm] x
– 0.22 in [5.59 mm]
- Double gang dimensions:
– 4.56 in [115.82 mm] x
– 4.5 in [114.30 mm] x
– 0.22 in [5.59 mm]
- Models available with and without labeling options
- Label areas with integrated, hinged covers
- Mold-over icon and leveling (for icons see Chapter 17)
- Improved label viewing area is larger with integrated, convex label covers that flip down and snap in place
- Larger radius on the faceplate edge and the convex shape of the label covers allow labels to be more easily viewed from above when faceplates are behind furniture
- Extender kits are used to add 0.5 inches [12.7 mm] of space between the mounting surface and the faceplate
- Extender kit dimensions:
– 5.21 in [132.33 mm] x
– 2.89 in [73.50 mm] x
– 0.50 in [12.70 mm]

16761 - ITEM 17

16761 - ITEM 18

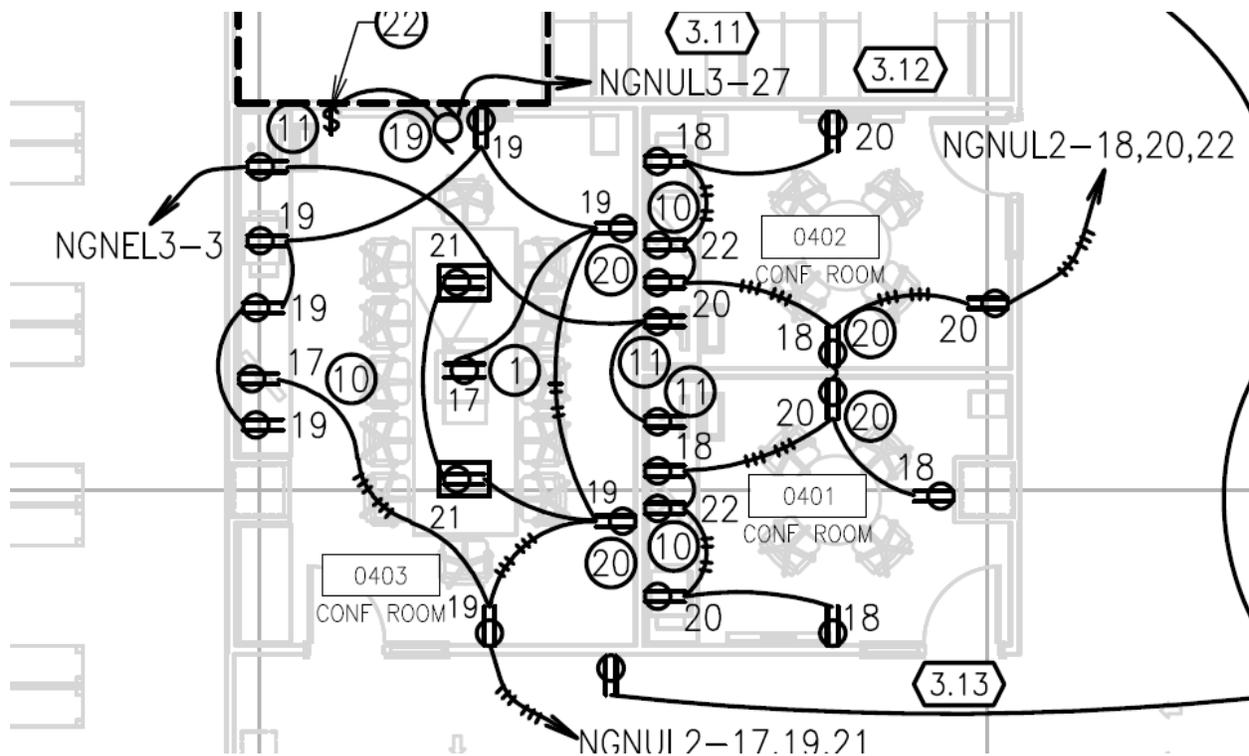
16761 - ITEM 19

Port Count	Footprint	Integrated Labeling Options	Orientation	Figure	Part Number						
					Almond	Black	White	Gray			
1	Single Gang	Label Covers and Icons	Vertical	A	2111008-1	2111008-2	2111008-3	2111008-4	1-2111008-1	1-2111008-3	
		None	Vertical	B	2111021-1	2111021-2	2111021-3	2111021-4	1-2111021-1	1-2111021-3	
2	Single Gang	Label Covers and Icons	Vertical	C	2111009-1	2111009-2	2111009-3	2111009-4	1-2111009-1	1-2111009-3	
		None	Vertical	D	2111022-1	2111022-2	2111022-3	2111022-4	1-2111022-1	1-2111022-3	
3	Single Gang	Label Covers and Icons	Vertical	E	2111010-1	2111010-2	2111010-3	2111010-4	1-2111010-1	1-2111010-3	
		None	Vertical	F	2111023-1	2111023-2	2111023-3	2111023-4	1-2111023-1	1-2111023-3	
4	Single Gang	Label Covers and Icons	Vertical	G	2111011-1	2111011-2	2111011-3	2111011-4	1-2111011-1	1-2111011-3	
		None	Horizontal	H	2111203-1	2111203-2	2111203-3	2111203-4	1-2111203-1	1-2111203-3	
6	Single Gang	Label Covers and Icons	Vertical	J	2111012-1	2111012-2	2111012-3	2111012-4	1-2111012-1	1-2111012-3	
		None	Vertical	K	2111025-1	2111025-2	2111025-3	2111025-4	1-2111025-1	1-2111025-3	
8	Double Gang	Label Covers and Icons	Vertical	L	2111013-1	2111013-2	2111013-3	2111013-4	1-2111013-1	1-2111013-3	
		None	Vertical	M	2111014-1	2111014-2	2111014-3	2111014-4	1-2111014-1	1-2111014-3	
12	Double Gang	Label Covers and Icons	Vertical	N	2111015-1	2111015-2	2111015-3	2111015-4	1-2111015-1	1-2111015-3	
Extender Kit					O	2111201-1	2111201-2	2111201-3	2111201-4	1-2111201-1	1-2111201-3

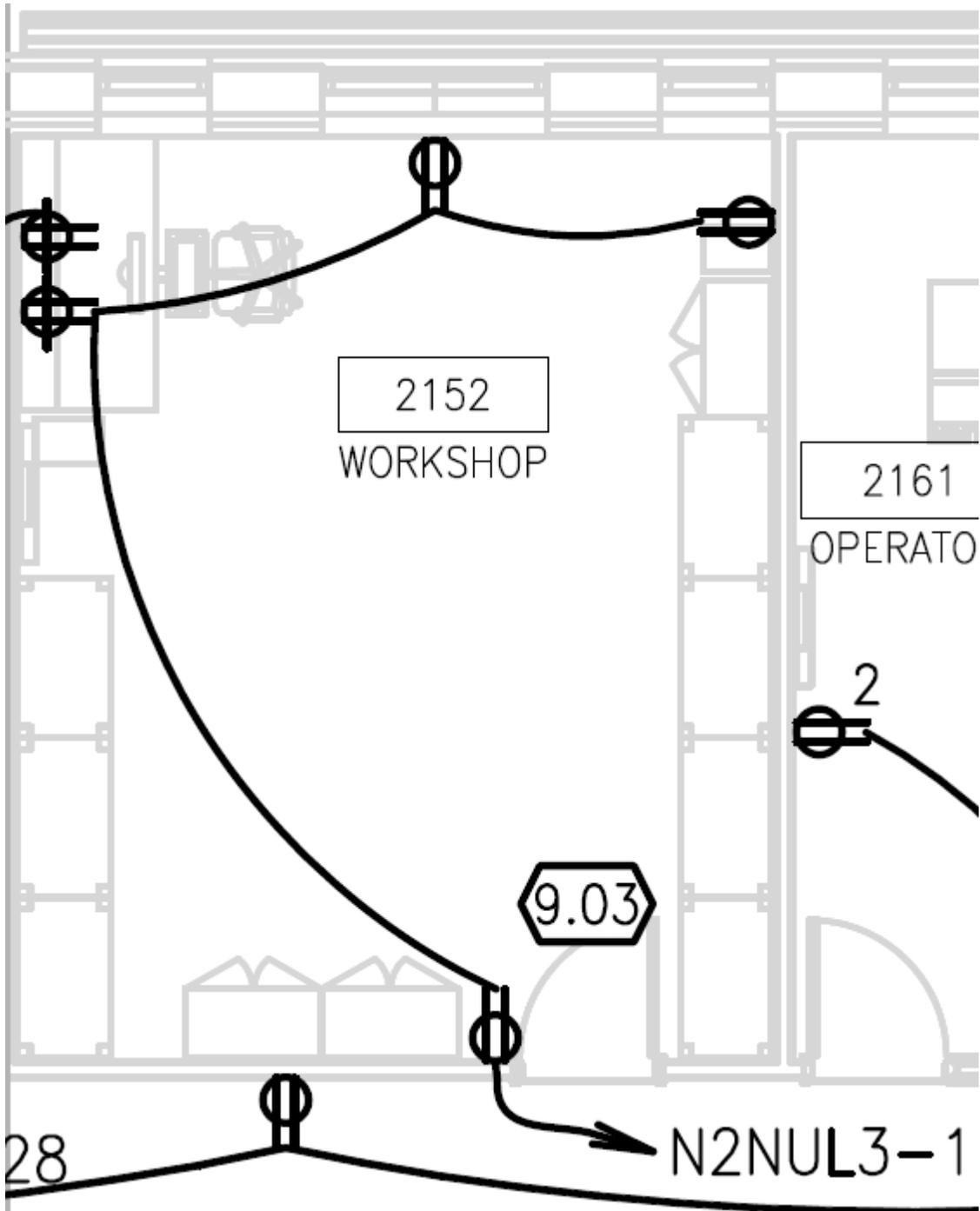
3.- For new layout of conduits (if necessary) the dresden type couplings are available in local supplier you may identified or to be imported??
They may need to be imported.

- 1. What are the specifications of the output data and receptacle?
- 2. What would be the ideal height for the outputs of the smart board?
- 3. Color chart for the paintings on the walls to resurface
- 4. Layout existing electrical circuits

Ground Floor Existing:



Second floor existing:



- 5. Available quantity of pipes for the wires
- 6. Number of cables must have for pipes
- No more than 8 (inside ¾ conduit)
- 7. there will be need to place new pipes for any new circuit wiring?
- Si es necesario instalar tuberías nuevas dentro del cuarto, pero se utilizaran las tuberías existentes para llevar los nuevos circuitos al cuarto eléctrico.
- 8. What is the distance traveled for feeding rewiring?

Translation

- 1. Cuales son las especificaciones de las salidas de data y tomacorriente?
- 2. Cual seria la altura ideal para las salidas de la pizarra inteligente?
- 3. Carta de colores para las pinturas de las paredes a resanar
- 4. Layout de circuito electrico existente
- 5. Que cantidad de cables debe haber por tuberías?
- 6. Confirmar si habra que colocar nuevas tuberias para cualquier cableado de circuito nuevo
- 7. Que diametro de tuberia se utilizara para el cableado HDMI y VGA?
- 8. Cual es la distancia a recorrer para la alimentacion nueva?
- Please provide horizontal and vertical distance for: i) Conference Room – North Telecom Closet; ii) Conference room south wall –Electrical room

Distance: The distance between the work place to the Facility/Control Room does not exceed 300 feet.

- Please provide the specifications for: i) data floor receptacles, ii) power floor receptacles, iii) data wall outlets, iv) power wall outlets
- Please provide specifications of breaker or new electrical circuit (to be installed in panel board N2NUL3-1 .
- What are the specs for the electrical outlets, data outlets? Please provide brand name.
- Does the sheetrock have special specs? Fireproof or normal? Fire proof 5/8” thickness
- Baseboards and tiles in the hallway are granite? Are they going to be supplied once we take the door out?if not please give the specs. We will supply those, but if possible try not to damage the floor.

- In the hallway, the finish on the wall is different from the one inside the conference room, what kind is it?

All walls have the same specifications

- All the trash generated from de dismantling does the embassy have a place to put out or we have to bring a truck to take it out? If yes please tell where we can.

Please bring your own truck to take the trash out.

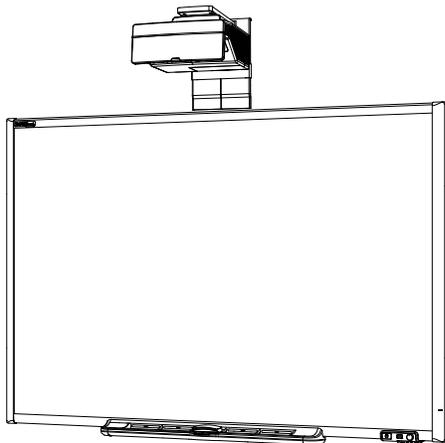
- Do we have to move the furniture from the first floor to the second?

Yes, please quote the move.

- In each room there is a movement sensor; do we have to leave all or just one?

The ceiling layout specifies how many sensors need to be left and the location

Related circuit, this will be done through the panel in the same tray to canalize the pipeline?



SMART Board® 685ix2

Interactive whiteboard systems

Configuration and user's guide

For model SB685ix2

SMART®

CC warning

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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This product and/or use thereof covered by one or more of the following U.S. patents.

www.smarttech.com/patents

05/2014

Important information

Before you install and use your SMART Board® 685ix2 interactive whiteboard system, read and understand the safety warnings and precautions in this user's guide and the included important information document. These safety warnings and precautions describe the safe and correct operation of your interactive whiteboard system and its accessories, helping you to prevent injuries and equipment damage. Ensure that your interactive whiteboard system is always being used correctly.

In this document, "interactive whiteboard system" refers to the following:

- SMART Board 600 series interactive whiteboard
- SMART UX80 projector
- Accessories and optional equipment

The projector included with your system is designed to work only with certain SMART Board interactive whiteboard models. Contact your authorized SMART reseller (smarttech.com/where) for more information.

Safety warnings, cautions and important information

Installation

WARNING

- Failure to follow the installation instructions shipped with your SMART product could result in personal injury and damage to the product.
- To reduce the risk of fire or electric shock, do not expose the SMART product to rain or moisture.

IMPORTANT INFORMATION

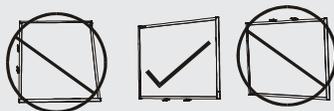
- Two people are required to mount your SMART product because it may be too heavy for one person to safely maneuver.

When you lift your interactive whiteboard, you and your assistant should stand on either side of the screen, supporting its weight at the bottom while balancing the top with your other hands.

- When mounting the projector boom on a framed or hollow wall, attach the mounting bracket to a stud to safely support the projector's weight. If you use only drywall anchors, the drywall can fail, resulting in possible personal injury, and damage to the product which may not be covered by your warranty.
- Do not leave cables on the floor where they can be a tripping hazard. If you must run a cable over the floor, lay it in a flat, straight line and secure it to the floor with tape or a cable management strip of a contrasting color. Handle cables carefully and avoid excessive bending.

CAUTION

- Do not operate this unit immediately after moving it from a cold location to a warm location. When the unit is exposed to such a change in temperature, moisture can condense on the lens and crucial internal parts. Allow the system to stabilize to room temperature before operation to prevent possible damage to the unit.
- Do not place the unit in hot locations, such as near heating equipment. Doing so could cause a malfunction and shorten the life of the projector.
- Avoid setting up and using the SMART product in an area with excessive levels of dust, humidity and smoke.
- Do not place your SMART product in direct sunlight or near any appliance that generates a strong magnetic field.
- If you need to lean the interactive whiteboard against a wall before you mount it, make sure it remains in an upright position, resting on the pen tray brackets, which can sustain the weight of the interactive whiteboard.



Do not rest the interactive whiteboard on its side or on the top of the frame.

IMPORTANT INFORMATION

- You must connect the USB cable that came with your SMART Board interactive whiteboard to a computer that has a USB compliant interface and that bears the USB logo. In addition, the USB source computer must be compliant with CSA/UL/EN 60950 and bear the CE mark and CSA and/or UL Mark(s) for CSA/UL 60950. This is for operating safety and to avoid damage to the SMART Board interactive whiteboard.

IMPORTANT

- The SMART Board 685ix2 interactive whiteboard system textless installation guide is also available online (smarttech.com/kb/170472).
- Make sure an electrical socket is near your SMART product and remains easily accessible during use.
- Using your SMART product near a TV or radio could cause interference to the images or sound. If this happens, move the TV or radio away from the projector.

Operation

WARNING

- If you are using an external audio system, use only the power supply included with that product. Using the wrong power supply might create a safety hazard or damage the equipment. If in doubt, refer to the specification sheet for your product to verify the power supply type.
- Do not climb (or allow children to climb) on a wall- or stand-mounted SMART Board interactive whiteboard.

Do not climb on, hang from or suspend objects from the projector boom.

Climbing on the interactive whiteboard or projector boom could result in personal injury or product damage.



CAUTION

- Do not block the projector's ventilation slots and openings.
- If dust or small items prevent pen tray buttons from being pressed or cause constant button contact, remove the obstructions carefully.

IMPORTANT INFORMATION

IMPORTANT

- If you have peripheral devices that do not use a 3.5 mm phone jack audio in/out, a DB15 VGA video input connector or an HDMI™ video connector, you may need to purchase third-party adapters.
- Keep your remote control in a safe place because there is no other way to access menu options.
- Do not disconnect cables from the ECP to connect peripheral devices because you could disconnect controls for your interactive whiteboard.
- Disconnect the product from its power source when it is not used for a long period.

Other precautions

If you own a SMART product other than a SMART Board 685ix2 series interactive whiteboard system, refer to the warnings document that shipped with your product for relevant warnings and maintenance instructions.

Environmental requirements

Before you install your interactive whiteboard system, review the following environmental requirements.

Environmental requirement	Parameter
Operating temperature	<ul style="list-style-type: none">• 41°F to 95°F (5°C to 35°C) from 0' to 6000' (0 m to 1800 m)• 41°F to 86°F (5°C to 30°C) from 6000' to 9800' (1800 m to 3000 m)
Storage temperature	<ul style="list-style-type: none">• -4°F to 122°F (-20°C to 50°C)
Humidity	<ul style="list-style-type: none">• 5% to 95% storage relative humidity, non-condensing• 5% to 85% operating relative humidity, non-condensing• Humidity above 80% could cause slight wrinkling in the screen surface sheet. The wrinkles disappear when the humidity lowers.
Water and fluid resistance	<ul style="list-style-type: none">• Intended for indoor use only. Doesn't meet any salt-spray or water ingress requirements.• Don't pour or spray liquids directly onto your interactive whiteboard, the projector or any of its sub-components.

IMPORTANT INFORMATION

Environmental requirement	Parameter
Dust	<ul style="list-style-type: none">• Intended for use in office and classroom environments. Not for industrial use where heavy dust and pollutants can cause malfunctions or impaired operation. Periodic cleaning is required in areas with heavier dust. See <i>Cleaning the projector</i> on page 27 for information on cleaning the SMART UX80 projector.
Electrostatic discharge (ESD)	<ul style="list-style-type: none">• EN61000-4-2 severity level 4 for direct and indirect ESD• No malfunction or damage up to 8kV (both polarities) with a 330 ohm, 150 pF probe (air discharge)• Unmated connectors meet no malfunction or damage up to 4kV (both polarities) for direct (contact) discharge
Cables	<ul style="list-style-type: none">• All SMART Board 685ix2 interactive whiteboard system cables should be shielded to prevent potential accidents and degraded video and audio quality.
Conducted and radiated emissions	<ul style="list-style-type: none">• EN55022/CISPR 22, Class A

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Chapter 1

About your interactive whiteboard system

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Your SMART Board 685ix2 interactive whiteboard system combines the following components:

- SMART Board 600 series interactive whiteboard
- SMART UX80 projector
- Accessories and optional equipment

This chapter describes the features of your interactive whiteboard and provides information about product parts and accessories.

CHAPTER 1

About your interactive whiteboard system

SMART Board 685ix2 interactive whiteboard system features

Your SMART Board 685ix2 interactive whiteboard system uses the WXGA (16:10) ultra-short-throw, high-offset SMART UX80 projector. It delivers high-definition, high performance interactivity that is virtually shadow-free and glare-free.

The modular and expandable hardware and software architecture of your interactive whiteboard system enables you to do everything you can do at your computer—open and close applications, meet with others, create new documents or edit existing ones, visit websites, play and manipulate video clips and more—just by touching the interactive surface.

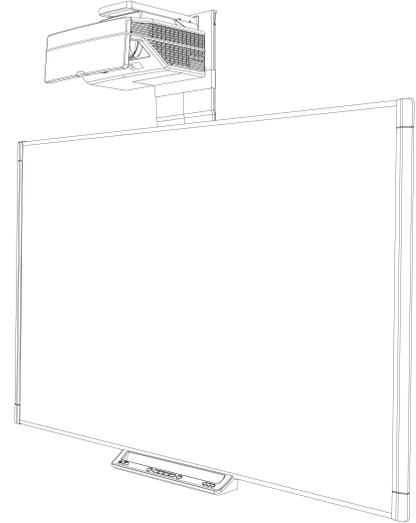
The projector also supports video and audio connections from a variety of devices, including DVD and Blu-ray™ players, document cameras, and other high-definition sources, and can project media from these sources onto the interactive screen.

When you use SMART software with your SMART Board 685ix2 interactive whiteboard system, you can write over any application in digital ink using a pen tray pen or your finger, and then save these notes for future reference and distribution.

SMART Board 600 series interactive whiteboard

Your SMART Board 600 series interactive whiteboard has many features, including a resistive touch screen and a pen tray.

The SMART Board 600 series interactive whiteboard performs well with the SMART UX80 projector because of the projector's exceptional color performance, aspect ratio, input response and short-throw image distance.

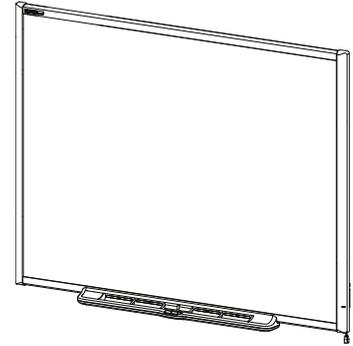


CHAPTER 1

About your interactive whiteboard system

Other features of your interactive whiteboard include the following:

- A pen tray that automatically detects when you pick up a pen tray pen or the eraser
- Pen tray buttons that activate the on-screen keyboard, right-click, Orientation and Help functions
- A durable tear-resistant surface optimized for projection and easily cleaned with whiteboard cleaner
- A security cable lock feature that enables you to lock your interactive whiteboard to help safeguard it from theft



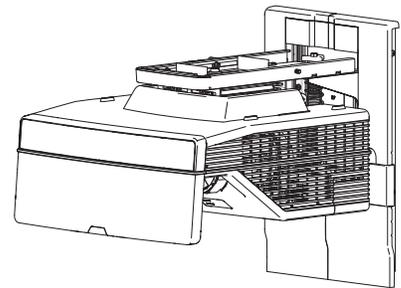
For more information about your SMART Board interactive whiteboard, see the *SMART Board 600 and D600 series interactive whiteboard installation and user's guide* (smarttech.com/kb/001414).

NOTE

Because of its wide-screen format, the SMART UX80 projector is compatible only with SMART Board 685 interactive whiteboards, and not with SMART Board 640, 660, 680, 690, D680 or D690 interactive whiteboards.

SMART UX80 projector

The SMART UX80 projector system includes an ultra-short-throw projector for use with SMART Board 685 interactive whiteboards and a sturdy support system ideal for corporate and classroom environments.



The features of the projector system include the following:

- A wall-mounted, high-offset SMART UX80 projector engine that uses single chip DLP® technology by Texas Instruments™, providing BrilliantColor™ performance, High Contrast, and Gamma 2.1 correction with Bright Classroom, Dark Classroom, sRGB, User and SMART Presentation modes
- 16:10 aspect ratio
- 3600 ANSI lumens (typical)
- PAL, PAL-N, PAL-M, NTSC, NTSC 4.43, SDTV (480i/p and 576i/p), HDTV (1080p) video system compatibility
- Native 1280 × 800 resolution
- Apple Macintosh, iMac and VESA® RGB video format standard compatibility

CHAPTER 1

About your interactive whiteboard system

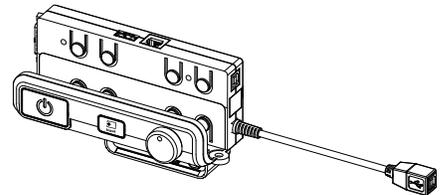
- Remote management via network through an RJ45 cable
- OR
- Remote management via a serial RS-232 interface
- Connectivity for a second SMART UX80 projector in a dual interactive whiteboard system
- Self-protection timer for a hot re-strike of the projector lamp
- Protected cable routing through the projector housing and a cable cover that prevent tampering and clutter
- Secure mounting and installation system that includes a projector padlock loop
- An internal speaker
- Templates and instructions for positioning the system safely

Your SMART UX80 projector connection panel has the following connections:

- 3.5 mm phone jack audio input connector
- 3.5 mm phone jack audio output connector
- DB15F (DE-15F) RGB VGA video input connector
- DB9F (DE-9F) RS-232 connector
- HDMI 1 In input connector
- HDMI 2 In input connector
- Power
- USB B connector for service access
- RJ45 (8P8C modular) connector for local area network connections
- RJ45 (8P8C modular) connector for dual interactive whiteboard systems
- 7-pin mini-DIN connector
- 4-pin power-DIN 5V/2A output connector

Extended Control Panel (ECP)

Your projector system's ECP attaches to the bottom frame of your interactive whiteboard. The ECP features controls for power, source selection and volume adjustment, as well as an integrated USB hub that enables you to switch seamlessly between two connected computers.



CHAPTER 1

About your interactive whiteboard system

Connection receptacles for your source inputs include:

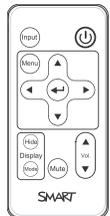
- One USB A receptacle on the front of the ECP for USB drives
- Two USB A receptacles behind the interactive whiteboard
- One captive USB B receptacle for your primary computer
- One DB15M receptacle behind the interactive whiteboard for connecting to the projector
- One USB B receptacle behind the interactive whiteboard for connecting a secondary computer
- Three RCA jacks on the front of the ECP (not connected to the projector and not used in the system)

Included accessories

The following accessories are included with your interactive whiteboard system.

Remote control

The remote control enables you to control the system and set up your projector. Use the remote control to access menu options, system information and input selection options.



Pens

The pens have rubberized grip areas and are colored to match four colors of digital ink: black, red, green and blue.



You can use dry-erase markers to replace the included pens, as long as they're a similar shape, don't scratch or mark your interactive whiteboard surface and reflect infrared light. If the substitute doesn't reflect infrared light, the pen tray sensors might not detect the presence of the pen.

NOTE

Some of SMART's older pens aren't designed to reflect infrared light and the pen tray sensors might not detect them reliably.

TIP

Wrap light-colored tape around a substitute pen to improve the reflection of infrared light and help with tool detection.

CHAPTER 1

About your interactive whiteboard system

Eraser

The eraser resembles a rectangular chalkboard eraser. You can use a substitute object, as long as it has a similar shape, reflects infrared light and doesn't scratch or mark the interactive whiteboard surface.



You can add a variety of accessories to your interactive whiteboard to best meet your specific needs. Purchase these items from your authorized SMART reseller (smarttech.com/where).

For more information on accessories, go to smarttech.com/accessories.

Hardware mounting kit

You can order a hardware mounting kit for your projector from your authorized SMART reseller (smarttech.com/where). It contains an assortment of screws and wall anchors for several different wall types (see smarttech.com/kb/160505).

Chapter 2

Installing your interactive whiteboard system

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Consult the SMART Board 685ix2 interactive whiteboard system installation document, installation template and important information included with your product for instructions on how to install and secure your system.



IMPORTANT

The *SMART Board 685ix2 interactive whiteboard system installation and cabling guide* is also available online (smarttech.com/kb/170472).

This chapter provides additional considerations and details for installing your interactive whiteboard system.

CHAPTER 2

Installing your interactive whiteboard system

Choosing a location

Choose a location for your interactive whiteboard system that's far from bright light sources, such as windows and strong overhead lighting. Bright light sources can cause distracting shadows on your interactive whiteboard and can reduce the contrast of the projected image.

Select a wall with a flat, regular surface and sufficient clearance to accommodate your interactive whiteboard system. Install the projector and your interactive whiteboard on the same flat surface. For best presentation alignment, mount your interactive whiteboard system in a location that's central to your audience's viewing direction.

For mobile or adjustable installation options, contact your authorized SMART reseller.

Choosing a height

SMART includes a mounting template with each interactive whiteboard system. If you lose this template, contact your authorized SMART reseller. Using this template ensures that you can do the following:

- Mount the projector at a safe height for headspace clearance, while maintaining enough space for airflow and installation access above the unit.
- Position the projector at the correct height above your interactive whiteboard to align the projected image with the touch screen.

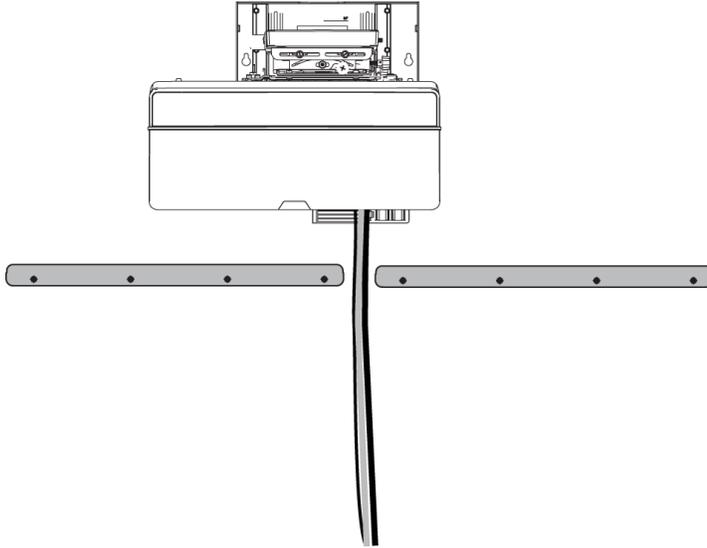
Dimensions on the template recommend a distance from the floor suitable for adults of average height. You should consider the general height of your user community when you choose a location for your interactive whiteboard.

CHAPTER 2

Installing your interactive whiteboard system

Routing the cables

When connecting cables from the SMART UX80 projector to your interactive whiteboard, make sure that all cables pass between the two interactive whiteboard wall-mounting brackets and that the cables don't rest on the wall-mounting brackets.



Installing SMART software

You must install SMART software, such as SMART Meeting Pro™ software or SMART Notebook™ collaborative learning software on the computer connected to your interactive whiteboard system to access all of its features.

Download SMART software from smarttech.com/software. These web pages list the minimum hardware requirements for each software version. If SMART software is already installed on your computer, take this opportunity to upgrade your software to ensure compatibility.

Setting up the projector image

You must focus the projected image, and then align the projected image.

CHAPTER 2

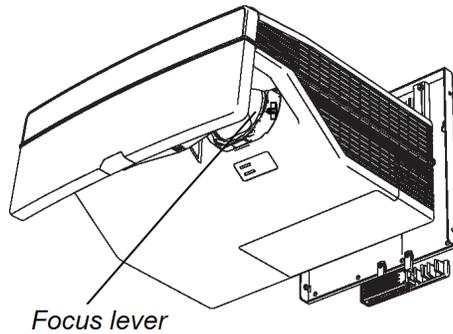
Installing your interactive whiteboard system

Focusing the image

Use the focus lever on the bottom of the SMART UX80 projector to focus the projected image.

To focus and adjust the image

Turn the focus lever clockwise or counterclockwise until the image is in focus.



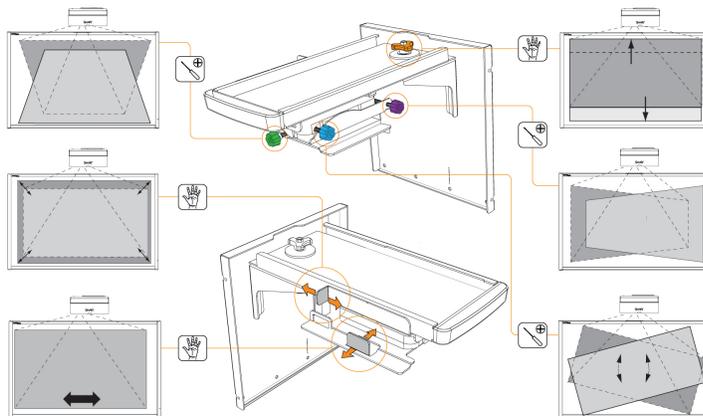
Aligning the image

Refer to these notes when aligning the projected image as described in the included *SMART Board 685ix2 interactive whiteboard system installation and cabling guide* (smarttech.com/kb/170472).

CAUTION

Never touch the lens or the mirror with your hands or a brush. This can disturb the focus or quality of image that your projector displays.

The projector's image alignment screen appears when you start your projector the first time, or you can access it from the startup screen menu any time.



CHAPTER 2

Installing your interactive whiteboard system

Use the mechanical adjustments described in the installation document and the image alignment screen to adjust the projected image size, shape and location so that you can see the full projected image clearly. Don't use other images, which might be cropped or scaled by the projector and result in a misleading projected image size, shape and location.

When adjusting keystone (tilt), ensure that the top and bottom edges of the image are horizontal before you position the left and right edges of the image relative to your interactive whiteboard.

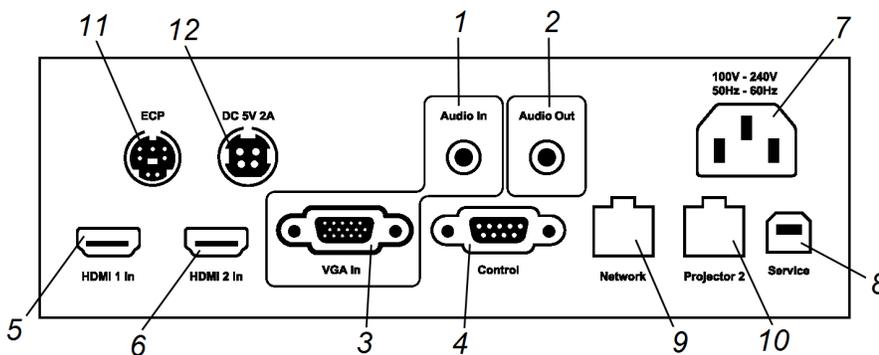
To fine-tune the image, you might need to repeat all steps described in the installation document in smaller increments.

Projector connection diagram

You can connect a variety of peripheral devices to your projector, including DVD/Blu-ray players, document cameras, and other high-definition sources, as well as peripheral device outputs such as a secondary projector or other displays, and powered speakers.

NOTE

You might need to purchase third-party adapters to connect certain peripheral devices.



No.	Connector	Connect to:
1	3.5 mm phone jack audio input	Audio sources associated with the computer connected to the VGA video input source.
2	3.5 mm phone jack audio output	External speakers (optional, not included)
3	DB15F RGB VGA video input	Secondary computer (optional, not included)
4	DB9F RS-232	ECP cable harness
5	HDMI 1 In	Primary computer high-definition media (audio and video) source (not included)

CHAPTER 2

Installing your interactive whiteboard system

No.	Connector	Connect to:
6	HDMI 2 In	Additional high-definition media (audio and video) source (not included)
7	Power	Mains power supply
8	USB B	Do not use (for service access only)
9	RJ45 (Cat 5)	Network (for web page management and SNMP access) network connection only
10	RJ45 (Cat 5 crossover cable)	Projector 2 (for dual interactive whiteboard systems) crossover cable connection only
11	7-pin mini-DIN	ECP cable harness
12	4-pin power-DIN 5V/2A output	ECP cable harness

IMPORTANT

The 4-pin mini-DIN 5V/2A output provides power to SMART products only.

NOTES

- To connect your SMART Board 685 interactive whiteboard see the *SMART Board 685x2 interactive whiteboard system installation and cabling guide* (smarttech.com/kb/170472).
- To connect accessories to your interactive whiteboard, refer to the documents included with the accessories and consult the SMART Support website (smarttech.com/support) for additional information.

Integrating your system with peripheral devices

For information on integrating your SMART Board 685x2 interactive whiteboard system with peripheral devices, see *Connecting peripheral sources and outputs* on page 82.

Locking the pen tray to your interactive whiteboard

To learn how to lock the pen tray to your interactive whiteboard, see the *SMART Board 600 and D600 series interactive whiteboard installation and user's guide* (smarttech.com/kb/001414).

Chapter 3

Using your interactive whiteboard system

Using your projector	13
Using your remote control	13
Using the remote control buttons	14
Adjusting projector settings	15
Using your interactive whiteboard	21
Using the Extended Control Panel (ECP)	22

This chapter describes the basic operation of your interactive whiteboard system and explains how to set up your remote control, retrieve system information, access the projector's image adjustment options and integrate your interactive whiteboard system with peripheral devices.

Using your projector

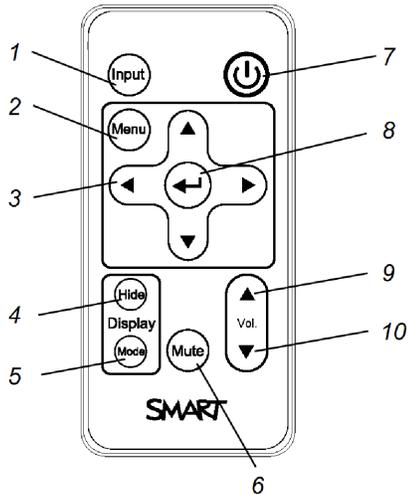
This section explains how to use your projector remote control to access on-screen menus and change projector setting.

Using your remote control

The projector remote control enables you to access on-screen projector menus and change projector settings.

Using the remote control buttons

The projector remote control enables you to access on-screen menus and change projector settings. Use the **Power**  button on the remote control or ECP to put the projector into Standby mode or to turn it on. You can also use the **Input** button on the remote control or ECP to switch sources on the projector.



Number	Function	Description
1	Input	Select a video and audio input source on the projector and the associated USB input source on the ECP, if present.
2	Menu	Show or hide the projector menus.
3	◀ (Left), ▶ (Right), ▲ (Up) and ▼ (Down) arrows	Change the menu selections and adjustments.
4	Hide	Freeze, hide or display the image: <ul style="list-style-type: none"> • Press once to freeze the image. For example, you can display a question on the screen while you check your e-mail. • Press again to hide the image, that is, to display a black screen. • Press again to return to the live image.
5	Mode	Select a display mode.
6	Mute	Mute audio amplification.
7	 (Power)	Turn on the projector or put it into Standby mode.
8	↵ (Enter)	Accept the selected mode or option.
9	▲ (Volume Up)	Increase audio amplification volume.
10	▼ (Volume Down)	Decrease audio amplification volume.

 **NOTE**

The **Mute**, **Volume Up** and **Volume Down** buttons work only if there is an audio source connected to the projector for the selected video input source.

For information on using the remote control's Menu button to adjust the projector settings, see *Adjusting projector settings* on page 72.

Adjusting projector settings

The remote control's Menu button enables you to access the on-screen display to adjust the projector settings.

 **IMPORTANT**

Keep your remote control in a safe place because there is no other way to access menu options.

Setting	Use	Notes
 Image Adjustment menu		
Display Mode	Indicates the projector's display output (SMART Presentation , Bright Room , Dark Room , sRGB and User).	The default is SMART Presentation .
Brightness	Adjusts projector brightness from 0 to 100.	The default is 50.
Contrast	Adjusts the difference between the lightest and darkest parts of the image from 0 to 100.	The default is 50.
Frequency	Adjusts the display data frequency of the projected image from -5 to 5 to match the frequency of your computer's graphics card.	The default is 0. This setting applies to VGA inputs only.
Tracking	Synchronizes your projector's display timing with your computer's graphics card from 0 to 63.	This setting applies to VGA inputs only.

CHAPTER 3

Using your interactive whiteboard system

Setting	Use	Notes
H-Position	Moves the horizontal position of the source video left or right from 0 to 100 (relative to the projected image).	Don't adjust this setting unless you're advised to by SMART Support. Apply this setting only after you make all physical adjustments. This setting applies to VGA inputs only and is useful in situations where the source video is cut off.
V-Position	Moves the vertical position of the source video up or down from -5 to 5 (relative to the projected image).	Don't adjust this setting unless you're advised to by SMART Support. Apply this setting only after you make all physical adjustments. This setting applies to VGA inputs only and is useful in situations where the source video is cut off.
White Peaking	Adjusts the image color brightness from 0 to 10 while providing more vibrant white shades.	A value closer to 0 creates a natural image and a value closer to 10 enhances brightness. The default is 10.
Degamma	Adjusts the color performance of the display from 1 to 3.	The default is 2.
Color	Adjusts the Red, Green, Blue, Cyan, Magenta and Yellow colors on the projector from 0 to 100 to provide custom color and luminance output.	Each color has a default value of 100. Adjustments to the color settings register under the User mode.
 Audio menu		
Volume	Adjusts the projector's volume amplification from -20 to 20.	The default is 0.
Mute	Mutes the projector's audio output.	The default is off. If you mute the projector's audio output and then increase or decrease the volume, the volume is restored automatically. You can prevent this from happening by disabling the volume control.
Disable Volume Control	Disables the projector's volume control and the ECP's volume control knob.	
System Output	Selects one or more speakers or other audio device.	Select Line Out+Speaker , Line Out Only or Speaker Only .

CHAPTER 3

Using your interactive whiteboard system

Setting	Use	Notes
 Projector Functions menu		
Auto Signal Detect	Enables or disables signal searching of input connectors.	<p>The default is off.</p> <p>Select On to have the projector continuously switch inputs until it finds an active video source.</p> <p>Select Off to maintain signal detection in one input.</p>
Lamp Reminder	Turns the lamp replacement reminder on or off.	This reminder appears 100 hours before the recommended lamp replacement.
Lamp Mode	Adjusts lamp brightness to Standard or Economy .	<p>Standard displays a high-quality, bright image.</p> <p>Economy increases the lamp life by decreasing the brightness of the image.</p>
Auto Power Off (minutes)	Sets the length of the auto power-off countdown timer between 1 and 240 minutes.	<p>The default is 120 minutes.</p> <p>The timer begins to count down when the projector no longer receives a video signal. The timer finishes when the projector enters Standby mode.</p> <p>Select 0 to turn off the timer.</p>
Zoom	Adjusts the zoom to the center of the image in or out from 0 to 30.	<p>The default is 0.</p> <p>Zooming in cuts off the outer edges of the source video.</p>
Projector ID	Displays the projector's unique ID number (from 0 to 99) within your organization's network.	You can refer to or change this number when using the network remote management feature (see <i>Remotely managing your system through a network interface</i> on page 47).
Aspect Ratio	Adjusts the image output to Fill Screen , Match Input or 16:9 .	<p>The default is Fill Screen.</p> <p>Fill Screen produces an image that fills the entire screen by stretching and scaling the source video to match the projector's native resolution and aspect ratio.</p> <p>Match Input displays the source video in its native aspect ratio. As a result, unused space could appear along the top and bottom edges of the screen (letterbox format) or along the left and right edges of the screen (pillarbox format).</p> <p>See <i>Video format compatibility</i> on page 79 for descriptions of each mode.</p>

CHAPTER 3

Using your interactive whiteboard system

Setting	Use	Notes
Startup Screen	Selects the type of startup screen (SMART , Capture User Startup Screen , Preview Startup Screen), or Image Alignment Screen .	This screen displays when the projector lamp is starting and a video source signal isn't displayed. SMART displays the default SMART logo on a blue background. Capture User Startup Screen closes the on-screen display menu and captures the entire projected image. The captured image is displayed the next time the on-screen display opens. (The capture can take up to one minute, depending on the complexity of the background graphic.) Preview Startup Screen enables you to preview the default or captured startup screen. Image Alignment Screen enables you to adjust the projected image size, shape and location.
Image Alignment Screen	Enables you to adjust the projected image size, shape and location.	The image alignment screen appears the first time you start your projector. However, you can access it from the startup screen menu any time. Press Menu or Enter to close it.
Set to Default?	Resets projector settings to their default values.	If you select Yes , all projector settings reset to their defaults, reversing any menu changes you made. This action is irreversible. Don't adjust this setting unless you want to reset all of the applied settings, or unless you're advised to by a SMART Support specialist.
USB Source Select	Opens a sub-menu that enables you to select the video input on your projector and the USB receptacle on the ECP (if present).	The defaults are as follows: <ul style="list-style-type: none"> • HDMI 1, USB 1 • HDMI 2, Disabled (no associated USB input) • VGA 1, USB 2
 Network menu		
Network	Activates the projector's RJ45 connector and network features.	
Status	Displays the current network status (Connected , Disconnected or Off).	The default is off.

CHAPTER 3

Using your interactive whiteboard system

Setting	Use	Notes
DHCP	Displays the status of the network's Dynamic Host Configuration Protocol (DHCP) as On or Off .	The default is on. On enables a DHCP server on the network to automatically assign an IP address to the projector. Off enables an administrator to assign an IP address manually.
Password Reminder	E-mails the network password to the previously defined e-mail recipient.	See <i>Web page management</i> on page 47 to set up a destination e-mail address.
IP Address	Displays the projector's current IP address in values between 0.0.0.0 and 255.255.255.255.	To change the projector's IP address, use the RS-232 connector (see <i>Network controls</i> on page 68) or use a DHCP server to assign a dynamic IP address, and then set a static IP address using the network remote management feature (see <i>Remotely managing your system through a network interface</i> on page 47).
Subnet Mask	Displays the projector's subnet mask number in values between 0.0.0.0 and 255.255.255.255.	
Gateway	Displays the projector's default network gateway in values between 0.0.0.0 and 255.255.255.255.	
DNS	Displays the projector's primary domain name server (DNS) IP address in values between 0.0.0.0 and 255.255.255.255.	
MAC Address	Displays the projector's MAC address in xx-xx-xx-xx-xx-xx format.	
Group Name	Displays the projector's workgroup name as set by an administrator (maximum 12 characters).	You can set the projector's workgroup name using the remote management features (see <i>Remotely managing your system through a network interface</i> on page 47 and <i>Remotely managing your system through an RS-232 serial interface</i> on page 57).

CHAPTER 3

Using your interactive whiteboard system

Setting	Use	Notes
Projector Name	Displays the projector's name as set by an administrator (maximum 12 characters).	You can set the projector's name using the remote management features (see <i>Remotely managing your system through a network interface</i> on page 47 and <i>Remotely managing your system through an RS-232 serial interface</i> on page 57).
Location	Displays the projector's location as set by an administrator (maximum 16 characters).	You can set the projector's location using the remote management features (see <i>Remotely managing your system through a network interface</i> on page 47 and <i>Remotely managing your system through an RS-232 serial interface</i> on page 57).
Contact	Displays the contact name or number for projector support as set by an administrator (maximum 16 characters).	You can set the contact name or number using the remote management features (see <i>Remotely managing your system through a network interface</i> on page 47 and <i>Remotely managing your system through an RS-232 serial interface</i> on page 57).
 Language menu		
Language	Selects language preference.	Projector menu support is available in English (default), Chinese (Simplified), Chinese (Traditional), Czech, Danish, Dutch, Finnish, French, German, Greek, Italian, Japanese, Korean, Norwegian, Polish, Portuguese (Brazil), Portuguese (Portugal), Russian, Spanish and Swedish.
 Information menu		
Lamp Hours	Displays the current number of lamp usage hours from when it was last reset.	Always reset the lamp hours after you replace a lamp, because lamp service reminders are based on the current hours of use. See <i>Resetting the lamp hours</i> on page 29 for details on the lamp hours reset procedure.
Input	Displays the currently displayed video input source (VGA , HDMI1 , HDMI2 or None).	
Resolution	Displays the projector's most recently detected video source signal resolution and refresh rate.	If there is no current video input source signal, this setting displays the last known source signal image resolution and refresh rate.

CHAPTER 3

Using your interactive whiteboard system

Setting	Use	Notes
Firmware Version	Displays the projector's digital display processor (DDP) firmware version in x.x.x.x format.	
MPU Version	Displays the projector microprocessor unit (MPU) firmware version in x.x.x.x format.	
Network Version	Displays the projector's network communications processor firmware version in x.x.x.x format.	If you haven't enabled the Network and VGA Out setting, this setting is unable to display the projector's network communications processor firmware version and displays 0.0.0.0 instead.
Model Number	Displays the projector's model number.	
Serial Number	Displays the projector's serial number.	
UCP ports 1 / 2	Reserved for future application.	

Using your interactive whiteboard

Refer to the *SMART Board 600 and D600 series interactive whiteboard installation and user's guide* (smarttech.com/kb/001414) for more information on using your interactive whiteboard.

When you connect your SMART Board interactive whiteboard to a computer with SMART software, you can access the full capabilities of your interactive whiteboard.

For more information on this software, press the **Help** button on your interactive whiteboard pen tray.

For additional resources, go to smarttech.com, click the flag icon in the top right corner, and then select your country and language. In the Support section of this website, you'll find up-to-date, product-specific information, including setup instructions and specifications.

The SMART training website (smarttech.com/training) includes an extensive library of training resources you can refer to when first learning to set up or use your interactive whiteboard system.

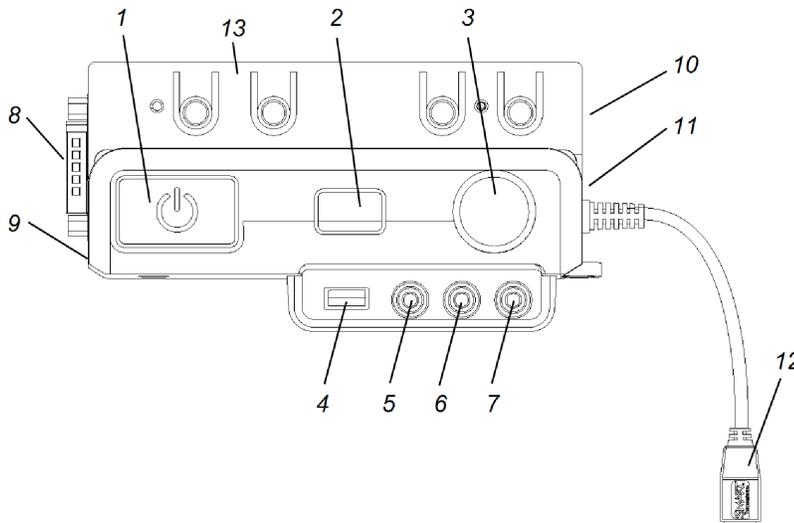
Using the Extended Control Panel (ECP)

The ECP gives you control of the basic operations of your interactive whiteboard system. Additionally, you can connect peripheral devices directly to the ECP, as described in *Connecting peripheral sources and outputs* on page 82. Press the **Power**  button on the ECP or remote control to put the projector system into Standby mode or turn it on. Press the **Input** button on the ECP or remote control to switch sources on the projector.

IMPORTANT

- Keep your remote control in a safe place because there is no other way to access menu options.
- Do not disconnect cables from the ECP to connect peripheral devices because you could disconnect controls for your interactive whiteboard.

The following diagram and table describe the components of the ECP:



Number	Function
Front	
1	Power  and ECP status indicator light
2	Input selection
3	Volume control
4	USB A receptacle (for USB drives)
5	RCA jack composite video input (not used in this configuration)

CHAPTER 3

Using your interactive whiteboard system

Number	Function
6	RCA audio jack right input (not used in this configuration)
7	RCA audio jack left input (not used in this configuration)
Left side	
8	DB15 socket (ECP cable harness only)
9	USB A receptacle (for any USB peripheral, up to 500mA)
Right side	
10	USB B receptacle (for a secondary computer such as a laptop) 
NOTE Use the projector's USB menu to ensure that the appropriate projector video input source is mapped to use this USB #2 port on the ECP. By default, this port is enabled only when the HDMI-1 video input on the projector is active.	
11	USB A receptacle (for SMART Board interactive whiteboard only)
12	USB B receptacle (for your primary computer) 
NOTE Use the projector's USB menu to ensure that the appropriate projector video input source is mapped to use this USB #1 port on the ECP.	
Top	
13	Not used

Chapter 4

Maintaining your interactive whiteboard system

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This chapter includes methods for properly cleaning and preventing damage to your SMART Board 685ix2 interactive whiteboard system.

Maintaining your interactive whiteboard

With proper care, your SMART Board interactive whiteboard will provide years of trouble-free service.

Preventing damage to your interactive whiteboard

Although your interactive whiteboard's surface is very durable, take the following precautions to prevent damage.

- Don't use sharp or pointed objects, such as ballpoint pens or pointers, as writing tools.
- Replace the pen nib when the nib wears out.
- Don't use low-odor dry-erase markers because they can be very difficult to erase. Use standard (high-odor) dry-erase markers that show a warning to use them only in well-ventilated areas.
- Don't use adhesive tape on the interactive surface.
- Don't use abrasive erasers or harsh chemicals to clean your product.

CHAPTER 4

Maintaining your interactive whiteboard system

- The digital cameras located in the corners of the frame are protected from dust and dirt by windows. In extremely dusty environments, spray a household, alcohol-free glass cleaner, such as Windex® cleaner, on a cotton swab and rub it gently on the windows. Don't use compressed air to clean the cameras.

Keeping the writing surface clean

Follow these tips to keep the interactive whiteboard's surface clean.

IMPORTANT

Turn your interactive whiteboard system off before you clean it so that you do not scramble the desktop icons or inadvertently activate applications when you wipe the interactive surface.

TIP

To view dirt or streaks more easily, set your projector to Standby (lamp off) mode.

- Clean your interactive whiteboard at least every six months.
- Don't spray cleaner directly onto the interactive whiteboard's surface. Instead, spray a light amount of cleaner on a cloth and then gently wipe the interactive surface.
- Don't allow excess cleaner to flow onto the crack between the lower frame and the writing surface, or into the pen tray slots.

Cleaning the pen tray

If the infrared sensors in the sides of the pen tools' slots become obstructed by dirt, spray a household, alcohol-free glass cleaner, such as Windex cleaner, on a cotton swab and then carefully clean the infrared transmitter and receiver.

Cleaning the projector

WARNING

Cleaning a wall-mounted projector can result in a fall or injury. Use caution when climbing a ladder.

CAUTION

- Before you clean the projector, press the **Power**  button twice on the ECP or remote control to put the system in Standby mode, and then wait 30 minutes for the lamp to cool completely.
- Never touch the lens or the mirror with your hands or a brush.
- Do not allow liquids or commercial solvents of any kind to flow into the projector base or head.
Do not spray cleaners or solvents near any part of the projector because they can spread a chemical mist on some of the projector's components and lamp, resulting in damage, staining or poor image quality.
- Do not use compressed air to clean the projector.

When cleaning the projector's lens or mirror:

- Use a bellows bulb or air blower bulb (commonly found in audio-visual supply stores) to blow off dust.
- If wiping the lens or mirror is unavoidable, wear protective gloves and gather the cleaning cloth into a ball. Gently fan the cleaning cloth across the lens or mirror like you would a feather duster. Do not apply any pressure to the lens or mirror.

Focusing and adjusting the projector image

For information on focusing and adjusting the projector image, see *Setting up the projector image* on page 9.

Removing and replacing the projector lamp module

Eventually the lamp module will dim, and a message will appear reminding you to replace the lamp. Make sure you have a replacement projector lamp module before proceeding.

For instructions on how to replace the projector lamp module, go to smarttech.com/kb/170389.

WARNING

- Replace the lamp when the projector displays its lamp life warning message. If you continue to use the projector after this message appears, the lamp can shatter or burst, scattering glass throughout the projector.
- If the lamp shatters or bursts, leave and then ventilate the area.

Next do the following:

- Avoid touching the glass fragments because they can cause injury.
- Wash your hands thoroughly if you have come into contact with lamp debris.
- Thoroughly clean the area around the projector, and discard any edible items placed in that area because they could be contaminated.
- Call your authorized SMART reseller for instructions. Do not attempt to replace the lamp.
- When replacing the projector lamp:
 - Put the projector into Standby mode and wait 30 minutes for the lamp to cool completely.
 - Do not remove any screws other than those specified in the lamp replacement instructions.
 - Wear protective eyewear while changing the lamp. Failure to do so can cause injuries including loss of eyesight if the lamp shatters or bursts.
 - Use only replacement lamps approved by SMART Technologies. Contact your authorized SMART reseller for replacement parts.
 - Never replace the lamp module with a previously used lamp module.
 - Always handle the fragile lamp module with care to prevent premature lamp failure or exposure to mercury. Use gloves when touching the lamp. Do not touch the lamp with your fingers.
 - Recycle or dispose of the lamp module as hazardous waste in accordance with local regulations.
- See [smarttech.com/compliance](https://www.smarttech.com/compliance) for the projector's Material Safety Data Sheets (MSDS) documents.

Resetting the lamp hours

After you replace the lamp module, you need to access the projector service menu and reset the lamp hours. To prevent accidental errors, only a system administrator should perform this procedure.



NOTE

Always reset the lamp hours after you replace the lamp, because lamp service reminders are based on the current hours of use.

To reset the lamp hours

1. Using the remote control, press the following buttons quickly to access the service menu:
Down, Up, Up, Left, Up.



CAUTION

Do not adjust any settings in the service menu other than those listed in this guide. Changing other settings can damage or affect the operation of your projector and may invalidate your warranty.

2. Scroll down to *Lamp Hour Reset* and then press **Enter**.



CAUTION

Do not reset the lamp hours unless you have just replaced the lamp module. Resetting the lamp hours on an old lamp can damage your projector as a result of lamp failure.

3. Scroll down to *Exit* and then press **Enter** to exit the projector service menu.

Replacing the remote control battery

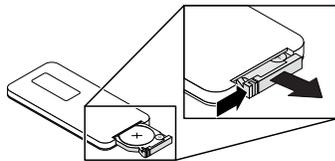
Follow this procedure to replace the remote control battery.

WARNING

- Reduce the risk associated with a leaking battery in the projector's remote control by following these practices:
 - Use only the specified CR2025 coin-cell battery.
 - Remove the battery when the remote control is unused for an extended period.
 - Do not heat, disassemble, short or recharge the battery, or expose it to fire or high temperatures.
 - Avoid eye and skin contact with the battery if it has a leak.
- Dispose of the exhausted battery and product components in accordance with applicable regulations.

To replace the remote control battery

1. Hold down the side release on the left side of the battery holder and pull the battery holder completely out of the remote control.



2. Remove the old battery from the battery holder and replace it with a CR2025 coin-cell battery.

IMPORTANT

Align the battery's positive (+) and negative (-) terminals with the correct signs on the battery holder.

3. Insert the battery holder into the remote control.

Chapter 5

Troubleshooting your interactive whiteboard system

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CHAPTER 5

Troubleshooting your interactive whiteboard system

This chapter provides basic troubleshooting information for your interactive whiteboard system.

For issues not covered in this chapter, consult the SMART Support website (smarttech.com/support) or contact your authorized SMART reseller (smarttech.com/where).

Before you start

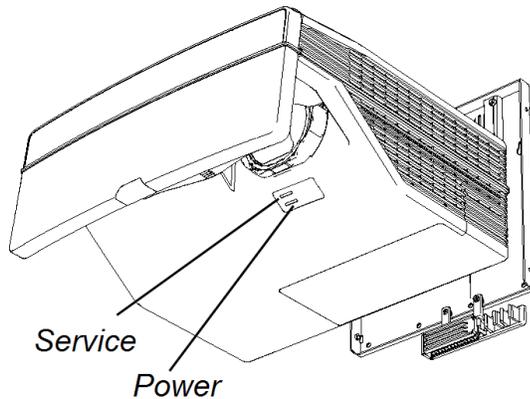
Before you troubleshoot your interactive whiteboard system or contact SMART Support or your authorized SMART reseller for assistance, you need to do the following:

- Locate your interactive whiteboard system's status lights
- Locate your interactive whiteboard system's serial numbers

Locating status lights

Your interactive whiteboard system consists of several components, which have their own status lights:

- Your interactive whiteboard's Ready light is located on the lower-right of the frame.
- Your projector's Power  and Service  lights are located on the bottom of the projector.



- The ECP's **Power**  button (see *Using the Extended Control Panel (ECP)* on page 22) also functions as a status light.

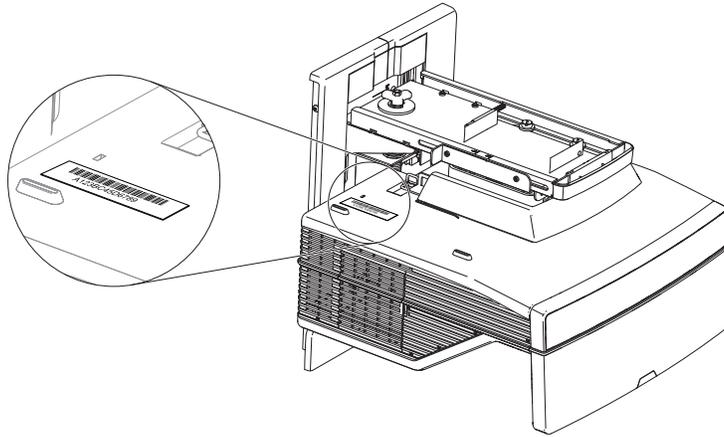
CHAPTER 5

Troubleshooting your interactive whiteboard system

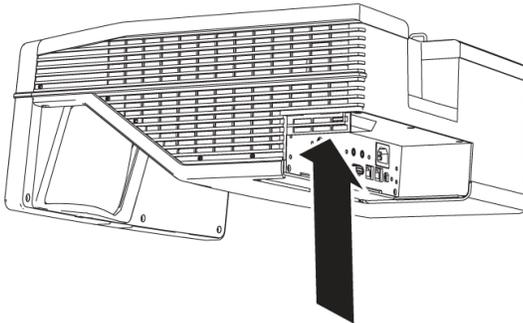
Locating serial numbers

The serial number on your SMART Board 600 series interactive whiteboard is located on the lower-right edge of the interactive whiteboard's frame. For more information, see the *SMART Board 600 and D600 series interactive whiteboard installation and user's guide* (smarttech.com/kb/001414).

The SMART UX80 projector's serial number is located on the top of the projector.



The serial number is also located at the bottom of the projector and can be seen when you stand on the floor and look up at the projector. Open the cable cover at the bottom of the projector and locate the serial number next to the cable connectors.



TIP

You can also access the projector's serial number through the on-screen menu. For more information, see *Adjusting projector settings* on page 72.

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Troubleshooting your interactive whiteboard system

For the locations of serial numbers on other components and accessories, see smarttech.com/support.

Determining your interactive whiteboard system's status

Use the following table to determine the status of your interactive whiteboard system:

 Projector Power light	 Projector Service light	 ECP light	 Interactive whiteboard Ready light	Projected image	Touch and pen control	Status and related troubleshooting
Normal operating statuses						
Solid green	Off	Solid green	Solid green	Correct	Full control	The system is operating normally. If image or sound issues occur, see the remaining sections of this chapter for troubleshooting information.
Flashing green	Off	Flashing green	Off	None	None	The system is starting up.
Solid amber	Off	Solid amber	Off	None	None	The system is in Standby mode.
Flashing amber	Off	Flashing amber	Off	None	None	The system is entering Standby mode.
Solid green	Off	Solid green	Solid amber	N/A	None	The interactive whiteboard's controller module is starting up. If this process takes longer than 10 seconds, see <i>Resolving controller module issues</i> on page 36.
Solid green	Off	Solid green	Flashing amber	N/A	N/A	The interactive whiteboard's controller module is ready to receive a firmware update or is applying a firmware update. If the Ready light flashes amber but no firmware update appears on the screen, see <i>Resolving controller module issues</i> on page 36.
Error statuses						
Solid green	Off	Solid green	Solid green	Incorrect	Full control	There's an issue with the projected image. See <i>Resolving image issues</i> on page 39.
Solid green	Off	Solid green	Solid green	Correct	None	There's an issue with the interactive whiteboard. See <i>Resolving operation issues</i> on page 36.
Solid green	Off	Solid green	Flashing green	Correct	Touch only	SMART Product Drivers isn't installed or running correctly on the connected computer.

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Troubleshooting your interactive whiteboard system

 Projector Power light	 Projector Service light	 ECP light	 Interactive whiteboard Ready light	Projected image	Touch and pen control	Status and related troubleshooting
Solid green	Off	Solid green	Off OR Solid red	N/A	None	There's an issue with the connections between the interactive whiteboard and the other components of the system. <i>See Resolving connection issues on the next page.</i>
Solid green	Off	Off	Off OR Solid red	N/A	N/A	The ECP isn't receiving power. <i>See Resolving ECP issues on page 44.</i>
Solid amber	Flashing red	N/A	N/A	None	N/A	There's an issue with the projector lamp. <i>See The "Lamp Failure" message appears on page 38.</i>
Off	Flashing red	N/A	Off	None	None	The projector's operating temperature has been exceeded. <i>See The "Projector Overheated", "Fan Failure", "Lamp Failure" or "Color Wheel Failure" message appears on page 37.</i>
Off	Solid red	N/A	N/A	None	N/A	There's an issue with the projector's fan or color wheel. <i>See The "Projector Overheated", "Fan Failure", "Lamp Failure" or "Color Wheel Failure" message appears on page 37.</i>
Solid amber	Solid red	N/A	N/A	None	N/A	Contact SMART Support.
Off	Off	Off	Off	None	None	The projector power cable isn't properly connected. OR There's an issue with the mains power supply (for example, the circuit breaker is off).

Resolving interactive whiteboard issues

This section includes information on resolving issues with your interactive whiteboard.

For information not covered in this section, see the *SMART Board 600 and D600 series interactive whiteboard installation and user's guide* (smarttech.com/kb/001414).

Resolving operation issues

To resolve operation issues, complete the following tasks:

- Confirm that the 4-wire cable (and 2-wire cable, if present) is connected to the interactive whiteboard's controller module.
- If necessary, complete additional troubleshooting with the guidance of SMART Support using SMART Board Diagnostics.
- Confirm that the 4-wire cable (and 2-wire cable, if present) is connected between the interactive whiteboard and the interactive whiteboard's controller module.
- Confirm that the 4-wire cable (and 2-wire cable, if present) is connected between the interactive whiteboard and the interactive whiteboard's controller module.
- Confirm that the interactive whiteboard's USB cable is properly connected between the computer and the correct USB port on the ECP.
- Reset the interactive whiteboard system. If necessary, complete additional troubleshooting with the guidance of SMART Support using SMART Board Diagnostics.

Resolving connection issues

To resolve connection issues, complete the following tasks:

- Confirm that the ECP cable harness's 4-pin power connector is properly connected to the **DC 5V 2A** connector on the projector.
- Confirm that the USB cable is properly connected from the interactive whiteboard to the correct USB port on the ECP.
- Confirm that the USB cable is properly connected from a fully functional USB port on the computer to the correct USB port on the ECP.
- Confirm that the projector's on-screen menu option for the USB source is set to associate the USB port on the ECP with the correct video source on the projector.
- If necessary, complete additional troubleshooting on any devices between the USB connection from the computer to the interactive whiteboard system, including any USB hubs and extension cables.

Resolving controller module issues

If the controller module takes longer than 10 seconds to start up, disconnect the interactive whiteboard's USB cable, wait 10 seconds, and then reconnect it.

If the issue persists, run the firmware upgrade utility, located in the same folder as your SMART Product Drivers (for example, **C:\Program Files\SMART Technologies\SMART Board Drivers\SMARTFirmwareUpdater.exe** [Windows® operating systems] or **\Applications\SMART Board Drivers\SMARTFirmwareUpdater.app** [Mac computers]). For more information about performing a firmware upgrade, see smarttech.com/kb/123545 or contact SMART support.

If the Ready light indicates that a firmware update is in progress but no update is actually taking place, disconnect the interactive whiteboard's USB cable, wait a few seconds, and then reconnect it.

Resolving projector issues

Resolving projector errors

System administrators can resolve the following projector errors on their own prior to contacting SMART Support. Performing initial troubleshooting on your projector will reduce the time of a support call.

Your projector stops responding

If your projector stops responding, perform the following procedure.

To restart an unresponsive projector

1. Put the projector into Standby mode, and then wait 30 minutes for it to cool down.
2. Disconnect the power cable from the power outlet, and then wait at least 60 seconds.
3. Connect the power cable, and then turn on the projector.

The “Projector Overheated”, “Fan Failure”, “Lamp Failure” or “Color Wheel Failure” message appears

If the “Projector Overheated”, “Fan Failure” or “Color Wheel Failure” message appears and the projector stops projecting an image, one of the following issues is occurring:

- The temperature is overheating but the “Projector Overheated” message fails to display.
- The temperature outside the projector is too high.
- One of the fans has failed.
- The projector has a color wheel issue.

To resolve the “Projector Overheated”, “Fan Failure”, “Lamp Failure” or “Color Wheel Failure” error

1. Put the projector into Standby mode, and then wait 30 minutes for it to cool down.
2. If your room is hot, lower the temperature if possible.
3. Ensure that nothing is blocking the projector’s air intake and exhaust.
4. Disconnect the power cable from the power outlet, and then wait at least 60 seconds.
5. Connect the power cable, and then turn on the projector.
6. If the previous steps don’t resolve the issue, put the projector into Standby mode, disconnect the power cable, and then contact your authorized SMART reseller.

The “Lamp Failure” message appears

If the “Lamp Failure” message appears, one of the following issues is occurring:

- The lamp is overheating, likely due to blocked air vents.
- The lamp has reached the end of its life.
- The projector has an internal problem.

To resolve the “Lamp Failure” error

1. Restart the projector (see *Your projector stops responding* on the previous page).
2. Check the remaining lamp hours using the on-screen menu (see *Adjusting projector settings* on page 72).

If the lamp has more than 2500 hours of use in Standard mode or 3000 hours of use in Economy mode, it’s near the end of its lifespan.

3. Replace your lamp as described in *Removing and replacing the projector lamp module* on page 27.
4. If replacing the lamp module doesn’t resolve the issue, put the projector into Standby mode, disconnect the power cable, and then contact your authorized SMART reseller.

The projector Power and Service lights are off

If the projector Power and Service lights are both off, one of the following issues is occurring:

- There was a power outage or a power surge.
- A circuit breaker or a safety switch was tripped.

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- The projector isn't connected to the power source.
- The projector has an internal problem.

To resolve the unlit projector Power and Service lights issue

1. Check the power source, and then make sure that all cables are connected.
2. Confirm that the projector is connected to an active power outlet.
3. Make sure the pins on the connectors aren't broken or bent.
4. Connect the power cable, and then turn on the projector.
5. If the previous steps don't resolve the issue, disconnect the power cable and then contact your authorized SMART reseller.

Resolving image issues

To resolve common image issues, complete the following tasks:

- Ensure the computer or other video source is on and set to display a resolution and refresh rate supported by the projector (see *Video format compatibility* on page 79).
- Ensure the video source is properly connected to the projector.
- Press the Input Select button on the remote control or ECP to switch to the correct video source.

If these tasks don't resolve the issue, refer to the following sections for additional troubleshooting information.

Loss of signal

If a video source signal is not detected, out of range of the projector's support video modes or the signal is being switched to a different device or input, the projector doesn't show a source signal and instead displays the SMART logo on a blue screen.



To resolve signal loss issues

1. Wait approximately 45 seconds for the image to synchronize. Some video signals require a longer synchronization period, cycling back through inputs to the one you want also helps image synchronization.
2. If the image doesn't synchronize, check the cable connections to the projector and the ECP.
3. Ensure that the image signal is compatible with the projector (see *Video format compatibility* on page 79).
4. If there are any extension cables, switch boxes, connection wall plates or other devices in the video connection from the computer to the projector, temporarily remove them to ensure they aren't causing the video signal loss.
5. If your projector still doesn't show a source signal, contact your authorized SMART reseller.

Partial, scrolling or incorrectly displayed image



NOTE

This procedure may vary depending on your version of Windows® operating system or Mac OS X operating system software and your system preferences. The following procedures apply to Windows 7 operating systems and Mac OS X 10.8 operating system software.

To resolve a partial, scrolling or incorrectly displayed image on your Windows computer

1. Select **Start > Control Panel > Display**.
2. Click **Adjust resolution**.
3. Verify that your display resolution setting is 1280 × 800 (WXGA).
4. Click **Advanced settings**, and then click the **Monitor** tab.
5. Verify that the screen refresh rate is 60 Hz.

To resolve a partial, scrolling or incorrectly displayed image on your Mac computer

1. Select **Apple Menu > System Preferences**.
The *System Preferences* dialog box appears.
2. Click **Displays**.
3. Verify that your display resolution setting is 1280 × 800 (WXGA).
4. Verify that the screen refresh rate is 60 Hz.

Unstable or flickering image

If the projector's image is unstable or flickering, you could have different frequency or tracking settings on your input source than on your projector.

IMPORTANT

Write down your setting values before adjusting any of the settings in the following procedure.

To resolve your unstable or flickering image

1. Check the display mode of your computer's graphics card. Make sure it matches one of the projector's compatible signal formats (see *Video format compatibility* on page 79). Refer to your computer's manual for more information.
2. Configure the display mode of your computer's graphics card to make it compatible with the projector. Refer to your computer's manual for more information.
3. Adjust the **Frequency**, **Tracking**, **H-position** and **V-position** settings in the on-screen menu. See *Adjusting projector settings* on page 72.
4. Optionally, reset the projector as described in *Resetting the projector* on page 45 to adjust the frequency and tracking to their original values.

IMPORTANT

This action resets all values to their defaults.

Frozen image

If your projector has a frozen image, perform the following procedure.

To resolve a frozen image

1. Ensure that the Hide Display feature is off.
2. Press the **Hide** button on the projector's remote control to hide or show the display.
3. Ensure that your source device, such as your DVD player or computer, isn't malfunctioning.
4. Put the projector into Standby mode, and then wait 30 minutes for it to cool down.
5. Disconnect the power cable from the power outlet, and then wait at least 60 seconds.
6. Connect the power cable, and then turn on the projector.
7. If the previous steps don't resolve the issue, contact your authorized SMART reseller.

The image from your connected laptop computer isn't projected

Laptop computer settings can interfere with projector operations.

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Some laptop computers deactivate their screens when you connect a secondary display device. Refer to your computer's manual for details on reactivating the computer's display screen.

Unaligned projected image

Alignment errors occur when the projected image isn't perpendicular to the screen. Alignment errors can occur when you mount your interactive whiteboard system on an uneven surface or a wall that has obstructions, or if you swivel the projector too far from the vertical center of your interactive whiteboard.

Use the instructions in the included *SMART Board 685ix2 interactive whiteboard systems installation instructions* (smarttech.com/kb/170472) to eliminate most image alignment issues.

The projector image can slip if the projector is moved often or installed in a location prone to vibration, such as next to a heavy door. Follow these precautions to help prevent the image from becoming misaligned:

- Make sure that the installation wall is plumb and square and doesn't move or vibrate excessively.
- Make sure that there are no obstructions behind the projector's wall-mounting bracket, and that the bracket is firmly secured to the wall according to the installation instructions.
- Confirm that all cables are held in place with the appropriate cable management clip.
- Adjust the projected image. See the included *SMART Board 685ix2 interactive whiteboard system textless installation guide* (smarttech.com/kb/170472) and *Aligning the image* on page 10.

Resolving audio issues

The projector includes an internal speaker. You can also connect an external audio system to the audio output connector in the projector's connection panel. If sound isn't coming from either your internal speaker or your external audio system, perform the following procedures.



NOTE

You might need to configure your computer to pass audio through HDMI if it isn't configured automatically.

To resolve audio issues, complete the following tasks:

- If you're using optional external speakers or an external audio system, ensure that the speakers' or audio system's cables are properly connected to the audio output plug on the projector's connection panel.

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- For the purpose of troubleshooting, enable both the internal and external speakers by ensuring that the System Output Switch in the audio menu is set to **Line Out + Speaker**.
- Ensure that the video cable from your computer is connected to the appropriate video connector on your projector.
- If you're using a VGA cable, ensure that the analog audio cable from your computer's audio output is connected to the projector's VGA audio input connector.
- Press the **Mute** button on the projector's remote control, and if Audio Mute is on, turn it off.
- Check the ECP's volume knob or use the projector's remote control to ensure that the volume isn't at the lowest setting.
- If you're using an external audio system, ensure that your speaker or audio system is on and that the volume is turned up.
- Check that your video source input, such as your computer or video device, isn't malfunctioning. Ensure that its audio output is on and that the volume isn't set to the lowest position.



NOTE

You must display the source input's video to play its audio through the connected speakers or audio system.

- Ensure that the correct audio output device is selected in your computer's Sound settings.
- If your computer's video signal is connected with an HDMI cable, ensure that your computer's audio output is also configured to output audio via the same HDMI cable. If your computer's video signal is connected with a VGA cable, ensure that your computer's audio output is configured to use its analog audio cable connected between the computer and the projector.



NOTE

If you're using an HDMI video input on the projector, don't use any DVI to HDMI adapters, because they don't transfer audio from the DVI source to the HDMI input on the projector.

- If the previous steps don't resolve the issue, contact your authorized SMART reseller.

Resolving network communication issues

If you don't have network access, perform the following procedure to troubleshoot your system.

To resolve network communication issues

1. Ensure that your network cable is properly connected to the internet connection on the projector's connection panel. There are two RJ45 (8P8C) ports: one is for the network and one is

for projector 2. Ensure that the network cable connected to the correct one.

2. Ensure that the LAN warning light on the projector is green. To activate the projector's network features, use the "vgaoutnetenable=on" RS-232 command (see *Projector programming commands* on page 59) or enable the **Network and VGA Out** setting (see *Adjusting projector settings* on page 72). The network features on the projector don't work until you complete one of these tasks.

Ensure that the network is enabled in the projector's on-screen display menu.

3. To ensure that the network function is enabled, press the **Menu** button, and then select the **Network Settings** menu to check the IP address. See *Adjusting projector settings* on page 72 for a description of the IP address field. Enter this IP address into your browser or SNMP agent.
4. If you still don't have network access, contact your network administrator. If your administrator is unable to resolve the issue, contact your authorized SMART reseller.

Resolving ECP issues

If the ECP isn't receiving power, complete the following tasks:

- Confirm that the ECP cable harness's ECP connector is properly connected to the ECP.
- Confirm that the ECP cable harness's 7-pin min-DIN connector and 4-pin power-DIN connectors are both properly connected to the ECP connector on the projector.

Accessing the service menu

CAUTION

- To prevent tampering or unintentional changes, only system administrators should access the service menu. Do not share the service menu access code with casual users of your interactive whiteboard system.
- Do not adjust any settings in the service menu other than those listed in this guide. Changing other settings can damage or affect the operation of your projector and may invalidate your warranty.

Retrieving your password

If you forget the projector's password, you can retrieve it by accessing the projector service menu directly from the projector or from the password settings menu on your projector's web page (see *Password settings* on page 55).

To retrieve your password from the service menu

1. Using the remote control, press the following buttons quickly to access the service menu:
Down, Up, Up, Left, Up.
2. Scroll to *Password Get*, and then press **Enter** on the remote control.
The password appears on the screen.
3. Write down the password.
4. Scroll to *Exit*, and then press **Enter** on the remote control to exit the projector service menu.

Resetting the projector

At some point during troubleshooting, you might need to reset all projector settings.



IMPORTANT

This action is irreversible.

To reset all projector settings

1. Using the remote control, press the following buttons quickly to access the service menu:
Down, Up, Up, Left, Up.
2. Scroll to *Factory Reset*, and then press **Enter** on the remote control.
3. Scroll to *Exit*, and then press **Enter** on the remote control to exit the projector service menu.

Transporting your interactive whiteboard system

Save your original SMART Board interactive whiteboard packaging so that it's available if you need to transport your interactive whiteboard system. When required, repack it with all of the original packaging. This packaging was designed to provide optimal shock and vibration protection. If you no longer have your original packaging, purchase the same packaging directly from your authorized SMART reseller.

If you prefer to use your own packaging materials, make sure you adequately protect your unit. Make sure that the projector lens and mirror are protected against any physical contact or pressure which may damage the projector's optics. Ship your interactive whiteboard in an upright position to deter shippers from placing heavy objects on it.

Appendix A

Remotely managing your system through a network interface

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This chapter includes detailed instructions on how to remotely manage your SMART Board 685ix2 interactive whiteboard system settings through a network interface.

Web page management

You can access advanced setup features via the projector's web page. This web page enables you to manage the projector from a remote location using any computer connected to your intranet.



NOTE

- To access the web page, your browser must support JavaScript®. Most commonly used browsers like Internet Explorer® and Firefox® support JavaScript.
- The SMART UX80 projector uses HTTP/1.1, HTML 4.01 and CSS 2.1 specifications.

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Remotely managing your system through a network interface

Accessing web page management

Before you can access the web page, connect your projector to the network, and then enable the projector's network functions using the projector's menu. An IP address appears on the on-screen display.

NOTE

You can view the projector's IP address by accessing the projector's Network Settings menu page (see *Network settings* on page 53).

To use the management web page

1. Start your Internet browser.
2. Type the IP address in the address box, and then press ENTER.
The *SMART UX80 Projector Settings* window appears.
3. Select the menu options in the left pane to access the settings on each page.
4. Modify settings using your computer's mouse and keyboard, and then click **Submit** or another action button next to each setting you change.

Home

The Home menu page displays basic projector information and enables you to select the on-screen display language.

NOTE

You can view basic projector information but you're unable to change it (with the exception of the on-screen display language) from the Home menu page.

Submenu setting	Description
Language	Displays language options
Projector Information	Displays current projector information

Control panel

This menu enables you to manage the projector audio and video status, alerts and appearance using an Internet browser.



NOTE

Image Adjustment settings displays only settings applicable to the active video source.

Submenu setting	Description
Power	Turns the projector on or puts it into Standby mode. Select the Power ON or Power OFF button.
Restore All Projector Defaults	Returns projector settings to default values or refreshes the current settings. Select Submit or Refresh .
	<div data-bbox="686 779 724 816" data-label="Image"> </div> <div data-bbox="738 781 948 810" data-label="Section-Header"> <h3>IMPORTANT</h3> </div> <div data-bbox="683 833 1308 865" data-label="Text"> <p>The Submit option is irreversible and resets all values.</p> </div>
Volume	Adjusts the projector's volume from -20 to 20.
Mute	Turns on or turns off the mute settings. Select On to mute the projector's sound and Off to turn off mute.
Volume Control	Enables volume control on the on-screen display. Select On to enable projector volume adjustment and select Off to disable projector volume adjustment.
Closed Captioning	Turns on or turns off the closed captioning feature.
Display Mode	Adjusts the display output to SMART Presentation , Bright Room , Dark Room , sRGB and User modes so you can project images from various sources with consistent color performance: <ul style="list-style-type: none"> • SMART Presentation is recommended for color fidelity. • Bright Room and Dark Room are recommended for locations with those conditions. • sRGB provides standardized accurate color. • User enables you to apply your own settings.
Brightness	Adjusts projector brightness from 0 to 100.
Contrast	Adjusts the difference between the lightest and darkest parts of the image from 0 to 100.
Frequency	Adjusts the display data frequency of the projected image from -5 to 5 to match the frequency of your computer's graphics card.
Tracking	Synchronizes your projector's display timing with your computer's graphics card from 0 to 31.
Sharpness	Adjusts the projected image's sharpness from 0 to 31.

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Submenu setting	Description
White Peaking	Adjusts the image color brightness from 0 to 10 while providing more vibrant white shades. A value closer to 0 creates a natural image and a value closer to 10 enhances brightness.
Degamma	Adjusts the color performance of the display from 0 to 3.
Color	Adjusts the Red, Green, Blue, Cyan, Magenta and Yellow colors on the projector from 0 to 100 to provide custom color and luminance output. Each color has a default value of 100. Adjustments to the color settings register to the User mode.
Auto Signal Detect	Enables or disables signal searching of input connectors. <ul style="list-style-type: none">• Select On to have the projector continuously switch inputs until it finds an active video source.• Select Off to maintain signal detection in one input.
Lamp Reminder	Select On to show or Off to hide the lamp replacement reminder when it appears. This reminder appears 100 hours before the recommended lamp replacement.
Lamp Mode	Adjusts lamp brightness to Standard or Economy . Standard displays a high-quality, bright image. Economy increases the lamp life by decreasing the brightness of the image.
Auto Power Off	Sets the length of the auto power off countdown timer between 1 and 240 minutes. The timer begins to count down when the projector no longer receives a video signal. The timer finishes when the projector enters Standby mode. Select 0 to turn off the timer.
Zoom	Adjusts the zoom to the center of the image in or out from 0 to 30.
H-position (RGB input)	Moves the horizontal position of the source video left or right from 0 to 100 (relative to the projected image). <div data-bbox="688 1331 1459 1440"><p> NOTE This is useful in situations where the source video is cut off.</p></div>
V-position (RGB input)	Moves the vertical position of the source video up or down from -5 to 5 (relative to the projected image). <div data-bbox="688 1528 1459 1638"><p> NOTE This is useful in situations where the source video is cut off.</p></div>

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Submenu setting	Description
Aspect Ratio	<p>Adjusts the image output to Fill Screen, Match Input or 16:9.</p> <ul style="list-style-type: none">• Fill Screen produces an image that fills the entire screen by stretching and scaling.• Match Input matches the projector's aspect ratio to the input's aspect ratio. As a result, black bands might appear along the top and bottom edges of the screen horizontally (letterbox format) or along the left and right edges of the screen vertically (pillarbox format).• 16:9 changes the output to 16:9 by letterboxing the image, which is recommended for use with HDTV and DVDs enhanced for wide-screen television.
	<p> NOTE</p> <p>See <i>Video format compatibility</i> on page 79 for appearance descriptions in each mode.</p>
Startup Screen	<p>Sets the type of startup screen to SMART or User. The SMART screen is the default SMART logo on a blue background. The User screen uses the saved picture from the Capture User Startup Screen function.</p>
High Speed Fan	<p>Adjusts the speed of the projector's fan. Select High or Normal.</p>
	<p> NOTE</p> <p>Use the High setting when the projector's temperature is high or the altitude is above 6000' (1800 m).</p>
Projector Mode	<p>Adjusts the projection mode to Front, Ceiling, Rear or Rear Ceiling.</p>
	<p> IMPORTANT</p> <p>SMART recommends that you never change this setting from the Ceiling projection mode.</p>
Source	<p>Adjusts the input source to VGA, HDMI1 or HDMI2.</p>
SMART Fixed Install (FI) / SMART Desktop mode (DT)	<p>User-defined tag not currently used. Reserved for future application.</p>
HDMI1	<p>Assigns an alternative name to your HDMI1 input, which appears when you select the HDMI1 input.</p>
HDMI2	<p>Assigns an alternative name to your HDMI2 input, which appears when you select the HDMI2 input.</p>
VGA1	<p>Assigns an alternative name to your VGA 1 input, which appears when you select the VGA 1 input.</p>

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Submenu setting	Description
Emergency Alert	Turns the on-screen alert broadcast message on or off. When enabled, this message displays over the current projected image.
Alarm Message / Alert Message	Displays an on-screen emergency notification message (maximum 60 characters).

Control panel II

This menu enables you to manage the projector's USB settings.

Submenu setting	Description
USB1 Source	Associates the input source to VGA , HDMI1 or HDMI2 .
USB2 Source	Associates the input source to VGA , HDMI1 or HDMI2 .

Failurelog

This menu enables you to view projector service details such as lamp hours, display hours, temperature and lamp voltage on failure types such as Lamp Error and System Overtemp.

Failurelog	Type	Lamp hours (hr.)	Display hours (hr.)	Temperature (°C)	Lamp voltage (V)
1	Lamp Error	159	178	47	0
2	System Overtemp	3046	153	57	93
3	System Overtemp	3046	152	60	91
4	System Overtemp	146	152	57	100
5	Lamp Error	146	152	55	0

USB Control settings

This menu allows you to associate a video source with a USB receptacle on the ECP.

Submenu setting	Description
USB1 Source	Enables touch for the selected video source (VGA , HDMI1 , HDMI2 or Disabled) by associating the video source with the room computer USB receptacle (USB1) on the ECP.
USB2 Source	Enables touch for the selected video source (VGA , HDMI1 , HDMI2 or Disabled) by associating the video source with the laptop USB receptacle (USB2) on the ECP.

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Network settings

This menu allows you to use or not use Dynamic Host Control Protocol (DHCP) and to set the network-related addresses and names when DHCP is not used.

Submenu setting	Description
DHCP	Determines if the projector's IP address and other network settings are dynamically assigned by a DHCP server or are manually set. <ul style="list-style-type: none">• On allows the network's DHCP server to assign a dynamic IP address to the projector.• Off allows you to manually set the projector's IP address and other network settings.
IP Address	Displays or allows you to set the projector's IP address in values between 0.0.0.0 and 255.255.255.255.
Subnet Mask	Displays or allows you to set the projector's subnet mask number in values between 0.0.0.0 and 255.255.255.255.
Gateway	Displays or allows you to set the projector's default network gateway in values between 0.0.0.0 and 255.255.255.255.
DNS	Displays or allows you to set the projector's IP address for your network's primary domain name server in values between 0.0.0.0 and 255.255.255.255.
Group Name	Displays or allows you to set the projector's workgroup name (maximum 12 characters).
Projector Name	Displays or allows you to set the projector's name (maximum 12 characters).
Location	Displays or allows you to set the projector's location (maximum 16 characters).
Contact	Displays or allows you to set the contact name or number for projector support (maximum 16 characters).
SNMP Enable	Turns the Simple Network Management Protocol (SNMP) agent on or off.
Read-Only Community	Sets a password that is required for each SNMP get request to the device. <div data-bbox="688 1528 1463 1633"> NOTE The default for Read-Only Community is public.</div>
Read/Write Community	Sets a password that is required for each SNMP set request to the device. <div data-bbox="688 1730 1463 1835"> NOTE The default for Read/Write Community is private.</div>

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Submenu setting	Description
TRAP Destination Address	Displays or allows you to set the IP address of the network's SNMP TRAP manager in values between 0.0.0.0 and 255.255.255.255. The TRAP destination address is the IP address of the computer assigned to handle unsolicited data generated by SNMP TRAP events generated by the projector, such as power state changes, projector failure modes, a lamp needing to be replaced or other issues.

E-mail alerts

This menu enables you to enter your preferred address for receiving e-mail alerts and adjust related settings.

Submenu setting	Description
E-mail Alert	Selects Enable to turn on or Disable to turn off the E-mail Alert function.
To	Displays or allows you to set the e-mail address of the e-mail alert recipient.
CC	Displays or allows you to set the e-mail address of the e-mail alert "copy to" recipient.
From	Displays or allows you to set the e-mail address of the user who sends the e-mail alert.
Outgoing SMTP server	Displays or allows you to set the Simple Mail Transfer Protocol (SMTP) server that you use on your network.
Username	Displays or allows you to set the SMTP server user name.
Password	Displays or allows you to set the SMTP server password.

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Submenu setting	Description
Alert Condition	<p>Sends e-mail alerts whenever the following conditions occur. Select the settings you want, and then click Submit.</p> <ul style="list-style-type: none">• Over Temperature• Fan Failure: DMD• Fan Failure: System• Fan Failure: Blower• Lamp Error• Color Wheel Break• Lamp Ignite Error• Lamp Driver Failure• Lamp Over Hours

 **NOTE**

The projector sends an alert e-mail (SMART Alert) to your e-mail address. Click **E-mail Alert Test** to confirm that your e-mail address and SMTP server settings are correct by sending a test e-mail (SMART Alert-Test Mail).

If the settings aren't correct, the e-mail alert messages aren't sent or received successfully and warnings and notification messages aren't available to advise of this state.

Password settings

This menu provides a security function that allows an administrator to manage projector use and enable the Administrator Password function.

Submenu setting	Description
Password	<p>When the password function is enabled, the administrator password is required to access Web Management. Select Disable to allow remote web management of the projector without requiring a password.</p>



NOTES

- The first time you enable the password settings, the default password value is four numbers, for example, 1234.
- If you forget the projector password, refer to *Accessing the service menu* on page 44 to set the projector setting to factory defaults.

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Simple Network Management Protocol (SNMP)

Your projector supports a list of SNMP commands as described in the management information base (MIB) file. You can download this file by browsing to smarttech.com/software and clicking the MIB file's link in the *Hardware* section for the SMART UX80 projector.

The SNMP agent in your projector supports SNMP version 1 or 2. Upload the MIB file to your SNMP management system application, and then use it as described in your application's user guide.

Crestron® RoomView®

Crestron RoomView Express management software is embedded in the SMART UX80 projector to deliver built-in direct connectivity and control via the IT network. There are no control processors and no custom programming is required; just connect the SMART UX80 projector to your network and Crestron RoomView immediately recognizes the device for seamless communication and control.

RoomView Connected® devices also feature built-in instant help-desk messaging and emergency broadcasting to provide the safest, most secure classroom environment so teachers have the confidence to focus on teaching.

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This appendix includes detailed instructions on how to set up your computer or room control system to remotely manage your SMART Board 685ix2 interactive whiteboard system settings through an RS-232 serial interface.

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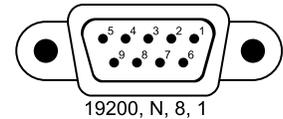
Connecting your room control system to the SMART UX80 projector

By connecting a computer or room control system to the RS-232 serial interface of the SMART UX80 projector, you can select video inputs, start up or shut down your interactive whiteboard system and request information such as projector lamp use, current settings and network addresses.

Pin configuration on the projector's RS-232 connector

The following table provides the pin configuration on the SMART UX80 projector. This pin configuration follows a three-wire connection so that a straight-through male-to-female RS-232 serial cable connects to the projector's serial interface in the following arrangement:

Pin number	Projector's female RS-232 connector
2	Receive data (Rx)
3	Transmit data (Tx)
5	Signal Ground (GND)



Serial interface settings

To be able to make use of the projector's control port, your computer equipment or room control system must be configured to match these serial data communications settings.

Setting	Value
Data Rate	19.2 kbps
Data Bits	8
Parity	None
Stop Bits	1
Flow Control	None

NOTES

- Asynchronous mode is disabled by default in the projector.
- All commands should be in ASCII format. Terminate all commands with a carriage return.
- All responses from the projector are terminated with a command prompt. Wait until you receive the command prompt indicating that the system is ready for another command before you

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continue.

- The room control feature of the projector is always on.

To configure your computer's serial interface

1. Turn on your computer, and then start your serial communications program or terminal emulation program.
2. Connect your computer to the serial connection cable connected to the projector.
3. Configure your serial interface settings using the values in the previous table, and then press ENTER.

The > character appears as a command prompt.

NOTE

If no message appears or an error message appears, your serial interface configuration isn't correct. Repeat step 3.

4. Type commands to configure your settings.

NOTES

- To see a list of commands available in the current operating mode, type ? and then press ENTER.
- If you're using a terminal emulation program, turn on your program's local echo setting to see characters as you type them.

Projector programming commands

This section documents the projector programming commands.

Projector power state controls

Your projector responds to commands only at certain power states and times.

There are six projector power states.

Command	Control basics
?	Commands the projector to output a list of commands that are available in the projector's current operating mode. Note that some available commands might not appear in the resulting list.

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Command	Control basics
on	Commands the projector to exit Standby mode, to ignite the lamp and to begin projecting an image.
off	Commands the projector to stop projecting an image, to cool down the lamp and to enter Standby mode. The projector doesn't do this immediately; instead, it responds with a request for confirmation, which must be followed by a second "off" command within 10 seconds.
off now	Commands the projector to immediately stop projecting an image, to cool down the lamp and to enter Standby mode without requiring any further confirmation.
get [parameter]	Commands the projector to allow you to retrieve information from the projector about the current state of one of the projector's operating parameters.
set [parameter] = [value]	Commands the projector to allow you to change the current state of one of the projector's operating parameters. For numeric values, the "set" command can also use a plus (+) or a minus (-) operator, in addition to an equals (=) operator.  NOTES <ul style="list-style-type: none">• Attempts to set a parameter to an invalid value return an "invalid command" response.• For parameters that use numeric values, attempts to set the value outside of its operating range result in setting the parameter to its maximum or minimum value.

NOTES

- If you send the projector an invalid command, you receive an "invalidcmd=[the command sent]" message from the projector.
- Projector operating parameters that are accessible via the "set" or "get" commands are listed in the following sections.

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Power state controls

These commands put the projector in and out of Standby mode and request the projector's current power state. The projector's power state determines whether certain commands are available at that time. These settings are available even when the projector is in Standby mode.

Usable command by power state		Property	Valid values	Notes
Standby / idle	On			
get	get	powerstate	<ul style="list-style-type: none">• on• off• confirm off• powering• cooling• idle	These states may be reported asynchronously, preceded by a # character, if the projector's "statereporting" function is enabled.
set or get	set or get	statereporting	<ul style="list-style-type: none">• on• off (default)	Causes the projector power state to be reported asynchronously, without a need to get it first.

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Display controls

These commands control the video display of the projector.

Usable command by power state		Property	Valid values	Notes
Standby / idle	On			
get	get	videoinputs	Returns a text list of available video source inputs, such as VGA#, HDMI#, Composite.	The default SMART UX80 projector with no accessories will return a list of VGA1, HDMI1, HDMI2.
get	set or get	input	<ul style="list-style-type: none"> • VGA# [# range of 1~5] • HDMI# [# range of 1~5] • Composite • None • Next (settable only, not gettable) 	A default SMART UX80 projector with no additional accessories has VGA1, HDMI1 and HDMI2 only.
	set or get	autosignal	<ul style="list-style-type: none"> • on • off (default) 	Causes the projector to automatically rotate through all available video inputs until a valid video source signal is found.
	set or get	signaldetected	<ul style="list-style-type: none"> • true • false 	Indicates if an active source video signal is detected by the projector.
	set or get	displayhide	<ul style="list-style-type: none"> • normal (default) • frozen • muted 	
	set or get	videomute	<ul style="list-style-type: none"> • on • off (default) 	
	set or get	videofreeze	<ul style="list-style-type: none"> • on • off (default) 	
	set or get	autopoweroff	<ul style="list-style-type: none"> • on • off (default) 	

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Audio controls

These commands control the audio of the projector.

Usable command by power state		Property	Valid values	Notes
Standby / idle	On			
	set or get	volumecontrol	<ul style="list-style-type: none">• on• off (default)	When off, prevents a user from changing the projector amplifier volume via the remote control or any attached control panel.
	set or get	volume	Numeric value. Range: -20~20 (default = 0)	This may be displayed to the user as a range of 0~40 in the projector's on-screen display.
	set or get	mute	<ul style="list-style-type: none">• on• off (default)	
	set or get	sysoutputsw	<ul style="list-style-type: none">• line• spkr• line+spkr (default)	Chooses where to route the audio output signal to the internal speaker, to the external audio system (via the line out connector) or both.

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System controls

These commands control the integration properties of the projector.

Usable command by power state		Property	Valid values	Notes
Standby / idle	On			
set or get	set or get	usb1source	<ul style="list-style-type: none"> •VGA# [# range of 1~5] •HDMI# [# range of 1~5] (default = vga1) 	A default SMART UX80 projector with no additional accessories has VGA1, HDMI1 and HDMI2 only.
set or get	set or get	usb2source	<ul style="list-style-type: none"> •VGA# [# range of 1~5] •HDMI# [# range of 1~5] (default = hdmi1) 	A default SMART UX80 projector with no additional accessories has VGA1, HDMI1 and HDMI2 only.
	set or get	emergencyalertmsg	[text string] (41 character maximum)	Contains text to be displayed when the “emergencyalert” function is turned on.
	set or get	emergencyalert	<ul style="list-style-type: none"> • on • off (default) 	This will cause the “emergencyalertmsg” to be displayed on the projector instead of the normal image.
	set or get	language	Arabic, Czech, German, Danish, Greek, English (default), Spanish, Finnish, French, Korean, Norwegian, Swedish, Italian, Japanese, Simplified Chinese, Polish, Traditional Chinese, Dutch, Iberian, Portuguese, Russian	<ul style="list-style-type: none"> • Matches the languages listed in the projector on-screen display’s <i>language</i> menu. • Languages with spaces in the name must be entered without the spaces.
	set or get	lampreminder	<ul style="list-style-type: none"> • on • off (default) 	Provides a reminder when it’s time to change the projector lamp.

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Usable command by power state		Property	Valid values	Notes
Standby / idle	On			
	set or get	startupscreen	<ul style="list-style-type: none">• smart (default)• usercapture• preview	Chooses what splash screen to display at projector startup or when there is no active video source signal.

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Service and support controls

These commands control the integration properties of the projector.

Usable command by power state		Property	Valid values	Notes
Standby / idle	On			
	get	modelnum	[model name text string]	The projector's model.
	get	prjserialnum	B01#??##?#### (13-digits, # is any number, ? is any letter)	The projector's serial number.
get	get	fwverddp	###.#	Firmware version for the projector's digital display processor.
get	get	fwvermpu	###.#	Firmware version for the projector's microprocessor unit.
get	get	fwvernet	###.#	Firmware version for the projector's network module. If the network module is disabled, this will report as 0.0.0.0.
get	get	fwverecp	###.#	Firmware version for the attached ECP (extended control panel). If no ECP is attached to the projector, this will be 0.0.0.0.
set or get	set or get	lamphrs	0~5000	Current record of the age of the projector lamp in usage hours.
get	get	syshrs	0~20000	Current record of the age of the projector in usage hours.
	get	displayhour	0~20000	Current record of the age of the projector in usage hours.

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Usable command by power state		Property	Valid values	Notes
Standby / idle	On			
	get	resolution	last known video input resolution in the format of ###x###@##Hz or ##i/p	
	set or get	highspeedfan	<ul style="list-style-type: none"> • high • normal (default) 	Enables the high speed fan in hot environments to prevent overheating.
get	get	failurelog	Returns a text list of failures detected by the projector and logged in the projector's failure log (or an indication of "normal"). This is in the format of failure1, failure2, failure3, etc.	Failures detectable by the projector include the following: overtemp, fanlock, fanDMD, fanblower, fansystem, lamperror, colorwheelbreak, lampignite, lampoverheat, lampdriver, lampoverhours
get	gett	error#	Returns text information about the specified error number in the projector's error log.	Reported data: Error type, lamp hours, system hours, system temperature, and lamp voltage when the error was detected.
set	set	restoredefaults		This immediately reset the projector operating parameters to their factory default settings. A hard power-cycle may be required to complete.
set	set	factoryreset	<ul style="list-style-type: none"> • true • false 	Setting this to "true" resets the projector operating parameters to their factory default settings. A hard power-cycle may be required to complete.

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Network controls

These commands control the integration properties of the projector.

Usable command by power state		Property	Valid values	Notes
Standby / idle	On			
	set or get	network	<ul style="list-style-type: none">• on• off (default)	Enables or disables the network module.
set or get	set or get	vgaoutnetenable	<ul style="list-style-type: none">• on• off (default)	Same function as the “network” property.
get	get	netstatus	<ul style="list-style-type: none">• connected• disconnected• disabled	Reports if the network port on the projector is or isn't connected to a network.
set or get	set or get	dhcp	<ul style="list-style-type: none">• on• off (default)	When off, the projector's network IP address, subnetmask, gateway and primary DNS values must all be set manually.
set or get	set or get	ipaddr	A valid IPv4 address in values between 0.0.0.0 and 255.255.255.255	An IPv4 address.
set or get	set or get	subnetmask	A valid IPv4 address in values between 0.0.0.0 and 255.255.255.255	An IPv4 address.
set or get	set or get	gateway	A valid IPv4 address in values between 0.0.0.0 and 255.255.255.255	An IPv4 address.
set or get	set or get	primarydns	A valid IPv4 address in values between 0.0.0.0 and 255.255.255.255	An IPv4 address.
get	set or get	macaddr	xx-xx-xx-xx-xx-xx]	The media access control (MAC) identifier of the projector's network module.

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Usable command by power state		Property	Valid values	Notes
Standby / idle	On			
	set or get	groupname	[text string]	These properties aren't used by any of the projector functions. They exist only for human reference, if desired.
	set or get	projectorname	[text string]	
	set or get	locationinfo	[text string]	
	set or get	contactinfo	[text string]	
	set or get	projectorid	Numeric value between 0 and 99	

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Advanced display controls

These commands control the integration properties of the projector.

Usable command by power state		Property	Valid values	Notes
Standby / idle	On			
	set or get	projectionmode	<ul style="list-style-type: none">• front• ceiling (default)• rear• rear ceiling	
	set or get	displaymode	<ul style="list-style-type: none">• SMARTPresentation (default)• Brightroom• Darkroom• sRGB• User	
	set or get	highbrightness	<ul style="list-style-type: none">• on (default)• off	
	get	nativeaspectratio	<ul style="list-style-type: none">• 16:9• 16:10	<ul style="list-style-type: none">• UX80 reports 16:10• UX80HD reports 16:9
	set or get	aspectratio	<ul style="list-style-type: none">• fill (default)• match• 16:9	
	set or get	brightness	Numeric value. Range: 0~100	Default=50
	set or get	contrast	Numeric value. Range: 0~100	Default=50
	set or get	frequency	Numeric value. Range: -5~5	Automatically detected from current video source.
	set or get	tracking	Numeric value. Range: 0~31	Automatically detected from current video source.
	set or get	hposition	Numeric value. Range: 0~100	Automatically detected from current video source.

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Usable command by power state		Property	Valid values	Notes
Standby / idle	On			
	set or get	vposition	Numeric value. Range: -5~5	Automatically detected from current video source.
	set or get	whitepeaking	Numeric value. Range: 0~10	Default=10
	set or get	degamma	Numeric value. Range: 0~3	Default=2
	set or get	red	Numeric value. Range: 0~100	Default=100
	set or get	green	Numeric value. Range: 0~100	Default=100
	set or get	blue	Numeric value. Range: 0~100	Default=100
	set or get	cyan	Numeric value. Range: 0~100	Default=100
	set or get	magenta	Numeric value. Range: 0~100	Default=100
	set or get	yellow	Numeric value. Range: 0~100	Default=100
	set or get	zoom	Numeric value. Range: 0~30	Default=0

Adjusting projector settings

The remote control's Menu button enables you to access the on-screen display to adjust the projector settings.

IMPORTANT

Keep your remote control in a safe place because there is no other way to access menu options.

Setting	Use	Notes
 Image Adjustment menu		
Display Mode	Indicates the projector's display output (SMART Presentation , Bright Room , Dark Room , sRGB and User).	The default is SMART Presentation .
Brightness	Adjusts projector brightness from 0 to 100.	The default is 50.
Contrast	Adjusts the difference between the lightest and darkest parts of the image from 0 to 100.	The default is 50.
Frequency	Adjusts the display data frequency of the projected image from -5 to 5 to match the frequency of your computer's graphics card.	The default is 0. This setting applies to VGA inputs only.
Tracking	Synchronizes your projector's display timing with your computer's graphics card from 0 to 63.	This setting applies to VGA inputs only.
H-Position	Moves the horizontal position of the source video left or right from 0 to 100 (relative to the projected image).	Don't adjust this setting unless you're advised to by SMART Support. Apply this setting only after you make all physical adjustments. This setting applies to VGA inputs only and is useful in situations where the source video is cut off.

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Setting	Use	Notes
V-Position	Moves the vertical position of the source video up or down from -5 to 5 (relative to the projected image).	Don't adjust this setting unless you're advised to by SMART Support. Apply this setting only after you make all physical adjustments. This setting applies to VGA inputs only and is useful in situations where the source video is cut off.
White Peaking	Adjusts the image color brightness from 0 to 10 while providing more vibrant white shades.	A value closer to 0 creates a natural image and a value closer to 10 enhances brightness. The default is 10.
Degamma	Adjusts the color performance of the display from 1 to 3.	The default is 2.
Color	Adjusts the Red, Green, Blue, Cyan, Magenta and Yellow colors on the projector from 0 to 100 to provide custom color and luminance output.	Each color has a default value of 100. Adjustments to the color settings register under the User mode.
 Audio menu		
Volume	Adjusts the projector's volume amplification from -20 to 20.	The default is 0.
Mute	Mutes the projector's audio output.	The default is off. If you mute the projector's audio output and then increase or decrease the volume, the volume is restored automatically. You can prevent this from happening by disabling the volume control.
Disable Volume Control	Disables the projector's volume control and the ECP's volume control knob.	
System Output	Selects one or more speakers or other audio device.	Select Line Out+Speaker , Line Out Only or Speaker Only .
 Projector Functions menu		
Auto Signal Detect	Enables or disables signal searching of input connectors.	The default is off. Select On to have the projector continuously switch inputs until it finds an active video source. Select Off to maintain signal detection in one input.

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Setting	Use	Notes
Lamp Reminder	Turns the lamp replacement reminder on or off.	This reminder appears 100 hours before the recommended lamp replacement.
Lamp Mode	Adjusts lamp brightness to Standard or Economy .	Standard displays a high-quality, bright image. Economy increases the lamp life by decreasing the brightness of the image.
Auto Power Off (minutes)	Sets the length of the auto power-off countdown timer between 1 and 240 minutes.	The default is 120 minutes. The timer begins to count down when the projector no longer receives a video signal. The timer finishes when the projector enters Standby mode. Select 0 to turn off the timer.
Zoom	Adjusts the zoom to the center of the image in or out from 0 to 30.	The default is 0. Zooming in cuts off the outer edges of the source video.
Projector ID	Displays the projector's unique ID number (from 0 to 99) within your organization's network.	You can refer to or change this number when using the network remote management feature (see <i>Remotely managing your system through a network interface</i> on page 47).
Aspect Ratio	Adjusts the image output to Fill Screen , Match Input or 16:9 .	The default is Fill Screen . Fill Screen produces an image that fills the entire screen by stretching and scaling the source video to match the projector's native resolution and aspect ratio. Match Input displays the source video in its native aspect ratio. As a result, unused space could appear along the top and bottom edges of the screen (letterbox format) or along the left and right edges of the screen (pillarbox format). See <i>Video format compatibility</i> on page 79 for descriptions of each mode.

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Setting	Use	Notes
Startup Screen	Selects the type of startup screen (SMART , Capture User Startup Screen , Preview Startup Screen), or Image Alignment Screen .	This screen displays when the projector lamp is starting and a video source signal isn't displayed. SMART displays the default SMART logo on a blue background. Capture User Startup Screen closes the on-screen display menu and captures the entire projected image. The captured image is displayed the next time the on-screen display opens. (The capture can take up to one minute, depending on the complexity of the background graphic.) Preview Startup Screen enables you to preview the default or captured startup screen. Image Alignment Screen enables you to adjust the projected image size, shape and location.
Image Alignment Screen	Enables you to adjust the projected image size, shape and location.	The image alignment screen appears the first time you start your projector. However, you can access it from the startup screen menu any time. Press Menu or Enter to close it.
Set to Default?	Resets projector settings to their default values.	If you select Yes , all projector settings reset to their defaults, reversing any menu changes you made. This action is irreversible. Don't adjust this setting unless you want to reset all of the applied settings, or unless you're advised to by a SMART Support specialist.
USB Source Select	Opens a sub-menu that enables you to select the video input on your projector and the USB receptacle on the ECP (if present).	The defaults are as follows: <ul style="list-style-type: none"> • HDMI 1, USB 1 • HDMI 2, Disabled (no associated USB input) • VGA 1, USB 2
 Network menu		
Network	Activates the projector's RJ45 connector and network features.	
Status	Displays the current network status (Connected , Disconnected or Off).	The default is off.

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Setting	Use	Notes
DHCP	Displays the status of the network's Dynamic Host Configuration Protocol (DHCP) as On or Off .	The default is on. On enables a DHCP server on the network to automatically assign an IP address to the projector. Off enables an administrator to assign an IP address manually.
Password Reminder	E-mails the network password to the previously defined e-mail recipient.	See <i>Web page management</i> on page 47 to set up a destination e-mail address.
IP Address	Displays the projector's current IP address in values between 0.0.0.0 and 255.255.255.255.	To change the projector's IP address, use the RS-232 connector (see <i>Network controls</i> on page 68) or use a DHCP server to assign a dynamic IP address, and then set a static IP address using the network remote management feature (see <i>Remotely managing your system through a network interface</i> on page 47).
Subnet Mask	Displays the projector's subnet mask number in values between 0.0.0.0 and 255.255.255.255.	
Gateway	Displays the projector's default network gateway in values between 0.0.0.0 and 255.255.255.255.	
DNS	Displays the projector's primary domain name server (DNS) IP address in values between 0.0.0.0 and 255.255.255.255.	
MAC Address	Displays the projector's MAC address in xx-xx-xx-xx-xx-xx format.	
Group Name	Displays the projector's workgroup name as set by an administrator (maximum 12 characters).	You can set the projector's workgroup name using the remote management features (see <i>Remotely managing your system through a network interface</i> on page 47 and <i>Remotely managing your system through an RS-232 serial interface</i> on page 57).

APPENDIX B

Remotely managing your system through an RS-232 serial interface

Setting	Use	Notes
Projector Name	Displays the projector's name as set by an administrator (maximum 12 characters).	You can set the projector's name using the remote management features (see <i>Remotely managing your system through a network interface</i> on page 47 and <i>Remotely managing your system through an RS-232 serial interface</i> on page 57).
Location	Displays the projector's location as set by an administrator (maximum 16 characters).	You can set the projector's location using the remote management features (see <i>Remotely managing your system through a network interface</i> on page 47 and <i>Remotely managing your system through an RS-232 serial interface</i> on page 57).
Contact	Displays the contact name or number for projector support as set by an administrator (maximum 16 characters).	You can set the contact name or number using the remote management features (see <i>Remotely managing your system through a network interface</i> on page 47 and <i>Remotely managing your system through an RS-232 serial interface</i> on page 57).
 Language menu		
Language	Selects language preference.	Projector menu support is available in English (default), Chinese (Simplified), Chinese (Traditional), Czech, Danish, Dutch, Finnish, French, German, Greek, Italian, Japanese, Korean, Norwegian, Polish, Portuguese (Brazil), Portuguese (Portugal), Russian, Spanish and Swedish.
 Information menu		
Lamp Hours	Displays the current number of lamp usage hours from when it was last reset.	Always reset the lamp hours after you replace a lamp, because lamp service reminders are based on the current hours of use. See <i>Resetting the lamp hours</i> on page 29 for details on the lamp hours reset procedure.
Input	Displays the currently displayed video input source (VGA , HDMI1 , HDMI2 or None).	
Resolution	Displays the projector's most recently detected video source signal resolution and refresh rate.	If there is no current video input source signal, this setting displays the last known source signal image resolution and refresh rate.

APPENDIX B

Remotely managing your system through an RS-232 serial interface

Setting	Use	Notes
Firmware Version	Displays the projector's digital display processor (DDP) firmware version in x.x.x.x format.	
MPU Version	Displays the projector microprocessor unit (MPU) firmware version in x.x.x.x format.	
Network Version	Displays the projector's network communications processor firmware version in x.x.x.x format.	If you haven't enabled the Network and VGA Out setting, this setting is unable to display the projector's network communications processor firmware version and displays 0.0.0.0 instead.
Model Number	Displays the projector's model number.	
Serial Number	Displays the projector's serial number.	
UCP ports 1 / 2	Reserved for future application.	

Appendix C

Integrating other devices

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Native video format	79
Video format compatibility	80
HD and SD signal format compatibility	81
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This appendix provides information on integrating your SMART Board 685ix2 interactive whiteboard system with peripheral devices.

Video format compatibility

Your projector has a native video format and various video format compatibility modes. You can change image appearances for certain formats and compatibilities.

Native video format

The following table lists the native VESA RGB video format and digital HDMI video format for the projector.

Resolution	Mode	Aspect ratio	Refresh rate (Hz)	Horizontal frequency (kHz)	Pixel clock (MHz)
1280 × 800	WXGA	16:10	60	48	83.5

APPENDIX C

Integrating other devices

Video format compatibility

The following tables list the projector's compatible VESA RGB video formats by resolution, which you can adjust by using the aspect ratio commands described in *Adjusting projector settings* on page 72.

Resolution	Mode	Aspect ratio	Refresh rate (Hz)	“Match Input” appearance
720 × 400	720×400_85	1.8:1	85.039	Pillarbox
640 × 480	VGA 60	4:3	59.94	Pillarbox
640 × 480	VGA 72	4:3	72.809	Pillarbox
640 × 480	VGA 75	4:3	75	Pillarbox
640 × 480	VGA 85	4:3	85.008	Pillarbox
800 × 600	SVGA 56	4:3	56.25	Pillarbox
800 × 600	SVGA 60	4:3	60.317	Pillarbox
800 × 600	SVGA 72	4:3	72.188	Pillarbox
800 × 600	SVGA75	4:3	75	Pillarbox
800 × 600	SVGA 85	4:3	85.061	Pillarbox
832 × 624	MAC 16"	4:3	74.55	Pillarbox
1024 × 768	XGA 60	4:3	60.004	Pillarbox
1024 × 768	XGA 70	4:3	70.069	Pillarbox
1024 × 768	XGA 75	4:3	75.029	Pillarbox
1024 × 768	XGA 85	4:3	84.997	Pillarbox
1024 × 768	MAC 19"	4:3	74.7	Pillarbox
1152 × 864	SXGA175	4:3	75	Pillarbox
1280 × 768	SXGA175	1.67:1	60	Letterbox
1280 × 800	WXGA	16:10	60	Letterbox
1280 × 800	WXGA	16:10	60	Native
1280 × 960	Quad VGA 60	4:3	60	Pillarbox
1280 × 960	Quad VGA 85	4:3	85.002	Pillarbox
1280 × 1024	SXGA3 60	5:4	60.02	Pillarbox

APPENDIX C

Integrating other devices

Resolution	Mode	Aspect ratio	Refresh rate (Hz)	“Match Input” appearance
1280 × 1024	SXGA3 75	5:4	75.025	Pillarbox
1280 × 1024	SXGA3 85	5:4	85.024	Pillarbox
1400 × 1050	SXGA+	4:3	59.978	Pillarbox
1600 × 1200	UXGA	4:3	60	Pillarbox
1680 × 1050	WSXGA+	16:10	60	Letterbox
1680 × 1050	WSXGA+	16:10	60	Native
1920 × 1080	HD 1080	16:9	60	Letterbox

HD and SD signal format compatibility

The following tables list the projector’s high definition and standard definition format signal compatibility, which you can adjust by using the aspect ratio commands described in *Adjusting projector settings* on page 72.

Signal format	Aspect ratio	Horizontal frequency (kHz)	Vertical frequency (Hz)	“Match Input” appearance
480i (525i)	4:3	15.73	59.94	Full screen
480p (525p)	4:3	31.47	59.94	Full screen
576i (625i)	5:4	15.63	50	Pillarbox
576p (625p)	5:4	31.25	50	Pillarbox
720p (750p)	16:9	45	59.94	Letterbox
720p (750p)	16:9	37.5	50	Letterbox
1080i (1125i)	16:9	33.75	59.94	Letterbox
1080i (1125i)	16:9	28.13	50	Letterbox
1080p (1125p)	16:9	67.5	59.94	Letterbox
1080p (1125p)	16:9	56.25	50	Letterbox



NOTE

Your projector is HD ready. Its native resolution supports a pixel-perfect display of 720p source content. However, because the projector compresses 1080p source content to fit its native resolution, it doesn’t support a pixel-perfect display of 1080p source content.

Video system signal compatibility

The following tables list the projector's video system signal compatibility delivered over HDMI video connectors, which you can adjust by using the aspect ratio commands described in *Adjusting projector settings* on page 72.

Video mode	Aspect ratio	Vertical frequency (Hz)
720p	16:9	59.94
720p	16:9	50
1080i	16:9	50
1080p	16:9	50.94
1080p	16:9	50
576i	5:4	50
480i	4:3	50.94

Connecting peripheral sources and outputs

Follow these instructions if you have a peripheral device to connect to your interactive whiteboard system, such as a DVD/Blu-ray player or a USB device.



NOTES

- Measure the distance between the projector and the peripheral device you want to connect. Make sure each cable is long enough, has plenty of slack and can be placed safely in your room without presenting a trip hazard.
- Do not disconnect cables from the ECP to connect peripheral devices because you could disconnect controls for your interactive whiteboard.
- The RCA jacks on the ECP aren't used in this configuration and aren't enabled.

To connect a laptop to a SMART Board 685ix2 interactive whiteboard system

1. Connect a USB cable from the laptop to the appropriate USB port on the ECP.
2. Connect a VGA cable from the laptop to the projector.
OR
Connect an HDMI cable from the laptop to the projector.
3. Press the **Input** button on the ECP or remote control to switch input sources to the laptop.

APPENDIX C

Integrating other devices

To connect a DVD/Blu-ray player or similar device

1. If you have speakers installed, turn the volume dial on the ECP all the way down to prevent buzzing or popping.
2. Press the **Input** button on the ECP or remote control to switch input sources to the peripheral device.
3. Restore the volume on the ECP's volume dial.

NOTE

HDMI inputs are High Definition Content Protection (HDCP) compliant.

The SMART UX80 projector allows synchronization between two adjacent systems. The two projectors can be connected with a Cat 5 crossover cable to allow the control of the power states through a single ECP, through the remote control or through a room control system.

To connect a second projector

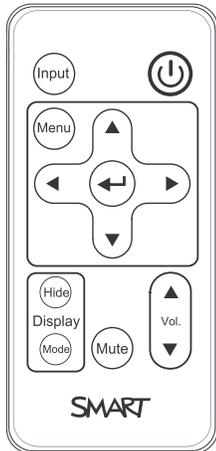
Connect a Cat 5 crossover cable to the Projector 2 port of the primary SMART UX80 projector and into the Projector 2 port of the secondary SMART UX80 projector.

NOTE

The Projector 2 ports only synchronize power states and don't carry audio or video.

Appendix D

Remote control code definitions



IR signal format: NEC1

Key	Repeat format	Vendor code		Key code	
		Byte 1	Byte 2	Byte 3	Byte 4
Input	F1	8B	CA	14	EB
Power (⏻)	F1	8B	CA	12	ED
Menu	F1	8B	CA	1B	E4
Up (▲)	F1	8B	CA	40	BF
Left (◀)	F1	8B	CA	42	BD
Enter (↵)	F1	8B	CA	13	EC
Right (▶)	F1	8B	CA	43	BC
Down (▼)	F1	8B	CA	41	BE
Hide	F1	8B	CA	15	EA
Volume up (▲)	F1	8B	CA	44	BB
Mode	F1	8B	CA	45	BA
Mute	F1	8B	CA	11	EE
Volume down (▼)	F1	8B	CA	46	B9

Appendix E

Hardware environmental compliance

SMART Technologies supports global efforts to ensure that electronic equipment is manufactured, sold and disposed of in a safe and environmentally friendly manner.

Waste Electrical and Electronic Equipment and Battery regulations (WEEE and Battery Directives)

Electrical and electronic equipment and batteries contain substances that can be harmful to the environment and to human health. The crossed-out wheeled bin symbol indicates that products should be disposed of in the appropriate recycling stream and not as regular waste.



Batteries

Remote contains CR2025 battery. Recycle or dispose of batteries properly.

Perchlorate material

Contains perchlorate material. Special handling may apply. See dtsc.ca.gov/hazardouswaste/perchlorate.

Mercury

The lamp in this product contains mercury and must be recycled or disposed in accordance with local, state, provincial and federal laws.



More information

See smarttech.com/compliance for more information.

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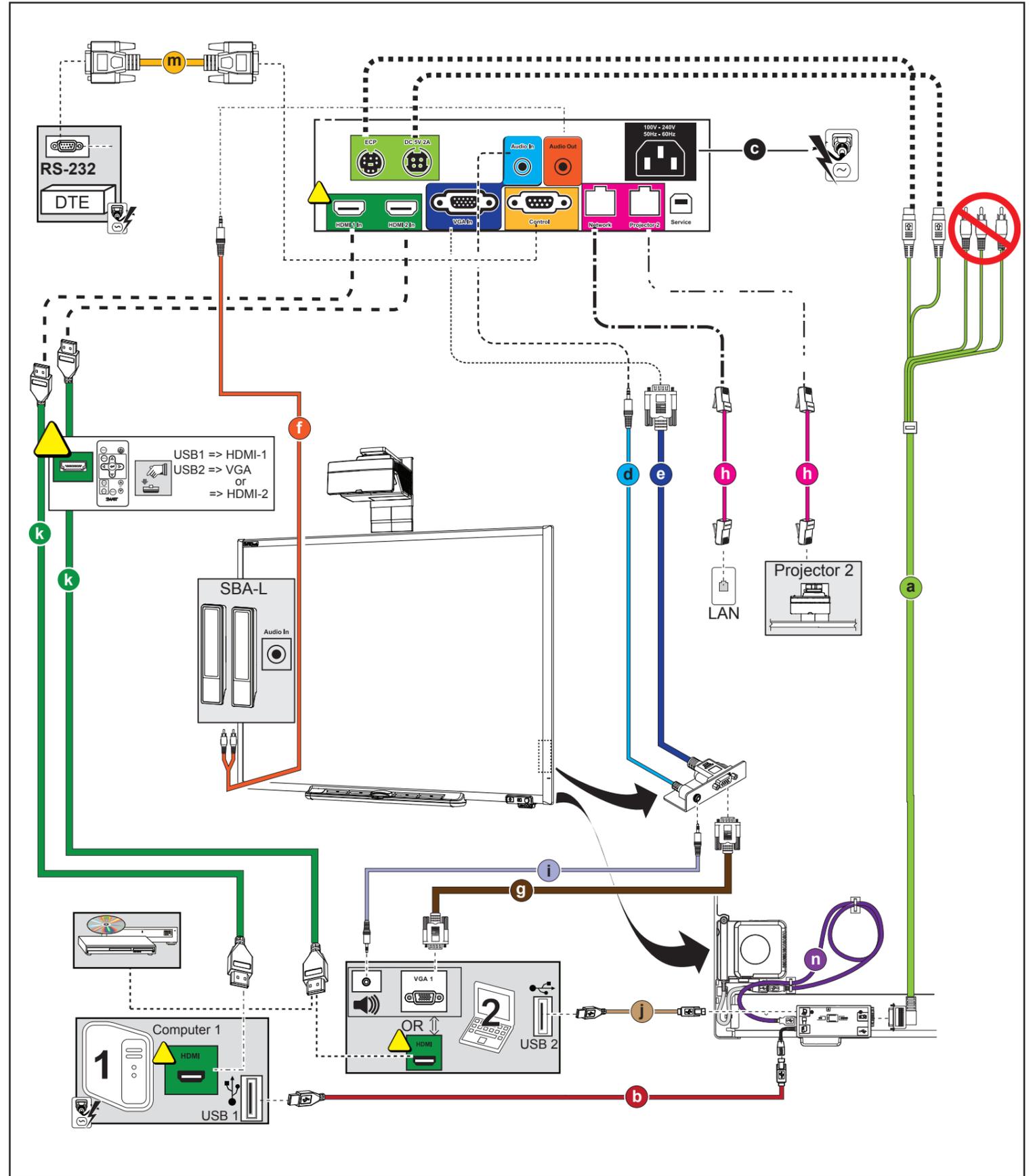
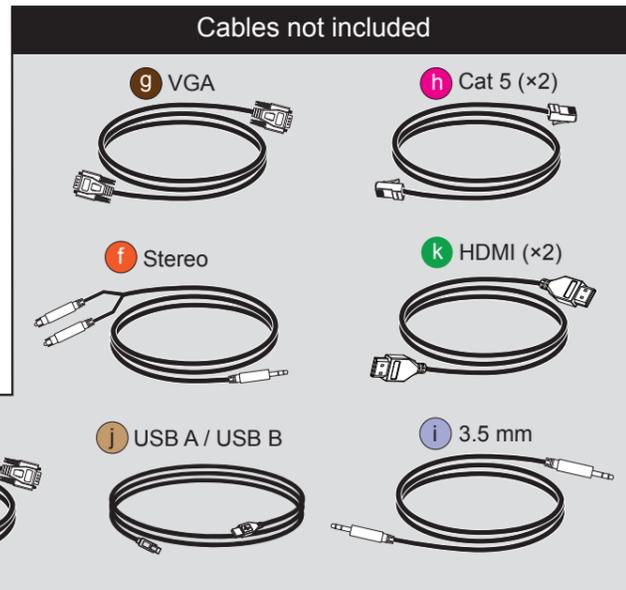
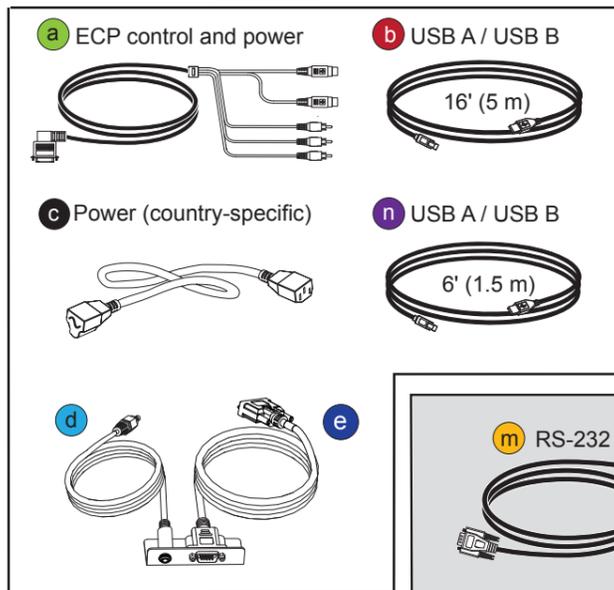
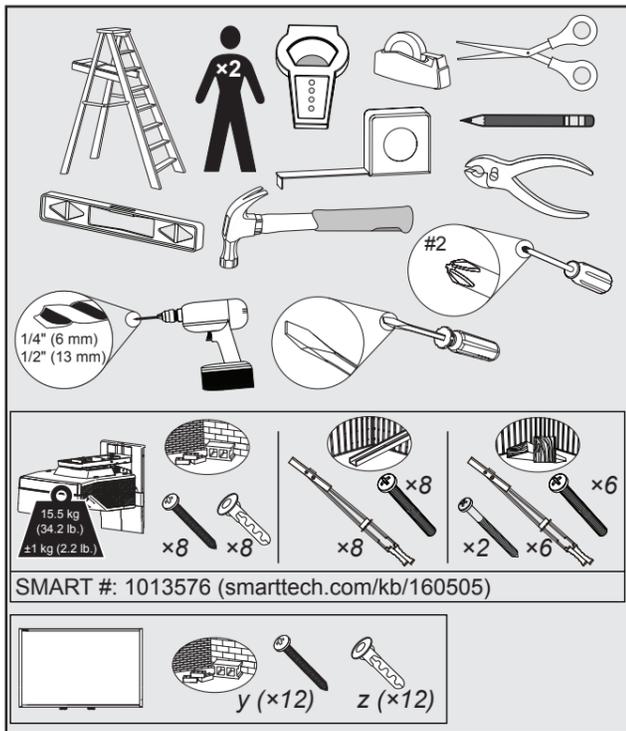
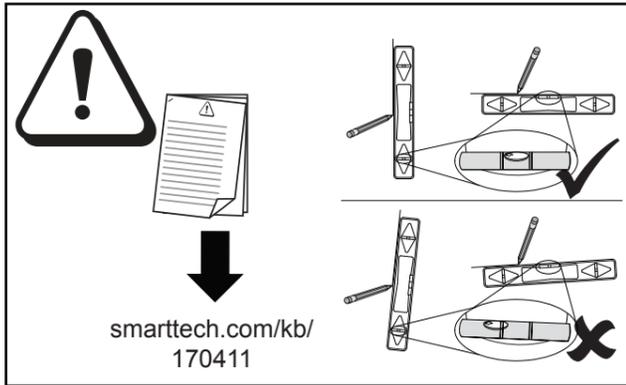
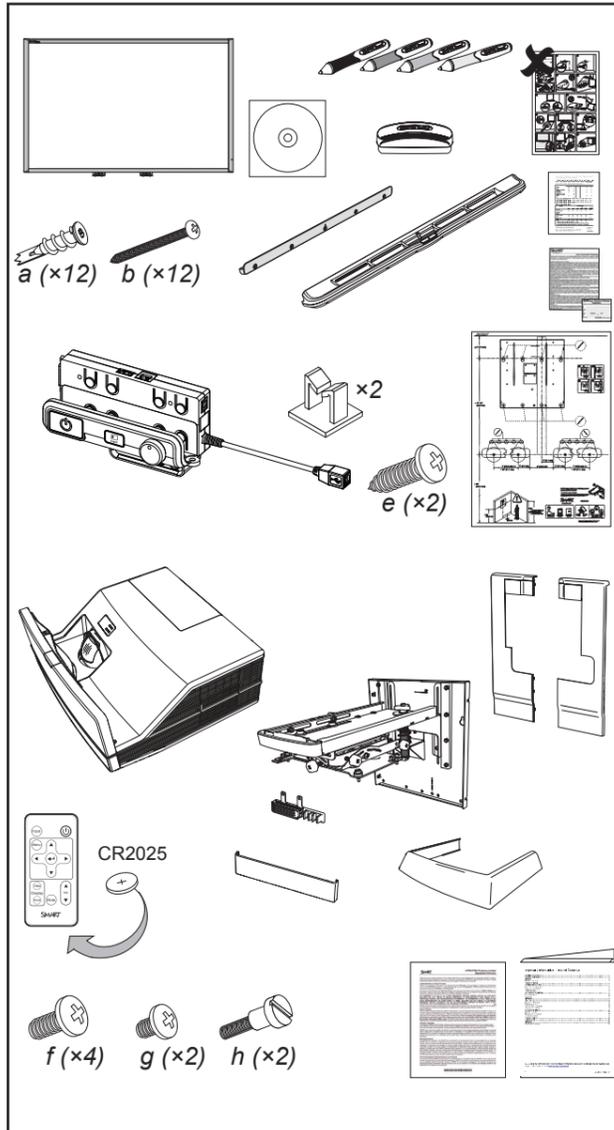
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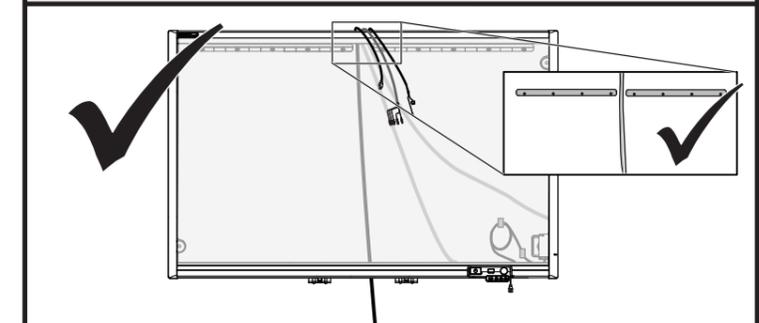
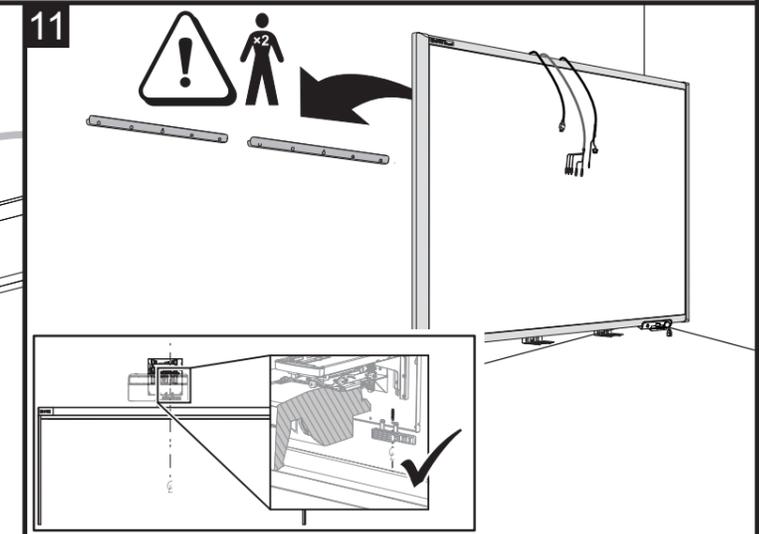
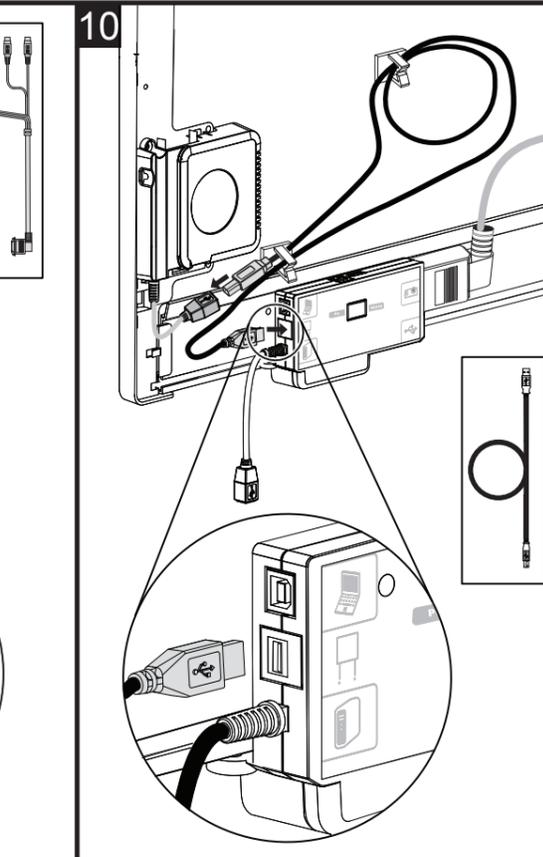
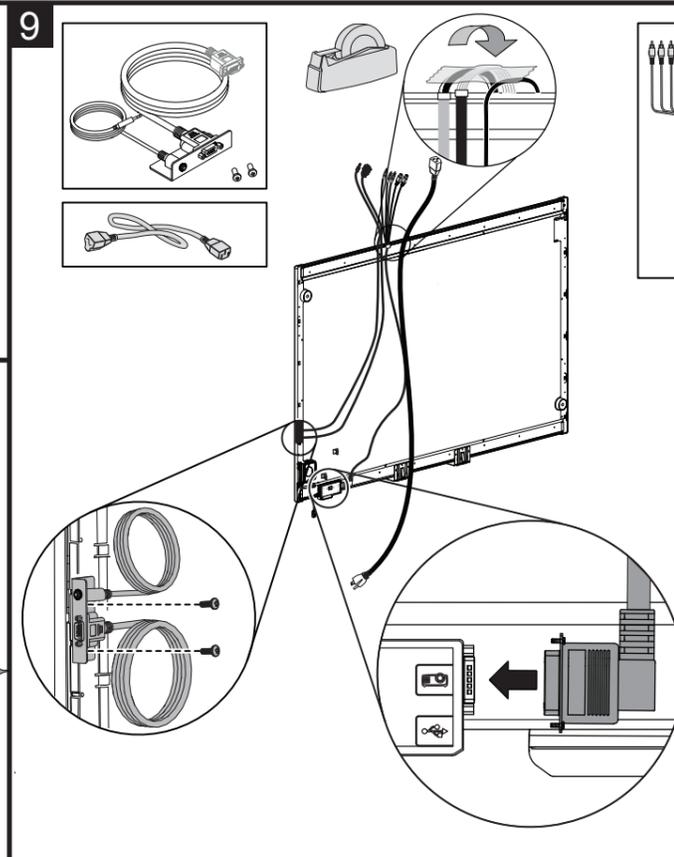
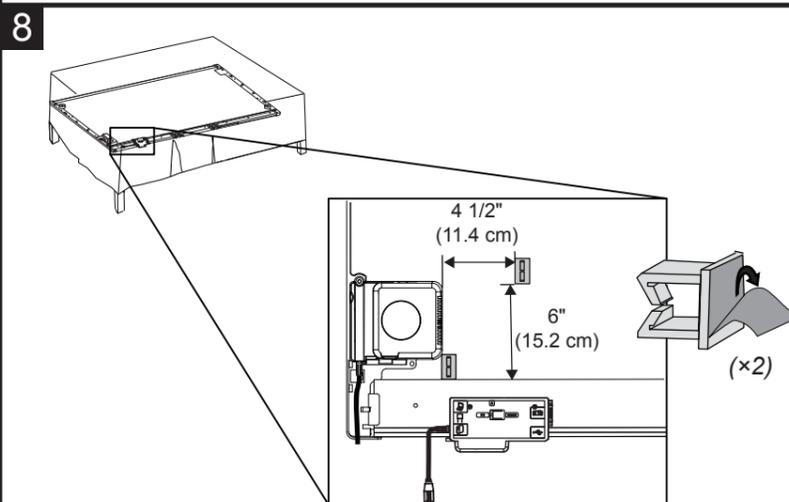
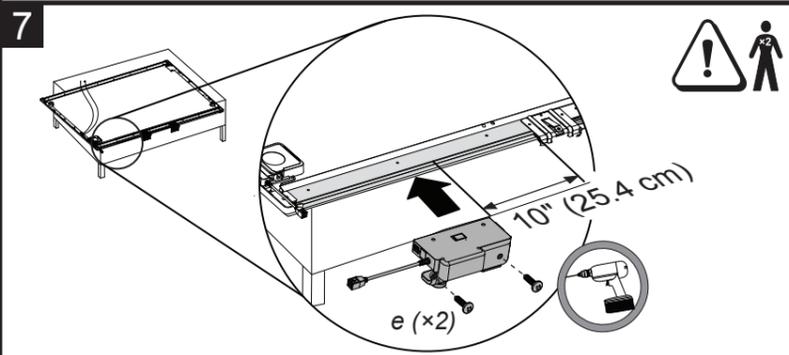
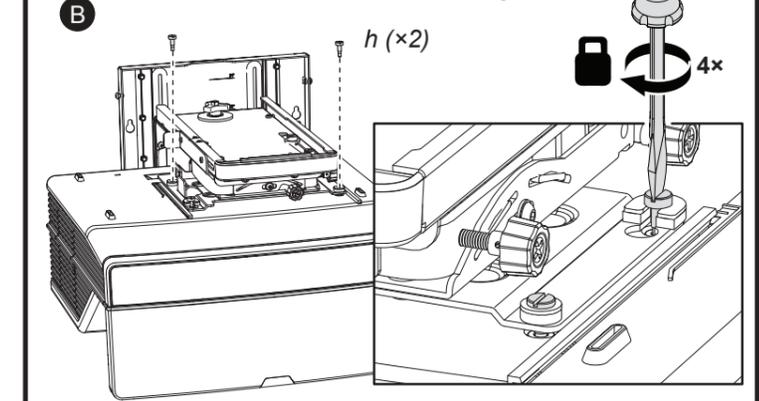
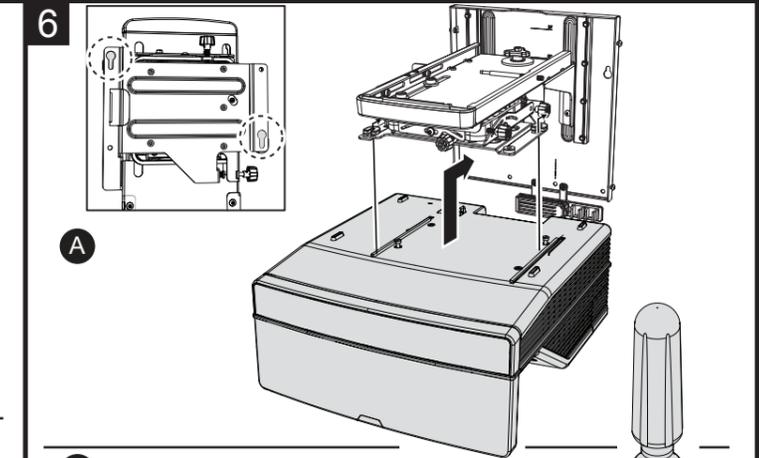
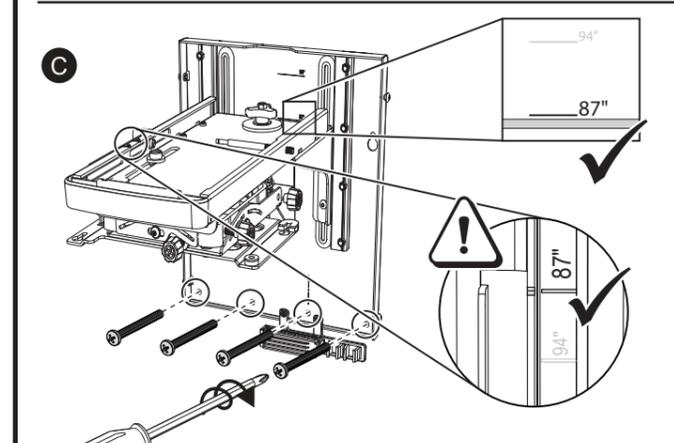
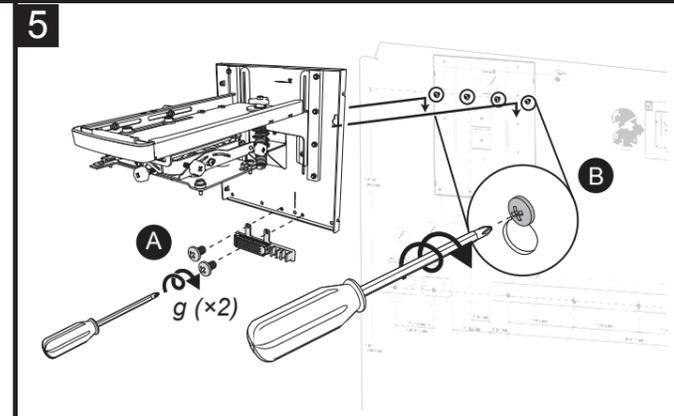
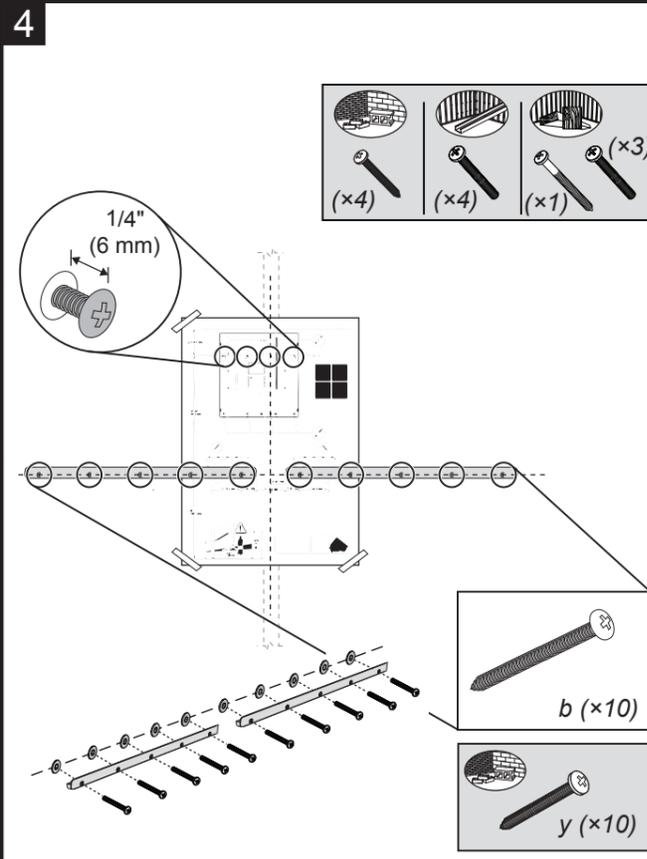
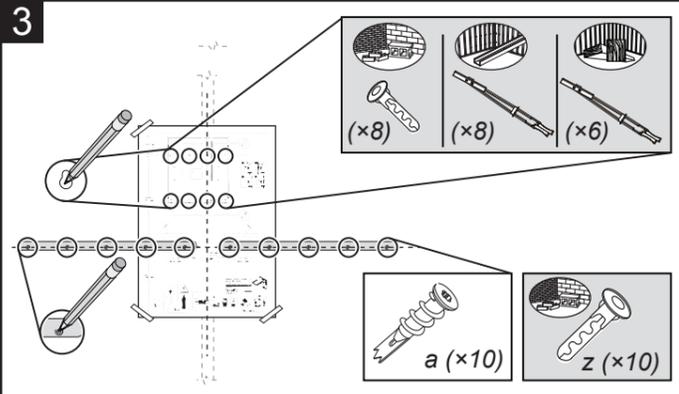
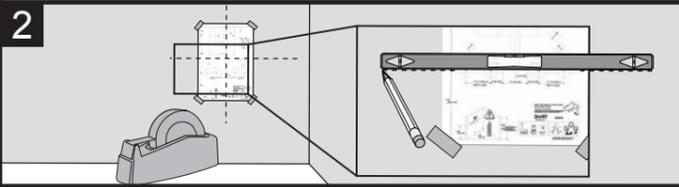
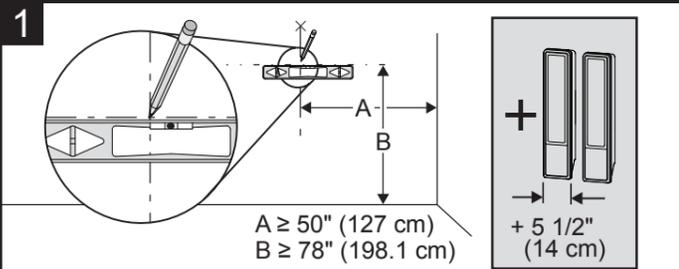
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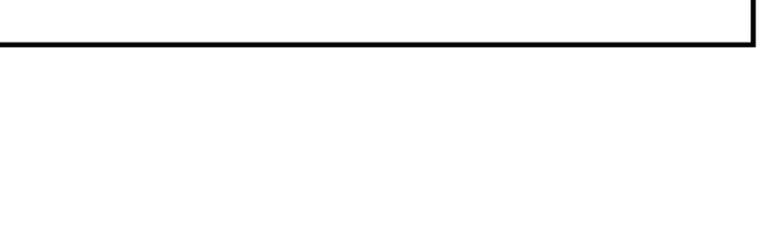
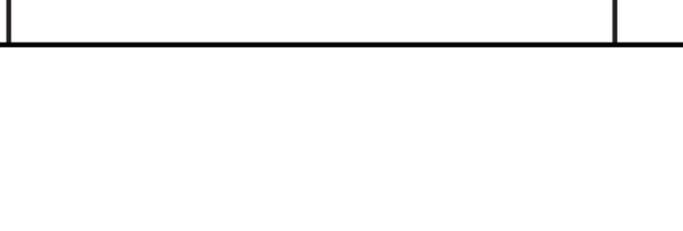
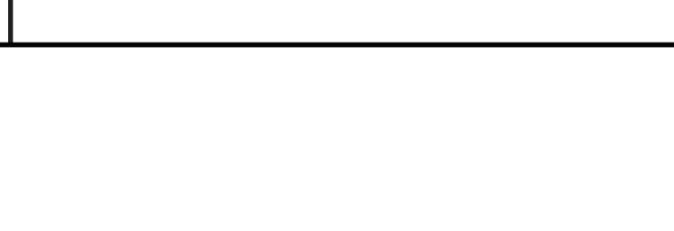
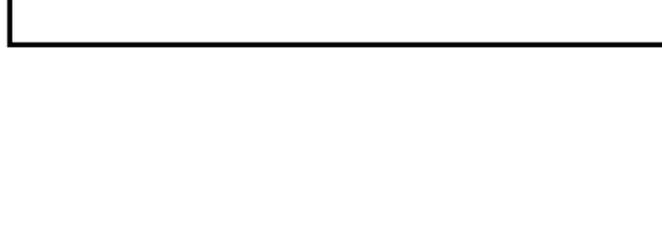
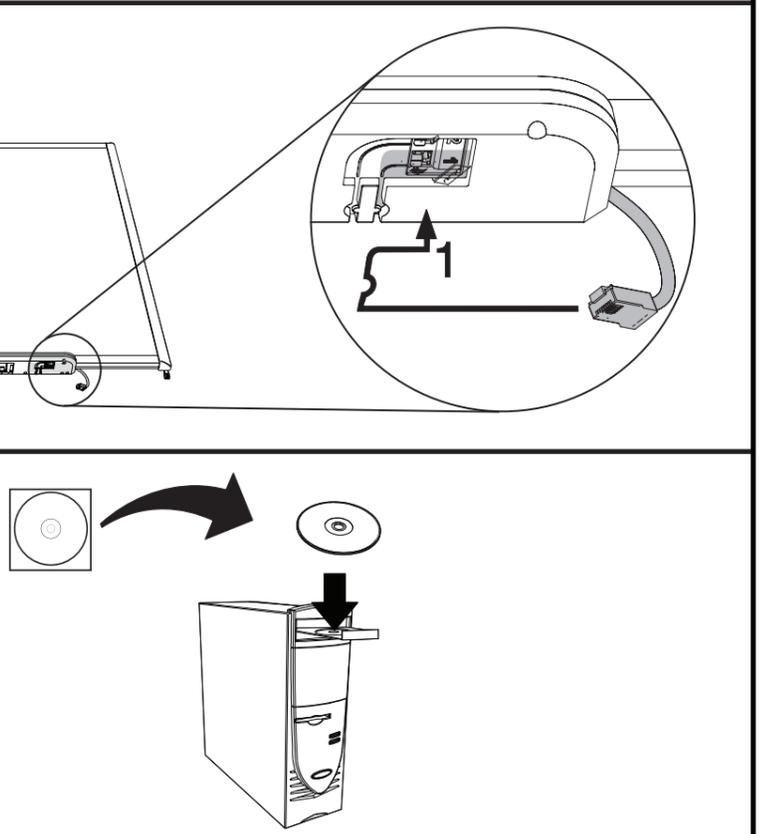
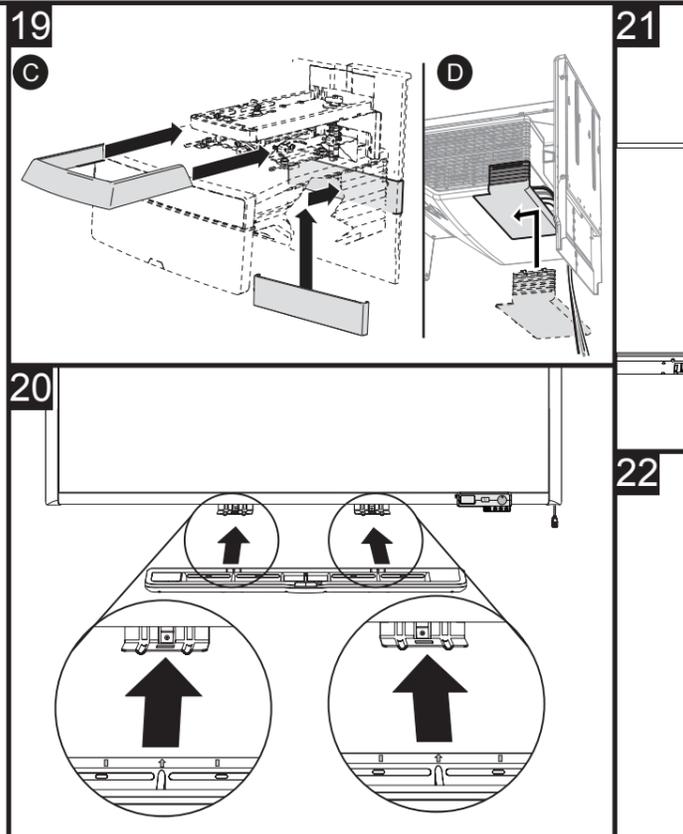
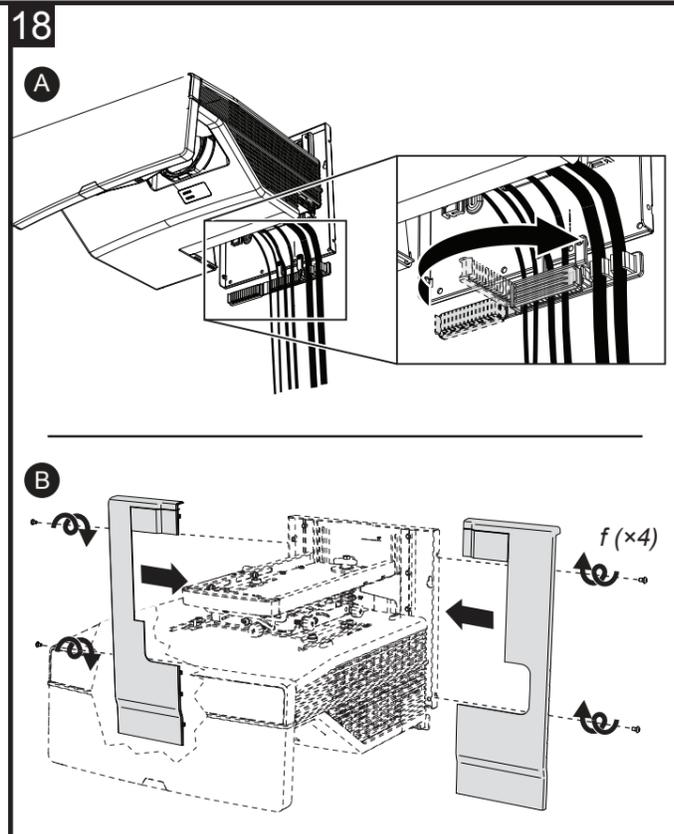
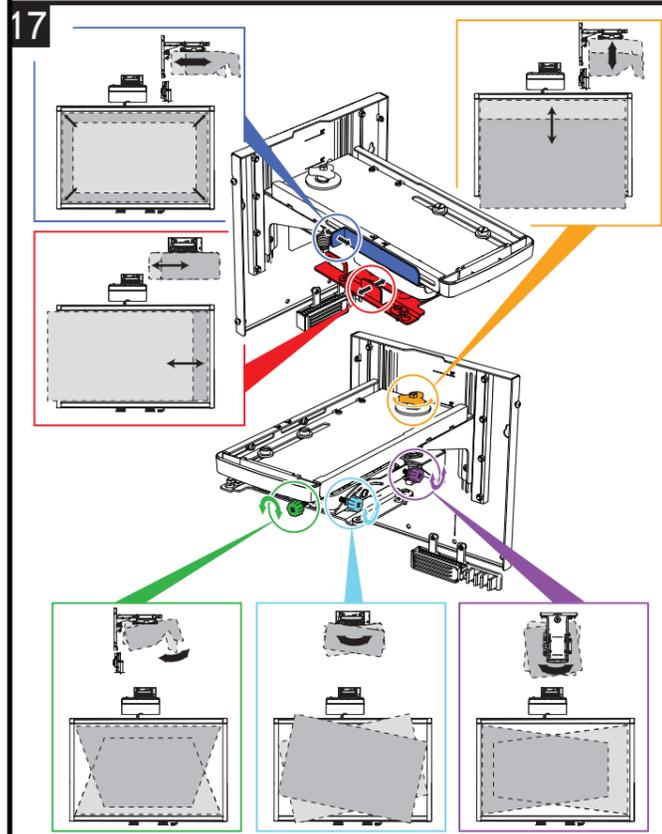
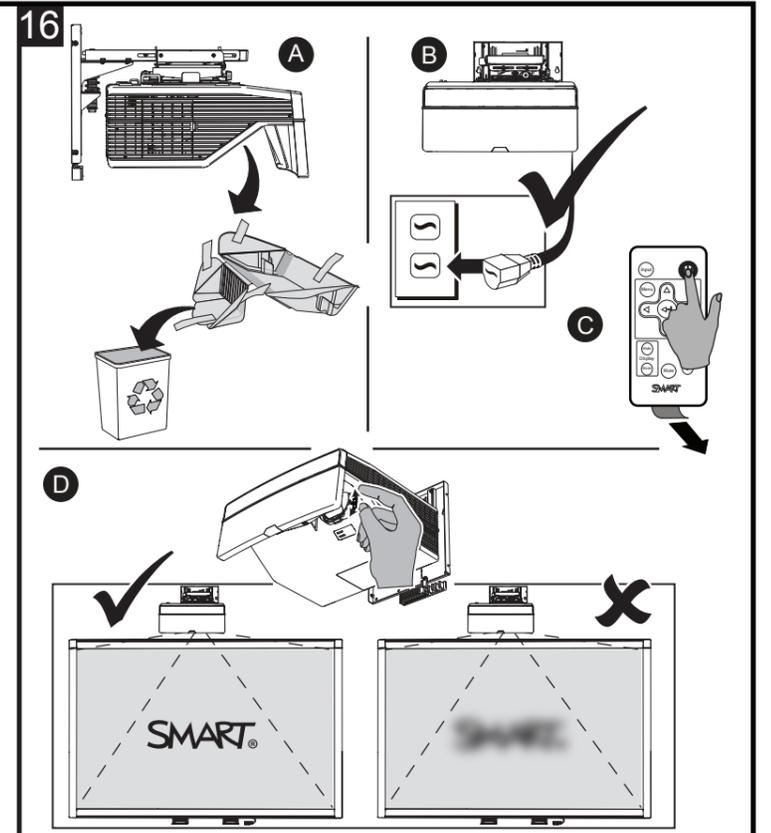
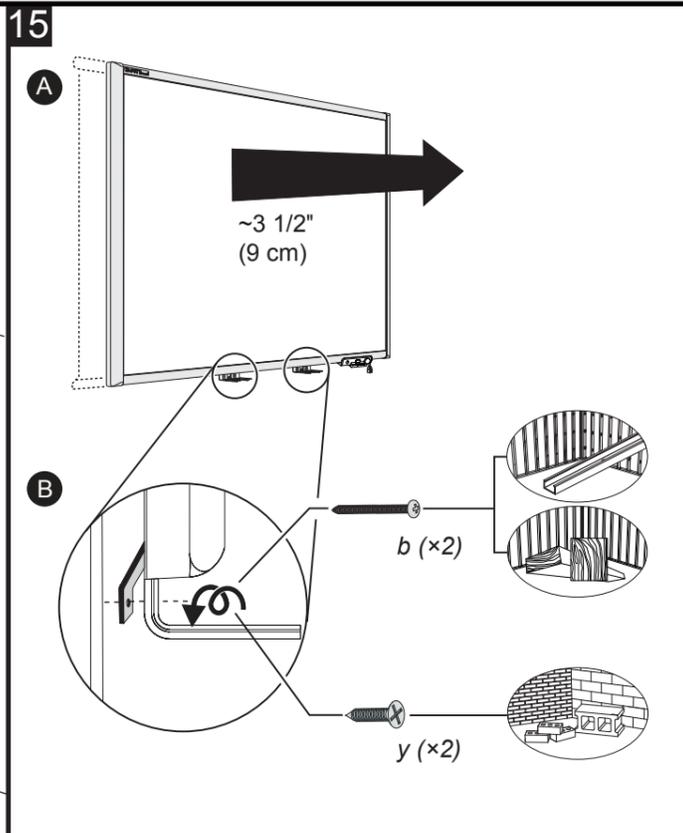
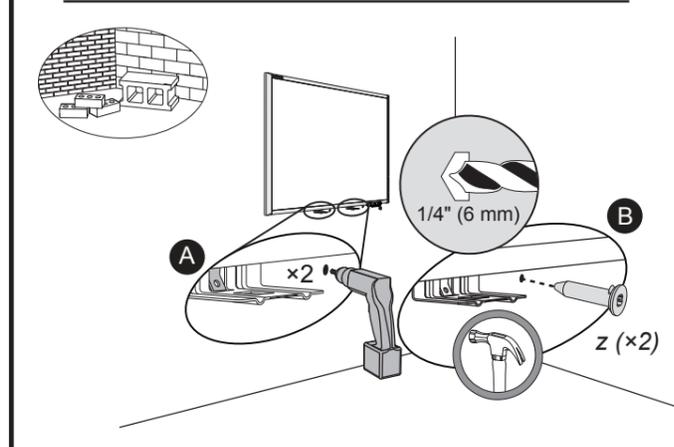
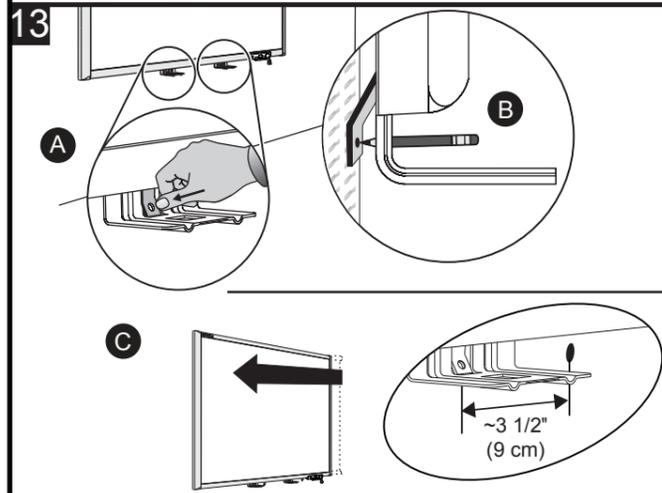
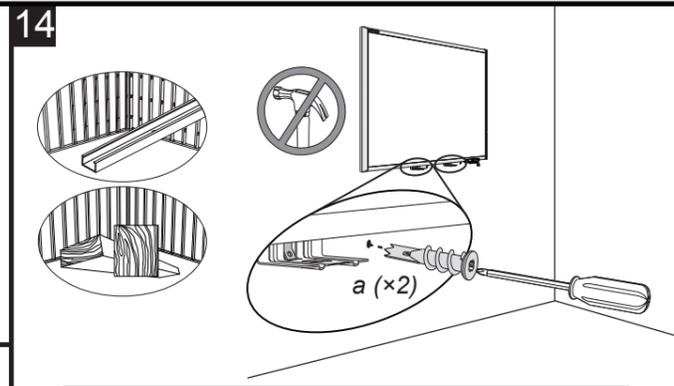
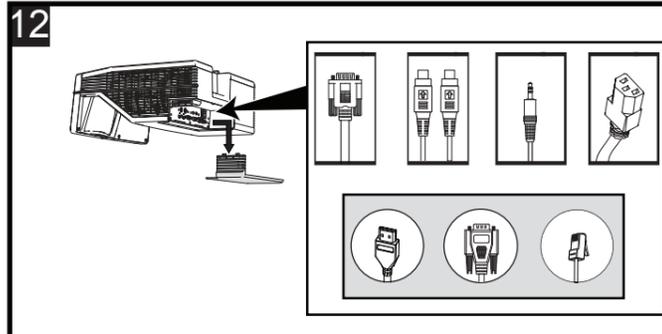
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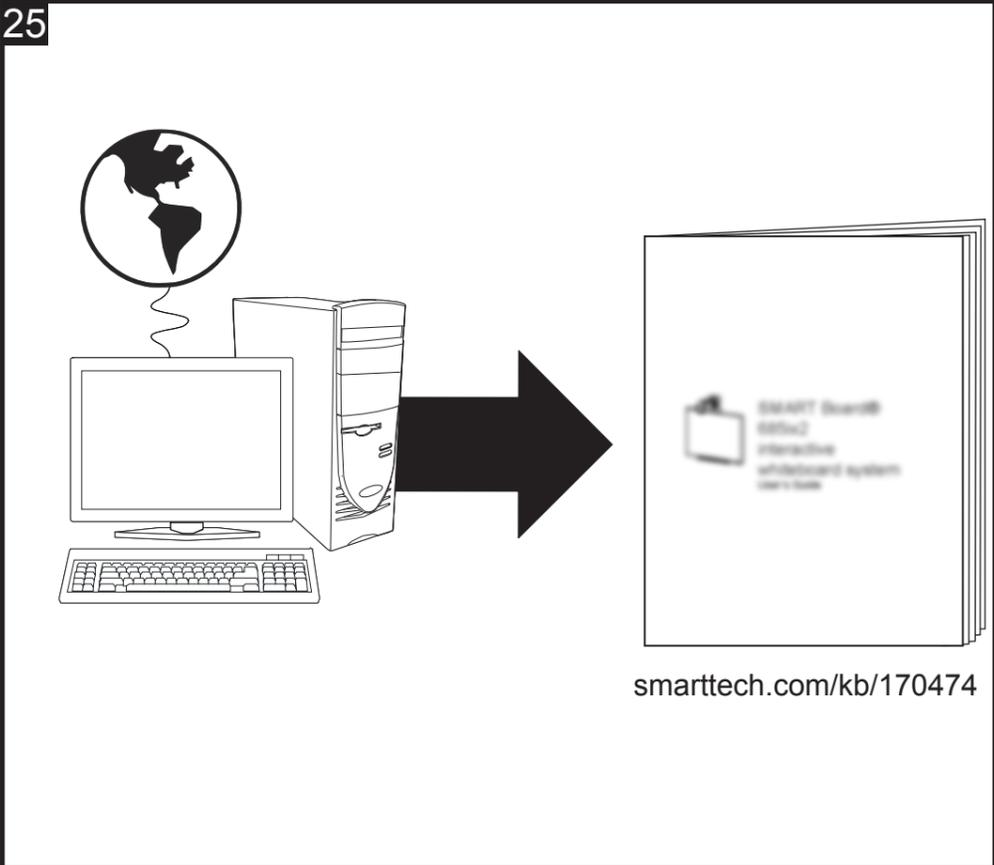
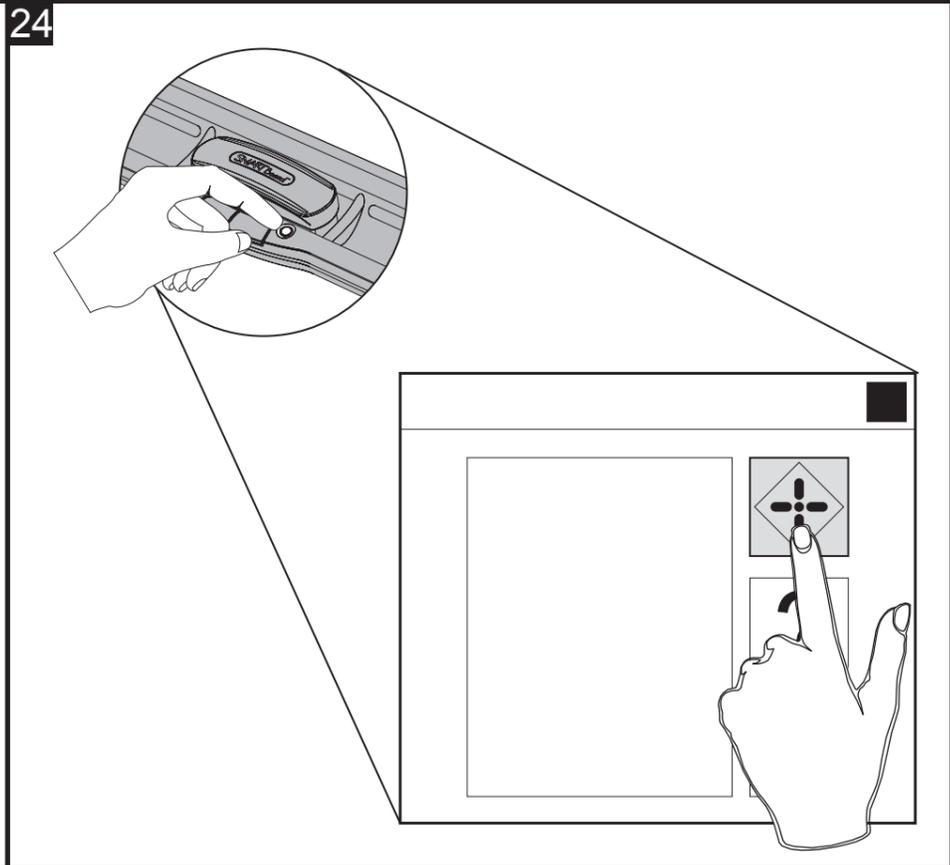
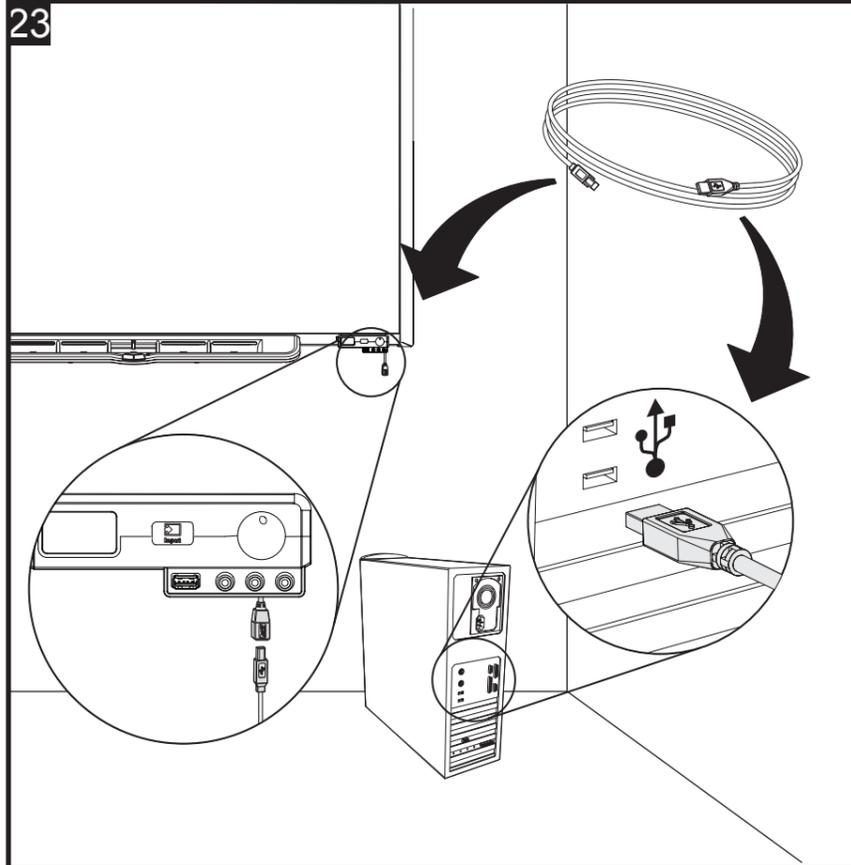
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Hardware environmental compliance

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 **Waste Electrical and Electronic Equipment and Battery regulations (WEEE and Battery Directives)**
Electrical and electronic equipment and batteries contain substances that can be harmful to the environment and to human health. The crossed-out wheeled bin symbol indicates that products should be disposed of in the appropriate recycling stream and not as regular waste.

 **Batteries**
The remote contains a CR2025 battery. Recycle or dispose of batteries properly.

 **Perchlorate material**
Battery contains perchlorate material. Special handling may apply. See dtsc.ca.gov/hazardouswaste/perchlorate.

 **Mercury**
The lamp in this product contains mercury and must be recycled of in accordance with local, state provincial or federal laws.

See smarttech.com/compliance for more information.

