

SMART Board® 7000 and 7000 Pro series interactive displays

INSTALLATION AND MAINTENANCE GUIDE

SBID-7075 | SBID-7086 | SBID-7275 | SBID-7286 | SBID-7375 | SBID-7386
SBID-7075P | SBID-7086P | SBID-7275P | SBID-7286P | SBID-7375P | SBID-7386P
ID7075-1 | ID7086-1

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Learn more

This guide and other resources for SMART Board 7000 and 7000 Pro series interactive displays are available in the Support section of the SMART website (smarttech.com/support). Scan this QR code to view these resources on your mobile device.

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www.smarttech.com/patents

09/2018

Important information

IMPORTANT

There are critical software updates for the display that you need to install to ensure the display is fully functional and provides the best experience. Connect to a wired or wireless network to automatically download and apply these updates as well as future updates.

WARNING

- Failure to follow the installation instructions shipped with the display could result in injury and product damage which may not be covered by the warranty.
 - Do not open or disassemble the display. You risk electrical shock from the high voltage inside the casing. Opening the casing also voids the warranty.
 - Do not stand (or allow children to stand) on a chair to touch the surface of the display. Rather, mount the product at the appropriate height.
 - To reduce the risk of fire or electric shock, do not expose the display to rain or moisture.
 - If the display requires replacement parts, make sure the service technician uses replacement parts specified by SMART Technologies or parts with the same characteristics as the original.
 - Ensure that any cables that cross the floor to the display are properly bundled and marked to avoid a trip hazard.
 - Do not insert objects inside the cabinet ventilation holes, because they could touch dangerous voltage points and cause electric shock, fire or product damage which may not be covered by the warranty.
 - Do not place heavy objects on the power cable. Damage to the cable could cause shock, fire or product damage which may not be covered by the warranty.
 - Use only extension cords and outlets that can fully accommodate the display's polarized plug.
 - Use the power cable provided with the display. If a power cable is not supplied, contact your supplier. Use only power cables that match the AC voltage of the power outlet and that comply with your country's safety standards.
-

IMPORTANT INFORMATION

- If the glass is broken, do not touch the liquid crystal. To prevent injury, handle glass fragments with care when disposing of them.
 - Do not move or mount the display by connecting rope or wire to its handles. The display is heavy, and failure of the rope, wire or handle could lead to injury.
 - Use only VESA®-approved mounts.
 - Disconnect all of the display's power cables from the wall outlet and seek assistance from qualified service personnel if any of the following occur:
 - The power cable or plug is damaged
 - Liquid is spilled into the display
 - Objects fall into the display
 - The display is dropped
 - Structural damage, such as cracking, occurs
 - The display behaves unexpectedly when you follow operating instructions
-

CAUTION

- Turn off the display before cleaning its screen. Otherwise, you may scramble the desktop icons or inadvertently activate applications when you wipe the screen.
- Avoid setting up and using the display in an area with excessive levels of dust, humidity and smoke.
- Make sure an electrical socket is near the display and remains easily accessible during use.
- The display should be used only with European TN and TT power distribution systems.

It is not suitable for older, IT-type power distribution systems found in some European countries. "This system (IT-type) is widely used isolated from earth, in some installations in France, with impedance to earth, at 230/400V, and in Norway, with voltage limiter, neutral not distributed, at 230V line-to-line."

Contact qualified personnel if you're uncertain of the type of power system available where you're installing the display.

- The accessory slot's maximum available power is 60 W. The slot is not a limited power source. To reduce the risk of fire, make sure that accessories connecting to the slot satisfy the fire enclosure requirements of IEC 60950-1.
-

IMPORTANT INFORMATION

- You must connect the USB cable that came with the display 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 display.
- Wait five minutes before removing the iQ appliance (AM50) from the display to allow the iQ appliance (AM50) to cool.

IMPORTANT

- The following are the normal operating power requirements for the display:

Model	Power requirements
SBID-7075	100V to 240V AC, 50 Hz to 60 Hz, 147 W
SBID-7086	100V to 240V AC, 50 Hz to 60 Hz, 172 W
SBID-7275	100V to 240V AC, 50 Hz to 60 Hz, 162 W
SBID-7286	100V to 240V AC, 50 Hz to 60 Hz, 187 W
SBID-7375	100V to 240V AC, 50 Hz to 60 Hz, 162 W
SBID-7386	100V to 240V AC, 50 Hz to 60 Hz, 187 W
SBID-7075P	100V to 240V AC, 50 Hz to 60 Hz, 147 W
SBID-7086P	100V to 240V AC, 50 Hz to 60 Hz, 172 W
SBID-7275P	100V to 240V AC, 50 Hz to 60 Hz, 162 W
SBID-7286P	100V to 240V AC, 50 Hz to 60 Hz, 187 W
SBID-7375P	100V to 240V AC, 50 Hz to 60 Hz, 162 W
SBID-7386P	100V to 240V AC, 50 Hz to 60 Hz, 187 W

- For additional requirements and other information, refer to the display's specifications (see *More information* on page 8).

Federal Communication Commission interference statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT INFORMATION

NOTE

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 instruction manual, 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.

CAUTION

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Radiation exposure statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the antenna of this device and all nearby persons. This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

Innovation, Science and Economic Development Canada statement

This device complies with RSS-247 of the Innovation, Science and Economic Development Canada Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

Radiation exposure statement

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the antenna of this device and all nearby persons. This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

Cet appareil est conforme à la norme ISED CNR-247 pour les appareils radio agréés. Son fonctionnement est soumis aux deux conditions suivantes:

1. le dispositif ne doit pas produire de brouillage préjudiciable, et
2. ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Déclaration d'exposition aux radiations

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps. Cet émetteur ne doit pas être co-implantés ou exploités conjointement avec une autre antenne ou émetteur.

EU declaration of conformity

Hereby, SMART Technologies ULC declares that the radio equipment type Interactive Display SBID-7075, SBID-7075P, SBID-7086, SBID-7086P, ID7075-1, ID7086-1 and the interactive pen SBID-7000-PEN, SBID-7000P-PEN are in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following Internet address: smarttech.com/compliance

IMPORTANT INFORMATION

WARNING

This equipment is compliant with Class A of CISPR 32. In a residential environment, this equipment may cause radio interference.

Radio frequency band and maximum power level:

Transmitting Band (MHz)	Maximum Transmit Power EIRP (dBm)
2402–2483.5	5.0

Compliance to Malaysia specification

The SMART Technologies ULC Interactive Display SBID-7075, SBID-7075P, SBID-7086, SBID-7086P, wireless Pen models SBID-7000-PEN and SBID-7000P-PEN meet the Malaysian requirements as defined by the Certifying Agency, SIRIM QAS International.



United Arab Emirates – TRA registration details

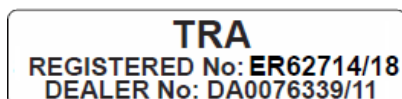
Pen – Regulatory models SBID-7000-Pen and SBID-7000P-PEN



Panel 75" – Regulatory models SBID-7075 and ID7075-1



Panel 86" – Regulatory model ID7086-1



Microsoft® statement regarding Windows® 10 operating system

Windows 10 is automatically updated, which is always enabled. ISP fees may apply. Additional requirements may apply over time for updates.

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Welcome

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This chapter introduces the SMART Board® 7000 and 7000 Pro series interactive displays.

About this guide

This guide explains how to install and maintain a SMART Board 7000 or 7000 Pro series interactive display. It includes the following information:

- How to install the display
- How to connect power and devices
- How to turn on the display for the first time and configure the iQ appliance
- How to maintain the display for years of use
- How to troubleshoot issues with the display

In addition, this guide includes information on the display's settings and remote management support.

This guide is intended for those who install and maintain displays in their organizations. Other documentation and resources are available for those who use displays (see *More information* on page 8).

Identifying your specific model

SMART offers several different models of the SMART Board 7000 and 7000 Pro series interactive display and iQ appliance.

Identifying your SMART Board 7000 or 7000 Pro series interactive display model

The following models of SMART Board 7000 and 7000 Pro series interactive display are available:

Model	Frame style	Screen size (approximate)	iQ	Intel® Compute Card
SBID-7075	White	75" (190 cm)	No	No
SBID-7086	White	86" (218 cm)	No	No
SBID-7275	White	75" (190 cm)	Yes	No
SBID-7286	White	86" (218 cm)	Yes	No
SBID-7375	White	75" (190 cm)	Yes	Yes
SBID-7386	White	86" (218 cm)	Yes	Yes
SBID-7075P	Black	75" (190 cm)	No	No
SBID-7086P	Black	86" (218 cm)	No	No
SBID-7275P	Black	75" (190 cm)	Yes	No
SBID-7286P	Black	86" (218 cm)	Yes	No
SBID-7375P	Black	75" (190 cm)	Yes	Yes
SBID-7386P	Black	86" (218 cm)	Yes	Yes

Refer to the specifications for detailed technical information for this model, including product dimensions and weights (see *More information* on page 8).

Identifying your iQ appliance model

The iQ appliance is installed in the accessory slot of some interactive display models to enable iQ

functionality in those models. SMART offers several different iQ appliance models.

Use the [Identifying your iQ appliance model wizard](#) to identify the specific model of iQ appliance installed in your display.

Features

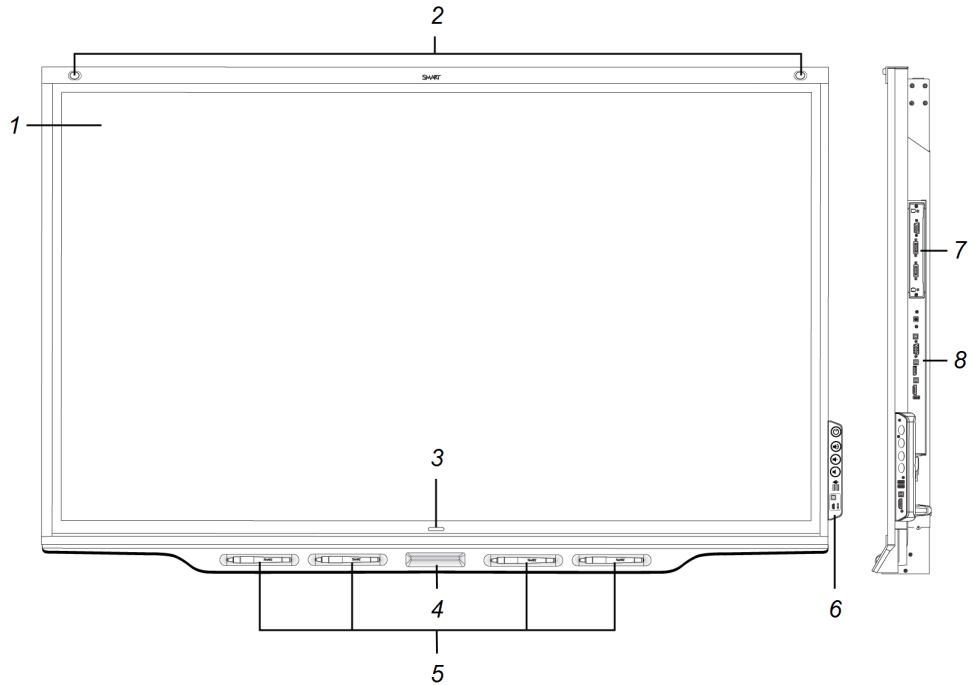
The SMART Board 7000 or 7000 Pro series interactive display is the hub of your classroom or meeting room. PC-free embedded computing provides one-touch access to collaborative tools, including a whiteboard, wireless screen sharing and a web browser. There's no need for wires, cables or manual software and firmware updates.

The display includes the following features:

Feature	Description
iQ experience	The display's iQ appliance provides one-touch access to collaborative tools, including a whiteboard, wireless screen sharing and a web browser. The SBID-7375, SBID-7386, SBID-7375P and SBID-7386P models have an Intel Compute Card in the appliance to provide a fully functional Windows 10 solution at your fingertips, without the need for an external PC or cabling.
Touch support	Users can do everything on the display that they can do at their computers—open and close applications, meet with others, create new documents or edit existing ones, visit websites, play and manipulate videos, and so on—by touching the display's surface.
Writing and drawing support	Users can write over applications in digital ink using one of the supplied pens, and then erase the digital ink using their palms, the eraser or the erasers on the pens.
Audio support	The display includes integrated speakers for presenting audio from connected input sources.

Components

The display consists of the following components:



No.	Name	More information
Pictured		
1	Screen	Page 5
2	Presence detection sensor (x2)	Page 5
3	Home button	Page 5
4	Eraser	Page 6
5	Pen (x4)	Page 6
6	Convenience panel	Page 6
7	iQ appliance (and Intel Compute Card)	Page 6
8	Connector panel	Page 27
Not pictured		
9	AC power inlet, outlet and switch	Page 33
10	RS-232 connectors	Page 19 Page 55
11	Speakers	Page 7


Screen

The following are the dimensions of the screen:

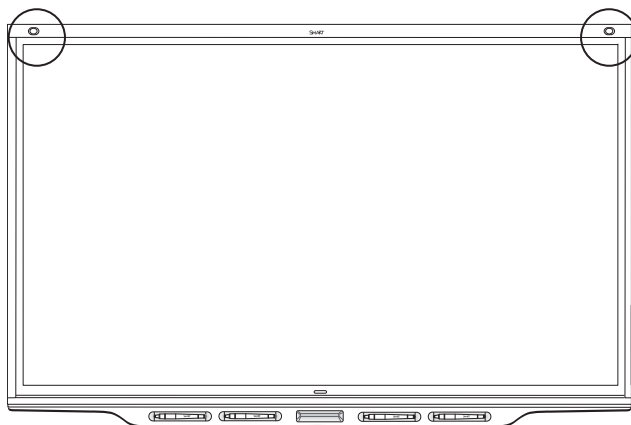
Model	Diagonal	Width	Height
SBID-7075	75" (190.5 cm)	65" (165.2 cm)	38 5/8" (93 cm)
SBID-7086	86" (218.4 cm)	74 7/8" (190.3 cm)	42" (107 cm)
SBID-7275	75" (190.5 cm)	65" (165.2 cm)	38 5/8" (93 cm)
SBID-7286	86" (218.4 cm)	74 7/8" (190.3 cm)	42" (107 cm)
SBID-7375	75" (190.5 cm)	65" (165.2 cm)	38 5/8" (93 cm)
SBID-7386	86" (218.4 cm)	74 7/8" (190.3 cm)	42" (107 cm)
SBID-7075P	75" (190.5 cm)	65" (165.2 cm)	38 5/8" (93 cm)
SBID-7086P	86" (218.4 cm)	74 7/8" (190.3 cm)	42" (107 cm)
SBID-7275P	75" (190.5 cm)	65" (165.2 cm)	38 5/8" (93 cm)
SBID-7286P	86" (218.4 cm)	74 7/8" (190.3 cm)	42" (107 cm)
SBID-7375P	75" (190.5 cm)	65" (165.2 cm)	38 5/8" (93 cm)
SBID-7386P	86" (218.4 cm)	74 7/8" (190.3 cm)	42" (107 cm)

Presence detection sensors

The display has two presence detection sensors on its top frame that can detect people up to 16' (5 m) away when the display is in Standby mode.

When the sensors detect people in the room, the display is ready to turn on. To turn on the display, press the **Power** button  or pick up a pen or eraser.

If the room is empty for a specified period, the display returns to Standby mode.

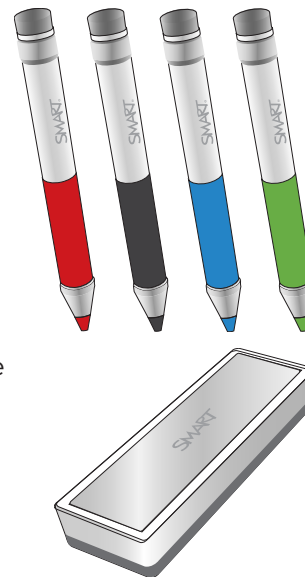


Home button

Tap the Home button to open the Home screen. From the Home screen, you can open the iQ appliance's apps as well as the settings.

Pens and eraser

The display comes with black, red, blue and green pens. Each pen has an attached eraser and an indicator light.



In addition to the pens, the display includes an eraser, which you can use when you want to erase a large area on the screen.

Convenience panel

The convenience panel contains buttons for turning the display on and off and controlling the volume. It also includes connectors for USB peripherals and a computer or other input source.

iQ appliance (and Intel Compute Card)

The iQ appliance is installed in the accessory slot on the back of the following models:

- SBID-7275
- SBID-7286
- SBID-7275P
- SBID-7286P
- SBID-7375
- SBID-7386
- SBID-7375P
- SBID-7386P

Take advantage of iQ technology and access collaborative tools.

The SBID-7375, SBID-7386, SBID-7375P and SBID-7386P models have an Intel Compute Card in the appliance to provide a fully functional Windows 10 solution at your fingertips, without the need for an external PC or cabling.

⚠ CAUTION

The accessory slot's maximum available power is 60 W. The slot is not a limited power source. To reduce the risk of fire, make sure that accessories connecting to the slot satisfy the fire enclosure requirements of IEC 60950-1.

TIP

Use the [Identifying your iQ appliance model wizard](#) on the SMART support site to identify your model of iQ appliance.

Internal speakers

The display includes two 10 W integrated speakers. You can also connect external speakers (see *Connecting external speakers* on page 25).

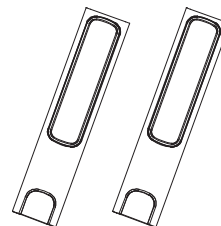
Accessories

Accessories for the display include the following:

- SBA-100 projection audio system
- SMART Audio 400 classroom amplification system
- USB extenders

SBA-100 projection audio system

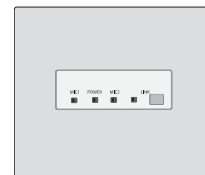
Available for education models, the SBA-100 projection audio system consists of two 14 W speakers and is intended for wall-mounted displays. You can control volume using the display's convenience panel or the digital volume controls in a connected computer's operating system.



For more information, see the *SBA-100 projection audio system specifications* (smarttech.com/kb/171146).

SMART Audio 400 classroom amplification system

Available for education models, the SMART Audio 400 classroom amplification system provides high-quality audio amplification. The system comes with a teacher microphone and optional student microphone. Multiple speaker options are available, including wall- and ceiling-mounted speakers. The amplifier receives audio signals from the microphones and translates them into crystal-clear sound through the speakers.



For more information, see the *SMART Audio 400 classroom amplification system specifications* (smarttech.com/kb/171137).

USB extenders

As noted in *Connecting cables for room computers, guest laptops and other input sources* on page 24, the USB connection between the display and computer should be no longer than 16' (5 m). If you need to connect a computer that is more than 16' (5 m) from the display, use one of the following USB extenders:

Extender	Specifications
USB-XT	smarttech.com/kb/119318
CAT5-XT-1100	smarttech.com/kb/170202

More information

In addition to this guide, SMART provides the following documents for the display:

Document	Link
Specifications and comparisons	
SBID-7075	smarttech.com/kb/171131
SBID-7086	smarttech.com/kb/171132
SBID-7275	smarttech.com/kb/171133
SBID-7286	smarttech.com/kb/171134
SBID-7375	smarttech.com/kb/171320
SBID-7386	smarttech.com/kb/171319
SBID-7075P	smarttech.com/kb/171211
SBID-7086P	smarttech.com/kb/171212
SBID-7275P	smarttech.com/kb/171213
SBID-7286P	smarttech.com/kb/171214
SBID-7375P	smarttech.com/kb/171318
SBID-7386P	smarttech.com/kb/171317
AM30	smarttech.com/kb/171097
AM40	smarttech.com/kb/171182

CHAPTER 1
WELCOME

Document	Link
AM50	smarttech.com/kb/171263
Comparison	smarttech.com/kb/171161
Installation instructions	
SBID-7075, 7275, 7375, 7075P, 7275P and 7375P	smarttech.com/kb/171160
SBID-7086, 7286, 7386, 7086P, 7286P and 7386P	smarttech.com/kb/171232
AM30	smarttech.com/kb/171090
AM40	smarttech.com/kb/171199
AM50	smarttech.com/kb/171294
Quick reference and guides	
Quick reference	smarttech.com/kb/171162
User's guide	smarttech.com/kb/171163

These documents are available in the Support section of the SMART website (smarttech.com/support). Scan the QR code on the cover of this guide to view the SMART Board 7000 and 7000 Pro series interactive displays pages in the Support section.

Chapter 2

Installing the display

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SMART recommends that only trained installers install the display.

This chapter is for installers. Installers should read this information along with the installation instructions included with the display before they install the display.

WARNING

Improper installation of the display can result in injury and product damage.

Moving the display to the installation site

After your organization receives the display, you need to move it to the place where you plan to install it.

On occasion, you might also need to move the display to another location after initially installing it.

! **IMPORTANT**

- Move the display at your own risk. SMART cannot accept liability for damages or injury that occur during the display's transportation.
- When moving the display, do the following:
 - Follow local safety regulations and standards.
 - Keep the display in its original packaging.
 - Move the display so that its top frame faces up.
 - Have at least two people move the display.

TIP

Display packaging may be labeled to indicate which side is the front. Look for "FRONT" on the packaging to help orient the box during transportation.

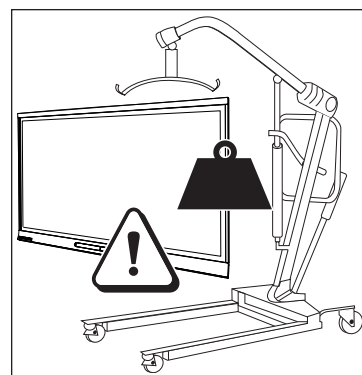
Using transportation aides

You can use the following aides to move the display:

- Cart
- Furniture dolly
- Mechanical lift

NOTE

Larger, heavier models feature eyebolt mounting holes for use with a mechanical lift. Refer to these models' installation instructions for information about using a mechanical lift.



Accommodating doorways, hallways and elevators

In some situations, you might need to remove the display from its packaging to move it through narrow doorways or hallways or on to an elevator. In these situations, SMART recommends that

you keep the foam pieces on the bottom corners of the display. These foam pieces protect the display if you need to set it down during transportation.

You might also need to rotate the display so that its top frame faces to the side. You can do this during transportation, but when you install the display, it must be in landscape orientation (with the top frame facing up).

Dealing with cracked, chipped or shattered glass

The display contains safety-tempered glass. Although this glass is heat-strengthened to help withstand impacts, the glass can crack, chip or shatter if struck with enough force. (Safety glass is designed to break into small pieces rather than sharp shards if it is broken.) Temperature changes can cause a minor crack or chip to become worse, possibly causing the glass to shatter. See the knowledge base article, [Shattered glass on an interactive display](#), for information about conditions that can cause the display's glass to shatter even when it's not in use.

If the display's glass is cracked or chipped, have it professionally inspected and repaired at a SMART authorized repair center. If the display's glass shatters, carefully clean up the area and have the display repaired or replaced.

CAUTION

For safety and to prevent further damage, do not continue to install or use the display if its glass is cracked, chipped or shattered.

Saving the original packaging

Save the original packaging to repack the display with as much of the original packaging as possible in case you need to move the display again after you initially install it. This packaging was designed to provide the best possible protection against shock and vibration.

CAUTION

Move the display only in the original packaging or replacement packaging purchased from your authorized SMART reseller. Moving the display without correct packaging can lead to product damage and voids the warranty.

NOTE

If the original packaging isn't available, you can purchase the same packaging directly from your authorized SMART reseller (smarttech.com/where).

Installing the display on a wall

Typically, you install the display on a wall in a classroom or meeting space.

Choosing a location

A display is typically installed at the room's focal point, such as at the front of a classroom or meeting space.

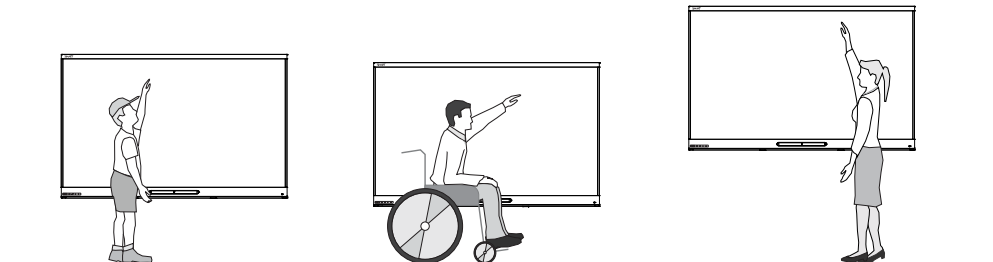
Selecting an appropriate location for the display is crucial for ensuring the best possible experience with the product. Consider the following factors as you choose a location:

Factor	Considerations
Room setup	<ul style="list-style-type: none">• The location allows users, including those in wheelchairs, access to the display. Refer to local regulations regarding accessibility.• The location allows for multiple users to access the display at a time.• The location accommodates room traffic patterns, and there are no tripping hazards.• The display is not installed where it could be hit by a door or gate.• There are no nearby shelving units, desks or other furniture that has doors or drawers that could hit the display.• Furniture, wall décor and other room features, such as light switches and thermostats, do not block the display or are blocked by it. (You might be able to move some of these room features to accommodate the display.)
Power and other connections	<ul style="list-style-type: none">• The location is close to the following:<ul style="list-style-type: none">◦ A power outlet◦ A network outlet (if you plan to use a wired network connection)◦ A room computer (if you plan to connect a room computer)◦ Speakers and other devices that you want to connect to the display <hr/> <p>NOTES</p> <ul style="list-style-type: none">◦ If the location is not near a power outlet, consult an electrician for the power setup you need.◦ Determine if you'll need additional equipment, such as power bars, additional cables or cable extenders. <hr/> <ul style="list-style-type: none">• The location is not where the mains power supply enters the building.

Factor	Considerations
<p>Visibility</p>	<p>The display's screen is clearly visible to all users in the room. SMART recommends users sit within a 178° viewing area:</p> <div data-bbox="630 386 1247 688" data-label="Diagram"> <p>The diagram shows a horizontal rectangle labeled 'Display' at the top. From the center of the bottom edge of this rectangle, a vertical line extends downwards. From the left and right corners of the bottom edge of the rectangle, two lines extend downwards and outwards, meeting the vertical line. A large arc is drawn below these lines, spanning from the leftmost point to the rightmost point, with a double-headed arrow underneath it labeled '178°'.</p> </div> <hr/> <p>NOTE</p> <p>The viewing area depends on the display's resolution and a variety of other factors. For more information, see the knowledge base article, Recommended viewing distances and viewing angles for SMART Board interactive flat panels.</p>
<p>Lighting</p>	<p>The location is not near bright light sources, such as windows or strong overhead lighting.</p> <p>Light sources can cause glare on the display's screen, reducing its visibility.</p> <hr/> <p>TIP</p> <p>To reduce light interference, install blinds or shades on windows or skylights and install switches to dim or turn off any lights shining directly on the display's screen. Keep in mind that sunlight can come through windows at different angles at different times of the year.</p>
<p>Acoustics</p>	<p>The room has good acoustics (see Configuring your SMART Board 7000 or 7000 Pro for the best audio performance).</p>
<p>Environment and ventilation</p>	<ul style="list-style-type: none"> • The location meets the environmental requirements in the display's specifications (see <i>More information</i> on page 8). • The display isn't subjected to strong vibrations or dust. • Ventilation systems don't blow air directly on the display. • There is adequate ventilation or air conditioning around the display so that heat can flow away from it and the mounting equipment. SMART recommends at least 2" (5 cm) of space on all sides of the display for proper airflow. • If you plan to install the display in a recessed area, there is at least 4" (10 cm) of space between the display and the recessed walls to enable ventilation and cooling.

Choosing a height

Consider the general height of the user community when you choose the height for the display.



SMART recommends that you mount the display so that its top is 6' 5" (1.9 m) from the floor.

NOTE

If participants will be sitting at a steep angle (such as in a lecture hall), you may have to adjust the installation height or angle.

Assessing the wall

Be sure the wall you're installing the display on can support the weight of the display and mounting equipment. If the wall can't support the weight of the display and mounting equipment, consider using a SMART wall stand to transfer some of the weight from the wall to the floor (see [smarttech.com/accessories](https://www.smarttech.com/accessories)).

NOTE

Refer to the display's specifications for its weight (see *More information* on page 8).

In some situations, you may need to request an engineering analysis to determine if the wall can support the display.

Selecting mounting hardware

The mounting hardware required for installation varies according to the type of wall onto which the display is being mounted.

Refer to the installation instructions for the mounting hardware required for the display.

Selecting a wall mount

It is always best to mount the display on a wall. If the wall can't support the display's weight, you can use additional hardware to transfer some of the weight to the floor.

CHAPTER 2
INSTALLING THE DISPLAY

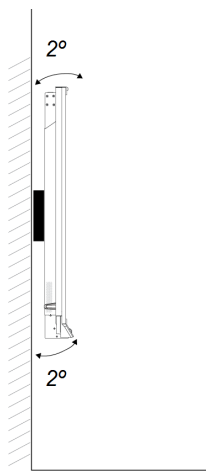
Contact your authorized SMART reseller (smarttech.com/where) for information on SMART's mounting options.

If you choose a third-party option rather than one of SMART's mounting options, be sure the wall mount can support the display's weight as well as the weight of any attached accessories and can accommodate the display's dimensions.

Mounting the display

Mount the display following the included installation instructions. In addition, consider the following:

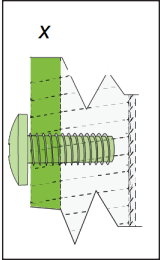
- Mount the display vertically (90° relative to the floor plus or minus 2° for tolerance) and in landscape orientation. SMART doesn't support mounting the display at other angles or in portrait orientation.



- Use a standard VESA mounting plate.

CHAPTER 2
INSTALLING THE DISPLAY

- Use M8 bolts (not included) to fasten the wall bracket.

Bolt length	$12 \text{ mm} + x \text{ mm} < M8 < 45 \text{ mm} + x \text{ mm}$ where x is the combined thickness of the wall bracket and washer
	
Fasten force	97.36–177.01 in-lb. (11–20 N·m)
	⚠ CAUTION Do not over-tighten the bolts.

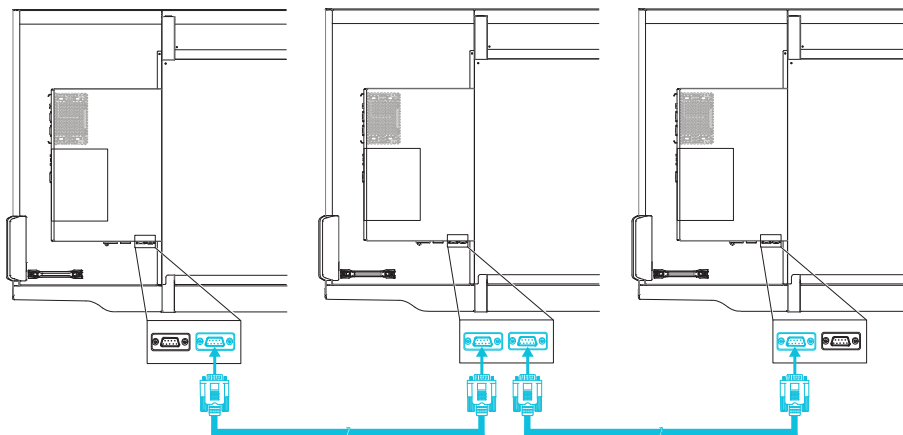
NOTE

SMART recommends M8 × 30 mm mounting bolts for standard installations where the total wall mount bracket and washer thickness is less than 7 mm.

- Because the receptacles might not be easily accessible after you mount the display, consider connecting cables for power, room computer and other devices while the display is still in its packaging (see *Chapter 3: Connecting power and devices* on page 21).

Mounting multiple displays

If you mount multiple displays side by side, you can connect a RS-232 cable from the rightmost display's RS-232 OUT connector to the next rightmost display's RS-232 IN connector, and so forth, to turn on, turn off and otherwise operate all of the displays from the right-most display's convenience panel.



! IMPORTANT

Use only standard RS-232 cables. Do not use a null modem cables. Null modem cables typically have ends of the same type.

NOTE

For more information on using RS-232 cables for remote management, see *Appendix B: Remotely managing the display* on page 55.

Installing the display on a stand

If you want to move the display from place to place or if it's not possible to install the display on a wall, you can install it on a stand.

Using SMART mobile stands

SMART mobile stands are designed for SMART interactive displays. They are height-adjustable. Some models include integrated speakers, a locking cabinet to secure equipment and casters that swivel and lock for easy movement.

For more information about SMART mobile stands, see smarttech.com/accessories.

Using a third-party stand

For information on selecting and using a third-party stand, see [Installing your SMART Board 7000 or 7000 Pro on a stand](#).

Chapter 3

Connecting power and devices

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Connecting cables for room computers, guest laptops and other input sources	24
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Connecting room control systems	26
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Connect the display to power after you install it but before you turn it on for the first time and configure the iQ appliance. You can also connect cables for room computers, guest laptops or other input sources as well as for speakers and room control systems.

By installing cables in advance, you make use of connectors that might not be accessible after the display is wall-mounted. You can then run the cables across floors or behind walls as needed.

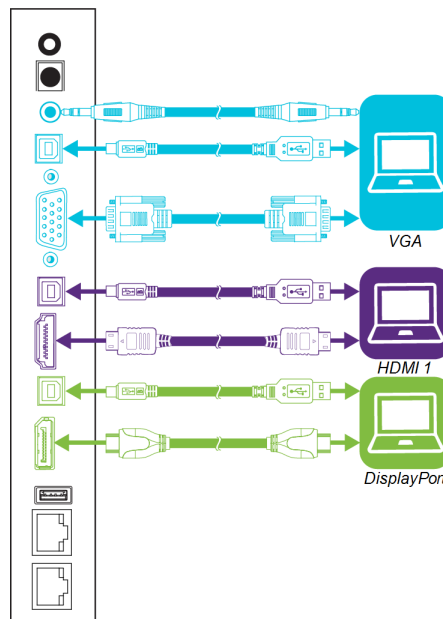
WARNING

Ensure that any cables that cross the floor to the display are properly bundled and marked to avoid a trip hazard.

Connecting cables for room computers, guest laptops and other input sources

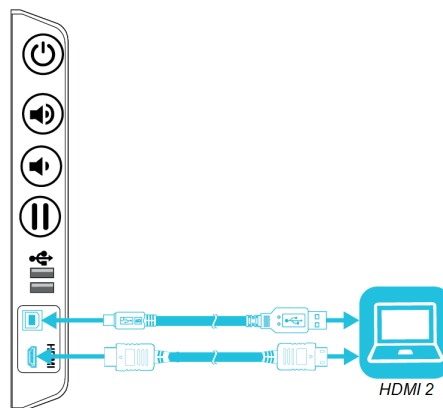
You can connect cables to the display so that users can connect and use room computers, guest laptops or other devices, such as Blu-ray™ disc players. The connector panel includes three sets of computer connectors:

- **VGA:** This set of connectors can accommodate a VGA cable for touch control, a USB cable for video and a stereo 3.5 mm cable for audio.
- **HDMI 1:** This set of connectors can accommodate a USB cable for touch control and an HDMI cable for video and audio. (This input supports HDMI 2.0.)
- **DisplayPort:** This set of connectors can accommodate a USB cable for touch control and a DisplayPort cable for video and audio.



In addition to the three sets of computer connectors on the connector panel, there is one set of computer connectors on the convenience panel:

- **HDMI 2:** This set of connectors can accommodate a USB cable for touch control and an HDMI cable for video and audio. (This input supports HDMI 1.4.)



! IMPORTANT

Do not connect computers or other devices to the iQ appliance. SMART Board 7000 series interactive displays do not support the use of these connectors.

SMART recommends the following varieties of cable:

Cable type	Maximum length	Recommendation
HDMI	23' (7 m) ¹	Use only certified HDMI cables that have been tested to support the performance standard you require.
DisplayPort	23' (7 m)	Use DisplayPort 1.2 compliant or better cables.
VGA	23' (7 m)	Use VGA cables with all pins in their connectors fully populated and wired.
Stereo 3.5 mm	20' (6 m)	[N/A]
USB	16' (5 m)	Use a USB extender if the distance between the computer and the display is greater than 16' (5 m). For more information, see <i>USB extenders</i> on page 8.

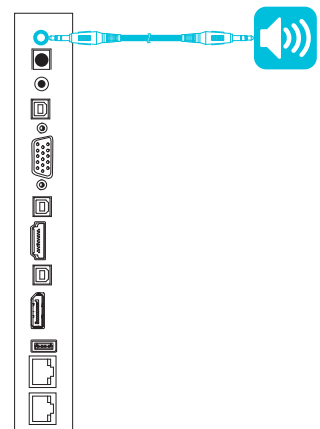
Using cables that exceed these maximum lengths may produce unexpected results, degraded picture quality or degraded USB connectivity.

SMART software should be installed on any computers users connect to the display. For information on installing SMART software and viewing a connected computer's input on the display, see the *SMART Board 7000 and 7000 Pro series interactive displays user's guide* (smarttech.com/kb/171163).

Connecting external speakers

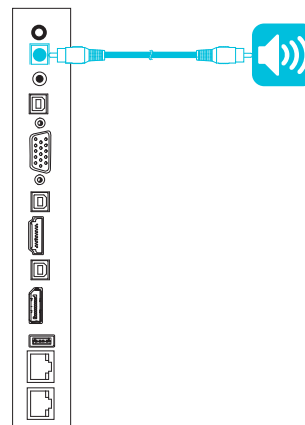
The display includes two 10 W speakers, which are designed to provide sound at the front of a room. You might want to connect the SBA-100 projection audio system (see *SBA-100 projection audio system* on page 7) or third-party external active speakers if you're providing sound in a larger space.

You can connect external speakers to the display using the stereo 3.5 mm out connector (pictured). Alternatively, you can connect external speakers directly to a room computer.



¹The performance of cables longer than 23' (7 m) is highly dependent on the cable's quality.

In addition to the stereo 3.5 mm out connector, the display provides a Sony/Philips Digital Interface (S/PDIF) out connector. S/PDIF is a digital audio transmission medium. You need an audio receiver that supports S/PDIF to decode this connection to analog for use with external speakers.



Connecting room control systems

A room control system enables users to control a room's lighting, audio system and, possibly, the display. Some installations may require you to integrate the display with a room control system. Refer to the display's documentation to see if it works with an external room control system.

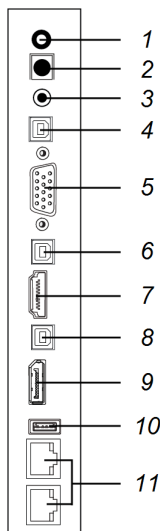
You can use the display's RS-232 connector to connect a third-party external control system to the display (see *Appendix B: Remotely managing the display* on page 55).

NOTE

Displays are not compatible with centralized remote control systems, such as a universal remote control.

Display connector panel reference

The following diagram and table present the connectors on the display's connector panel:

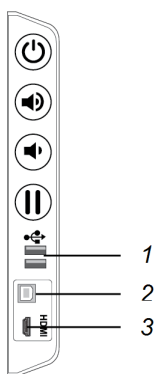


No.	Connector	Connects to	Notes
1	Stereo 3.5 mm out	External speakers	See page 25 and Analog audio cables and connectors .
2	S/PDIF out	Digital audio output	See page 25 and Digital audio cables and connectors .
3	Stereo 3.5 mm in	VGA input (audio)	See page 24 and Analog audio cables and connectors .
4	USB Type-B	VGA input (touch)	See page 24 and USB cables and connectors .
5	VGA in	VGA input (video)	See page 24 and VGA cables and connectors .
6	USB Type-B	HDMI 1 input (touch)	See page 24 and USB cables and connectors .
7	HDMI 2.0 in	HDMI 1 input (video and audio)	See page 24 and HDMI cables and connectors .
8	USB Type-B	DisplayPort input (touch)	See page 24 and USB cables and connectors .
9	DisplayPort in	DisplayPort input (video and audio)	See page 24 and DisplayPort cables and connectors .

No.	Connector	Connects to	Notes
10	USB Type-A	[N/A]	This connector is a service port.
11	RJ45 (×2)	Network	See page 22 and Ethernet (network) cables and connectors .

Display convenience panel reference

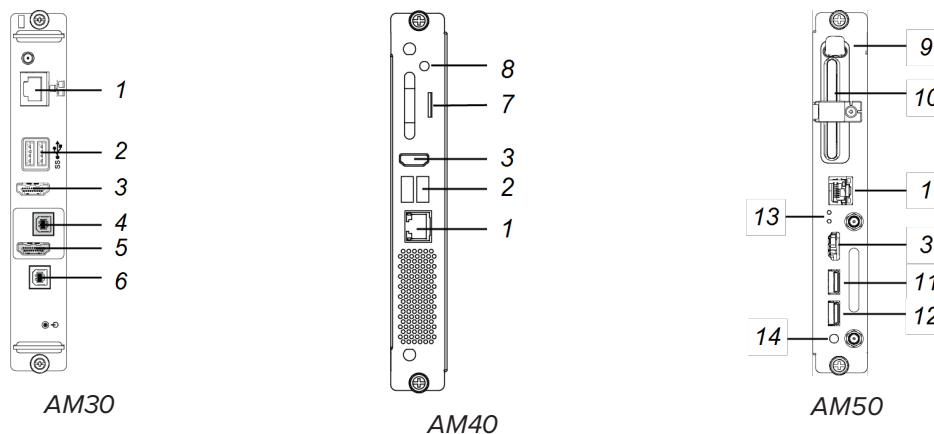
The following diagram and table present the connectors on the display's convenience panel:



No.	Connector	Connects to	Notes
1	USB Type-A (×2)	Supported peripherals	See USB cables and connectors .
2	USB Type-B	HDMI 2 input (touch)	See page 24 and USB cables and connectors .
3	HDMI 1.4 in	HDMI 2 input (video and audio)	See page 24 and HDMI cables and connectors .

iQ appliance reference

The following diagram and table present the connectors on the iQ appliance:



No.	Connector	Connects to	Notes
1	RJ45	Network	Do not use this jack. Use the jacks on the display instead. See page 22.
2	USB Type-A (×2)	Supported peripherals	[N/A]
3	HDMI out	External monitor	This receptacle is HDCP-encrypted HDMI. See HDMI cables and connectors .
4	USB Type-B	OPS/HDMI input (touch)	Do not use this receptacle. Use the receptacles on the display instead. See page 24.
5	HDMI in	OPS/HDMI input (video and audio)	Do not use this receptacle. Use the receptacles on the display instead. See page 24.
6	USB Type-B	[N/A]	This receptacle is a service port.
7	Micro SD	[N/A]	This receptacle is a service port.
8	LED	[N/A]	LED lights green when the iQ appliance is inserted in the accessory slot and turned on.

No.	Connector	Connects to	Notes
9	Eject button	[N/A]	This button ejects the Intel Compute Card. See Ejecting the Intel Compute Card .
10	Intel Compute Card	[N/A]	For iQ appliance (AM50) only.
11	USB Type-A	Supported peripherals	For iQ appliance (AM50) only. Any supported peripherals connected to this receptacle are available in the Windows 10 operating system. See Using Input .
12	USB Type-A	Supported peripherals	For iQ appliance (AM50) only. Any supported peripherals connected to this receptacle are available for the iQ experience. See page 24.
13	Lock and Eject LEDs	[N/A]	The Lock LED lights when the iQ appliance (AM50) shouldn't be removed from the display. The Eject LED lights when it is safe to remove the iQ appliance (AM50) from the display. See Ejecting the Intel Compute Card .
14	Power LED	[N/A]	LED lights when the iQ appliance is inserted in the accessory slot and turned on.
Not pictured			
13	Intel Compute Card label	[N/A]	For iQ appliance (AM50) only The label for the Intel Compute Card. The label is titled "Assembly, PC, AM50".
13	iQ appliance (AM50)	[N/A]	For iQ appliance (AM50) only The label for the iQ appliance (AM50). The label is titled "Model / AM50".

NOTE

Older models of the iQ appliance (AM30) don't have all the connectors.

Other connectors

There are additional connectors on the bottom of the display (see *Mounting multiple displays* on page 19 and *Appendix B: Remotely managing the display* on page 55).

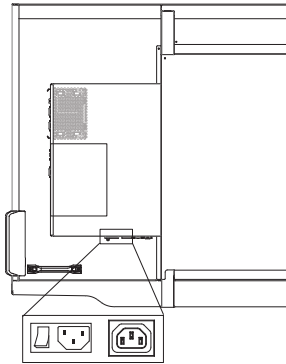
Chapter 4

Turning on the display for the first time

Turn on the display after mounting it and connecting power and devices.

To turn on and set up the display for the first time

1. Flick the switch beside the AC power inlet to the ON (I) position.



2. Select your preferred language, and then tap **Next**.
3. Select your country, and then tap **Next**.
4. Select your time zone, and then tap **Next**.
5. Set the date, and then tap **Next**.
6. Set the time, and then tap **Next**.
7. Name the display, and then tap **Next**.
8. If the display isn't using a wired network connection, select a wireless network, and then tap **Next**.
9. Select the list of applications that will appear in the launcher, and then tap **Next**. For more information about the apps, see the *SMART Board 7000 and 7000 Pro series interactive displays user's guide* (smarttech.com/kb/171163)

10. Select the apps you want to appear in the launcher, and then tap **Next**.

TIP

To change which apps appear in the launcher, see [Adding or removing apps from the launcher](#).

11. Tap **Finish**.

The *Welcome* screen appears.

Chapter 5

Maintaining the display

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With proper maintenance, the display will provide years of use.

Checking the display installation

Inspect the display installation frequently to ensure that it remains securely installed.

- Check the mounting location for signs of damage or weakness that can occur over time.
- Check for loose screws, gaps, distortions or other issues that could occur with the mounting hardware.

If you find an issue, contact a trained installer.

Cleaning the screen

Follow these instructions to clean the screen without damaging its anti-glare coating or other product components.

 **CAUTION**

- Do not use permanent or dry-erase markers on the screen. If dry-erase markers are used on the screen, remove the ink as soon as possible with a lint-free, non-abrasive cloth.
- Do not rub the screen with dense or rough material.
- Do not apply pressure to the screen.
- Do not use cleaning solutions or glass cleaners on the screen, because they can deteriorate or discolor the screen.

To clean the screen

1. Turn off the display (see *Turning the display off and back on* on the facing page).
2. Wipe the screen with a lint-free, non-abrasive cloth.

NOTE

Alternatively, you can use a damp cloth with a drop of dish soap.

Maintaining ventilation

The display requires proper ventilation. Dust buildup in the ventilation holes compromises cooling and can lead to product failure.

- Clean accessible ventilation holes monthly with a dry cloth.
- Use a vacuum cleaner with a narrow hose end fitting to clear the back ventilation holes regularly. You might have to remove the display from the wall.

For more information on removing the display, see *Removing and transporting the display* on page 38.

 **CAUTION**

Avoid setting up or using the display in an area with excessive levels of dust, humidity or smoke.

Preventing condensation

If the display has been moved from a colder environment to a warmer environment (for example, from storage to the installation site), let the display sit for a few hours so that it can acclimate to the new temperature. Failing to do so can cause humidity to build up in the space between the front glass and the LCD.

If condensation appears under the screen after you turn on the display, select an active video source and leave the display on for 48 hours. If the condensation doesn't dissipate, contact SMART Support if the display is still under warranty.

If there is enough moisture between the layers to cause the moisture to drip and run, remove power immediately and contact SMART Support if the display is still under warranty.

Replacing the pens and eraser


To prevent damage to the display's anti-glare coating, replace a pen if its nib or eraser pad become worn. You can purchase replacement pens and erasers from the Store for SMART Parts (see smarttech.com/Support/PartsStore).

Turning the display off and back on

In most situations, you can put the display to sleep when not using it following the instructions in the *SMART Board 7000 and 7000 Pro series interactive displays user's guide* (smarttech.com/kb/171163).

In some situations, such as when you need to transport the display or clean its screen, you need to turn off the display for a period of time. You can turn it back on after.

To turn the display off

1. Press the **Power** button  on the convenience panel for four seconds.
A slider appears on the screen.
2. Move the slider to the right.

NOTE

Wait at least 30 seconds before turning the display back on.


To turn the display back on

Press the **Power** button  on the convenience panel.

Resetting the display

You can reset the display and the iQ appliance using the convenience panel.

To reset the display

Press and hold the **Power** button  on the convenience panel for 10 seconds.

The display and iQ appliance reset.

Removing and transporting the display

If the display is wall mounted, you might need to remove it from its current location and transport it to another location on occasion.

To remove the display safely, use two or more trained installers.

WARNING

- Do not attempt to move the display by yourself. The display is very heavy.
- Do not move the display by connecting a rope or wire to the handles on the back. The display can fall and cause injury and product damage.

IMPORTANT

Follow any documentation included with the third-party mounting hardware.

To remove the display

1. Turn off any connected computers.
2. Turn off the display (see *Turning the display off and back on* on the previous page).
3. Flick the switch beside the AC power inlet to the OFF (O) position.
4. Remove all accessible cables and connectors.
5. Remove the iQ appliance from the accessory slot.

6. Lift the display from its mounting location.

 **WARNING**

Do not place the display on a sloping or unstable cart, stand or table. The display could fall, resulting in injury and severe product damage.

 **CAUTION**

Do not leave the display face up, face down or upside down for an extended period. This could cause permanent damage to the screen.

7. Remove the mounting brackets.

To transport the display

See *Moving the display to the installation site* on page 11.

Updating system software

When an update to the system software or firmware is available, the display downloads the update in the background then waits for four hours of inactivity. When that happens, the display shows a two-minute countdown before beginning the update. The countdown can be interrupted at any time. The update begins when the countdown finishes. The display shows a blank screen for four minutes. When the update is complete, the display shows the Whiteboard and any content that was on Whiteboard before the update.

NOTE

You can configure your organization's network to allow or prevent automatic system software and firmware updates (see [Connecting to a network](#)).

Applying an automatic system software update manually

If the display has downloaded the system software update but hasn't yet applied the update, you can start the update process manually from Settings.

To apply an automatic system software update manually

1. From the Home screen, tap **Settings** .

The *Settings* window appears.

2. Scroll to **Auto Update**.
3. Under *Check for Updates Now*, tap **Apply Update Now**.

The display turns off and then turns back on. The display then applies the update.

If there is an update for the pen firmware, the pen's indicator light will flash green or amber. Leave the pen in the tray until the pen's light is a solid color.

Updating system software manually

You can download system software updates at smarttech.com/downloads and update your display using a USB drive.

Chapter 6

Troubleshooting

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This chapter explains how to resolve a variety of common issues with the display, including issues with:

- Power
- Presence detection
- Video
- Image quality
- Audio
- Touch and digital ink
- iQ experience
- Intel Compute Card
- Software

Resolving issues with power

Issue	Solutions
The display doesn't turn on and its power light isn't lit.	<ul style="list-style-type: none">• Make sure the power cable is securely fastened to the power outlet and the display. <hr/> <p>NOTE</p> <p>If the power cable is connected to a power bar, make sure the power bar is securely fastened to the power outlet and turned on.</p> <hr/> <ul style="list-style-type: none">• Make sure the switch beside the AC power inlet is in the ON (I) position.• Make sure the power outlet is working by testing it with a different device.• Make sure the power cable is working by testing it with a different device.
The display turns on, its power light is lit, but nothing shows on the screen.	<ul style="list-style-type: none">• Pick up a pen or press the Power button.• See <i>Resolving issues with video</i> on the facing page.• Restart the display. <i>See Turning the display off and back on on page 37.</i>
The display doesn't turn on when you use a connected computer's mouse or keyboard.	<ul style="list-style-type: none">• Make sure the computer is on.• Pick up a pen or press the display's Power button.
You're experiencing other issues with power, or the previous solutions don't resolve the issue.	<p><i>See Referring to the SMART knowledge base for additional troubleshooting information on page 47.</i></p>

Resolving issues with presence detection

Issue	Solutions
The display doesn't enter Ready mode when users enter the room.	<ul style="list-style-type: none">• Make sure all cables are securely connected.• Make sure nothing is blocking the presence detection sensors.
The display enters Ready mode when it shouldn't.	<ul style="list-style-type: none">• Check for and, if possible, move the display away from the following:<ul style="list-style-type: none">◦ Direct sunlight◦ Bright lights◦ Forced air ducts◦ Plasma displays◦ Infrared audio systems and other infrared sources◦ Polished floors, glass walls, or other reflective surfaces• Be aware that the display's presence detection range is 16' (5 m).
You're experiencing other issues with presence detection, or the previous solutions don't resolve the issue.	<p><i>See Referring to the SMART knowledge base for additional troubleshooting information on page 47.</i></p>

Resolving issues with video

Issue	Solutions
You're experiencing the following or similar issues with video: <ul style="list-style-type: none">• The video is distorted.• There is visual noise.• The image is dim.	<ul style="list-style-type: none">• Make sure any connected computers are on and not in Standby mode.• Make sure the iQ appliance is securely installed in the accessory slot and its power light is on.• Set connected computers' resolution and refresh rate to values that the display supports.• Restart the display and any connected computers. <i>See Turning the display off and back on on page 37.</i>• Replace the video cable connecting the computer to the display to determine if the issue is with the cable.
The display is on, but nothing shows on the screen.	<ul style="list-style-type: none">• Make sure any connected computers are on and not in Standby mode.• Make sure the screen is working by pressing the Home button (below the screen) to open the launcher.• Restart the display and any connected computers. <i>See Turning the display off and back on on page 37.</i>• Replace the video cable connecting the computer to the display to determine if the issue is with the cable.
A computer is connected to the display, but only a "Looking for a connection" message appears on the screen.	Make sure the computer is connected to the currently selected input.
You want to output video to another display.	<ul style="list-style-type: none">• Be aware that only displays with newer AM30 or AM40 appliances support video output.• See Using a secondary display.
You're experiencing other issues with video, or the previous solutions don't resolve the issue.	<i>See Referring to the SMART knowledge base for additional troubleshooting information on page 47.</i>

Resolving issues with image quality

Issue	Solutions
You're experiencing the following or similar issues with image quality: <ul style="list-style-type: none">• There are lines or snow on the screen.• The image is flickering or flashing.	<ul style="list-style-type: none">• Set the connected computer's resolution and refresh rates to values that the display supports.• Open the on-screen display menu. If it appears correctly, the issue is with the video input.• Adjust the display's image settings. <i>See Display on page 51.</i>• Restart the display. <i>See Turning the display off and back on on page 37.</i>

CHAPTER 6
TROUBLESHOOTING

Issue	Solutions
There are bright spots on the screen.	<ul style="list-style-type: none">• Open the on-screen display menu. If it appears correctly, the issue is with the video input.• Take a photograph of the screen and send it to SMART support. If SMART support determines that the issue is with the screen and the display is under warranty, you may be eligible for a replacement.
The image isn't clear. There are lines, double images or other distortions.	Adjust the display's image settings. See <i>Display</i> on page 51.
Colors don't appear correctly.	<ul style="list-style-type: none">• Be aware that if two or more displays are mounted side-by-side, there could be minor differences in colors across the displays. This issue is not unique to SMART products.• If you're using a VGA video input, use a different cable or connect a different source to see if the issue is with the cable or input source.
The image is cut off or shifted to the left or right.	<ul style="list-style-type: none">• Adjust any connected computers' video settings, particularly zoom, crop and underscan. See the computer's operating system documentation.• If the computer's desktop is entirely black, change it to dark gray or a different color.• If the computer's background is extended across multiple screens, duplicate the desktop across the screens or set the display as the only screen.
The image doesn't fill the entire screen.	Adjust any connected computers' video settings, particularly overscan. See the computer's operating system documentation.
A persistent image appears on the display.	See Image persistence or burn in on LCD displays .
You're experiencing other issues with image quality, or the previous solutions don't resolve the issue.	See <i>Referring to the SMART knowledge base for additional troubleshooting information</i> on page 47.

Resolving issues with audio

Issue	Solutions
<p>You're experiencing the following or similar issues with audio:</p> <ul style="list-style-type: none">• No sound is coming from the speakers.• Sound is coming from the speakers, but the volume is low.• The sound is distorted or muffled.	<ul style="list-style-type: none">• If you're using external speakers, make sure the speakers are turned on.• Make sure the cables connecting the display to the computer are securely fastened. <hr/> <p>NOTES</p> <ul style="list-style-type: none">◦ The display's stereo 3.5 mm in connector works with the VGA input.◦ Connecting an audio cable to the display's stereo 3.5 mm out connector disables the internal speakers.◦ If you're using the display's S/PDIF out connector to connect a sound bar or receiver for external speakers, see <i>Connecting external speakers</i> on page 25. <hr/> <ul style="list-style-type: none">• Adjust the volume on the display and the connected computer and make sure neither are muted.• Adjust the display's audio settings. See <i>Audio</i> on page 51.• Make sure the display is set as the default audio device for the connected computer's audio output. See the connected computer's operating system documentation.• If you're using the integrated speakers, set the volume for the computer and any running applications to 80%, and then adjust the display's volume. OR If you're using external speakers, set the volume for the computer, any running applications and the display to 80%, and then adjust the speakers' volume.
<p>There is a whine or buzzing sound coming from the back of the display.</p>	<ul style="list-style-type: none">• Be aware that these sounds are normal. All displays emit some electrical noise. Such sounds may be more noticeable with some displays than with others. However, if you hear noise from the front of the display, further investigation is required.• Connect all devices to the same power outlet or power bar.
<p>You're experiencing other issues with audio, or the previous solutions don't resolve the issue.</p>	<p>See <i>Referring to the SMART knowledge base for additional troubleshooting information</i> on page 47.</p>

Resolving issues with touch and digital ink

Issue	Solutions
<p>You're experiencing the following or similar issues with touch and digital ink:</p> <ul style="list-style-type: none">• When users touch or write on the screen, the pointer or digital ink appears in the wrong place.• Touch and digital ink are intermittent.• Digital ink disappears as you write.• Digital ink colors change unexpectedly.	<ul style="list-style-type: none">• Restart the display. <i>See Turning the display off and back on on page 37.</i>• Confirm with the installers that the computer is connected to the display with only a single cable.• Make sure SMART Product Drivers and SMART Ink are installed and running on any connected computers.• Use a known working pen from another display to check if the issue is being caused by the pen.• Remove infrared sources such as incandescent or arc lights, desk lamps and infrared audio devices or move the display to another location in the room.• Update the firmware.• Remove the display from the wall, calibrate it and confirm if this resolves the issue. If it does, check the wall and wall mount for issues.
<p>The display responds to touch but not to writing with a pen.</p>	<p>Reinstall or update SMART Product Drivers.</p>
<p>The display doesn't respond to touch or writing with a pen.</p>	<p>Make sure any connected computers have detected the display's USB connection and installed drivers. On Windows computers, open Device Manager and make sure there is no red X or yellow explanation mark (!) over the display's icon. On Mac computers, open System Information and ensure there are no error messages in the display's row.</p>
<p>You're experiencing issues with one or more of the display's pens.</p>	<ul style="list-style-type: none">• Use only SMART Board 7000 series interactive display pens with the display. Pens from other interactive displays aren't compatible.• Return the pen to its magnetic holder to calibrate it.• Make sure the pen's pressure sensitive switch isn't damaged or dirty.• If one pen isn't working, make sure the pen is paired with the display and is fully charged.• If all pens aren't working, return the pens to their magnetic holders and restart the display.
<p>You can't write or draw in Microsoft Office.</p>	<ul style="list-style-type: none">• Make sure Microsoft Office 2013 or later is installed.• Reinstall or update SMART Product Drivers and SMART Ink.
<p>You're experiencing other issues with touch and digital ink, or the previous solutions don't resolve the issue.</p>	<p><i>See Referring to the SMART knowledge base for additional troubleshooting information on the facing page.</i></p>

Resolving issues with the iQ experience

For information on resolving issues with the iQ experience, including the Whiteboard, SMART Notebook Player, Browser, Input and Screen Share apps, see [Troubleshooting iQ system software](#).

Resolving issues with the Intel Compute Card

For information on resolving issues with the Intel Compute Card, including the drivers, see [Troubleshooting Windows 10 on Intel Compute Card](#).

Resolving issues with software

For information on resolving issues with SMART Learning Suite (including SMART Notebook software), see [Troubleshooting SMART Notebook 18](#).

For information on resolving issues with SMART Meeting Pro software, see [Troubleshooting SMART Meeting Pro 4](#).

Referring to the SMART knowledge base for additional troubleshooting information

Refer to the SMART knowledge base for additional troubleshooting information:

community.smarttech.com/s/topic/0TO0P00000010RIWAY/7000-series

Contacting your reseller for additional support

If an issue you're experiencing with the display persists or isn't covered in this chapter or the knowledge base, contact your authorized SMART reseller (smarttech.com/where) for support.

Your reseller might ask you for the serial number for the display or the iQ appliance.

Finding the display serial number

The display's serial number is located in the following places:

- In the iQ settings (see *Serial Number* on page 54)
- On the bottom frame
- On the back of the display

Finding the iQ appliance serial number

The iQ appliance's serial number is located on the iQ appliance.

NOTE

You need to remove the iQ appliance from the display to find the serial number.

Appendix A

Adjusting iQ settings

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You can access settings using the  icon on the Home screen.

Network settings

Option	Values	Function	Notes
• Wi-Fi	[N/A]	Shows which wireless network the display is connected to.	Turn on Wi-Fi to discover networks.
• [Wi-Fi network name]	[N/A]	Shows information about the wireless network the display is connected to.	[N/A]
• Wi-Fi MAC address	[N/A]	Shows MAC address for the network the display is connected to.	[N/A]
• Wi-Fi IP address	[N/A]	Shows IP address for the network the display is connected to.	[N/A]
▶ SMART iQ Ethernet			
• Static iP	[N/A]	Shows information about the network the display is connected to.	[N/A]
• Proxy	[N/A]	Shows information about the network the display is connected to.	[N/A]
• MAC address	[N/A]	Shows information about the network the display is connected to.	[N/A]
▶ SMART Board scaler ethernet			
• MAC address	[N/A]	Shows information about the network the display's scaler is connected to.	[N/A]

APPENDIX A
ADJUSTING IQ SETTINGS

Option	Values	Function	Notes
<ul style="list-style-type: none"> IP address 	[N/A]	Shows information about the network the display's scaler is connected to.	[N/A]
<ul style="list-style-type: none"> Bluetooth 	[N/A]	Shows information about the display's Bluetooth	[N/A]

Personalization

Option	Values	Function	Notes
<ul style="list-style-type: none"> Wallpaper 	[Wallpapers]	Select the wallpaper that appears in the background.	<ul style="list-style-type: none"> 1920 × 1080 images work best The display supports .png and .jpg file formats See Changing the display's wallpaper.

Application settings

Option	Values	Function	Notes
▶ SMART Whiteboard			
<ul style="list-style-type: none"> Whiteboard Storage 	[N/A]	[N/A]	[N/A]
<ul style="list-style-type: none"> Library 	On Off	Enables or disables saving whiteboard sessions	[N/A]
<ul style="list-style-type: none"> Save Whiteboards in Library 	For 1 week For 1 Month Indefinitely	Sets how long whiteboard sessions are saved	[N/A]
<ul style="list-style-type: none"> Mobile App 	[N/A]	[N/A]	[N/A]
<ul style="list-style-type: none"> Saving Whiteboards 	On Off	Enables or disables the Capture function in the SMART kapp app	If this option is off, the QR code is not visible. The SMART kapp app is unable to connect to the display and your mobile device is unable to save snapshots of the display in the app.
<ul style="list-style-type: none"> Sharing Whiteboards 	On Off	Enables or disables the Invite function on the SMART kapp app	If this option is off, you're unable to invite people to your session.
<ul style="list-style-type: none"> Annotation 			

APPENDIX A
ADJUSTING IQ SETTINGS

Option	Values	Function	Notes
<ul style="list-style-type: none"> • Enable annotation layers 	On Off	Enables or disables annotations on the Browser and Screen Share app	[N/A]
▶ Screen Share			
<ul style="list-style-type: none"> • Require Permission 	[N/A]	Enables or disables a device automatically connecting and sharing its screen.	[N/A]
<ul style="list-style-type: none"> • Reset Screen Share 	[N/A]	Closes and restarts the Screen Share app and its discovery services	You can restart Screen Share as a troubleshooting step if a mobile device or computer can't find or connect to the display.

System settings

Option	Values	Function	Notes
▶ Display			
<ul style="list-style-type: none"> • Screen Adjustment 	[N/A]	[N/A]	[N/A]
<ul style="list-style-type: none"> • Brightness 	0–100	Sets the overall brightness of the image	[N/A]
<ul style="list-style-type: none"> • Contrast 	0–100	Sets the difference in brightness between the lightest and darkest parts of the image	[N/A]
▶ Audio			
<ul style="list-style-type: none"> • Speakers 	[N/A]	[N/A]	[N/A]
<ul style="list-style-type: none"> • Built-in Speakers 	On Off	Enables or disables the display's internal speakers	When analog speakers are connected to the display, the display's internal speakers are disabled automatically.
<ul style="list-style-type: none"> • Audio Properties 			
<ul style="list-style-type: none"> • Balance 	0–100	Sets the audio output from the speakers	Drag the slider all the way to the left to have all audio from the left speaker. Drag the slider all the way to the right to have all the audio from the right speaker.
<ul style="list-style-type: none"> • Bass 	0–100	Sets the bass level	[N/A]
<ul style="list-style-type: none"> • Treble 	0–100	Sets the treble level	[N/A]

APPENDIX A
ADJUSTING IQ SETTINGS

Option	Values	Function	Notes
▶ Date & Time			
• Automatic Date & Time	On Off	Sets the display's date and time automatically	Configure the network to allow Network Time Protocol (NTP) requests to Internet time servers. See Connecting to a network .
• Date	[N/A]	Sets the display's date	Disable Automatic date & time to set the date manually.
• Time	[N/A]	Sets the display's time	Disable Automatic date & time to set the time manually.
• 24 Hour Time	On Off	Shows the display's time using the 24-hour clock	[N/A]
• Time Zone	[N/A]	Sets the display's time zone	[N/A]
• Language	[Languages]	Sets the language for the settings menu	[N/A]
• Country	[Countries]	Sets the display's country	[N/A]
▶ Diagnostics			
• Factory Reset	[N/A]	Resets all options to their default values	Only administrators should reset the display.
• Performance Logging	On Off	Enables or disables diagnostics logging for IQ experience performance	Logging performance may help with troubleshooting.
• Save Log File	[N/A]	Copy diagnostic logs to a USB drive	[N/A]
• Improve the Experience	On Off	Sends usage statistics and error reports to SMART	[N/A]
• SMART Cloud Status	[Status]	Shows the status of SMART Cloud	[N/A]
• Support ID	[Support ID]	Shows the support ID associated with the display	[N/A]
▶ Security			
• Lock Down Settings	[N/A]	Lock down the display's settings using a certificate on a USB drive.	See Locking down the Settings app for more information.
• Install certificates	[N/A]	Install certificates to connect to a network	[N/A]
• Clean up	[N/A]	[N/A]	[N/A]

APPENDIX A
ADJUSTING IQ SETTINGS

Option	Values	Function	Notes
<ul style="list-style-type: none"> Clean Up Policy 	Disabled Manually reset with the Clean Up button in the launcher 1 hour 2 hours 3 hours 1 day	Sets how often the display cleans up	[N/A]
<ul style="list-style-type: none"> Clean Up the whiteboard 	[N/A]	Saves the Whiteboard session to the Library and erases the Whiteboard	[N/A]
<ul style="list-style-type: none"> Clean Up the browser 	[N/A]	Closes the browser tabs and clears the history, cache and cookies	[N/A]
<ul style="list-style-type: none"> Clean Up other applications 	[N/A]	Closes open applications	[N/A]
▶ Auto Update			
<ul style="list-style-type: none"> Updates Channel 	Stable Channel Beta Channel	Sets which system software updates the display receives	When switching from the Beta channel to the Stable channel, a factory reset occurs. See page 52 for more information about factory reset. For more information about the Beta Channel, see Switching to the Beta channel .
<ul style="list-style-type: none"> Check for Updates Now 	[N/A]	Checks for updates to the system software <hr/> NOTE The display must be connected to the Internet to check for system software updates.	If an update is available, the text changes to Apply update now .
▶ About			
<ul style="list-style-type: none"> Board Name 	[N/A]	Select a name for your display	[N/A]
<ul style="list-style-type: none"> Help 	[N/A]	Shows the SMART support site	[N/A]
<ul style="list-style-type: none"> Send Feedback 	[N/A]	Send feedback to SMART about the display experience	[N/A]
<ul style="list-style-type: none"> Board Details 	[N/A]	[N/A]	[N/A]
<ul style="list-style-type: none"> Build Number 	[N/A]	Shows the IQ system software's version number	[N/A]

APPENDIX A
ADJUSTING IQ SETTINGS

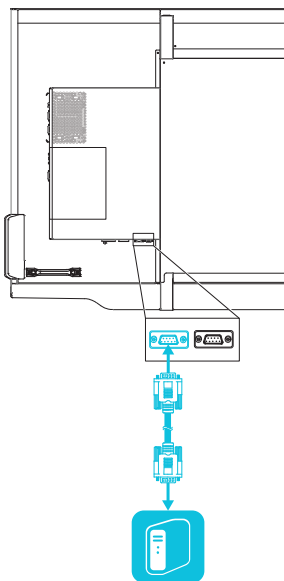
Option	Values	Function	Notes
• Serial Number	[N/A]	Shows the display's serial number	[N/A]
• Firmware Details	[N/A]	[N/A]	[N/A]
• Legal Information	[N/A]	[N/A]	[N/A]
• End User License Agreement	[N/A]	Shows the SMART end user license agreement	[N/A]
• Open Source Licenses	[N/A]	Shows the open source licenses	[N/A]
• SMART Intellectual Property	[N/A]	Shows the SMART intellectual property information	[N/A]

Appendix B

Remotely managing the display

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You can connect an RS-232 cable from the computer's serial output to the RS-232 IN connector on the bottom of the display to remotely select video inputs, turn the display on or off and get information about the display's current settings, such as contrast and power state.

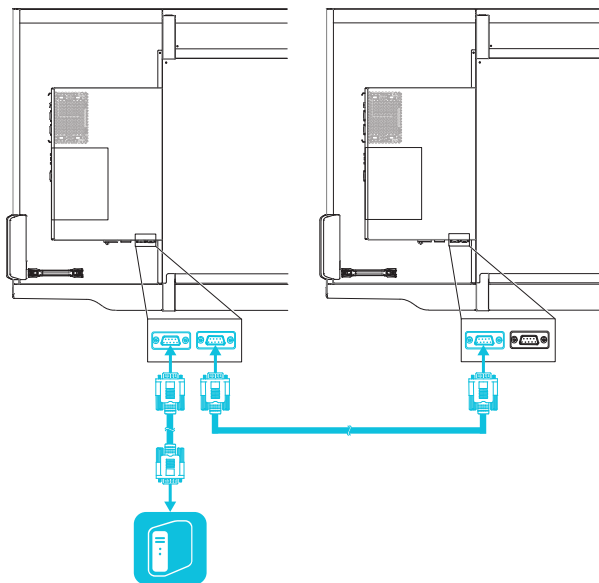


! IMPORTANT

Use only a standard RS-232 cable. Do not use a null modem cable. Null modem cables typically have ends of the same type.

Connecting multiple displays

You can connect up to ten displays to a room control system by connecting a RS-232 cable from the computer's serial output to the rightmost display's RS-232 IN connector and then connecting another RS-232 cable from the rightmost display's RS-232 OUT connector to the next rightmost display's RS-232 IN connector:



NOTES

- When you connect displays in this manner, they behave as a single unit (see *Mounting multiple displays* on page 19).
- With the exception of the `get input`, `set input` and `get fwwer`, all remote management commands apply to all connected displays.

Configuring the computer's serial interface settings

Configure the computer's serial interface before sending commands to the display.

To configure the computer's serial interface

1. Turn on the display.
2. Turn on the computer, and then start the serial communications program or terminal emulation program.
3. Activate local echo.
4. Configure the serial interface settings using the following values, and then press ENTER.

Baud rate	19200
Data length	8
Parity bit	None
Stop bit	1


A command prompt (>) appears on the following line, and the display can now accept commands from the computer.



NOTE

If no message appears or an error message appears, the serial interface isn't configured correctly. Repeat steps 3 and 4.

Power states

The display has six power states:

Power state	Description
ON	The display is in normal operating mode.
READY	The screen is off, but the display is ready to turn on when the following occurs: <ul style="list-style-type: none">• A user presses the Power button  on the convenience panel.• A user picks up a pen or the eraser.• You send the <code>set powerstate=on</code> command.

Power state	Description
STANDBY	The screen is off, and the display is in a low power state. The display enters READY state when the following occurs: <ul style="list-style-type: none">• The presence detection sensors detect people in the room.• A user presses the Power button  on the convenience panel.• You send the <code>set powerstate=on</code> command.
POWERSAVE	The screen is off, and the display is a very low power state. The display enters READY state when the following occurs: <ul style="list-style-type: none">• A user presses the Power button  on the convenience panel.• You send the <code>set powerstate=on</code> command.
UPDATEON	The display is updating firmware. Do not turn off the display.
UPDATEREADY	The display is updating firmware while the screen is off. Do not turn off the display.

With the exception of `get powerstate` and `set powerstate`, commands are available only when the display is in ON power state.

Commands and responses

To access display information or to adjust display settings using the room control system, type commands after the command prompt (`>`), and then wait for the response from the display.

CORRECT

```
>get volume  
volume=55  
>
```

If you type a command that the room control system doesn't recognize, you will receive an invalid command response.

In the example below, the user included an extra space in the volume command.

INCORRECT

```
>set vol ume=65  
invalid cmd=set vol ume=65  
>
```

NOTES

- Use ASCII formatted commands.
 - Commands aren't case-sensitive.
 - You can use the BACKSPACE key when typing commands.
 - Review each entry carefully before you press ENTER.
 - Don't send another command until you receive the response and the next command prompt.
-

To identify the current value of a setting

Use a get command.

This example shows how to get the volume:

```
>get volume  
volume=55  
>
```

To assign a value to a setting

Use a set command.

This example sets the volume to 65:

```
>set volume=65  
volume=65  
>
```

To increase or decrease the value of a setting

Use the `set` command to increase or decrease the value by a designated number.

This example increases the volume by 5:

```
>set volume+5  
volume=70  
>
```

This example decreases the volume by 15:

```
>set volume-15  
volume=55  
>
```

To identify or assign a value for a specific display

Start the command with `[Display],@`, where `[Display]` is the display you want to apply the command to.

This example sets the input for the rightmost display to HDMI 2:

```
>A,@ set input=hdmi2  
@,A input=hdmi2  
>
```

NOTES

- The rightmost display is labeled A, the next rightmost display is labeled B, and so on.
 - You can identify a specific display for only the `get input`, `set input` and `get fwver` commands.
-

Power state commands

Get command	Set command	Response
get powerstate	set powerstate[<i>Value</i>] Where [<i>Value</i>] is one of the following: <ul style="list-style-type: none"> • =on • =ready • =standby • =powersave <hr/> NOTE If the display is in UPDATEON or UPDATEREADY state, it might not change power states after receiving the command.	powerstate=[<i>Value</i>] Where [<i>Value</i>] is one of the following: <ul style="list-style-type: none"> • on • ready • standby • powersave • updateon • updateready

Input commands

Get command	Set command	Response
If one display is connected		
get input	set input[<i>Value</i>] Where [<i>Value</i>] is one of the following: <ul style="list-style-type: none"> • =hdmi1 • =hdmi2 • =dp1 • =vga1 • =ops1 	input=[<i>Value</i>] Where [<i>Value</i>] is one of the following: <ul style="list-style-type: none"> • hdmi1 • hdmi2 • dp1 • vga1 • ops1
If multiple displays are connected		
[<i>Display</i>],@ get input Where [<i>Display</i>] is the display's label (A, B, and so on).	[<i>Display</i>],@ set input[<i>Value</i>] Where <ul style="list-style-type: none"> • [<i>Display</i>] is the display's label (A, B, and so on). • [<i>Value</i>] is one of the following: <ul style="list-style-type: none"> ◦ =hdmi1 ◦ =hdmi2 ◦ =dp1 ◦ =vga1 ◦ =ops1 	@,[<i>Display</i>] input=[<i>Value</i>] Where <ul style="list-style-type: none"> • [<i>Display</i>] is the display's label (A, B, and so on). • [<i>Value</i>] is one of the following: <ul style="list-style-type: none"> ◦ hdmi1 ◦ hdmi2 ◦ dp1 ◦ vga1 ◦ ops1

Brightness commands

Get command	Set command	Response
get brightness	set brightness[Value] Where [Value] is one of the following: <ul style="list-style-type: none">• +[Value]• -[Value]• =[5-100]	brightness=[Value] Where [Value] is a number between 5 and 100

Freeze commands

Get command	Set command	Response
get videofreeze	set videofreeze[Value] Where [Value] is one of the following: <ul style="list-style-type: none">• =on• =off	videofreeze=[Value] Where [Value] is one of the following: <ul style="list-style-type: none">• on• off

Volume commands

Get command	Set command	Response
get volume	set volume[Value] Where [Value] is one of the following: <ul style="list-style-type: none">• +[Value]• -[Value]• =[0-100]	volume=[Value] Where [Value] is a number between 0 and 100

Mute commands

Get command	Set command	Response
get mute	set mute[Value] Where [Value] is one of the following: <ul style="list-style-type: none">• =on• =off	mute=[Value] Where [Value] is one of the following: <ul style="list-style-type: none">• on• off

Firmware version commands

Get command	Response
If one display is connected	
get fwversion	fwversion=[<i>Value</i>] Where [<i>Value</i>] is the firmware version.
If multiple displays are connected	
[<i>Display</i>],@ get fwversion Where [<i>Display</i>] is the display's label (A, B, and so on).	@,[<i>Display</i>] fwversion=[<i>Value</i>] Where <ul style="list-style-type: none">[<i>Display</i>] is the display's label (A, B, and so on).[<i>Value</i>] is the firmware version.

Serial number commands

Get command	Response
get serialnum	serialnum=[<i>Value</i>] Where [<i>Value</i>] is the serial number.
	NOTE If multiple display are connected, the response includes the serial numbers for all displays separated by commas.

Part number commands

Get command	Response
get partnum	partnum=[<i>Value</i>] Where [<i>Value</i>] is the part number, including the revision.
	NOTE If multiple display are connected, the response includes the part numbers for all displays separated by commas.

Resolving issues with remote management

The following table presents common issues with remote management and explains how to resolve them:

Issue	Solutions
You're experiencing general issues with remote management.	<ul style="list-style-type: none">• Make sure all the cable connections are secure.• Restart the display and the remote management system. <i>See Turning the display off and back on on page 37.</i>• Configure the serial interface settings. <i>See Configuring the computer's serial interface settings on page 56.</i>
You're experiencing other issues with remote management, or the previous solutions don't resolve the issue.	<p><i>See Referring to the SMART knowledge base for additional troubleshooting information on page 47.</i></p>

Appendix C

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 (WEEE)

Electrical and electronic equipment 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 pens contain rechargeable lithium batteries. Recycle or dispose of batteries properly.

More information

See smarttech.com/compliance for more information.

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