

SMART Board MX (V2) and MX (V2) Pro series interactive displays

INSTALLATION AND MAINTENANCE

SBID-MX255-V2 | SBID-MX265-V2 | SBID-MX275-V2 | SBID-MX286-V2 | SBID-MX255-V2-PW | SBID MX265-V2-PW | SBID-MX275-V2-PW | SBID-MX286-V2-PW

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SMART[®]



Learn more

This guide and other resources for SMART Board MX (V2) and MX (V2) 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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This product and/or use thereof is covered by one or more of the following U.S. patents:

www.smarttech.com/patents

February 11, 2021

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 the display to a wired or wireless network with Internet access to automatically download and apply these updates as well as future updates.

WARNING

- Failure to follow the installation instructions included 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.
- 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 if using a mount other than the one supplied with the display..
- 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
- Before inserting or removing an OPS from the display, turn off the display using the switch at the back of the display. See [Open Pluggable Slot computer \(OPS\) disclaimer](#) for more information.

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.

Important information

- 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 or IEC 62368-1.
- 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 IEC 60950-1 and/or IEC 62368-1. The source computer must be CE marked and carry safety certification marks for Canada and USA. This is for operating safety and to avoid damage to the display.

IMPORTANT

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

Model	Power requirements
SBID-MX255-V2	100V to 240V AC, 50 Hz to 60 Hz, 98 W max
SBID-MX265-V2	100V to 240V AC, 50 Hz to 60 Hz, 103 W max
SBID-MX275-V2	100V to 240V AC, 50 Hz to 60 Hz, 114 W max
SBID-MX286-V2	100V to 240V AC, 50 Hz to 60 Hz, 167 W max

- For additional requirements and other information, refer to the display's specifications (see *More information* on page 16).

ENERGY STAR®



ENERGY STAR is the government-backed symbol for energy efficiency, providing simple, credible, and unbiased information that consumers and businesses rely on to make well-informed decisions. ENERGY STAR-certified products are the simple choice for energy efficiency, making it

easy for consumers and businesses to make purchases that save them money and protect the environment. The U.S. EPA ensures that each product that earns the label is independently certified to deliver the quality, performance, and savings that users have come to expect.

As shipped, your display delivers ENERGY STAR performance and savings. However, changing some settings may increase energy consumption beyond the limits required for ENERGY STAR certification. For example, increased brightness and contrast will increase power consumption.

Please consider the environment when you choose non-ENERGY STAR settings.

Federal Communication Commission interference statement

FCC

Suppliers Declaration of Conformity

47 CFR § 2.1077 Compliance Information

Unique Identifier: IDX55-2, IDX65-2, IDX75-2, IDX86-2

Responsible Party – U.S. Contact Information

SMART Technologies Inc.

2401 4th Ave., 3rd Floor

Seattle, WA 98121

compliance@smarttech.com

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.

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.

Restriction

Operations in the 5.15-5.25GHz band are restricted to indoor usage only.

IEEE 802.11b or 802.11g operation of this product in the USA is firmware limited to channels 1 through 13.

CAUTION

- i. the device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;

Important information

- ii. the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall comply with the e.i.r.p. limit; and
- iii. the maximum antenna gain permitted for devices in the band 5725-5825 MHz shall comply with the e.i.r.p. limits specified for point-to-point and non point-to-point operation as appropriate.
- iv. Users should also be advised that high-power radars are allocated as primary users (i.e., priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

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.

Innovation, Science et Développement économique Déclaration du Canada

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.

ADVERTISSEMENT

- i. les dispositifs fonctionnant dans la bande 5 150-5 250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;
- ii. le gain maximal d'antenne permis pour les dispositifs utilisant les bandes 5 250-5 350 MHz et 5 470-5 725 MHz doit se conformer à la limite de p.i.r.e.;
- iii. le gain maximal d'antenne permis (pour les dispositifs utilisant la bande 5 725-5 825 MHz) doit se conformer à la limite de p.i.r.e. spécifiée pour l'exploitation point à point et non point à point, selon le cas.
- iv. De plus, les utilisateurs devraient aussi être avisés que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5 250-5 350 MHz et 5 650-5 850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.

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 displays model SBID-MX255-V2, SBID-MX265-V2, SBID-MX275-V2, SBID-MX286-V2 are in compliance with Directive 2014/53/EU.

WARNING

Operation of this equipment in a residential environment this equipment may could cause radio interference.

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

The frequency band and the maximum transmitted power in EU are listed below:

Transmitting Band (MHz)	Maximum Transmit Power EIRP (dBm)
2402-2483.5	19
5150-5350	23
5470-5725	23

Restrictions in

Important information

AT/BE/BG/CZ/DK/EE/FR/DE/IS/IE/IT/EL/ES/CY/LV/LI/LT/LU/HU/MT
NL/NO/PL/PT/RO/SI/SK/TR/FI/SE/CH/UK/HR—5150MHz-
5350MHZ is for indoor use only



CAUTION: EXPOSURE TO RADIO FREQUENCY RADIATION

This equipment complies with EU radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body.

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Chapter 1

Welcome

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This chapter introduces the SMART Board® MX (V2) and MX (V2) Pro series interactive displays.

About this guide

This guide explains how to install and maintain a SMART Board MX (V2) or MX (V2) Pro 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 experience

- How to maintain the display for years of use
- How to troubleshoot issues with the display

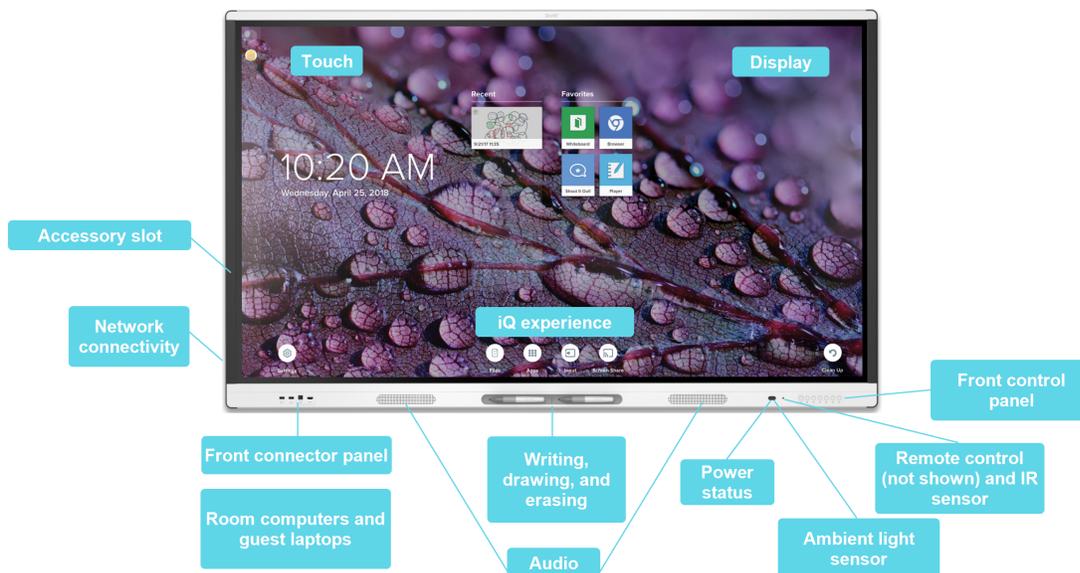
In addition, this guide includes information on the display's settings and remote management support.

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 16).

About the display

The SMART Board MX (V2) or MX (V2) Pro interactive display with iQ is the hub of your classroom.

The display includes an extensive set of features and components:



Touch

You can do everything on the display that 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 videos, and so on—by touching the display's surface.

You can use an array of gestures within applications, including panning, scaling, rotating, and zooming in and out.

Writing, drawing, and erasing

The display comes with two pens, which you can use to write or draw on the screen.

Use your fist or palm to erase digital ink on the screen.

With Object Awareness™, the display responds automatically to the tool or object you're using, whether it's a pen, finger, or palm. The display's Simultaneous Tool Differentiation technologies allow two people to write independently and simultaneously.

iQ experience

The display's iQ experience provides one-touch access to collaborative tools, including a whiteboard, wireless screen sharing, and a web browser. With minimal network integration, there's no need for wires, cables, or manual software and firmware updates.

Tap the **Home**  button on the display's front control panel or the remote control to open the Home screen. From the Home screen, you can open the iQ apps, switch inputs, and adjust settings.

Display

The 4K ultra-high-definition LCD display provides optimal image clarity and wide viewing angles.

The size of the display varies by model:

Models	Size (diagonal)
SBID-MX255-V2 / SBID-MX255-V2-PW	55"
SBID-MX265-V2 / SBID-MX265-V2-PW	65"
SBID-MX275-V2 / SBID-MX275-V2-PW	75"
SBID-MX286-V2 / SBID-MX286-V2-PW	86"

Audio

The display includes two 15 W integrated speakers, which are designed to provide sound at the front of a room.

TIP

You might want to connect an external audio system if you're providing sound in a larger space (see *Connecting an external audio system* on page 38).

Network connectivity

The display requires a network connection for downloading software and firmware updates, and a number of the iQ apps require a network connection as well.

You can connect to a network using Wi-Fi or the RJ45 LAN jack on the display:

- Wi-Fi supports both 2.4 and 5 GHz bands.
- The two RJ45 jacks allow you to connect the display and an external device, such as a computer, to a Ethernet network.

For more information, see *Connecting to a network* on page 26.

Room computers and guest laptops

You can connect room computers and guest laptops and use the display to view and interact with them.

The display comes with SMART software that you can install on connected computers to take full advantage of the display's features while using the connected computers.

For more information, see *Chapter 3: Connecting computers and other devices* on page 30.

Accessory slot

You can install an OPS-compatible device, such as a SMART OPS PC module, in the accessory slot. The PCM8 series of SMART OPS PC modules provides a complete Windows 10 Pro installation.

For more information on the SMART PCM8 series OPS PC, see *SMART OPS PC module* on page 14.

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 and/or IEC 62368-1.

Front control panel

The front control panel contains buttons for turning the display on and off, controlling the volume, freezing and unfreezing the screen, and showing and hiding a screen shade.

For more information about the front control panel, see the *SMART Board MX (V2) and MX (V2) Pro series interactive displays user guide* (smartechnology.com/kb/171554).

Front connector panel

The front connector panel includes connectors for USB peripherals and a computer or other input source.

Ambient light sensor

The ambient light sensor is located in the bottom-right corner of the display's frame.

The ambient light sensor detects the brightness of the room and adjusts the screen's brightness accordingly.

You can enable or disable this feature (see *Auto Brightness* on page 64).

Power status light

The power status is located in the bottom-right corner of the display's frame.

The power status light indicates the display's status.

Power status light	Display status
Red	Standby mode
Green	Normal operating mode

Remote control and IR sensor

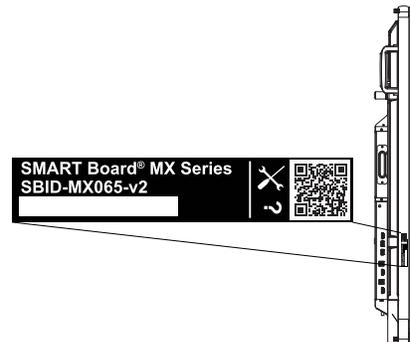
You can use the remote control to turn the display on and off, adjust display settings, and so on.

The IR sensor for the remote control is located in the bottom-right corner of the display's frame.

For more information about the remote control, see the *SMART Board MX (V2) and MX (V2) Pro series interactive displays user guide* (smarttech.com/kb/171554).

Identifying your specific model

SMART offers several models of the SMART Board MX (V2) and MX (V2) Pro series interactive display. For help identifying your model, see the label on the left side of the display.



Model	Screen size (approximate)
SBID-MX255-V2	55" (140 cm)

Model	Screen size (approximate)
SBID-MX265-V2	65" (165 cm)
SBID-MX275-V2	75" (190 cm)
SBID-MX286-V2	86" (218 cm)
SBID-MX255-V2-PW	55" (140 cm)
SBID-MX265-V2-PW	65" (165 cm)
SBID-MX275-V2-PW	75" (190 cm)
SBID-MX286-V2-PW	86" (218 cm)

Accessories

Accessories for the display include:

- SMART OPS PC module
- SBA-100 projection audio system
- SMART wall mount (WM-SBID-200) for SMART Board displays
- Stands
- USB extenders

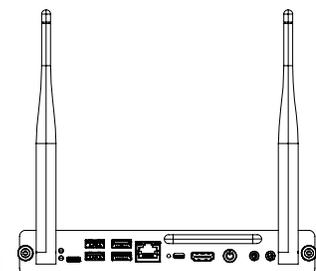
NOTE

For more information about these and other accessories, see smarttech.com/accessories.

SMART OPS PC module

SMART Open Pluggable Specification (OPS) PC modules provide a hassle-free Windows® 10 Pro installation based on eighth generation Intel® Core™ processors and are designed specifically to work with a SMART display.

Available in two standard configurations, all OPS PC modules in the PCMB series are WHQL certified and fully licensed with Windows 10 Pro. Install the OPS PC module in a display's OPS slot to provide a complete 4K UHD Windows 10 installation at your fingertips, without the need for an external PC or additional cables.

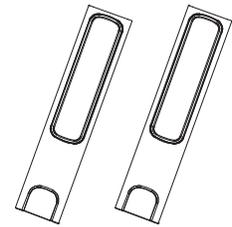


Install familiar Windows applications, such as SMART Notebook®, SMART TeamWorks™, and SMART Meeting Pro® software, and access the internet directly through your display's network connection. Upgrades and service for the OPS PC module are easy to perform without removing the display from its mounting.

SBA-100 projection audio system

For education models only

The SBA-100 projection audio system consists of two 14 W speakers designed for wall-mounted displays. You can control volume using the display's front control panel or the volume controls on a connected computer.



Stands

If you want to move the display from place to place, you can install it on a SMART mobile stand. If you are installing the display on a wall that cannot support the display's full weight, you can install the display on a SMART floor stand.

USB extenders

As noted in the display's specifications, there is a maximum length for USB cable connections between the display and computer.

When using USB 2.0, the cable should be no longer than 16' (5 m).

When using USB 3.0, the cable should be no longer than 9' (3 m).

Use one of the following USB extenders if you need a longer USB connection:

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

NOTES

- To extend touch using the SMART CAT 5 USB extender (CAT5-XT-1100) use a touch USB connector associated with an HDMI 1, HDMI 2, or VGA input. The extender will not function correctly if used to

extend touch associated with the HDMI 3 input on the front of the display.

- For more information about extending USB connections, see [USB cable extenders](#).
-

More information

In addition to this guide, SMART provides other documents for the display in the Support section of the SMART website (smarttech.com/support). Scan the QR code on the cover of this guide to view links to SMART Board MX (V2) and MX (V2) Pro series interactive display documents and other support resources.

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
 - Follow local safety regulations and standards.
 - Pack the display in its original packaging, including the pallet.
 - 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

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, 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 and repack the display with as much of it as possible if you ever need to move the display after installation. 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

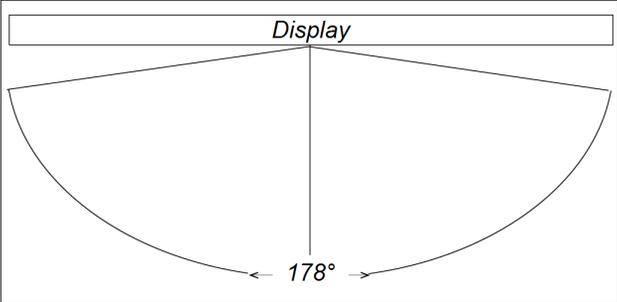
Typically, you install the display on a wall in a classroom or meeting space.

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.

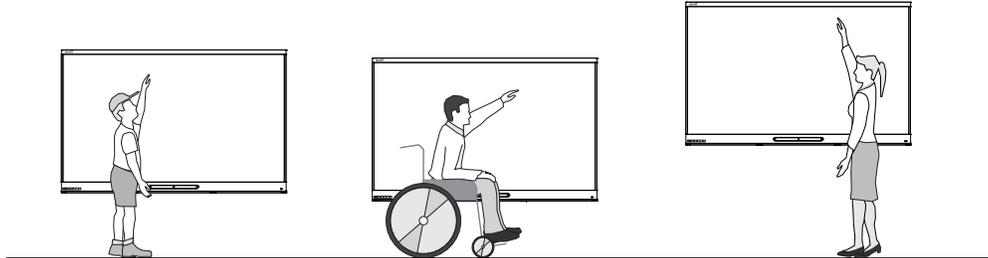
Selecting an appropriate location for the display is crucial for ensuring the best possible experience with the product. Consider the following factors as you choose a location:

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 the same 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 heat sources directed at the display such as a radiator or heat vent.• 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 and are not 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:<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)◦ External audio systems 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
Visibility	<p>The display's screen is clearly visible to all users in the room. SMART recommends users sit within a 178° viewing area:</p>  <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>
Lighting	<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> <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>
Acoustics	<p>The room has good acoustics (see Configuring your SMART Board MX (V2) or MX (V2) Pro for the best audio performance).</p>
Environment and ventilation	<ul style="list-style-type: none">• The location meets the environmental requirements in the display's specifications (see <i>More information</i> on page 16).• 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 it can't, 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 16).

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 *Installation best practices for SMART products* ([smarttech.com/kb/171035](https://www.smarttech.com/kb/171035)) 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.

The display includes a pre-attached wall bracket which can be used to mount the display to the wall. See the *SBID-MX255-V2, SBID-MX265-V2, MX275-V2 and MX286-V2 installation instructions* (smarttech.com/kb/171547).

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 accommodate the display's dimensions and support the display's weight as well as the weight of any attached accessories.

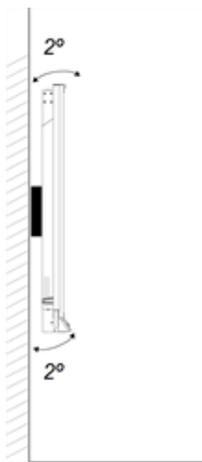
Mounting the display

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

The electrical and mechanical components of a display are designed to work properly when the display is mounted in the orientation described in its installation instructions. Mounting the display in a different orientation can cause malfunctions and will void the display's warranty.

There are a number of potential hazards of mounting a display in a non-standard orientation or angle:

- Mounting a display horizontally (like a table top) can cause the glass to sag, damaging the display or interfering with the display's touch system.
- Non-standard orientation can affect ventilation, creating hotspots in equipment, premature failures and, in displays that use projectors, exploding projector bulbs.
- 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 the included wall mount. Optionally, use a VESA-approved mounting plate that is rated for the

display's weight and size.

- If you're not using the included bolts to fasten the wall mount to the display, see the following table.

SMART Board MX255-V2	Minimum M8 length	14 mm + x mm where x is the combined thickness of the wall mount and washer	
	Maximum M8 bolt length	20 mm + x mm where x is the combined thickness of the wall mount and washer	
	Fasten force	97.36–177.01 in-lb. (11–20 N-m)	Fasten force
		<p>⚠ CAUTION</p> <p>Do not over-tighten the bolts.</p>	
SMART Board MX265-V2	Minimum M8 length	14 mm + x mm where x is the combined thickness of the wall mount and washer	
	Maximum M8 bolt length	18 mm + x mm where x is the combined thickness of the wall mount and washer	
	Fasten force	97.36–177.01 in-lb. (11–20 N-m)	
		<p>⚠ CAUTION</p> <p>Do not over-tighten the bolts.</p>	
SMART Board MX275-V2	Minimum M8 length	18 mm + x mm where x is the combined thickness of the wall mount and washer	
	Maximum M8 bolt length	30 mm + x 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)	
		<p>⚠ CAUTION</p> <p>Do not over-tighten the bolts.</p>	
SMART Board MX286-V2	Minimum M8 length	14 mm + x mm where x is the combined thickness of the wall mount and washer	

Maximum M8 bolt length	30 mm + x mm where x is the combined thickness of the wall mount and washer	
Fasten force	97.36–177.01 in-lb. (11–20 N·m)	
⚠ CAUTION Do not over-tighten the bolts.		

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.

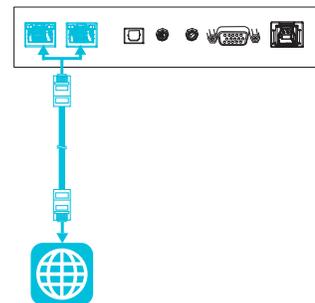
Using a third-party stand

For information on selecting and using a third-party stand, see [Installing your SMART Board MX \(V2\) or MX \(V2\) Pro on a stand](#).

Connecting to a network

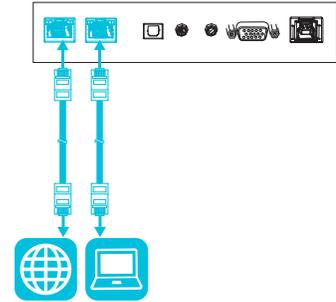
Before connecting the display, your organization's network administrators need to configure the network to allow users to update the display's firmware automatically and use all the features of the iQ experience. See [Configuring your organization's network for a SMART display with the iQ experience](#).

The display requires a network and internet connection for downloading software and firmware updates, and a number of the iQ apps require a network connection as well. You can connect to a network using Wi-Fi or one of the RJ45 jacks.



TIP

If you're using one of the display's RJ45 jacks to connect to a network, you can connect a computer to the other RJ45 jack to provide network access for the computer (pictured). This is particularly useful if there is only one wired network connection in the room. (Network access is available when the display is on or in Sleep mode but not when it's in Standby mode.)

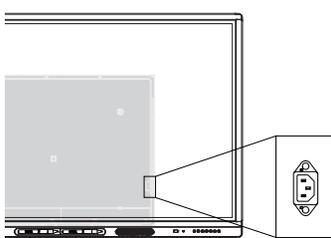


Connecting power and turning on the display for the first time

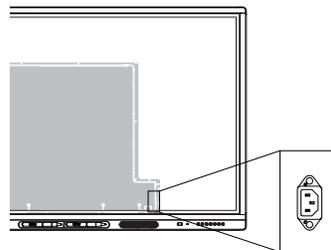
The final step in installing and configuring the display is to connect power and turn it on. When you first turn on the display, a setup wizard appears. Follow the steps in the wizard to complete the setup.

To connect the display to power

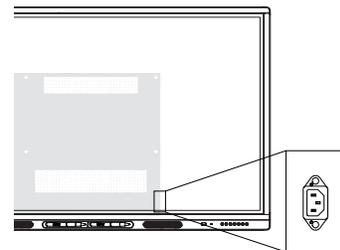
Connect the supplied **power cable** from the AC power inlet on the back of the display to a power outlet.



SBID-MX255-V2
SBID-MX265-V2



SBID-MX275-V2



SBID-MX286-V2

NOTE

Refer to the display's specifications for power requirements and power consumption information (see *More information* on page 16).

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

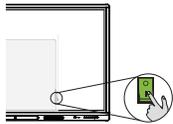
! IMPORTANT

Install the OPS PC module before you turn the display on.

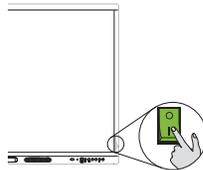
NOTES

- Touch is not available right after waking up the display or turning it on. Wait a few seconds and then the display will respond to touch.
- If a USB drive is connected to the display's service port, do not remove the USB drive. The USB drive contains an important firmware update.

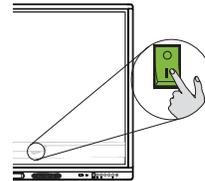
1. Flick the switch beside the AC power inlet to the ON (I) position.



SBID-MX255-V2



SBID-MX265-V2



SBID-MX275-V2

SBID-MX286-V2

2. Press the **Power** button  on the front control panel or remote control
3. Select your preferred language, and then tap **Next**.
4. Select your country, and then tap **Next**.
5. Select your time zone, and then tap **Next**.
6. Set the date, and then tap **Next**.
7. Set the time, and then tap **Next**.
8. Name the display, and then tap **Next**.
9. If the display isn't using a wired network connection, select a wireless network, and then tap **Next**.

! IMPORTANT

The display needs an internet connection for downloading and installing important updates. Ask the network administrator to confirm that the network has been correctly configured for the iQ experience. For more information about network configuration, see [Connecting a SMART display with the iQ experience to a network](#).

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

TIP

To change which apps appear in the Apps Library, see *Launcher* on page 60.

11. Tap **Finish**.

The *Welcome* screen appears.

OR

The display downloads and applies updates for the firmware and system software.

Chapter 3

Connecting computers and other devices

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WARNING

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

Installing SMART software

The display comes with the following software, which you can install on connected computers:

Software	Description	Notes
SMART Learning Suite	A suite of desktop and online software that combines lesson delivery, activities, assessments, and collaborative workspaces. Includes SMART Notebook software and SMART Learning Suite Online.	Education models only. SMART Notebook basic version also available.
SMART Meeting Pro	Software that enables you to capture ideas in a virtually unlimited interactive workspace.	Pro models only.
SMART Product Drivers	Software that enables the computer to detect input from the display.	Included with SMART Learning Suite
SMART Ink	Software that enables you to write and draw in digital ink over applications, files, folders, websites, and any other open window.	Included with SMART Learning Suite

TIP

You can purchase additional licenses or subscriptions to SMART software to install on other computers.

The following software is also available but sold separately:

Software	Description	Licensing details
SMART TeamWorks room edition	Software that simplifies meetings and facilitates deeper, more natural interaction with on-site and remote participants.	1-year subscription ¹
SMART Remote Management	Cloud-based mobile device management software for remotely maintaining, supporting, controlling, and securing the display and your other devices	3-year subscription ²

Contact your authorized SMART reseller (smarttech.com/where) for information about purchasing SMART software.

You can download SMART software from smarttech.com/downloads and install it following the instructions in [Installing and maintaining SMART Notebook](#), [Downloading and installing SMART TeamWorks](#), or [Installing and maintaining SMART Meeting Pro](#).

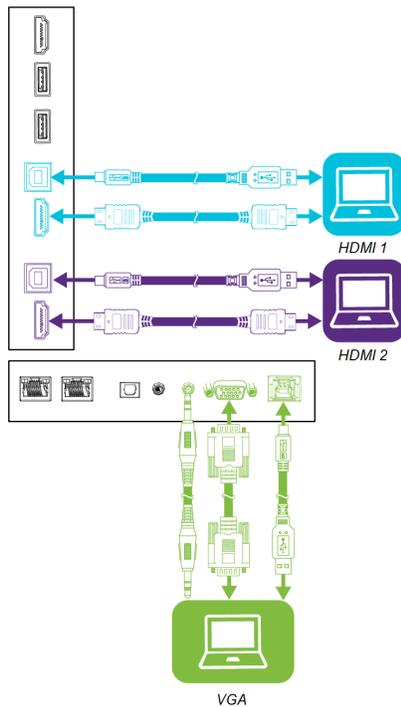
¹Pro models only.

²Subscription terms may vary in some regions.

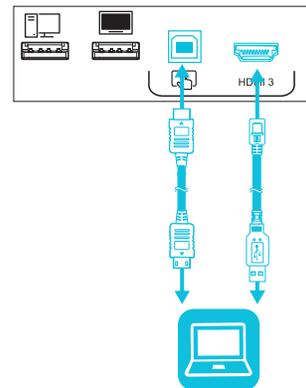
Connecting room computers and guest laptops

You can connect cables for room computers and guest laptops. 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.

Side and bottom connector panel



Front connector panel



NOTES

Install SMART software on any computers you connect to the display (see *Installing SMART software* on the previous page).

Viewing a connected computer's input

To view a connected computer's input

1. Connect the computer to the display.
2. Press the **Input**  button on the front control panel or the remote control.

The display shows thumbnails of the devices that are connected to the display's inputs:

NOTE

A thumbnail with **Touch enabled**  indicates a USB cable is connected between the display and device and touch is available.

- A gray thumbnail indicates no device is connected to an input.
 - A black thumbnail indicates a device is connected to an input but is in Standby mode.
 - A thumbnail showing a preview screen indicates an active device is connected to an input.
3. Tap the computer's thumbnail.

Setting a connected computer's resolution and refresh rate

The following table presents the recommend resolutions and refresh rates for the display's HDMI 1, HDMI 2, and HDMI 3 input sources:

Resolution	Input source aspect ratio	Mode	Refresh rate
3840 × 2160	16:9	UHD / 2160p	59.94 Hz / 60 Hz 50 Hz 29.97 Hz / 30 Hz 25 Hz 23.98 Hz / 24 Hz
1920 × 1080	16:9	FHD / 1080p	59.94 Hz / 60 Hz 50 Hz 29.97 Hz / 30 Hz 25 Hz 23.98 Hz / 24 Hz
1360 × 768	16:9	HD	60.015 Hz
1366 × 768	16:9	HD	60.015 Hz

Resolution	Input source aspect ratio	Mode	Refresh rate
1280 × 720	16:9	HD / 720p	59.94 Hz / 60 Hz 50 Hz 29.97 Hz / 30 Hz 25 Hz 23.98 Hz / 24 Hz
720 × 480	16:9	480p (DVD Player)	60 Hz

The following table presents the recommend resolutions and refresh rates for the display's VGA input source:

Resolution	Input source aspect ratio	Mode	Refresh rate
1920 × 1080	16:9	[N/A]	60.000 Hz
1600 × 1200	4:3	[N/A]	60.000 Hz
1360 × 768	16:9	[N/A]	60.015 Hz
1280 × 1024	5:4	SXGA 60	60.020 Hz
1024 × 768	4:3	XGA 60 XGA 70 XGA 75	60.004 Hz 70.069 Hz 75.029 Hz
800 × 600	4:3	SVGA 60 SVGA 72 SVGA 75	60.317 Hz 72.188 Hz 75.000 Hz
640 × 480	4:3	VGA 60	59.940 Hz

If possible, set any connected computers to these resolutions and refresh rates. See the connected computers' operating system documentation for instructions.

Connecting USB drives, peripherals, and other devices

You can use USB drives, peripherals, and other devices with a computer connected to the display using the USB receptacles on the display.

For more information, see *Connecting USB drives, peripherals, and other devices* on page 36.

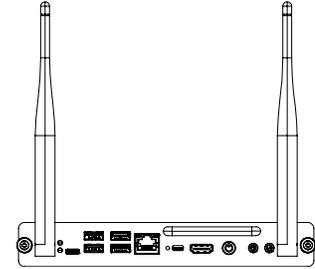
Troubleshooting connected computers

For troubleshooting information for connected computers, see *Chapter 5: Troubleshooting* on page 50.

Connecting a SMART OPS PC module

If your organization has purchased a SMART OPS PC module, you or your organization's installers can install the OPS PC module in the display's accessory slot following the OPS PC module's installation instructions (smarttech.com/kb/171544). You can then view the OPS PC module's input on the display.

For more information about the PCM8 series of SMART OPS PC modules, see *SMART OPS PC module* on page 14.



CAUTION

Do not install the OPS PC module or remove it from the accessory slot while the display is turned on. Ensure the power switch on the back of the display beside the AC power inlet is in the OFF (O) position.

TIP

You can install the SMART software that is included with the display on the OPS PC. For more information on installing software, see *Installing SMART software* on page 31.

Viewing the OPS PC module input

To view the OPS PC module input

1. Press the **Input**  button on the front control panel or the remote control.

The input selection menu appears.

2. Tap the OPS PC module input.

Connecting external displays

You can connect an external display to duplicate or extend the OPS PC module's desktop.

For more information, see *Connecting an external display* on page 37.

Connecting other devices

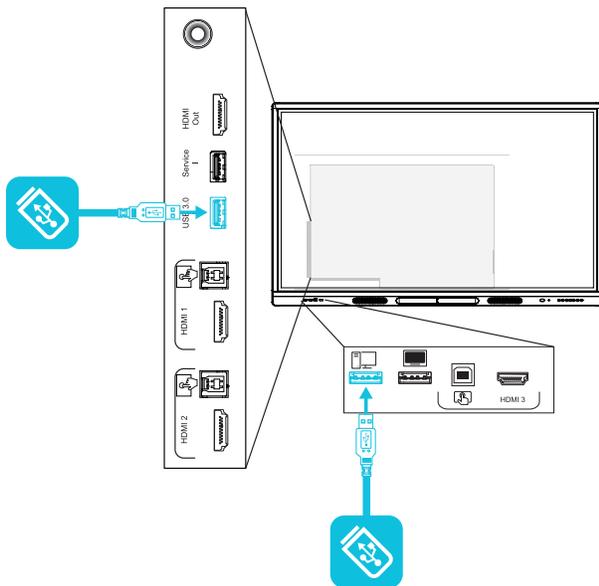
In addition to computers, you can connect the following devices to the display:

- USB drives, peripherals, and other devices
- External displays

- External audio systems
- Room control systems

Connecting USB drives, peripherals, and other devices

The display includes the following USB Type A receptacles. You can connect USB drives, peripherals (such as keyboards), and other devices to these connectors and use the devices with the iQ experience, connected computers, and devices installed in the accessory slot (such as the SMART PCM8 series OPS PC).



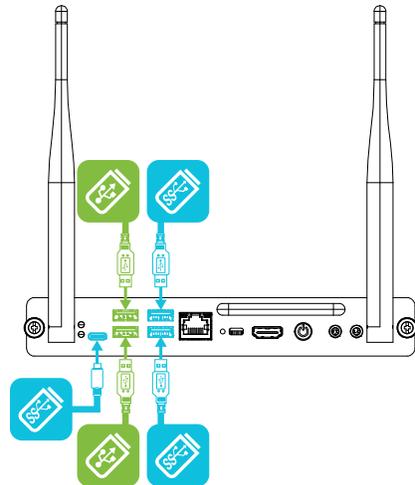
The following table shows which USB 3.0 Type-A receptacles you can use with each input source and the supported USB speed:

Input source	USB 3.0 Type-A receptacle on the side connector panel	USB 2.0 Type-A receptacle on the front connector panel
iQ	✓ (SuperSpeed)	✓ (Hi-Speed)
HDMI 1	✓ (SuperSpeed)	✓ (Hi-Speed)
HDMI 2	✓ (SuperSpeed)	✓ (Hi-Speed)
HDMI 3	✓ (SuperSpeed)	✓ (Hi-Speed)
VGA	✓ (SuperSpeed)	✓ (Hi-Speed)

Input source	USB 3.0 Type-A receptacle on the side connector panel	USB 2.0 Type-A receptacle on the front connector panel
Accessory slot	✓ (SuperSpeed)	✓ (Hi-Speed)
OPS PC	✓ (SuperSpeed)	✓ (Hi-Speed)

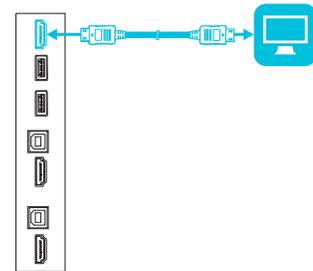
NOTE

If a SMART OPS PC module is installed in the accessory slot, you can connect USB drives, peripherals, and other devices to the USB 2.0 Type-A, USB 3.0 Type-B, and USB Type-C receptacles on the OPS PC module to access those devices from the OPS PC module input.



Connecting an external display

You can connect an external display using the HDMI 2.0 out connector on the connector panel (pictured). The external display will show the same image. This is useful when you're using the display in an auditorium or other large space where it would be beneficial to have a second display.

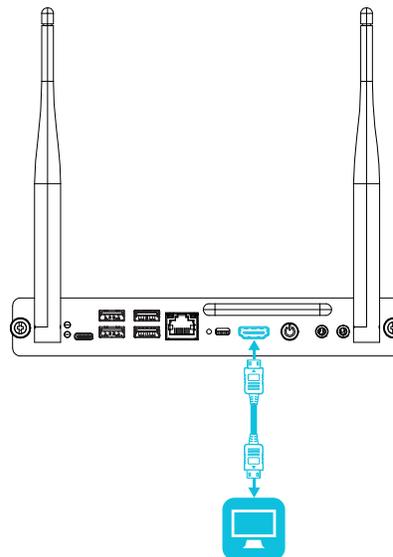


! IMPORTANT

If the connected external display doesn't support HDCP, the image on the external display is limited to 480p resolution. For full resolution output, connect a display that supports HDCP.

TIP

If a SMART OPS PC module is installed in the accessory slot, you can connect an external display to the HDMI 1.4 out connector on the OPS PC module rather than the one on the display. This allows you to duplicate or extend the OPS PC module's desktop to the external display.

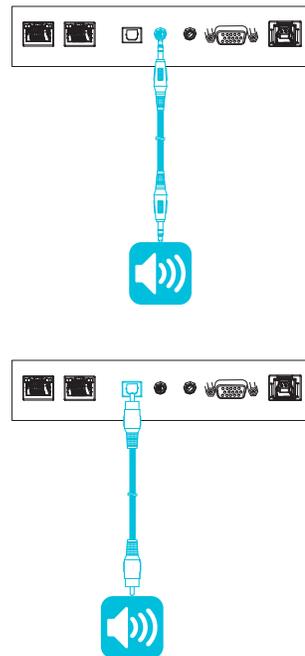


Connecting an external audio system

The display includes two 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 15) or a third-party external audio system if you're providing sound in a larger space.

You can connect an external audio system to the display using the stereo 3.5 mm out connector (pictured). This disables the display's internal speakers. Alternatively, you can connect an external audio system directly to a room computer.

In addition to the stereo 3.5 mm out connector, the display provides a Sony/Philips Digital Interface (S/PDIF) out connector (pictured). S/PDIF is a digital audio transmission medium. You need an audio system that has an S/PDIF input to decode this connection to analog. Most external sound bars include a S/PDIF connector.



NOTE

The S/PDIF audio is a fixed-volume output. Adjusting the display’s volume for its internal speakers does not affect the volume output of the S/PDIF port.

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.

You can use the display’s RS-232 connector to connect a third-party external control system to the display (see *Appendix B: Managing the display using RS-232* on page 70).

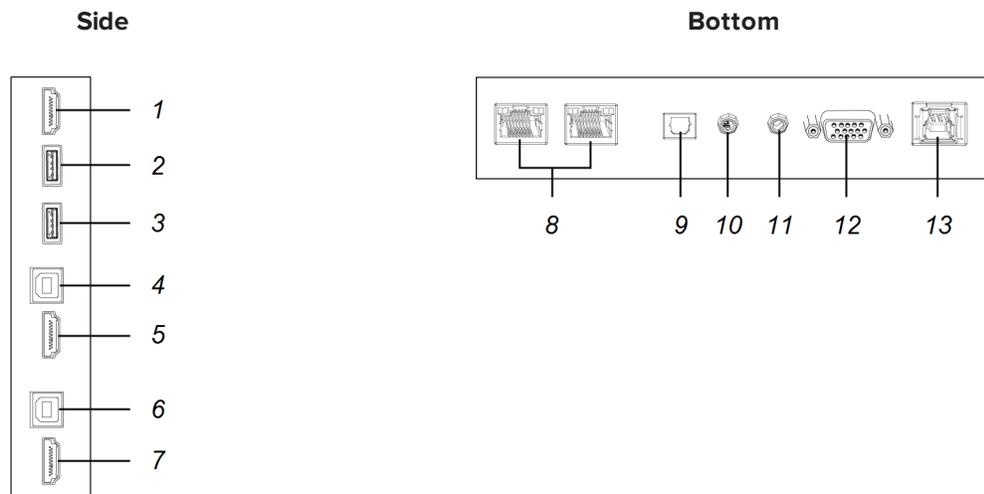
NOTE

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

Connector diagrams

Connector panel

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

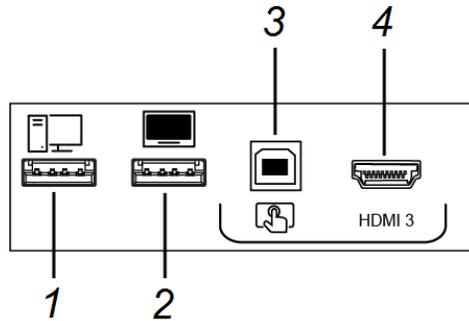


No.	Connector	Connects to	Notes
1	HDMI 2.0 out	External display	See <i>Connecting an external display</i> on page 37 and HDMI cables and connectors .

No.	Connector	Connects to	Notes
2	USB 2.0 Type-A	[N/A]	This connector is a service port.
3	USB 3.0 Type-A	Supported USB drives, peripherals, and other devices	See <i>Connecting USB drives, peripherals, and other devices</i> on page 36 and USB cables and connectors .
4	USB 3.0 Type-B	HDMI 1 input (touch)	See page 32 and USB cables and connectors .
5	HDMI 2.0 in	HDMI 1 input (video and audio)	See page 32 and HDMI cables and connectors .
6	USB 3.0 Type-B	HDMI 2 input (touch)	See page 32 and USB cables and connectors .
7	HDMI 2.0 in	HDMI 2 input (video and audio)	See page 32 and HDMI cables and connectors .
8	RJ45 (×2)	Network	See page 26 and Ethernet (network) cables and connectors .
9	S/PDIF out	Digital audio output	See page 38 and Digital audio cables and connectors .
10	Stereo 3.5 mm out	External audio system	See page 38 and Analog audio cables and connectors .
11	Stereo 3.5 mm in	VGA input (audio)	See page 32 and Analog audio cables and connectors .
12	VGA in	VGA input (video)	See page 32 and VGA cables and connectors .
13	USB 3.0 Type-B	VGA input (touch)	See page 32 and USB cables and connectors .

Front connector panel

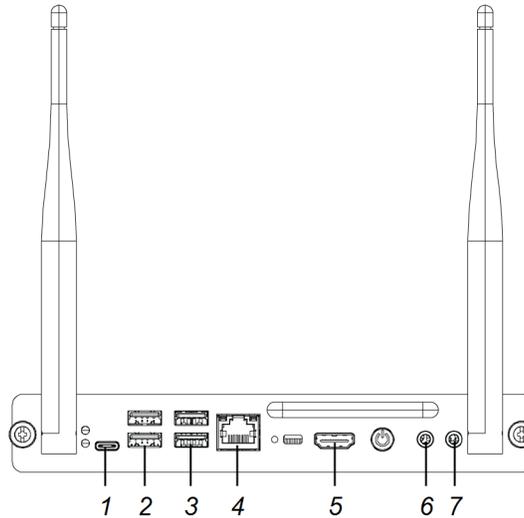
The following diagram and table present the connectors on the display's front connector panel:



No.	Name	Procedure
1	USB 2.0 Type-A connector	Connect USB drives and other devices that you want to use with the currently selected input source.
2	USB 2.0 Type-A connector	Connect a USB drive to update the display's firmware.
3	USB 2.0 Type-B connector	Connect a USB cable to the display and computer to provide touch control of the computer connected to HDMI 3.
4	HDMI 3 input connector	Connect a computer or other input source to the display (see page 32).

SMART PCM8 series OPS PC (optional)

The following diagram and table present the connectors on the optional SMART OPS PC module:



No.	Connector	Connects to	Notes
1	USB Type-C	Supported USB drives, peripherals, and other devices	See <i>Connecting USB drives, peripherals, and other devices</i> on page 36 and USB cables and connectors .
2	USB 2.0 Type-A (×2)	Supported USB drives, peripherals, and other devices	See <i>Connecting USB drives, peripherals, and other devices</i> on page 36 and USB cables and connectors .
3	USB 3.0 Type-A (×2)	Supported USB drives, peripherals, and other devices	See <i>Connecting USB drives, peripherals, and other devices</i> on page 36 and USB cables and connectors .
4	RJ45	[N/A]	The OPS PC module uses the display's network connection (if available), so you typically don't need to connect the OPS PC module directly to a network.
5	HDMI out	External display	See <i>Connecting an external display</i> on page 37 and HDMI cables and connectors .

No.	Connector	Connects to	Notes
6	Stereo 3.5 mm out	External speakers or headphones	[N/A]
7	Stereo 3.5 mm in	Microphone	[N/A]

Chapter 4

Maintaining the display

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

Turning off, turning on, and resetting the display

In most situations, you can put the display into Sleep or Standby when not using it following the instructions in the *SMART Board MX (V2) and MX (V2) Pro series interactive displays user guide* (smarttech.com/kb/171554).

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

You can also reset the display.

To turn the display off

1. Press the **Power** button  on the front control panel or the remote control for five seconds.

A slider appears on the screen.

2. Move the slider to the right.
3. Flick the switch beside the AC power inlet to the OFF (O) position.

NOTE

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

To turn the display back on

NOTE

Touch is not available right after waking up the display or turning it on. Wait a few seconds and then the display will respond to touch.

1. Flick the switch beside the AC power inlet to the ON (I) position.
2. Press the **Power** button  on the front control panel or the remote control.

To reset the display

Press and hold the **Power** button  on the front control panel or the remote control for 10 seconds.

The display resets.

Cleaning and maintaining hardware

Checking the display installation

Inspect the display installation frequently to ensure that the display 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 any connected computers.
2. Turn off the display (see *Turning off, turning on, and resetting the display* on page 44).
3. Wipe the screen with a lint-free, non-abrasive cloth.

NOTE

You can also use a damp cloth with a drop of dish soap.

Cleaning the touch sensors

The display uses infrared (IR) transmitters and sensors around the display's perimeter between the screen and the frame. Dust buildup on the protective plastic can impair touch performance. Inspect these areas for dust and clean them every week.

CAUTION

- Do not use compressed air to clean the sensors or borders.
- Do not use water or cleaning agents to clean the touch sensors.
- Do not apply too much pressure when cleaning the display because you can damage the plastic.

To clean the IR transmitters and sensors

1. With a clean lint-free, non-abrasive cloth, gently wipe the plastic between the screen and the frame around the perimeter of the display's screen.

2. If dirt still remains, use 50% isopropyl alcohol (IPS) to clean the protective plastic between the screen and the frame.

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* below.

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 cold environment to a warmer one (for example, from storage to the installation site), let the display sit for a few hours to allow it to 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

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

NOTE

For pen part numbers, refer to the service parts diagrams.

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 connected computers.
2. Turn off the display by pressing and holding the **Power** button  on the front control panel for four seconds.
3. Flick the switch on the back of the display to the OFF (O) position.
4. Remove all accessible cables, connectors and antennae.
5. Remove any modules from the accessory slot.
6. Lift the display from its mounting location and insert it into its original shipping box.

 **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 17.

Updating system software

When the display is connected to the Internet, it updates its system software automatically.

When a system software update 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 Home screen.

When the update is installing, touch, the front control panel and remote control will not respond.

NOTE

You can configure your organization's network to allow or prevent automatic system software 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 iQ system software update manually

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

Updating system software manually

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

Chapter 5

Troubleshooting

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This section explains how to resolve a variety of common issues with the display and SMART PCM8 OPS PC (if installed). If your specific symptoms aren't covered below or the solutions to the symptoms don't work, refer to the SMART knowledge base for additional troubleshooting information

community.smarttech.com/s/topic/0TO0P000000Xt5yWAC/mx-series

The display isn't turning on

Symptom	Troubleshooting steps
The 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> <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 power light is lit, but the screen is blank.	<ul style="list-style-type: none">Press the Power button on the front of the display or on the remote control.If the power status light is green, press Home button  on the front control panel or remote control, or switch to a different input source.Restart the display. See <i>Turning off, turning on, and resetting the display</i> on page 44.Determine if the problem is with the video.

The screen is blank or there's a problem with the image on the screen

NOTE

If the issue occurs on the Home screen, the issue may be with the display. See *Contacting your reseller for additional support* on page 57.

If the issue doesn't occur on the Home screen, examine the connected computers or devices.

Symptom	Troubleshooting steps
The screen is blank.	<ul style="list-style-type: none">• Make sure the screen is working by pressing the Home button  on the front control panel or the remote control to open the Home screen.• Make sure any connected computers are on and not in Sleep mode.• Restart the display and any connected computers. <i>See Turning off, turning on, and resetting the display on page 44.</i>• Replace the video cables connecting any computers to the display to determine if the issue is with the cables.
A computer is connected to the display, but only a connection message appears on the screen.	<ul style="list-style-type: none">• Make sure the computer is connected to the currently selected input.• If the currently selected input is a computer, make sure the computer is not in Sleep mode.
The image on the screen is distorted. OR There are lines, snow or, other visual noise on the screen. OR The image is flickering or flashing. OR The image is dim.	<ul style="list-style-type: none">• Press the Home button  on the front control panel or the remote control to open the Home screen. If it appears correctly, the issue is with the video input.• Switch to a different input and then back to the first input.• Make sure any connected computers are on and not in Sleep mode.• Restart the display and any connected computers. <i>See Turning off, turning on, and resetting the display on page 44.</i>• Set any connected computers' resolution and refresh rate to values that the display supports. <i>See Setting a connected computer's resolution and refresh rate on page 33.</i>• Replace the video cables that connect any computers to the display to determine if the issue is with the cables.
There are bright spots on the screen.	<ul style="list-style-type: none">• Press the Home button  on the front control panel or the remote control to open the Home screen. 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.

Symptom	Troubleshooting steps
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 the screen is completely lacking one color on the screen or the color problems occur on the Home screen, see <i>Contacting your reseller for additional support</i> on page 57.• 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 any connected computers' desktops are entirely black, change them to dark gray or a different color.• If any connected computers' desktops are extended across multiple screens, duplicate the desktops across the screens or set the display as the only screen.
The image doesn't fill the entire screen.	<ul style="list-style-type: none">• Adjust any connected computers' video settings, particularly overscan. See the computer's operating system documentation.• Make sure the connected computer's video connector is configured to output a supported video signal. See No video display output from a laptop.
A persistent image appears on the display.	See Image persistence or burn in on LCD displays .

There's no sound or there's a problem with the sound

Symptom	Troubleshooting steps
There's no sound. OR There is sound, but the volume is low. OR The sound is distorted or muffled.	<ul style="list-style-type: none">• If you're using an external audio system, make sure it is 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 only.◦ 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 an external audio system</i> on page 38. <hr/> <ul style="list-style-type: none">• If you're using the display's stereo 3.5 mm out connector, adjust the volume on the display and the connected computer and make sure neither are muted.• If you're using the display's S/PDIF out connector, adjust the volume on the external audio system and make sure the audio system isn't muted.• Adjust the display's audio settings. See <i>Audio</i> on page 64.• 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. <p>OR</p> <p>If you're using an external audio system, set the volume for the computer, any running applications and the display to 80%, and then adjust the external audio system's volume.</p>
There is a whine or buzzing sound coming from the back of the display.	<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.

Touch isn't working as expected

Symptom	Troubleshooting steps
The display doesn't respond to touch.	<ul style="list-style-type: none">• Touch is not available right after waking up the display or turning it on. Wait a few seconds and then the display will respond to touch.• Make sure SMART Product Drivers 12.14 or later are installed and running on any connected computers.• Make sure the USB cable between the display and the computer doesn't exceed the supported maximum cable length. See <i>Connecting room computers and guest laptops</i> on page 32.• Make sure any connected computers have detected the display's USB connection and SMART Product Drivers 12.14 or later is installed.• 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 make sure there are no error messages in the display's row.• For Mac computers with macOS Mojave, see How to resolve issues with installing and using SMART Learning Suite software on macOS Mojave.
The display responds to touch intermittently. OR When you touch the screen, the pointer doesn't appear in the correct place.	<ul style="list-style-type: none">• Make sure jewelry or clothing doesn't touch the board when erasing the ink.• When erasing, make sure the palm or fist is flat on the screen.• Touch is not available right after waking up the display or turning it on. Wait a few seconds and then the display will respond to touch.• Restart the display. <i>See Turning off, turning on, and resetting the display on page 44.</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. Orient the display. See Orienting your SMART interactive product using SMART Product Drivers 12.• 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.• Remove any USB extenders to help isolate the USB cable.• Update the firmware.

The pens and erasers aren't working as expected

Symptom	Troubleshooting steps
The display doesn't respond to touch or writing with a pen.	<ul style="list-style-type: none"> • Touch is not available right after waking up the display or turning it on. Wait a few seconds and then the display will respond to touch. • Make sure any connected computers have detected the display's USB connection and SMART Product Drivers 12.14 or later is installed. • 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 make sure there are no error messages in the display's row. • Reinstall or update SMART Product Drivers and SMART Ink on any connected computers. • Make sure SMART Product Drivers is version 12.14 or later.
The display responds to touch but not to writing with a pen.	<ul style="list-style-type: none"> • Reinstall or update SMART Product Drivers and SMART Ink on any connected computers.
When you write on the screen, the ink appears in the wrong place. OR Writing is intermittent. OR Ink disappears as you write.	<ul style="list-style-type: none"> • Make sure you are using a SMART Board MX (V2) interactive display pen. • Restart the display. <i>See Turning off, turning on, and resetting the display on page 44.</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. • Make sure the pen nib is not worn. Replacement pens are available from the Store for SMART Parts (see smarttech.com/Support/PartsStore). • Make sure SMART Product Drivers and SMART Ink are installed and running on any connected computers. Orient the display. See Orienting your SMART interactive product using SMART Product Drivers 12. • 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.
You can't write or draw in Microsoft Office.	<ul style="list-style-type: none"> • Make sure Microsoft Office 2013 or later is installed. • Reinstall or update SMART Product Drivers and SMART Ink.

iQ apps aren't working as expected

Symptom	Troubleshooting steps
iQ apps aren't working as expected.	See Troubleshooting the iQ experience .

SMART software on connected computers isn't working as expected

Symptom	Troubleshooting steps
SMART Notebook software isn't working as expected.	See Troubleshooting SMART Notebook .
SMART Learning Suite Online isn't working as expected.	See Troubleshooting common issues in SMART Learning Suite Online .
SMART TeamWorks software isn't working as expected.	See Troubleshooting SMART TeamWorks .
SMART Meeting Pro software isn't working as expected.	See Basic troubleshooting for SMART Meeting Pro .
SMART Ink isn't working as expected.	See Troubleshooting SMART Ink .
SMART Product Drivers isn't working as expected.	See Troubleshooting SMART Product Drivers .

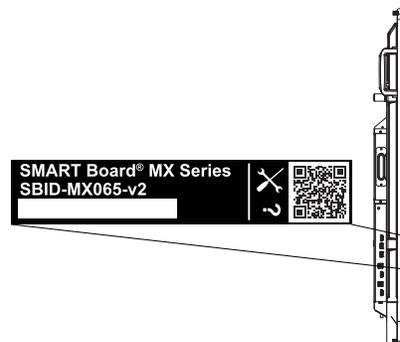
The SMART PCM8 OPS PC isn't working as expected

Symptom	Troubleshooting steps
The on-screen keyboard isn't visible.	<ul style="list-style-type: none">• Enable the on-screen keyboard:<ol style="list-style-type: none">a. Select Start > Settings. The <i>Settings</i> window appears.b. Tap Ease of Access, and then tap Keyboard.c. Enable Use the On-Screen Keyboard.For more information, see Use the On-Screen Keyboard (OSK) to type.• Enable tablet mode:<p>Tap the notification icon  in the bottom-right corner of the screen and then select Tablet mode.</p>For more information, see Turn tablet mode on or off.
Windows 10 or the OPS PC module is unresponsive.	<ul style="list-style-type: none">• Restart the OPS PC module:<ol style="list-style-type: none">a. Press and hold the power button on the OPS PC module.b. Wait two minutes.c. Press the power button to turn on the OPS PC module.• If restarting the OPS PC module doesn't resolve the issue, contact SMART support.
There is an issue with Bluetooth.	See Fix Bluetooth problems in Windows 10: FAQ .
There is an issue with the network connection.	See Fix network connection issues in Windows .

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 display's serial number. The serial number is on a label located on the left side of the display (pictured).



TIPS

- Scan the QR code on the label to view the SMART Board MX (V2) or MX (V2) Pro series interactive display support pages on the SMART website.
 - You can also find the serial number in the iQ settings (see *Appendix A: Adjusting iQ settings* on page 58).
-

Appendix A

Adjusting iQ settings

Network settings	58
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You can access settings using the  icon on the Home screen.

NOTES

- Settings can apply to a user or to the entire system. User-level settings change depending on the user who is signed in. System-level settings apply to all users. See the settings for more information.
- Some settings aren't available while you're signed in to your SMART Account. Sign out of your SMART Account on the display to see all settings.

Network settings

Option	Values	Function	Notes	User or system setting
▶ Wi-Fi				
• Wi-Fi	On Off	Enables or disables Wi-Fi on the display.	Turn on Wi-Fi to discover networks.	System
• [Wi-Fi network name]	[N/A]	Shows information about the connected wireless network.	[N/A]	System
• Wi-Fi MAC address	[N/A]	Shows MAC address for the network the display is connected to.	[N/A]	System
• Wi-Fi IP address	[N/A]	Shows IP address for the network the display is connected to.	[N/A]	System

Option	Values	Function	Notes	User or system setting
▶ SMART iQ Ethernet				
• Advanced options	[N/A]	Options available when an Ethernet cable is connected	[N/A]	System
• Static IP (Use DHCP)	On Off	Enables or disables DHCP to assign the display an IP address.	[N/A]	User
• Proxy (Use proxy)	On Off	Enables or disables a proxy server for connecting to the network.	[N/A]	User
• Proxy (Auto-configure)	On Off	Enables or disables automatic configuration of the proxy server for connecting to the network.	[N/A]	User
• MAC Address	[N/A]	Shows information about the network the display is connected to.	[N/A]	System
• IP Address	[N/A]	Shows information about the network the display is connected to.	[N/A]	System
• Bluetooth Address	On Off	Shows information about the display's Bluetooth.	Turn on Bluetooth to view available Bluetooth devices.	System
▶ SMART Cloud				
• SMART Cloud Status	[Status]	Shows the status of SMART Cloud.	[N/A]	System
• Service Region	[N/A]	Shows the service region.	[N/A]	System

Personalization

NOTE

If iQ is disabled, Personalization settings are not available.

Option	Values	Function	Notes	User or system setting
• 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. 	User

Application settings

NOTE

If iQ is disabled, Application settings are not available.

Option	Values	Function	Notes	User or system setting
▶ Launcher				
• SMART Notebook Player	On Off	Enables or disables SMART Notebook Player in the Apps Library.	[N/A]	User
• Browser	On Off	Enables or disables Browser in the Apps Library.	[N/A]	User
• Input	On Off	Enables or disables Input in the Apps Library.	[N/A]	[N/A]
• Screen Share	On Off	Enables or disables Screen Share in the Apps Library.	[N/A]	User
▶ Files Library				
• Whiteboard Storage	[N/A]	[N/A]	[N/A]	User
• Default Whiteboard Location	My Files > SLS Files My Files > Board Files	Sets where new whiteboard files are saved.	See Syncing SMART Notebook and SMART Learning Suite Online files to the iQ experience.	User
• Files Storage	[N/A]	[N/A]	[N/A]	User
• Allow Google Drive integration in Files Library	On Off	Enables or disables access to Google Drive when you're signed in to your SMART Account.	See Opening your Google Drive or OneDrive on the display.	User
• Allow OneDrive integration in Files Library	On Off	Enables or disables access to OneDrive when you're signed in to your SMART Account.	See Opening your Google Drive or OneDrive on the display.	User
▶ SMART Whiteboard				
• Whiteboard Storage	[N/A]	[N/A]	[N/A]	User
• Library	On Off	Enables or disables saving kapp Whiteboard sessions.	[N/A]	User

Appendix A
Adjusting iQ settings

Option	Values	Function	Notes	User or system setting
<ul style="list-style-type: none"> Save Whiteboards in Library 	For 1 week For 1 Month Indefinitely	Sets how long kapp Whiteboard sessions are saved.	[N/A]	User
• Mobile App				
<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 cannot connect to the display and your mobile device cannot save snapshots of the display in the app.	User
<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 cannot invite people to your session.	User
• Annotation				
<ul style="list-style-type: none"> Enable annotation layers 	On Off	Enables or disables annotations on the Home screen, video input, and most apps.	[N/A]	User
▶ Screen Share				
<ul style="list-style-type: none"> Require Permission 	On Off	Enables or disables automatic connection from a device sharing its screen.	[N/A]	System
<ul style="list-style-type: none"> AirPlay 	On Off	Enables or disables the AirPlay protocol.	AirPlay is enabled by default.	System
<ul style="list-style-type: none"> Google Cast 	On Off	Enables or disables the Google Cast protocol.	Google Cast is enabled by default.	System
<ul style="list-style-type: none"> Miracast 	On Off	Enables or disables the Miracast protocol.	Miracast is enabled by default. <div style="border: 1px solid #00a0e3; padding: 5px;"> <p>IMPORTANT</p> <p>Devices that use AirPlay and Google Cast can't connect to the display while a Miracast device is connected.</p> </div>	System
<ul style="list-style-type: none"> Performance Logging 	On Off	SMART Support may ask users to enable Performance Logging to help diagnose issues.	Performance Logging is disabled by default.	System

Option	Values	Function	Notes	User or system setting
<ul style="list-style-type: none"> Auto-disconnect from Wifi for Miracast 	On Off	When enabled, the display disconnects from the network when a device shares its screen using Miracast.	<p>SMART recommends enabling this setting for areas with high network saturation or busy networks.</p> <hr/> <p>! IMPORTANT</p> <p>Only one device can connect to the display when Miracast is enabled.</p> <p>This setting used to be named "Miracast Connection Handling"</p>	System
<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
<ul style="list-style-type: none"> Use Web Player 	On Off	When enabled, the display uses a different method to stream videos.	If this method doesn't work, disable it to return to the original method.	System

System settings

Option	Values	Function	Notes	User or system setting
▶ System				
<ul style="list-style-type: none"> Access to USB mass storage devices 	On Off	Enables or disables access to a USB drive.	[N/A]	System
<ul style="list-style-type: none"> SMART Board with iQ 	On Off	Enables or disables the iQ experience.	[N/A]	System
<ul style="list-style-type: none"> Default input 	Inputs available on the display.	Select the default input the display will use when starting.	The iQ embedded experience is the default input.	System

Appendix A
Adjusting iQ settings

Option	Values	Function	Notes	User or system setting
▶ Power				
<ul style="list-style-type: none"> Turn screen off after 	Disabled 1 min 5 mins 30 mins 1 hour 1.5 hours 2 hours 5 hours 10 hours	Sets the number of minutes of inactivity before the display goes to sleep.	The default is 60 minutes.	System
<ul style="list-style-type: none"> Go to energy saving mode after 	Disabled 1 min 5 mins 30 mins 1 hour 1.5 hours 2 hours 5 hours 10 hours	Sets the number of minutes of inactivity before the display enters energy saving mode .	The default is 60 minutes.	System
<ul style="list-style-type: none"> Standby (Shutdown) 	[N/A]	If selected, the display wakes up slowly .	This option is more energy efficient.	System
<ul style="list-style-type: none"> Networked Standby (Sleep) 	[N/A]	If selected, the display wakes up faster	This option is less energy efficient.	System
▶ Display				
<ul style="list-style-type: none"> Screen Adjustment 				
<ul style="list-style-type: none"> Brightness 	0–100	Sets the overall brightness of the image.	NOTE If Auto Brightness is enabled and the brightness slider is moved quickly left or right, the image on the screen flickers. This will be fixed in a future system software release.	System

Appendix A
Adjusting iQ settings

Option	Values	Function	Notes	User or system setting
<ul style="list-style-type: none"> Auto Brightness 	On Off	Enables or disables the automatic brightness adjustment depending on the ambient light level.	[N/A]	System
<ul style="list-style-type: none"> Advanced Display Options 				
<ul style="list-style-type: none"> Color Temperature 	Very Cool Cool Neutral Warm Very Warm	Sets how colors appear on the display.	[N/A]	System
<ul style="list-style-type: none"> Lightness 	0–488	Sets the overall lightness of the image.	[N/A]	System
<ul style="list-style-type: none"> Contrast 	0–488	Sets the overall contrast of the image.	[N/A]	System
<ul style="list-style-type: none"> Saturation 	0–511	Sets the overall saturation of the image.	[N/A]	System
<ul style="list-style-type: none"> Red 	0–448	Sets the overall red of the image..	[N/A]	System
<ul style="list-style-type: none"> Green 	0–448	Sets the overall green of the image.	[N/A]	System
<ul style="list-style-type: none"> Blue 	0–448	Sets the overall blue of the image.	[N/A]	System
<ul style="list-style-type: none"> HDMI Output 				
<ul style="list-style-type: none"> Default resolution 	Auto 4K60 1080p60 720p60 640x480p60	Sets the HDMI out resolution.	[N/A]	System
<ul style="list-style-type: none"> HDMI Input 				
<ul style="list-style-type: none"> Advanced HDMI Settings 	HDMI 2.0 HDMI 1.4b Auto-detect	Sets .the HDMI version for each HDMI input.	You can also enable or disable strictly conformant HDMI Input DDC SDA timing and forbid or allow HDCP 2.2 with older receivers.	System
<ul style="list-style-type: none"> ▶ Audio 				
<ul style="list-style-type: none"> Speakers 				

Appendix A
Adjusting iQ settings

Option	Values	Function	Notes	User or system setting
<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.	System
<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.	System
<ul style="list-style-type: none"> Bass 	0–100	Sets the bass level.	[N/A]	System
<ul style="list-style-type: none"> Treble 	0–100	Sets the treble level.	[N/A]	System
<ul style="list-style-type: none"> ▶ Date & Time 				
<ul style="list-style-type: none"> 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 .	System
<ul style="list-style-type: none"> Date 	[N/A]	Sets the display's date.	Disable Automatic date & time to set the date manually.	System
<ul style="list-style-type: none"> Time 	[N/A]	Sets the display's time.	Disable Automatic date & time to set the time manually.	System
<ul style="list-style-type: none"> 24 Hour Time 	On Off	Shows the display's time using the 24-hour clock.	[N/A]	User
<ul style="list-style-type: none"> Time Zone 	[N/A]	Sets the display's time zone.	[N/A]	System
<ul style="list-style-type: none"> Language 	[Languages]	Sets the language for the settings menu.	[N/A]	User

Appendix A
Adjusting iQ settings

Option	Values	Function	Notes	User or system setting
• Country	[Countries]	Sets the display's country.	[N/A]	System
▶ Diagnostics				
• Factory Reset	[N/A]	Resets all options to their default values.	Only administrators should reset the display.	[N/A]
• Save Log File to a USB key	[N/A]	Copy diagnostic logs to a USB drive.	[N/A]	[N/A]
• Submit Log file to SMART	[N/A]	Send diagnostic logs to SMART.	[N/A]	[N/A]
• Improve the Experience	On Off	Sends usage statistics and error reports to SMART.	[N/A]	User
• Support ID	[Support ID]	Shows the support ID associated with the display.	[N/A]	[N/A]
• Logging Service	[Languages]	Sets the language for the settings menu.	[N/A]	User
• Enable Logging Service	On Off	Enables or disables saving logs to a USB drive	[N/A]	System
• Log Levels	[N/A]	[N/A]	[N/A]	[N/A]
• Log Level RAW	On Off	Advanced logging options to be set under the direction of SMART Support	[N/A]	System
• Log Level SPM	On Off	Advanced logging options to be set under the direction of SMART Support	[N/A]	System
• Log Level RATP	On Off	Advanced logging options to be set under the direction of SMART Support	[N/A]	System
• Log Level SEP	On Off	Advanced logging options to be set under the direction of SMART Support	[N/A]	System
• Log Level EXT	On Off	Advanced logging options to be set under the direction of SMART Support	[N/A]	System
▶ 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.	System

Appendix A
Adjusting iQ settings

Option	Values	Function	Notes	User or system setting
<ul style="list-style-type: none"> Make passwords visible 	On Off	Reveals characters when typing a password in an app or website	[N/A]	System
<ul style="list-style-type: none"> Install certificates 	[N/A]	Install certificates to connect to a network.	[N/A]	System
<ul style="list-style-type: none"> View certificates 	[N/A]	View installed certificates.	[N/A]	System
<ul style="list-style-type: none"> Automatic inactivity log out 	Enabled Disabled	Automatically logs a user off after a time of inactivity.	[N/A]	System
<ul style="list-style-type: none"> Clean up 				
<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]	User
<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]	User
<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]	User
<ul style="list-style-type: none"> Clean Up other applications 	[N/A]	Closes open applications.	[N/A]	User
<ul style="list-style-type: none"> <ul style="list-style-type: none"> Software Update 				
<ul style="list-style-type: none"> <ul style="list-style-type: none"> Updates Channel 	Stable Channel Beta Channel	Sets which iQ system software updates the display receives.	When switching from the Beta channel to the Stable channel, a factory reset occurs. See page 66 for more information about factory reset. For more information about the Beta Channel, see Switching to the Beta channel .	System

Appendix A
Adjusting iQ settings

Option	Values	Function	Notes	User or system setting
<ul style="list-style-type: none"> Check for Updates Now 	[N/A]	Checks for updates to the system software. NOTE The display must be connected to the internet to check for system software updates or a USB drive with the system software update file is connected to the display.	If an update is available, the text changes to Apply update now.	[N/A]
▶ Remote Management				
<ul style="list-style-type: none"> Launch Remote Management Settings 	[N/A]	Configure the display's connection settings with the Radix Viso server.	This option is only enabled when Remote Management is enabled.	System
<ul style="list-style-type: none"> Remote Management Enabled 	On Off	Enables or disables Remote Management on the display.	[N/A]	User
<ul style="list-style-type: none"> Radix Viso version 	[N/A]	Shows the Radix Viso version.	[N/A]	System
▶ About				
<ul style="list-style-type: none"> Help 	[N/A]	Shows the SMART support site.	[N/A]	[N/A]
<ul style="list-style-type: none"> Board Name 	[N/A]	Select a name for your display.	[N/A]	System
<ul style="list-style-type: none"> Send Feedback 	[N/A]	Send feature request to SMART.	[N/A]	[N/A]
<ul style="list-style-type: none"> Board Details 	[N/A]	[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]	[N/A]
<ul style="list-style-type: none"> Serial Number 	[N/A]	Shows the display's serial number.	[N/A]	[N/A]
<ul style="list-style-type: none"> Part Number 	[N/A]	Shows the display's part number.	[N/A]	[N/A]
<ul style="list-style-type: none"> Model Number 	[N/A]	Shows the display's model number.	[N/A]	[N/A]
<ul style="list-style-type: none"> Configuration 	[N/A]	Shows the display's iQ system configuration.	[N/A]	[N/A]
<ul style="list-style-type: none"> Firmware Details 	[N/A]	[N/A]	[N/A]	[N/A]
<ul style="list-style-type: none"> Touch controller version 	[N/A]	Shows the display's touch controller version.	[N/A]	[N/A]

Appendix A
Adjusting iQ settings

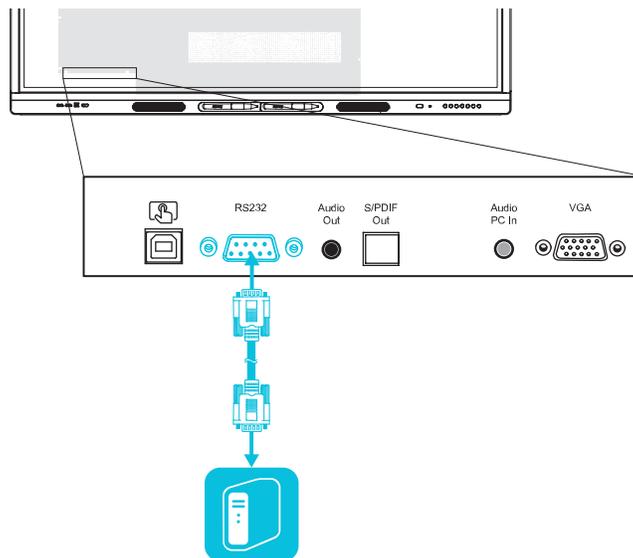
Option	Values	Function	Notes	User or system setting
<ul style="list-style-type: none">Scaler version	[N/A]	Shows the display's scaler version.	[N/A]	[N/A]
<ul style="list-style-type: none">Legal Information	[N/A]	[N/A]	[N/A]	[N/A]
<ul style="list-style-type: none">End User License Agreement	[N/A]	Shows the SMART end user license agreement.	[N/A]	[N/A]
<ul style="list-style-type: none">Open Source Licenses	[N/A]	Shows the open source licenses.	[N/A]	[N/A]
<ul style="list-style-type: none">SMART Intellectual Property	[N/A]	Shows the SMART intellectual property information.	[N/A]	[N/A]

Appendix B

Managing the display using RS-232

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You can connect an RS-232 cable from a computer or a control system's serial output to the display's RS-232 in connector to remotely select video inputs, turn the display on or off, and get information about the display's current settings, such as volume 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.

TIP

SMART also offers SMART Remote Management cloud-based device-management software, which you can use to manage SMART Board interactive displays with iQ and devices running Windows, Chrome™ OS, Android™, and iOS operating systems. For more information, see [SMART Remote Management](#).

Configuring the serial interface settings

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

1. Turn on the display.
2. If you're using a terminal application on a computer, activate local echo to see what you're typing and sending to the display.
3. Configure the serial interface settings with the following values:

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

4. Send a carriage return character (<CR>) to the display. The display will show a command prompt (>) to indicate that the display can now accept commands.

NOTE

- If you're using a terminal application on a computer, pressing ENTER should send a carriage return character (<CR>) but may also send a line feed character (<LF>), depending on your terminal application configuration.
 - If no message appears or an error message appears, the serial interface isn't configured correctly. Repeat steps 3 and 4.
-

When using a control system program instead of terminal program, all lines output from the display are preceded by a carriage return character (<CR>) and line feed character (<LF>) and then followed by a carriage return character (<CR>) and line feed character (<LF>), as shown in the example below. Refer to an [ASCII table](#) for more information about character codes if needed.

```
>set volume=0<CR>
<CR><LF>
volume=0<CR><LF>
>
```

Commands and responses

To access display information or to adjust display settings using the room control system, send a command after the command prompt (>), send a carriage return character or press ENTER, and then wait for the response from the display. Responses are preceded by a carriage return character (<CR>) and line feed character (<LF>) and then followed by a carriage return character (<CR>) and line feed character (<LF>). If no command prompt is present, send a carriage return character to the display. If the display is ready to receive commands, it will show a command prompt (>) when the carriage return is received. See the example below.

CORRECT

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

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

In the example below, the user used ==-50 instead of -50.

INCORRECT

```
>set volume=-50
invalid cmd: setvolume=-50
>
```

NOTES

- Use ASCII formatted commands.
 - Commands aren't case-sensitive and extra spacing is ignored.
 - In many terminal applications on a computer, you can use the BACKSPACE key when typing commands.
 - Review each entry carefully before sending a command to the display.
 - Don't send another command until you receive the response and the next command prompt (>). If no command prompt is present, send a carriage return character (<CR>) to the display. If the display is ready to receive commands, it will show a command prompt after receiving the carriage return.
-

To retrieve a setting's current value

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  
  
>
```

Power state commands

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

The display has six power states:

Power state	Description
ON	The display is in normal operating mode.

Power state	Description
READY	<p>The screen is off, but the display is ready to turn on when one of the following occurs:</p> <ul style="list-style-type: none"> • A user presses the Power button  on the convenience panel or the remote control. • You send the <code>set powerstate=on</code> command.
STANDBY	<p>The screen is off, and the display is in a low power state. The display enters READY or ON state when one of the following occurs:</p> <ul style="list-style-type: none"> • A user presses the Power button  on the front control panel or the remote control. • You send the <code>set powerstate=standby</code> command.
POWERSAVE	<p>The screen is off, and the display is a very low power state. The display enters READY or ON state when one of the following occurs:</p> <ul style="list-style-type: none"> • A user presses the Power button  on the front control panel or the remote control. • You send the <code>set powerstate=powersave</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 READY or ON power state.

Input commands

Get command	Set command	Response
<code>get input</code>	<code>set input[Value]</code> Where [Value] is one of the following: <ul style="list-style-type: none"> • =hdmi1 • =hdmi2 • =hdmi3 • =vga1 • =ops1 • =android 	<code>input=[Value]</code> Where [Value] is one of the following: <ul style="list-style-type: none"> • hdmi1 • hdmi2 • hdmi3 • vga1 • ops1 • android

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

Screen shade commands

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

Model number commands

Get command	Response
get modelnum	modelnum=[Value] Where [Value] is one of the following: <ul style="list-style-type: none">• sbid-mx055-v2• sbid-mx065-v2• sbid-mx075-v2• sbid-mx086-v2

Serial number commands

Get command	Response
get serialnum	serialnum=[Value] Where [Value] is the serial number.

Part number commands

Get command	Response
get partnum	partnum=[Value] Where [Value] is the part number, including the revision.

Asynchronous messages

The display sends an asynchronous message when the front control panel, Settings app, or remote control are used to change a display's setting that can be controlled by RS-232. The display will also send an asynchronous message if the display's power state changes. Asynchronous messages are identified by a pound sign (#) before the message and aren't followed by a command prompt (>).

Change	Asynchronous message
Display power state	#powerstate=[Value] Where [Value] is one of the following: <ul style="list-style-type: none">• on• ready• standby• powersave• updateon• updateready
Input selection	#input=[Value] Where [Value] is one of the following: <ul style="list-style-type: none">• hdmi1• hdmi2• hdmi3• vga1• ops1• android
Brightness	#brightness=[Value] Where [Value] is a number between 5 and 100
Freeze frame	#videofreeze=[Value] Where [Value] is one of the following: <ul style="list-style-type: none">• on• off
Screen shade	#screenshade=[Value] Where [Value] is one of the following: <ul style="list-style-type: none">• on• off

Change	Asynchronous message
Volume increase or decrease	#volume=[Value] Where [Value] is a number between 0 and 100
Volume mute	#mute=[Value] Where [Value] is one of the following: <ul style="list-style-type: none">• on• off

Resolving issues with managing the display using RS-232

The following table presents common issues with managing the display using RS-232 and explains how to resolve them:

Symptom	Troubleshooting steps
Managing the display using RS-232 isn't working as expected.	<ul style="list-style-type: none">• Make sure all the cable connections are secure.• Restart the display and the remote management system. See <i>Turning off, turning on, and resetting the display</i> on page 44.• Configure the serial interface settings. See <i>Configuring the serial interface settings</i> on page 71.
You're experiencing other issues with managing the display using RS-232, or the previous steps don't resolve the issue.	See <i>Chapter 5: Troubleshooting</i> on page 50.

Appendix C

Enrolling the display in SMART Remote Management

Your SMART Board MX (V2) or MX (V2) Pro has a built-in feature that enables you to enroll the display with your organization's SMART Remote Management account. When you enroll one of these displays, you can use SMART Remote Management to centrally control features and settings for the display, such as:

- blocklists and allowlists
- Wi-Fi
- wallpaper
- certificates
- lock screen
- available apps

To learn how to enroll your display, see [Enrolling a SMART Board interactive display in SMART Remote Management](#).

Appendix D

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. See smarttech.com/compliance for more information.



Batteries

The remote control contains alkaline batteries. The display and the OPS PC contain CR2032 coin cells. Recycle or dispose of batteries properly.

Perchlorate material

The display and OPS PC coin cells contain perchlorate material. Special handling may apply. See dtsc.ca.gov/hazardouswaste/perchlorate.

More information

See smarttech.com/compliance for more information.

SMART TECHNOLOGIES

smarttech.com/support

smarttech.com/contactsupport

smarttech.com/kb/171555