

SMART Board MX and MX Pro series interactive displays

INSTALLATION AND MAINTENANCE GUIDE

SBID-MX255-V3 | SBID-MX265-V3 | SBID-MX275-V3 | SBID-MX286-V3
SBID-MX255-V3-PW | SBID-MX265-V3-PW | SBID-MX275-V3-PW | SBID-MX286-V3-PW
SBID-MX055-V3 | SBID-MX065-V3 | SBID-MX075-V3 | SBID-MX086-V3
SBID-MX055-V3-PW | SBID-MX065-V3-PW | SBID-MX075-V3-PW | SBID-MX086-V3-PW

SBID-MX255-V2-C | SBID-MX265-V2-C | SBID-MX275-V2-C | SBID-MX286-V2-C
SBID-MX255-V2-CPW | SBID-MX265-V2-CPW | SBID-MX275-V2-CPW | SBID-MX286-V2-CPW

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

SBID-MX365 | SBID-MX375 | SBID-MX386 | SBID-MX265 | SBID-MX275 | SBID-MX286

IDX55-3 | IDX65-3 | IDX75-3 | IDX86-3 | IDX55-2 | IDX65-2 | IDX75-2 | IDX86-2

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SMART[®]



Learn more

This guide and other resources for SMART Board MX and MX 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

December 14, 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 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 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 information

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

Model	Power requirements
SBID-MX255-V3 / SBID-MX255-V3-PW / SBID-MX055-V3 / SBID-MX055-V3-PW	100V to 240V AC, 50 Hz to 60 Hz, 90 W
SBID-MX265-V3 / SBID-MX265-V3-PW / SBID-MX065-V3 / SBID-MX065-V3-PW	100V to 240V AC, 50 Hz to 60 Hz, 120 W
SBID-MX275-V3 / SBID-MX275-V3-PW / SBID-MX075-V3 / SBID-MX075-V3-PW	100V to 240V AC, 50 Hz to 60 Hz, 150 W
SBID-MX286-V3 / SBID-MX286-V3-PW / SBID-MX086-V3 / SBID-MX086-V3-PW	100V to 240V AC, 50 Hz to 60 Hz, 150 W
SBID-MX255-V2-C / SBID-MX255-V2	100V to 240V AC, 50 Hz to 60 Hz, 98 W
SBID-MX265-V2-C	100V to 240V AC, 50 Hz to 60 Hz, 119 W
SBID-MX265-V2	100V to 240V AC, 50 Hz to 60 Hz, 103 W
SBID-MX275-V2-C / SBID-MX275-V2	100V to 240V AC, 50 Hz to 60 Hz, 114 W
SBID-MX286-V2-C / SBID-MX286-V2	100V to 240V AC, 50 Hz to 60 Hz, 167 W
SBID-MX365	100V to 240V AC, 50 Hz to 60 Hz, 115 W max
SBID-MX375	100V to 240V AC, 50 Hz to 60 Hz, 253 W max
SBID-MX386	100V to 240V AC, 50 Hz to 60 Hz, 265 W max
SBID-MX265	100V to 240V AC, 50 Hz to 60 Hz, 106 W max

Model	Power requirements
SBID-MX275	100V to 240V AC, 50 Hz to 60 Hz, 244 W max
SBID-MX286	100V to 240V AC, 50 Hz to 60 Hz, 256 W max

- For additional requirements and other information, refer to the display's specifications (see *More information* on page 18).

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, IDX55-3, IDX65-1, IDX65-2, IDX65-3, IDX75-1, IDX75-2, IDX75-3, IDX86-1, IDX86-2, IDX86-3

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:

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

Important information

NOTE

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

CAUTION

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

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;
- 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.

AVERTISSEMENT

- 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

Important information

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 IDX55-2, IDX55-3, IDX65-1, IDX65-2, IDX-65-3, IDX75-1, IDX75-2, IDX75-3, IDX86-1, IDX86-2, IDX86-3, and the OPS AM40, AM50 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

AT/BE/BG/CZ/DK/EE/FR/DE/IS/IE/IT/EL/ES/CY/LV/LI/LT/LU/HU/MNL/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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This chapter introduces the SMART Board® MX and MX Pro series interactive displays.

About this guide

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

- How to install the display
- How to connect power and devices
- How to turn on the display for the first time

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 18).

About the display

The SMART Board MX or MX 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.

From the iQ experience 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-V3 / SBID-MX255-V2-C / SBID-MX255-V2-CPW / SBID-MX255-V2 / SBID-MX255-V2-PW	55"
SBID-MX265-V3 / SBID-MX265-V2-C / SBID-MX265-V2-CPW / SBID-MX265-V2 / SBID-MX265-V2-PW / SBID-MX365 / SBID-MX265	65"
SBID-MX275-V3 / SBID-MX275-V2-C / SBID-MX275-V2-CPW / SBID-MX275-V2 / SBID-MX275-V2-PW / SBID-MX375 / SBID-MX275	75"
SBID-MX286-V3 / SBID-MX286-V2-C / SBID-MX286-V2-CPW / SBID-MX286-V2 / SBID-MX286-V2-PW / SBID-MX386 / SBID-MX286	86"

Audio

The display includes two 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 44).

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 28.

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 33.

Accessory slot

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

- SBID-MX365
- SBID-MX375
- SBID-MX386
- SBID-MX265
- SBID-MX275
- SBID-MX286

NOTE

With the SBID-MX365, SBID-MX375, and SBID-MX386 models, you can insert an Intel Compute Card in the appliance to provide a complete Windows 10 solution at your fingertips, without the need for an external PC or cables.

For other models, you can install an OPS-compatible device, such as a SMART OPS PC module, in the accessory slot. SMART OPS PC modules provide a complete Windows® 10 Pro installation.

For more information on SMART OPS PC modules, see *SMART OPS PC module* on page 17.

 **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 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 and MX Pro series interactive displays user guide* (smarttech.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 79).

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 and MX Pro series interactive displays user guide* (smarttech.com/kb/171554).

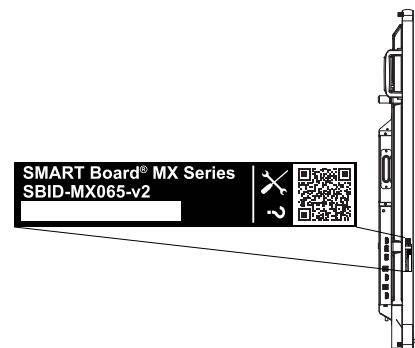
Identifying your specific model

There are several series of SMART Board MX and MX Pro series interactive displays:

SMART Board MX (V3) series	SMART Board MX (V2-C) series	SMART Board MX (V2) series	SMART MX series
SBID-MX255-V3	SBID-MX255-V2-C	SBID-MX255-V2	SBID-MX365
SBID-MX265-V3	SBID-MX265-V2-C	SBID-MX265-V2	SBID-MX375
SBID-MX275-V3	SBID-MX275-V2-C	SBID-MX275-V2	SBID-MX386
SBID-MX286-V3	SBID-MX286-V2-C	SBID-MX286-V2	SBID-MX265
SBID-MX255-V3-PW	SBID-MX255-V2-CPW	SBID-MX255-V2-PW	SBID-MX275
SBID-MX265-V3-PW	SBID-MX265-V2-CPW	SBID-MX265-V2-PW	SBID-MX286
SBID-MX275-V3-PW	SBID-MX275-V2-CPW	SBID-MX275-V2-PW	
SBID-MX286-V3-PW	SBID-MX286-V2-CPW	SBID-MX286-V2-PW	

TIP

For help identifying your SMART Board MX (V2, V2-C, or V3) series model, see the label on the left side of the display.



Accessories

Accessories for the display include:

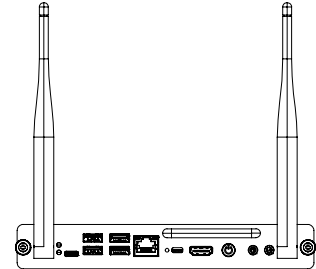
- SMART OPS PC module
- Stands
- USB extenders

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 Pro installation based on Intel® Core™ processors and are designed specifically to work with a SMART display. All OPS PC modules are WHQL certified and fully licensed with Windows Pro. Install the OPS PC module in a display's accessory slot to provide a complete 4K UHD Windows 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.

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

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 and MX Pro series interactive display documents and other support resources.

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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 onto 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.

WARNING

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.

NOTE

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

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.

Installing the display on a wall

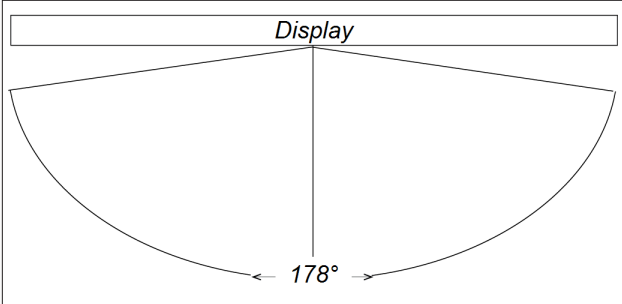
Typically, you install the display on a wall in a classroom or meeting space.

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:

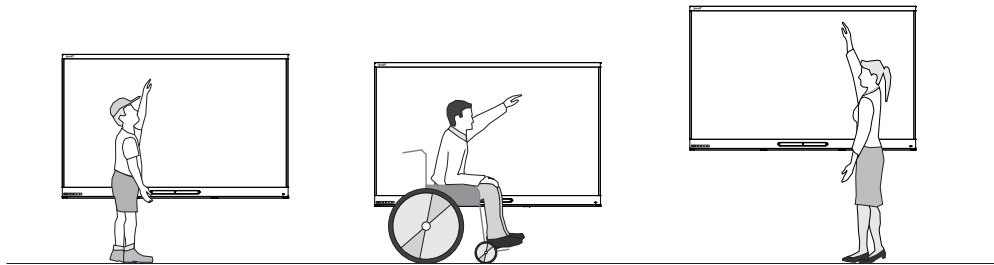
Factor	Considerations
Room setup	<ul style="list-style-type: none">• The location allows users, including those in wheelchairs, access to the display. Refer to local regulations regarding accessibility.• The location allows for multiple users to access the display at the same time.• The location accommodates 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
<p>Visibility</p>	<p>The display's screen is clearly visible to all users in the room. SMART recommends users sit within a 178° viewing area:</p>  <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 displays.</p>
<p>Lighting</p>	<p>The location is not near bright light sources, such as windows or strong overhead lighting.</p> <p>Risks of light interference include:</p> <ul style="list-style-type: none"> ◦ Reduced visibility: Light sources can cause glare on the display's screen, reducing its visibility. ◦ Touch system interference: Many displays use infrared (IR) light as a key component of the touch system. Strong light that hits the display's screen directly can cause interference with the touch system and prevent the display from working properly. <p>TIP</p> <p>To reduce light interference, install blinds or shades on windows or skylights and install switches to dim or turn off any lights shining directly on the display's screen. Keep in mind that sunlight can come through windows at different angles at different times of the year.</p>
<p>Acoustics</p>	<p>The room has good acoustics (see Configuring your SMART Board MX or MX Pro for the best audio performance).</p>

Factor	Considerations
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 18).• 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 18).

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.

If you're using the SMART wall mount (WM-SBID-200), see the wall mount's illustrated installation instructions for information about the required mounting hardware (smarttech.com/kb/171373).

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) or the *SBID-MX255-V3, SBID-MX265-V3, MX275-V3 and MX286-V3 installation instructions* (smarttech.com/kb/171785).

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

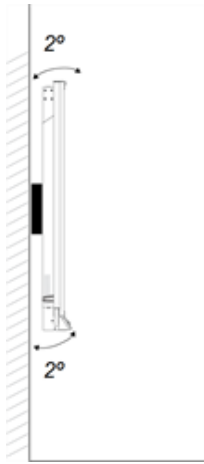
Mount the display following the included installation instructions. In addition, consider the following:

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.

Display	Bolt type	Minimum length	Maximum length
SMART Board MX (V2, V2-C, and V3) series			
55" models	M8	14 mm + x mm	20 mm + x mm
65" models	M8	14 mm + x mm	18 mm + x mm
75" models	M8	18 mm + x mm	30 mm + x mm
86" models	M8	14 mm + x mm	30 mm + x mm
SMART Board MX series			
65" models (Part No. 1031028)	M6	14 mm + x mm	18 mm + x mm
65" models (Part No. 1033445)	M8	14 mm + x mm	18 mm + x mm
75" models	M8	18 mm + x mm	30 mm + x mm
86" models	M8	14 mm + x mm	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 or MX Pro on a stand](#).

 **For SMART Board MX series displays**

Installing the iQ appliance and Intel Compute Card

For more information about installing the iQ appliance in SMART Board MX series displays, see the *SMART Board MX series interactive display installation instructions* (smarttech.com/kb/171274).

 **CAUTION**

Install the AM50 iQ appliance and Intel Compute Card before you turn on the display for the first time.

 **IMPORTANT**

If you're installing an AM50 iQ appliance in a display, make sure the display's firmware is updated to 1.8.7 or later. The display may not function properly if the display's firmware is not updated. See [Updating firmware for your SMART Board MX](#).

Connecting the Intel Compute Card

With the SBID-MX365, SBID-MX375, and SBID-MX386 models, you can insert an Intel Compute Card in the slot on the AM50 iQ appliance to access the card's Windows 10 operating system from the display.

! IMPORTANT

Make sure the Intel Compute Card is inserted before you turn on the display.

NOTE

By default, the HDMI output extends the Windows desktop, and this can cause display problems in certain configurations. If you experience issues, set the HDMI out to a mirrored desktop rather than the default extended desktop. Right click, select Display settings, and set the secondary display to mirror the first.

TIP

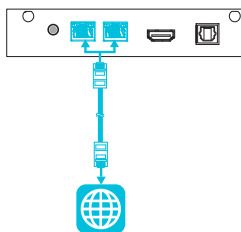
You can connect peripherals, such as a keyboard or mouse, to the Intel Compute Card using the USB receptacles on the iQ appliance.

Connecting to a network

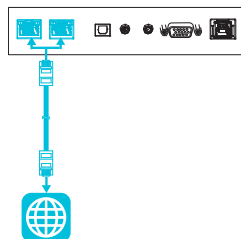
Before connecting the display, your organization's network administrators need to configure the network to allow users to update the display's firmware automatically and use all the features of the iQ experience. See [Configuring your organization's network for a SMART display with the iQ experience](#).

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.

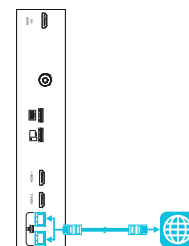
SMART Board MX (V3) series



SMART Board MX (V2 and V2-C) series



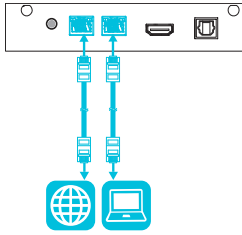
SMART Board MX series



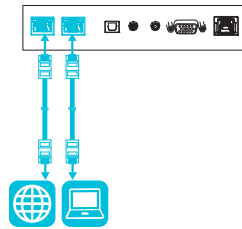
TIP

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 Networked Standby is enabled in Settings but not when Standby is enabled in Settings.)

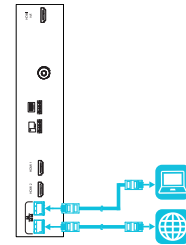
SMART Board MX (V3) series



SMART Board MX (V2 and V2-C) series



SMART Board MX series

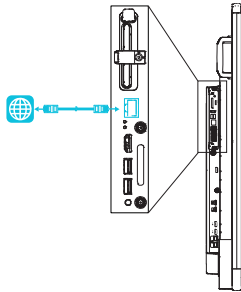


AM50 iQ appliance

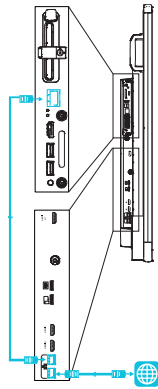
For SMART Board MX series displays

There are three ways to connect the AM50 appliance included with the SBID-MX365, SBID-MX375, and SBID-MX386 models to a network:

- Wi-Fi
- connect an Ethernet cable from a network outlet directly to the AM50 appliance's RJ45 jack



- connect an Ethernet cable from a network outlet to the display's RJ45 IN jack, and then connect another Ethernet cable from the display's RJ45 OUT jack to the AM50 appliance's RJ45 jack



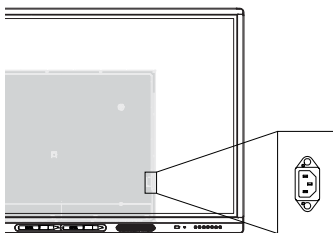
Connecting power and turning on the display for the first time

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.

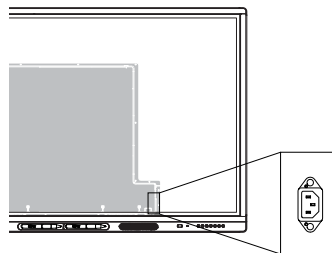
To connect the display to power

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

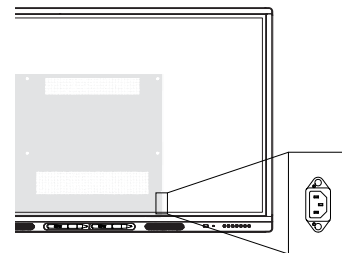
55" and 65" models



75" models



86" models



NOTE

Refer to the display's specifications for power requirements and power consumption information (see *More information* on page 18).

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

! IMPORTANT

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

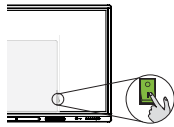
NOTES

- 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.

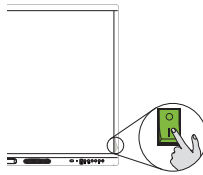
1. Flick the switch beside the AC power inlet to the ON (I) position.

- SMART Board MX (V2, V2-C, and V3) series

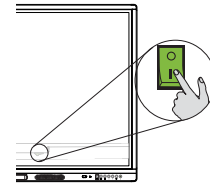
55" models



65" models

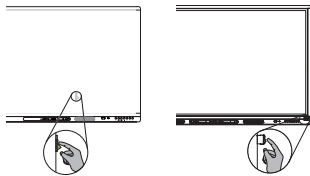


75" and 86" models

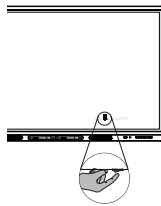


- SMART Board MX series

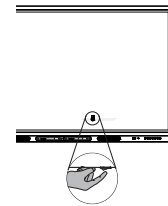
65" models




75" models



86" models



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.

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

11. Tap **Finish**.



The *Welcome* screen appears.

OR

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

About energy saving modes

The display features a number of energy saving modes:

- Networked standby: a low power state in which the display quickly turns on when the Power button  is pressed.
- Standby: a very low power state in which the display turns on when the Power button  is pressed.

Standby is the default energy saving mode for displays set to a location within the EU. Elsewhere, networked standby is the default energy saving mode. You can select the display's energy saving mode in **Settings > System Settings > Power > Standby (Shutdown)** or **Settings > System Settings > Power > Networked Standby (Sleep)**.

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 Lumio™ by SMART.	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	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](#), [Installing SMART TeamWorks](#), or [Installing and maintaining SMART Meeting Pro](#).

¹Pro models only.

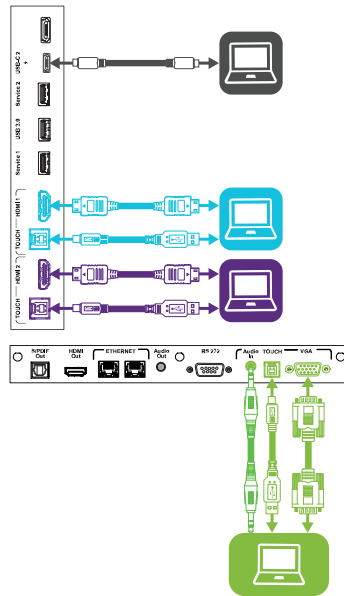
²Subscription terms may vary in some regions.

Connecting room computers and guest laptops

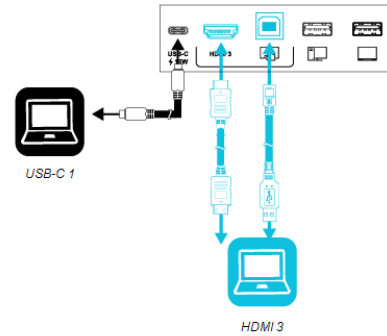
You can connect cables for room computers and guest laptops. By installing cables in advance, you make use of connectors that might not be accessible after the display is wall-mounted. You can then run the cables across floors or behind walls as needed.

- SMART Board MX (V3) series

Side and bottom connector panels

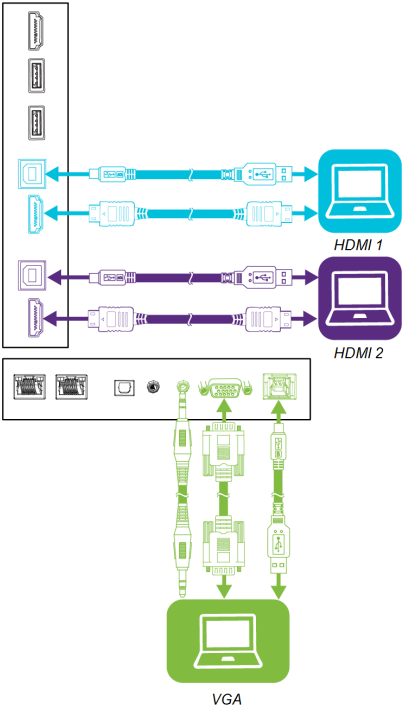


Front connector panel

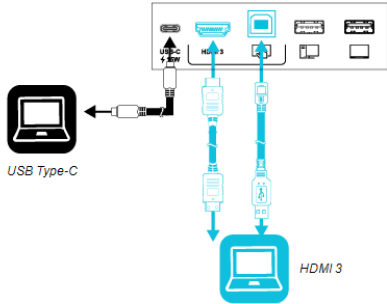


- SMART Board MX (V2-C) series

Side and bottom connector panels

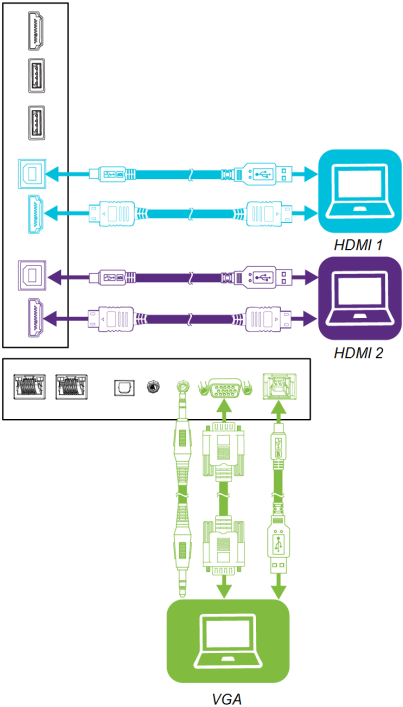


Front connector panel

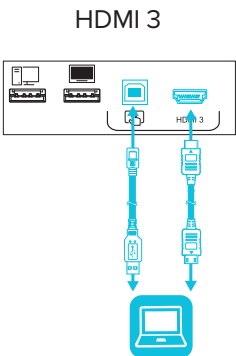


- SMART Board MX (V2) series

Side and bottom connector panels

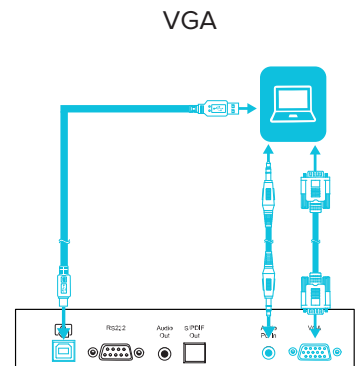
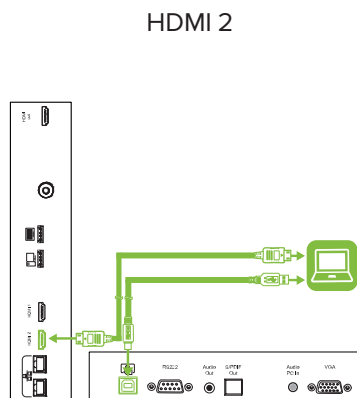
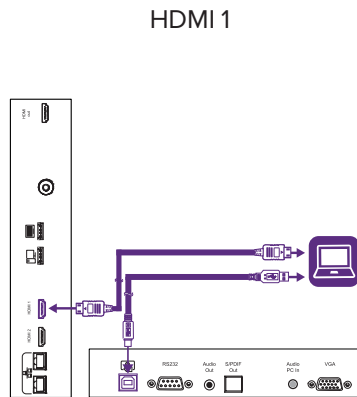


Front connector panel

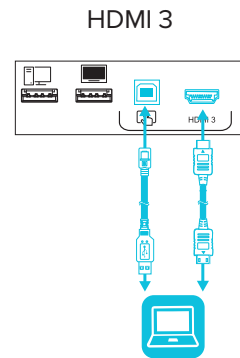


- SMART Board MX series

Side and bottom connector panels



Front connector panel



NOTES






- Install SMART software on any computers you connect to the display (see *Installing SMART software* on page 34).

- You can charge devices connected to the USB Type-C receptacle on the front connector panel of SMART Board MX (V2-C and V3) series interactive displays up to 15 W.
- You can charge devices connected to the USB Type-C receptacle on the side connector panel of SMART Board MX (V3) series interactive displays up to 65 W (if a module is not installed in the accessory slot) or up to 30 W (if a module is installed in the accessory slot).

Viewing a connected computer's input


To view the input of a computer connected to a SMART Board MX (V3, V2 or V2-C) series display

1. Connect the computer to the display.
2. Do one of the following:

If iQ is enabled	If iQ is disabled
Tap Input  on the Home screen. OR Press Input  on the remote control. OR Press Input  on the front control panel.	Press the Home button  or the Input button  on 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.

To view the input of a computer connected to a SMART Board MX series display

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

The Input selection menu appears.

NOTE

Inputs with devices connected are blue, and inputs without a connection are black.

3. Tap the computer's input menu option.

Setting a connected computer's resolution and refresh rate

The following table presents the recommend resolutions and refresh rates for the display's USB-C, 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
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 the next page.

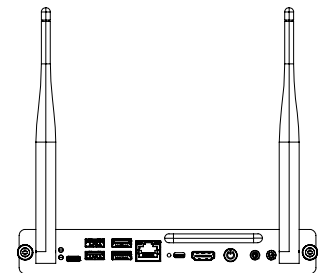
Troubleshooting connected computers

For troubleshooting information for connected computers, see *Chapter 5: Troubleshooting* on page 64.

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 SMART OPS PC modules, see the *SMART OPS PC modules user guide* (smarttech.com/kb/171747).



Connecting other devices

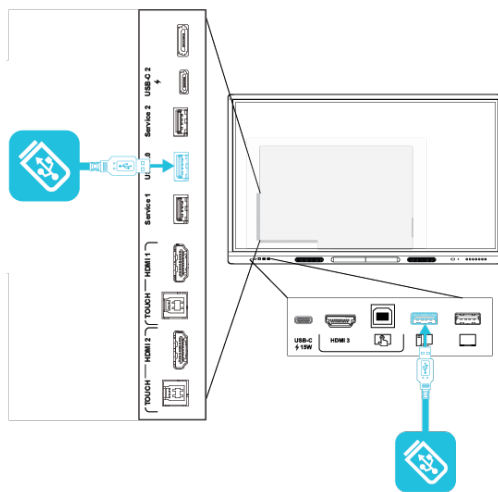
In addition to computers, you can connect the following devices to the display:

- USB drives, peripherals, and other devices
- External displays
- External audio systems
- Room control systems

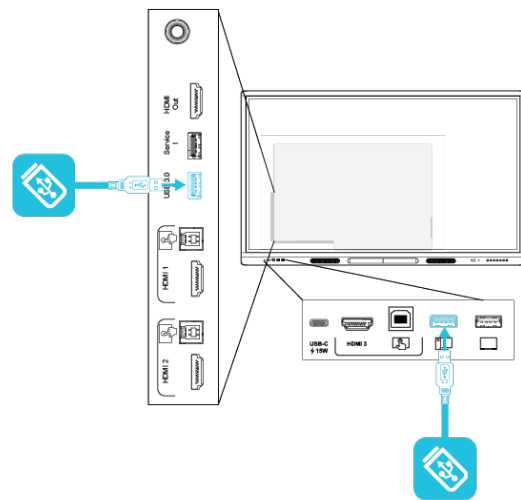
Connecting USB drives, peripherals, and other devices

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 OPS PC module).

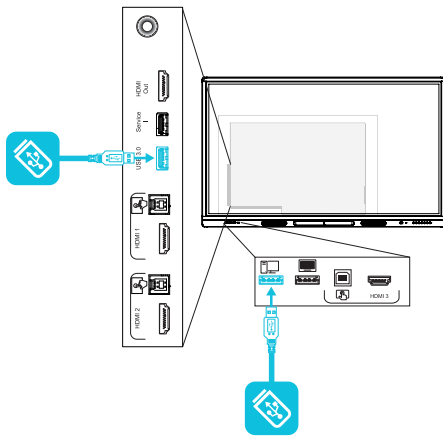
SMART Board MX (V3) series



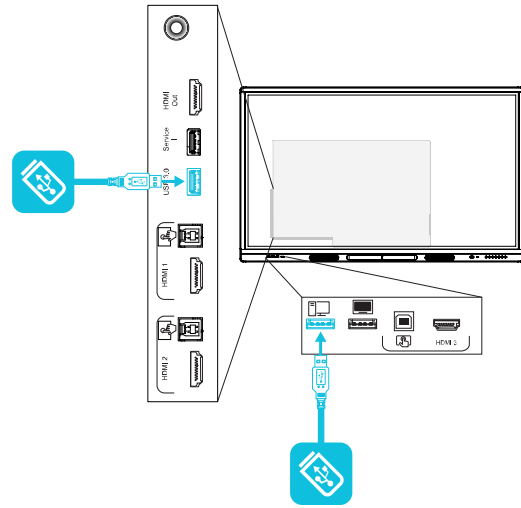
SMART Board MX (V2-C) series



SMART Board MX (V2) series



SMART Board MX series



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

Input source	USB 3.0 Type-A receptacle ³	USB 2.0 Type-A receptacle ⁴
iQ	✓ (SuperSpeed)	✓ (Hi-Speed)
HDMI 1	✓ (SuperSpeed)	✓ (Hi-Speed)
HDMI 2	✓ (SuperSpeed)	✓ (Hi-Speed)
HDMI 3	✓ (SuperSpeed)	✓ (Hi-Speed)
VGA	✓ (SuperSpeed)	✓ (Hi-Speed)
Accessory slot	✓ (SuperSpeed)	✓ (Hi-Speed)
OPS PC	✓ (SuperSpeed)	✓ (Hi-Speed)

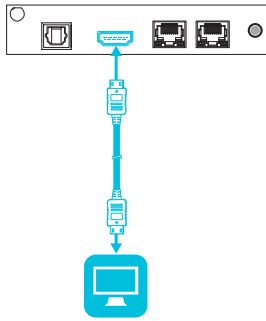
Connecting an external display

You can connect an external display to SMART Board MX (V2, V2-C, and V3) series displays using the HDMI 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.

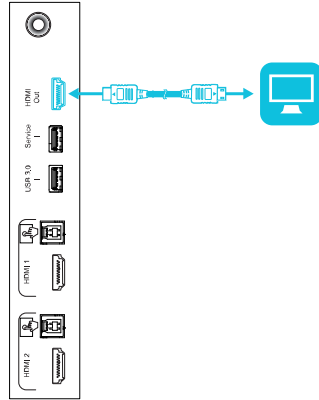
³Located on the side connector panels of SMART Board MX (V2 and V2-C) series displays

⁴Located on the front connector panels of all displays and on the side connector panel of SMART Board MX series displays

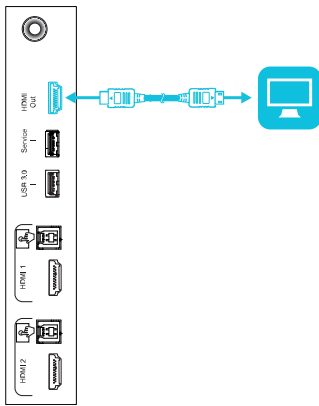
SMART Board MX (V3) series



SMART Board MX (V2 and V2-C) series



SMART Board MX series



NOTE

SMART Board MX series display has an HDMI 1.4 out connector. SMART Board MX (V2, V2-C, and V3) series displays have an HDMI 2.0 out connector.

! IMPORTANT

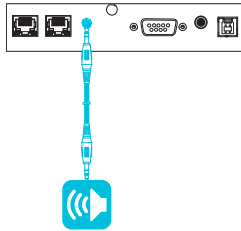
If the connected external display doesn't support HDCP, the image on the external display is limited to 480p resolution. For full resolution output, connect a display that supports HDCP.

Connecting an external audio system

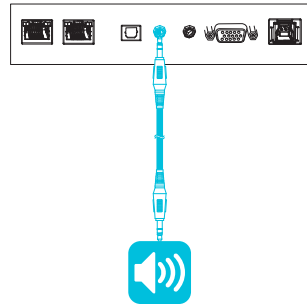
The display includes two speakers, which are designed to provide sound at the front of a room. You might want to connect an external audio system if you're providing sound in a larger space.

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.

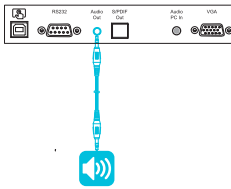
SMART Board MX (V3) series



SMART Board MX (V2 and V2-C) series

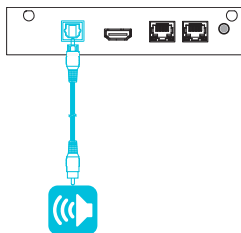


SMART Board MX series

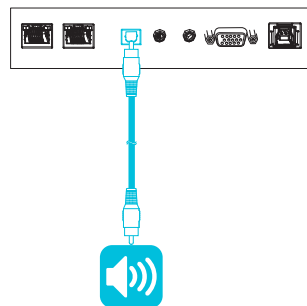


In addition to the stereo 3.5 mm out connector, the display provides a Sony/Philips Digital Interface (S/PDIF) out connector (pictured). S/PDIF is a digital audio transmission medium. You need an audio system that has an S/PDIF input to decode this connection to analog. Most external sound bars include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

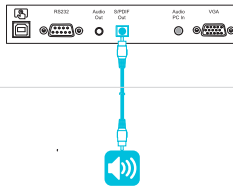
SMART Board MX (V3) series



SMART Board MX (V2 and V2-C) series



SMART Board MX series



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 C: Managing SMART Board MX (V3, V2 and V2-C) series displays using RS-232* on page 95).

NOTE

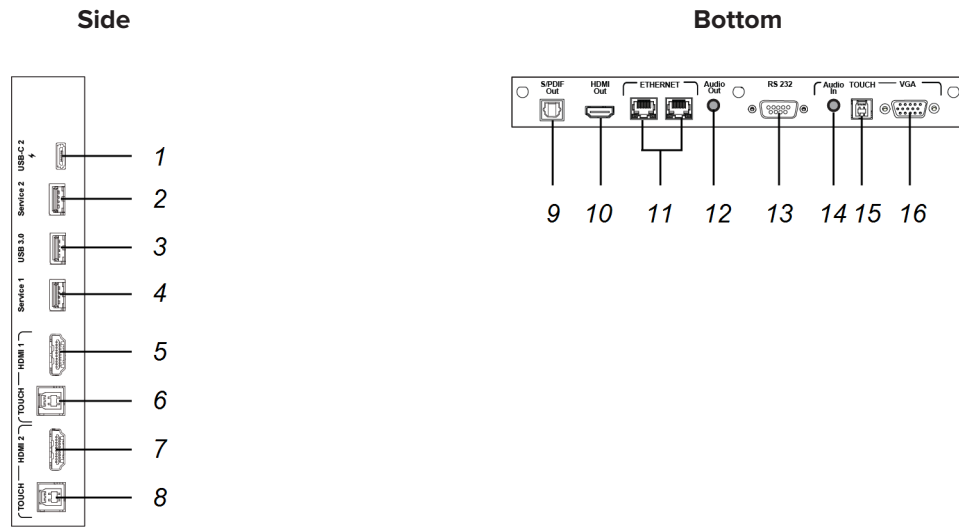
Displays are not compatible with centralized remote control systems, such as a universal remote control.

Connector diagrams

SMART Board MX (V3) series

Connector panel

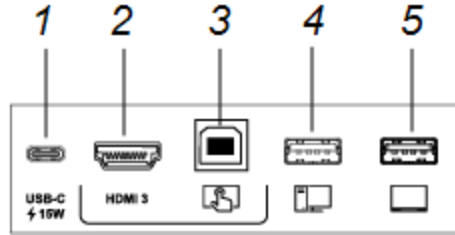
The following diagram and table present the connectors on the display's connector panel:



No.	Connector	Connects to	Notes
1	USB Type-C	USB Type-C 2 input	See page 35 and USB cables and connectors .
2	USB 3.0 Type-A	[N/A]	This connector is a service port.
3	USB 3.0 Type-A	Supported USB drives, peripherals, and other devices	See page 42 and USB cables and connectors .
4	USB 2.0 Type-A	[N/A]	This connector is a service port.
5	HDMI 2.0 in	HDMI 1 input (video and audio)	See page 35 and HDMI cables and connectors .
6	USB 3.0 Type-B	HDMI 1 input (touch)	See page 35 and USB cables and connectors .
7	HDMI 2.0 in	HDMI 2 input (video and audio)	See page 35 and HDMI cables and connectors .
8	USB 3.0 Type-B	HDMI 2 input (touch)	See page 35 and USB cables and connectors .
9	S/PDIF out	Digital audio output	See page 44 and Digital audio cables and connectors .
10	HDMI 2.0 out	External display	See <i>Connecting an external display</i> on page 43 and HDMI cables and connectors .
11	RJ45 (×2)	Network	See page 28 and Ethernet (network) cables and connectors .
12	Stereo 3.5 mm out	External audio system	See page 44 and Analog audio cables and connectors .
13	RS-232	Room control system	See page 95 and RS-232 cables and connectors .
14	Stereo 3.5 mm in	VGA input (audio)	See page 35 and Analog audio cables and connectors .
15	USB 3.0 Type-B	VGA input (touch)	See page 35 and USB cables and connectors .
16	VGA in	VGA input (video)	See page 35 and VGA cables and connectors .

Front connector panel

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

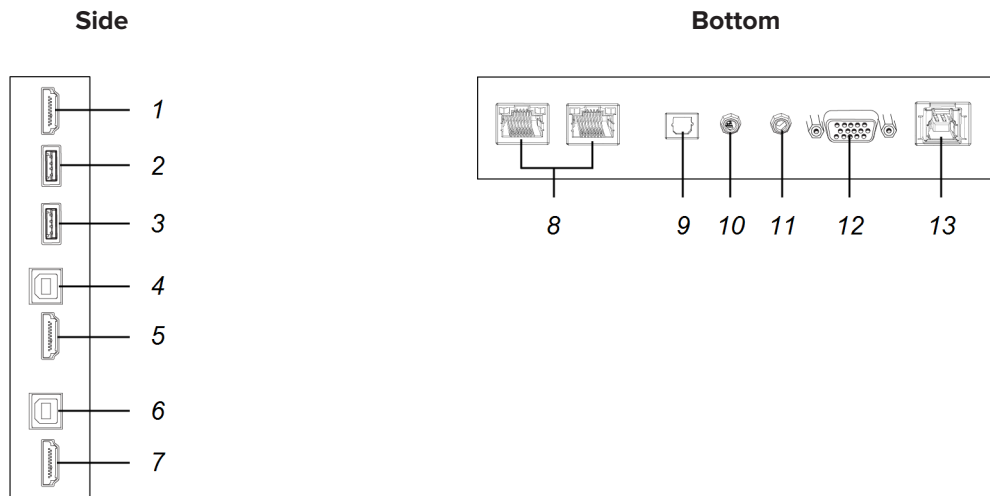


No.	Connector	Connects to	Notes
1	USB Type-C	USB Type-C 1 input	See page 35 and USB cables and connectors .
2	HDMI 3 input connector	HDMI 3 input (video and audio)	See page 35 and Analog audio cables and connectors .
3	USB 3.0 Type-B connector	HDMI 3 input (touch)	See page 35 and USB cables and connectors .
4	USB 2.0 Type-A	Supported USB drives, peripherals, and other devices	See page 42 and USB cables and connectors .
5	USB 2.0 Type-A connector	Supported USB drives	Connect a USB drive to update the display’s firmware.

SMART Board MX (V2 and V2-C) series

Connector panel

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

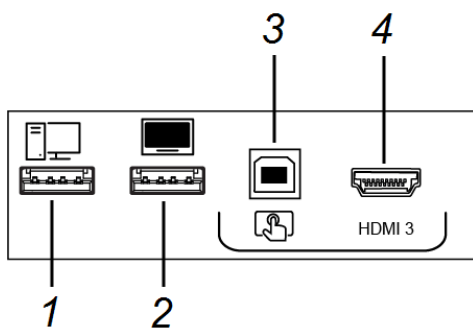


No.	Connector	Connects to	Notes
1	HDMI 2.0 out	External display	See <i>Connecting an external display</i> on page 43 and HDMI cables and connectors .
2	USB 2.0 Type-A	[N/A]	This connector is a service port.
3	USB 3.0 Type-A	Supported USB drives, peripherals, and other devices	See page 42 and USB cables and connectors .
4	USB 3.0 Type-B	HDMI 1 input (touch)	See page 35 and USB cables and connectors .
5	HDMI 2.0 in	HDMI 1 input (video and audio)	See page 35 and HDMI cables and connectors .
6	USB 3.0 Type-B	HDMI 2 input (touch)	See page 35 and USB cables and connectors .
7	HDMI 2.0 in	HDMI 2 input (video and audio)	See page 35 and HDMI cables and connectors .
8	RJ45 (×2)	Network	See page 28 and Ethernet (network) cables and connectors .
9	S/PDIF out	Digital audio output	See page 44 and Digital audio cables and connectors .
10	Stereo 3.5 mm out	External audio system	See page 44 and Analog audio cables and connectors .
11	Stereo 3.5 mm in	VGA input (audio)	See page 35 and Analog audio cables and connectors .
12	VGA in	VGA input (video)	See page 35 and VGA cables and connectors .
13	USB 3.0 Type-B	VGA input (touch)	See page 35 and USB cables and connectors .

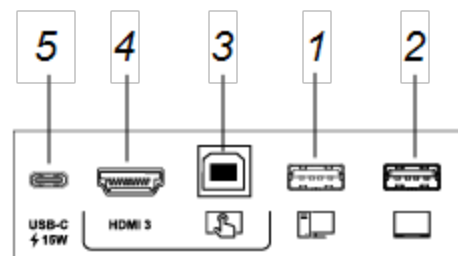
Front connector panel

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

SMART Board MX (V2) series



SMART Board MX (V2-C) series

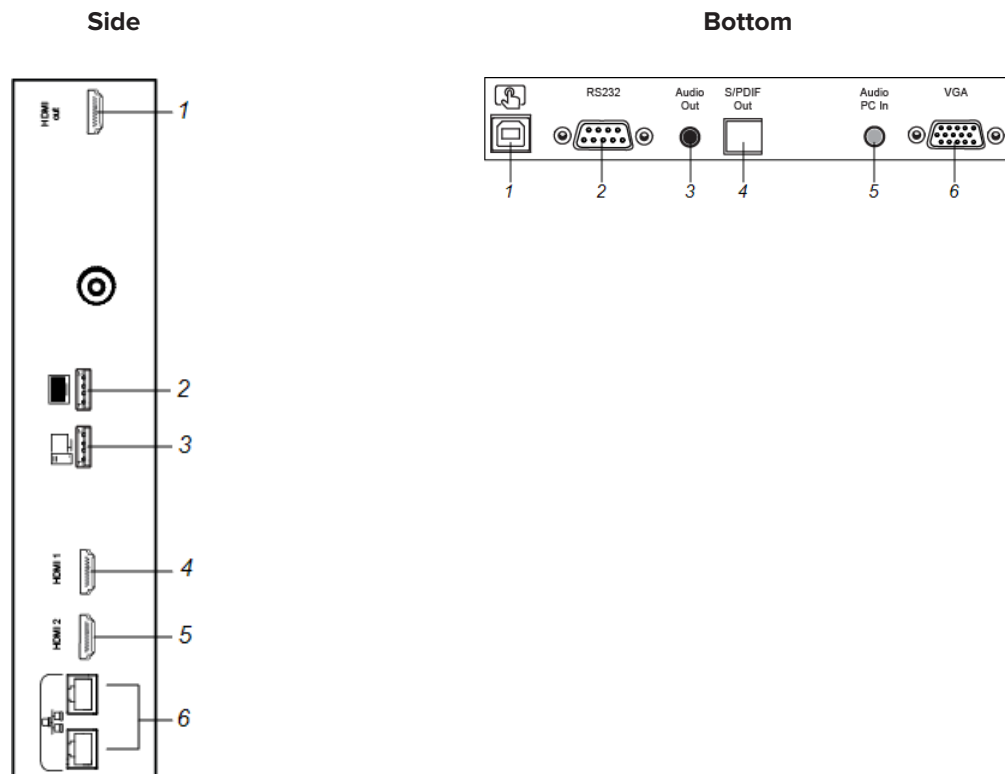


No.	Connector	Connects to	Notes
1	USB 2.0 Type-A	Supported USB drives, peripherals, and other devices	See page 42 and USB cables and connectors .
2	USB 2.0 Type-A connector	Supported USB drives	Connect a USB drive to update the display's firmware.
3	USB 2.0 Type-B connector	HDMI 3 input (touch)	See page 35 and USB cables and connectors .
4	HDMI 3 input connector	HDMI 3 input (video and audio)	See page 35 and Analog audio cables and connectors .
5	USB Type-C input source connector	USB Type-C input	See page 35 and USB cables and connectors .

SMART Board MX series

Connector panel

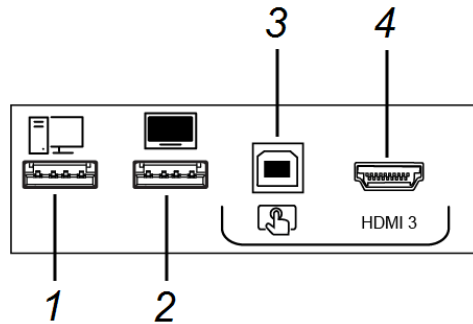
The following diagram and table present the connectors on the display's connector panel:



No.	Connector	Connects to	Notes
1	HDMI 1.4 out (HDCP-compliant)	External monitor	<p>This connector is HDCP-encrypted HDMI.</p> <hr/> <p>NOTE</p> <p>HDMI out is an optional feature. Contact your authorized SMART reseller (smarttech.com/where) for further ordering instructions.</p>
2	USB 2.0 Type-A connector	Supported USB drives, peripherals, and other devices	<p>Connect a USB drive to update the display's firmware.</p> <hr/> <p>NOTE</p> <p>If troubleshooting an issue with the display, connect a USB mouse to navigate the display's on-screen menu.</p>
3	USB 2.0 Type-A connector	Supported USB drives, peripherals, and other devices	See page 42 and USB cables and connectors .
4	HDMI 1 2.0 in	HDMI 1 input (video and audio)	See page 35 and HDMI cables and connectors .
5	HDMI 2 2.0 in	HDMI 2 input (video and audio)	See page 35 and HDMI cables and connectors .
6	RJ45 (×2)	Network	See page 28 and Ethernet (network) cables and connectors .
7	USB 2.0 Type-B	HDMI 1, HDMI 2, or VGA input (touch)	See page 35 and USB cables and connectors .
8	RS-232	Room control system	See page 95 and RS-232 cables and connectors .
9	Stereo 3.5 mm out	External audio system	See page 44 and Analog audio cables and connectors .
10	S/PDIF out	Digital audio output	See page 44 and Digital audio cables and connectors .
11	Stereo 3.5 mm in	VGA input (audio)	See page 35 and Analog audio cables and connectors .
12	VGA in	VGA input (video)	See page 35 and VGA cables and connectors .

Front connector panel

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



No.	Connector	Connects to	Notes
1	USB 2.0 Type-A	Supported USB drives, peripherals, and other devices	See page 42 and USB cables and connectors .
2	USB 2.0 Type-A connector	Supported USB drives	Connect a USB drive to update the display's firmware.
3	USB 2.0 Type-B connector	HDMI 3 input (touch)	See page 35 and USB cables and connectors .
4	HDMI 3 input connector	HDMI 3 input (video and audio)	See page 35 and Analog audio cables and connectors .

AM40 and AM50 appliances

See [iQ appliance connector panel](#).

Chapter 4

Maintaining the display

Turning off, turning on, and resetting the display	54
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Updating system software manually	62
Orienting your SMART Board MX series display	62

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

Turning off, turning on, and resetting the display

Turning off, turning on, and resetting SMART Board MX (V3, V2 and V2-C) series displays	55
Turning off, turning on, and resetting SMART Board MX series displays	56


In most situations, you can put the display into Sleep or Standby when not using it following the instructions in the *SMART Board MX and MX 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.

Turning off, turning on, and resetting SMART Board MX (V3, V2 and V2-C) series displays

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.

Turning off, turning on, and resetting SMART Board MX series displays

To turn the display off

Press the **Power** button  on the front control panel for two seconds.

To turn the display back on

Press the **Power** button  on the front control panel.

To reset the display

1. Flick the switch to the OFF (O) position.
2. Flick the switch to the ON (I) position.

The display and iQ appliance reset.

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 54).
 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 (IPA) 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 19.

 **For SMART Board MX series displays**

Configuring the network for SMART Board MX's firmware update

 **IMPORTANT**

This step is only required for SMART Board MX series displays. This doesn't apply to SMART Board MX (V3), (V2-C), (V2) series interactive displays.

You can connect the display to a network using Wi-Fi or an Ethernet connection. Before connecting the display, your organization's network administrators need to configure the network to allow users to update the display's firmware automatically.

To configure the network

1. Open the port required for automatic firmware updates:

Protocol	Port range
TCP	80

2. Add the following URLs to the network allowlist:

- <http://api.lango-tech.cn>
- <http://lango-tech.cn/>
- <http://otaa.lango-tech.cn>
- <http://otag.lango-tech.cn>
- <http://downloads.smarttech.com>

For SMART Board MX series displays

Updating the display's firmware

The display checks for firmware updates automatically, provided the display's date and time are set correctly (see *Date & Time* on page 83) and the display is connected to the internet. The display notifies you when a firmware update is available.

When a display is connected to the Internet and an update for the display's firmware is available, the display shows a message that an update is available.

- Tap **Update** to update the display's firmware.
- Tap **Ignore** to skip that specific firmware update. The display won't apply that update even if you check for updates manually.
- Tap **Cancel** to update the display's firmware at a later time.

The display applies the firmware update automatically if no options are selected after a short time.

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

To make sure the network is configured properly for firmware updates, see *Configuring the network for SMART Board MX's firmware update* on the previous page.

To update the display's iQ system software, see *Updating iQ system software* below.

Updating iQ 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.

To update SMART Board MX series firmware, see *Updating the display's firmware* on the previous page.


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. From the Home screen, tap **Settings** .
2. Scroll to **Auto Update**.
3. 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.

 **For SMART Board MX series displays**

Orienting your SMART Board MX series display

Use SMART Settings on computers connected to the display to orient it.


If the display is connected to a computer and the pointer appears a distance from the actual contact when you touch the screen, orient the display.

NOTE

You can use your finger or a pen to orient the display.

To orient the display when connected to a computer

1. Open SMART Settings.

Operating system	Procedure
Windows® 10	<ol style="list-style-type: none">a. Select Start.b. Scroll to and select SMART Technologies > SMART Settings.
Windows 8	<ol style="list-style-type: none">a. Open the <i>Apps</i> screen.b. Scroll to and select SMART Technologies > SMART Settings.
Windows 7	Select Start > All Programs > SMART Technologies > SMART Tools > SMART Settings .
macOS	<ol style="list-style-type: none">a. Press  on the Mac menu bar.b. Press SMART Settings.

2. Tap **Orient**.
3. Tap the red targets as they appear. Hold your finger or the tip of the pen at the center of each target, and then lift the pen or finger. When you lift the pen or finger, the target moves to the next orientation point.

 **IMPORTANT**

Hold the pen at a right angle to the screen.

4. Continue until you've pressed all the targets.
The orientation window closes.

Chapter 5

Troubleshooting

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This section explains how to resolve a variety of common issues with the display. 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> <hr/> <ul style="list-style-type: none">Make sure the switch beside the AC power inlet is in the ON (I) position.Make sure the power outlet is working by testing it with a different device.Make sure the power cable is working by testing it with a different device.
The 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.Restart the display. <i>See Turning off, turning on, and resetting the display on page 54.</i>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 70.

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:<ul style="list-style-type: none">◦ On SMART Board MX (V3, V2 or V2-C) series displays, press the Home button  on the front control panel or the remote control to open the Home screen.◦ On SMART Board MX series displays, press Input  on the front control panel or the remote control, and then select OPS to switch to the iQ experience and open the Home screen.• Make sure the SMART Board MX (V3, V2 or V2-C) series display is not in Standby mode by pressing the Power button .• Make sure any connected computers are on and not in an energy saving mode.• Restart the display and any connected computers. See <i>Turning off, turning on, and resetting the display</i> on page 54.• 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.• Make sure the display supports the connected computer's refresh rate. See [XREF].• If the currently selected input is a computer, make sure the computer is not in an energy saving mode.

Symptom	Troubleshooting steps
<p>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.</p>	<ul style="list-style-type: none"> On SMART Board MX (V3, V2 or V2-C) series displays, press the Home button  on the front control panel or the remote control. OR On SMART Board MX series displays, press Input  on the front control panel or the remote control, and then select OPS. If the Home screen appears correctly, the issue is with the video input. On SMART Board MX series displays, make sure the iQ appliance is securely installed in the accessory slot and its power light is on. Switch to a different input and then back to the first input. Make sure any connected computers are on and not in an energy savings mode. Restart the display and any connected computers. See <i>Turning off, turning on, and resetting the display</i> on page 54. Set any connected computers' resolution and refresh rate to values that the display supports. See <i>Setting a connected computer's resolution and refresh rate</i> on page 40. Replace the video cables that connect any computers to the display to determine if the issue is with the cables.
<p>(For SMART Board MX (V3) and (V2-C) series displays) There is no image when using the USB Type-C receptacle with a computer</p>	<ul style="list-style-type: none"> Make sure that the computer supports Display Port Alternate Mode video via USB Type-C. Look for the Display Port logo beside the USB Type-C receptacle on the computer. If it's not there, the computer may not support Display Port Alternate Mode video via USB Type-C. Make sure the cable used with the USB Type-C receptacle supports Super Speed (5Gbps) USB. Look for the Super Speed USB logo on the cable. If the cable doesn't have the Super Speed USB logo, it may not have the internal wiring necessary to carry Display Port Alternate Mode video data.
<p>There are bright spots on the screen.</p>	<ul style="list-style-type: none"> On SMART Board MX (V3, V2 or V2-C) series displays, press the Home button  on the front control panel or the remote control. OR On SMART Board MX series displays, press Input  on the front control panel or the remote control, and then select OPS. If the Home screen 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.
<p>Colors don't appear correctly.</p>	<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 70. 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. Adjust the display's color settings, or reset them to the factory defaults. See [XREF].

Symptom	Troubleshooting steps
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 you're using a VGA video input and 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 44. <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 81. 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 are installed and running on connected computers. (SMART Board MX (V3) displays require SMART Product Drivers 12.18 or later, and SMART Board MX (V2-C) and (V2) displays require SMART Product Drivers 12.14 or later).• 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 35.• Make sure any connected computers have detected the display's USB connection.• 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 54.</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">• Make sure SMART Product Drivers are installed and running on connected computers. (SMART Board MX (V3) displays require SMART Product Drivers 12.18 or later, and SMART Board MX (V2-C) and (V2) displays require SMART Product Drivers 12.14 or later).• 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.• 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.
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 or MX Pro series interactive display pen.• Restart the display. See <i>Turning off, turning on, and resetting the display</i> on page 54.• 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 .
Lumio by SMART isn't working as expected.	See Troubleshooting common issues in Lumio by SMART .
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 OPS PC module isn't working as expected

Symptom	Troubleshooting steps
The SMART OPS PC module isn't working as expected.	See the <i>SMART OPS PC modules user guide</i> (smarttech.com/kb/171747).

The Intel Compute Card isn't working as expected

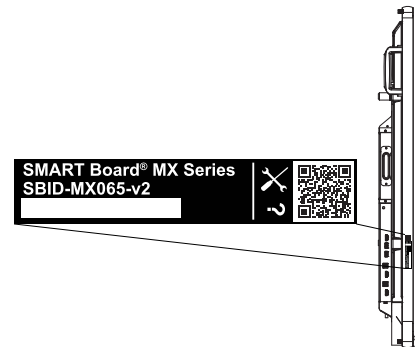
Symptom	Troubleshooting steps
The Intel Compute Card isn't working as expected.	See Troubleshooting the iQ appliance (AM50) and Intel Compute Card .

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.

For SMART Board MX (V3, V2 and V2-C) series displays, the serial number is on a label located on the left side of the display (pictured).



TIP

Scan the QR code on the label to view the SMART Board MX or MX Pro series interactive display support pages on the SMART website.

For SMART Board MX series displays, the serial number is on labels located on the bottom frame and the back of the display.

NOTE

To find the serial number for the iQ appliance and Intel Compute Card, see [Getting support and finding serial numbers for your iQ appliance and Intel Compute Card](#).

You can also find the serial number in the settings (see *Appendix A: Adjusting iQ settings* on page 72).

Appendix A

Adjusting iQ settings

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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				
• Bluetooth	On Off	Enable or disable the display's Bluetooth.	Turn on Bluetooth to view available Bluetooth devices.	System
• View available bluetooth devices	[N/A]	Shows available Bluetooth devices.	Turn on Bluetooth to view available Bluetooth devices.	System
▶ SMART Cloud				
• 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
<ul style="list-style-type: none"> Wallpaper 	[Wallpapers]	Select the wallpaper that appears in the background.	<ul style="list-style-type: none"> 1920 × 1080 images work best The display supports .png and .jpg file formats See Changing the display's wallpaper. 	User

Application settings

NOTE

If iQ is disabled, Application settings are not available.

Option	Values	Function	Notes	User or system setting
▶ Launcher				
<ul style="list-style-type: none"> Browser 	On Off	Enables or disables Browser in the Apps Library.	[N/A]	User
<ul style="list-style-type: none"> Input 	On Off	Enables or disables Input in the Apps Library.	This option is not available for SMART Board MX series displays.	[N/A]
<ul style="list-style-type: none"> Screen Share 	On Off	Enables or disables Screen Share in the Apps Library.	[N/A]	User
▶ Files Library				
<ul style="list-style-type: none"> Whiteboard Storage 	[N/A]	[N/A]	[N/A]	User
<ul style="list-style-type: none"> Default Whiteboard Location 	My Files > Lumio My Files > Board Files	Sets where new whiteboard files are saved when you're signed in to your SMART Account.	See Syncing SMART Notebook and Lumio files to the iQ experience .	User
<ul style="list-style-type: none"> Files Storage 	[N/A]	[N/A]	These options are not available for SMART Board 6000S (V3) or MX-V3 models	User
<ul style="list-style-type: none"> 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

Appendix A
Adjusting iQ settings

Option	Values	Function	Notes	User or system setting
<ul style="list-style-type: none"> 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				
<ul style="list-style-type: none"> Whiteboard Storage 				
<ul style="list-style-type: none"> Allow saving 	On Off	Enables or disables saving SMART Whiteboard sessions.	[N/A]	System
<ul style="list-style-type: none"> Whiteboard deletion policy 	Delete after 1 week Delete after 1 Month Delete manually	Sets how SMART Whiteboards are saved.	[N/A]	System
<ul style="list-style-type: none"> SMART kapp 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
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> Other 				
<ul style="list-style-type: none"> Enable Finger Inking 	On Off	When enabled, you can write with your finger. Default is off.	[N/A]	User
<ul style="list-style-type: none"> Enabled Shared Whiteboard 	On Off	When enabled, you can share the whiteboard with student devices.	[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

Appendix A
Adjusting iQ settings

Option	Values	Function	Notes	User or system setting
<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.	<p>Miracast is enabled by default.</p> <hr/> <p>! IMPORTANT</p> <p>Devices that use AirPlay and Google Cast can't connect to the display while a Miracast device is connected.</p>	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
<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
► Notifications				
<ul style="list-style-type: none"> Do not disturb 	On Off	When enabled, the display doesn't show notifications for any app.	[N/A]	System

Appendix A
Adjusting iQ settings

Option	Values	Function	Notes	User or system setting
<ul style="list-style-type: none"> [Apps] 	On Off	When enabled, the display shows notifications for apps.	[N/A]	User
▶ Installed Apps				
<ul style="list-style-type: none"> Allow App Store 	On Off	When enabled, the App Store is available and the display can download and install new apps.	[N/A]	User

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.	This option is not available for SMART Board MX series displays.	System
• Advanced Options				
<ul style="list-style-type: none"> SMART Board with iQ 	On Off	Enables or disables the iQ experience.	This option is not available for SMART Board MX series displays.	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. This option is not available for SMART Board MX series displays.	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 in to an energy saving mode.	The default is 60 minutes. This option is not available for SMART Board MX series displays.	System
• Energy Saver				
<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 an energy saving mode.	The default is 60 minutes. This option is not available for SMART Board MX series displays.	System
<ul style="list-style-type: none"> Standby (Shutdown) 	[N/A]	If selected, the display will turn off all running components to achieve maximum energy savings but wakes up slower.	This option is more energy efficient. This option is the default for displays in the EU. For information about the display's energy saving modes, see <i>About energy saving modes</i> on page 32. This option is not available for SMART Board MX series displays.	System

Appendix A
Adjusting iQ settings

Option	Values	Function	Notes	User or system setting
<ul style="list-style-type: none"> Networked Standby (Sleep) 	[N/A]	If selected, the display wakes up faster and can be turned on up by a Wake on LAN command from the network.	<p>This option is less energy efficient.</p> <p>This option is the default for displays not in the EU.</p> <p>For information about the display's energy saving modes, see <i>About energy saving modes</i> on page 32.</p> <p>This option is not available for SMART Board MX series displays.</p>	System
<ul style="list-style-type: none"> External Inputs 				
<ul style="list-style-type: none"> Apply power settings even when displaying an external video source 	On Off	If enabled, the display will enter an energy saving mode even when an external video input is connected.	This option is not available for SMART Board MX series displays.	System
<p>► Display</p>				
<ul style="list-style-type: none"> Screen Adjustment 				
<ul style="list-style-type: none"> Brightness 	0–100	Sets the overall brightness of the image.	<p>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.</p> <p>This option is not available for SMART Board MX series displays.</p>	System
<ul style="list-style-type: none"> Auto Brightness 	On Off	Enables or disables the automatic brightness adjustment depending on the ambient light level.	This option is not available for SMART Board MX series displays.	System

Appendix A
Adjusting iQ settings

Option	Values	Function	Notes	User or system setting
<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.	This option is not available for SMART Board MX series displays.	System
<ul style="list-style-type: none"> Lightness 	0–488	Sets the overall lightness of the image.	This option is not available for SMART Board MX series displays.	System
<ul style="list-style-type: none"> Contrast 	0–488	Sets the overall contrast of the image.	This option is not available for SMART Board MX series displays.	System
<ul style="list-style-type: none"> Saturation 	0–511	Sets the overall saturation of the image.	This option is not available for SMART Board MX series displays.	System
<ul style="list-style-type: none"> Red 	0–448	Sets the overall red of the image..	This option is not available for SMART Board MX series displays.	System
<ul style="list-style-type: none"> Green 	0–448	Sets the overall green of the image.	This option is not available for SMART Board MX series displays.	System
<ul style="list-style-type: none"> Blue 	0–448	Sets the overall blue of the image.	This option is not available for SMART Board MX series displays.	System
<ul style="list-style-type: none"> HDMI Output 				

Appendix A
Adjusting iQ settings

Option	Values	Function	Notes	User or system setting
<ul style="list-style-type: none"> Default resolution 	Auto 4K60 1080p60 720p60 640x480p60	Sets the HDMI out resolution.	This option is not available for SMART Board MX series displays. When changing the output resolution on 6000S (V3) and MX (V3) models, the HDMI output may not be visible for several seconds.	System
<ul style="list-style-type: none"> HDMI Input 				
<ul style="list-style-type: none"> Advanced HDMI Settings 	HDMI 1.0 HDMI 2.0 HDMI 3.0 OPS VGA	Sets the HDMI version, HDP pulse width, and MHL setup delay 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. This option is not available for SMART Board MX series displays.	System
<ul style="list-style-type: none"> Go to the Input Lobby when there is no signal 	On Off	When enabled, show the input previews when there is no signal.	This option is not available for SMART Board MX series displays.	System
<p>▶ Audio</p>				
<ul style="list-style-type: none"> Audio In These options are available for SMART Board 6000S (V3) models only.				
<ul style="list-style-type: none"> Volume 	Range slider	Sets the volume from the microphone.	[N/A]	System
<ul style="list-style-type: none"> Built-in microphone 	On Off	Enables or disables the display's built-in microphone. The default is on.	[N/A]	System

Appendix A
Adjusting iQ settings

Option	Values	Function	Notes	User or system setting
<ul style="list-style-type: none"> Noise suppression 	On Off	Enables or disables the noise suppression filter for the display's built-in microphone. The default is on.	Enable the noise suppression filter to reduce background noise when using the display's built-in microphone.	System
<ul style="list-style-type: none"> Audio Out 				
<ul style="list-style-type: none"> Volume 	Range slider	Sets the volume from the speakers	This option is not available for SMART Board MX series displays.	System
<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. This option is not available for SMART Board MX series displays.	System
<ul style="list-style-type: none"> Audio Properties 				
<ul style="list-style-type: none"> Balance 	Range slider	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. This option is not available for SMART Board MX series displays.	System
<ul style="list-style-type: none"> Bass 	Range slider	Sets the bass level.	This option is not available for SMART Board MX series displays.	System

Appendix A
Adjusting iQ settings

Option	Values	Function	Notes	User or system setting
<ul style="list-style-type: none"> Treble 	Range slider	Sets the treble level.	This option is not available for SMART Board MX series displays.	System
▶ 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
▶ Language				
<ul style="list-style-type: none"> System Language 	[Languages]	Sets the language for the settings menu.	To select a different language for the on-screen display menu for SMART Board MX series displays, see <i>Appendix B: Adjusting display settings</i> on page 89.	User
<ul style="list-style-type: none"> Ink-To-Text Language 	[Languages]	Sets the language for converting writing to text.	You can install and uninstall languages. See Configuring ink-to-text languages for the Text pen .	User
<ul style="list-style-type: none"> Country 	[Countries]	Sets the display's country.	[N/A]	System

Appendix A
Adjusting iQ settings

Option	Values	Function	Notes	User or system setting
▶ 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.	Enable this option only on the advice of SMART Support, and only in combination with the board's Support ID.	[N/A]
• Logging Service	[Languages]	Sets the language for the settings menu.	To select a different language for the on-screen display menu for SMART Board MX series displays, see <i>Appendix B: Adjusting display settings</i> on page 89.	User
• Enable Logging Service	On Off	Enables or disables saving logs to a USB drive	This option allows the temporary iQ system log files to survive a system restart, at the cost of some device storage space.	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

Appendix A
Adjusting iQ settings

Option	Values	Function	Notes	User or system setting
• 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 security certificate on a USB drive.	See Locking down the Settings app for more information.	System
• Make passwords visible	On Off	Reveals characters when typing a password in an app or website	[N/A]	System
• Install certificates	[N/A]	Install security certificates to connect to a network.	[N/A]	System
• View certificates	[N/A]	View installed security certificates.	[N/A]	System
• View root CA certificates	[N/A]		[N/A]	System
• Automatic inactivity log out	Disabled 1 hour 8 hours 12 hours	Automatically logs a user off after a time of inactivity.	[N/A]	System
• Enable automatic login	On Off	Automatically logs in a user if enabled	Default is off.	System
• Clean up				
• 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]	System

Appendix A
Adjusting iQ settings

Option	Values	Function	Notes	User or system setting
<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]	System
<ul style="list-style-type: none"> Clean Up app data and preferences 	[N/A]	Closes open applications and clears apps data and preferences.	[N/A]	System
► Software Update				
<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 84 for more information about factory reset. For more information about the Beta Channel, see Switching to the Beta channel .	System
<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]	System
<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"> Board Name 	[N/A]	Select a name for your display.	[N/A]	System

Appendix A
Adjusting iQ settings


Option	Values	Function	Notes	User or system setting
• Help	[N/A]	Shows the SMART support site for iQ.	[N/A]	[N/A]
• Send Feedback	[N/A]	Send feature request to SMART.	[N/A]	[N/A]
• Board Details	[N/A]	[N/A]	[N/A]	[N/A]
• Build Number	[N/A]	Shows the iQ system software's version number.	[N/A]	[N/A]
• Serial Number	[N/A]	Shows the display's serial number (SMART Board (V2 and V2-C) series displays). Shows the iQ appliance serial number (SMART Board MX series displays).	[N/A]	[N/A]
• Part Number	[N/A]	Shows the display's part number.	[N/A]	[N/A]
• Model Number	[N/A]	Shows the display's base model number. Displays purchased as 62xxS or 64xxS SKUs will have a 60xxS base model number.	[N/A]	[N/A]
• Configuration	EDU-iQ (Education iQ experience) ENT-iQ (Enterprise iQ experience) ENT-NoiQ (Enterprise, display-only configuration without iQ)	Shows the display's iQ system configuration.	[N/A]	[N/A]
• Firmware Details	[N/A]	[N/A]	[N/A]	[N/A]
• Touch controller firmware version	[N/A]	Shows the display's touch controller firmware version.	[N/A]	[N/A]
• Scaler version	[N/A]	Shows the display's scaler version. This option is not available for the SMART Board 6000S (V3), 6000S (C), and 6000S models.	[N/A]	[N/A]
• Legal Information	[N/A]	[N/A]	[N/A]	[N/A]
• End User License Agreement	[N/A]	Shows the SMART end user license agreement.	[N/A]	[N/A]
• Open Source Licenses	[N/A]	Shows the open source licenses.	[N/A]	[N/A]
• SMART Intellectual Property	[N/A]	Shows the SMART intellectual property information.	[N/A]	[N/A]

Appendix B

 For SMART Board MX series displays

Adjusting display settings

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You can access SMART Board MX series displays' settings using the **Menu**  button on the front control panel.

Exiting the display's settings

Tap **Exit**

OR

press the **Menu**  button on the front control panel

Network

Option	Values	Function	Notes
▶ Ethernet			
• Ethernet	Enable Disable	Enables or disables connecting to a network with the wired RJ45 jacks	Enabling Ethernet disables Wi-Fi.
• Get IP address automatically	Enable Disable	The display automatically acquires an IP address from a DHCP server on your network	Enabling Wi-Fi hotspot allows you to connect your mobile device to the display using Wi-Fi for screen sharing.
• Static IP address	Enable Disable	Enter a static IP address	Use the on-screen keyboard or connect a USB keyboard to the Display USB Type-A connector on the front connector panel to enter information.
• Wi-Fi	Enable Disable	Enables or disables connecting to a network wirelessly	Turn on Wi-Fi to discover networks. Enabling Wi-Fi disables Ethernet.

Appendix B
Adjusting display settings

Option	Values	Function	Notes
▶ Wi-Fi hotspot			
• Wi-Fi hotspot	Enable Disable	Enables or disables the Wi-Fi hotspot	The lock screen appears after the display wakes up from sleep.
• Set up Wi-Fi hotspot	[N/A]	Sets the network name, security, password and access point frequency	Use the on-screen keyboard or connect a USB keyboard to the Display USB Type-A connector on the front connector panel to enter information.
• Network status	[N/A]	Shows information about the display's current network connection	[N/A]

Screen lock

Option	Values	Function	Notes
▶ Lock screen mode			
• Lock screen mode	Enable Disable	Turns lock screen on or off	[N/A]
• Image	[N/A]	Select a custom image for the lock screen	Supports .png, .jpg, .bmp files Save the wallpaper file to a USB drive and insert it into the USB port. See <i>Connector diagrams</i> on page 46.
• Disable	[N/A]	Turns off the custom image for the lock screen	[N/A]
• Lock screen password	Enable Disable	Set a PIN to unlock the lock screen	[N/A]
• Settings security	Enable Disable	Set a PIN to access certain settings	When Settings security is enabled, only Advanced and About settings are available. To access the other settings, tap the setting and enter the PIN.

Advanced

Option	Values	Function	Notes
▶ Display			
• Wallpaper	[N/A]	Sets the background image on the display	Only .png, .jpg, .bmp files are supported Save the wallpaper file to a USB drive and insert it into the USB port. See <i>Connector diagrams</i> on page 46.
• Launcher	[Apps]	Select which apps appear in the launcher.	[N/A]
• Home screen	[Apps]	Select three apps to appear on the home screen	Tap the app you want to remove from the home screen. Then select the app you want to appear on the home screen instead.
• HDMI out	480p 1080p 4K	Select the output resolution	Ensure the device that is receiving the display's HDMI out signal matches the selected output resolution.
• Sleep	15 minutes 30 minutes 45 minutes 60 minutes Always on	When a time interval is selected, the display's screen will turn off even if the connected computer or device is still on.	If the iQ experience is selected, the display's screen will not turn off when a time interval is selected.
▶ Brightness and volume			
• Auto	[N/A]	Automatically sets the display's brightness based on the room's brightness.	The ambient light sensor can detect the room brightness and adjust the display's screen brightness
• Manual	[N/A]	Sets the display's brightness level	Disable Auto to set the brightness manually
• Volume	[N/A]	Sets the display's volume level	[N/A]
▶ OTA			
• OTA server	[OTA servers]	Sets which server the display connects to for updates NOTE The display must be connected to the Internet to check for system software updates.	Default is Auto .
• Automatically check for updates	Enable Disable	Enables or disables checking and downloading updates for the display's firmware	Enabled by default. If this is disabled, manually check for updates in <i>Update</i> on the next page.

Appendix B
Adjusting display settings

Option	Values	Function	Notes
<ul style="list-style-type: none"> Power saving mode 	Enable Disable	Enables or disables power saving mode	Enabled by default. When enabled, power saving mode activates after 90 minutes of inactivity. Enabling Power saving mode makes RS-232 control of the display unavailable until the display is turned on using the power button on the front control panel .
<ul style="list-style-type: none"> Default input 	OPS HDMI1 HDMI2 HDMI3 VGA	Select a default input when the display is turned on.	OPS is enabled by default.
<ul style="list-style-type: none"> Use default touch settings 	Enabled Disabled	Sets the number of touch points.	Default is Enabled. Select Enabled to use 10 touch points. Select Disabled to use 20 touch points.
<ul style="list-style-type: none"> Power on RS232 	Enabled Disabled	When enabled, RS-232 can be used to turn on the display from low power state (soft off).	Default is Disabled.
<ul style="list-style-type: none"> HDMI [connector number]-EDID version 	Default EDID 1.4 EDID 2.0	Sets the HDMI-EDID version of the display's active HDMI connector to Default, EDID 1.4 or EDID 2.0. NOTE Default is selected by default.	When Default is selected, the display automatically detects a connected device's HDMI-EDID version and switches the display's HDMI connector between EDID 1.4 and 2.0. This feature might not work consistently for older or non-compliant EDID 1.4 devices.

Update

Option	Values	Function	Notes
<ul style="list-style-type: none"> Firmware version 	[N/A]	Shows technical information about the display's scalar firmware.	To see the firmware version use the About option (see <i>About</i> on the next page.
<ul style="list-style-type: none"> Update 	[N/A]	Checks for updates to the system software	If an update is available, the text changes to Apply update now. NOTE The display must be connected to the Internet to check for system software updates. Check the display's network settings. To check the network settings, see <i>Network</i> on page 89.

Recovery

Option	Values	Function	Notes
<ul style="list-style-type: none">Restore user settings	[N/A]	Resets any options the user may have changed	[N/A]
<ul style="list-style-type: none">Restore factory settings	[N/A]	Resets all options to their default values	Only administrators should reset the display.

About

Option	Values	Function	Notes
<ul style="list-style-type: none">Name	[N/A]	Select a name for your display	This name is different from the display name set in the iQ system software.
<ul style="list-style-type: none">RAM	[N/A]	Shows how much RAM is installed in the display	[N/A]
<ul style="list-style-type: none">Local storage	[N/A]	Shows how much storage memory is available and how much is currently in use	[N/A]
<ul style="list-style-type: none">Resolution	[N/A]	Shows the display's current screen resolution	[N/A]
<ul style="list-style-type: none">Android	[N/A]	Shows the current version of the Android operating system on the display	[N/A]
<ul style="list-style-type: none">MX system version	[N/A]	Shows the current version of the display's scalar firmware	[N/A]
<ul style="list-style-type: none">Touch kit	[N/A]	Shows the current version of the touch system firmware	[N/A]
<ul style="list-style-type: none">HDMI-out	[N/A]	Shows the current version of the HDMI-out system firmware	[N/A]
<ul style="list-style-type: none">MAC address	[N/A]	Shows the network's MAC address	[N/A]
<ul style="list-style-type: none">Serial number	[N/A]	Shows the display's serial number	[N/A]
<ul style="list-style-type: none">License	[N/A]	Shows third-party component licenses	[N/A]
<ul style="list-style-type: none">User agreement	[N/A]	Shows the SMART EULA	[N/A]

Appendix C

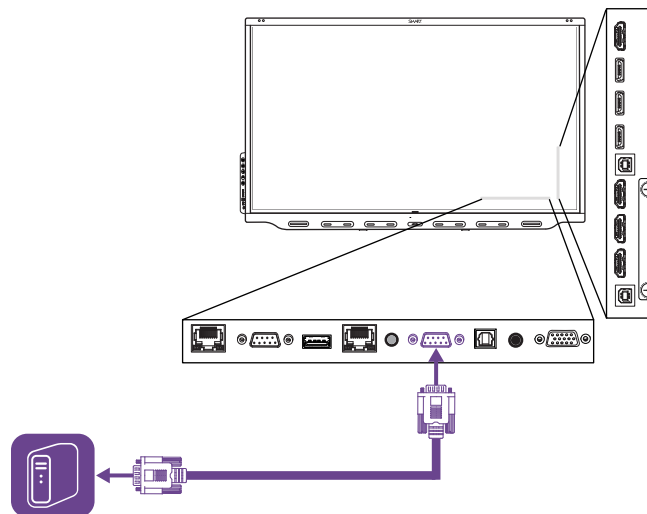


For SMART Board MX (V3), MX (V3) Pro, MX (V2-C), MX (V2-C) Pro, MX (V2), MX (V2) Pro, and MX Pro series displays.

Managing SMART Board MX (V3, V2 and V2-C) series displays 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
>
```

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
<code>get powerstate</code>	<code>set powerstate[Value]</code> Where [Value] is one of the following: <ul style="list-style-type: none">• =on• =ready• =standby• =powersave <hr/> NOTE If the display is in UPDATEON or UPDATEREADY state, it might not change power states after receiving the command.	<code>powerstate=[Value]</code> Where [Value] is one of the following: <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. • The display receives a video signal.
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. <p>This power state is the default energy saving mode for displays set to a non-EU location.</p> <hr/> <p>NOTE</p> <p>The EU uses “networked standby” to describe this power state.</p>
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=ready</code> or <code>set powerstate=on</code> command. <p>This power state is the default energy saving mode for displays set to an EU location.</p> <hr/> <p>NOTE</p> <p>The EU uses “standby” to describe this power state.</p>
UPDATEON	<p>The display is updating firmware. Do not turn off the display.</p>
UPDATEREADY	<p>The display is updating firmware while the screen is off. Do not turn off the display.</p>

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
get input	set input[Value] Where [Value] is one of the following: <ul style="list-style-type: none"> • =hdmi1 • =hdmi2 • =hdmi3 • =vga1 • =ops1 • =usbc1 • =android <hr/> <p>NOTE</p> The usbc1 set command applies only to displays equipped with USB Type-C connectors.	input=[Value] Where [Value] is one of the following: <ul style="list-style-type: none"> • hdmi1 • hdmi2 • hdmi3 • vga1 • ops1 • usbc1 • 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	<p>#powerstate=[Value] Where [Value] is one of the following:</p> <ul style="list-style-type: none"> • on • ready • standby • powersave • updateon • updateready
Input selection	<p>#input=[Value] Where [Value] is one of the following:</p> <ul style="list-style-type: none"> • hdmi1 • hdmi2 • hdmi3 • vga1 • ops1 • android
Brightness	<p>#brightness=[Value] Where [Value] is a number between 5 and 100</p>
Freeze frame	<p>#videofreeze=[Value] Where [Value] is one of the following:</p> <ul style="list-style-type: none"> • on • off
Screen shade	<p>#screenshade=[Value] Where [Value] is one of the following:</p> <ul style="list-style-type: none"> • on • off
Volume increase or decrease	<p>#volume=[Value] Where [Value] is a number between 0 and 100</p>
Volume mute	<p>#mute=[Value] Where [Value] is one of the following:</p> <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 54.• Configure the serial interface settings in your RS-232 terminal application. See <i>Configuring the serial interface settings</i> on page 96.
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 64.

Appendix D

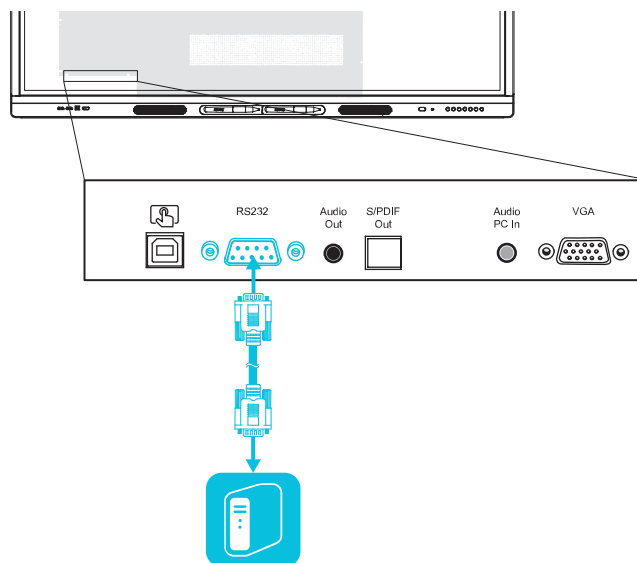
 For SMART Board MX series displays

Managing SMART Board MX series displays using RS-232

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You can connect a control system or terminal emulation program on your computer to the display's room control input and remotely select video inputs, change power and sleep states, and get information about the display's current settings, such as current input source, contrast and power state.

Connect an RS-232 cable from the control system or the computer's serial port to the RS-232 connector on the bottom of the display.



! 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.

Configuring the serial interface settings

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

To configure the serial interface settings

1. Turn on the display.
2. Turn on the control system or computer, and access the serial data communications settings.
3. If using a terminal emulation program on a computer, activate local echo.
4. Configure the serial interface settings using the following values, and then press **ENTER**.

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

When a command prompt (>) is received by your control system or terminal emulation program, the display can accept commands. If the command prompt isn't received, send a carriage return character (0x0d) to the display (press **ENTER** on your keyboard if you're using a terminal emulation program on your computer).

NOTE

If no message or an error message is received in the control system or terminal emulation program, the serial interface isn't configured correctly. Repeat steps 3 and 4.

Communication structure

Communication consist of a command argument, property affected, operator symbol, a value to apply, and a terminating carriage return character (0x0d).

IMPORTANT

When manually entering commands into a terminal emulation program, commands must be terminated with only a carriage return character (0x0d). If you terminate a command with both a carriage return character (0x0d) and a line feed (0x0a), the command may not be processed and the command prompt that indicates readiness to receive the next command may not be received.

NOTES

- The display won't respond to RS-232 commands when it is in a low power state (soft off). Disable Power saving mode to prevent the display from entering a low power state. See *Power saving mode* on page 92.
- When you first turn on the display, the RS-232 connector operates in a special diagnostics mode instead of control mode, and the display won't respond to control commands. In addition, the connected control system or terminal emulation program might receive unexpected data characters.

Program a connected control system to ignore the unexpected data characters and only send commands after it receives the command prompt (>).

If you haven't disabled Power saving mode, you'll see the unexpected characters every time you turn on the display.

CORRECT

```
>set input=HDMI1
```

INCORRECT

```
>set HDMI1
```

To use the room control system to get information about the display or to adjust display settings, send commands after receiving a command prompt (>), and then wait for the display's response before sending another command.

CORRECT

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

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

The example contains an extra space in the volume command.

INCORRECT

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

NOTES

- Use ASCII formatted commands.
 - Commands aren't case-sensitive.
 - When manually entering commands into a terminal emulation program, review each entry carefully before you press ENTER to send a carriage return (0x0d) to terminate the command.
 - Don't send another command until you receive the response and the next command prompt.
-

To identify the current value of a setting

Use a get command.

This example shows how to get the display's current volume setting:

```
>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 states

The display has the following power states:

Power state	Description
ON	The display is in normal operating mode.
READY	The screen is off, but the display is ready to turn on when: <ul style="list-style-type: none">• A user presses the Power button  on the front control panel.• A user presses the Power button on the remote control.• You send the <code>set powerstate=on</code> command. <hr/> <p>TIP</p> <p>If the <code>set powerstate</code> command returns an “invalid command” message, add spaces around the operator symbol (=).</p> <hr/>
SOFT OFF (low power state)	The screen is in a low power state (soft off) and won't respond to RS-232 commands. Disable Power saving mode to prevent the display from entering a low power state. See <i>Power saving mode</i> on page 92. The display turns on when: <ul style="list-style-type: none">• A user presses the Power button  on the front control panel.• A user presses the Power button on the remote control.
UPDATEON	The display is updating firmware. Do not turn off the display.
UPDATEREADY	The display is updating firmware while the screen is off. Do not turn off the display.

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

Commands

Get command	Set command	Response
<code>get powerstate</code>	<p><code>set powerstate[Value]</code> Where [Value] is one of the following:</p> <ul style="list-style-type: none"> • = on • = ready <hr/> <p>NOTES</p> <ul style="list-style-type: none"> • If the command returns an “invalid command” message, add spaces around the operator symbol (=). • When the screen is in a low power state, it doesn’t respond to any RS-232 commands. Disable Power saving mode to prevent the display from entering a low power state. See <i>Power saving mode</i> on page 92. • If the display is in UPDATEON or UPDATEREADY state, it might not change power states after it receives the command. 	<p><code>powerstate=[Value]</code> Where [Value] is one of the following:</p> <ul style="list-style-type: none"> • on • ready • updateon • updateready
<code>get input</code>	<p><code>set input[Value]</code> Where [Value] is one of the following:</p> <ul style="list-style-type: none"> • =OPS • =OPSCC • =HDMI1 • =HDMI2 • =HDMI3 • =VGA 	<p><code>input=[Value]</code> Where [Value] is one of the following:</p> <ul style="list-style-type: none"> • =OPS • =OPSCC • =HDMI1 • =HDMI2 • =HDMI3 • =VGA • =ANDROID <hr/> <p>NOTES</p> <ul style="list-style-type: none"> • =OPSCC is only available if you install an AM50 iQ appliance and compute card. • =ANDROID is the display’s settings.

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 <hr/> NOTE Enabling Auto Brightness overrides any brightness values set manually.
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
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
get fwversion	fwversion=[Value] Where [Value] is the firmware version.	
get serialnum	serialnum=[Value] Where [Value] is the display's serial number. <hr/> NOTE If multiple displays are connected, the response includes the serial numbers for all displays, separated by commas.	
get partnum	partnum=[Value] Where [Value] is the part number, including the revision.	
get videofreeze <hr/> NOTE This command is only available in SMART Board MX firmware 1.8.7 or later.	set videofreeze=[Value] Where [Value] is one of the following: <ul style="list-style-type: none"> • =on • =off <hr/> NOTE This command is only available in SMART Board MX firmware 1.8.7 or later.	videofreeze=[Value] Where [Value] is one of the following: <ul style="list-style-type: none"> • on • off <hr/> NOTE This command is only available in SMART Board MX firmware 1.8.7 or later.

Appendix E

Enrolling the display in SMART Remote Management

Your SMART Board MX or MX 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 F

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 iQ appliance module contain CR2032 coin cells. Recycle or dispose of batteries properly.

Perchlorate material

The display and iQ appliance module coin cells contain perchlorate material. Special handling may apply. See dtsc.ca.gov/hazardouswaste/perchlorate.

More information

See smarttech.com/compliance for more information.

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