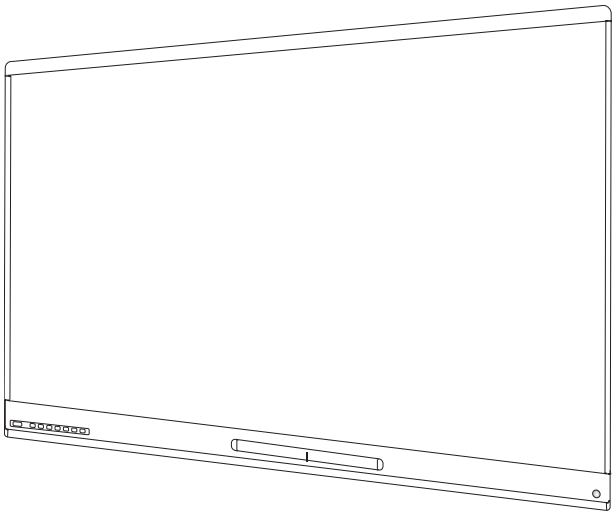


SMART Board® 6000 and 6000 Pro series

interactive displays

INSTALLATION AND MAINTENANCE GUIDE

SPNL-6365-V3/SBID-6365 | SPNL-6265-V3/SBID-6265 | SPNL-6065-V3/SBID-6065
SPNL-6365-V2 | SPNL-6375 | SPNL-6265-V2 | SPNL-6275 | SPNL-6065-V2 | SPNL-6075 | SPNL-6055 | SPNL-6065
SPNL-6365P | SPNL-6375P | SPNL-6265P | SPNL-6275P | SPNL-6065P | SPNL-6075P

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SMART®

Learn more

This guide and other resources for SMART Board 6000 and 6000 Pro series interactive displays are available in the Support section of the SMART website (smarttech.com/support). Scan this QR code to view these resources on your mobile device.

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www.smarttech.com/patents

03/2019

Important information

WARNING

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

- Disconnect all of the display's power cables from the wall outlet and seek assistance from qualified service personnel if any of the following occur:
  - The power cable or plug is damaged
  - Liquid is spilled into the display
  - Objects fall into the display
  - The display is dropped
  - Structural damage, such as cracking, occurs
  - The display behaves unexpectedly when you follow operating instructions

CAUTION

- Before you clean the display's screen, shut down or disconnect the computer. 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.
- Dust buildup on the camera windows and reflective tape will degrade touch performance. SMART recommends that you inspect the camera windows and reflective tape for buildup and clean weekly.
- 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." (IEC 60950:1999)

  Contact qualified personnel if you're uncertain of the type of power system available where you're installing the display.
- The accessory slot's maximum available power is 60 W. The slot is not a limited power source. To reduce the risk of fire, make sure that accessories connecting to the slot satisfy the fire enclosure requirements of IEC 60950-1.
- You must connect the USB cable that came with the display to a computer that has a USB compliant interface and that bears the USB logo. In addition, the USB source computer must be compliant with CSA/UL/EN 60950 and bear the CE mark and CSA and/or UL Mark(s) for CSA/UL 60950. This is for operating safety and to avoid damage to the display.

IMPORTANT

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

Model	Power requirements
SPNL-6000-V3/SBID-6000 models	
SPNL-6365-V3/SBID-6365	100V to 240V AC, 50 Hz to 60 Hz, 92 W
SPNL-6265-V3/SBID-6265	100V to 240V AC, 50 Hz to 60 Hz, 92 W
SPNL-6065-V3/SBID-6065	100V to 240V AC, 50 Hz to 60 Hz, 83 W
SPNL-6000-V2 models	
SPNL-6365-V2	100V to 240V AC, 50 Hz to 60 Hz, 113 W
SPNL-6375	100V to 240V AC, 50 Hz to 60 Hz, 190 W
SPNL-6265-V2	100V to 240V AC, 50 Hz to 60 Hz, 113 W
SPNL-6275	100V to 240V AC, 50 Hz to 60 Hz, 190 W
SPNL-6065-V2	100V to 240V AC, 50 Hz to 60 Hz, 110 W
SPNL-6075	100V to 240V AC, 50 Hz to 60 Hz, <131 W
SPNL-6000-V1 models	
SPNL-6055	90V to 240V AC, 50 Hz to 60 Hz, 130 W
SPNL-6065	100V to 240V AC, 50 Hz to 60 Hz, 200 W
SPNL-6000P models	
SPNL-6365P	100V to 240V AC, 50 Hz to 60 Hz, 113 W
SPNL-6375P	100V to 240V AC, 50 Hz to 60 Hz, 190 W
SPNL-6265P	100V to 240V AC, 50 Hz to 60 Hz, 113 W
SPNL-6275P	100V to 240V AC, 50 Hz to 60 Hz, 190 W
SPNL-6065P	100V to 240V AC, 50 Hz to 60 Hz, 110 W
SPNL-6075P	100V to 240V AC, 50 Hz to 60 Hz, <131 W

- For additional requirements and other information, refer to the display's specifications (see *More information* on page 13).

Federal Communication Commission interference statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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 in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

5.15–5.25 GHz frequency band operation is restricted to indoor use only. Outdoor operations in the 5150~5250 MHz are prohibited.

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 20 cm between the radiator and your body.

Note: The country code selection is for the non-U.S. model only and is not available to all U.S. models. Per FCC regulations, all Wi-Fi products marketed in U.S. must be fixed to U.S. operation channels only.

Industry Canada statement

This device complies with RSS-210 of the Industry 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.

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet 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.

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.

Avertissement

Le guide d'utilisation des dispositifs pour réseaux locaux doit inclure des instructions précises sur les restrictions susmentionnées, notamment :

(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.

Radiation exposure statement

This equipment complies with IC 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.

Déclaration d'exposition aux radiations

Cet équipement est conforme aux limites d'exposition aux rayonnements IC 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.

EU declaration of conformity

Hereby, SMART Technologies ULC declares that the radio equipment type OPS, AM40 is in compliance with Directive 2014/53/EU.

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

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

Transmitting Band (MHz)	Maximum Transmit Power EIRP (dBm)
2400–2483.5	19
5150–5350	16
5470–5725	16

Restrictions in

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

⚠ CAUTION: EXPOSURE TO RADIO FREQUENCY RADIATION

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

Microsoft® statement regarding Windows® 10 operating system

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

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Chapter 1

Welcome

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This chapter introduces the SMART Board® 6000 or 6000 Pro series interactive display.

About this guide

This guide explains how to install and maintain a SMART Board 6000 or 6000 Pro series interactive display. It includes the following information:

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

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

This guide is intended for those who install and maintain displays in their organizations. Other documentation and resources are available for those who use displays (see *More information* on page 13).

Identifying your specific model

SMART offers several different models of the SMART Board 6000 and 6000 Pro series interactive display and iQ appliance.

Identifying your SMART Board 6000 or 6000 Pro series interactive display model

The following models of SMART Board 6000 and 6000 Pro series interactive display are available:

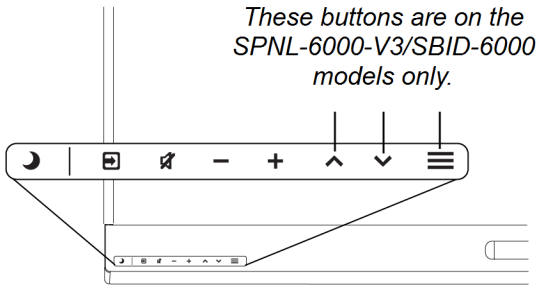
Model	Frame style	Screen size (approximate)	iQ
SPNL-6000-V3/SBID-6000 models			
SPNL-6365-V3/SBID-6365	White	65" (165 cm)	Yes
SPNL-6265-V3/SBID-6265	White	65" (165 cm)	Yes
SPNL-6065-V3/SBID-6065	White	65" (165 cm)	No
SPNL-6000-V2 models			
SPNL-6365-V2	White	65" (165 cm)	Yes
SPNL-6375	White	75" (190 cm)	Yes
SPNL-6265-V2	White	65" (165 cm)	Yes
SPNL-6275	White	75" (190 cm)	Yes
SPNL-6065-V2	White	65" (165 cm)	No
SPNL-6075	White	75" (190 cm)	No
SPNL-6000-V1 models			
SPNL-6055	White	55" (140 cm)	No
SPNL-6065	White	65" (165 cm)	No
SPNL-6000P models			
SPNL-6365P	Brushed metal	65" (165 cm)	Yes

Model	Frame style	Screen size (approximate)	iQ
SPNL-6375P	Brushed metal	75" (190 cm)	Yes
SPNL-6265P	Brushed metal	65" (165 cm)	Yes
SPNL-6275P	Brushed metal	75" (190 cm)	Yes
SPNL-6065P	Brushed metal	65" (165 cm)	No
SPNL-6075P	Brushed metal	75" (190 cm)	No

Refer to the specifications for detailed technical information for each of these models, including product dimensions and weights (see *More information* on page 13).

NOTES

- The SPNL-6000-V1 models have been discontinued.
- The easiest way to differentiate SPNL-6000-V3/SBID-6000 models from other models is the front control panels. On SPNL-6000-V3/SBID-6000 models, the front control panels have three additional buttons:



Identifying your iQ appliance model

The iQ appliance is installed in the accessory slot of some interactive display models to enable iQ functionality in those models. SMART offers several different iQ appliance models.

Use the Identifying your iQ appliance model wizard to identify the specific model of iQ appliance installed in your display.

Features

The SMART Board 6000 or 6000 Pro series interactive display is the hub of your classroom or meeting room. PC-free embedded computing provides one-touch access to collaborative tools,

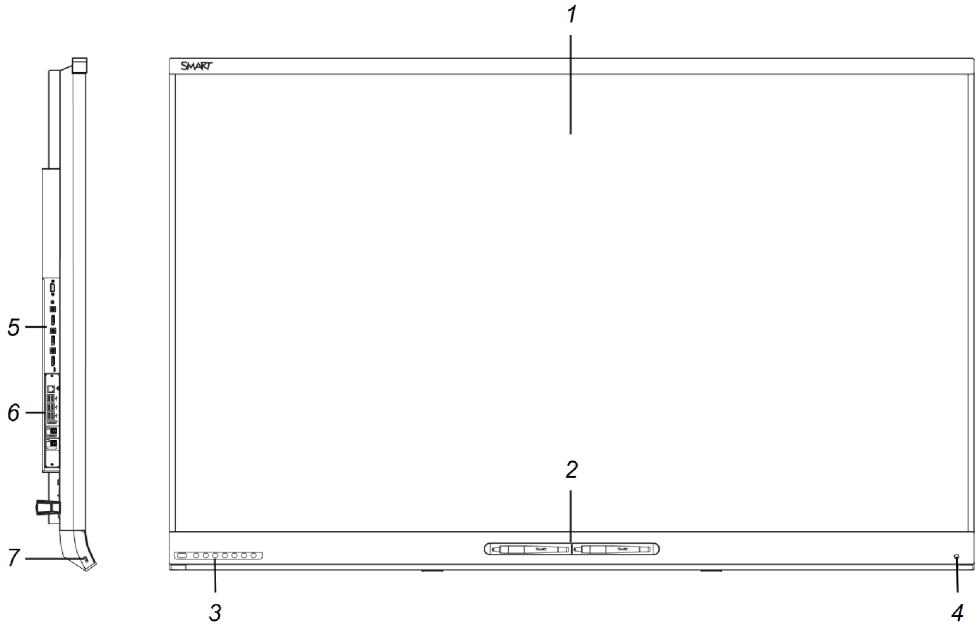
including a whiteboard, wireless screen sharing and a web browser. There's no need for wires, cables or manual software and firmware updates.

The display includes the following features:

Feature	Description
iQ experience	The display's iQ appliance provides one-touch access to collaborative tools, including a whiteboard, wireless screen sharing and a web browser. The SPNL-6365-V3/SBID-6365, SPNL-6365-V2, SPNL-6375, SPNL-6365P and SPNL-6375P models have an Intel Compute Card in the appliance to provide a fully functional Windows 10 solution at your fingertips, without the need for an external PC or cabling.
Touch support	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. The display's support for at least four simultaneous touches enables you and other users to interact with objects on the screen at the same time.
Writing and drawing support	You can write over applications in digital ink using one of the supplied pens, and then erase the digital ink using your palm or the eraser on the pen. You and another writer can write or draw digital ink on the screen at the same time. The Pen ID™ feature enables you to assign different ink appearances to each pen.
Audio support	The display includes integrated speakers for presenting audio from connected input sources.

Components

The display consists of the following components:



No.	Name	More information
Pictured		
1	Screen	Page 7
2	Pen with eraser (×2)	Page 8
3	Front control panel	Page 8
4	Presence detection sensor	Page 10
5	Connector panel	Page 25
6	iQ appliance (and Intel Compute Card)	Page 6
7	USB receptacle	Page 44
Not pictured		
8	Menu control panel[1]	Page 67
9	Speakers	Page 11

[1]SPNL-6000-V2, SPNL-6000-V1 and SPNL-6000P models only

iQ appliance (and Intel Compute Card)

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

- SPNL-6365-V3/SBID-6365
- SPNL-6265-V3/SBID-6265
- SPNL-6365-V2
- SPNL-6375
- SPNL-6265-V2
- SPNL-6275
- SPNL-6365P
- SPNL-6375P
- SPNL-6265P
- SPNL-6275P

Take advantage of iQ technology and access collaborative tools.

The SPNL-6365-V3/SBID-6365, SPNL-6365-V2, SPNL-6375, SPNL-6365P and SPNL-6375P models have an Intel Compute Card in the appliance to provide a fully functional Windows 10 solution at your fingertips, without the need for an external PC or cabling.

CAUTION

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

TIP

Use the Identifying your iQ appliance model wizard on the SMART support site to identify your model of iQ appliance.

Screen

The screen sizes vary by model:

Model	Diagonal	Width	Height
SPNL-6000-V3/SBID-6000 models			
SPNL-6365-V3/ SBID-6365	64 1/2" (163.9 cm)	56 1/4" (142.8 cm)	31 5/8" (80.4 cm)
SPNL-6265-V3/ SBID-6265	64 1/2" (163.9 cm)	56 1/4" (142.8 cm)	31 5/8" (80.4 cm)
SPNL-6065-V3/ SBID-6065	64 1/2" (163.9 cm)	56 1/4" (142.8 cm)	31 5/8" (80.4 cm)
SPNL-6000-V2 models			
SPNL-6365-V2	64 1/2" (163.9 cm)	56 1/4" (142.8 cm)	31 5/8" (80.4 cm)
SPNL-6375	75" (190.5 cm)	65" (165.2 cm)	38 5/8" (93 cm)
SPNL-6265-V2	64 1/2" (163.9 cm)	56 1/4" (142.8 cm)	31 5/8" (80.4 cm)
SPNL-6275	75" (190.5 cm)	65" (165.2 cm)	38 5/8" (93 cm)
SPNL-6065-V2	64 1/2" (163.9 cm)	56 1/4" (142.8 cm)	31 5/8" (80.4 cm)
SPNL-6075	75" (190.5 cm)	65" (165.2 cm)	38 5/8" (93 cm)
SPNL-6000-V1 models			
SPNL-6055	54 1/2" (138.4 cm)	47 5/8" (121 cm)	26 3/4" (68 cm)
SPNL-6065	64 1/2" (163.9 cm)	56 1/4" (142.8 cm)	31 5/8" (80.4 cm)
SPNL-6000P models			
SPNL-6365P	64 1/2" (163.9 cm)	56 1/4" (142.8 cm)	31 5/8" (80.4 cm)
SPNL-6375P	75" (190.5 cm)	65" (165.2 cm)	38 5/8" (93 cm)
SPNL-6265P	64 1/2" (163.9 cm)	56 1/4" (142.8 cm)	31 5/8" (80.4 cm)
SPNL-6275P	75" (190.5 cm)	65" (165.2 cm)	38 5/8" (93 cm)
SPNL-6065P	64 1/2" (163.9 cm)	56 1/4" (142.8 cm)	31 5/8" (80.4 cm)
SPNL-6075P	75" (190.5 cm)	65" (165.2 cm)	38 5/8" (93 cm)

Cameras in the corners of the screen track finger and pen positions across the display. The screen is surrounded by a channel that contains reflective tape.

CAUTION

- Keep the reflective tape dry.
- Do not remove or damage the reflective tape.

IMPORTANT

- Do not attach adhesive notes or other items to the screen because they will interfere with the cameras.
- Do not place anything in the reflective tape channel because it will interfere with the cameras.

Pens with erasers

The display comes with two pens with erasers attached.

The display's bottom frame includes magnetic holders for the pens. Removing a pen from the holders activates it, and you can use the pen to draw or erase digital ink.

CAUTION

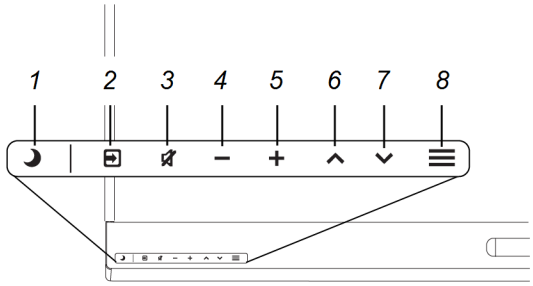
When you return the pen to the magnetic holder, make sure it's centered in its holder to keep it from falling and being damaged.

IMPORTANT

Use only pens designed for SMART Board 6000 and 6000 Pro series interactive displays (see smarttech.com/kb/171230).

Front control panel

The front control panel contains the Standby, Input Select, Mute, volume control and on-screen display menu buttons.



No.	Name	Procedure
1	Standby	• Press to exit Standby mode. • Press twice to enter Standby mode. • Press and hold to reset the display.
2	Select	• If the on-screen display menu isn't open, press to switch inputs. • If the on-screen display menu is open, press to open the currently selected menu.[2]
3	Mute	• Press to mute or unmute the volume. • Press and hold to freeze and unfreeze the screen.
4	Decrease	• If the on-screen display menu isn't open, press to decrease the volume. • If the on-screen display menu is open, press to decrease the value of the currently selected option.[2]
5	Increase	• If the on-screen display menu isn't open, press to increase the volume. • If the on-screen display menu is open, press to increase the value of the currently selected option.[2]
6	Move Up[2]	Press to move to the previous option in the current menu.
7	Move Down[2]	Press to move to the next option in the current menu.
8	Menu[2]	• If the on-screen display menu isn't open, press to open the on-screen display menu. • If the on-screen display menu is open, press to return to the previous menu. • Press and hold to close the on-screen display menu.

IMPORTANT

- If there is a film over the front control panel, remove it before using the front control panel.
- If the buttons don't respond when you press them, the front control panel might have been disabled (see *FBC Control* on page 65). To re-enable the front control panel, press the Standby button until the buttons light.

In normal operation, all buttons are white.

[2] SPNL-6000-V3/SBID-6000 models only

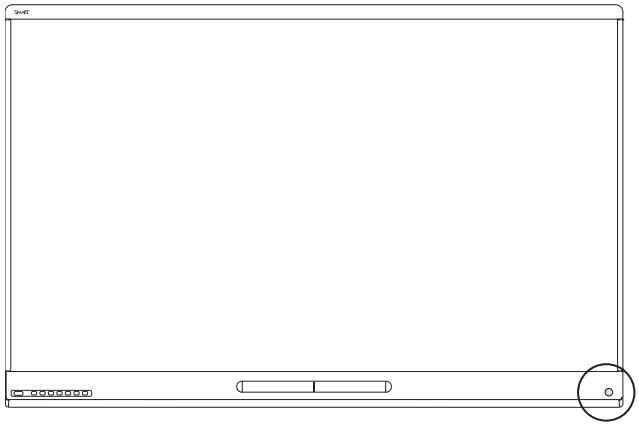
The Standby button also functions as an indicator light:

Indicator light	Status	Procedure
Solid white	Normal operation	[N/A]
Off	Not receiving power	• Confirm the display's power cable is connected to the power outlet. • Flick the switch beside the AC power inlet to the ON (I) position.
Solid amber	DPMS (power management) mode	• Press the **Standby** button to exit DPMS mode. • Connect an input source.
Slowly flashing amber	Standby mode	• Press the **Standby** button to exit Standby mode. • If presence detection is enabled, move in range of the presence detection sensor. • If Wake to Touch is enabled, touch the screen.
Flashing amber	No USB connection from the connected computer	• Verify the connections to the computer. • Switch to the computer's input. See *Connecting cables for room computers, guest laptops and other input sources* on page 27.
Slowly flashing white	SMART Board service not running on the connected computer	Ensure that SMART Product Drivers is installed and that the SMART Board service is running.

Presence detection sensor

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

If the Turn On Display option is enabled, the display turns on when the sensor detects people in the room. If the room is empty for a specified period, the display returns to Standby mode.



NOTE

Presence detection settings can be changed with the on-screen display menu. For more information, see *Proximity* on page 65 for SPNL-6000-V3/SBID-6000 models, *Proximity* on page 70 for SPNL-6000-V2 and SPNL-6000-P models or *Proximity* on page 75 for SPNL-6000-V1 models.

Internal speakers

The display includes two 10 W integrated speakers. You can also connect external speakers (see *Connecting external speakers* on page 28).

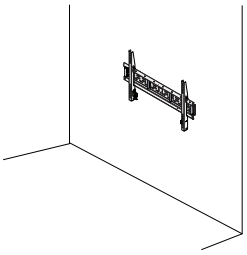
Accessories

Related products for the display include the following:

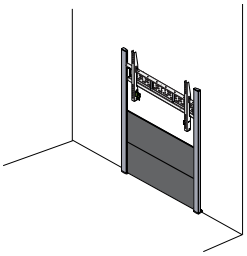
- SMART wall mount
- SMART wall stand
- SMART Mobile Stand
- SBA-100 projection audio system
- SMART Audio 400 classroom amplification system
- USB extenders

SMART wall mount and wall stand

Use the SMART wall mount model WM-SBID-501 to mount the display on a wall. For more information about the SMART wall mount, see the *SMART wall mount installation instructions* (smarttech.com/kb/170599).

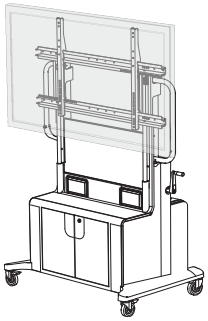


If the wall can't support the display's weight, you can use the SMART wall stand model WS-SBID-500 along with the SMART wall mount to transfer some of the weight from the wall to the floor. For more information about the SMART wall stand, see the *SMART wall stand installation instructions* (smarttech.com/kb/170466).



SMART Mobile Stand

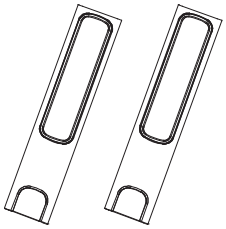
The SMART Mobile Stand is height adjustable and includes integrated speakers, a locking cabinet to secure equipment and casters that swivel and lock for easy movement.



For more information, see the *SMART Mobile Stand specifications* (smarttech.com/kb/131862).

SBA-100 projection audio system

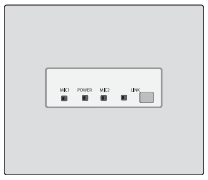
Available for education models, the SBA-100 projection audio system consists of two 14 W speakers and is intended for wall-mounted displays. You can control volume using the display's front control panel or the digital volume controls in a connected computer's operating system.



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

SMART Audio 400 classroom amplification system

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



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

USB extenders

As noted in *Connecting cables for room computers, guest laptops and other input sources* on page 27, the USB connection between the display and computer should be no longer than 16' (5 m). If you need to connect a computer that is more than 16' (5 m) from the display, use one of the following USB extenders:

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

More information

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

Document	Link
Specifications and comparison	
SPNL-6365-V3/SBID-6365	smarttech.com/kb/171322
SPNL-6265-V3/SBID-6265	smarttech.com/kb/171138
SPNL-6065-V3/SBID-6065	smarttech.com/kb/171140
SPNL-6365-V2	smarttech.com/kb/171316
SPNL-6375	smarttech.com/kb/171143
SPNL-6265-V2	smarttech.com/kb/171142
SPNL-6275	smarttech.com/kb/171143
SPNL-6065-V2	smarttech.com/kb/171096
SPNL-6075	smarttech.com/kb/171011
SPNL-6055	smarttech.com/kb/170817
SPNL-6065	smarttech.com/kb/170640
SPNL-6365P	smarttech.com/kb/171314
SPNL-6375P	smarttech.com/kb/171313
SPNL-6265P	smarttech.com/kb/171219
SPNL-6275P	smarttech.com/kb/171218
SPNL-6065P	smarttech.com/kb/171234
SPNL-6075P	smarttech.com/kb/171235
AM50	smarttech.com/kb/171263
AM40	smarttech.com/kb/171182
AM30	smarttech.com/kb/171097
Comparison	smarttech.com/kb/171161
Installation instructions	
SPNL-6000-V3/SBID-6000	smarttech.com/kb/171193
SPNL-6000-V2 and SPNL-6000P (65" models)	smarttech.com/kb/171107
SPNL-6000-V2 and SPNL-6000P (75" models)	smarttech.com/kb/170996

Document	Link
SPNL-6000-V1	smarttech.com/kb/170641
AM50	smarttech.com/kb/171294
AM40	smarttech.com/kb/171199
AM30	smarttech.com/kb/171090
Quick reference and guides	
Quick reference	smarttech.com/kb/171165
User's guide	smarttech.com/kb/171166
Release notes	
iQ appliance	smarttech.com/kb/171206

These documents are available in the Support section of the SMART website (smarttech.com/support). Scan the QR code on the cover of this guide to view the SMART Board 6000 and 6000 Pro series interactive display pages in the Support section.

Chapter 2

Installing the display

Moving the display to the installation site 15
- Using transportation aides 16
- Accommodating doorways, hallways and elevators 16
- Dealing with cracked, chipped or shattered glass 17
- Saving the original packaging 17

Installing the display on a wall 18
- Choosing a location 18
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- Selecting a wall mount 21
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- Mounting multiple displays 23

Installing the display on a stand 24
- Using SMART mobile stands 24
- Using a third-party stand 24

SMART recommends that only trained installers install the display.

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

WARNING

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

Moving the display to the installation site

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

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

IMPORTANT

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

TIP

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

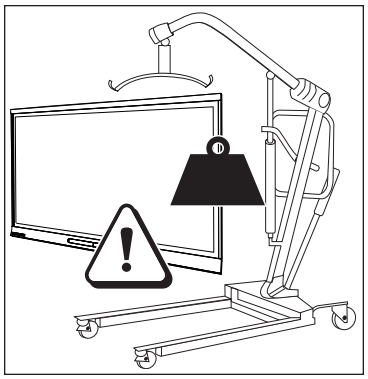
Using transportation aides

You can use the following aides to move the display:

- Cart
- Furniture dolly
- Mechanical lift

NOTE

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



Accommodating doorways, hallways and elevators

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

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

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

Dealing with cracked, chipped or shattered glass

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

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

CAUTION

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

Saving the original packaging

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

CAUTION

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

NOTE

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

Installing the display on a wall

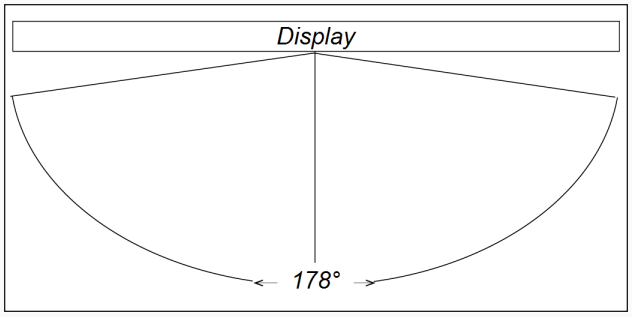
Typically, you install the display on a wall in a classroom or meeting space.

Choosing a location

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

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

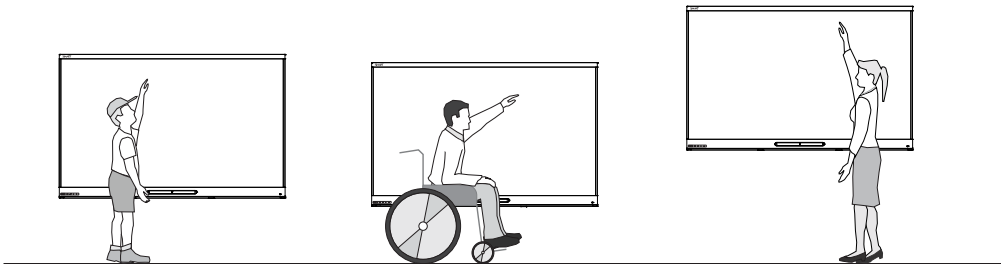
Factor	Considerations
Room setup	• The location allows users, including those in wheelchairs, access to the display. Refer to local regulations regarding accessibility. • The location allows for multiple users to access the display at a time. • The location accommodates room traffic patterns, and there are no tripping hazards. • The display is not installed where it could be hit by a door or gate. • There are no nearby shelving units, desks or other furniture that has doors or drawers that could hit the display. • Furniture, wall décor and other room features, such as light switches and thermostats, do not block the display or are blocked by it. (You might be able to move some of these room features to accommodate the display.)
Power and other connections	• The location is close to the following: ◦ 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 **NOTES** ◦ 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. • The location is not where the mains power supply enters the building.

Factor	Considerations
Visibility	The display's screen is clearly visible to all users in the room. SMART recommends users sit within a 178° viewing area:  **NOTE** The viewing area depends on the display's resolution and a variety of other factors. For more information, see the knowledge base article, Recommended viewing distances and viewing angles for SMART Board interactive flat panels.
Lighting	The location is not near bright light sources, such as windows or strong overhead lighting. Risks of light Interference include: ◦ **Reduced visibility:** Light sources can cause glare on the display's screen, reducing its visibility. ◦ **Touch system interference:** 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. **TIP** 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.
Acoustics	The room has good acoustics (see Configuring your SMART Board 6000 or 6000 Pro for the best audio performance).

Factor	Considerations
Environment and ventilation	• The location meets the environmental requirements in the display's specifications (see *More information* on page 13). • The display isn't subjected to strong vibrations or dust. • Ventilation systems don't blow air directly on the display. • There is adequate ventilation or air conditioning around the display so that heat can flow away from it and the mounting equipment. SMART recommends at least 2" (5 cm) of space on all sides of the display for proper airflow. • If you plan to install the display in a recessed area, there is at least 4" (10 cm) of space between the display and the recessed walls to enable ventilation and cooling.

Choosing a height

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



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

NOTE

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

Assessing the wall

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

NOTE

Refer to the display's specifications for its weight (see *More information* on page 13).

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

Selecting mounting hardware

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

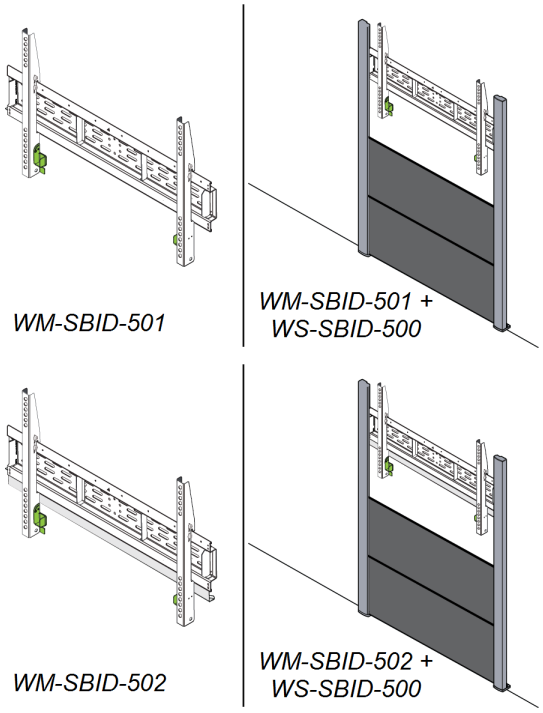
Refer to the installation instructions for the mounting hardware required for the display.

Selecting a wall mount

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

SMART offers two wall mounts for SMART Board displays: WM-SBID-501 and WM-SBID-502. Most displays can use the WM-SBID-501 while the WM-SBID-502 is for larger and heavier displays. These mounts can be purchased separately or as part of a SMART Wall Stand Kit (WSK-Single or WSK-Dual).

These wall-stand kits are not free-standing mounts; they still require a wall that can support the display's weight.

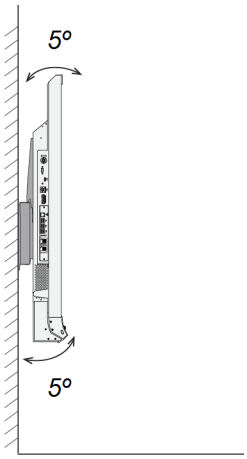


If you choose a third-party option rather than one of SMART's mounting options, be sure the wall mount can support the display's weight as well as the weight of any attached accessories and can accommodate the display's dimensions.

Mounting the display

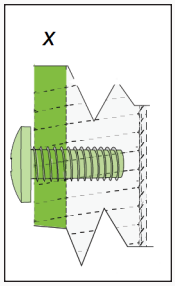
Mount the display following the included installation instructions. In addition, consider the following:

- Mount the display vertically (90° relative to the floor plus or minus 5° for tolerance) and in landscape orientation. SMART doesn't support mounting the display at other angles or in portrait orientation.



- Use the SMART wall mount (see *SMART wall mount and wall stand* on page 11) or a third-party standard VESA mounting plate.

- Use M8 bolts to fasten the wall bracket.

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

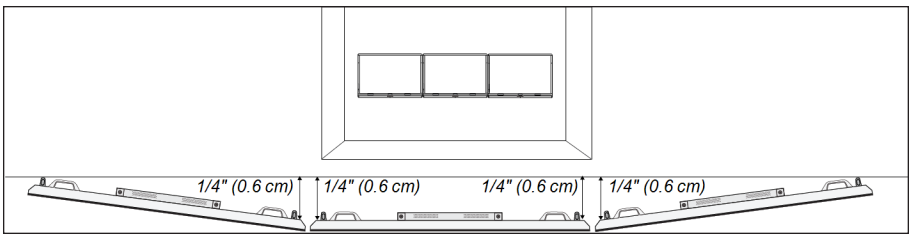
NOTE

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

- Because the receptacles might not be easily accessible after you mount the display, consider connecting cables for power, computers and other input sources while the display is still in its packaging (see *Chapter 3: Connecting power and devices* on page 25).
- Before turning on the display for the first time, clean the camera windows and reflective tape following the instructions in *Cleaning the camera windows and reflective tape* on page 40.

Mounting multiple displays

If you mount multiple displays side by side, install them as shown in the following diagram. This ensures the displays' cameras don't interfere with each other.



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 6000 or 6000 Pro on a stand.

Chapter 3

Connecting power and devices

Connecting power 25
Connecting to a network 26
Connecting the Intel Compute Card 26
Connecting cables for room computers, guest laptops and other input sources 27
Connecting external speakers 28
Connecting room control systems 29
Connector panel reference 29
iQ appliance reference 30

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

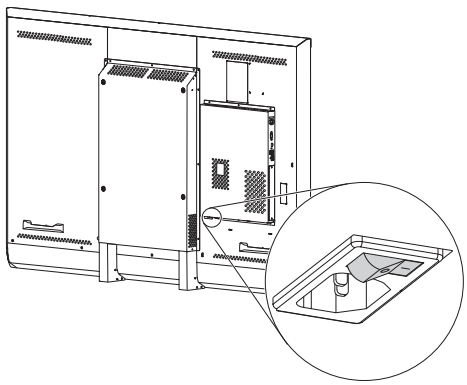
By installing cables in advance, you make use of connectors that might not be accessible after the display is wall-mounted. You can then run the cables across floors or behind walls as needed.

WARNING

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

Connecting power

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

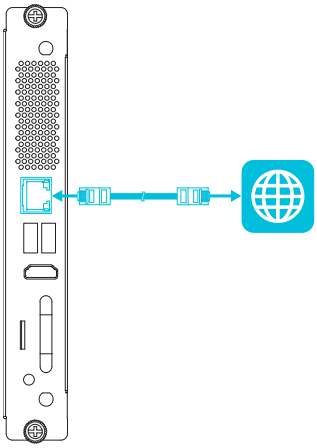


NOTE

Refer to the display's specifications for power requirements and power consumption information (see *More information* on page 13).

Connecting to a network

The iQ appliance requires a network connection for downloading software updates, and a number of the iQ appliance's apps require a network connection as well. You can connect to a network using a Wi-Fi connection or the RJ45 jack on the iQ appliance (pictured). For more information about the iQ appliance's network connection and configuration, see Connecting to a network.



NOTE

The above diagram shows the location of the RJ45 jack on the AM40 appliance. See *iQ appliance reference* on page 30 for the location of the RJ45 jack on your specific iQ appliance model.

Connecting the Intel Compute Card

The SPNL-6365-V3/SBID-6365, SPNL-6365-V2, SPNL-6375, SPNL-6365P and SPNL-6375P models have an Intel Compute Card. Insert the Intel Compute Card in the slot on the iQ appliance to access its Windows 10 operating system from the display.

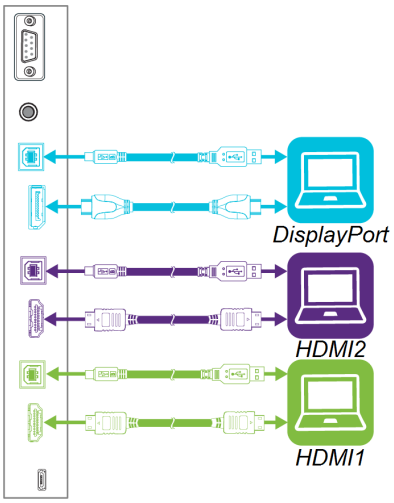
TIP

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

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

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

- **DisplayPort:** This set of connectors can accommodate a USB cable for touch control and a DisplayPort cable for video and audio.
- **HDMI 2:** This set of connectors can accommodate a USB cable for touch control and an HDMI cable for video and audio.
- **HDMI 1:** This set of connectors can accommodate a USB cable for touch control and an HDMI cable for video and audio.



NOTES

- The above diagram shows the computer connectors on SPNL-6000-V3/SBID-6000 models. See *Chapter 3: Connecting power and devices* on page 25 for the computer connectors available on your specific model.
- If you have an older model iQ appliance (AM30), you can connect a computer to the appliance and use the Input app to view the computer's input.

SMART recommends the following varieties of cable:

Cable type	Maximum length	Recommendations
HDMI	23' (7 m)[1]	Use only certified HDMI cables that have been tested to support the performance standard you require.
DisplayPort	23' (7 m)	Use DisplayPort 1.2 compliant or better cables.

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

Cable type	Maximum length	Recommendations
USB	16' (5 m)	Use a USB extender if the distance between the computer and the display is greater than 16' (5 m). For more information, see *USB extenders* on page 12.

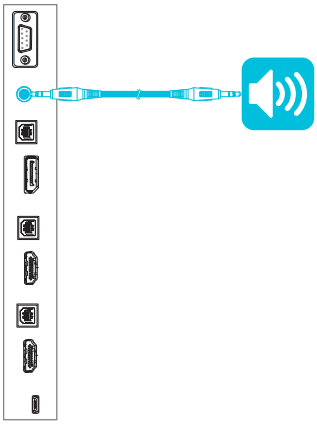
Using cables that exceed these maximum lengths may produce unexpected results, degraded picture quality or degraded USB connectivity.

SMART software should be installed on any computers users connect to the display. For information on installing SMART software and viewing a connected computer's input on the display, see the *SMART Board 6000 and 6000 Pro series interactive display user's guide* (smarttech.com/kb/171166).

Connecting external speakers

The display includes two 10 W speakers, which are designed to provide sound at the front of a room. You might want to connect the SBA-100 projection audio system (see *SBA-100 projection audio system* on page 12) or third-party external active speakers if you're providing sound in a larger space.

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



NOTE

The above diagram shows the location of the stereo 3.5 mm connector on SPNL-6000-V3/SBID-6000 models. See *Chapter 3: Connecting power and devices* on page 25 for the location of the stereo 3.5 mm connector on your specific model.

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.

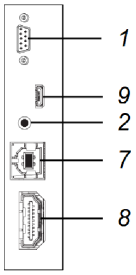
You can use the display's RS-232 connector to connect a third-party external control system to the display (see *Appendix D: Remotely managing the display* on page 77).

NOTE

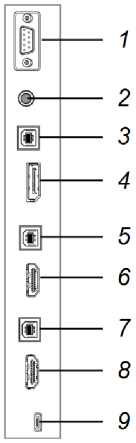
Displays are not compatible with centralized remote control systems, such as a universal remote control.

Connector panel reference

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



SPNL-6000-V1 models



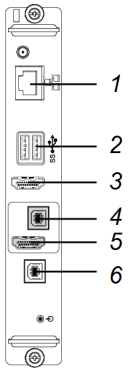
All other models

No.	Connector	Connects to	Notes
1	RS-232	Room control system	See page 77 and RS-232 cables and connectors.
2	Stereo 3.5 mm	External speakers	See page 27 and Analog audio cables and connectors.
3	USB Type-B	DisplayPort input (touch)	See page 27 and USB cables and connectors.
4	DisplayPort in	DisplayPort input (video and audio)	See page 27 and DisplayPort cables and connectors.

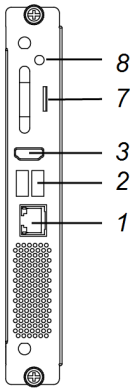
No.	Connector	Connects to	Notes
5	USB Type-B	HDMI2 input (touch)	See page 27 and USB cables and connectors.
6	HDMI in	HDMI2 input (video and audio)	See page 27 and HDMI cables and connectors.
7	USB Type-B	HDMI1 input (touch)	See page 27 and USB cables and connectors.
8	HDMI in	HDMI1 input (video and audio)	See page 27 and HDMI cables and connectors.
9	USB Micro-B	[N/A]	This connector is a service port. **NOTE** This connector is located above the RS-232 connector in SPNL-6000-V2 and SPNL-6000P models.

iQ appliance reference

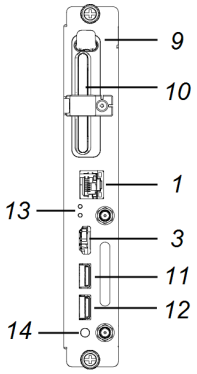
The following diagram and table present the connectors on the iQ appliance:



AM30



AM40



AM50

No.	Connector	Connects to	Notes
1	RJ45	Network	See page 26.
2	USB Type-A (×2)	Supported peripherals	[N/A]

No.	Connector	Connects to	Notes
3	HDMI out	External monitor	This receptacle is HDCP-encrypted HDMI. See HDMI cables and connectors.
4	USB Type-B	OPS/HDMI input (touch)	See page 27.
5	HDMI in	OPS/HDMI input (video and audio)	See page 27.
6	USB Type-B	[N/A]	This receptacle is a service port.
7	Micro SD	[N/A]	This receptacle is a service port.
8	LED	[N/A]	LED lights green when the iQ appliance is inserted in the accessory slot and turned on.
9	Eject button	[N/A]	This button ejects the Intel Compute Card. See Ejecting the Intel Compute Card.
10	Intel Compute Card	[N/A]	For iQ appliance (AM50) only.
11	USB Type-A	Supported peripherals	For iQ appliance (AM50) only. Any supported peripherals connected to this receptacle are available in the Windows 10 operating system. See Using Input.
12	USB Type-A	Supported peripherals	For iQ appliance (AM50) only. Any supported peripherals connected to this receptacle are available for the iQ experience. See page 27.
13	Lock and Eject LEDs	[N/A]	The Lock LED lights when the iQ appliance (AM50) shouldn't be removed from the display. The Eject LED lights when it is safe to remove the iQ appliance (AM50) from the display. See Ejecting the Intel Compute Card.

No.	Connector	Connects to	Notes
14	Power button and LED	[N/A]	LED lights when the iQ appliance is inserted in the accessory slot and turned on. Press the Power button to start up Windows 10 on the Intel Compute Card.
Not pictured			
13	Intel Compute Card label	[N/A]	For iQ appliance (AM50) only The label for the Intel Compute Card. The label is titled “Assembly, PC, AM50”.
13	iQ appliance (AM50)	[N/A]	For iQ appliance (AM50) only The label for the iQ appliance (AM50). The label is titled “Model / AM50”.

NOTE

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

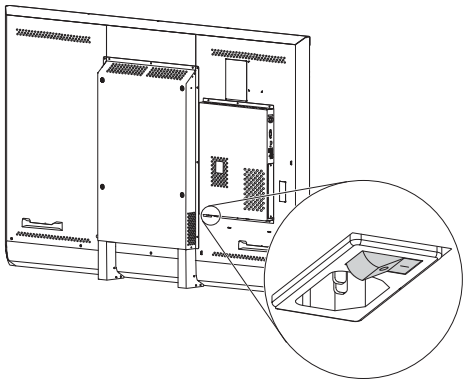
Chapter 4

Turning on the display for the first time

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

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

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



2. Select your preferred language, and then tap **Next**.
3. Select your country, and then tap **Next**.
4. Select your time zone, and then tap **Next**.
5. Set the date, and then tap **Next**.
6. Set the time, and then tap **Next**.
7. Name the display, and then tap **Next**.
8. If the display isn't using a wired network connection, select a wireless network, and then tap **Next**.

IMPORTANT

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

9. Select the list of applications that will appear in the launcher, and then tap **Next**. For more information about the apps, see the *SMART Board 6000 and 6000 Pro series interactive display user's guide* (smarttech.com/kb/171166).
10. Select the apps you want to appear in the Apps Library, and then tap **Next**.

    TIP

    To change which apps appear in the Apps Library, see Adding or removing apps from the launcher.

11. Tap **Finish**.

    The *Welcome* screen appears.

Chapter 5

Orienting and calibrating the display

Orienting the display 35
Calibrating the display 36

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

Orienting the display

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	a. Select **Start**. b. Scroll to and select **SMART Technologies** > **SMART Settings**.
Windows 8	a. Open the *Apps* screen. b. Scroll to and select **SMART Technologies** > **SMART Settings**.
Windows 7	Select **Start** > **All Programs** > **SMART Technologies** > **SMART Tools** > **SMART Settings**.
macOS	a. Press the **SMART Board** icon on the Mac menu bar. b. Press **SMART Settings**.

   SMART Settings appears.

2. Press **Orient**.

3. Press 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.

5. If orientation doesn't correct inaccurate touch, calibrate the display (see *Calibrating the display* below).

Calibrating the display

Digital cameras in the corners of the display track the position of the pens, eraser and your finger on the interactive surface, and then send the information to the SMART software on connected computers, which interprets this information as mouse clicks, digital ink or an eraser in the appropriate location. Calibration determines the position and angles of the cameras to accurately identify the location of touches on the display.

IMPORTANT

If an error message appears while you calibrate the display, contact your authorized SMART reseller (smarttech.com/where).

To calibrate the display when connected to a computer

1. Open SMART Settings:

Operating system	Procedure
Windows 10	a. Select **Start**. b. Scroll to and select **SMART Technologies** > **SMART Settings**.
Windows 8	a. Open the *Apps* screen. b. Scroll to and select **SMART Technologies** > **SMART Settings**.
Windows 7	Select **Start** > **All Programs** > **SMART Technologies** > **SMART Tools** > **SMART Settings**.
macOS	a. Press the **SMART Board** icon on the Mac menu bar. b. Press **SMART Settings**.

   SMART Settings appears.

2. Press **SMART Hardware Settings**.
3. If more than one SMART product is connected to your computer, select the display.
4. Select **Advanced Settings** from the drop-down list.
5. Press **Calibrate**, and then follow the on-screen instructions.

   The calibration screen appears. This can take a few moments.

6. Press the red target with the tip of a pen. Hold the tip at the center of the target until the target turns green, and then lift the pen.

   The target moves to the next location.

   NOTE

   You can calibrate a target again by pressing the LEFT ARROW key on your keyboard.

7. Continue pressing targets until the second calibration screen and a grid appears.

   An example appears briefly to demonstrate how to draw across the screen to calibrate the interactive surface.

8. Use a pen to draw a spiral horizontally across the grid. As you draw, the ink is blue. As you complete each square, the square becomes green.

   When all the squares are green, a progress bar appears.

   When the progress bar is full, the message *Calibration successful* appears.

   IMPORTANT

   Wait until the calibration screen indicates that the display is operating correctly before proceeding.

9. Orient the display (see *Orienting the display* on page 35).

Chapter 6

Maintaining the display

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Updating firmware and software 44
    Updating firmware 44
    Updating system software 45

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

Checking the display installation

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

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

If you find an issue, contact a trained installer.

Cleaning the screen

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

CAUTION

- Do not use permanent or dry-erase markers on the screen. If dry-erase markers are used on the screen, remove the ink as soon as possible with a lint-free, non-abrasive cloth.
- Do not rub the screen with dense or rough material.
- Do not apply pressure to the screen.
- Do not use cleaning solutions or glass cleaners on the screen, because they can deteriorate or discolor the screen.
- Avoid touching the reflective tape between the screen and the frame, and ensure that this strip stays dry. Damage to this strip affects touch interactivity.

To clean the screen

1. Turn off any connected computers.
2. Turn off the display (see *Turning the display off and back on* on page 42).
3. Wipe the screen with a lint-free, non-abrasive cloth.

NOTE

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

Cleaning the camera windows and reflective tape

The display's DViT® (Digital Vision Touch) technology uses four cameras in the corners of the frame and the reflective material between the screen and the frame. Dust buildup on the camera windows or reflective tape can impair touch performance.

Inspect these areas regularly for dust, and clean them if any obvious buildup has occurred.

CAUTION

- Dust buildup on the camera windows and reflective tape will degrade touch performance. SMART recommends that you inspect the camera windows and reflective tape for buildup

and clean weekly.

- Do not use compressed air to clean the camera windows or borders.
- Do not use water, chemicals or cleaning agents.
- Applying too much pressure when cleaning the tape or cameras can damage the tape and cause performance issues or errors.

To clean the camera windows and reflective tape

1. Using a clean lint-free cloth, gently wipe the camera windows in the top corners and the reflective tape along the top of the screen.
2. Gently wipe the reflective tape along the sides of the screen.
3. Gently wipe the camera windows in the bottom corners and the reflective strip across the bottom of the screen.

Cleaning the presence detection sensor

The display has a presence detection sensor on its bottom frame (see *Presence detection sensor* on page 10).

Inspect the sensor regularly for dust and gently wipe it using a clean lint-free cloth if buildup has occurred.

CAUTION

Do not use compressed air, water, chemical agents or cleaning agents to clean the sensor.

Maintaining ventilation

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

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

  For more information on removing the display, see *Removing and transporting the display* on page 43.

CAUTION

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

Preventing condensation

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

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

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

Replacing the pens

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

Turning the display off and back on

In some situations, you need to turn off the display for a period of time. You can turn it back on after.

To turn the display off

1. Press the **Standby** button on the front control panel twice.
2. 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

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

Resetting the display

You can reset the display and the iQ appliance using the front control panel.

To reset the display

1. Press the **Standby** button on the front control panel.

   A message appears on the screen, prompting you to either press the button again to enter Standby mode or press and hold the button to reset the display.

2. Press and hold the **Standby** button until the screen turns black.

   The display and iQ appliance reset.

Removing and transporting the display

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

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

WARNING

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

IMPORTANT

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

To remove the display

1. Turn off any connected computers.
2. Turn off the display (see *Turning the display off and back on* on the previous page)
3. Flick the switch beside the AC power inlet to the OFF (O) position.

4. Remove all accessible cables and connectors.
5. Remove the iQ appliance from the accessory slot.
6. Lift the display from its mounting location.

   WARNING

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

   CAUTION

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

7. Remove the mounting brackets.

To transport the display

See *Moving the display to the installation site* on page 15.

Updating firmware and software

Updating firmware

The display uses firmware on its processor. Updates to SMART software could include a firmware update in the form of a downloaded firmware executable file. When the display detects this executable file, you're prompted to run the file to update the firmware.

CAUTION

- Only a system administrator should update display firmware.
- Only one display can be connected to the computer during the firmware update.
- Do not disconnect the display from your computer during the firmware update.
- Do not touch the display screen or input button during the firmware update.
- Do not turn off your computer or the display during the firmware update.

To update firmware

See SMART Board 6000 series firmware.

Updating system software

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

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

NOTES

- You can configure your organization's network to allow or prevent automatic system software updates.
- Alternatively, you can download system software updates at smarttech.com/downloads and update your display using a USB drive.

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

To apply an automatic system software update manually

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

Chapter 7

Troubleshooting

Using the indicator light to resolve common issues 48
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Contacting your reseller for additional support 54
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    Finding the iQ appliance serial number 55

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

- Power
- Presence detection and Wake to Touch
- Front control panel
- Video
- Image quality
- Audio
- Touch and digital ink
- iQ experience
- Intel Compute Card
- Software

Using the indicator light to resolve common issues

The Standby button on the front control panel also functions as an indicator light. You can use the indicator light to resolve common issues with the display.

For more information, see *Front control panel* on page 8.

Resolving issues with power

Issue	Solutions
The display doesn't turn on and its power light isn't lit.	• Make sure the power cable is securely fastened to the power outlet and the display. **NOTE** 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. • Make sure the switch beside the AC power inlet is in the ON (I) position. • Make sure the power outlet is working by testing it with a different device. • Make sure the power cable is working by testing it with a different device.
The display turns on, its power light is lit, but nothing shows on the screen.	• See *Resolving issues with video* on page 50. • Restart the display. See *Turning the display off and back on* on page 42.
The display doesn't turn on when you use a connected computer's mouse or keyboard.	• Make sure the computer is on. • Make sure the display is in Power Save mode rather than Standby mode. You can enable Power Save mode from the on-screen display menu. For SPNL-6000-V3/SBID-6000 models, see *Power Save* on page 65 For SPNL-6000-V2 and SPNL-6000P models, see *Power Save* on page 70. For SPNL-6000-V1 models, see *Power Save* on page 74. Also see Understanding the SMART Board 6000 series and 8000i-G5 series interactive flat panels' power modes. **NOTE** The display's power light is solid amber when the display is in Power Save mode.
You're experiencing other issues with power, or the previous solutions don't resolve the issue.	See *Referring to the SMART knowledge base for additional troubleshooting information* on page 54.

Resolving issues with presence detection and Wake to Touch

Issue	Solutions
The display doesn't turn on when users enter the room.	• Make sure all cables are securely connected and presence detection is enabled. For SPNL-6000-V3/SBID-6000 models, see *Proximity* on page 65. For SPNL-6000-V2 and SPNL-6000P models, see *Proximity* on page 70. For SPNL-6000-V1 models, see *Proximity* on page 75. • Make sure nothing is blocking the presence detection sensor.
The display turns on when it shouldn't.	• Set the Re-enable Time option so that users have enough time to leave the room. For SPNL-6000-V3/SBID-6000 models, see *Proximity* on page 65. For SPNL-6000-V2 and SPNL-6000P models, see *Proximity* on page 70. For SPNL-6000-V1 models, see *Proximity* on page 75. • Check for and, if possible, move the display away from the following: ◦ Direct sunlight ◦ Bright lights ◦ Forced air ducts ◦ Plasma displays ◦ Infrared audio systems and other infrared sources ◦ Polished floors, glass walls, or other reflective surfaces • Be aware that the display's presence detection range is 16' (5 m).
The display doesn't wake when users touch the screen.	• Make sure users touch the screen for at least one second. • Be aware that SPNL-6000-V1 models with scaler firmware 1.1.0.6 or earlier don't wake when you touch the screen.
You're experiencing other issues with presence detection or Wake to Touch, or the previous solutions don't resolve the issue.	See *Referring to the SMART knowledge base for additional troubleshooting information* on page 54.

Resolving issues with the front control panel

Issue	Solutions
The front control panels don't respond when you press them.	Re-enable the front control panel by pressing the Standby button until the buttons light.

Resolving issues with video

Issue	Solutions
You're experiencing the following or similar issues with video: • The video is distorted. • There is visual noise. • The image is dim.	• Make sure any connected computers are on and not in Standby mode. • Set connected computers' resolution and refresh rate to values that the display supports. • Restart the display and any connected computers. See *Turning the display off and back on* on page 42. • Replace the video cable connecting the computer to the display to determine if the issue is with the cable.
The display is on, but nothing shows on the screen.	• If the power light is solid or slowly flashing amber, press the Power button to turn on the display. See Understanding the SMART Board 6000 series and 8000i-G5 series interactive flat panels' power modes. • Make sure any connected computers are on and not in Standby mode. • Make sure that the screen is working by opening the on-screen display menu. • Restart the display and any connected computers. See *Turning the display off and back on* on page 42. • Replace the video cable connecting the computer to the display to determine if the issue is with the cable.
A computer is connected to the display, but only a "No Signal" or "Initializing" message appears on the screen.	Make sure the computer is connected to the currently selected input.
One or more video inputs don't work with the Multi-Window feature.	Make sure the Multi-Window feature is set correctly. See *Multi-Window menu options* on page 71.
You want to output video to another display.	• Be aware that only displays with newer AM30 or AM40 appliances support video output. • See Using a secondary display.
You're experiencing other issues with video, or the previous solutions don't resolve the issue.	See *Referring to the SMART knowledge base for additional troubleshooting information* on page 54.

Resolving issues with image quality

Issue	Solutions
You're experiencing the following or similar issues with image quality: • There are lines or snow on the screen. • The image if flickering or flashing.	• Set the connected computer's resolution and refresh rates to values that the display supports. • Open the on-screen display menu. If it appears correctly, the issue is with the video input. • Adjust the display's image settings. For SPNL-6000-V3/SBID-6000 models, see *Picture menu options* on page 64. For SPNL-6000-V2 and SPNL-6000P models, see *Picture menu options* on page 69. For SPNL-6000-V1 models, see *Picture menu options* on page 72. • Restart the display. See *Turning the display off and back on* on page 42.
There are dead or stuck pixels on the screen.	See Pixel problems.
There are bright spots on the screen.	• Open the on-screen display menu. If it appears correctly, the issue is with the video input. • Take a photograph of the screen and send it to SMART support. If SMART support determines that the issue is with the screen and the display is under warranty, you may be eligible for a replacement.
The image isn't clear. There are lines, double images or other distortions.	Adjust the display's image settings. For SPNL-6000-V3/SBID-6000 models, see *Picture menu options* on page 64. For SPNL-6000-V2 and SPNL-6000P models, see *Picture menu options* on page 69. For SPNL-6000-V1 models, see *Picture menu options* on page 72.
Colors don't appear correctly.	• 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. • When using the Multi-Window feature, be aware that each video input has its own image settings. • Perform a factory reset. For SPNL-6000-V3/SBID-6000 models, see *Factory Reset* on page 66. For SPNL-6000-V2 and SPNL-6000P models, see *Factory Reset* on page 71. For SPNL-6000-V1 models, see *Factory Reset* on page 75.
The image is cut off or shifted to the left or right.	• Adjust any connected computers' video settings, particularly zoom, crop and underscan. See the computer's operating system documentation. • If the computer's desktop is entirely black, change it to dark gray or a different color. • If the computer's background is extended across multiple screens, duplicate the desktop across the screens or set the display as the only screen.
The image doesn't fill the entire screen.	Adjust any connected computers' video settings, particularly overscan. See the computer's operating system documentation.

Issue	Solutions
A persistent image appears on the display.	See Image persistence or burn in on LCD displays.
You're experiencing other issues with image quality, or the previous solutions don't resolve the issue.	See *Referring to the SMART knowledge base for additional troubleshooting information* on page 54.

Resolving issues with audio

Issue	Solutions
You're experiencing the following or similar issues with audio: • No sound is coming from the speakers. • Sound is coming from the speakers, but the volume is low. • The sound is distorted or muffled.	• 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. • Adjust the volume on the display and the connected computer and make sure neither are muted. • Adjust the display's audio settings. For SPNL-6000-V3/SBID-6000 models, see *Sound menu options* on page 65. For SPNL-6000-V2 and SPNL-6000P models, see *Sound menu options* on page 70. For SPNL-6000-V1 models, see *Sound menu options* on page 73. • If you're using the integrated speakers, set the volume for the computer and any running applications to 80%, and then adjust the display's volume. OR If you're using 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.
There is a whine or buzzing sound coming from the back of the display.	• 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.
You're experiencing other issues with audio, or the previous solutions don't resolve the issue.	See *Referring to the SMART knowledge base for additional troubleshooting information* on page 54.

Resolving issues with touch and digital ink

Issue	Solutions
You're experiencing the following or similar issues with touch and digital ink: • When users touch or write on the screen, the pointer or digital ink appears in the wrong place. • A "Limited Functionality" message appears when users touch or attempt to write on the screen. • Touch and digital ink are intermittent. • The display only responds to touch on part of the screen. • Digital ink disappears as you write. • Digital ink colors change unexpectedly.	• Make sure that the pen is touching the interactive surface within a 45° angle and that your hand is not covering the pen's IR cone. • If you're using two pens, make sure they're at least 2" (5 cm) apart. • Restart the display. See *Turning the display off and back on* on page 42. • Confirm with the installers that the computer is connected to the display with only a single cable. • Clean the cameras and the frame on all four sides to ensure no dust or objects are obstructing the cameras' view. • Calibrate the display. • Make sure SMART Product Drivers and SMART Ink are installed and running on any connected computers. • Use a known working pen from another display to check if the issue is being caused by the pen. • Remove infrared sources such as incandescent or arc lights, desk lamps and infrared audio devices or move the display to another location in the room. • Use SMART Diagnostics to confirm if one or more of the display's cameras has failed. See Using the View menu. • Update the firmware. **NOTE** Always calibrate the panel after updating the firmware. • Remove the display from the wall, calibrate it and confirm if this resolves the issue. If it does, check the wall and wall mount for issues.
The display responds to touch but not to writing with a pen.	Reinstall or update SMART Product Drivers.
The display doesn't respond to touch or writing with a pen.	Make sure any connected computers have detected the display's USB connection and installed drivers. On Windows computers, open Device Manager and make sure there is no red X or yellow explanation mark (!) over the display's icon. On Mac computers, open System Information and ensure there are no error messages in the display's row.
The display doesn't respond to touch when you're using the Multi-Window feature.	Be aware that the Multi-Window feature doesn't support touch.
You can't write or draw in Microsoft Office.	• Make sure Microsoft Office 2013 or later is installed. • Reinstall or update SMART Product Drivers and SMART Ink.
SMART Ink toolbars appear even when you don't pick up a pen	If two or more displays are mounted on the same wall, make sure they are mounted in such a way that their cameras don't interfere with each other.
You're experiencing other issues with touch and digital ink, or the previous solutions don't resolve the issue.	See *Referring to the SMART knowledge base for additional troubleshooting information* on the next page.

Resolving issues with the iQ experience

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

Resolving issues with the Intel Compute Card

For information on resolving issues with the Intel Compute Card, including the drivers, see Troubleshooting Windows 10 on Intel Compute Card.

Resolving issues with software

For information on resolving issues with SMART software, see the following pages in the Support section of the SMART website:

- Troubleshooting SMART Notebook 18
- Troubleshooting SMART Learning Suite Online
- Troubleshooting SMART Meeting Pro 4
- Troubleshooting SMART Ink 5
- Troubleshooting SMART Product Drivers 12

Referring to the SMART knowledge base for additional troubleshooting information

Refer to the SMART knowledge base for additional troubleshooting information:

community.smarttech.com/s/topic/0TOU0000000XlU9OAK/6000-series#articles

Contacting your reseller for additional support

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

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

Finding the display serial number

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

- In the on-screen display menu (see *Serial Number* on page 66 for SPNL-6000-V3/SBID-6000 models, *Serial Number* on page 72 for SPNL-6000-V2 and SPNL-6000P models or *Serial Number* on page 76 for SPNL-6000-V1 models)
- On a label on the bottom frame
- On a label on the back of the display

Finding the iQ appliance serial number

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

NOTE

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

Appendix A

Adjusting iQ settings

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

NOTE

Older versions of the display don't include all the settings listed here.

Network settings

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

Personalization

Option	Values	Function	Notes
• Wallpaper	[Wallpapers]	Select the wallpaper that appears in the background.	• 1920 × 1080 images work best • The display supports .png and .jpg file formats • See Changing the display's wallpaper.

Application settings

Option	Values	Function	Notes
▸ **Launcher**			
• SMART Notebook Player	On Off	Enables or disables SMART Notebook Player in the Apps Library	[N/A]
• Browser	On Off	Enables or disables Browser in the Apps Library	[N/A]
• Screen Share	On Off	Enables or disables Screen Share in the Apps Library	[N/A]
▸ **SMART Whiteboard**			
• Whiteboard Storage	[N/A]	[N/A]	[N/A]
• Library	On Off	Enables or disables saving whiteboard sessions	[N/A]
• Save Whiteboards in Library	For 1 week For 1 Month Indefinitely	Sets how long whiteboard sessions are saved	[N/A]
• Mobile App	[N/A]	[N/A]	[N/A]
• Saving Whiteboards	On Off	Enables or disables the Capture function in the SMART kapp app	If this option is off, the QR code is not visible. The SMART kapp app is unable to connect to the display and your mobile device is unable to save snapshots of the display in the app.
• Sharing Whiteboards	On Off	Enables or disables the Invite function on the SMART kapp app	If this option is off, you're unable to invite people to your session.
• Annotation			

Option	Values	Function	Notes
• Enable annotation layers	On Off	Enables or disables annotations on the Browser and Screen Share app	[N/A]
▸ **Screen Share**			
• Require Permission	On Off	Enables or disables a device automatically connecting and sharing its screen.	[N/A]
• AirPlay	On Off	Enables or disables the AirPlay protocol.	AirPlay is enabled by default.
• Google Cast	On Off	Enables or disables the Google Cast protocol.	Google Cast is enabled by default.
• Miracast	[N/A]	Enables or disables the Miracast protocol.	Miracast is enabled by default.
• Reset Screen Share	[N/A]	Closes and restarts the Screen Share app and its discovery services	You can restart Screen Share as a troubleshooting step if a mobile device or computer can't find or connect to the display.

System settings

Option	Values	Function	Notes
▸ **Date & Time**			
• Automatic Date & Time	On Off	Sets the display's date and time automatically	Configure the network to allow Network Time Protocol (NTP) requests to Internet time servers. See Connecting to a network.
• Date	[N/A]	Sets the display's date	Disable **Automatic date & time** to set the date manually.
• Time	[N/A]	Sets the display's time	Disable **Automatic date & time** to set the time manually.
• 24 Hour Time	On Off	Shows the display's time using the 24-hour clock	[N/A]
• Time Zone	[N/A]	Sets the display's time zone	[N/A]

Option	Values	Function	Notes
• Language	[Languages]	Sets the language for the settings menu	To select a different language for the on-screen display menu, see *Language* on page 65 for SPNL-6000-V3/SBID-6000 models, *Language* on page 70 for SPNL-6000-V2 and SPNL-6000P models or *Language* on page 74 for SPNL-6000-V1 models.
• Country	[Countries]	Sets the display's country	[N/A]
▸ **Diagnostics**			
• Touch Calibration Wizard	[N/A]	Calibrate the display	[N/A]
• Factory Reset	[N/A]	Resets all options to their default values	Only administrators should reset the display.
• Performance Logging	On Off	Enables or disables diagnostics logging for iQ experience performance	Logging performance may help with troubleshooting.
• Save Log File	[N/A]	Copy diagnostic logs to a USB drive	[N/A]
• Improve the Experience	On Off	Sends usage statistics and error reports to SMART	[N/A]
• SMART Cloud Status	[Status]	Shows the status of SMART Cloud	[N/A]
• Support ID	[Support ID]	Shows the support ID associated with the display	[N/A]
▸ **Security**			
• Lock Down Settings	[N/A]	Lock down the display's settings using a certificate on a USB drive.	See Locking down the Settings app for more information.
• Install certificates	[N/A]	Install certificates to connect to a network	[N/A]
• Clean up	[N/A]	[N/A]	[N/A]
• 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]

Option	Values	Function	Notes
• Clean Up the whiteboard	[N/A]	Saves the Whiteboard session to the Library and erases the Whiteboard	[N/A]
• Clean Up the browser	[N/A]	Closes the browser tabs and clears the history, cache and cookies	[N/A]
• Clean Up other applications	[N/A]	Closes open applications	[N/A]
▸ **Auto Update**			
• Updates Channel	Stable Channel Beta Channel	Sets which system software updates the display receives	When switching from the Beta channel to the Stable channel, a factory reset occurs. See page 60 for more information about factory reset. For more information about the Beta Channel, see Switching to the Beta channel.
• 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.	If an update is available, the text changes to **Apply update now**.
▸ **About**			
• Board Name	[N/A]	Select a name for your display	[N/A]
• Help	[N/A]	Shows the SMART support site	[N/A]
• Send Feedback	[N/A]	Send feedback to SMART about the display experience	[N/A]
• Board Details	[N/A]	[N/A]	[N/A]
• Build Number	[N/A]	Shows the iQ system software's version number	[N/A]
• Serial Number	[N/A]	Shows the iQ appliance serial number	[N/A]
• Firmware Details	[N/A]	[N/A]	[N/A]
• Touch controller version	[N/A]	Shows the display's touch controller version	[N/A]
• Scaler version	[N/A]	Shows the display's scaler version	[N/A]

Option	Values	Function	Notes
• Legal Information	[N/A]	[N/A]	[N/A]
• End User License Agreement	[N/A]	Shows the SMART end user license agreement	[N/A]
• Open Source Licenses	[N/A]	Shows the open source licenses	[N/A]
• SMART Intellectual Property	[N/A]	Shows the SMART intellectual property information	[N/A]

Appendix B

Using the SPNL-6000-V3/SBID-6000 on-screen display menu

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On SPNL-6000-V3/SBID-6000 models, you can access the on-screen display menu using the front control panel (see *Front control panel* on page 8).

Changing settings in the on-screen display menu

To change settings in the on-screen display menu

1. Press the **Menu** button ☰ on the front control panel.

   The on-screen display menu appears.

2. Press the **Move Up** ^ and **Move Down** v buttons to highlight a menu item, and then press the **Select** button ⏎.

3. Press the **Move Up** ^ and **Move Down** v buttons to highlight a menu option.

4. Press the **Increase** + and **Decrease** − buttons to change the menu option's setting.

   OR

   Press the **Select** button ⏎ to open the menu option's submenu. (Repeat steps 3 and 4 to change settings in the submenu.)

5. Press and hold the **Menu** button ☰ until the on-screen menu closes.

Picture menu options

Option	Values	Function	Notes
▸ Picture Mode	Standard User Dynamic	Sets the picture mode	Select **User** to customize brightness, contrast, sharpness and other *Picture* options. Select one of the other values to set brightness, contrast, sharpness and other *Picture* options to default values.
• Brightness	0–100	Sets the overall brightness of the image and background	You can modify this option only if you select **User** in *Picture Mode*.
• Contrast	0–100	Sets the difference in brightness between the lightest and darkest parts of the image	You can modify this option only if you select **User** in *Picture Mode*.
• Sharpness	0–100	Sets the image sharpness	You can modify this option only if you select **User** in *Picture Mode*.
▸ Color temperature	Normal Warm User Cool	Sets the color temperature	Select **User** to customize the amount of red, green and blue in the image. Select one of the other values to set the amount of red, green and blue in the image to default values.
• Red	0–100	Sets the amount of red in the image	You can modify this option only if you select **User** in *Color Temperature*.
• Green	0–100	Sets the amount of green in the image	You can modify this option only if you select **User** in *Color Temperature*.
• Blue	0–100	Sets the amount of blue in the image	You can modify this option only if you select **User** in *Color Temperature*.
• Local Dimming	On Off	Enables or disables local dimming mode	[N/A]
• Picture Reset	[N/A]	Resets all options in the *Picture* menu to their default values	[N/A]

Sound menu options

Option	Values	Function	Notes
• Volume	0–100	Sets the volume	[N/A]
• Balance	-50–50	Balances the left and right volume	[N/A]
• Sound Reset	[N/A]	Resets all options in the *Sound* menu to their default values	[N/A]

OSD menu options

Option	Values	Function	Notes
• Language	[Languages]	Sets the on-screen display menu's language	[N/A]
• OSD Turn Off	Off 5 seconds 10 seconds 20 seconds	Sets the time of inactivity before the on-screen display menu turns off	[N/A]
• OSD Reset	[N/A]	Resets all options in the *OSD* menu to their default values	[N/A]

Setup menu options

Option	Values	Function	Notes
• Power Save	On Off	Enables or disables Power Save mode	When Power Save mode is enabled and there is no video input, *No Signal* appears on the screen for 90 seconds before the display turns off.
• FBC Control	On Off	Enables or disables the front control panel	[N/A]
• Wake to Touch	On Off	Enables or disables the ability to wake the display by touching the screen	[N/A]
▸ Proximity	On Off	Enables or disables presence detection	[N/A]

Option	Values	Function	Notes
• Turn On Display	On Off	Sets the display to turn on if the presence detection sensor detects users in the room	Set this option to “Off” if you prefer the display to remain in Standby mode when users first enter the room. A user then needs to press the **Standby** button or touch the screen (if the Wake to Touch option is enabled) to turn on the display.
• Re-enable Time	1Min.–10Min.	Sets a period of time between when the display is turned off and when it detects motion again	Set this option to give users enough time to leave the room after they turn off the display.
• Auto Power Off	15Min.–240Min.	Sets how long the display waits between when it last detects motion and when it turns off	[N/A]
• Video input detect	Off OPS/HDMI	Specifies the default video input source when video input detection is enabled	With video input detection, the display shows the selected video input when there are no computers or other input sources connected. Video input detection is useful in scenarios where a user connects a laptop to the display for a meeting and forgets to return to the default video input after disconnecting the laptop.
• Setup Reset	[N/A]	Restores the setup settings to their default value	[N/A]
• Factory Reset	[N/A]	Resets options in all menus to their default values	[N/A]

About menu options

Option	Values	Function	Notes
• Model Number	[N/A]	Shows the display’s model number	[N/A]
• Serial Number	[N/A]	Shows the display’s serial number	[N/A]
• Scaler firmware version	[N/A]	Shows the display’s scaler firmware version	[N/A]
• Touch firmware version	[N/A]	Shows the display’s touch firmware version	[N/A]
• OPS Information	[N/A]	Indicates whether a module is installed in the accessory slot	[N/A]
• USB Update	[N/A]	Updates the scaler firmware using a connected USB drive	[N/A]

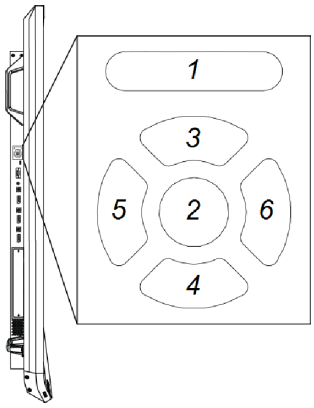
Appendix C

Using the SPNL-6000-V2, SPNL-6000-V1 and SPNL-6000P on-screen display menu

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On SPNL-6000-V2, SPNL-6000-V1 and SPNL-6000P models, you can access the on-screen display menu using the menu control panel on the side of the display.



No.	Name
1	MENU
2	SET
3	[Up]
4	[Down]
5	[Left]
6	[Right]

Changing settings in the on-screen display menu

To change settings in the on-screen display menu

1. Press the **MENU** button on the menu control panel.

   The on-screen display menu appears.

2. Press the up and down arrows to highlight a menu, and then press **SET**.
3. Press the up and down arrows to highlight a menu option.
4. Press the left and right arrows to change the menu option's setting.

   OR

   Press the right arrow to open the menu option's submenu. (Repeat steps 3 and 4 to change settings in the submenu.)

5. Press **MENU** until the on-screen menu closes.

SPNL-6000-V2 and SPNL-6000P menu options

Picture menu options

Option	Values	Function	Notes
▸ Picture Mode	Standard User Dynamic	Sets the picture mode	Select **User** to customize brightness, contrast, sharpness and other *Picture* options. Select one of the other values to set brightness, contrast, sharpness and other *Picture* options to default values.
• Brightness	0–100	Sets the overall brightness of the image and background	You can modify this option only if you select **User** in *Picture Mode*.
• Contrast	0–100	Sets the difference in brightness between the lightest and darkest parts of the image	You can modify this option only if you select **User** in *Picture Mode*.
• Black Level	0–100	Sets the level of brightness in the darkest parts of the image	You can modify this option only if you select **User** in *Picture Mode*.
• Color	0–100	Sets the image color depth	You can modify this option only if you select **User** in *Picture Mode*.
• Sharpness	0–100	Sets the image sharpness	You can modify this option only if you select **User** in *Picture Mode*.
▸ Color temperature	Normal Warm User Cool	Sets the color temperature	Select **User** to customize the amount of red, green and blue in the image. Select one of the other values to set the amount of red, green and blue in the image to default values.
• Red	0–100	Sets the amount of red in the image	You can modify this option only if you select **User** in *Color Temperature*.
• Green	0–100	Sets the amount of green in the image	You can modify this option only if you select **User** in *Color Temperature*.
• Blue	0–100	Sets the amount of blue in the image	You can modify this option only if you select **User** in *Color Temperature*.
• Local Dimming	On Off	Enables or disables local dimming mode	This option is applicable to only SPNL-6075 and SPNL-6275 models.
• Picture Reset	[N/A]	Resets all options in the *Picture* menu to their default values	[N/A]

Sound menu options

Option	Values	Function	Notes
• Volume	0–100	Sets the volume	[N/A]
• Balance	L50–R50 OR -50–50	Balances the left and right volume	[N/A]
• Sound Reset	[N/A]	Resets all options in the *Sound* menu to their default values	[N/A]

OSD menu options

Option	Values	Function	Notes
• Language	[Languages]	Sets the on-screen display menu's language	[N/A]
• OSD Turn Off	Off 5 seconds 10 seconds 15 seconds	Sets the time of inactivity before the on-screen display menu turns off	[N/A]
• OSD Reset	[N/A]	Resets all options in the *OSD* menu to their default values	[N/A]

Setup menu options

Option	Values	Function	Notes
• Power Save	On Off	Enables or disables Power Save mode	When Power Save mode is enabled and there is no video input, *No Signal* appears on the screen for 25 seconds before the display turns off.
• Monitor ID	1–100	Specifies a unique ID for the display	[N/A]
• FBC Control	On Off	Enables or disables the front control panel	[N/A]
• Wake to Touch	On Off	Enables or disables the ability to wake the display by touching the screen	[N/A]
▸ Proximity	On Off	Enables or disables presence detection	[N/A]

Option	Values	Function	Notes
• Turn On Display	On Off	Sets the display to turn on if the presence detection sensor detects users in the room	Set this option to "Off" if you prefer the display to remain in Standby mode when users first enter the room. A user then needs to press the **Standby** button or touch the screen (if the Wake to Touch option is enabled) to turn on the display.
• Re-enable Time	1Min.–10Min.	Sets how long the display waits before detecting motion again	[N/A]
• Auto Power Off	15Min.–240Min.	Sets how long the display waits before turning off	[N/A]
• Video input detect	Off OPS/HDMI OPS/DisplayPort	Specifies the default video input source when video input detection is enabled	With video input detection, the display shows the selected video input when there are no computers or other input sources connected. Video input detection is useful in scenarios where a user connects a laptop to the display for a meeting and forgets to return to the default video input after disconnecting the laptop.
• Setup Reset	[N/A]	Restores the setup settings to their default value	[N/A]
• Factory Reset	[N/A]	Resets options in all menus to their default values	[N/A]

Multi-Window menu options

Option	Values	Function	Notes
• Multi-Window Mode	Off Dual Quad	Sets the number of video inputs that appear on the display's screen to one (**Off**), two (**Dual**) or four (**Quad**)	If you use this feature, be aware that SMART doesn't support touch while multiple input sources appear on the display.
• Audio Input	Window1 Window2 WIndow3 Window4	Sets the audio input source when multiple video inputs are displayed	You can modify this option only if you select **Dual** or **Quad** in *Multi-Window Mode*.
• Window1	[Depends on the model]	Select the video input for the first window	You can modify this option only if you select **Dual** or **Quad** in *Multi-Window Mode*.
• Window2	[Depends on the model]	Select the video input for the second window	You can modify this option only if you select **Dual** or **Quad** in *Multi-Window Mode*.

Option	Values	Function	Notes
• Window3	[Depends on the model]	Select the video input for the third window	You can modify this option only if you select **Quad** in *Multi-Window Mode*.
• Window4	[Depends on the model]	Select the video input for the fourth window	You can modify this option only if you select **Quad** in *Multi-Window Mode*.

About menu options

Option	Values	Function	Notes
• Model Number	[N/A]	Shows the display's model number	[N/A]
• Serial Number	[N/A]	Shows the display's serial number	[N/A]
• Scalar firmware version	[N/A]	Shows the display's scalar firmware version	[N/A]
• Touch firmware version	[N/A]	Shows the display's touch firmware version	[N/A]
• OPS Information	[N/A]	Indicates whether a module is installed in the accessory slot	[N/A]

SPNL-6000-V1 menu options

Picture menu options

Option	Values	Function	Notes
▸ Picture Mode	Standard User Dynamic	Sets the picture mode	Select **User** to customize brightness, contrast, sharpness and other *Picture* options. Select one of the other values to set brightness, contrast, sharpness and other *Picture* options to default values.
• Brightness	0–100	Sets the overall brightness of the image and background	You can modify this option only if you select **User** in *Picture Mode*.
• Contrast	0–100	Sets the difference in brightness between the lightest and darkest parts of the image	You can modify this option only if you select **User** in *Picture Mode*.
• Black Level	0–100	Sets the level of brightness in the darkest parts of the image	You can modify this option only if you select **User** in *Picture Mode*.

Option	Values	Function	Notes
• Color	0–100	Sets the image color depth	You can modify this option only if you select **User** in *Picture Mode*.
• Sharpness	0–100	Sets the image sharpness	You can modify this option only if you select **User** in *Picture Mode*.
▸ Color temperature	Normal Warm User Cool	Sets the color temperature	Select **User** to customize the amount of red, green and blue in the image. Select one of the other values to set the amount of red, green and blue in the image to default values.
• Red	0–100	Sets the amount of red in the image	You can modify this option only if you select **User** in *Color Temperature*.
• Green	0–100	Sets the amount of green in the image	You can modify this option only if you select **User** in *Color Temperature*.
• Blue	0–100	Sets the amount of blue in the image	You can modify this option only if you select **User** in *Color Temperature*.
• Movie Mode	Off Low Middle High	Sets the brightness, contrast, black level, color and sharpness for movie watching	[N/A]
• Picture Reset	[N/A]	Resets all options in the *Picture* menu to their default values	[N/A]

Sound menu options

Option	Values	Function	Notes
▸ Sound Mode			
• Treble	L50–R50	Sets the high frequency sound	[N/A]
• Bass	L50–R50	Sets the low frequency sound	[N/A]
▸ EQ			
• 120 Hz	0–100	Sets the sound equalization at 120 Hz	[N/A]
• 500 Hz	0–100	Sets the sound equalization at 500 Hz	[N/A]
• 1.2 kHz	0–100	Sets the sound equalization at 1.2 kHz	[N/A]

Option	Values	Function	Notes
• 7.5 kHz	0–100	Sets the sound equalization at 7.5 kHz	[N/A]
• 12 kHz	0–100	Sets the sound equalization at 12 kHz	[N/A]
• Balance	L50–R50 OR -50–50	Balances the left and right volume	[N/A]
• Audio Input	[Depends on the current video input]	Sets the audio input source	If HDMI is the current video input, the available values are HDMI and USB. If OPS/HDMI is the current video input, the available values are OPS Digital and USB.
• Sound Reset	[N/A]	Resets all options in the *Sound* menu to their default values	[N/A]

OSD menu options

Option	Values	Function	Notes
• Language	[Languages]	Sets the on-screen display menu's language	[N/A]
• OSD Turn Off	Off 5 seconds 10 seconds 15 seconds	Sets the time of inactivity before the on-screen display menu turns off	[N/A]
• OSD Reset	[N/A]	Resets all options in the *OSD* menu to their default values	[N/A]

Setup menu options

Option	Values	Function	Notes
• Power Save	On Off	Enables or disables Power Save mode	When Power Save mode is enabled and there is no video input, *No Signal* appears on the screen for 90 seconds before the display turns off.
• Monitor ID	1–100	Specifies a unique ID for the display	[N/A]
• FBC Control	On Off	Enables or disables the front control panel	[N/A]

Option	Values	Function	Notes
▸ Proximity	On Off	Enables or disables presence detection	[N/A]
• Turn On Display	On Off	Sets the display to turn on if the presence detection sensor detects users in the room	Set this option to "Off" if you prefer the display to remain in Standby mode when users first enter the room. A user then needs to press the **Standby** button or touch the screen (if the Wake to Touch option is enabled) to turn on the display.
• Re-enable Time	1Min.–10Min.	Sets a period of time between when the display is turned off and when it detects motion again	Set this option to give users enough time to leave the room after they turn off the display.
• Auto Power Off	15Min.–240Min.	Sets how long the display waits between when it last detects motion and when it turns off	[N/A]
• Video input detect	On Off	Enables or disables video input detection	With video input detection, the display shows the selected video input when there are no computers or other input sources connected. Video input detection is useful in scenarios where a user connects a laptop to the display for a meeting and forgets to return to the default video input after disconnecting the laptop.
• Lync® Room Reset	[N/A]	Resets options in all menus to their default values (for a SMART Room System™ for Skype® for Business)	[N/A]
• Setup Reset	[N/A]	Restores the setup settings to their default value	[N/A]
• Factory Reset	[N/A]	Resets options in all menus to their default values	[N/A]

About menu options

Option	Values	Function	Notes
• Model Number	[N/A]	Shows the display's model number	[N/A]
• Serial Number	[N/A]	Shows the display's serial number	[N/A]
• Scaler firmware version	[N/A]	Shows the display's scaler firmware version	[N/A]
• Touch firmware version	[N/A]	Shows the display's touch firmware version	[N/A]
• OPS Information	[N/A]	Indicates whether a module is installed in the accessory slot	[N/A]

Appendix D

Remotely managing the display

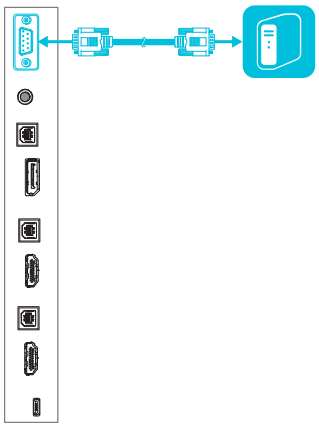
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You can connect an RS-232 cable from the computer's serial output to the RS-232 input on the connector panel to remotely select video inputs, turn the display on or off and get information about the display's current settings, such as contrast and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



IMPORTANT

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

NOTE

You can remotely manage only the display and not the iQ appliance.

Configuring the computer's serial interface settings

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

To configure the computer's serial interface

1. Turn on the display.
2. Turn on the computer, and then start the serial communications program or terminal emulation program.
3. Activate local echo.

4. Configure the serial interface settings using the following values, and then press ENTER.

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

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

NOTE

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

Power modes

The display has three power modes:

- On
- Power Save
- Standby

All commands are available when the display is on. Some commands are available when the display is in Standby mode.

Commands and responses

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

CORRECT

```
>get contrast
contrast=55
```

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

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

INCORRECT

```
>set con trast=65
invalid cmd=set con trast=65
```

NOTES

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

To view a list of available commands

Type **?** at the command prompt, and then press ENTER.

To identify the current value of a setting

Use the **get** command.

This example shows how to get the contrast level:

```
>get contrast
contrast=55
```

To assign a value to a setting

Use the **set** command.

This example sets the contrast level to 65:

```
>set contrast=65
contrast=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 contrast level by 5:

```
>set contrast +5
contrast=70
```

This example decreases the contrast level by 15:

```
>set contrast -15
contrast=55
```

SPNL-6000-V3/SBID-6000 command inventory

Power state

Use the following commands to identify power state settings.

Command	Response	Possible values	Standby mode
get intpowerstate	intpowerstate=*[Value]*	on standby dpms novideo confirm proximitywait welcome	Yes
get powerstate	powerstate=*[Value]*	on off standby	Yes

Use the following commands to assign power state settings.

Command	Possible values	Response	Standby mode
set powerstate *[Value]*	=on =off =standby	powerstate=*[Value]*	Yes

Source

Use the following commands to identify source settings.

Command	Response	Possible values	Standby mode
get input	input=*[Value]*	hdmi1 hdmi2 displayport ops/hdmi	Yes
get videoinputs	videoinputs=*[Value]*	hdmi1 hdmi2 displayport ops/hdmi	Yes
get videoinputdetect	videoinputdetect=*[Value]*	ops/hdmi off	No

Use the following commands to assign source settings.

Command	Possible values	Response	Standby mode
set input *[Value]*	=hdmi1 =hdmi2 =displayport =ops/hdmi	input=*[Value]*	Yes
set videoinputdetect *[Value]*	=ops/hdmi =off	videoinputdetect=*[Value]*	No

Video

Use the following commands to identify video settings.

Command	Response	Possible values	Standby mode
get displaymode	displaymode=*[Value]*	standard user dynamic	No
get contrast	contrast=*[Value]*	0–100	No
get brightness	brightness=*[Value]*	0–100	No
get sharpness	sharpness=*[Value]*	0–100	No

Command	Response	Possible values	Standby mode
get colortemp	colortemp=*[Value]*	normal warm cool user	No
get red	red=*[Value]*	0–100	No
get green	green=*[Value]*	0–100	No
get blue	blue=*[Value]*	0–100	No

Use the following commands to assign video settings.

Command	Possible values	Response	Standby mode
set displaymode *[Value]*	=standard =user =dynamic	displaymode=*[Value]*	No
set contrast *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	contrast=*[Value]*	No
set brightness *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	brightness=*[Value]*	No
set sharpness *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	sharpness=*[Value]*	No
set colortemp *[Value]*	=normal =warm =cool =user	colortemp=*[Value]*	No
set red *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	red=*[Value]*	No
set green *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	green=*[Value]*	No
set blue *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	blue=*[Value]*	No

Audio

Use the following commands to identify audio settings.

Command	Response	Possible values	Standby mode
get volume	volume=*[Value]*	0–100	No
get mute	mute=*[Value]*	on off	No
get balance	balance=*[Value]*	0–100	No

Use the following commands to assign audio settings.

Command	Possible values	Response	Standby mode
set volume *[Value]*	+*[Incremental value]* -*[Incremental value]* =-50–50	volume=*[Value]*	No
set mute *[Value]*	=on =off	mute=*[Value]*	No
set balance *[Value]*	+*[Incremental value]* -*[Incremental value]* =-50–50	balance=*[Value]*	No
set soundreset *[Value]*	=yes	soundreset=*[Value]*	No

System information

Use the following commands to identify system information settings.

Command	Response	Possible values	Standby mode
get autopoweroff	autopoweroff=*[Value]*	15–240	No
get fwverscr	fwverscr=*[Value]*	*[Scalar version firmware number]*	Yes
get fwvertouch	fwvertouch=*[Value]*	*[Touch controller firmware version number]*	Yes
get serialtouch	serialtouch=*[Value]*	*[Touch controller serial number]*	No
get opsinfo	opsinfo=*[Value]*	OPS NO OPS	No
get usb	usb=*[Value]*	hdmi1 hdmi2 displayport ops	No

Command	Response	Possible values	Standby mode
get language[1]	language=*[Value]*	English Arabic Danish German Spanish Finnish French Italian Dutch Norwegian Russian Swedish Chinese_sim	No
get modelnum	modelnum=*[Value]*	*[Model number]*	No
get serialnum	serialnum=*[Value]*	*[Serial number]*	No
get proximityinstalled	proximityinstalled=*[Value]*	yes no	
get proximity	proximity=*[Value]*	on off	Yes
get proximityreenable	proximityreenable=*[Value]*	1–10	Yes
get proximitydetected	proximitydetected=*[Value]*	yes no	No
get powersave	powersave=*[Value]*	on off	No
get fbc	fbc=*[Value]*	on off	No
get waketotouch	waketotouch=*[Value]*	on off	No

Use the following commands to assign system information settings.

Command	Possible values	Response	Standby mode
set autopoweroff *[Value]*	+*[Incremental value]* -*[Incremental value]* =15–240	autopoweroff=*[Value]*	No
set factoryreset *[Value]*	=yes	factoryreset=*[Value]*	Yes

[1]Languages for the on-screen display menu only

Command	Possible values	Response	Standby mode
set language *[Value]*[2]	=English =Arabic =Danish =German =Spanish =Finnish =French =Italian =Dutch =Norwegian =Russian =Swedish =Chinese_sim	language=*[Value]*	No
set proximity *[Value]*	=on =off	proximity=*[Value]*	Yes
set proximityreenable *[Value]*	=1–10	proximityreenable=*[Value]*	Yes
set touchdetected *[Value]*	=yes	touchdetected=*[Value]*	No
set powersave *[Value]*	=on =off	powersave=*[Value]*	No
set fbc *[Value]*	=on =off	fbc=*[Value]*	No
set waketotouch *[Value]*	=on =off	waketotouch=*[Value]*	No

[2]Languages for the on-screen display menu only

SPNL-6000-V2 and SPNL-6000P command inventory

Power state

Use the following commands to identify power state settings.

Command	Response	Possible values	Standby mode
get intpowerstate	intpowerstate=*[Value]*	on standby dpms novideo confirm proximitywait welcome	Yes
get powerstate	powerstate=*[Value]*	on off standby	Yes

Use the following commands to assign power state settings.

Command	Possible values	Response	Standby mode
set powerstate *[Value]*	=on =off =standby	powerstate=*[Value]*	Yes

Source

Use the following commands to identify source settings.

Command	Response	Possible values	Standby mode
get input	input=*[Value]*	hdmi1 hdmi2 displayport ops/hdmi	Yes
get videoinputs	videoinputs=*[Value]*	hdmi1 hdmi2 displayport ops/hdmi	Yes
get videoinputdetect	videoinputdetect=*[Value]*	ops/hdmi off	No

Use the following commands to assign source settings.

Command	Possible values	Response	Standby mode
set input *[Value]*	=hdmi1 =hdmi2 =displayport =ops/hdmi	input=*[Value]*	Yes
set videoinputdetect *[Value]*	=ops/hdmi =off	videoinputdetect=*[Value]*	No

Video

Use the following commands to identify video settings.

Command	Response	Possible values	Standby mode
get displaymode	displaymode=*[Value]*	standard user dynamic	No
get contrast	contrast=*[Value]*	0–100	No
get brightness	brightness=*[Value]*	0–100	No
get sharpness	sharpness=*[Value]*	0–100	No
get colortemp	colortemp=*[Value]*	normal warm cool user	No
get red	red=*[Value]*	0–100	No
get green	green=*[Value]*	0–100	No
get blue	blue=*[Value]*	0–100	No
get localdimming[3]	localdimming=*[Value]*	on off	No

Use the following commands to assign video settings.

Command	Possible values	Response	Standby mode
set displaymode *[Value]*	=standard =user =dynamic	displaymode=*[Value]*	No

[3]SPNL-6075, SPNL-6275, SPNL-6375, SPNL-6075P, SPNL-6275P and SPNL-6375P only

Command	Possible values	Response	Standby mode
set contrast *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	contrast=*[Value]*	No
set brightness *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	brightness=*[Value]*	No
set sharpness *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	sharpness=*[Value]*	No
set colortemp *[Value]*	=normal =warm =cool =user	colortemp=*[Value]*	No
set red *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	red=*[Value]*	No
set green *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	green=*[Value]*	No
set blue *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	blue=*[Value]*	No
set localdimming *[Value]*[4]	=on =off	localdimming=*[Value]*	No

Audio

Use the following commands to identify audio settings.

Command	Response	Possible values	Standby mode
get volume	volume=*[Value]*	0–100	No
get mute	mute=*[Value]*	on off	No
get balance	balance=*[Value]*	0–100	No

[4]SPNL-6075, SPNL-6275, SPNL-6375, SPNL-6075P, SPNL-6275P and SPNL-6375P only

Use the following commands to assign audio settings.

Command	Possible values	Response	Standby mode
set volume *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	volume=*[Value]*	No
set mute *[Value]*	=on =off	mute=*[Value]*	No
set balance *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	balance=*[Value]*	No
set soundreset *[Value]*	=yes	soundreset=*[Value]*	No

Multi-Window

Use the following commands to identify Multi-Window settings.

Command	Response	Possible values	Standby mode
get mw	mw=*[Value]*	off dual quad	No
get mwaudioinput	mwaudioinput=*[Value]*	window1 window2 window3 window4	No
get mwwindow1input	mwwindow1input=*[Value]*	hdmi1 hdmi2 displayport opshdmi opshdmidisplayport	No
get mwwindow2input	mwwindow2input=*[Value]*	hdmi1 hdmi2 displayport opshdmi opshdmidisplayport	No
get mwwindow3input	mwwindow3input=*[Value]*	hdmi1 hdmi2 displayport opshdmi opshdmidisplayport	No

Command	Response	Possible values	Standby mode
get mwwindow4input	mwwindow4input=*[Value]*	hdmi1 hdmi2 displayport opshdmi opshdmidisplayport	No

Use the following commands to assign Multi-Window settings.

Command	Possible values	Response	Standby mode
set mw *[Value]*	=off =dual =quad	mw=*[Value]*	No
set mwaudioinput *[Value]*	=window1 =window2 =window3 =window4	mwaudioinput=*[Value]*	No
set mwwindow1input *[Value]*	=hdmi1 =hdmi2 =displayport =opshdmi =opshdmidisplayport	mwwindow1input=*[Value]*	No
set mwwindow2input *[Value]*	=hdmi1 =hdmi2 =displayport =opshdmi =opshdmidisplayport	mwwindow2input=*[Value]*	No
set mwwindow3input *[Value]*	=hdmi1 =hdmi2 =displayport =opshdmi =opshdmidisplayport	mwwindow3input=*[Value]*	No
set mwwindow4input *[Value]*	=hdmi1 =hdmi2 =displayport =opshdmi =opshdmidisplayport	mwwindow4input=*[Value]*	No

System information

Use the following commands to identify system information settings.

Command	Response	Possible values	Standby mode
get autopoweroff	autopoweroff=*[Value]*	15–240	No
get fwverscr	fwverscr=*[Value]*	*[Scalar version firmware number]*	Yes
get fwvertouch	fwvertouch=*[Value]*	*[Touch controller firmware version number]*	Yes
get serialtouch	serialtouch=*[Value]*	*[Touch controller serial number]*	No
get opsinfo	opsinfo=*[Value]*	OPS NO OPS	No
get usb	usb=*[Value]*	hdmi1 hdmi2 displayport ops	No
get language[5]	language=*[Value]*	English Arabic Danish German Spanish Finnish French Italian Dutch Norwegian Russian Swedish Chinese_sim	No
get modelnum	modelnum=*[Value]*	*[Model number]*	No
get serialnum	serialnum=*[Value]*	*[Serial number]*	No
get proximityinstalled	proximityinstalled=*[Value]*	yes no	
get proximity	proximity=*[Value]*	on off	Yes
get proximityreenable	proximityreenable=*[Value]*	1–10	Yes
get proximitydetected	proximitydetected=*[Value]*	yes no	No

[5]Languages for the on-screen display menu only

Command	Response	Possible values	Standby mode
get powersave	powersave=*[Value]*	on off	No
get fbc	fbc=*[Value]*	on off	No
get waketotouch	waketotouch=*[Value]*	on off	No

Use the following commands to assign system information settings.

Command	Possible values	Response	Standby mode
set autopoweroff *[Value]*	+*[Incremental value]* -*[Incremental value]* =15–240	autopoweroff=*[Value]*	No
set factoryreset *[Value]*	=yes	factoryreset=*[Value]*	Yes
set language *[Value]*[6]	=English =Arabic =Danish =German =Spanish =Finnish =French =Italian =Dutch =Norwegian =Russian =Swedish =Chinese_sim	language=*[Value]*	No
set proximity *[Value]*	=on =off	proximity=*[Value]*	Yes
set proximityreenable *[Value]*	=1–10	proximityreenable=*[Value]*	Yes
set touchdetected *[Value]*	=yes	touchdetected=*[Value]*	No
set powersave *[Value]*	=on =off	powersave=*[Value]*	No
set fbc *[Value]*	=on =off	fbc=*[Value]*	No
set waketotouch *[Value]*	=on =off	waketotouch=*[Value]*	No

[6]Languages for the on-screen display menu only

SPNL-6000-V1 command inventory

Power state

Use the following commands to identify power state settings.

Command	Response	Possible values	Standby mode
get intpowerstate	intpowerstate=*[Value]*	on standby dpms novideo confirm proximitywait welcome	Yes
get powerstate	powerstate=*[Value]*	on off standby	Yes

Use the following commands to assign power state settings.

Command	Possible values	Response	Standby mode
set powerstate *[Value]*	=on =off =standby	powerstate=*[Value]*	Yes

Source

Use the following commands to identify source settings.

Command	Response	Possible values	Standby mode
get input	input=*[Value]*	hdmi1 ops/hdmi2	Yes
get videoinputs	videoinputs=*[Value]*	hdmi1 ops/hdmi2	Yes

Use the following commands to assign source settings.

Command	Possible values	Response	Standby mode
set input *[Value]*	=hdmi1 =ops/hdmi2	input=*[Value]*	Yes

Video

Use the following commands to identify video settings.

Command	Response	Possible values	Standby mode
get displaymode	displaymode=*[Value]*	standard user dynamic	No
get contrast	contrast=*[Value]*	0–100	No
get brightness	brightness=*[Value]*	0–100	No
get tint	tint=*[Value]*	0–100	No
get sharpness	sharpness=*[Value]*	0–100	No
get colortemp	colortemp=*[Value]*	normal warm cool user	No
get red	red=*[Value]*	0–100	No
get green	green=*[Value]*	0–100	No
get blue	blue=*[Value]*	0–100	No
get blacklevel	blacklevel=*[Value]*	0–100	No

Use the following commands to assign video settings.

Command	Possible values	Response	Standby mode
set displaymode *[Value]*	=standard =user =dynamic	displaymode=*[Value]*	No
set contrast *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	contrast=*[Value]*	No
set brightness *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	brightness=*[Value]*	No
set tint *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	tint=*[Value]*	No
set sharpness *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	sharpness=*[Value]*	No

Command	Possible values	Response	Standby mode
set colortemp *[Value]*	=normal =warm =cool =user	colortemp=*[Value]*	No
set red *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	red=*[Value]*	No
set green *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	green=*[Value]*	No
set blue *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	blue=*[Value]*	No
set blacklevel *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	blacklevel=*[Value]*	No
set picturereset *[Value]*	=yes	picturereset=*[Value]*	No

Audio

Use the following commands to identify audio settings.

Command	Response	Possible values	Standby mode
get volume	volume=*[Value]*	0–100	No
get mute	mute=*[Value]*	on off	No
get audioinput	audioinput=*[Value]*	usbaudio HDMI OPSdigital	No
get treble	treble=*[Value]*	0–100	No
get bass	bass=*[Value]*	0–100	No
get audioeq120	audioeq120=*[Value]*	0–100	No
get audioeq500	audioeq500=*[Value]*	0–100	No
get audioeq1200	audioeq1200=*[Value]*	0–100	No
get audioeq7500	audioeq7500=*[Value]*	0–100	No
get audioeq12k	audioeq12k=*[Value]*	0–100	No
get balance	balance=*[Value]*	0–100	No

Use the following commands to assign audio settings.

Command	Possible values	Response	Standby mode
set volume *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	volume=*[Value]*	No
set mute *[Value]*	=on =off	mute=*[Value]*	No
set audioinput *[Value]*	=usbaudio =HDMI =OPSDigital	audioinput=*[Value]*	No
set treble *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	treble=*[Value]*	No
set bass *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	bass=*[Value]*	No
set audioeq120 *[Value]*	=0–100	audioeq120=*[Value]*	No
set audioeq500 *[Value]*	=0–100	audioeq500=*[Value]*	No
set audioeq1200 *[Value]*	=0–100	audioeq1200=*[Value]*	No
set audioeq7500 *[Value]*	=0–100	audioeq7500=*[Value]*	No
set audioeq12k *[Value]*	=0–100	audioeq12k=*[Value]*	No
set balance *[Value]*	+*[Incremental value]* -*[Incremental value]* =0–100	balance=*[Value]*	No
set soundreset *[Value]*	=yes	soundreset=*[Value]*	No

System information

Use the following commands to identify system information settings.

Command	Response	Possible values	Standby mode
get autopoweroff	autopoweroff=*[Value]*	15–240	No
get fwverscr	fwverscr=*[Value]*	*[Scalar version firmware number]*	Yes
get fwvertouch	fwvertouch=*[Value]*	*[Touch controller firmware version number]*	Yes
get serialtouch	serialtouch=*[Value]*	*[Touch controller serial number]*	No

Command	Response	Possible values	Standby mode
get opsinfo	opsinfo=*[Value]*	OPS NO OPS	No
get language[7]	language=*[Value]*	English Arabic Danish German Spanish Finnish French Hebrew Italian Dutch Norwegian Portuguese Russian Swedish Turkish Chinese_sim	No
get modelnum	modelnum=*[Value]*	*[Model number]*	No
get serialnum	serialnum=*[Value]*	*[Serial number]*	No
get proximityinstalled	proximityinstalled=*[Value]*	yes no	
get proximity	proximity=*[Value]*	on off	Yes
get proximityreenable	proximityreenable=*[Value]*	1–10	Yes
get proximitydetected	proximitydetected=*[Value]*	yes no	No
get monitorid	monitorid=*[Value]*	1–100	No

Use the following commands to assign system information settings.

Command	Possible values	Response	Standby mode
set autopoweroff *[Value]*	+*[Incremental value]* -*[Incremental value]* =15–240	autopoweroff=*[Value]*	No
set factoryreset *[Value]*	=yes	factoryreset=*[Value]*	Yes

[7]Languages for the on-screen display menu only

Command	Possible values	Response	Standby mode
set language *[Value]*[8]	=English =Arabic =Danish =German =Spanish =Finnish =French =Hebrew =Italian =Dutch =Norwegian =Portuguese =Russian =Swedish =Turkish =Chinese_sim	language=*[Value]*	No
set proximity *[Value]*	=on =off	proximity=*[Value]*	Yes
set proximityreenable *[Value]*	=1–10	proximityreenable=*[Value]*	Yes
set monitorid *[Value]*	+*[Incremental value]* -*[Incremental value]* =1–100	monitorid=*[Value]*	No
set lyncroom *[Value]*	=reset	lyncroom=*[Value]*	No
set touchdetected *[Value]*	=yes	touchdetected=*[Value]*	No

Resolving issues with remote management

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

Issue	Solutions
You're experiencing general issues with remote management.	• Make sure all the cable connections are secure. • Be aware that some commands work only when the display is on. For SPNL-6000-V3/SBID-6000 models, see page 81. For SPNL-6000-V2 and SPNL-6000P models, see page 87. For SPNL-6000-V1 models, see page 94. • Configure the serial interface settings. See *Configuring the computer's serial interface settings* on page 78.

[8] Languages for the on-screen display menu only

Issue	Solutions
You're experiencing other issues with remote management, or the previous solutions don't resolve the issue.	See *Referring to the SMART knowledge base for additional troubleshooting information* on page 54.

Appendix E

Hardware environmental compliance

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

Waste Electrical and Electronic Equipment (WEEE)

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



More information

See smarttech.com/compliance for more information.

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