

SMART Board 2000 series Display

USER'S GUIDE

FOR SBD-2075

DRAFT



SMART[®]

Product registration

If you register your SMART product, we'll notify you of new features and software upgrades.

Register online at smarttech.com/registration.

Keep the following information available in case you need to contact SMART Support.

Serial number:

Date of purchase:

DRAFT

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

www.smarttech.com/patents

05/2017

Important information

Failure to follow the installation instructions shipped with your SMART product could result in personal injury and product damage which may not be covered by your warranty.

Do not open or disassemble the SMART product. You risk electrical shock from the high voltage inside the casing. Opening the casing also voids your warranty.

Do not stand (or allow children to stand) on a chair to touch the surface of your SMART product. Rather, mount the product at the appropriate height.

Do not climb (or allow children to climb) on a wall- or stand-supported SMART product. Climbing on the SMART product could result in personal injury or product damage.

Individuals under the age of 18 require adult supervision when using this SMART Product.

To reduce the risk of fire or electric shock, do not expose your SMART product to rain or moisture.

If your SMART product 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 extending across the floor to your SMART product 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 your warranty.

Do not place any heavy objects on the power cable. Damage to the cable could cause shock, fire or product damage which may not be covered by your warranty.

Use only extension cords and outlets into which this product's polarized plug can be fully inserted.

Use the power cable provided with this product. If a power cable is not supplied with this product, please 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. Because the display is heavy, rope, wire or handle failure could lead to personal injury.

To prevent personal injury, do not attempt to mount or carry the interactive flat panel using your own strength. Instead, use a lifting device with the included attachable eyebolts. The eyebolts are not post-installation hardware.

Use only VESA®-approved mounting hardware.

Disconnect all power cables for your display from the wall outlet and seek assistance from qualified service personnel when any of the following occurs:

- 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

Regulatory information

This device complies with directive 2014/53/EU.

This device complies with class A of CISPR 32 and may cause radio interference in a residential environment.

Canada statement

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

1. This device may not cause interference; and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

The device meets the exemption from the routine evaluation limits in section 2.5 of RSS 102 and compliance with RSS-102 RF exposure, users can obtain Canadian information on RF exposure and compliance.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

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

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. l'appareil ne doit pas produire de brouillage;
2. l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Le dispositif rencontre l'exemption des limites courantes d'évaluation dans la section 2.5 de RSS 102 et la conformité à l'exposition de RSS-102 rf, utilisateurs peut obtenir l'information canadienne sur l'exposition et la conformité de rf.

Cet émetteur ne doit pas être Co-placé ou ne fonctionnant en même temps qu'aucune autre antenne ou émetteur. Cet équipement devrait être installé et actionné avec une distance minimum de 20 centimètres entre le radiateur et votre corps.

les dispositifs fonctionnant dans la bande 5150-5250 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;

FCC warning

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

FCC Radiation Exposure Statement

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and it also complies with Part 15 of the FCC RF Rules. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and consider removing the no-collocation 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.

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

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Chapter 1

Chapter 1

About the display

[Overview]

The SMART Board 2075 display is a 75" non-touch LED display with built-in screen sharing that supports iOS, Android and Microsoft platforms. The 4K ultra-high-definition display serves as an active collaboration hub between student and teacher devices to allow for greater levels of student engagement. The SMART Board 2075 display is a cost-effective solution that offers educators flexibility in their implementation of technology in classrooms for whole class and small group collaboration.

Features

The display includes the following features

Feature	Description
4K ultra high definition	
Screen sharing apps	

Turning on the display for the first time

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

▶ To turn on the display for the first time

(missing or bad snippet)

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

The *Welcome* screen appears.

Connecting to a network

You can connect the display to a network using either Wi-Fi or an Ethernet connection. Before you do so, your organization's network administrators need to configure the network for the display.

Configuring the network for the display


Network administrators need to configure the network so users can use the Screen Share app, update the system software automatically over the air and enable the display to set the date and time automatically.

Configuring the network for iQ functions

Network administrators need to configure the network so users can update the display's firmware and system software automatically over the air and to allow apps to function properly.

► **To configure the network**

Add these URLs to the network whitelist.

URL	Feature
https://ws.kappboard.com	Automatic iQ system software update
 NOTE Block access to https://ws.kappboard.com to prevent automatic iQ system software updates	
https://*.mixpanel.com	iQ system software
*.hockeyapp.net	iQ system software
https://*.smarttech-prod.com	SMART Notebook® Player
http://*.loggly.com	SMART Notebook Player
http://*.smarttech.com	iQ system software, Workspaces app, Activities app, SMART Notebook Player
https://*.smarttech.com	SMART Notebook Player
https://www.fabric.io/	SMART Notebook Player
https://*.classlab.com	Workspaces app, Activities app
https://www.firebase.com/test.html	Workspaces app, Activities app
https://*.smartamp.com	Workspaces app, Activities app
https://*.google.com	Activities app
http://*.google-analytics.com	Activities app
https://www.gstatic.com	Activities app
https://*.firebaseio.com	Activities app
https://*.cloudfront.com	Activities app
https://content.googleapis.com	Workspaces app
https://gstatic.com	Workspaces app
https://*.youtube.com	Workspaces app, SMART Notebook Player
https://api.datamarket.azure.com	Workspaces app

► **To allow mobile devices and computers to use AirPlay and Google Cast to use the Screen Share app**

1. Open the required TCP/UDP ports:

Protocol	Port range	Feature
TCP	80	Outbound http
UDP	123	Network Time Protocol
TCP	3689	iTunes music sharing
TCP	5000	Audio streaming
TCP	5353	mDNS
UDP	5353	mDNS
TCP	7000	Picture sharing
TCP	7001	Video streaming
UDP	7010	Display mirroring
UDP	7011	Display mirroring
TCP	7100	Display mirroring
TCP	47000	Audio negotiation
TCP	49152–65535	Dynamic ports
UDP	49152–65535	Dynamic ports
TCP	49228	Google Cast
TCP	50259	Google Cast
UDP	54780	Google Cast
UDP	62572	Google Cast

2. Configure the network to allow Bonjour and mDNS (multicast).
3. Configure the network to allow Network Time Protocol (NTP) requests to Internet time servers.

 **NOTE**

Using a 5 GHz network connection may provide a better experience with the Screen Share app.

▶ **To allow SMART Notebook Player to connect to the display**

 **NOTE**

The network may have been configured to allow Network Time Protocol in *To allow mobile devices and computers to use AirPlay and Google Cast to use the Screen Share app.*

Configure the network to allow Network Time Protocol (NTP) requests to Internet time servers

Connecting the display to a network

The display can connect to a network using either Wi-Fi or an Ethernet connection. Network administrators can also add a browser proxy.

▶ **To connect to a Wi-Fi network**

(missing or bad snippet)

1. Tap **Wi-Fi**.

 **NOTE**

Ensure Wi-Fi is turned **On**.

2. Select a wireless network.

If the Wi-Fi network is not password protected, the display connects to the network.

3. If the network requires a password, enter the Wi-Fi password and tap **Connect**.

OR

If the network requires a user name and password, enter the user name and Wi-Fi password and tap **Connect**.

 **TIP**

Use the crosshairs to move the on-screen keyboard.

▶ **To connect to an Ethernet network**

 **NOTE**

The network must provide network settings via DHCP. If you require a static IP, use DHCP reservation on your router.

▶ **To add a proxy**

(missing or bad snippet)

1. Tap **Wi-Fi**.
2. Tap and hold the network to which you're adding a proxy.
A dialog box appears.
3. Tap **Modify network**.
4. Select **Show advanced options**.
5. In the *Proxy* box, select **Manual**.
6. Enter the information in the *Proxy hostname*, *Proxy port* and *Bypass proxy* boxes.
7. Tap **Save**.

Evaluating the impact of Screen Share on your network data usage

When you connect your device or computer to the display using Screen Share, the screen sharing protocol compresses the image from your device or computer. The protocol may transmit only areas of the screen that change. This can make it difficult to estimate the impact of Screen Share on a network where many users would like to screen share simultaneously.

For example, in a school where 30 teachers are using Screen Share simultaneously, 10% of teachers might be streaming video while 90% might be sharing static content with occasional updates. In such an instance, you could expect to see an additional 5 Mbps in network traffic. Use the following table to help estimate the impact of wireless Screen Share on your network.

Content being shared	Data rate transmission
Static content with minor screen movement	20 kb/sec
Static content with periodic scrolling or refreshes	Spikes briefly to 500–600 kb/sec, returns to 20 kb/sec
Gaming or streaming video with major screen changes	700 kb/sec–1.2 Mbps

Chapter 2

Chapter 2

Using Screen Share



You can share content wirelessly to the display from your computer or mobile device.

NOTE

If you want to change the display's name, see the *SMART Board 2000 series displays installation and maintenance guide* (smarttech.com/kb/xxxxxx) for instructions.

Sharing content from the Chrome™ browser to the display

You can use the Chrome browser and Google Cast™ (a browser extension for Chrome) to share the desktop or a specific browser tab from your computer.

NOTES

- Use Chrome version 52 and later to share content.
- Make sure your computer is connected to the same network as the display. See *Confirming the display and mobile device or computer are connected to the same network* on page 14 for more information.

To download the Chrome browser

1. On your computer, go to google.com/chrome.
2. Click **Download** > **For personal computers** > **Download Chrome**.
3. Follow the on-screen instructions.

To share content from the browser tab to the display


1. On the remote, press **Input**  button to open the launcher.

The launcher appears.


2. Select **Screen Share**  and press **OK**.

 **NOTE**




Remember the display's name.

3. On your computer, open the Chrome browser.
4. Open the tab you want to share to the display.
5. In the top right corner of your browser, click the **Cast** icon .
6. Select the display's name.


 **NOTE**

When you're sharing content, the Cast icon  turns blue.

▶ **To share content from your desktop to the display**

1. On the remote, press **Input**  button to open the launcher.
The launcher appears.
2. Select **Screen Share**  and press **OK**.
3. On your computer, open the Chrome browser.
4. In the top right corner of your browser, click the **Cast** icon .
5. Click the drop-down menu beside *Cast to*.
6. Click **Cast desktop**.
7. Select the display's name.
8. In the *Share your screen* dialog box, click **Entire screen**.

 **NOTE**

When you're sharing content, the Cast icon  turns blue.

Sharing content from your Windows® computer to the display

You can use the Chrome browser to share content from your Windows computer.

You can purchase AirParrot®, an application that allows you to share your display, a single application or a media file. See airsquirrels.com/airparrot/features/win.

If your computer is running Windows 10, Windows 8 or Windows 8.1 operating system, you can use Miracast to share content.

 **NOTE**

Make sure your computer is connected to the same network as the display. See *Confirming the display and mobile device or computer are connected to the same network* on page 14 for more information.

Using Miracast to share content from Windows 8 operating system

▶ **To share content from the Windows 8 operating system**

1. On the remote, press **Input**  button to open the launcher.

The launcher appears.

2. Select **Screen Share**  and press **OK**.

 **NOTE**

Remember the display's name.

3. Swipe in from the right edge of the screen, and then tap **Devices**.

OR

With a mouse, point to the lower-right corner of the screen, move the pointer up and click **Devices**.

4. Click **Project > Add a wireless display** and select the display.

▶ **To choose how content is shared from the Windows 8 operating system**

1. On the remote, press **Input**  button to open the launcher.

The launcher appears.

2. Select **Screen Share**  and press **OK**.

 **NOTE**

Remember the display's name.

3. Swipe in from the right edge of the screen, and then tap **Devices**.

OR

With a mouse, point to the lower-right corner of the screen, move the pointer up and click **Devices**.

4. Click **Project** and select:
 - **PC screen only**. No content is shared to the display.
 - **Duplicate**. Content is shared on both screens.
 - **Extend**. The computer's desktop is extended across the computer and display's screen. You can move items between the two screens.
 - **Second screen only**. Content is shared to the display. The computer's screen is blank.

Using Miracast to share content from the Windows 10 operating system

▶ To share content from a computer using Windows 10 system software

1. On the computer, turn on Wi-Fi.
2. On the remote, press **Input**  button to open the launcher.
The launcher appears.
3. Select **Screen Share**  and press **OK**.

NOTE

Remember the display's name.

4. On the computer, click **action center** > **Connect** and select the display.

Supported Chrome browsers

Chrome browser version 52 or later

Sharing content from your Apple product to the display

For a list of supported Apple products, see *Supported Apple devices and operating systems* on the next page.

NOTE

Make sure your Mac computer or iOS device is connected to the same network as the display. See *Confirming the display and mobile device or computer are connected to the same network* on page 14 for more information.

▶ To mirror your Mac computer's desktop to the display

1. On the remote, press **Input**  button to open the launcher.

The launcher appears.

2. Select **Screen Share**  and press **OK**.

NOTE

Remember the display's name.

3. On your Mac computer, click the **AirPlay** icon  in the menu bar.
4. Select the display's name.

The AirPlay icon turns blue  when your Mac computer is sharing content with AirPlay.

▶ To extend your Mac computer desktop to the display

1. On the remote, press **Input**  button to open the launcher.

The launcher appears.


2. Select **Screen Share**  and press **OK**.

NOTE

Remember the display's name.

3. On your Mac computer, click the **AirPlay** icon  in the menu bar.
4. Select the display's name.

The AirPlay icon  turns blue when your Mac computer is sharing content with AirPlay.

5. Click the **AirPlay** icon , and then click **Extend Desktop**.

▶ To mirror your iOS device's screen to the display

1. On the remote, press **Input**  button to open the launcher.

The launcher appears.

2. Select **Screen Share**  and press **OK**.

 **NOTE**

Remember the display's name.

3. On your iOS mobile device, open the Control Center.
4. Tap **AirPlay**.
5. Select the display's name.
6. Select **Mirroring**.
7. Select an app.

The content appears on the display.

Supported Apple devices and operating systems

The following Apple operating systems support Screen Share.

- iOS 9 or later
- OS X 10.11 (El Capitan) or later

The following Apple devices support Screen Share.

- iPhone 4S or later
- iPad 2 or later
- iPod touch (5th generation) or later

Sharing content from your Android™ mobile device



For a list of supported Android products, see *Supported Android devices and operating systems* on page 14.

For more information, see [Cast your Android screen from the Google Home app](#).

 **NOTE**


Make sure your Android mobile device is connected to the same network as the display. See *Confirming the display and mobile device or computer are connected to the same network* on the next page for more information.

▶ **To share your Android mobile device's screen on the display using the Google Home app**

1. Download the Google Home app from Google Play™.
2. On the remote, press **Input**  button to open the launcher.
The launcher appears.
3. Select **Screen Share**  and press **OK**.

 **NOTE**

Remember the display's name.

4. On your Android mobile device, open the Google Home app.
5. In the top left corner, press the navigation drawer .
6. Tap **Cast Screen**.
7. Select the display's name.

 **NOTE**

If you don't see the display you want, tap **MORE SETTINGS** to show more displays.

▶ **To share your Android mobile device's screen on the display from the notification shade**

1. On your device, swipe down to open the notification shade.
2. Tap **Cast**.
3. Select the display's name.

If you don't see the display you want, tap **MORE SETTINGS** to show more displays.

 **NOTES**

- Make sure your Android mobile device is connected to the same network as the display.
 - Not all apps are Google Home-enabled.
-

Supported Android devices and operating systems

- All devices running Android 4.4.2 or later support the Cast Screen feature.

See [Optimized devices for Android Screen casting](#).

 **NOTE**

Not all mobile devices have been optimized for screen casting.

- Make sure Power Saving mode is off on your Android mobile device. Power Saving mode can limit the mobile device's processing power, which could affect the performance of the Cast Screen feature.

Stop sharing content

 **TIP**



You can disconnect your mobile device or computer to stop sharing content to the display.

▶ **To stop sharing content to the display**

1. On the remote, press **Back**.
The message "Want to disconnect?" appears.
2. Select **Yes** and press **OK**.

Confirming the display and mobile device or computer are connected to the same network

▶ **To confirm the display and mobile device or computer are connected to the same network**

1. On the remote, press **Input**  button to open the launcher.
The launcher appears.
2. Select **Screen Share**  and press **OK**.
3. Note the network the display is connected to.
4. On your mobile device or computer, confirm which network the mobile device or computer is connected to. Consult the mobile device or computer's user guide for more information.


Using Input



You can present content from your computer on the display when you connect a computer to the display.

Showing content on the display


▶ To show content on the display

1. On the remote, press **Input**  button to open the launcher.
The launcher appears.
2. Use the arrow button to select the input source and press **OK**.
The display looks for a connection, and the content appears on the screen.

Naming the video input ports

You can add a custom name, up to 35 characters, for each video input.

▶ To name a video input

1. Open the launcher.
The launcher appears.
2. Tap **Input** .
3. Tap [pen icon] to edit the video input port's name.
4. Using the on-screen keyboard, enter a name for the video input port.
5. Tap **Done** on the on-screen keyboard.

Stop showing content on the display

▶ To stop showing content on the display

Open the launcher and select another app.

Using settings

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You can access the display's settings using the  icon in the launcher.

About device

 **NOTE**

To find the display's serial number, see <XREF>.

Option	Values	Function	Notes
▶ Product information			
• Board name	[N/A]	Select a name for your display	[N/A]
• Legal Information	[N/A]	Shows the open source licenses, the SMART end user license agreement and SMART intellectual property information	[N/A]
▶ Board information			
• Build number	[N/A]	Shows the iQ system software's version number	[N/A]
• Up time	[N/A]	Shows how long the display has been turned on	Turning off the display resets the up time to 0.
▶ Board configuration			
• Factory data reset	[N/A]	Resets all options to their default values	Only administrators should reset the display.

Diagnostics

Option	Values	Function	Notes
<ul style="list-style-type: none">• Write logs to USB	[N/A]	Copy diagnostic logs to a USB drive	[N/A]

Language

Option	Values	Function	Notes
<ul style="list-style-type: none">• Language	[Languages]	Sets the language for the settings menu	(missing or bad snippet)

Country

Option	Values	Function	Notes
<ul style="list-style-type: none">• Country	[Countries]	Sets the display's country	[N/A]

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Wi-Fi



NOTE

To add a proxy, see *Connecting the display to a network* on page 5.

Option	Values	Function	Notes
▶ Wi-Fi	[Wireless networks]	Select a wireless network	Turn on Wi-Fi to discover networks.
• Scan	[N/A]	Scan for wireless networks	Tap More to access this option.
• WPS Pin Entry	[N/A]	[N/A]	Not used
• Wi-Fi Direct	[N/A]	[N/A]	Not used
• Advanced	[N/A]	Set advanced options for Wi-Fi	See <i>Advanced Wi-Fi options</i> below.
• WPS push button	[N/A]	Connect to a wireless network using Wi-Fi Protected Setup	[N/A]
• Add network	[N/A]	Add a wireless network	[N/A]

Advanced Wi-Fi options

Option	Values	Function	Notes
▶ Advanced			
• Network notification	[N/A]	Notifies you when an open wireless network is available	[N/A]
• Keep Wi-Fi on during sleep	Always Only when plugged in Never	Determines if the Wi-Fi remains on when the display goes to sleep	[N/A]
• Scanning always available	[N/A]	Allow Google's location service and other applications to scan for networks, even when Wi-Fi is turned off	[N/A]
• Wi-Fi frequency band	Auto 5 Ghz 2.4 Ghz	Wi-Fi frequency band	[N/A]
• Install certificates	[N/A]	Install certificates to connect to a network	[N/A]
• Wi-Fi optimization	[N/A]	Minimize battery usage when Wi-Fi is enabled	[N/A]
• MAC address	[N/A]	Shows the display's MAC address	[N/A]
• IP address	[N/A]	Shows the display's IP address	[N/A]

Ethernet

 **NOTE**

Manual configuration isn't available. The IP address is automatically configured via DHCP.

Option	Values	Function	Notes
• IP address	[N/A]	Shows the display's IP address	[N/A]
• MAC address	[N/A]	Shows the display's MAC address	[N/A]

Date & time

Option	Values	Function	Notes
• Automatic date & time	[N/A]	Sets the display's date and time automatically	Configure the network to allow Network Time Protocol (NTP) requests to Internet time servers. See page 2.
• Set date	[N/A]	Sets the display's date	Disable Automatic date & time to set the date manually.
• Set time	[N/A]	Sets the display's time	Disable Automatic date & time to set the time manually.
• Select time zone	[N/A]	Sets the display's time zone	[N/A]
• Use 24-hour format	[N/A]	Shows the display's time using the 24-hour clock	[N/A]
• Choose date format	[N/A]	Sets the display's date format	[N/A]

Usage Data


Option	Values	Function	Notes
• Share Usage Data	[N/A]	Sends usage statistics and error reports to SMART	[N/A]

Auto Update

NOTE

To prevent automatic system software updates, block access to <https://ws.kappboard.com>.

Option	Values	Function	Notes
<ul style="list-style-type: none">Updates Channel	Stable Channel Beta Channel	Sets which system software updates the display receives	When switching from the Beta Channel to the Stable Channel, a factory reset occurs. See page 16 for more information about factory reset.
<ul style="list-style-type: none">Check for Updates Now	[N/A]	Checks for updates to the system software	If an update is available, the text changes to Apply update now .

 **NOTE**
The display must be connected to the Internet to check for system software updates.

Screen Share

Option	Values	Function	Notes
▶ Screen Share			
<ul style="list-style-type: none">Reset	[N/A]	Closes and restarts 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.

Using the OSD menu

You can access the on-screen display (OSD) menu by using the control panel on the side of the display or the remote control.

Changing settings in the on-screen display menu

To change settings with the control panel

1. Press the **Menu** button on the side control panel.
The on-screen display menu appears.
2. Press the up and down arrows to highlight a menu, and then press **Input** to select it.
3. Press the up and down arrows to highlight a menu option, and then press **Input** to select it.
4. Press the left and right arrows to change the setting.
5. Press **Menu** to navigate backwards until the on-screen menu closes.

Picture menu

Option	Values	Function	Notes	
Brightness	0–100	Sets the overall brightness of the image and background	[N/A]	
Contrast	0–100	Sets the difference in brightness between the lightest and darkest parts of the image	[N/A]	
Sharpness	0–100	Sets the image sharpness	[N/A]	
Color temperature	Native 6500K 9300K User	Sets the color temperature	Select User to customize red, green and blue settings in the <i>Color control</i> option.	
Color control	Red	0–100	Sets the amount of red in the image	You can modify this value only if you select User in the <i>Color temperature</i> option.
	Green	0–100	Sets the amount of green in the image	You can modify this value only if you select User in the <i>Color temperature</i> option.
	Blue	0–100	Sets the amount of blue in the image	You can modify this value only if you select User in the <i>Color temperature</i> option.
Picture mode	Standard Highbright Soft Standard	Sets the picture mode	[N/A]	
Picture reset	Yes No	Resets all settings in the <i>Picture</i> menu to their default values	[N/A]	

Screen menu

Option	Values	Function	Notes
H-position	0–100	Sets the horizontal position of the image	[N/A]
V-position	0–100	Sets the vertical position of the image	[N/A]
Clock	0–100	[N/A]	[N/A]

Option	Values	Function	Notes
Clock phase	0–100	[N/A]	[N/A]
Blank	Off On	Turns the image off	[N/A]
Dimming	10–100	Sets the image dimming	[N/A]
Aspect ratio	Wide 4:3	Sets the aspect ratio	[N/A]
Screen reset	No Yes	Resets all settings in the <i>Screen</i> menu to their default values	[N/A]

Audio menu

Option	Values	Function	Notes
Speaker	Internal External	Sets the speaker output	[N/A]
Audio source	HDMI 1 HDMI 2 DP Audio 1 Audio 2	Sets the audio input	[N/A]
Audio reset	Yes No	Resets all settings in the <i>Audio</i> menu to their default values	[N/A]

Configuration 1 menu

Option	Values	Function	Notes
Auto adjust	What are the values?	What does this do?	You can modify this value only if you select the VGA input.
Language	English What's the second Asian language here?	Sets the language	[N/A]
Auto source	No Yes	Turns input auto-source on or off	[N/A]
Configuration reset	No Yes	Resets all settings in the <i>Configuration 1</i> menu to their default values	[N/A]
Factory reset	No Yes	Resets all OSD menu settings to their default values	[N/A]

Configuration 2 menu

Option	Values	Function	Notes
OSD turn off	5-120 seconds	Sets the time of inactivity before the on-screen display menu turns off	[N/A]
Freeze function	Off On	Turns the picture freeze frame on or off	[N/A]
OSD H-position	1-100	Sets the horizontal position of the OSD menu	[N/A]
OSD V-position	1-100	Sets the vertical position of the OSD menu	[N/A]
OSD rotation	Landscape Portrait	Sets the rotation position of the OSD menu	[N/A]
Monitor information	[N/A]	Displays the model name, serial number, and operating time	[N/A]

Advance menu

Option	Values	Function	Notes
Gamma selection	Mode 1 Mode 2 Mode 3	Sets the color gamma value	[N/A]
Over scan	Off On	Turns over scan on or off	Over scan increases the picture size on the display
IR control	Normal Lock	Turns the remote control feature on or off	[N/A]
Keypad control	Unlock Lock	Turns the OSD keypad on or off	[N/A]
DDC/CI	On Off	Turns access to Extended Display Identification Data (EDID) on or off	[N/A]
Advanced option reset	No Yes	Resets all settings in the <i>Advanced</i> menu to their default values	[N/A]

Updating system software

When the SMART Board 2000 series display is connected to the Internet, it updates its system software automatically.

When an update to the system software 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 is complete. The display shows a blank screen for four minutes. When the update is complete, the display shows the Whiteboard and any content that was on Whiteboard before the update.

 **NOTE**

You can configure your organization's network to allow or prevent automatic system software updates (see *Configuring the network for the display* on page 2).

Applying an automatic system software update manually

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

▶ **To apply an automatic system software update manually**

(missing or bad snippet)

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

Updating system software manually

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

Appendix A

Appendix A

Troubleshooting the display's software

This section explains how to troubleshoot the display's software.

Resolving issues with SMART Notebook Player

(missing or bad snippet)

Resolving issues with Input

Issue	Solutions
There is an issue with the image.	<ul style="list-style-type: none">• Make sure the video cable is securely fastened to both your computer and the display.• Replace the video cable with a better quality video cable.• If you're using two connected video cables, use one longer cable or move the computer so it's within a single cable length of the display.• If you're using a display adapter with your video cable, try a different display adapter.• (missing or bad snippet)• The computer's video resolution settings and refresh rates aren't supported by the display. The display supports the following resolutions and refresh rates:<ul style="list-style-type: none">◦ 1920 × 1080 at 60 Hz◦ 1600 × 900 at 60 Hz◦ 1280 × 720 at 60 Hz
There is an issue with audio.	<ul style="list-style-type: none">• (missing or bad snippet)• Turn off the mute setting on your computer.• Turn up the volume on your computer.• Turn up the volume on the display. See <XREF>.





Resolving issues with Screen Share

TIP

Restart the Screen Share app and its discovery services:






On the remote, press up and select Screen Share.

Resolving issues with Android™ mobile devices

Issue	Solutions
The display's name doesn't appear in the list of available devices.	<ul style="list-style-type: none">• Make sure your mobile device is on the same network as the display.• Not all Android devices can initiate Screen Share from the notification drawer. Download the Google Home app from Google Play™ to use Screen Share.• If your display is using a wired network connection, try connecting it to a wireless network. <hr/> <p> NOTE</p> <p>Wired and wireless networks don't often share the same network subnet. Connecting the display to a wireless network might help the connection between the display and a mobile device or computer that's connected wirelessly.</p> <hr/> <ul style="list-style-type: none">• Make sure the display and mobile device are set to the correct date and time. See <i>Date & time</i> on page 19 and your mobile device's documentation.• Make sure the display and mobile device are set to the correct date and time.• On your mobile device, turn Airplane mode on and then off again.• Restart your Android mobile device. <hr/> <p> NOTE</p> <p>Restarting your mobile device can clear network address information that your mobile device had cached. Restarting the mobile device can also reinitialize audio and video encoders that might have stopped working properly.</p> <hr/> <ul style="list-style-type: none">• On the remote, press up and select Screen Share.• Restart your display. See <XREF>.• If you've restarted your display and still don't see the display's name in the list of devices, wait several minutes and then try to connect to the display again.• Ensure you have the latest operating software on your Android mobile device. Make sure no system updates are pending for your Android mobile device. See the mobile device's user guide for more information.
The display's name appears in the list of available devices but you're unable to connect to it.	<ul style="list-style-type: none">• Open the Screen Share app.<ol style="list-style-type: none">a. On the remote, press Input  button to open the launcher. The launcher appears.b. Select Screen Share  and press OK.





Issue	Solutions
The video is choppy or the audio isn't in sync with the video.	<ul style="list-style-type: none">• If your network is slow or congested, Screen Share is affected. Contact your administrator.• Your mobile device could be connected to different access points than your display, which can increase latency. Turn Airplane mode on and then off on your mobile device to try to connect to a closer access point.• Sharing videos or playing video games with frequent screen updates requires more network bandwidth. Try reducing the video quality to improve performance. <i>See Evaluating the impact of Screen Share on your network data usage on page 6.</i>• Sharing videos or playing video games with frequent screen updates requires more network bandwidth. Try reducing the video quality to improve performance.• Your mobile device may not be optimized for sharing its screen and is limited to lower quality performance. Try connecting with a different mobile device.• Ensure you have the latest operating software on your Android mobile device. Make sure no system updates are pending for your Android mobile device. See the mobile device's user guide for more information.
The video has no audio.	<ul style="list-style-type: none">• Make sure the volume on your mobile device is turned up and the display is not muted.• Turn up the volume on the display. <i>See <XREF>.</i>• Make sure you have the latest operating software on your Android mobile device.• Restart your mobile device.
The screen is not responding to touch or you're unable to write or draw with the pens.	Touch interactions are not supported while using Screen Share.
The issues persist even after you've restarted your Android mobile device and ensured it is on the same network as the display.	Contact your system administrator.

Resolving issues with Apple devices

Issue	Solutions
The display's name doesn't appear in the list of available devices.	<ul style="list-style-type: none">• Make sure your mobile device or computer is on the same network as the display.• If your display is using a wired network connection, try connecting it to a wireless network. <hr/> <p> NOTE</p> <p>Wired and wireless networks don't often share the same network subnet. Connecting the display to a wireless network might help the connection between the display and a mobile device or computer that's connected wirelessly.</p> <hr/> <ul style="list-style-type: none">• Make sure the display and computer are set to the correct date and time. See <i>Date & time</i> on page 19 and your computer's documentation.• Make sure the display and computer are set to the correct date and time.• On your mobile device, turn Airplane mode on and then off on your mobile device.• Restart your mobile device. <hr/> <p> NOTE</p> <p>Restarting your mobile device can clear network address information that your mobile device had cached. Restarting the mobile device can also reinitialize audio and video encoders that might have stopped working properly.</p> <hr/> <ul style="list-style-type: none">• On the remote, press up and select Screen Share.• On your computer, turn Wi-Fi off and then back on, or disconnect and then reconnect the Ethernet cable.• Restart your computer. <hr/> <p> NOTE</p> <p>Restarting your computer can clear network address information that your computer had cached. Restarting the computer can also reinitialize audio and video encoders that might have stopped working properly.</p> <hr/> <ul style="list-style-type: none">• Restart your display. See <XREF>.• If you've restarted your display and still don't see the display's name in the list of devices, wait several minutes and then try to connect to the display again.• Make sure your computer or device has the latest operating system software.
The display's name appears in the list of available devices but you're unable to connect to it.	Open the Screen Share app. <ul style="list-style-type: none">a. On the remote, press Input  button to open the launcher. The launcher appears.b. Select Screen Share  and press OK.





Issue	Solutions
The video is choppy or the audio isn't in sync with the video.	<ul style="list-style-type: none">• If your network is slow or congested, Screen Share is affected. Contact your administrator.• The display and the mobile device or computer could be connected to different wireless access points, which can increase latency. On the mobile device, turn Airplane mode on and back off to try to connect to a closer access point. On the computer, disconnect and then reconnect the Ethernet cable or turn Wi-Fi off and then back on to try to connect to a closer access point.• Reduce your computer's display resolution to 1920 × 1080 or lower.• Sharing videos or playing video games with frequent screen updates requires more network bandwidth. Try reducing the video quality to improve performance. <i>See Evaluating the impact of Screen Share on your network data usage on page 6.</i>• Sharing videos or playing video games with frequent screen updates requires more network bandwidth. Try reducing the video quality to improve performance.• Make sure your computer or device has the latest operating system software.
The video has no audio.	<ul style="list-style-type: none">• Make sure the volume on your iOS device is turned up and the display is not muted.• Make sure the Ring/Silent switch isn't set to silent on your mobile device.• Turn up the volume on the display. See <XREF>.
The screen is not responding to touch or you're unable to write or draw with the pens.	Touch interactions are not supported while using Screen Share.
The issues persist even after you've restarted your Mac computer or iOS mobile device and ensured they are on the same network as the display.	Contact your system administrator.

Resolving issues with Chrome™ browser and Chromebook™

Issue	Solutions
The display's name doesn't appear in the list of available devices.	<ul style="list-style-type: none">• Make sure your computer is on the same network as the display.• If your display is using a wired network connection, try connecting it to a wireless network. <hr/> <p> NOTE</p> <p>Wired and wireless networks don't often share the same network subnet. Connecting the display to a wireless network might help the connection between the display and a mobile device or computer that's connected wirelessly.</p> <hr/> <ul style="list-style-type: none">• Make sure the display and computer are set to the correct date and time. See <i>Date & time</i> on page 19 and your computer's documentation.• Make sure the display and computer are set to the correct date and time.• On your computer, turn Wi-Fi off and then back on, or disconnect and then reconnect the Ethernet cable.• Restart your computer. <hr/> <p> NOTE</p> <p>Restarting your computer can clear network address information that your computer had cached. Restarting the computer can also reinitialize audio and video encoders that might have stopped working properly.</p> <hr/> <ul style="list-style-type: none">• For more information about the Google Cast browser extension, see Casting a tab or entire desktop.• Restart your display. See <XREF>.• If you've restarted your display and still don't see the display's name in the list of devices, wait several minutes and try to connect to the display again.
The display's name appears in the list of available devices but you're unable to connect to it.	<p>Open the Screen Share app.</p> <ol style="list-style-type: none">a. On the remote, press Input  button to open the launcher. The launcher appears.b. Select Screen Share  and press OK.

Issue	Solutions
The video is choppy or the audio isn't in sync with the video.	<ul style="list-style-type: none">• If your network is slow or congested, Screen Share is affected. Contact your administrator.• Not all devices are designed for video encoding for Screen Sharing, so video streaming might not behave as expected.• Sharing videos or playing video games with frequent screen updates requires more network bandwidth. Try reducing the video quality to improve performance. <i>See Evaluating the impact of Screen Share on your network data usage on page 6.</i>• Sharing videos or playing video games with frequent screen updates requires more network bandwidth. Try reducing the video quality to improve performance.• Screen Share has not been optimized for performance with Chromebooks. For best results, limit usage to static content.• The display and the computer might be connected to different wireless access points, which can increase latency. On the computer, disconnect and then reconnect the Ethernet cable or turn Wi-Fi off and then back on to try to connect to a closer access point.• (missing or bad snippet)
Parts of the image do not display correctly when sharing streaming video to the display.	
The screen is not responding to touch or you're unable to write or draw with the pens.	Touch interactions are not supported while using Screen Share.

Resolving issues with Windows computers

Issue	Solutions
The display's name doesn't appear in the list of available devices.	<ul style="list-style-type: none">• Make sure your computer is on the same network as the display.• If your display is using a wired network connection, try connecting it to a wireless network. <hr/> <p> NOTE</p> <p>Wired and wireless networks don't often share the same network subnet. Connecting the display to a wireless network might help the connection between the display and a mobile device or computer that's connected wirelessly.</p> <hr/> <ul style="list-style-type: none">• Make sure the display and computer are set to the correct date and time. See <i>Date & time</i> on page 19 and your computer's documentation.• Make sure the display and computer are set to the correct date and time.• On your computer, turn Wi-Fi off and then back on, or disconnect and then reconnect the Ethernet cable.• Restart your computer. <hr/> <p> NOTE</p> <p>Restarting your computer can clear network address information that your computer had cached. Restarting the computer can also reinitialize audio and video encoders that might have stopped working properly.</p> <hr/> <ul style="list-style-type: none">• Restart your display. See <XREF>.• If you've restarted your display and still don't see the display's name in the list of devices, wait several minutes and try to connect to the display again.• Make sure the operating system on your computer is up to date.• Windows Wireless Display (Miracast) is currently not supported.<ul style="list-style-type: none">◦ Use Google Cast from Chrome browser. See <i>Sharing content from your Windows computer to the display</i> on page 8.◦ Use Google Cast from Chrome browser. See the <i>SMART Board 2000 series displays quick reference</i> (smarttech.com/kb/xxxxxx).◦ You can purchase AirParrot, an application that allows you to share your computer's display, an application, audio or a media file. See AirParrot.• If you've restarted your display and still don't see the display's name in the list of devices, wait several minutes and then try to connect to the display again.
The display's name appears in the list of available devices but you're unable to connect to it.	<p>Open the Screen Share app.</p> <ol style="list-style-type: none">a. On the remote, press Input  button to open the launcher. The launcher appears.b. Select Screen Share  and press OK.

Issue	Solutions
<p>The video is choppy or the audio isn't in sync with the video.</p>	<ul style="list-style-type: none"> • If your network is slow or congested, Screen Share is affected. Contact your administrator. • The Wi-Fi signal could be weak. Contact your administrator. • Your device could be connected to a different access point than your display, which can increase latency. Turn Airplane mode on and then off on your computer to try to connecting to a closer access point. • Sharing videos or playing video games with frequent screen updates requires more network bandwidth. Try reducing the video quality to improve performance. See <i>Evaluating the impact of Screen Share on your network data usage</i> on page 6. • Sharing videos or playing video games with frequent screen updates requires more network bandwidth. Try reducing the video quality to improve performance. • (missing or bad snippet) • Reduce your display's resolution to 1920 × 1080 or lower. • Make sure the operating system on your computer is up to date. • If you're using AirParrot, make sure AirParrot is up to date. • If you're using Chrome, the browser is version 52 or later and is up to date. • If you've restarted your display and still don't see the display's name in the list of devices, wait several minutes and then try to connect to the display again.
<p>Which version of Chrome browser supports Screen Share?</p>	<p>Chrome browser version 52 or later</p>
<p>The screen is not responding to touch or you're unable to write or draw with the pens.</p>	<p>Touch interactions are not supported while using Screen Share.</p>

Advanced troubleshooting for Screen Share

Issue	Solutions
<p>Mobile devices and computers can't find the display.</p>	<ul style="list-style-type: none"> • School networks often block a number of network ports. Ask the administrator to allow <ul style="list-style-type: none"> ◦ TCP ports 7000, 8008, 8009, 47000, 7100, 49228, 50259 ◦ UDP ports 62572 and 54780 ◦ If using Google Cast, UDP port 1900 ◦ If using Windows computer or a Mac computer, UDP port 5353. See <i>To allow mobile devices and computers to use AirPlay and Google Cast to use the Screen Share app</i> on page 4 for more information. • The display's casting ID may not have propagated yet through the network or may be cached on the network when it's not actually available. Wait several minutes and attempt to connect again. • You're using Miracast or an unsupported wireless screen casting method. See <i>Using Screen Share</i> on page 7. • You're using Miracast or an unsupported wireless screen casting method. See the <i>SMART Board 2000 series displays quick reference</i> (smarttech.com/kb/xxxxxx).

Issue	Solutions
Screen Share is not working for Windows computers.	<ul style="list-style-type: none">• There might be an issue with the Windows firewall.<ul style="list-style-type: none">◦ Windows 7 operating system: See Allow a program to communicate through Windows Firewall.◦ Windows 8 operating system: See Windows Firewall from start to finish.• Your antivirus product might be blocking access. See the antivirus product's help for more information.
Screen Share is not working for Mac computers.	<ul style="list-style-type: none">• There might be an issue with the Mac firewall. See OS X: About the application firewall.• Your antivirus product might be blocking access. See the antivirus product's help for more information.• The network must be configured to run Bonjour and mDNS, and Multicast must be enabled.• Ensure your device and display are on the same VLAN or subnet.
AirPlay is not displaying on an iOS mobile device.	<ul style="list-style-type: none">• Ensure the iOS device is on the same network as the display.• Try connecting the display with a wired network connection.• See Get help with AirPlay and AirPlay Mirroring on your iPhone, iPad, or iPod touch.
Screen Share is not working on Android devices.	<ul style="list-style-type: none">• Ensure your Android mobile device is on the same network as the display.• Casting the screen is available on mobile devices running Android 4.4.2 or later.• Turn off the device's Power Saving mode.• If you've downloaded the Google Cast app, see Cast your Android screen from the Chrome Cast app.• Your antivirus product might be blocking access. See the antivirus product's help for more information.• Your network consists of multiple access points connected to a single wireless LAN controller (WLC).<ul style="list-style-type: none">◦ See Chrome Cast Deployment Guide, Release 7.6.◦ See Chrome Cast mDNS Service in order to Cast Screen Configuration on WLC.
Screen Share app closes unexpectedly or the video stops playing on the display.	<ul style="list-style-type: none">• If your display is connected to a 2.4 GHz network, connect your display to a 5 GHz network.• Select a less congested Wi-Fi channel.

DRAFT

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