

SMART Board®
T Pro
series interactive displays

Installation and maintenance guide

IDT65-1 | IDT75-1 | IDT86-1

SMART®

Important information

Before installing or using a SMART Board® T Pro series interactive display, review the important information included with the display. If you cannot find this information, it is available online.

See › docs.smarttech.com/kb/171931

Learn more

This guide and other resources for SMART Board T 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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December 16, 2025

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Chapter 1 **Welcome**

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The SMART Board T Pro series interactive display is the hub of your meeting room.

About this guide

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

- How to install the display and maintain it for years of use
- How to connect devices
- How to update the display
- Where to find troubleshooting information

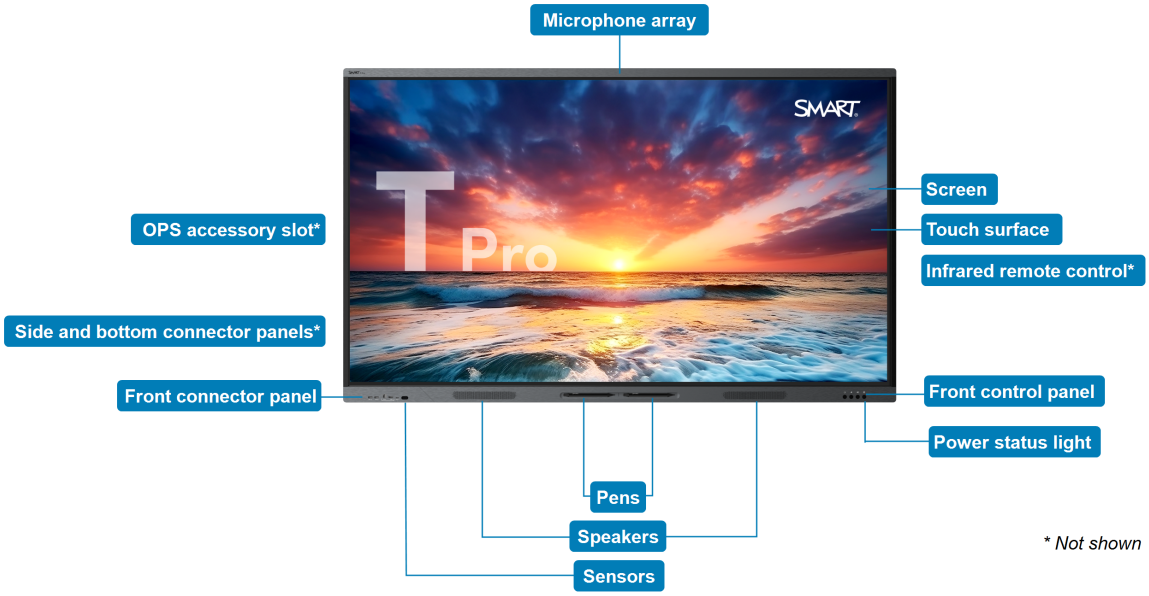
In addition, this guide includes information about the display's support for RS-232 management and network control protocol management.

This guide is intended for those who install and maintain displays in their organizations. Other documentation and resources are available for those who use displays.

See › *More information* on page 8

About the display

If you need to install or maintain the display, take this tour to familiarize yourself with its components:



Component	Description
Screen	The QLED display comes with Full Array Local Dimming and Dolby Vision®. It is available in the following screen sizes: • 65" • 75" • 86"
Touch surface	The display's advanced infrared touch technology supports up to 50 touch points (depending on the connected device's operating system).
Pens	The display comes with two pens, which users can use to write or draw on the screen. Replace a pen if its nib becomes worn to prevent damage to the screen or impairment of pen and finger detection. Users can use the fine eraser on the back of the pen, a fist, or palm to erase digital ink.

Component	Description
Power status light	The power status light indicates the display's status: • When the power status light is amber, the display is in Standby mode. • When the power status light is green, the display is in normal operating mode. • When the power status light is white, the display is turned off but receiving power.
Sensors	The display includes the following sensors: • Ambient light, which can detect the brightness of the room and adjust the screen's brightness accordingly • Infrared, which works with the infrared remote control You can enable or disable the ambient light sensor feature.
Infrared remote control	When you first install and configure the display, you can use the infrared remote control to turn the display on or off, switch inputs, and view and change settings. After installation and configuration, you can give the remote to users for use with the display.
Front control panel	The front control panel provides buttons for turning the display on and off, controlling the volume, and switching inputs.
Power status light	The power status light indicates the display's status: • When the power status light is amber, the display is in Standby mode. • When the power status light is green, the display is in normal operating mode. • When the power status light is white, the display is turned off but receiving power.
Front connector panel	The front connector panel includes connectors for up to two computers or other devices as well as USB peripherals. It's typically used to connect users' laptops and peripherals and other devices users bring with them.
Side and bottom connector panels	The side and bottom connector panels include connectors for multiple computers, peripherals, and other devices. They are typically used for room computers, peripherals, and other devices that are connected to the display all the time.
OPS accessory slot	You can install a SMART OPS appliance, such as a SMART OPS PC module, in the OPS accessory slot.

Component	Description
Speakers	The display includes two integrated speakers and a subwoofer, designed to provide sound at the front of a room. As an alternative to using these integrated speakers, you can connect to an external audio system.
Microphone array	The display's built-in 8-microphone array can be used with a conferencing app or in place of a connected computer's microphone.

More information

In addition to this guide, SMART provides other documents for the display in the Support section of the SMART website (smarttech.com/support).

Scan the QR code on page 2 to view links to SMART Board T Pro series interactive display documents and other support resources.

Chapter 2 **Installing and maintaining the display**

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Is this the first time you've installed or maintained a SMART Board interactive display?

If you haven't installed or maintained a SMART Board interactive display before, refer to the SMART Board interactive display installation and maintenance hub for general instructions and best practices for installing and maintaining a display, including:

- Moving the display to the installation site
- Mounting the display on a wall, floor stand, or mobile stand
- Configuring the display after installation
- Regularly cleaning and maintaining the display to keep it in the best possible condition

> **Important**
>
> Before you clean the SMART product's screen, shut down or disconnect the computer. Otherwise, you may scramble the desktop icons or inadvertently activate applications when you wipe the screen.



See also › *SMART Board interactive display installation and maintenance best practices* (docs.smarttech.com/kb/171035)

Installing the display

SMART recommends that only trained installers install SMART Board interactive displays.

Warning

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

Caution

- Avoid setting up and using the SMART product in an area with excessive levels of dust, humidity, or smoke.
- Make sure an electrical outlet is near the SMART product and remains easily accessible during use.
- The display should be used only with European TN and TT power distribution systems.

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

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

Important

Refer to the display's specifications for its normal operating power requirements, additional requirements, and other information.

Note

- If you want to use the 75" and 86" models (T075-P and T086-P) with one of SMART's electric height-adjustable stands, you must first attach a SMART wall mount (model WM-SBID-200, part no. 1031766, docs.smarttech.com/kb/171405) to the display before mounting the display to the stand. (This applies to the FSE-400, FSE-410, and FSE-420 models of mobile stand and the WSE-400 and WSE-410 models of wall stand).

Refer to the illustrated installation instructions included with the display for specific information about installing it. If you've misplaced these instructions, they're also available online.

See › *SMART Board T Pro series illustrated installation instructions* (docs.smarttech.com/kb/172042)

Installing SMART OPS appliances

The display includes an OPS accessory slot in which your organization can install a SMART OPS appliance:

- SMART OPS PC
- SMART AM60
- SMART Chromebox OPS module

Tip

The Support section of the SMART website lists the SMART computing modules and appliances compatible with the display.

See › Computing module and appliance compatibility with SMART Board interactive displays

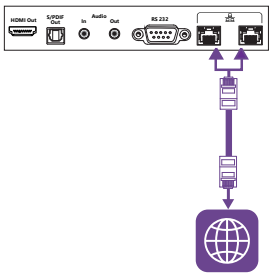
Caution

- Only SMART-provided OPS appliances are supported in SMART Board interactive displays. Third-party OPS appliances are not supported, and their use can lead to poor performance or damage to the display.
- Remove the OPS accessory slot cover before installing the OPS appliance. Store for future use. The accessory slot cover must be reinstalled if an OPS accessory is removed and not replaced.
- Do not install or remove the OPS appliance while the display is turned on. First make sure the power switch on the back of the display beside the AC power inlet is in the OFF (O) position. If you can't reach the power switch, use the front control panel's **Power** button to put the display in Standby mode, and then unplug the display's power cable from the power outlet.
- After you have turned the display's power switch off or unplugged it, wait at least 30 seconds before removing the appliance to allow its internal power supplies to discharge completely. You might also wait five minutes to give the appliance the opportunity to cool, if necessary.
- Make sure the OPS appliance is secured to the display with screws through the two anchor points. Inadequately secured appliances can damage the display. (An OPS appliance's anchoring screws are typically captive, although some simply include separate anchoring screws.)

See › support.smarttech.com/accessories/computing-modules-and-appliances

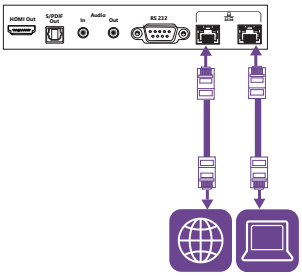
Connecting to a network

You can connect the display to a network using one of the RJ45 Ethernet jacks. The display's network connection is then shared internally with an OPS PC, if installed in the display's accessory slot.



Tip

If you're using one of the display's RJ45 jacks to connect to a network, you can connect a computer to the other RJ45 jack to provide network access for the computer. This is particularly useful if only one wired network connection is available in the room. Network access is available when Networked Power save is enabled in Settings but not when Power save is enabled.



Note

You can use either a static or dynamic IP address scheme.

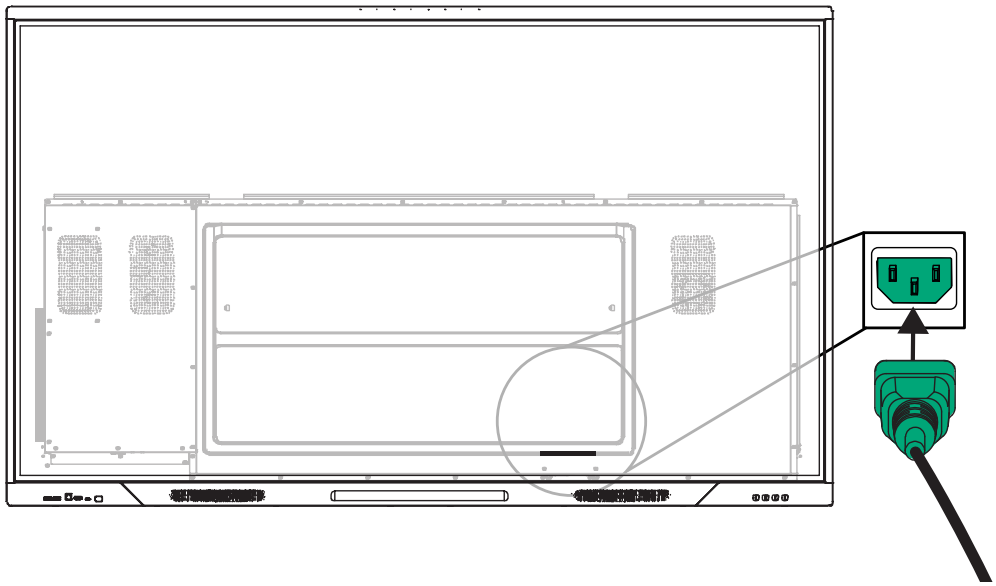
See › *Network* on page 31

Connecting power and turning on the display for the first time

The final step in installing the display is to connect power, turn the display on, and complete the initial setup.

To connect the display to power

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



Note

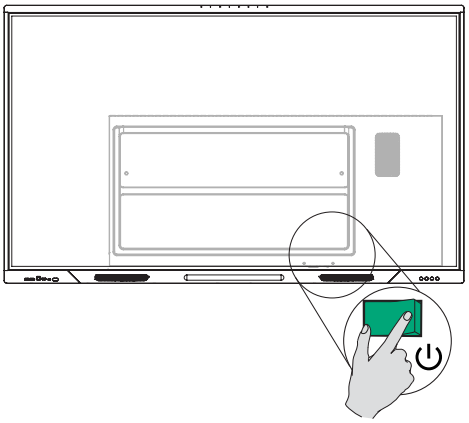
Refer to the display's specifications for power requirements and power consumption information (see Page 8).

To turn on the display

Caution

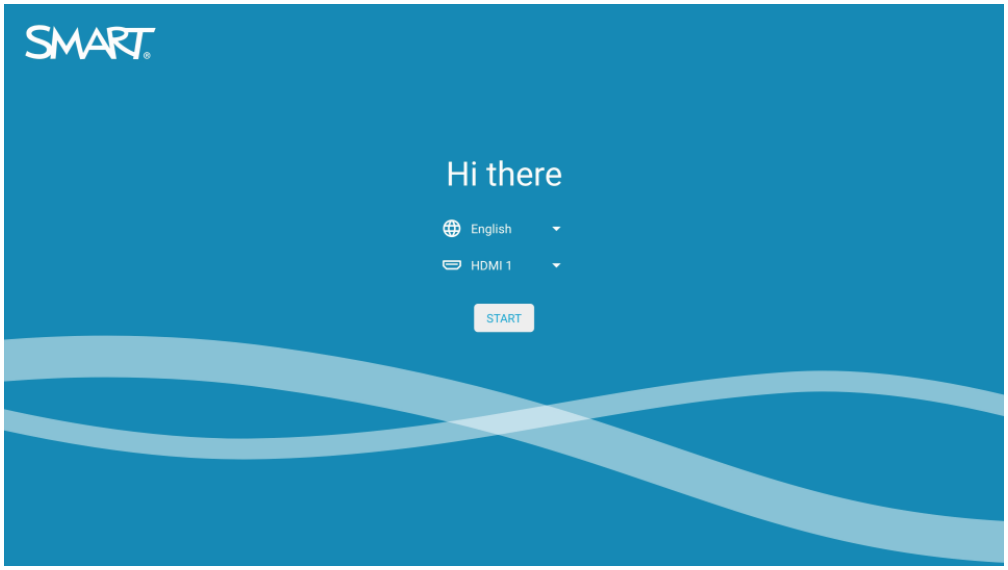
- Install the OPS appliance before you turn on the display. If you can't reach the power switch, use the front control panel's **Power** button to put the display in Standby mode, and then unplug the display's power cable from the power outlet.
- Make sure the OPS appliance is secured to the display with screws through the two anchor points. Inadequately secured appliances can damage the display. (An OPS appliance's anchoring screws are typically captive, although some simply include separate anchoring screws. Third-party OPS appliances are not supported, and their use can lead to poor performance or damage to the display.

Flick the power switch beside the AC power inlet on the rear of the display to the ON (I) position.



To complete initial setup

1. Select the default language.



2. Select the default input.
3. Tap **START**.

Chapter 3 **Connecting computers and other devices**

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Warning

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

Installing and using SMART software

For full use of the SMART Board T Pro series touch surface, you can install SMART Product Drivers and Ink on connected room computers, guest laptops, and SMART modules or appliances. Other SMART software is optional.

Software type	SMART Software
Required	 SMART Product Drivers and Ink

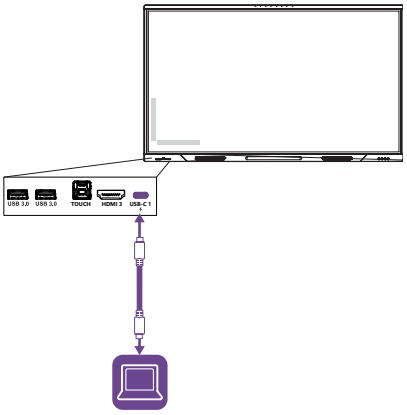
Software type	SMART Software
Optional	 Lumio  SMART Notebook  SMART Notebook Plus  SMART TeamWorks Room  SMART Meeting Pro

See › smarttech.com/downloads

Connecting room computers and guest laptops

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

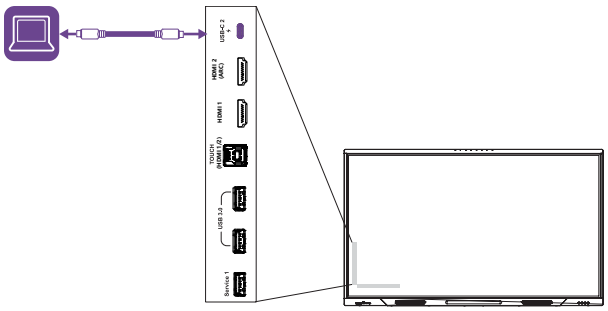
- **USB-C 1**



Video/audio/touch/network

Connector	USB-C 1
Standard	USB 3.2 Gen 1×1 (as DFP) Display Port 1.2 4-lane (as UFP) USB peripheral at 480 Mbps (touch)

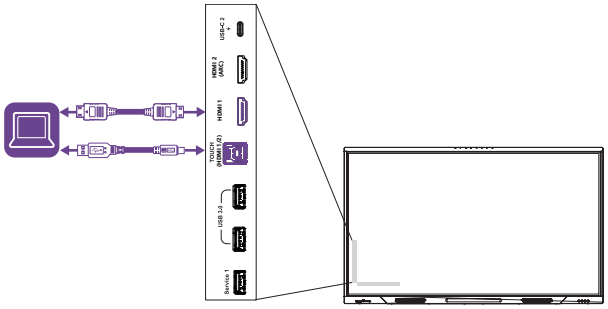
- **USB-C 2**



Video/audio/touch/network

Connector	USB-C 2
Standard	USB 3.2 Gen 1×1 (as DFP) Display Port 1.2 4-lane (as UFP) USB peripheral at 480 Mbps (touch)

- **HDMI 1**



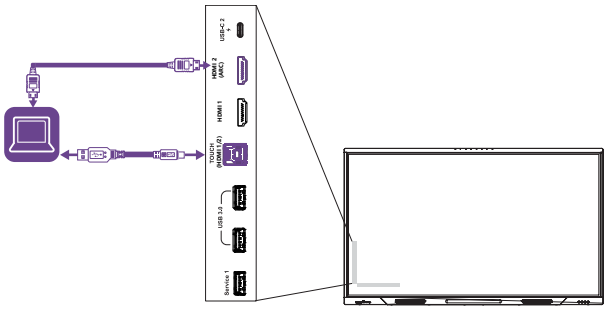
Video/audio

Connector	HDMI 1
Standard	HDMI 2.1

Touch

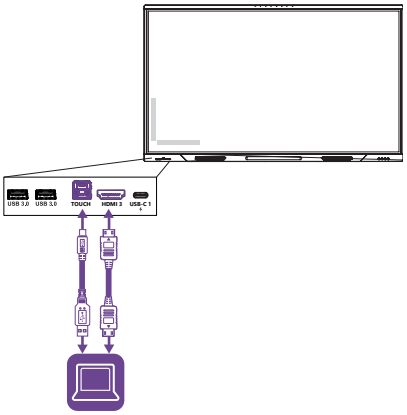
Connector	Touch (USB Type-B)
Standard	USB 3.2 Gen 1

- **HDMI 2**



Video/audio	
Connector	HDMI 2
Standard	HDMI 2.1
Touch	
Connector	Touch (USB Type-B)
Standard	USB 3.2 Gen 1

- **HDMI 3**



Video/audio	
Connector	HDMI 3
Standard	HDMI 2.1
Touch	
Connector	Touch (USB Type-B)
Standard	USB 3.2 Gen 1

⚠ Caution

When connecting a USB cable to a computer, make sure the computer has a USB compliant interface and bears the USB logo. In addition, the USB source computer must be compliant with IEC 60950-1 and/or IEC 62368-1. The source computer must be CE marked and carry safety certification marks for Canada and USA. This is for operating safety and to avoid damage to the SMART product.

Notes

- A room computer or guest laptop connected to the display through a USB Type-B or Type-C receptacle has access to any networks connected to the display by Ethernet while the computer is the currently selected input on the display.

  See › *Connecting to a network* on page 12

- Install SMART software on any computers you connect to the display.

  See › Installing SMART software

- If a connected computer reports “Too many USB hubs” or “cannot start (code 10),” see the knowledge base article, SMART Board interactive displays and USB tier structure use.

Viewing a connected computer's input

1. Connect the computer to the display.
2. View the available inputs in one of the following ways:
   - Press **Input** on the front control panel.
   - Press **Input** on the remote control.

   The input selection menu appears.
3. Tap the computer's input menu option.

Setting a connected computer's resolution and refresh rate

This table presents the recommended resolutions and refresh rates for the display's USB-C and HDMI inputs:

Resolution	Input aspect ratio	Mode	Refresh rate
3840 × 2160	16:9	UHD/2160p	59.94 Hz/60 Hz 50 Hz 29.97 Hz/30 Hz 25 Hz 23.98 Hz/24 Hz
1920 × 1080	16:9	FHD/1080p	59.94 Hz/60 Hz 50 Hz 29.97 Hz/30 Hz 25 Hz 23.98 Hz/24 Hz
1360 × 768	16:9	HD	60.015 Hz
1366 × 768	16:9	HD	59.79 Hz
1280 × 720	16:9	HD/720p	59.94 Hz/60 Hz 50 Hz 29.97 Hz/30 Hz 25 Hz 23.98 Hz/24 Hz
720 × 480	16:9	480p (DVD player)	60 Hz

This table presents the recommend resolutions and refresh rates for the display's VGA input:

Resolution	Input aspect ratio	Mode	Refresh rate
800 × 600	4:3	SVGA 60	60.317 Hz
640 × 480	4:3	VGA 60	59.940 Hz

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

See also › support.smarttech.com/docs/resandrefreshrates

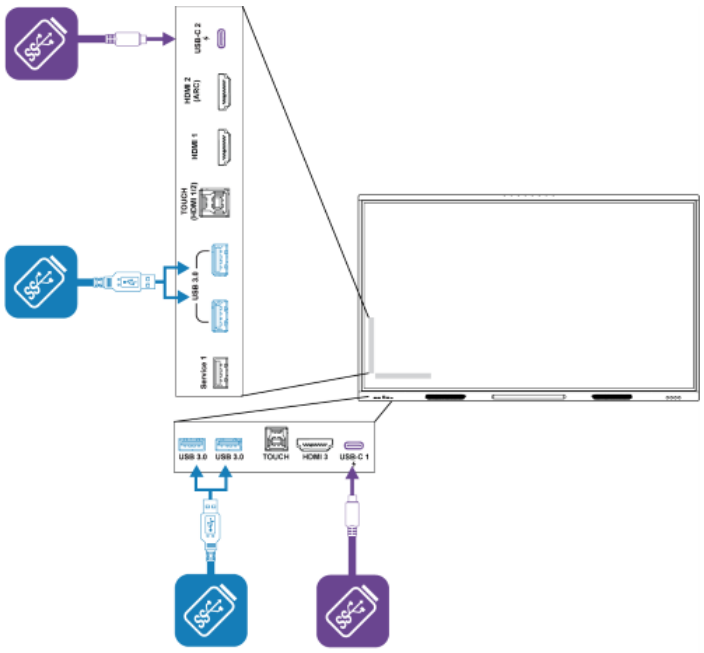
Connecting other devices

In addition to computers, you can connect a variety of other devices to the display:

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

Connecting USB drives, peripherals, and other devices

The display includes the following USB receptacles. You can connect USB drives, peripherals (such as keyboards), and other devices to these receptacles and use the devices with iQ, connected computers, and OPS modules installed in the OPS accessory slot.



This table shows the supported USB speeds for each input:

Input	USB 3.2 Gen 1 Type-A	USB Type-C
USB-C 1	Hi-Speed	Hi-Speed
USB-C 2	Hi-Speed	Hi-Speed
HDMI 1	SuperSpeed	SuperSpeed
HDMI 2	SuperSpeed	SuperSpeed
HDMI 3	SuperSpeed	SuperSpeed
OPS accessory slot	SuperSpeed	SuperSpeed

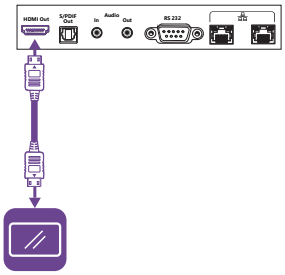
Notes

- Hi-Speed = 480 Mbps
- SuperSpeed = 5 Gbps
- You can charge devices using the display's USB Type-C receptacles:

Receptacle	Location	Maximum charging capacity
USB-C In 1	Front connector panel	100 W
USB-C In 2	Side connector panel	100 W

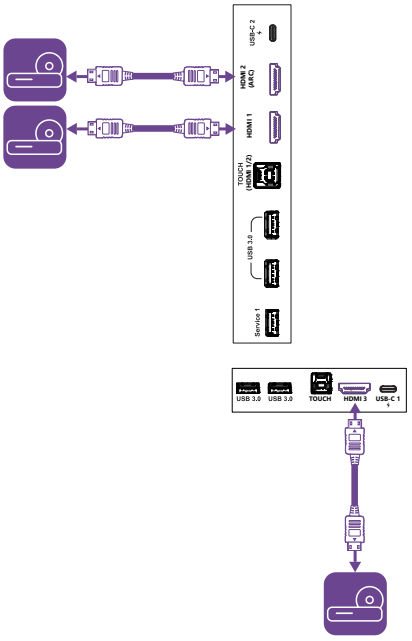
Connecting an external display

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



Connecting an external video source

You can connect an external video source, such as a DVD player, media box, or cable box, to your display using an HDMI cable and to any of the HDMI connectors on the display's connector panels. To view the source content, switch to the connected HDMI input.

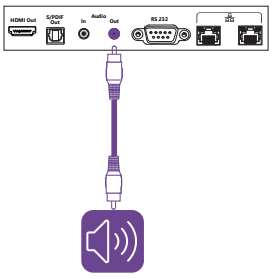


Connecting an external audio system

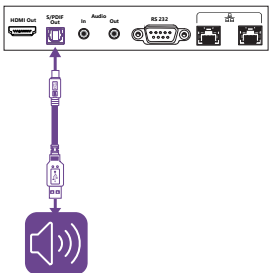
The display includes two integrated speakers and a subwoofer, designed to provide sound at the front of a room.

You might want to connect an external audio system if you're providing sound in a larger space.

You can connect the display to an external audio system using the Stereo 3.5 mm Out connector. This disables the display's internal speakers.



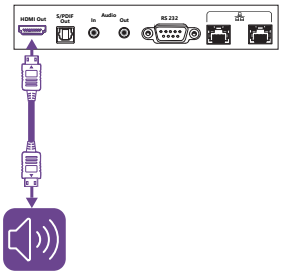
In addition to the Stereo 3.5 mm Out connector, the display provides an optical Sony/Philips Digital Interface (S/PDIF) Out connector. S/PDIF is a digital audio transmission medium. You need an audio system that has an S/PDIF input to decode this connection to analog. Most external sound bars include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



Note

The S/PDIF audio is a fixed-volume output. Adjusting the volume of the display's speakers does not affect the S/PDIF output.

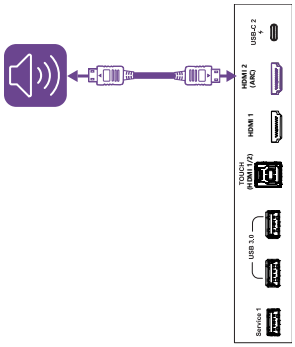
You can also connect an external audio system to the display using the HDMI Out connector on the bottom connector panel.



Note

The audio is a fixed-volume output. Adjusting the volume of the display's speakers does not affect the HDMI output.

If you have an external audio system with HDMI ARC (Audio Return Channel) or eARC (Enhanced Audio Return Channel), you can output the display's audio to the audio system by connecting the display's HDMI 2 (ARC) connector on the side connector panel to the HDMI Out connector on the audio system's receiver.



Connecting room control systems

A room control system enables users to control a room's lighting, audio system, and possibly, the display. Some installations may require you to integrate the display with a room control system.

You can use the display's RS-232 connector to connect a third-party external control system to the display.

See › *Appendix B Managing the display using RS-232* on page 34

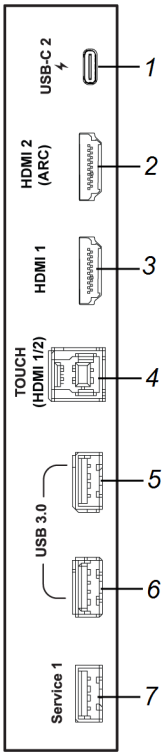
> **Note**
>
> SMART Board interactive displays are not compatible with centralized remote control systems, such as a universal remote control.

Connector diagrams

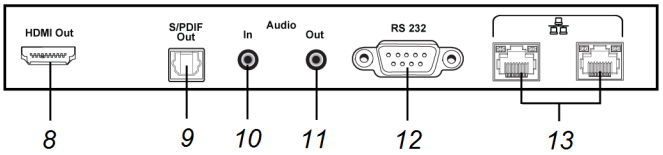
Side and bottom connector panels

This diagram and table present the connectors on the display's side and bottom connector panels:

Side



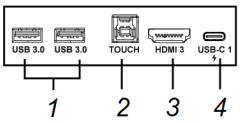
Bottom



No.	Connector	Connects to	Notes
1	USB Type-C	USB Type-C 2 input OR Supported USB drives, peripherals, and other devices	See › Page 16 See › Page 20
2	HDMI 2.1 In	HDMI 2 (ARC) input (video and audio) OR External video source OR External audio system	This connector supports HDMI ARC (Audio Return Channel) and eARC (Enhanced Audio Return Channel), which allow audio signals to travel between the display and the connected device and improve audio quality as a result. See › Page 16 See › Page 22 See › Page 22
3	HDMI 2.1 In	HDMI 1 input (video and audio) OR External video source	See › Page 16 See › Page 22
4	USB 3.2 Gen 1 Type B	HDMI 1 input (touch) OR HDMI 2 input (touch)	See › Page 16
5	USB 3.2 Gen 1 Type-A	Supported USB drives, peripherals, and other devices	See › Page 20
6	USB 3.2 Gen 1 Type-A	Supported USB drives, peripherals, and other devices	See › Page 20
7	USB 3.2 Gen 1 Type-A	N/A	This connector is a service port.
8	HDMI 2.1 Out	External display OR External audio system	See › Page 21 See › Page 22
9	S/PDIF Out	Digital audio output	See › Page 22
10	Stereo 3.5 mm In	External audio system	See › Page 16
11	Stereo 3.5 mm Out	External audio system	See › Page 22
12	RS-232	Room control system	See › Page 34
13	RJ45 (×2)	Network	See › Page 12

Front connector panel

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



No.	Connector	Connects to	Notes
1	USB 3.2 Gen 1 Type-A	Supported USB drives, peripherals, and other devices	See › Page 20
2	USB 3.0 Type-B	HDMI 3 input (touch, microphone, camera, and other USB peripherals)	See › Page 16
3	HDMI 2.1 in	HDMI 3 input (video and audio) OR External video source	See › Page 16 See › Page 22
4	USB Type-C	USB Type-C 1 input OR Supported USB drives, peripherals, and other devices	See › Page 16 See › Page 20

Updating system firmware

You can update the display's firmware over-the-air provided it is connected to the internet, or manually using a USB drive.

Updating system firmware

To apply a firmware update

1. Open the Settings menu by pressing either of the **Input** buttons on the front control panel or the remote control.
2. Tap **System**.
3. In the *Firmware update* section, tap **Update**.

4. Tap **Network update** to update the firmware automatically over the internet.

   > **Note**
   >
   > *Local update* is to update the display's firmware manually.

5. Select the OTA server.
6. Tap **Update**.

   The display downloads and applies the firmware update.

   > **Note**
   >
   > The display may restart a number of times when a firmware update is applied.

Updating system firmware manually

You can download system firmware updates from the display's downloads page and update the display's firmware manually using a USB drive.

To find your display's firmware version

You can find the display's current firmware version by going to **Settings** > **About** > *Firmware version*.

See > *Firmware version* on page 33

Chapter 4 **Troubleshooting**

Troubleshooting the display and related SMART products

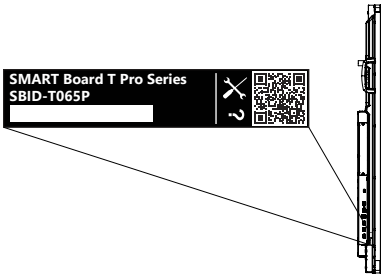
The Support section of the SMART website includes information about resolving a variety of common problems with the display and related SMART products.

See › support.smarttech.com/docs/tprotroubleshooting

Contacting your reseller for additional support

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

Your reseller might ask you for the display's serial number.
The serial number is on a label located on the left side of the display (pictured).



> **Tip**
>
> Scan the QR code on the label to view the SMART Board T Pro series interactive display support pages on the SMART website.

Appendix A **Adjusting settings**

You can access the display's settings by tapping the **Input** button on the front control panel. You can also press the Input or Settings button on the remote control.

To exit display settings, tap **Exit menu** in the Settings menu.

Input settings

Option	Values	Function	Notes
▸ **General**			
• General	HDMI 1 HDMI 2 HDMI 3 USB-C 1 USB-C 2 OPS	Select a connected computer or other device's input to view on the display. **Note** Tap and hold the input button to rename the input.	A purple box appears around the currently selected input (HDMI1, HDMI2, HDMI3, USB Type-C1, USB Type-C2, OPS). Inputs with a connected source are highlighted in purple rather than appearing gray.
• Volume	Range slider	Sets the display's volume.	N/A
• Brightness	Range slider	Sets the overall brightness of the image.	N/A

Other settings

Option	Values	Function	Notes
▸ **Display**			
• Brightness	Range slider	Sets the overall brightness of the image.	N/A

Option	Values	Function	Notes
• Screen Timeout	Never 1 minute 5 minutes 10 minutes 30 minutes 60 minutes 90 minutes 5 hours 10 hours	Set the timer for the screen turning off.	
• Go to Standby Mode	Never 1 minute 5 minutes 10 minutes 30 minutes 60 minutes 90 minutes 5 hours 10 hours	Set the timer for going into standby mode.	
• Local Dimming	Enabled Disabled	Automatically adjusts the screen contrast based on the video content.	
• Automatic Brightness Control	Enabled Disabled	Detects the ambient light in the room and automatically adjusts the screen brightness.	
• Eco mode	Enabled Disabled	Reduces the screen brightness of the display to save power.	N/A
• Touch Mode	• Fast Touch • Visual Priority • Automatic	Set the touch mode based on the content. • Optimized for smooth writing and fast response. • Sharper media, reduced touch response. • Adjust touch mode based on content.	N/A
• Contrast	0 to 100	Sets the difference in brightness between the lightest and darkest parts of the image.	N/A
• Saturation	0 to 100	Sets the color saturation of the image.	N/A
• Color temperature	Range slider	Sets the color temperature of the image.	Very cool Cool Neutral Warm Very warm
▸ **Sound**			
• Speaker Output	On Off Auto	Enables or disables internal speakers. Auto is the default. Speakers auto-disable when external audio device is connected	

Option	Values	Function	Notes
• ARC	Enabled Disabled		
• Volume	0 to 30	Sets the display's volume	
• Bass	-6 to 6	Sets the bass level.	
• Treble	-6 to 6	Sets the treble level.	
• Balance	-50 to 50	Sets the L/R balance of the display's built-in speakers.	
• Microphone	Enabled Disabled	Enables or disables the microphone.	
▸ **Input & Output**			
• Default Input	HDMI 1 HDMI 2 HDMI 3 USB-C 1 USB-C 2 OPS	Sets the display's default input.	
• Wake on active source	Enabled Disabled	Wakes up the display when a video signal is detected from a connected computer or other video source.	
• HDMI CEC	Enabled Disabled	Allows HDMI connected devices to send commands to the display to turn on or switch to that input.	
• HDMI Version	Auto 1.4 2.0	Sets the HDMI version for each input.	
• Output Format	4K (3840x2160) FHD (1920x1080) Auto	Sets the display's output format.	
▸ **Network**			
• Ethernet	Enabled Disabled	Enables or disables the display's Ethernet network connection.	N/A
• IP Address scheme	DHCP Static	Enables or disables DHCP to assign an IP address to the display.	When set to *Static*, you can manually enter the IP configuration details using the on-screen keyboard.
• IP Address		Information displayed by a router.	When set to *Static*, you can manually enter the IP configuration details using the on-screen keyboard.

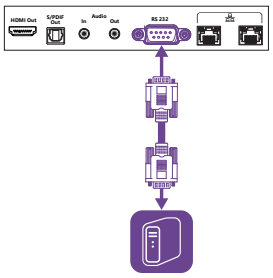
Option	Values	Function	Notes
• Subnet Mask		Information displayed by a router.	When set to *Static*, you can manually enter the IP configuration details using the on-screen keyboard.
• Gateway		Information displayed by a router.	When set to *Static*, you can manually enter the IP configuration details using the on-screen keyboard.
• Preferred DNS		Information displayed by a router.	When set to *Static*, you can manually enter the IP configuration details using the on-screen keyboard.
• Alternative DNS		Information displayed by a router.	When set to *Static*, you can manually enter the IP configuration details using the on-screen keyboard.
• MAC address		Information displayed by a router.	When set to *Static*, you can manually enter the IP configuration details using the on-screen keyboard.
▸ **System**			
• Language	English French Spanish German Dutch Chinese Italian Danish Finnish Norwegian	Sets the display's language.	N/A
• RS-232	Enabled Disabled	Enables or disables the RS-232 room control interface port.	N/A
• Button Lock Control	Enabled Disabled	Enables or disables the buttons on the front control panel. Press and hold Volume up and Volume down together for four seconds to reenable them.	N/A
• Firmware Upgrade	Upgrade	Tap Upgrade to download the latest firmware.	N/A
• Factory Reset	Reset	Reset all settings to factory defaults.	N/A
• Diagnostic Log	Enabled Disabled	Use only if instructed by SMART Support teams.	N/A
▸ **About**			

Option	Values	Function	Notes
• Product model name	N/A	Shows the display's product model name.	N/A
• Serial number	N/A	Shows the display's serial number.	N/A
• Production part number	N/A	Shows the display's production part number.	N/A
• Regulatory name	N/A	Shows the display's regulatory name.	N/A
• Firmware version	N/A	Shows the current version of the display's firmware version.	See › *Updating system firmware* on page 26
• Touch sensor firmware	N/A	Shows the current version of the display's touch sensor firmware.	N/A
• Front I/O firmware	N/A	Shows the current version of the display's front I/O firmware version.	N/A
• Rear I/O firmware	N/A	Shows the current version of the display's rear I/O firmware version.	N/A
• DSP firmware	N/A	Shows the current version of the display's DSP firmware version.	N/A
▸ **Power off**			
• Power off		Puts the display into a low-standby mode.	N/A
• Restart		Restarts the display.	N/A

Appendix B **Managing the display using RS-232**

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



Important

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

Configuring the serial interface settings

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

To configure the computer or control system's serial interface

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

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

4. Send a carriage return character (<CR>) to the display.

   The display will show a command prompt (>) to indicate that the display can now accept commands.

   > **Notes**
   >
   > - If you're using a terminal application on a computer, pressing ENTER should send a carriage return character (<CR>) but may also send a line feed character (<LF>), depending on your terminal application configuration.
   > - When you use a control system program instead of terminal application, all lines output from the display are preceded by a carriage return character (<CR>) and line feed character (<LF>) and then followed by a carriage return character (<CR>) and line feed character (<LF>).
   >
   >   **Example**
   >
   >   ```
   >   >set volume=0<CR>
   >   <CR><LF>
   >   volume=0<CR><LF>
   >   >
   >   ```
   >
   > - If no message appears or an error message appears, the serial interface isn't configured correctly. Repeat steps 3 and 4.

See also › wikipedia.org/wiki/ASCII

Commands and responses

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

Correct

```
>get volume

volume=25

>
```

In this example, the user used `=-30` instead of `-30`.

Incorrect

```
>set volume=-30

invalid cmd: setvolume=-30

>
```

Notes

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

To retrieve a setting's current value

Use a `get` command.

This example shows how to get the volume:

```
>get volume

volume=25

>
```

To assign a value to a setting

Use a `set` command.

This example sets the volume to 15:

```
>set volume=15

volume=15

>
```

To increase or decrease the value of a setting

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

This example increases the volume by 5:

```
>set volume+5

volume=20

>
```

This example decreases the volume by 15:

```
>set volume-15

volume=5

>
```

Power states

The display has three power states:

Power state	Description
ON	The display is in normal operating mode.
READY	The screen is off, but the display is ready to turn on when: • A user presses the **Power** button on the front control panel or the remote control • You send the set `powerstate=on` command. • The display receives a video signal.
POWERSAVE	The screen is off, and the display is in a low power state. The display enters READY or ON state when: • A user presses the **Power** button on the front control panel or the remote control. • The display receives a video signal.

Power state commands

Get command	Set command	Response
`get powerstate`	`set powerstate[Value]` Where `[Value]` is one of the following: • `=on` • `=ready` • `=standby` • `=powersave` **Note** You must wait 20 seconds after issuing a `set powerstate=powersave` command until the display responds again.	`powerstate=[Value]` Where `[Value]` is one of the following: • `on` • `ready` • `powersave`

See also › support.smarttech.com/docs/energysavingmodes

Input commands

Get command	Set command	Response
`get input`	`set input[Value]` Where `[Value]` is one of the following: • `=hdmi1` • `=hdmi2` • `=hdmi3` • `=ops1` • `=usbc1` • `=usbc2`	`input=[Value]` Where `[Value]` is one of the following: • `hdmi1` • `hdmi2` • `hdmi3` • `ops1` • `usbc1` • `usbc2`

Brightness commands

Get command	Set command	Response
`get brightness`	`set brightness[Value]` Where `[Value]` is one of the following: • `+[Value]` • `-[Value]` • `=[0-100]`	`brightness=[Value]` Where `[Value]` is a number between 0 and 100

Room commands

Get command	Set command	Response
`get statereporting`	`set statereporting[Value]` Where `[Value]` is one of the following: • `=on` • `=off`	`statereporting=[Value]` Where `[Value]` is the following: • `on`
`get help`	N/A	N/A
`factoryreset`	`set factoryreset[Value]` Where `[Value]` is the display's serial number	`factoryreset=[Value]` Where `[Value]` is the panel serial number

Freeze commands

Get command	Set command	Response
`get videofreeze`	`set videofreeze[Value]` Where `[Value]` is one of the following: • `=on` • `=off`	`videofreeze=[Value]` Where `[Value]` is one of the following: • `on` • `off`

Screen shade commands

Get command	Set command	Response
`get screenshade`	`set screenshade[Value]` Where `[Value]` is one of the following: • `=on` • `=off`	`screenshade=[Value]` Where `[Value]` is one of the following: • `on` • `off`

Volume commands

Get command	Set command	Response
`get volume`	`set volume[Value]` Where `[Value]` is one of the following: • `+[Value]` • `-[Value]` • `=[0-30]`	`volume=[Value]` Where `[Value]` is a number between 0 and 30.
`get mute`	set mute`[Value]` Where `[Value]` is one of the following: • `=on` • `=off`	mute=`[Value]` Where `[Value]` is one of the following: • `on` • `off`

Microphone array commands

Get command	Set command	Response
`get micarray`	set micarray`[Value]` Where `[Value]` is one of the following: • `=on` • `=off`	micarray=`[Value]` Where `[Value]` is one of the following: • `on` • `off`

Firmware version commands

Get command	Response
`get fwversion`	`fwversion=[Value]` Where `[Value]` is the firmware, in the format SMART_x.x.x.x.

Model number commands

Get command	Response
`get modelnum`	`modelnum=[Value]` Where `[Value]` is one of the following: • `SBID-T065-P` • `SBID-T075-P` • `SBID-T086-P`

Serial number commands

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

Part number commands

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

Asynchronous messages

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

Change	Asyncronous message
Display power state	`#powerstate=[Value]` Where `[Value]` is one of the following: • `on` • `ready` • `powersave`
Input selection	`#input=[Value]` Where `[Value]` is one of the following: • `hdmi1` • `hdmi2` • `hdmi3` • `usbc1` • `usbc2` • `ops1`
Brightness	`#brightness=[Value]` Where `[Value]` is a number between 0 and 100
Freeze frame	`#videofreeze=[Value]` Where `[Value]` is one of the following: • `on` • `off`
Screen shade	`#screenshade=[Value]` Where `[Value]` is one of the following: • `on` • `off`
Volume increase or decrease	`#volume=[Value]` Where `[Value]` is a number between 0 and 30
Volume mute	`#mute=[Value]` Where `[Value]` is one of the following: • `on` • `off`

Appendix C **Managing the display using network control protocol**

You can connect the display to your LAN and use a computer or control system to send TCP or UDP commands. You can use network control to change inputs, turn the display on or off, and check settings such as volume or power state.

> **Important**
>
> - Make sure the computer or control system supports TCP and UDP, and that it can connect to the display on port 4664.
> - A full list of network commands and responses for the SMART Board T Pro series interactive display can be found at docs.smarttech.com/kb/172095

Configuring the network settings

Before you send commands, configure the control system to match the display's network settings.

To configure the computer or control system's network settings

1. Turn on the display.
2. Connect the display to the network by using an Ethernet cable.
3. Press the display's **Input** button, tap **Network**, and confirm that the display has a valid IP address.

   > **Tip**
   >
   > Use a static IP address or reserve one in DHCP.

4. Configure the computer or control system's network settings with the following values:

Network protocol	IP
Transport protocol	TCP and UDP
TCP/IP port	4664

5. Open a TCP or UDP connection to the display by using its IP address and port 4664.

6. Send a test command. Follow the display's protocol for command formatting and termination.

   Notes

   - Ensure the command includes the source and destination addresses, function code, setting identifier, and value field as required, and terminate the frame with the designated end-of-frame byte.
   - After sending the frame, wait for the display to respond with the corresponding reply frame before sending another command.
   - The display automatically returns a reply frame immediately upon receiving a valid command frame.
   - If no reply frame appears or an error reply is received, the network control isn't configured correctly. Repeat steps 3 and 4.

See also › wikipedia.org/wiki/hexadecimal

Commands and responses

To access display information or adjust display settings using the RS-232 network protocol, send each command as a complete structured frame containing the source and destination addresses, function code, setting identifier, and value field as required, and terminate the frame with the designated end-of-frame byte. After sending a frame, wait for the display to respond with the corresponding reply frame before sending another command. The display automatically returns a reply frame, so no visible prompt is displayed.

The device communicating with the display is the master. It sends requests to the display, and the display replies with responses. The display will not send packets autonomously.

Notes

- All commands must follow the RS-232 frame format.
- Values are hexadecimal representation of ASCII characters within the frame where required.
- Only one frame should be sent at a time; wait for the reply before sending the next frame.
- Does not use ASCII prompts or echo commands.

There are only two fundamental operations, `set` and `get`.

Correct

```
Frame sent:
3A 30 31 47 38 30 30 30 0D

Display response:
3A 30 31 72 38 30 32 35 0D
```

In this example, the user formatted the frame incorrectly or the value was invalid. The display returned a failure status.

Incorrect

```
Frame sent:
3A 30 31 53 38 2D 33 39 0D

Display response:
34 30 31 2D 0D
(Failure)
```

To retrieve a setting's current value

Use a `get` command.

This example shows how to get the volume:

```
3A 30 31 47 38 30 30 30 0D
```

To assign a value to a setting

Use a `set` command.

This example sets the volume to 030:

```
3A 30 31 53 38 30 33 30 0D
```

Network control commands

A full list of network commands and responses for the SMART Board T Pro series interactive display can be found at docs.smarttech.com/kb/172095

Certification and compliance

Federal Communication Commission interference statement

FCC
Suppliers Declaration of Conformity
47 CFR § 2.1077 Compliance Information
Unique Identifier: IDT65-1, IDT75-1, IDT86-1
Responsible Party – U.S. Contact Information
SMART Technologies (Seattle) Inc.
11100 NE 8th St., Suite 210
Bellvue, WA 98004
compliance@smarttech.com

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

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

Note

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

Caution

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

Innovation, Science and Economic Development Canada statement

This device complies with CAN ICES-003(A) / NMB-003(A) of the Innovation, Science and Economic Development Canada Rules. Operation is subject to the following two conditions:

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

Innovation, Science et Développement économique Déclaration du Canada

Cet appareil est conforme à la norme CAN ICES-003(A) / NMB-003(A) pour les appareils radio agréés. Son fonctionnement est soumis aux deux conditions suivantes:

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

EU declaration of conformity

Hereby SMART Technologies ULC declares that the Interactive Displays regulatory model IDT65-1, IDT75-1, and IDT86-1 are in compliance with 2014/30/EU and Electromagnetic Compatibility Regulations 2016.

Warning

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

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

Hardware environmental compliance

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

Waste Electrical and Electronic Equipment and Battery regulations (WEEE and Battery Directives)

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



Batteries

> ⚠ **Caution**
> There is a risk of fire or explosion if a battery is replaced by an incorrect type. Dispose of used batteries promptly. Follow handling instructions on coin cell packaging. Recycle or dispose of used batteries according to local guidelines.

The display contains a CR2032 coin cell battery. The remote control contains alkaline batteries. Recycle or dispose of batteries properly.

Perchlorate material

The coin cell battery contains perchlorate material. Special handling may apply.

See › dtsc.ca.gov/hazardouswaste/perchlorate

REACH regulation

This product may contain substances that are candidate SVHCs under the EU REACH Regulation (EC) 1907/2006.

See › echa.europa.eu/scip-database

Mercury

The lamp in this product contains mercury and must be recycled or disposed in accordance with local, state, provincial and federal laws.



SMART Technologies

smarttech.com/support

smarttech.com/contactsupport

docs.smarttech.com/kb/172043