Extron TeamWork 400 Kit Device Control Processor Cable Installation Guide

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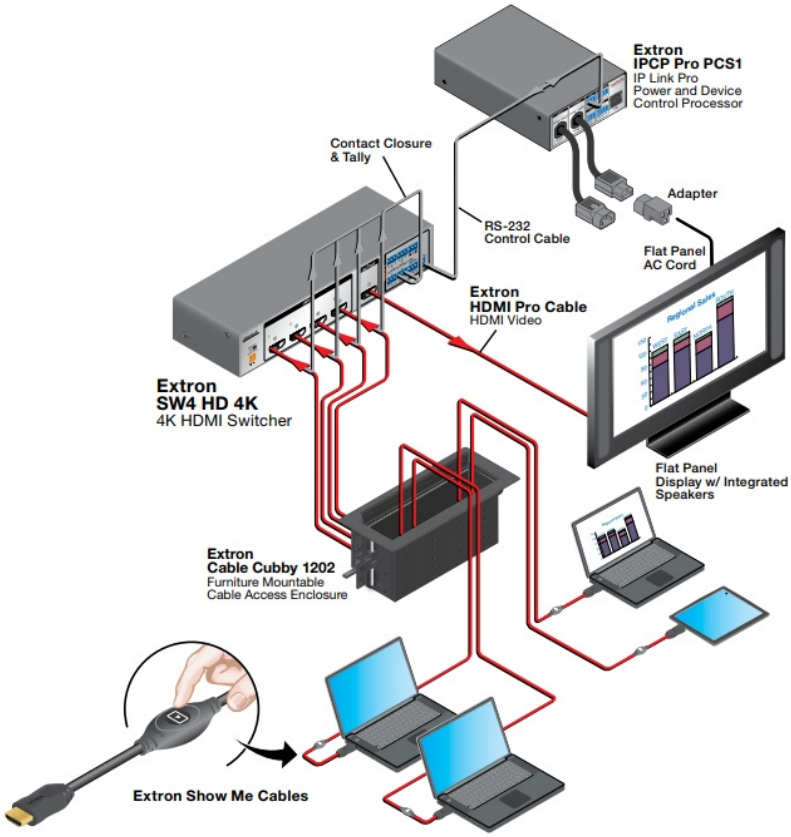
Contents

Team Work 400 Kit

The Team Work 400 kit consists of an **HDMI** switcher, system controller, Cable Cubby®, and cables packaged together as a complete system that, in most cases, requires no configuration.



The diagram above shows a typical TeamWork 400 application. The input devices (laptops and a tablet) connect to the switcher, using Show Me® cables. The Show Me cables allow the user to select the active input on the switcher.
A control cable connects the RS-232 ports on the switcher and the system controller.
The system controller powers the display on and off. The system controller has been configured so that when a video signal is detected on any of the switcher inputs, the display is powered on. A 30 second timer is started when no signal is detected on any of the switcher inputs. If an active source is detected before the timer expires, the display remains on and the timer is reset. If 30 seconds pass without an active signal, the system controller powers off the display.
The TeamWork kits work, as described, without further software configuration. If you need to change the behavior or operation of the system, you must configure the system controller (see the IPCP Pro Series User Guide at [www.extron.com)](www.extron.com).

Features

- Standard systems support groups of up to four users.
- Standard systems contain a complete turnkey package that includes cables, switcher, system controller, and Cable Cubby enclosure.
- System controller pre-loaded with Global Configurator that requires no further adjustment.
- Works with most commercially available flat panel displays, laptops and tablets.
- **HDCP** compliant.
- Section 508 compliant.

Kit Components

When your kit is delivered, check that all the components are present.

Team Work 400 Kit

TeamWork 400	
HDMI switcher	1 (SW4 HD 4K, 4 input)
System controller	1 (IPCP Pro PCS1)
Cable Cubby	1 (Cable Cubby 1202)
Power modules (included with Cable Cubby)	1
HDMI Show Me cables	4
HDMI cable	1
Switcher control cable	1
Cable Cubby SM Bracket Kit	1
Installation Guide	TeamWork 400 Kit Installation Guide

Display Requirements

The TeamWork system is designed to work with most brands and models of flat panel displays available worldwide. For optimum performance, consider the following when selecting the displays for your TeamWork installation. The display should be tested thoroughly prior to installation or mass deployment of TeamWork systems.
Power attributes — The system works by controlling AC power to the display. When the display is in the ON state with an HDMI input selected, it must be able to power back ON to the same HDMI input when AC power is disconnected and reconnected.
If the display doesn't behave this way, an alternate display should be used. Alternatively, you may need to control the display a different way (i.e. RS-232, infrared, or via Ethernet) using a different type of Extron control processor.
Sleep mode — If the display has a Sleep Mode feature (sometimes called 'auto sleep'), it must be disabled. Many displays have an option to disable this within the menu settings.
Resolution — The TeamWork systems were designed for use with flat panels having an HDMI input connector and having a native resolution of 1080p. Many of the readily available consumer and professional displays support 1080p natively.
Audio — Audio from source devices is supported in the TeamWork system by routing it as an embedded audio signal to the display for playback via integrated speakers. Most displays with HDMI inputs and integrated speakers work this way. Some professional or commercial grade displays do not have integrated speakers and do not support audio playback. Typically, source devices with HDMI output connectors embed audio onto the HDMI connector.

NOTES:

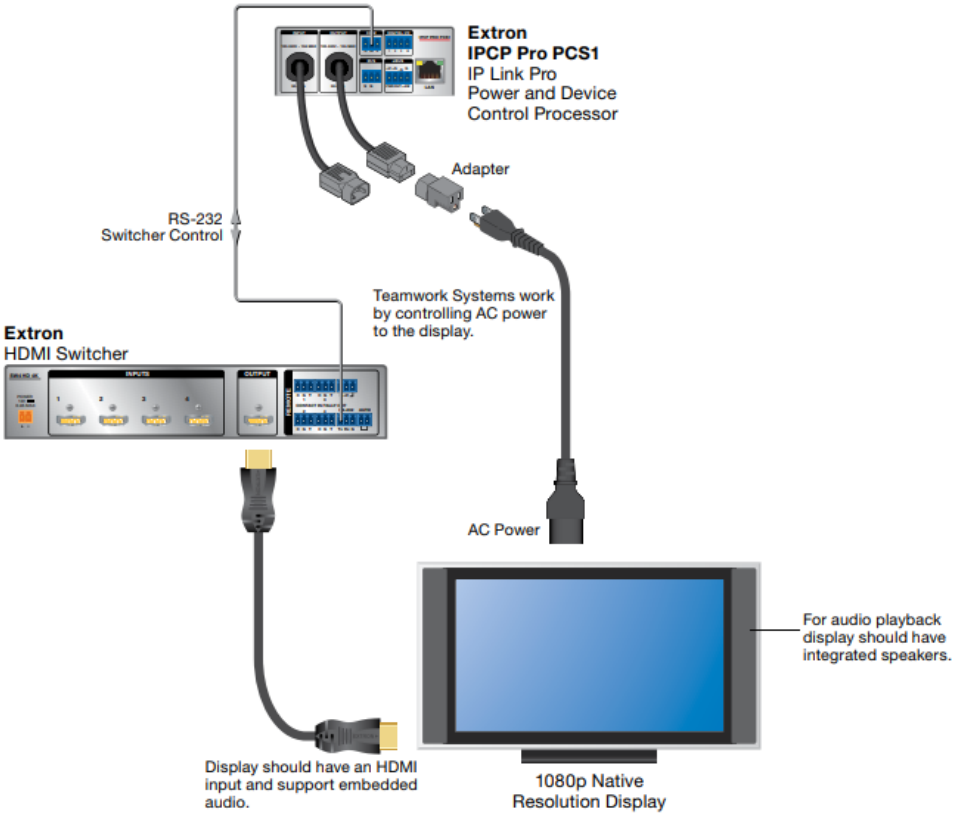
- Always check and test compatibility before installation. Some systems may require advanced configuration of the system controller and require the display to be controlled by RS-232, Ethernet, or Infrared.
- Some displays support a lockout of local buttons. Extron recommends that, after setup, user accessible controls are locked whenever possible. This ensures the display remains optimized for the TeamWork system.

TeamWork systems require a display that returns to the previous state when the power cord is disconnected and then plugged back in.

How to check if a display is compatible:

1. Apply AC power to the display.
2. Turn the display ON.
3. Select the HDMI input.
4. Adjust the volume.
5. Unplug the display (remove AC power).
6. Re-apply AC power to the display.

If the display powers back up (to the ON state) and to the same input and volume level, the display works with the TeamWork system.

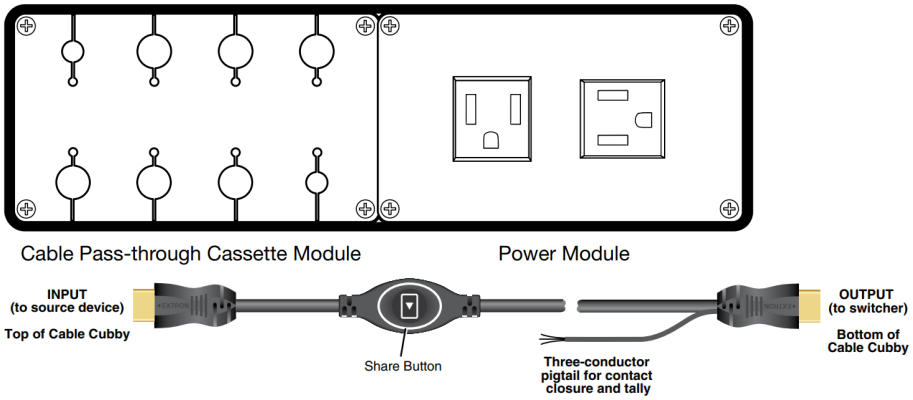


Installation

Install the Cable Pass-through Cassette Module and Show Me Cables

Detailed instructions are in the Cable Cubby Setup Guide.
Extron recommends the layout shown to the right with cable pass-through module to the left of the power module.

NOTE: The figure to the right shows the US power module. Power modules for other countries look different.

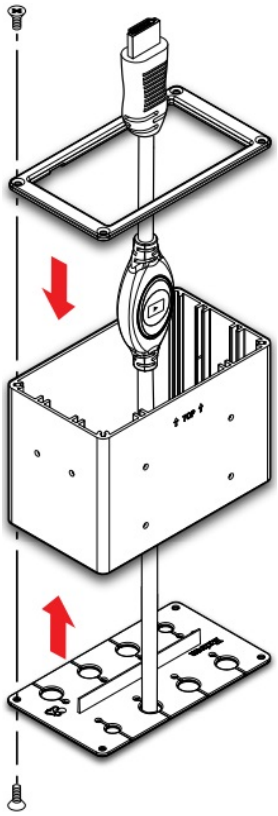


ATTENTION:

- The end with the button and LED connects to the input devices and must come out of the top of the Cable Cubby.
- The end with the three-conductor pigtail connects to the switcher and must come out of the bottom of the Cable Cubby.

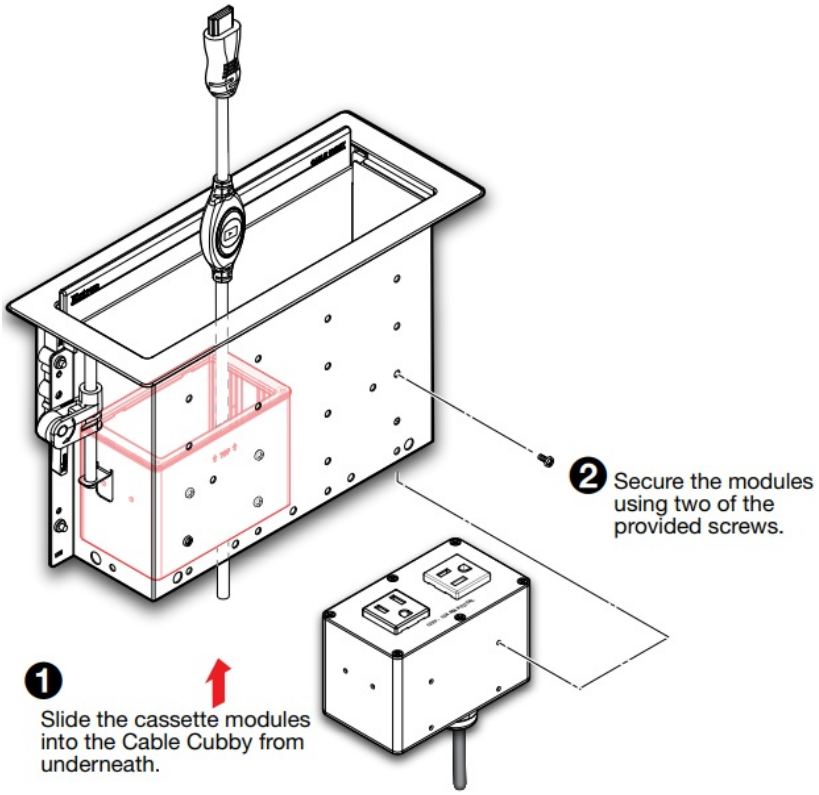
1. Assemble the cable pass-through cassette module as shown in the diagram to the right.
2. Insert the cable cassette module into the Cable Cubby from underneath and secure them in position with the provided #4-40 Phillips head screws and star washers.

Attach the Trim Plate to the top of the module, using the included screws.
Attach the grommet plate to the bottom of the module, using the included screws.
Insert Show Me Cables into the grommet plate.



Install the Power Modules in the Cable Cubby
Insert the power module into the Cable Cubby from underneath and secure the power modules in position with the provided #4-40 Phillips head screws and star washers.

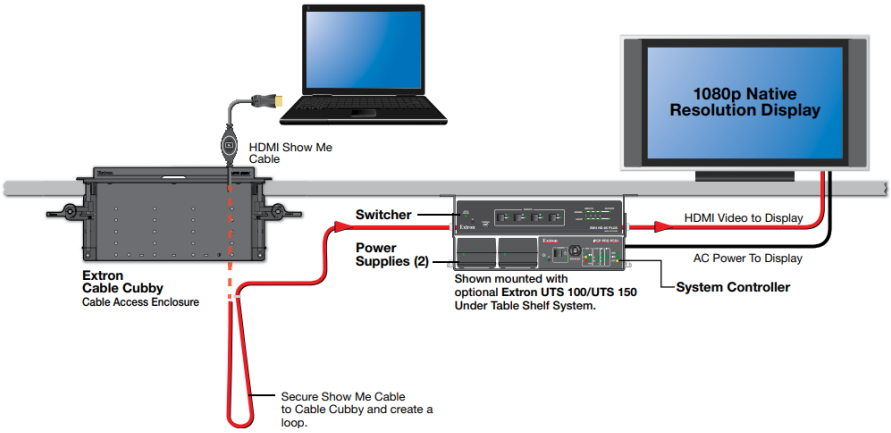
WARNING: Possible electric shock: To ensure good electric grounding, you must use the star washers with the screws.



Mounting and Placement of System Components

Decide where to install your TeamWork system and where to place the individual components.

- The Cable Cubby should provide easy access for as many users as possible. Ensure that there is ample space for cables under the table. Ensure that the edge on which the lid opens is correctly oriented.
- The system controller should be placed close to the display.
- The switcher should be placed close to the Cable Cubby.



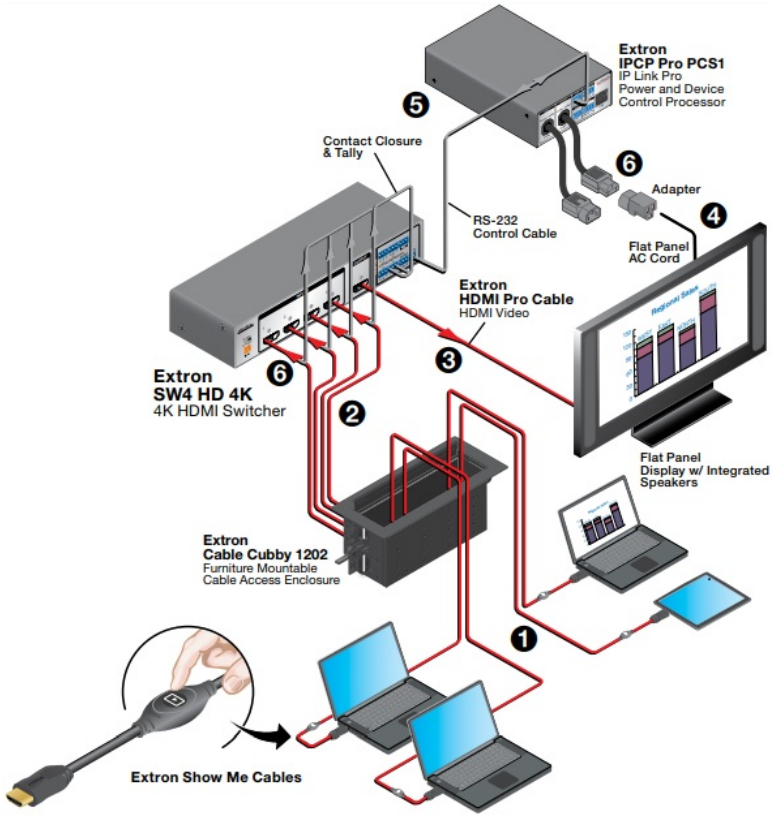
Installing the Cable Cubby in the Table

Before cutting the table and installing the Cable Cubby, see the Cable Cubby Setup Guide (see www.extron.com)

ATTENTION:

- Ensure that the orientation of the cable cubby and the hole dimensions are correct before cutting the table.

Cabling

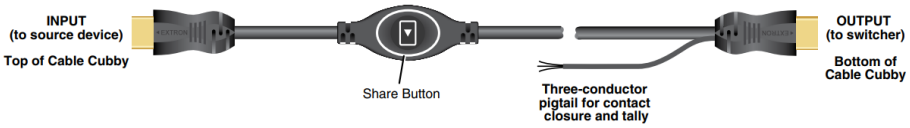


1. Connect the Show Me cables to the source devices.
2. Connect the Show Me cables to the switcher.
3. Connect the switcher to the display.
4. Connect the display to the system controller.
5. Connect the system controller to the switcher.
6. Connect power to the switcher and system controller

HDMI Show Me Cables

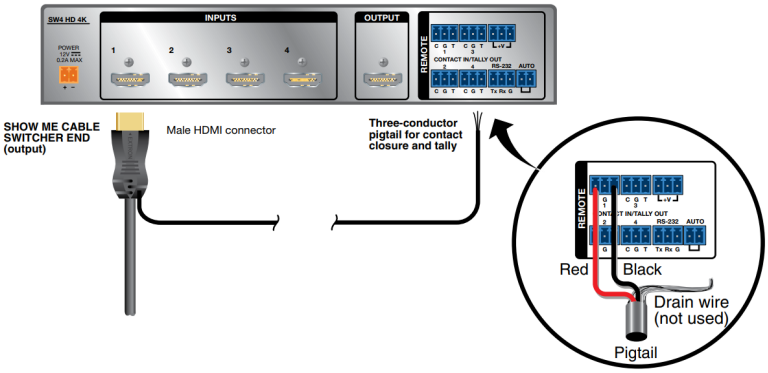
The Extron Show Me cables are for use with Extron TeamWork systems. They feature a Share button for remote input source selection and a control pigtail, which may be wired directly into Extron switchers with contact closure and tally outputs.

HDMI Show Me cable INPUT



1. Connect the input end of the Show Me cable to the source device.
2. Connect the **HDMI** output to the Extron switcher.

   Extron SW4 HD 4K Switcher (HDMI input)



3. Connect the black (Tally Out) and red (Contact) pigtail wires as shown above. The number next to the Tally Out and Contact pins must correspond to the video input on the switcher

NOTES:

- The drain wire does not need to be wired to the switcher. The Show Me cables are grounded via the video connectors.
- Do not connect the Show Me cable to the +V pin on the Extron switcher.

Press the Share button to switch the connected source to the main presentation display.
Pressing the Share button creates a momentary contact closure, which triggers the switcher to select the connected source device. If a tally output is available, the button lights blue.

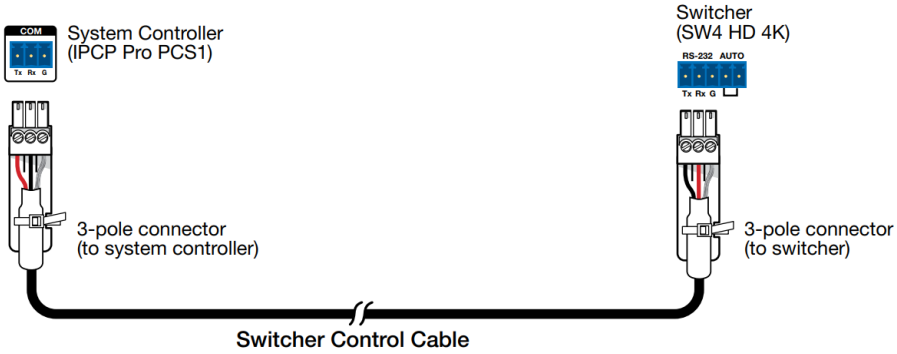
NOTES:

- The source device provides the +5 VDC supply voltage needed to illuminate the Share button. If the source device does not supply this +5 VDC, the Share button does not light. Some mobile devices do not provide the required voltage to light up the button.
- Digital Show Me cables support embedded audio and CEC signals.

Connect the Switcher to the Display Device
Connect the switcher HDMI output to the HDMI input of the display device, using the provided cable. Do not use HDMI to DVI adapters. If necessary, see the user guide for the display device.

Connect the Display to the System Controller
Connect the power cord from the display device to the power output receptacle of the system controller. TeamWork systems work by controlling the AC power to the display.

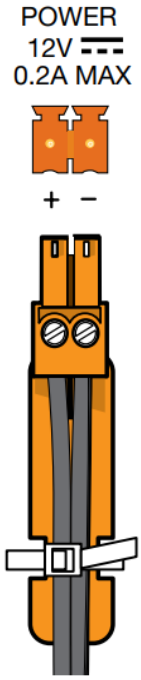
Connect the System Controller to the Switcher
Connect the COM port of the system controller to the RS-232 port on the switcher with the provided control cable.



Connect Power
The system controller uses an internal power supply. Connect the power cord to a wall outlet.
The TeamWork 400 systems use a 4 input switcher with a 12 VDC, 1 A power supply, which is provided with the switcher.

ATTENTION:

- Do not connect the power supply to the SW4 HD 4K switcher until you have read the Attention notifications in the “Wiring the Power Supply” section of the SW HD 4K Series User Guide.



Testing the System

The Team Work system has been pre-configured so that, once all the connections have been made and the devices are all powered on, there should be no need of further configuration for the system to work. To ensure that the system has been set up correctly, follow these steps:

1. Power on the equipment:
    - Source devices
    - Switcher
    - System controller (IPCP Pro PCS1)
2. Press the Power button (1) on the front panel of the system controller.
   The LED (2) lights green when power is being supplied to the attached output device.
3. Turn on the display and confirm that the display is receiving power.
4. Go to the menu for the display and disable the sleep mode feature. If necessary, see the display user guide.
5. Press the power button on the power controller. The LED should go out and the display should be turned off.
6. Connect one of the Show Me cables to a video source, such as a laptop.
7. Press the Share button on that cable. If the source device is providing a video signal, the LED on the Show Me cable lights blue and the display automatically turns on.
8. Connect a second Show Me cable to a second video source.
9. Repeat step 7 to verify that the second source device is providing a video signal and it is the output signal from the switcher.

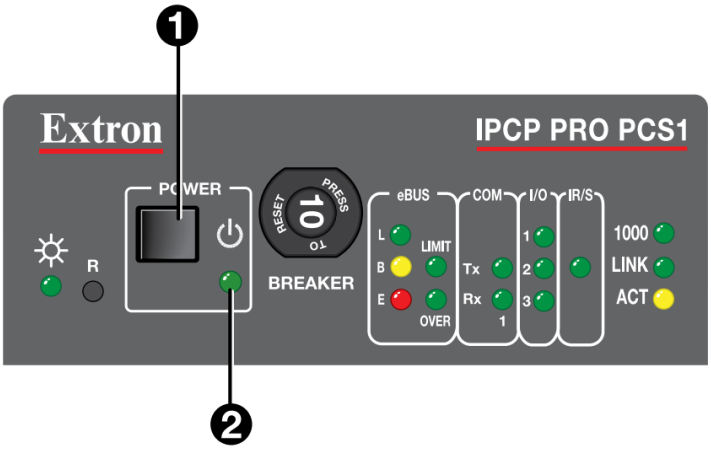
When the button on the second Show Me cable is pressed, the LED lights blue and the LED on the first cable is switched off.

10. Disconnect all the Show Me cables from the source devices.

    After about 30 seconds without an input signal, the display should turn off.

11. Connect a Show Me cable to a source device and press the Share button on that cable.

    As soon as an active video signal is detected, the display should automatically turn on.



Troubleshooting

No Image on the Display:

Cause 1 — There is a problem with the source device:
Solution — Verify that the source device is powered on and outputs an active signal.
Cause 2 — Cable connections are incorrect:
Solution — Verify that the HDMI output cable from the switcher is connected to the current HDMI input of the display.
Cause 3 — Display is off:
Solution 1 — Verify that the display is in the on state.
Solution 2 — The TeamWork system turns the display on and off by controlling the AC power. If the display has a Sleep Mode feature, this feature must be disabled to prevent the display from accidentally powering off.
Cause 4 — The display has a problem:
Solution — Verify that the display functions correctly.
Cause 5 — The display cannot show video at the incoming resolution:
Solution — The EDID settings on the switcher may need to be changed. Refer to the SW HD 4K Series User Guide (see **www.extron.com**) or contact an Extron Support representative at **www.extron.com/company/contactus.aspx**.

Show Me Button LEDs Stay Off When Pressed:

Cause 1 — The cable is not plugged into a source device that is producing an active video output signal:
Solution — Verify that the source device is on and producing an active signal.
Cause 2 — Contact or Tally wiring is incorrect:
Solution — See HDMI Show Me Cables on page 7 to ensure the contact and tally pins are correctly wired.
Cause 3 — The switcher is not powered on:
Solution — Verify that the switcher is powered on.
Cause 4 — Problem with Show Me cable:
Solution — Try connecting the video source to a different cable. If the second cable works correctly, there may be a problem
with the Show Me cable. Contact an Extron Support representative
a **www.extron.com/company/contactus.aspx**.
Cause 5 — Problem with Switcher:
Solution — If none of the cables work correctly, there may be a problem with the switcher. Contact an Extron

Support representative at www.extron.com/company/contactus.aspx.
Cause 6 — The source device does not output +5V:
Solution — This is a problem with the source device. HDMI specifications require pin 18 to carry a +5V output.

The Display Does Not Automatically Turn On:

Cause 1 — Incorrect wiring:
Solution — Verify that the RS-232 communication cable is connected properly between the IPLink Pro controller and Extron switcher.
Cause 2 — There is no video signal present at Show Me cables:
Solution — Verify that an active signal is present at the input of any of the Show Me cables.
Cause 3 — IPLink Pro configuration is missing or corrupted:
Solution — Contact an Extron Support representative at www.extron.com/company/contactus.aspx.
Cause 4 — Display power is out of sync:
Solution — The display is in standby mode. Turn on the display using the remote or the physical power button.
Cause 5 — Display has sleep mode enabled
Solution — Go to the menu for the display and disable the sleep mode feature. Turn on the display using the remote or physical power button.

The Display Stays On and Never Turns Off:

Cause 1 — Video signal is present at Show Me cables:
Solution — Verify that no active signals are present at the inputs of any of the Show Me cables. The TeamWork system is designed to turn off the Display only when no video signals are present.

For information on safety guidelines, regulatory compliances, EMI/EMF compatibility, accessibility, and related topics, see the Extron Safety and Regulatory Compliance Guide on the Extron website.
For information about replacing and disposing of batteries, see the IPCP Pro xi Series User Guide at www.extron.com.

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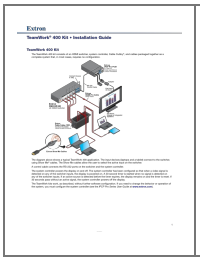
Documents / Resources

	Extron TeamWork 400 Kit Device Control Processor Cable [pdf] Installation Guide TeamWork 400 Kit Device Control Processor Cable, TeamWork 400, Kit Device Control Process or Cable, Device Control Processor Cable, Control Processor Cable, Processor Cable

References