SAVANT

For Product Info

Fiber Transmitter and Room Controller (FTC-P100-00) Quick Reference Guide

The Savant Fiber Transmitter and Room Controller (FTC-P100) Quick Reference Guide provides the information necessary to install the FTC-P100 and associated components.

Box Contents

(1) Fiber Transmitter and Room Controller (FTC-P100)
(1) Installation Kit (075-0125-xx)
- (2) 3-Pin connectors - GPIO and Relay ports (028-9351-xx)
- (1) 6-Pin connector - IR ports (028-9352-xx)
- (4) Screw M3 x 8MM Flat Phil Blk (039-0017-xx)
- (2) Side Mounts Chassis Brackets (071-0268-xx)

(1) Quick Reference Guide (this document)

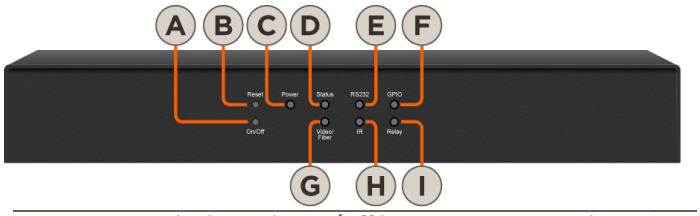
Note: The 3-Pin and 6-Pin connectors described above are a screw down plug-in female type connector

Optional Accessories

120/230V AC to 12V DC Power Supply (PWR-12025-xx)

Specifications

Environments	
Operating Temperature	32° to 104° F (0° to 40°C)
Operating Humidity	5% to 95% (non-condensing)
Maximum BTU	51 BTU per hour
Cooling (Recommended)	3 cubic feet per minute (CFM)
Dimensions and Weight	
Height	11.72 in (29.77 cm)
Width	7.10 in (18.03 cm)
Depth	1.65 in (4.19 cm)
Weight	Net: 3.05 lb (1.38 kg)
	Shipping: 4.0 lb (1.81 kg)
Power	
Power Over Ethernet (POE)	IEEE 802.3af
	IEEE 802.3at
Power Supply (Optional)	
Power Supply (PWR-12025-xx)	Input: 120-230V AC 50/60Hz
	Output: 12V DC
Power Draw	
Maximum	14.8 watts
Nominal	10.8 watts
Regulatory	
Safety and Emissions	FCC Part 15 | CE Mark | C-Tick
RoHS	Compliant
Minimum Supported Release	
da Vinci	5.1.0



A Press and release the **On/Off** button to power up the FTC-P100. Press and hold the **On/Off** button for five seconds to power down.

B Press and release the **Reset** button to reset the FTC-P100. See the Restore System Defaults section below for info on setting the FTC-P100 back to factory defaults.

C **Power Status**
- Off – FTC-P100 is not receiving power
- Red – FTC-P100 is receiving power but not powered On.
- Green – FTC-P100 is receiving power and powered On.

D **Status**
- Off – Embedded processor is resetting or booting the embedded software.
- Green – Savant Host™ has established communications with the FTC-P100
- Green Flashing – FTC-P100 has been provisioned with an IP Address but is not communicating with the Savant Host.
- Red – The host has determined a firmware update is required but a problem occurred during the update process. At this point, the system will initiate a reset.
- Red Flashing – The embedded firmware is loaded and running but the FTC-P100 has not been assigned an IP Address yet.
- Amber – The firmware is currently being updated. The Savant Host initiates the updates.
- Amber Flashing – FTC-P100 has established a valid link local IP Address and is waiting to connect to the host.

E **RS-232**
- Green – RS-232 serial port data activity.
- Off – No RS-232 serial port data activity.

F **GPIO**
- Green –GPIO port signal activity.
- Off –No GPIO port signal activity.

G **Video/Fiber**
- Green – Valid fiber link exists.
- Off – No fiber link present.

H **IR**
- Green –IR port signal activity.
- Off – No IR port signal activity.

I **Relay**
- Green – RS-232 port signal activity.
- Off – No RS-232 port signal activity.

⚠ WARNINGS!
- Fiber optic transceivers emit laser light that can cause eye damage. Never look directly into a fiber optic transceiver or into the ends of a fiber optic cable connected to a transceiver.
- Do not stare directly into the laser beam or view it with optical instruments even if the interface is disabled.

⚠ CAUTIONS!
- Do not bend fiber optic cables beyond their minimum bend radius. Bending the cables beyond their minimum bend radius can damage the cables and cause problems that are difficult to diagnose.
- To reduce the stress on the fastening point of a fiber optic cable, do not let fiber optic cables hang free from the connector and do not allow fastened loops to dangle.

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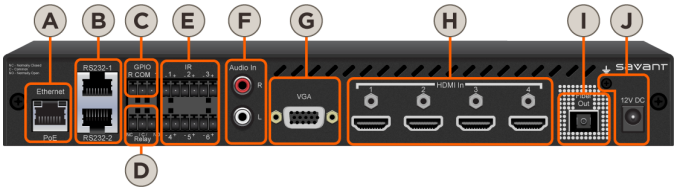
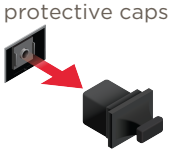


A	RJ-45 Ethernet PoE port. Supports 10/100 Base T, auto negotiation, and Power Over Ethernet. **Left** LED • Green – Ethernet Link Activity • Off – No Ethernet Link Activity **Right** LED • Green – 100 Mbps • Off – 10 Mbps
B	**RS232-1** and **RS232-2** (RJ-45) - Ports available for transmitting and receiving serial data. These two ports are used for controlling an external device via serial binary data communication. Each RS-232 port can be configured with or without flow control (RTS/CTS).
C	**GPIO** (General Purpose Input or Output) – GPIO port can be configured as either a binary input or output. • When configured as an input, the GPIO port will detect a binary input voltage from 0-30V DC with a threshold of 2.4V DC. • When configured as an output, the GPIO port can supply a voltage between 0-12V DC and the maximum current is 150 milliamps. An overcurrent condition shuts down the output until that condition is removed. See GPIO Wiring below.
D	**Relay** - Port provides dry contacts (open/closed) to control devices requiring basic on and off operation. The **Relay** port supports a 30V DC max voltage and a 1.0 amp max current. Input from a device to the Savant controller is not supported through the relay port.
E	**IR** – Six IP output ports transmit IR signals to devices such as an IR flasher. The signals from the IR flasher are then used to control devices with an IR input or IR receiver.
F	**Audio In** - RCA input ports connect to the left and right RCA ports of an analog stereo audio source.
G	**VGA** (Input) • VGA – Resolutions up to 1920x1200@60 Hz • Component Video – Resolutions up to 1080p@60Hz using an RGB to VGA adapter (not included).
H	**HDMI In** – (Four Type A Audio/Video inputs) • Video – Resolutions up to 1080p@60Hz • Graphics – Resolutions up to 1920x1200@60Hz • HDMI Audio – S/PDIF, I2S, and HD Audio
I	**Fiber Out** - Transmits an A/V signal over a single OM3 multimode fiber cable to a VIM card installed into a Savant matrix switcher chassis. • Video – Resolutions up to 1080p@60Hz • Graphics – Resolutions up to 1920x1200@60Hz • HDMI Audio Out – S/PDIF, I2S, and HD Audio
J	**12V DC** – (Optional) System can be powered through the 12V DC power input port when not utilizing PoE. **Gnd Screw** - Connect to external ground when using PoE.

Fiber Optic Protective Caps

Before plugging a fiber cable into the **Fiber In** port, remove the protective caps as shown in the diagram below.



IMPORTANT!

Always keep the protective cap on the **Fiber In** port when the fiber optic cable is not plugged in.

Installation

Follow the instructions below to install.

1. Determine the location for mounting.
   - Ensure adequate ventilation for proper cooling.
   - Ensure proper spacing for wiring. This should include enough spacing to allow for a proper bend radius on the fiber optic cabling.
2. Connect the supplied side mounted brackets using the (4) M3 x 8MM flathead screws. Two screws per bracket.
3. Mount the FTC-P100 to a solid base utilizing the brackets just installed.
4. Connect a Cat 5e/6/7 Ethernet cable between the FTC-P100 Ethernet port and the local network router/switch.
5. Connect the fiber optic cable between the **Fiber In** connection on the front of the FTC-P100 and a **VIM** card located in a Savant matrix switcher chassis. Allow for proper bend radius when making this connection.
6. If required, connect an external power supply such as the PWR-12025-xx to the 12 V DC port. Connect the input to the power supply to a surge protected circuit.

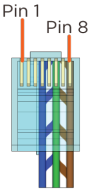
IMPORTANT!

If powering the FTC-P100 using PoE (Power over Ethernet) an external power supply is not required. In this situation, connect a ground wire from the grounding screw on right panel of the FTC-P100 to a proper grounding point within the Savant Control System.

7. Make connections between the external devices and the FTC-P100. Refer to the wiring diagrams in this document or the **Training Videos** located in the Savant University that is accessible through the **Savant Customer Community.**
8. Arrange and tie-wrap all wiring in a neat and safe manner.

RS-232 Wiring Pinout

Refer to the diagram below when connecting or troubleshooting RS-232 connections.



RJ-45 Connector
(Gold Pins Facing Up)

Pin 1: --------	**Pin 5: RXD (RS-232)**
Pin 2: --------	**Pin 6: TXD (RS-232)**
Pin 3: --------	**Pin 7: CTS (RS-232)**
Pin 4: GND (RS-232)	**Pin 8: RTS (RS-232)**

- Pins 7 & 8 are only required for CTS/RTS handshaking.
- Wire coloring is included to identify the pins used for this connection. Colors shown do not represent any wiring standard.

IMPORTANT! When wiring to this port, DO NOT connect any wires within the cable that are not required for communication.

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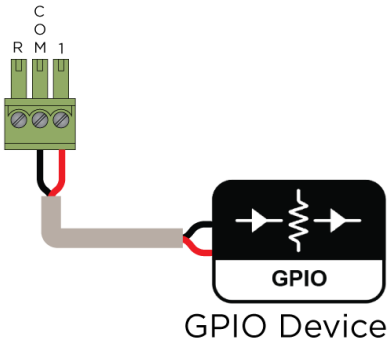
GPIO Wiring

Refer to diagram below when wiring the GPIO ports.



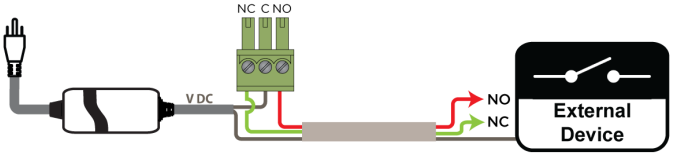
GPIO Device

R	Reserved for Future Use
COM	Connect to the common or ground terminal on each GPIO device.
Port 1	Connect to positive side of GPIO device

For more information regarding the GPIO ports, refer to the **Application Note: Relay and General Purpose Input/Output Profiles** located on the **Savant Customer Community**.

Relay Wiring

Refer to diagram below when wiring the Relay port.

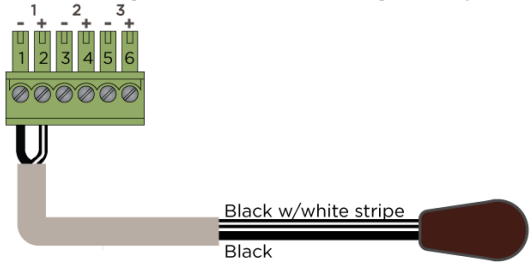


NC	Dependent on your application, connect the Normally Closed (NC) port to the external device being switched.
C	Connect **C** to the DC power source that is being switched
NO	Dependent on your application, connect the Normally Open (NO) port to the external device being switched.

For more information on connecting the Relay port, refer to the **Application Note: Relay and General Purpose Input/Output Profiles** located on the **Savant Customer Community**.

IR Wiring (Infrared)

Refer to diagram below when wiring the IR ports.



1 (-)	Connect the **(-)** port of IR pair port 1 on the FTC-P100 to the negative terminal on the IR Device. If using the Savant **IRB-1000-xx** IR Emitter, the black wire connects to the **(-)** port.
1 (+)	Connect the **(+)** port of IR pair port 1 on the FTC-P100 to the positive terminal on the IR Device. If using the Savant **IRB-1000-xx** IR Emitter, the black wire with white stripe connects to the **(+)** port.

IR ports 2-6 are wired the same as IR port 1

Additional Information

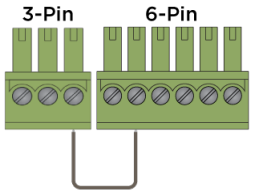
Additional documentation can be located on the **Savant Customer Community**.

FRC-P100 Quick Reference Guide (009-0490-xx)

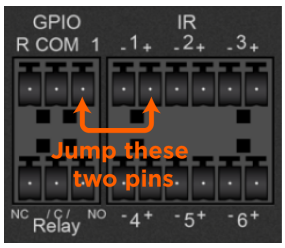
Restore System Defaults

The following procedure will set the FTC-P100 network settings to the factory default of DHCP. Any static IP Address that has been set will be lost and need to be reset.

1. Power Off the FTC-P100 using one of the following:
   - Unplug 12V DC power supply from front panel –or-
   - Unplug the **Ethernet-3** port (PoE)
2. Remove the 3-Pin GPIO and the 6-Pin top level IR connectors from the FTC-P100.
3. Using a 3-Pin and 6-Pin screw down plug-in connector and a spare wire, make up the cable shown below. The cable will be used to short Pin 1 of the GPIO port to the **+** Pin of IR port 1 (Refer to the 3-Pin/6-Pin cable image below).



Connects GPIO port Pin 1 to the + Pin of IR port 1



4. Plug the 3-Pin connector into the GPIO slot and plug the 6-Pin connector into the upper row of IR ports. At this point, Pin 1 of the GPIO port will be shorted to the **+** Pin of IR port 1 (Refer to the GPIO/IR port image above).
5. Apply power to the system.
6. The **Status** LED on the opposite side panel will blink green briefly while the firmware clears the static IP Address.
7. Remove the cable made earlier that shorts GPIO Pin 1 to the **+** Pin of IR port 1.
8. After a short time, the FTC-P100 will automatically reboot. After the reboot, the **Status** LED will flash dependent on how the system is set up. Refer to the descriptions in the Status LED section above to determine the state of the FTC-P100.

Note: After the reboot, the FTC-P100 will return with DHCP mode enabled and if there is a router set up for DHCP in the local network, the FTC-P100 will typically get assigned an IP Address from it.

9. If you would like to assign a static IP Address, the rpmEmbScanner tool which is opened through the Savant Application Manager can be used. Refer to the Support Article **Setting a Static Network IP Address on a Savant Controller by using rpmEmbScanner** located on the **Savant Customer Community**.

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