

ETC® Installation Guide

Unison Paradigm Touchscreen Rack Panel

Overview

The Unison® Paradigm™ Touchscreen uses a high-resolution, 7"-wide screen, color liquid-crystal display (LCD) that is bright and easy to read, with controllable back lights. The Touchscreen is installed in a rack panel, which is shipped separately. The Touchscreen is also available in locking cover and wall mount configurations. The Touchscreen is powered by either LinkPower and Auxiliary power or PoE (Power Over Ethernet 802.3af).

- Echelon® LinkPower® (LinkConnect) control network utilizing Belden 8471 (or approved equal) and 24 Vdc Auxiliary power (two 16 AWG 1.5mm²) wires.
- PoE (Power over Ethernet 802.3af) utilizing Category 5 cable (or approved equal).

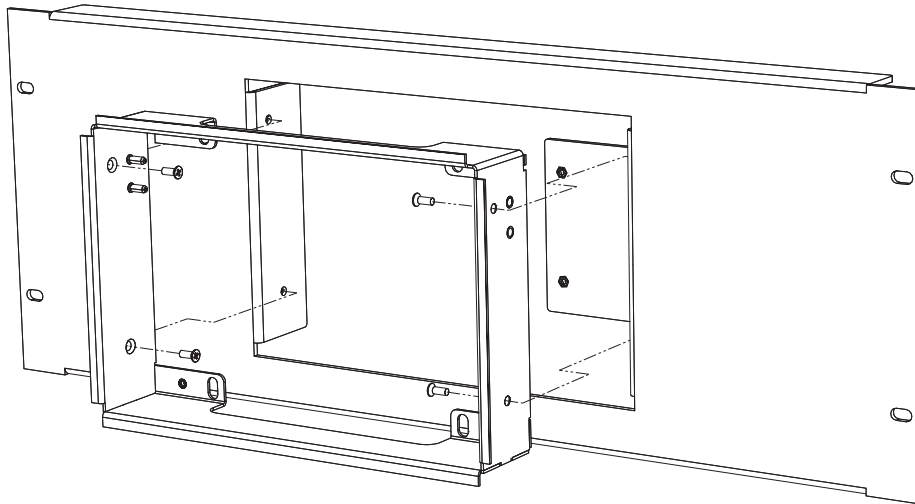
All control wiring should be installed and terminated by a qualified installer and should follow standard wiring installation practices. Leave approximately 10 inches (254mm) of wiring in the backbox for connection and to allow slack for future service needs. For more information about terminating Cat5 cable, refer to the *ETC Ethernet Cat5 Termination Kit Setup Guide*.

Installing the Collar

Installation should follow local codes and standard practices. Ensure that all wiring is installed correctly. The touchscreen is supplied with an installation kit which includes hardware and electrical supplies for most applications.

Paradigm Touchscreen Model

Model	Description
P-LCD-RBB	Paradigm Touchscreen rack panel




- Step 1: Slide the collar into the rack panel.
- Step 2: Install and tighten four M3x8mm flat head screws through the collar into the rack panel.

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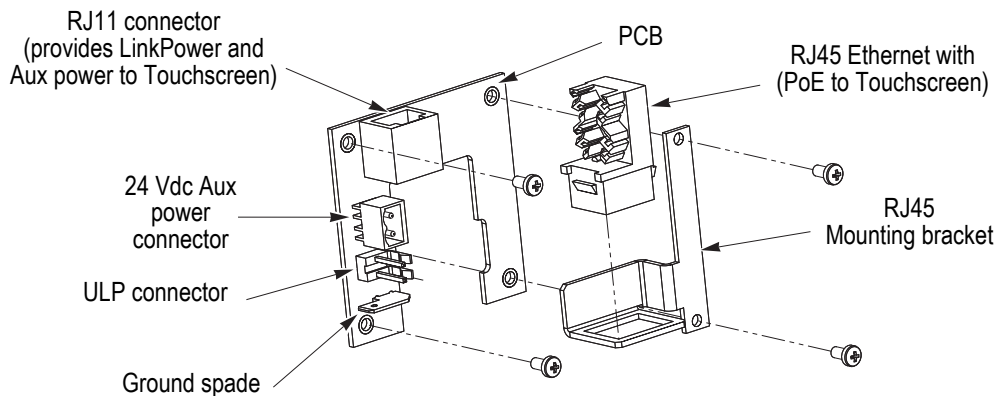
Installing the Termination PCB

The printed circuit board (PCB) assembly is designed to accommodate *either* Ethernet or LON connections. Prior to installing the PCB, terminate all necessary wiring. The PCB is installed on the back of the rack panel.


 **CAUTION:** Only one network type may be connected to the touchscreen, not both. Damage may occur if both power types, Auxiliary power and PoE, are connected to the touchscreen. ETC requires that all backboxes are grounded in accordance with local electrical codes. The RJ11 connection must be used to provide a ground connection from the backbox to the touchscreen even when Ethernet connectivity is used.

The PCB consists of three parts:

- PCB with female RJ11, LinkPower connector, 24 Vdc (Aux) connector, and ground spade
- RJ45 with punch down wire termination
- Mounting bracket and screws



Connecting Ethernet

 **Note:** All Ethernet terminations must follow IEEE 802.3 and be terminated to the T568B standard.

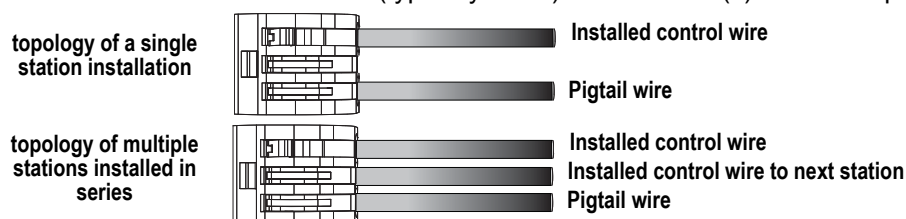
Step 1: Terminate the network wiring in the RJ45 punch down strip using a standard 110 punch down tool (not provided). Reference the connector label for the CAT5e wire termination color code. The punch down connector provides insulation displacement. Do not pre-strip wire.

Step 2: Snap the connector into the bracket.

Connecting LinkPower and Auxiliary Power

Use the provided WAGO CAGE CLAMP® connectors to terminate the wiring to the provided LinkPower and Auxiliary power pigtailed. Strip the ends of each wire (both installed control wires and pigtail wires) approximately 3/8" (10mm).

Step 1: Terminate the installed LinkPower wiring to the white and black LinkPower pigtail. Using two Wago connectors connect (typically white) installed wire(s) with white pigtail wire and connect the (typically black) installed wire(s) with black pigtail wire as shown below.



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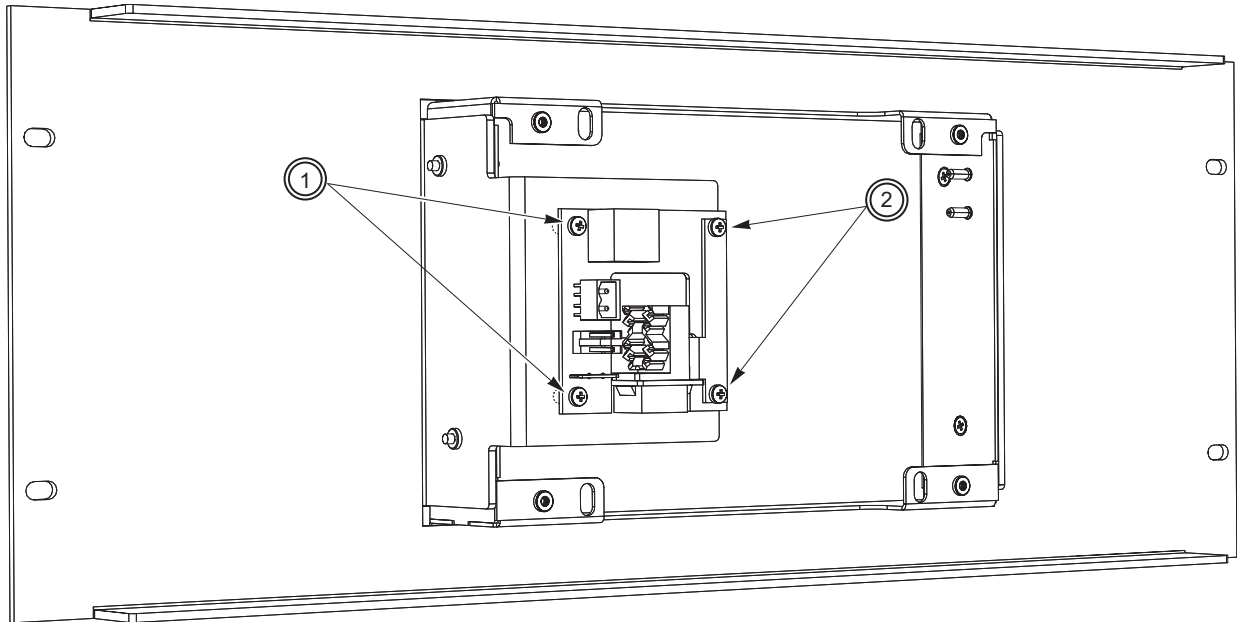
- Step 2: Plug the LinkPower connector into the LinkPower receptacle on the termination PCB.
- Step 3: Terminate the installed Auxiliary power wire to the red and black Auxiliary power pigtail wires. Using two Wago connectors connect the (typically red) installed wire(s) with red pigtail wire and connect the (typically black) installed wire(s) with black pigtail wire.
- Step 4: Plug the Auxiliary power connector into the Aux power receptacle on the termination PCB.
- Step 5: A ground connection is required for all Touchscreen assemblies. If the backbox is not already grounded, attach the ground wire to the ground spade on the PCB.

Installing the Termination PCB to the Rack Panel

- Step 1: Position the PCB on the four standoffs on the back of the rack panel and secure with two M3x10mm pan head screws on the RJ11 side of the PCB only.

Note: *The termination PCB can be installed in any orientation to accommodate wiring.*

- Step 2: Place the bracket and RJ45 assembly (if used) on top of the PCB. Secure the PCB to the backbox through the remaining holes in the PCB with two M3x10mm pan head screws.



Installing the Touchscreen

The Touchscreen bracket is designed for two positions, service and operation. When installed so that the pins are in the first slots on the bracket, the Touchscreen is held out at the bottom for service.

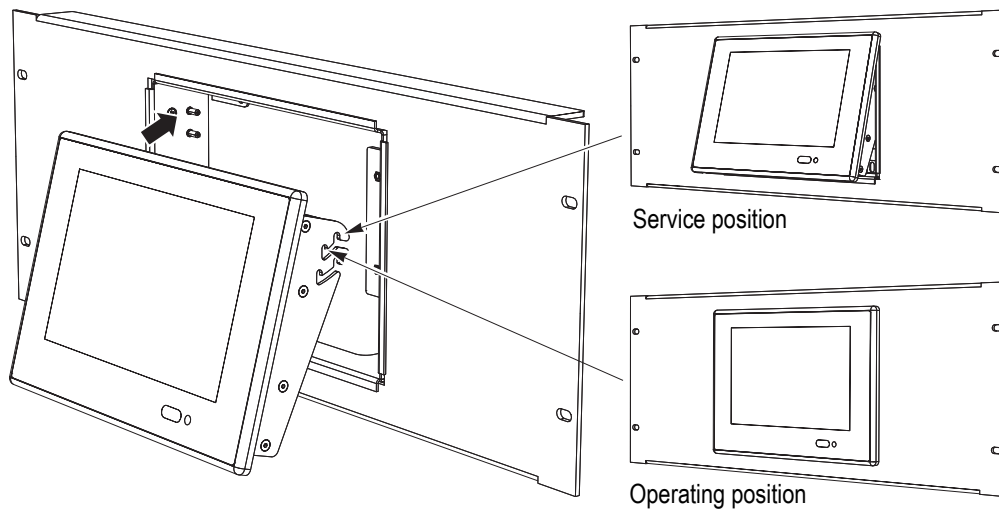
- Step 1: Install the RJ11 control cable provided in the installation kit to the RJ11 jack on the PCB. Also attach the RJ45 control cable if PoE will be used for communication and power.

Note: *The RJ11 cable provides the ground connection to the rack panel and must always be installed.*

- Step 2: Plug the other end of the cable(s) into the Touchscreen.
- Step 3: Hold the Touchscreen at a slight angle and insert the top first and hook the bracket onto the double pins on each side of the collar.

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- Step 4: To move the Touchscreen from the service position to the operation position, lift up at the bottom and rotate the bottom inward.
- Step 5: Push firmly in and down on the bottom corners of the bezel until it audibly snaps onto the collar. When properly installed, the Touchscreen should not easily unsnap from the collar.
- Step 6: To open or remove the Touchscreen, insert a flat bladed screwdriver into the pry slots and unsnap the Touchscreen from the collar. Then lift the bottom upward slightly and rotate outward.

Indicators

After the Touchscreen has been powered up, the appropriate LEDs on the service panel on the bottom of the Touchscreen illuminate. The LCD displays a startup screen a few seconds after booting. For information about using the service panel, refer to the *Unison Paradigm Control Designer Configuration Guide* or *Online Help System*.

