

ETC® Installation Guide

Unison Paradigm Touchscreen with Locking Cover



Overview

The Unison® Paradigm™ Touchscreen with locking cover 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 flush mount backbox or a surface backbox or which is shipped separately. The locking cover prevents tampering or damage to the Touchscreen. The Touchscreen is also available in rack mount 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 Backbox and Locking Cover

Installation should follow local codes and standard practices. Ensure that the backbox is clean and free of obstructions. 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 Backbox

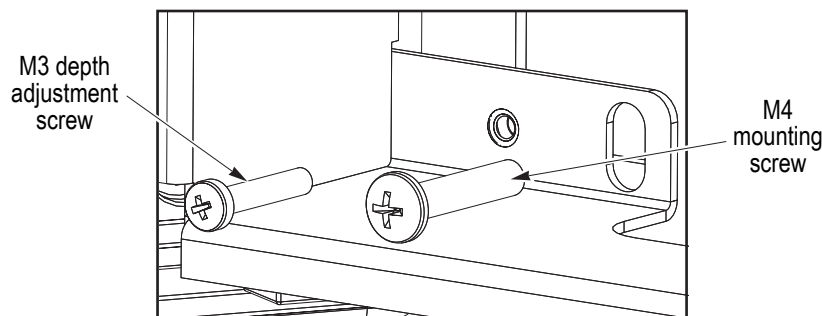
Model	Description
P-LCD-FBB	Paradigm Touchscreen flush mount backbox
P-LCD-LSBB	Paradigm Touchscreen Locking Cover surface mount backbox

Flush Mount Backbox

The hole in the wall should be cut carefully so there are no gaps around the box. The installation kit includes two lengths of screws for depth adjustment and screws for securing the collar.

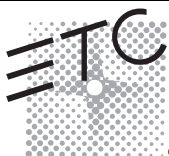


Note: *A special trim ring is available to cover any excess rough-in gap. Contact ETC or your ETC Dealer for availability.*



Surface Mount Backbox

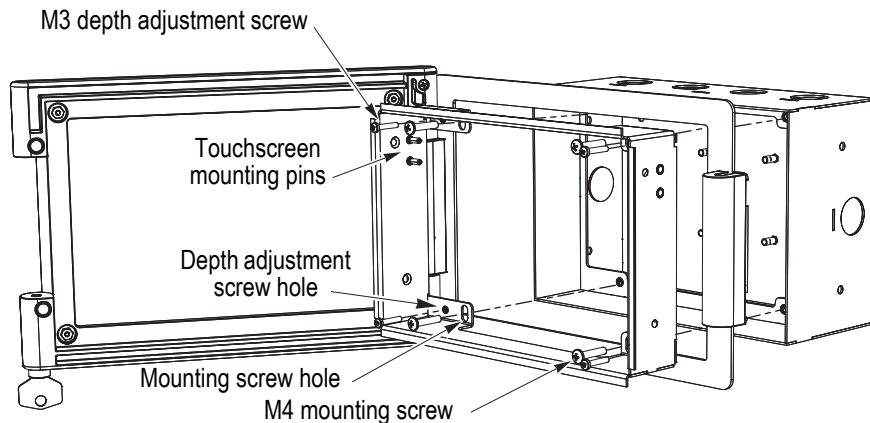
Do not use the depth adjustment screws in the surface mount backbox. Use the M4 mounting pan head screws to attach the collar to the surface mount backbox. Refer to the instructions for the flush mount backbox.



Corporate Headquarters ■ 3031 Pleasant View Road, P.O. Box 620979, Middleton, Wisconsin 53562-0979 USA ■ Tel +608 831 4116 ■ Fax +608 836 1736
London, UK ■ Unit 26-28, Victoria Industrial Estate, Victoria Road, London W3 6UU, UK ■ Tel +44 (0)20 8896 1000 ■ Fax +44 (0)20 8896 2000
Rome, IT ■ Via Ennio Quirino Visconti, 11, 00193 Rome, Italy ■ Tel +39 (06) 32 111 683 ■ Fax +44 (0)20 8896 2000
Holzkirchen, DE ■ Ohmstrasse 3, 83607 Holzkirchen, Germany ■ Tel +49 (80 24) 47 00-0 ■ Fax +49 (80 24) 47 00-3 00
Hong Kong ■ Rm 1801, 18/F, Tower 1 Phase 1, Enterprise Square, 9 Sheung Yuet Road, Kowloon Bay, Kowloon, Hong Kong ■ Tel +852 2799 1220 ■ Fax +852 2799 9325
Service: (Americas) service@etconnect.com ■ (UK) service@etceurope.com ■ (DE) techserv-hoki@etconnect.com ■ (Asia) service@etcasia.com
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- Step 1: For flush mount applications, thread the four M3 depth adjustment screws into the collar.
- Step 2: Open the locking cover and insert the collar through the opening of the locking cover. Make sure the Touchscreen mounting pins are at the top.
- Step 3: Insert the collar into the backbox so that the cover frame is flat against the backbox or wall surface.
- Step 4: For flush mount, adjust the depth adjustment screws (if required) so that the cover is even against the wall surface.
- Step 5: Install and tighten the four M4 mounting screws through the collar into the backbox.

Installing the Termination PCB

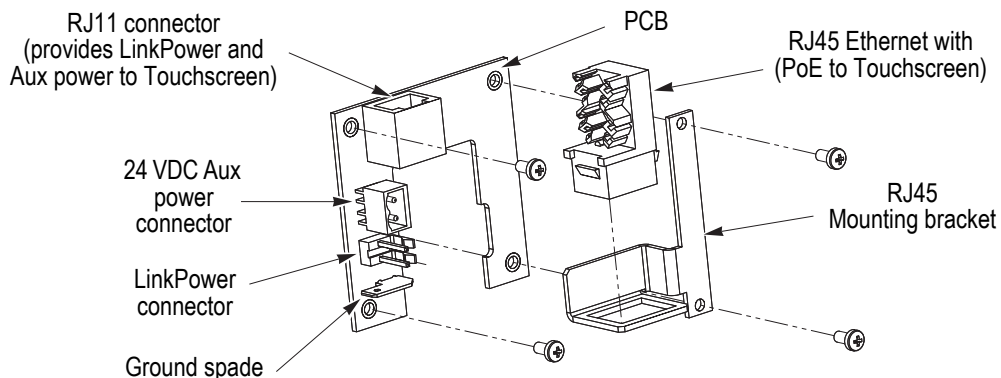
The printed circuit board (PCB) assembly is designed to accommodate *either* Ethernet or LON connections. Prior to installing the PCB, terminate all necessary wiring.



CAUTION: *Only one network type can 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 back boxes be grounded in accordance with local electrical codes. The RJ11 connection must be used to provide a ground connection from the back box 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



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Connecting Ethernet



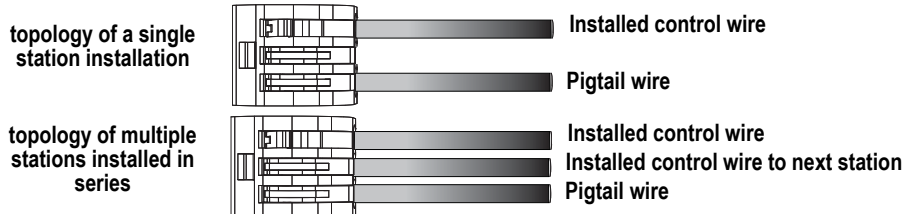
Note: All Ethernet terminations must follow IEEE 802.3 and be terminated to the T568B standard.

- 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 pigtails. 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.



- 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.

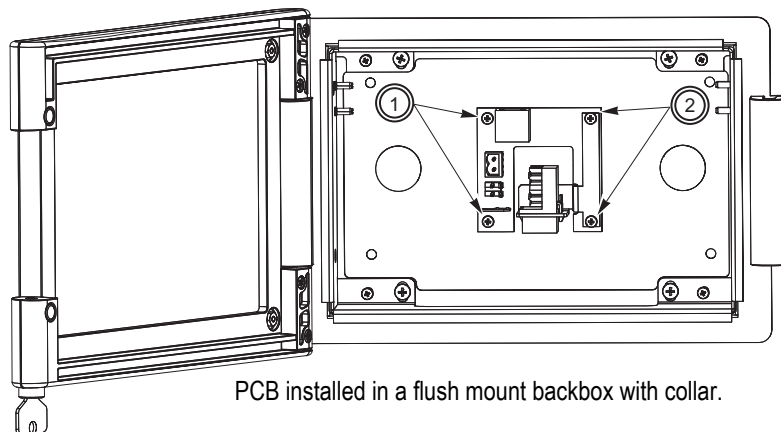
Installing the Termination PCB in the Backbox

- Step 1: Position the PCB on the four standoffs in the backbox 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.



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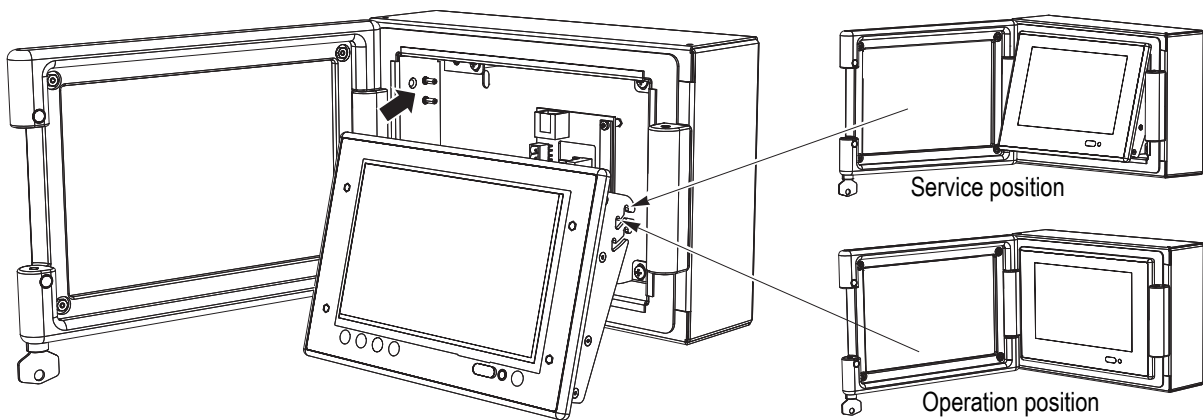
Installing the Touchscreen

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 back box 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.



- 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 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 Manual or Online Help System*.

