Extron

TLCA 2 Adapter • Setup Guide

IMPORTANT NOTE:

Go to **www.extron.com** for the complete TLCA 2 installation instructions and specifications.

Overview

The TLCA 2 is a TouchLink Control Port Expansion Adapter that provides multiple control port options, including an IR port, digital input, two bidirectional RS-232 ports, and two relay ports. This adapter can transform your wall mount, tabletop, and Cable Cubby TouchLink Pro touchpanels into a powerful, all-in-one control system.

This innovative tool adds flexibility and power to our latest TouchLink Pro touchpanels, including the TLP Pro 535 Series, TLP Pro 835 Series, and TLP Pro 1035 Series.

NOTE: The TouchLink Pro touchpanel must have a LinkLicense for TLP Control Processor, purchased separately and applied via Toolbelt, prior to using TLCA 2.

Included

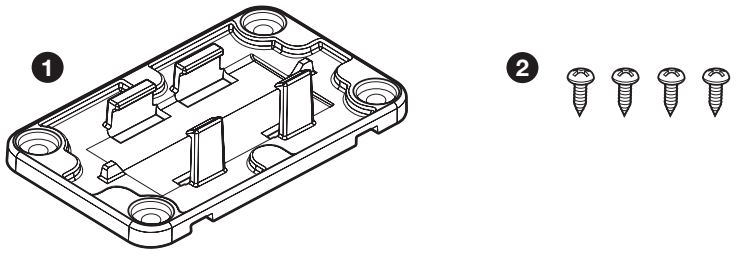

Figure 1. USB Adapter and Mounting Clip

1. **Mounting Clip** — For tabletop and Cable Cubby installations.
2. **Four #6 screws** — For tabletop installations.

TLCA 2 Features

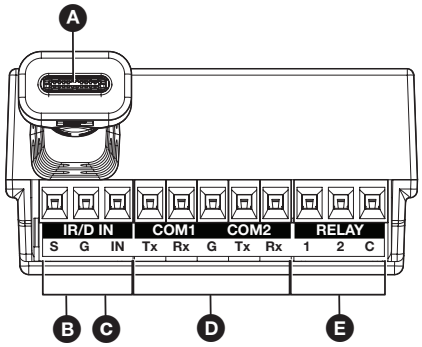

Figure 2. TLCA 2 Adapter — Top View

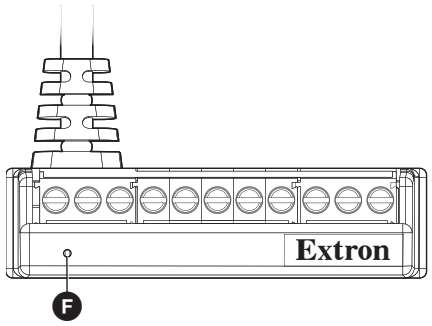

Figure 3. TLCA 2 Adapter — Front View

- **A USB C connector** — Insert into the USB C port of the TLP Pro 535, 835, and 1035 Series Touchpanel.
- **B IR port** (shares the ground pin with **Digital Input** port) — See **IR** on page 2 for installation instructions.
- **C Digital input** (shares the ground pin with **IR Output** port) — See **Digital Input** on page 2 for installation information.

- **D** **COM ports** (two, with shared ground wire) (see **figure 2** on page 1) — See **COM ports** on page 3 for installation information.
- **E** **Relays** (two, with shared common wire) — See **Relays** on page 4 for installation information.
- **F** **Power LED indicator** (see **figure 3** on page 1) — Provides the power status of the adapter

Control Ports

IR

1. Insert the wires from an IR emitter into the IR port, and place the head of the emitter over or next to the IR signal pickup window of the device being controlled.
2. Connect two wires to the IR port (see figure 4). If both the IR port and digital input are used, the ground pin must be shared by both devices.

NOTE: Each emitter must be within 100 feet (30.4 meters) of the TLCA for best IR control results.

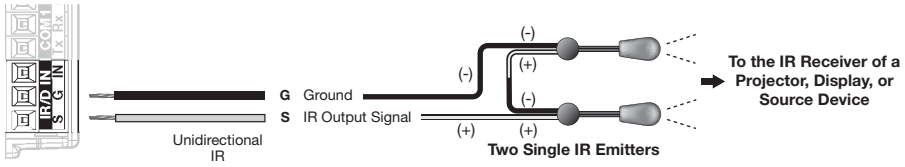

Figure 4. IR Connector

The IR port can accept a single IR emitter (see figure 5), a dual IR emitter (see figure 6) or two single IR emitters, tied in series (see figure 7).

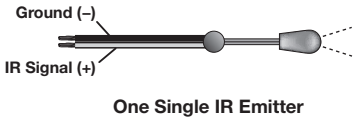

Figure 5. Installing One Single Emitter

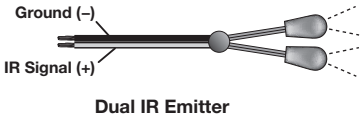

Figure 6. Installing One Dual Emitter

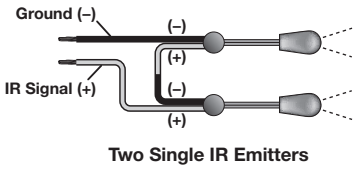

Figure 7. Installing Two Single Emitters

Digital Input

The digital input measures two states: high and low. Digital input is triggered by an external switch or voltage between the digital input pin and ground (see figure 8). The threshold voltages are:

- Low to high — 2.8 VDC
- High to low — 2.0 VDC

If the connected device does not provide its own power, use Global Configurator to configure an internal pull-up resistor (see the *Global Configurator Help File* for details).

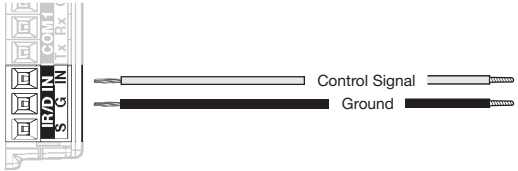

Figure 8. Digital Input Monitoring

TLCA 2 Adapter • Setup Guide (Continued)

COM ports

The TLCA has two COM ports, which support software flow control. They share a common ground pin. COM ports control and receive status messages from connected devices, using the following RS-232 protocol:

- 300 to 115200 baud (default = 9600 baud)
- 8 data bits (default) or 7 data bits (Tx only)
- 1 (default) or 2 stop bits
- No parity, even parity, or odd parity (default = no parity)
- This port supports flow control (default = no flow control)

NOTE: The maximum distance from the touchpanel to the device being controlled is usually 200 feet (61 meters), but this can vary, depending on factors such as cable gauge, baud rates, environment, and output levels from the touchpanel and the device being controlled.

To wire the ports, see figure 9.

- If a single port is used, it can be wired using either COM 1 or COM 2.
- For bidirectional serial communication, the transmit, ground, and receive pins must be wired to both the adapter and the device being controlled.
- For information about wiring the device being controlled, see the user guide for that device.
- If you use cable that has a drain wire, the drain wire must be tied to ground at both ends. For best results, insulate the common or drain wires using heat shrink.

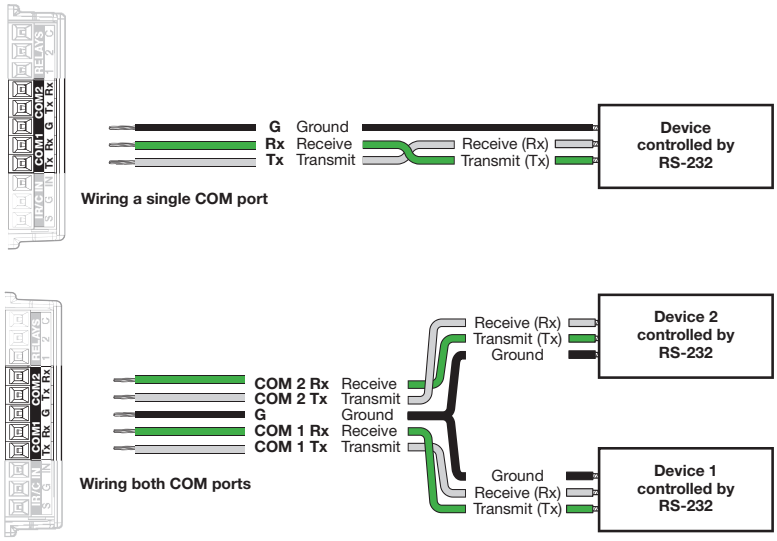

Figure 9. COM Ports

Relays

There are two relay ports, which share a common ground. These ports can be used to control any equipment as long as the contact specifications of a total of 24 V at 1 A are not exceeded for each port. These relays are normally open by default.

When activated, the open contacts close. They can be set up to operate in one of two ways:

- **Latching —** Brief or indefinite period contact. Press to close, press to open.
- **Pulsed —** Timed cycle. Press to close, timeout to open, with automatic repeat.

  In pulsed mode the default timeout period (hold time) is 0.5 second (500 ms). This time can be changed with Global Configurator.

> **NOTE:** The pulse function is absolute: it always sets the relay state to closed, times out (briefly), then opens the contact. It overrides the previously selected setting (on state, off state, or toggle).

To use a single relay port connect Pin 3 (C) and either Pin 1 (Relay 1) or Pin 2 (Relay 2) to the device being controlled.
To use both relay ports, connect the pins as shown in figure 10. Pin 3 (C) must be connected to both devices being controlled.

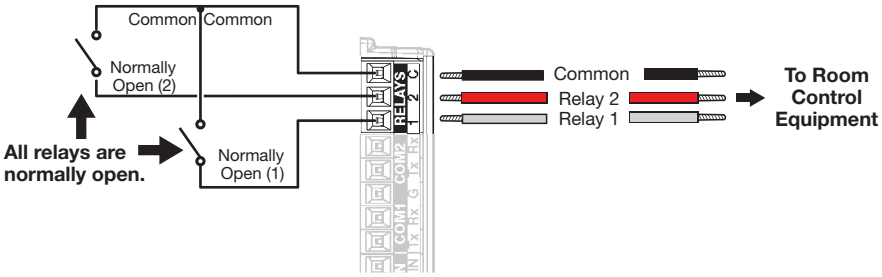

Figure 10. Relay Ports

Adapter Installation

Attaching the TLCA 2 to the Mounting Clip

Insert the TLCA 2 into the mounting clip at an angle:

1. First the captive-screw side, against the shorter clip (see figure 11, ❶),
2. Then the back side, clicking into place against the taller clip (❷).

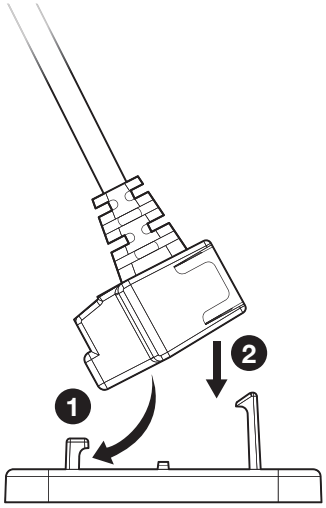

Figure 11. Attaching TLCA 2 to the Mounting Clip

Wall mount Touchpanels (No Mounting Clip)

On the backside of the 535M, 835M, and 1035M touchpanels is a plastic slot (see figure 12, ❶) where a small zip tie (included with the TLP) can be used to secure the cable of the TLCA 2.

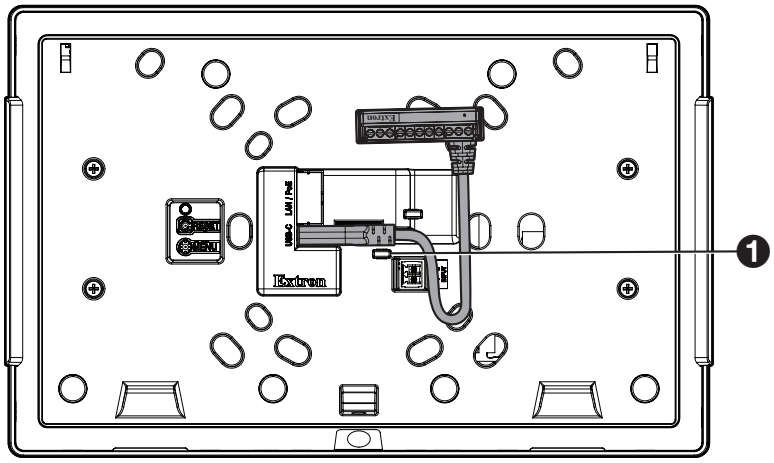

Figure 12. Mounting TLCA 2 to a Wall Mount Touchpanel

Drywall or junction box

Route the TLCA 2 thru the mounting plate opening (see figure 13, ❶) and into the drywall or junction box (if applicable). This also applies to the RM (rack mount).

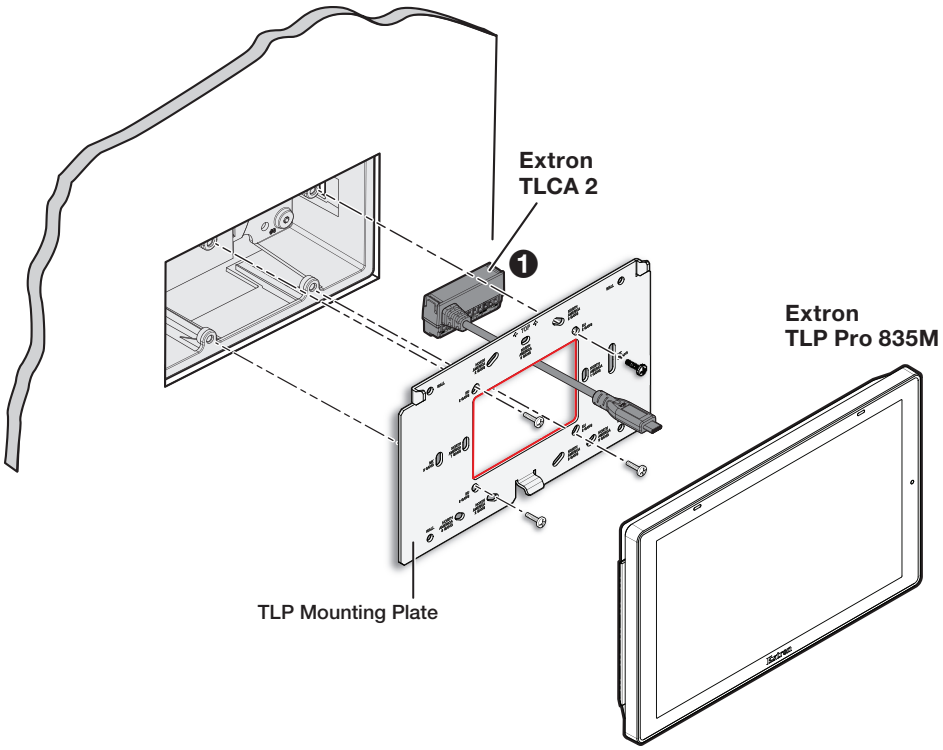

Figure 13. Mounting TLCA 2 within drywall or junction box

Masonry wall, glass wall or mullion mount

Using a USB C extension cable (not included) (see figure 14, ❶), extend the TLCA 2 to the nearest available mounting location (for example, to the ceiling).

NOTE: The TLCA 2 does not fit within enclosed mounting accessories such as the SMK (surface mount kit) or MMK (mullion mount kit).

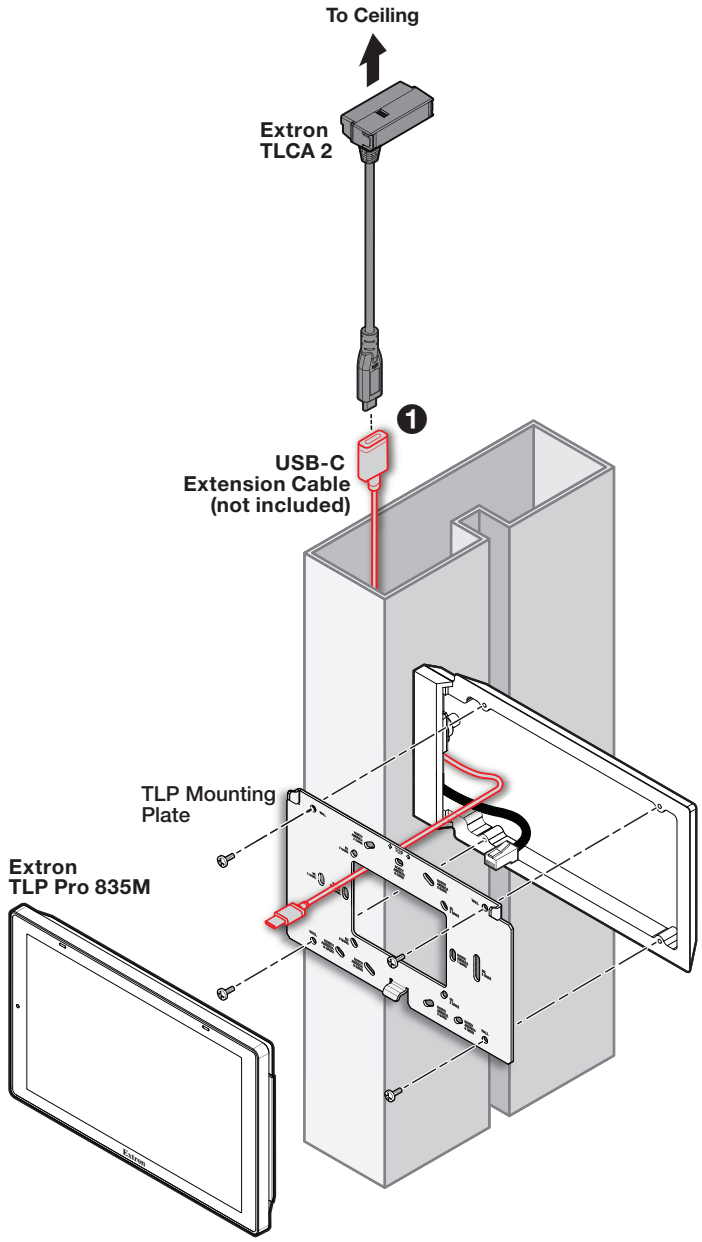

Figure 14. Mounting TLCA 2 to Wall, Glass Wall or Mullion Mount (With USB C Extension Cable)

Mounting Under a Desk (for Tabletop TLP)

To mount the TLCA 2 Adapter under a desk or other furniture:

1. Hold the mounting clip against the underside of the furniture, and mark the location of the mounting clip screw holes onto the mounting surface.
2. Drill 3/32 inch (3.28 mm) diameter pilot holes, 1/4 inch (6.3 mm) deep in the mounting surface at the marked screw locations.
3. Align the mounting clip and the four #6 mounting screws over the screw hole positions (see figure 15, ❶), and tighten all four screws to secure the mounting clip in place.
4. Attach the TLCA 2 adapter to the mounting clip (❷, see **Attaching the TLCA 2 to the Mounting Clip** on page 4).
5. Connect the USB C connector of the TLCA 2 to the USB C extension cable (not included) (❸).
6. Use a Phillips head screwdriver to remove three securing screws and the cable cover (❹) from the base of the TLP.
7. Connect the USB C connector of the extension cable to the USB port under the tabletop TLP (❺).
8. Replace the cable cover and tighten screws.

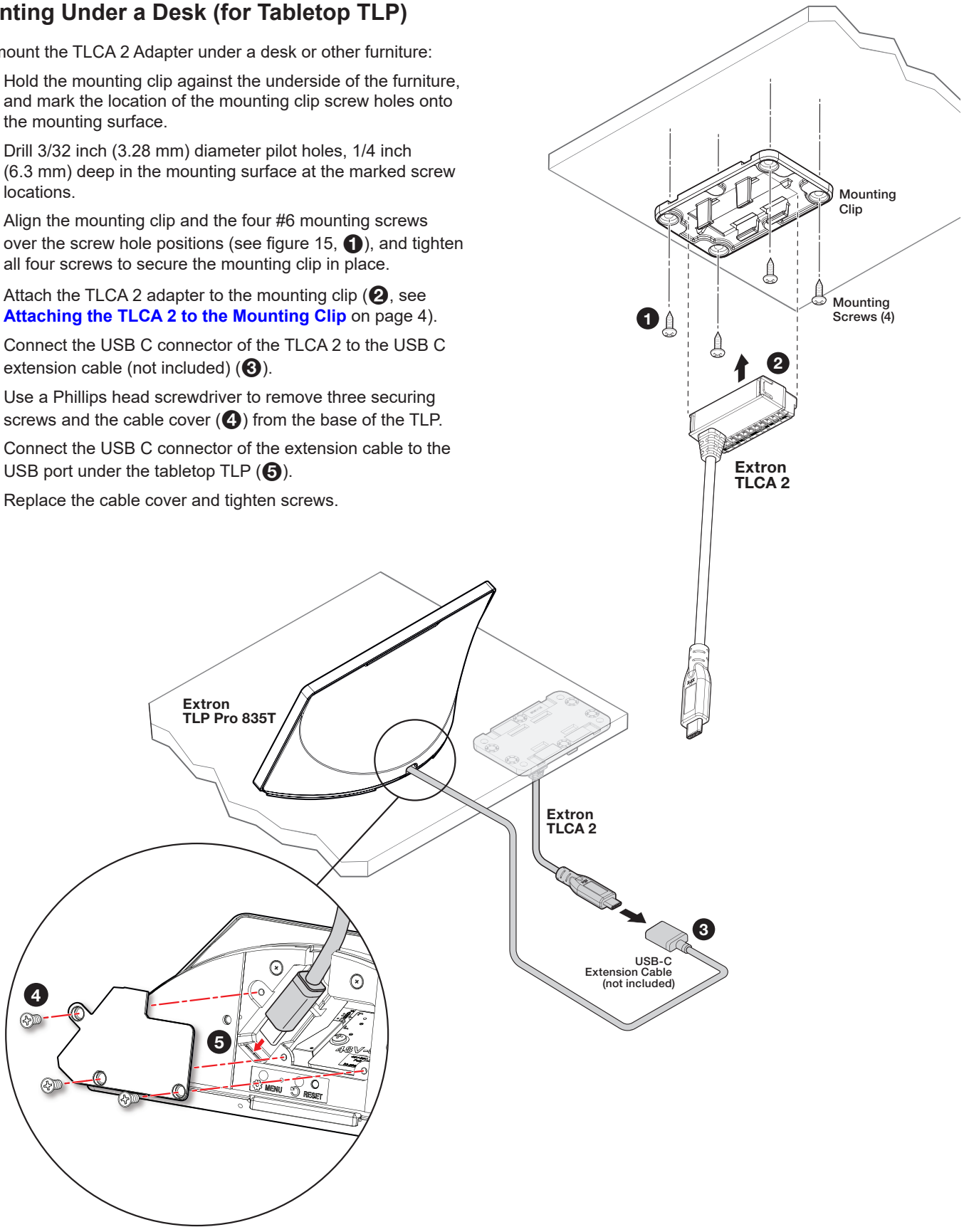

Figure 15. Mounting Under A Desk (Tabletop Tlp With USB C Extension Cable)

Mounting with Cable Cubby

To mount the TLCA 2 adapter under a Cable Cubby:

1. Attach the TLCA 2 to the mounting clip (see figure 16, ❶ and ❷).
2. Mount the TLCA 2 and mounting clip against the bottom exterior of the Cable Cubby (see figure 16, ❸). The mounting clip is magnetic, and holds secure to the metal frame.
3. Plug the USB C connector into the exterior Cable Cubby USB port (❹).

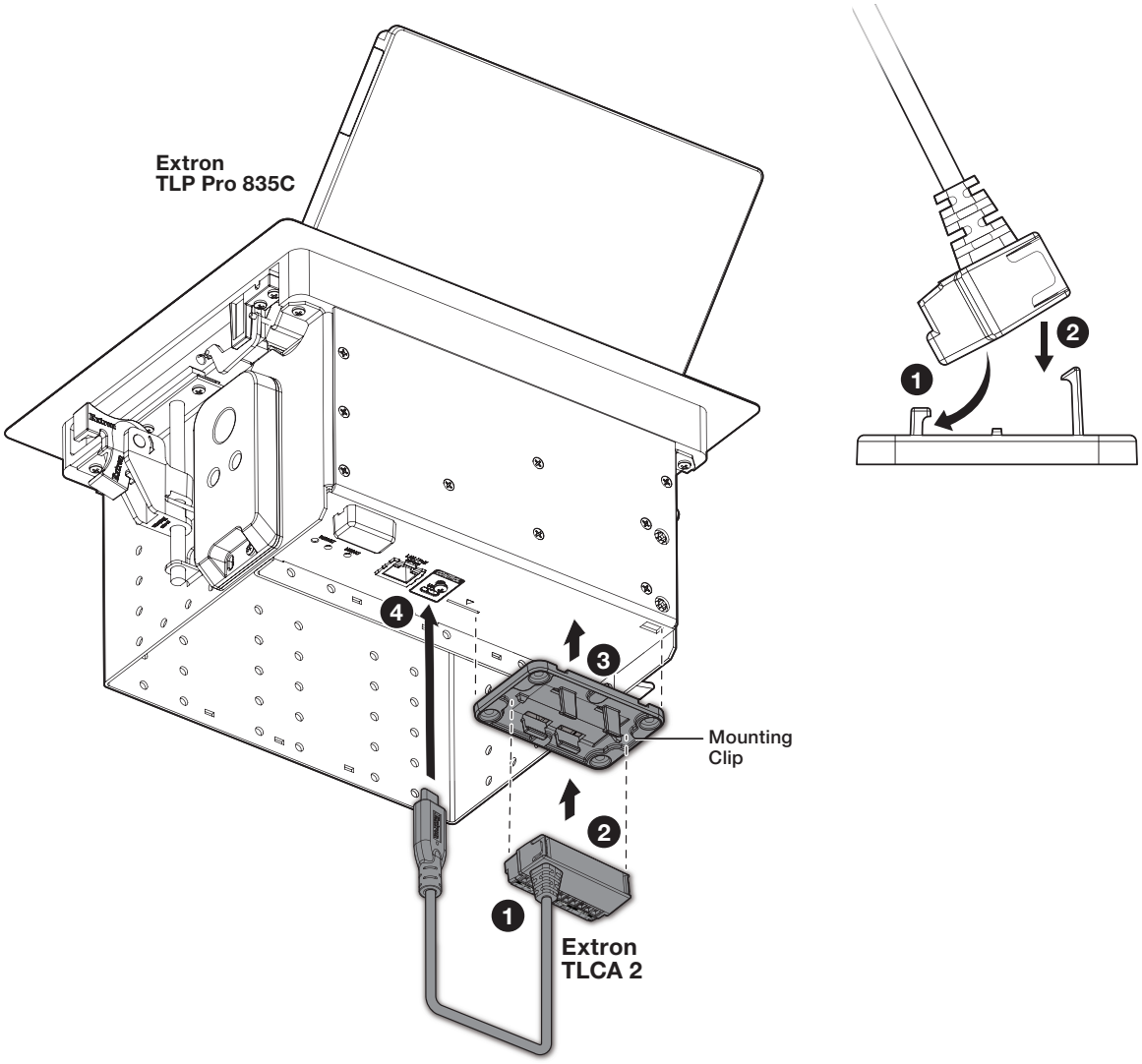

Figure 16. Mounting Under a Cable Cubby

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.

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