




Trimble 121132 EDB10 Data Bridge User Guide

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Trimble 121132 EDB10 Data Bridge



Trimble® EMPOWER is an ecosystem of rugged platform devices along with sensor and communication modules, creating a host solution targeted at specific workflows.

The Trimble EMPOWER Data Bridge (EDB10) is a “sled” that takes the EMPOWER concept further to allow an EMPOWER module to not only be used in EMPOWER hosts (e.g with a Trimble TSC7 controller) but with a full choice of consumer, prosumer, semi-rugged and fully rugged devices. It s a field rugged device used by surveying and engineering professionals to help facilitate radio communications between professional-grade geomatics hardware and applications for the purposes of data collection and data transfer. It allows the EMPOWER ecosystem to extend across more devices and supports Windows® and Android™ operating systems.

The intended use is to connect a controller (without radio, fixed on survey grade pole 1-3 feet away from the user) to a Trimble robotic total station as shown above.

WHAT’S IN THE BOX?



- Trimble EDB10 data bridge
- USB-C cable
- A/C adapter and international connectors
- Module screwdriver
- Quick Start Guide (not shown)

REMOVING BATTERIES FROM “SHIP MODE”

To minimize battery drain while the unit is idle during shipment, the EDB10 data bridge ships with batteries in “ship mode”. Before connecting the EDB10 data bridge to any device, the batteries must be taken out of “ship mode”:

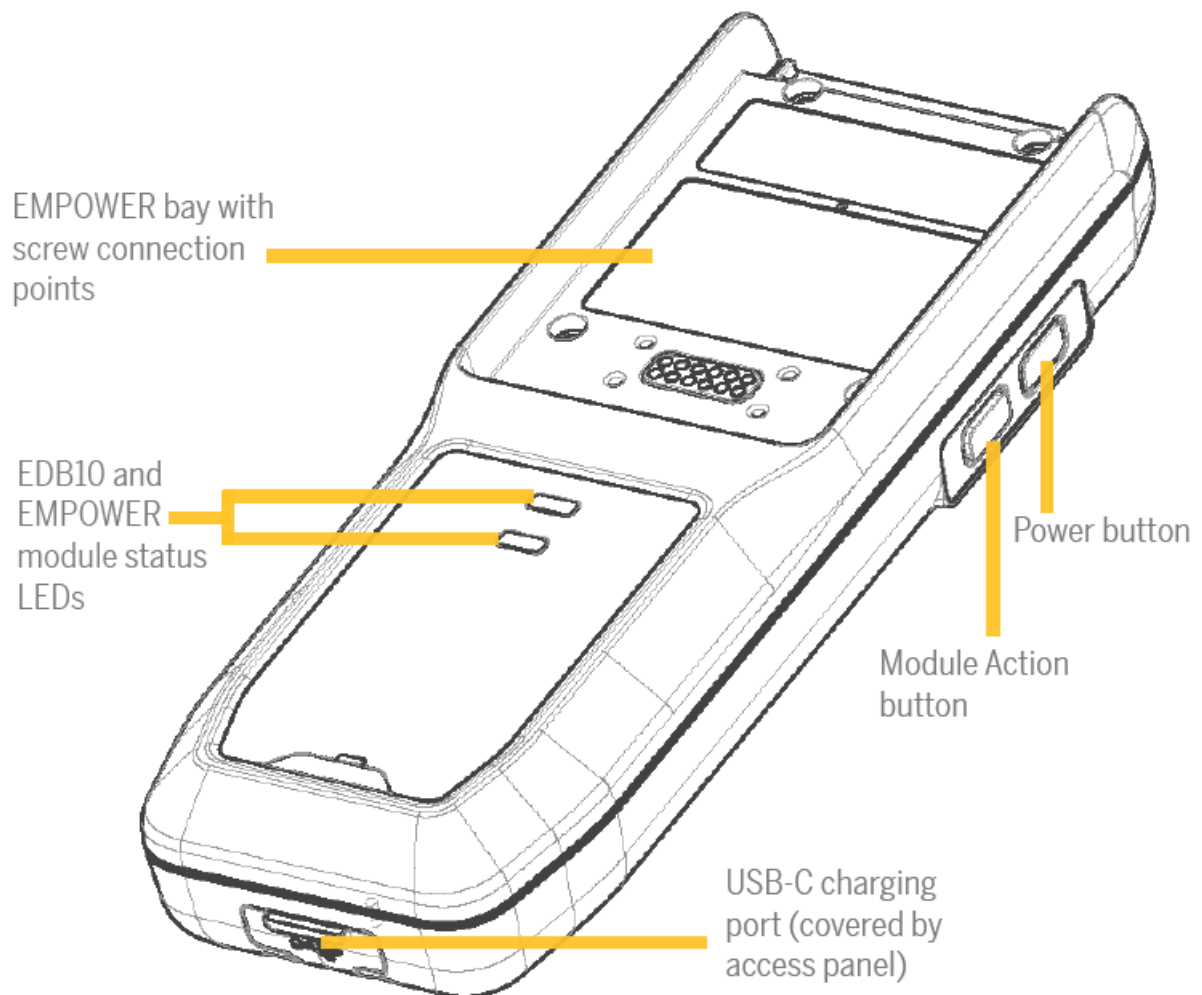
1. Plug the EDB10 data bridge into power using the USB-C charging cable and adapter.
2. Press the green Power button on the side of the unit to turn the unit on. The batteries are taken out of “ship mode”.

CHARGING THE BATTERY

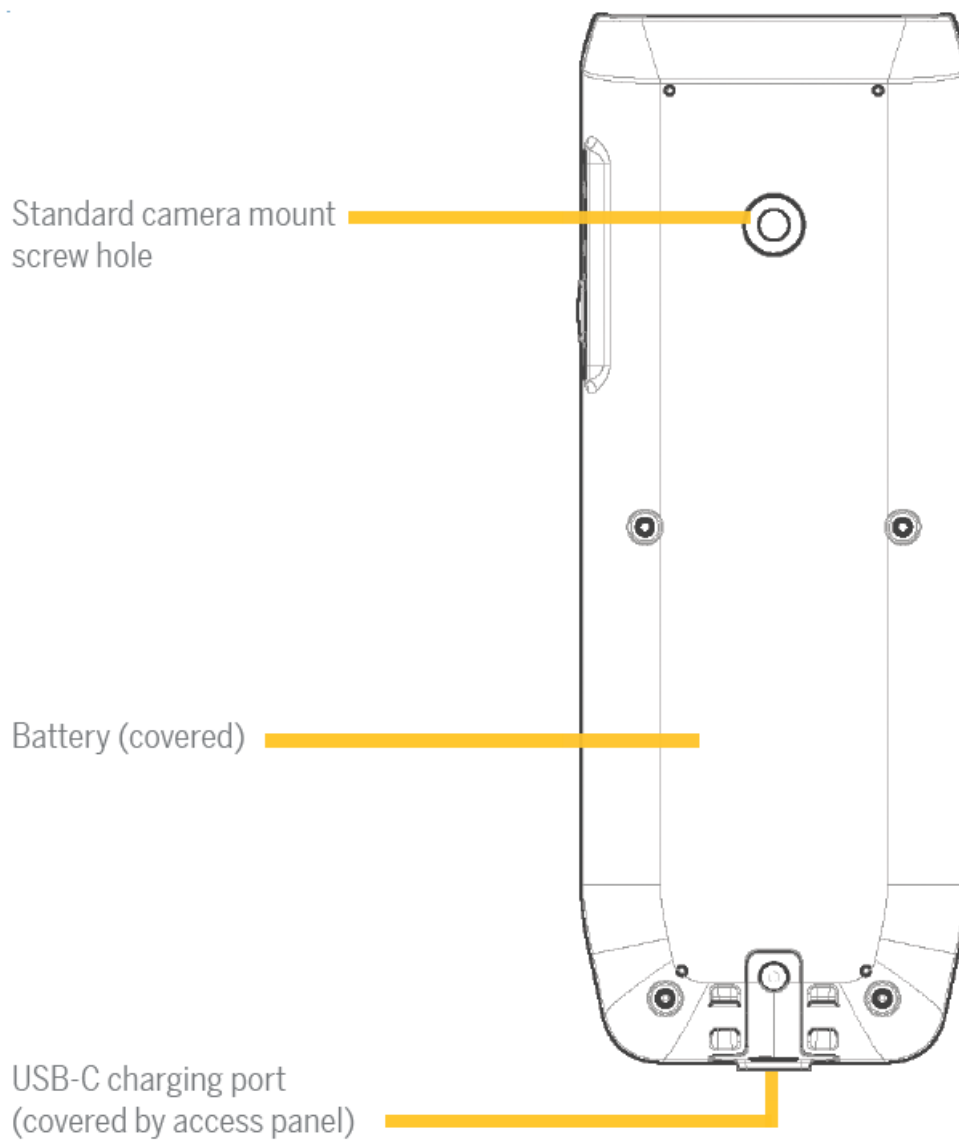
1. Connect the USB-C charging cable to the AC adapter, and plug into power.
2. Plug the charging cable into the USB charging port at the bottom of the EDB10 data bridge.
3. Charge for six hours or until fully charged.

PARTS OF THE TRIMBLE EDB10 DATA BRIDGE

Front view



Rear view



BUTTON BEHAVIOR

The EDB10 data bridge has two buttons located on the side of the unit.



Use the Power button to:

- Power On/Off the EDB10 data bridge. Short Press (1 second)
- Perform a soft reset; Long Press (9 Seconds)
- Perform a hardware reset = Long Press (13 seconds)
- View the battery status = <1 second "button tap"

The Action (Module) button is designed to work with the EMPOWER module when it is attached to the EDB10 data bridge.

With the EM120 module, reset the module = Long Press (>10 seconds).

CONNECTING TO AN EMPOWER MODULE

Before connecting the EDB10 data bridge to an EMPOWER module, make sure the EDB10 data bridge is powered off. Powering on the EDB10 data bridge prior to connecting an EMPOWER module may lead to an inability to connect to an instrument, and will require a reset of the EDB10 data bridge.

To connect the EDB10 data bridge to an EMPOWER module:

1. Align both units (as shown), with the EMPOWER module slightly higher than the EDB10 data bridge
2. Slide the EMPOWER module down so the top lip of the EMPOWER module hooks neatly over the top of the EDB10 data bridge.

The bottom of the EMPOWER module will fit neatly into the cavity of the EDB10 data bridge with the bottom edge lying flush against the recess of the EDB10 data bridge.

The screws on the EMPOWER module will align with the screw holes on the EDB10 data bridge.

3. Tighten the two screws using the Module screwdriver (provided in the box). To prevent damage to the EDB10 data bridge, do not overtighten the screws.

The EMPOWER module and the EDB10 data bridge should form a firm connection.



LED BEHAVIOR

The EDB10 data bridge has two LEDs located on the front of the unit:

LED 1 (Module LED)

LED 2 (EDB10 Battery
/ Connection LED)



LED 1 – EMPOWER module

This LED indicates the interaction between the EMPOWER module and an external device.

LED 1 EMPOWER module behavior with EM120 module

LED 1 Empower/Data	LED Color	LED State
EM120 attached to EDB10	Yellow	Solid
EM120 active data connection with radio	Green	Solid
Error	Red	Solid
No EMPOWER module attached	No color	LED Off

LED 2 – EDB10 battery/connection

This LED indicates both the battery “charge state” of the internal battery of the EDB10 data bridge, as well as the “connection state” of the EDB10 data bridge to an external controller

LED 2 sequencing for battery state

To check the battery status of the EDB10 data bridge when it is on, a short button tap (<1 second) on the module button will prompt the unit battery LED to indicate the battery status for 5 seconds.

LED 2 status when EDB10 is on and using internal battery

Battery State					
<10%	Red	Grey	Red	Grey	Red
10-20%	Red	Red	Red	Red	Red
26-74%	Orange	Orange	Orange	Orange	Orange
75-100%	Green	Green	Green	Green	Green

Battery status when unit is on and connected to external power (charging)

Battery State					
0-25%					
26-74%					
75-98%					
99-100%					

Battery status when unit is off and connected to external power (charging)

NOTE – In this case the EDB10 will always report battery status and no prompting is required to report status.

Battery State					
0-25%					
26-74%					
75-98%					
99-100%					

LED 2 Sequencing for connection state

When the EDB10 data bridge is powered on and connected to an external device (e.g. a data controller) the following colors indicate the type of connection:

No connection	White
Bluetooth connection	Blue

BLUETOOTH PAIRING

When the EDB10 data bridge is switched, it is discoverable and ready to be paired. LED 2 (EDB10 Battery / Connection LED) will be white, indicating the unit is not connected and is ready to pair.

The EDB10 data bridge is discoverable when not connected to a device.

A pairing code is not required to pair with the EDB10 data bridge.

When pairing the EDB10 data bridge with a data collector device, the EDB10 data bridge has the Bluetooth name EDBXXXXXXXXX, where XXXXXXXXXX are the last 10 digits of the EDB10 data bridge's serial number. Once the data collector has been paired, all subsequent requests to bond from the remote device will be honored. The data collector device is the Bluetooth master and must initiate all pairing and bonding activities. The pairing relationship is persistent across loss of power in both the pairing device and the EDB10 data bridge.

Bluetooth Pairing using NFC

The EDB10 data bridge can also be paired with NFC compatible devices (for example, the Trimble TDC600 handheld).

To pair devices using NFC:

1. Ensure both pairing devices are switched on, and NFC is enabled on the data controller / handheld device.
2. Place the data controller / handheld device, with the screen facing up, on top of the EDB10 data bridge, with the data controller / handheld device positioned over the NFC icon on the EDB10 data bridge. You may need to move the data controller / handheld device over the EDB10 data bridge until the NFC reader in the handheld is aligned with the NFC icon on the EDB10 data bridge.
3. Once detected, a dialog box appears prompting you to confirm you want to pair with the EDB10 data bridge. Select YES.
4. Depending on your data controller / handheld device a further dialog box may appear confirming pairing and connection. If required, confirm the pairing to finalize the connection.
5. Verify that connection has been established in the settings of your data controller / handheld device.

CONNECTING TO A TRIMBLE TOTAL STATION RADIO USING THE EDB10 DATA BRIDGE AND THE EMPOWER EM120 MODULE

When the EDB10 is attached to a Trimble EMPOWER EM120 Cirronet module, and paired with a data controller / handheld device, a radio connection can be established with a Trimble Total Station radio.

This is initiated from within the data controller / handheld device software and is based on the internal settings of the Trimble Total Station radio.

Once the Trimble radio is connected, the EDB10 data bridge connection to the data controller / handheld device can send and receive data using the radio link solution upon request from compatible application software.

Data received from the remote radio connection will be transmitted to the data controller / handheld device via the connection with the EDB10 data bridge.

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Documents / Resources



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