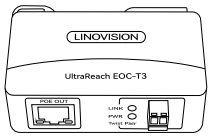
LINOVISION

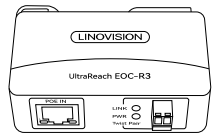
UltraReach PoE over Single Pair Cable or Twisted Pair Cable
UltraReach EOC3
Quick Guide (V1.0/2026-10-21)

Quick Guide

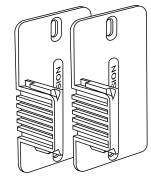
Package Contents



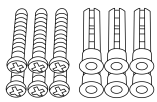
UltraReach EOC-T3



UltraReach EOC-R3

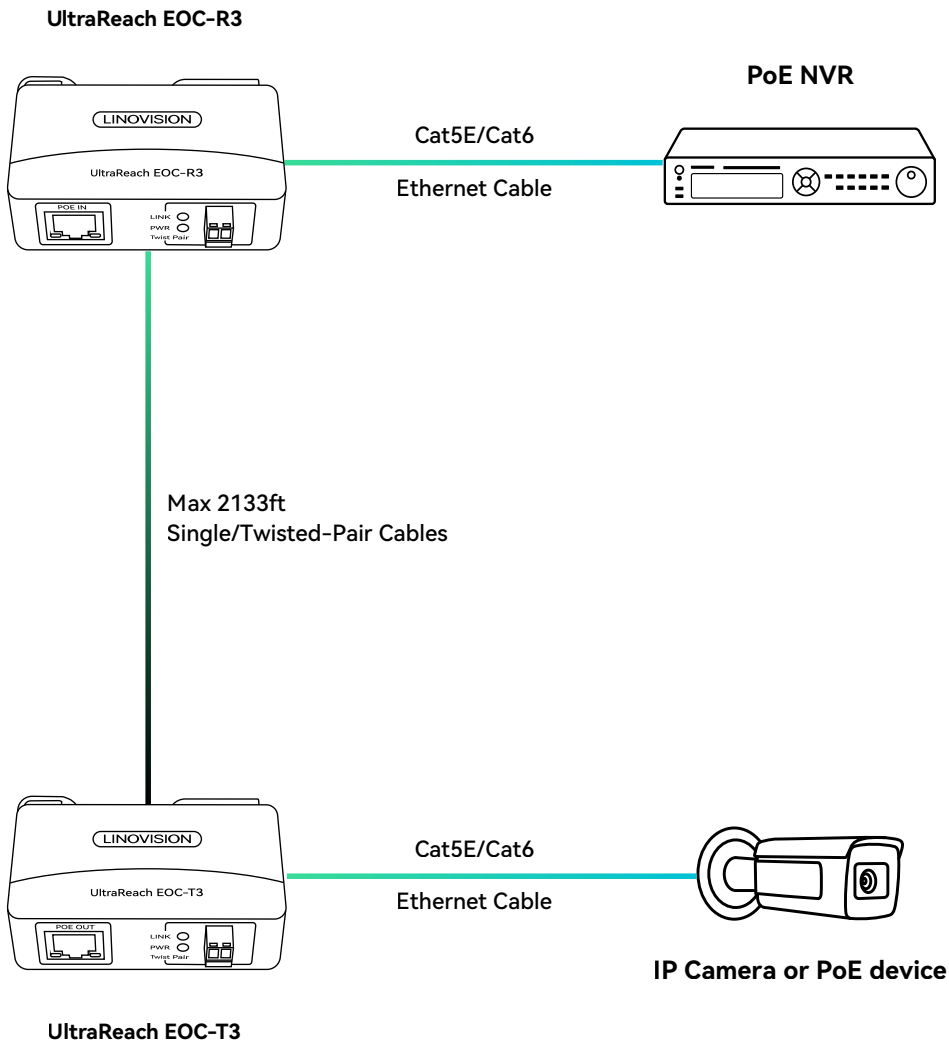


Wall Mounting Accessory



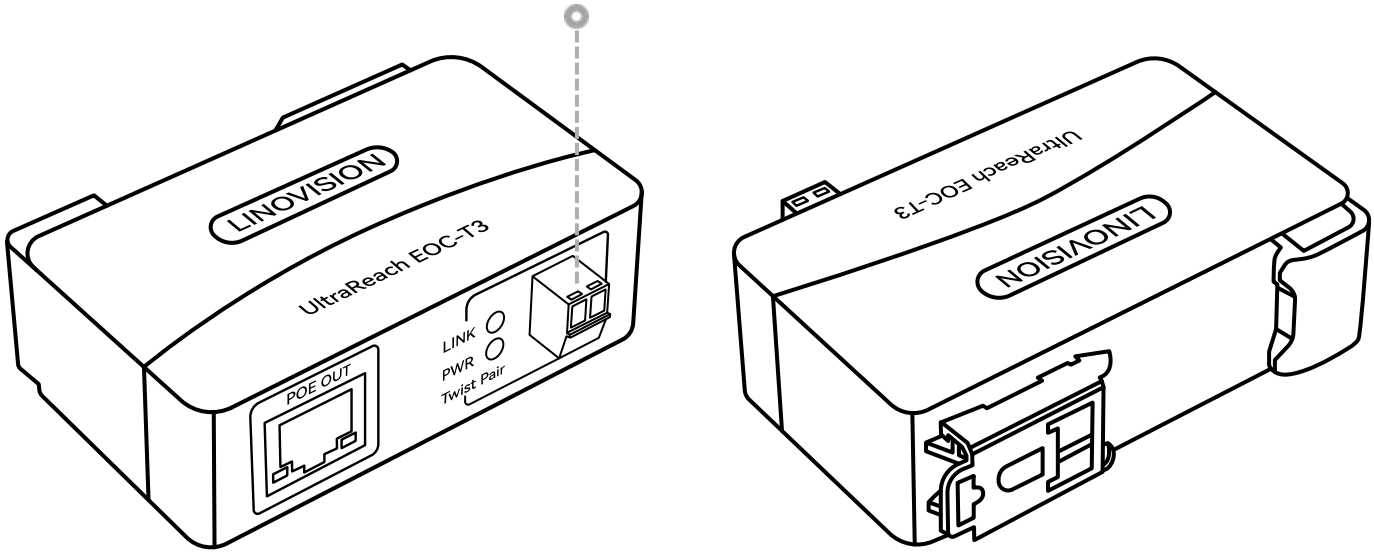
Screw Bag

Connection Diagram



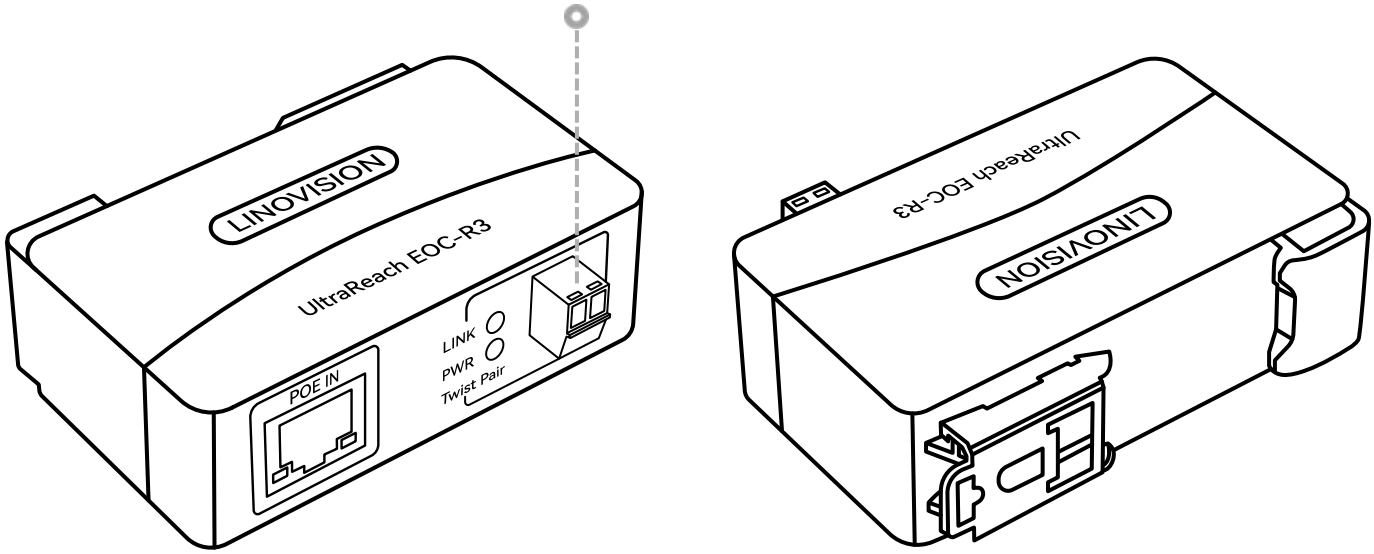
Transmitter & Receiver

Wiring ports suitable for single-pair
or twisted-pair cables.



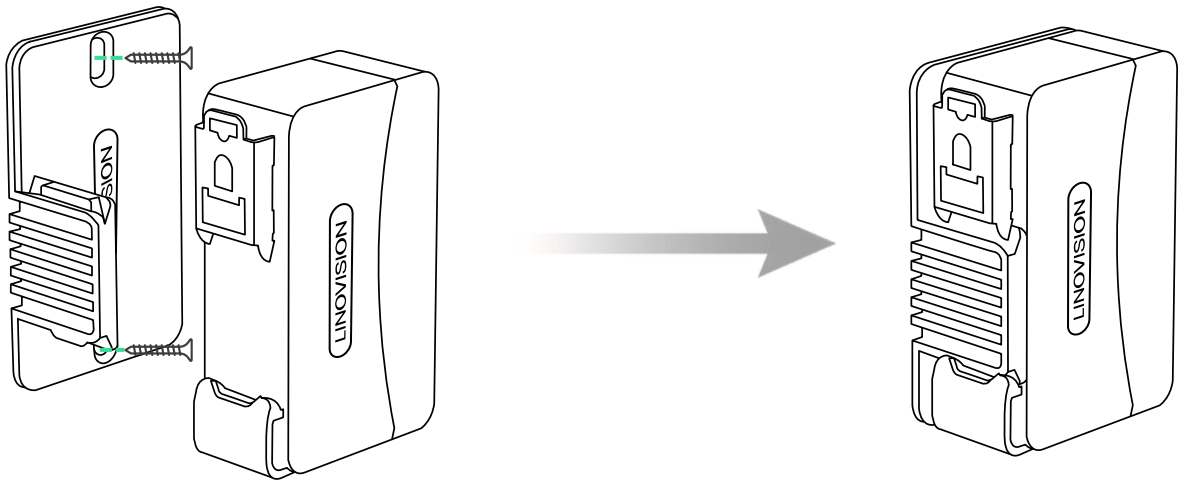
UltraReach EOC-T3

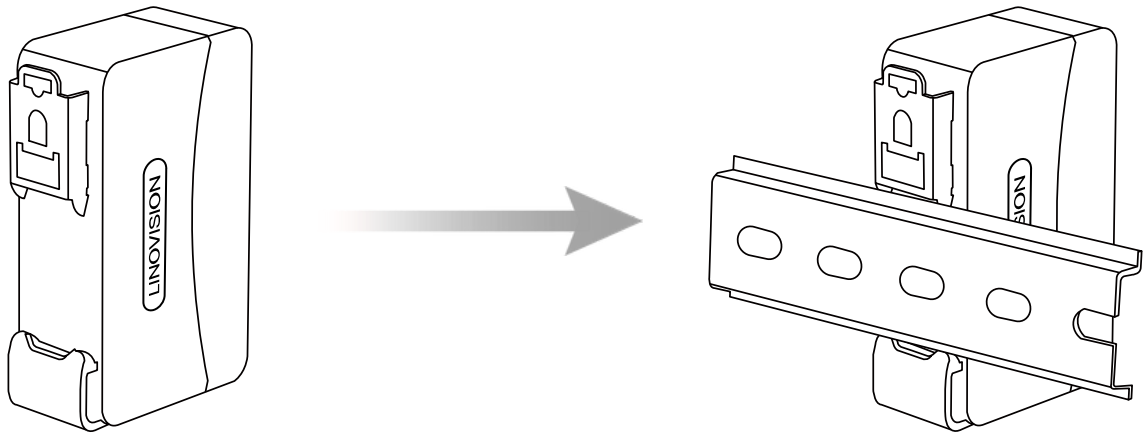
Wiring ports suitable for single-pair
or twisted-pair cables.



UltraReach EOC-R3

Installation





DIN-rail Installation & Wall Mounting

Specifications

Hardware		
Model	UltraReach EOC-T3 (Transmitter)	UltraReach EOC-R3 (Receiver)
Function Port	1 × 10/100 Mbps Ethernet port (RJ45) 1 × 2-pin 3.81 mm terminal block	
Power Consumption	<2W	
Transmission Bandwidth	24 AWG pure copper：300m/100Mbps；650m/10Mbps	
PoE Protocol	The EOC2 operates as a PoE PD on the Receiver side and a PoE PSE on the Transmitter side, enabling PoE power pass-through over coaxial cable. PoE power and Ethernet data are first received by the Receiver, then regenerated and output by the Transmitter to the downstream device.	
	Transmitter (PSE): Delivers IEEE 802.3af/at–compliant PoE power to downstream powered devices (IP cameras, etc.), supporting IEEE 802.3af/at or 48 V Passive PoE (power on pairs 1/2 (+), return on 3/6 (-)).	Receiver (PD): Accepts PoE input from an upstream PoE source, with automatic support for PoE Mode A or Mode B. A 30 W PoE source is recommended for stable operation.
Network Standard	IEEE802.3, IEEE802.3u, IEEE802.3x	
Capatible Cables	RJ45 Port: Cat 5e/Cat 6 Ethernet cable 2-Pin Terminal Block: Single-pair or twisted-pair cable (two conductors)	
Lightning Protection	Common Mode 6KV Differential Mode 3KV	
Operating Temperature	–30℃ to 65℃ (–22℉ to 149 ℉)	
Operating Humidity	5%–95%	
Weight	95 g (0.209 lb)	
Dimension (W×D×H)	79 * 52 * 25 mm（3.11 * 2.05 * 0.98 in）	

Transmission Performance

Transmission Distance		Performance
100 m (330 ft)	Bandwidth	100 Mbps
	Load Capacity	21 W
400 m (1300 ft)	Bandwidth	100 Mbps
	Load Capacity	9 W
1000 m (3280 ft)	Bandwidth	10 Mbps
	Load Capacity	4W
*Base on RG59 Cable & 48V PoE Input		

LED Indicators

UltraReach EOC-R3			
Interface	**LED/Color**	**Status**	**Indication**
UltraReach	LINK/Green	On	The Ethernet link to the UltraReach EOC-T3 is active, and link-rate negotiation is complete.
	PWR/Red	On	Power is being supplied to the UltraReach EOC-T3.
PoE IN	Green	Blinking	Ethernet data is being transmitted.
	Yellow	On	The Ethernet port is operating at 100 Mbps.

UltraReach EOC-T3			
Interface	**LED/Color**	**Status**	**Indication**
UltraReach	LINK/Green	On	The Ethernet link to the UltraReach EOC-R3 is active, and link-rate negotiation is complete.
	PWR/Red	On	Power is being received from the UltraReach EOC-R3.
PoE OUT	Green	Blinking	Ethernet data is being transmitted.
	Yellow	On	The Ethernet port is operating at 100 Mbps.

Debug Progress

BEFORE CONNECTION

Product Matching*

EOC-R3 and EOC-T3 units of the updated version cannot be mixed with units of the previous version.

Correct Connections

Connect EOC-R3 to a working PoE NVR, switch, or injector. Connect EOC-T3 to a powered device (PD), such as an IP camera.

Point-to-Point Connection

Use a single, continuous twisted-pair cable between EOC-R3 and EOC-T3. Splices or splitters may prevent the system from working.

Improve PoE Input Quality

Use a high-quality, higher-voltage IEEE 802.3at PoE source to reduce cable losses, prevent voltage drops from disabling the powered device, and ensure reliable performance.

AFTER POWER-ON

Check the LED Indicators

Observe the LED indicators to check whether the units are working normally. Refer to the following Debug Progress pages for details.

Test One Pair at a Time*

Multiple units used together may interfere with each other. Temporarily disconnect the other units and connect one EOC-R3/EOC-T3 pair at a time to rule out interference.

If a single pair works normally, try switching to high-performance PoE switches and high-quality twisted-pair cables to reduce interference.

Check Cable Length and Power Load

Keep each Ethernet cable connecting EOC-R3 to its upstream or downstream device within 328 ft (100 m). Keep the twisted-pair cable between EOC-R3 and EOC-T3 within 2,133 ft (650 m). If a device repeatedly restarts, ensure the PoE source supplies sufficient power.

Check PoE Compatibility

Ensure both the PoE source and powered device support IEEE 802.3af/at. The powered device must support Mode A and 48 V PoE.

Debug Progress

After completing the product connections, wait for the LED indicators to stabilize. Then check the PWR and LINK indicators on both the EOC-R3 and EOC-T3.

EOC-R3 PWR or EOC-T3 PWR Is Off

R-PWR is off: The entire link is not receiving power, indicating a PoEnegotiation issue between the PSE and the R unit.

- Check whether the PSE is providing PoE output normally, for example whether thePoE indicator on the PSE is illuminated. Check whether the PSE complies with the IEEE 802.3af/at/bt standard.

R-PWR is on, but T-PWR is off: The R unit is unable to supply power to the T unit correctly.

- Check the connections at the 2-pin terminal blocks and confirm that both conductors have continuity. Use a single, continuous twisted pair without branches or intermediate devices. Confirm that the cable length is within the rated distance for the cable and transmission speed.

Only One of the R-LINK or T-LINK LEDs Is On

There may be a 10/100 Mbps speed negotiation issue between the R and T units.

- Check the R-Y and T-Y indicators to determine whether only one side is illuminated. If only one side is illuminated, the 10/100 Mbps negotiation status between the R unit and the PSE and between the T unit and the PD may not be synchronized. Try changing the network settings on both the PSE and PD sides by setting both sides to Auto-Negotiation, or manually configuring both sides to the same speed, either 10 Mbps or 100 Mbps.

Both R-LINK and T-LINK LEDs Are Off

The R and T units are unable to establish a link with each other.

- Check whether the R and T units are the same version of UltraReach EOC3. The R and T units of UltraReach EOC3 cannot be mixed with the R and T units of EOC-Converter.
- Electromagnetic interference may be present in the cabling or surrounding equipment. Try connecting only a single pair of UltraReach EOC3 units and wait briefly for the link to establish.

R-G and T-G Do Not Flash, or Only One of Them Flashes.

The link cannot be established due to network configuration issues.

- Connect the PSE and PD directly and check whether they can communicate properly with the current network settings