

# Model EL1500U (for use with Twisted Pair cable)

# Installation and Operation Manual

Includes one ER1500U Receiver  
and one ET1500U Transmitter

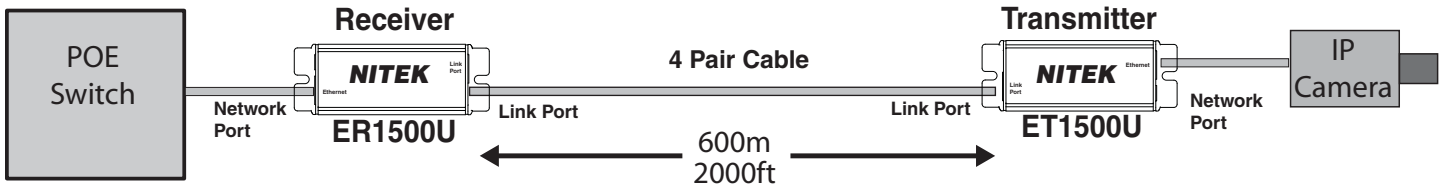
## Introduction

The EL1500U is a system for extending Ethernet & PoE. The EL1500U can be used on new or existing cable and is designed to greatly extend the distances to which IP cameras and network devices can operate. In addition to network communication the EL1500U is ideal for PoE applications. It allows all power to flow from the head end for most camera applications. In unique cases where high power PoE is needed it can inject up to 25 watts of power at the transmitter end.

## TYPE 1 Installation

### EL1500 with a PoE Source Switch and IP Cameras

One common installation involves using the ER1500U Receiver to power both the remote transmitter and PoE camera. The ER1500U can be powered by a PoE switch. Refer to the diagram below when installing. Refer to the PoE power chart below to determine maximum range for a PoE camera.



### Wiring for Link Port

| PIN | COLOR   |
|-----|---------|
| 1   | WHT/ORG |
| 2   | ORG/WHT |
| 3   | WHT/GRN |
| 4   | BLU/WHT |
| 5   | WHT/BLU |
| 6   | GRN/WHT |
| 7   | WHT/BRN |
| 8   | BRN/WHT |

### PoE Device Power 24AWG CAT5 Cable\*

| Distance    | Power at PoE Port With 54 Volt supply | Power at PoE Port with 48 Volt supply |
|-------------|---------------------------------------|---------------------------------------|
| 325ft/100m  | 29.2 watts                            | 15.4 watts                            |
| 650ft/200m  | 27.0 watts                            | 14.6 watts                            |
| 1000ft/300m | 25.6 watts                            | 13.8 watts                            |
| 1300ft/400m | 24.8 watts                            | 12.5 watts                            |
| 1600ft/500m | 16.1 watts                            | 11.3 watts                            |

\*IP1054 is a 54 Volt supply  
\*PS48 is a 48 Volt supply

### LED INDICATORS

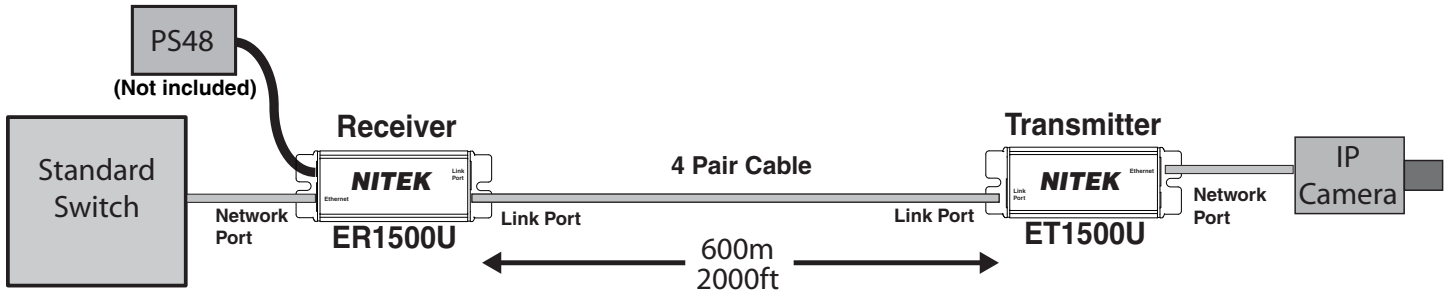
| Connector    | LED         | OFF              | ON                 | FLASHING |
|--------------|-------------|------------------|--------------------|----------|
| Network Port | Power       | No power         | Power Good         |          |
|              | Link Status | No Ethernet Link | Ethernet Link Good |          |
| Link Port    | POE Out     | No POE Power Out | POE Power Good     |          |
|              | 10/100      | No Link          | 100Mb              | 10Mb     |

|                 |     |  |        |   |
|-----------------|-----|--|--------|---|
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## TYPE 2 Installation

### Install EL1500U with 48VDC External Power Supply

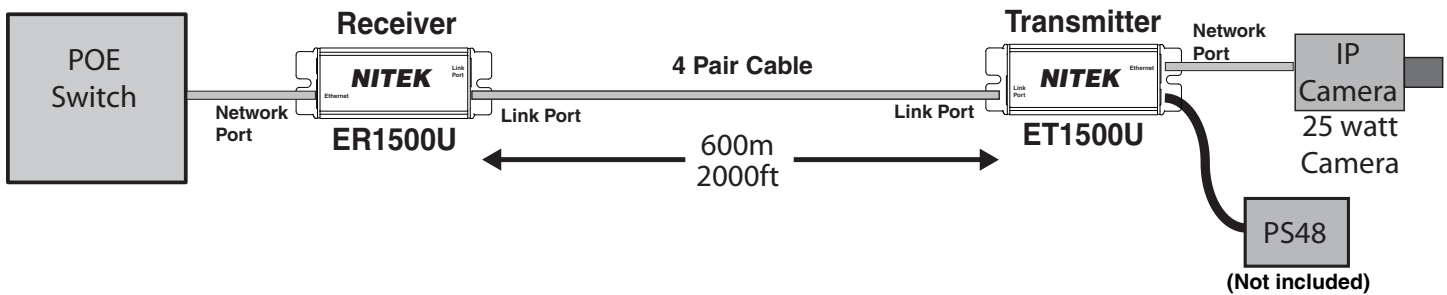
Refer to the diagram below when installing. When installing without a PoE source device, the ER1500U can be powered directly. The ER1500U will provide power for both the transmitter and PoE camera. Refer to the PoE power chart on page 1 to determine maximum range for a PoE camera.



## TYPE 3 Installation

### Install EL1500U for Powering High Power PoE Cameras

Refer to the diagram below when installing. The ER1500U can be powered from a power supply or a PoE Switch. The ET1500U can be used with a PS48 power supply (available separately from Nitek) to power cameras up to 25 watts. When installing without a PoE source device, the ER1500U must be powered directly. Refer to the PoE power chart on page 1 to determine maximum range for a PoE camera.



| Transmitter used as PoE Injector* |                            |
|-----------------------------------|----------------------------|
| Distance from Network Port        | PoE Device Power Available |
| 30ft/10m                          | 33 watts                   |
| 325ft/100m                        | 26 watts                   |

\*Results with 48VDC power to the Transmission optional Power Port