

## INSTALLATION AND OPERATION MANUAL



### CLFE4US1TPC

4-PORT ETHERNET SWITCH WITH UTP/TWISTED COPPER AND COAXIAL CABLE EXTENDER

#### Important Safety Warning:

Read and keep these directions

Heed all warnings

Follow all instructions

Do not use this apparatus near water

Clean only with a dry cloth

Install in accordance with the manufacturer's instructions

This installation should be made by a qualified service person and should conform to all local codes

See further safety instructions on Page 7

The ComNet™ CopperLine® CLFE4US1TPC is an unmanaged switch that combines four individual Ethernet data channels over a single standard COAX or UTP cable. Symmetric bandwidth assures full bandwidth transmission is maintained over the entire operational distance for both uploads and downloads with virtually zero packet loss. Bandwidth assurance provides the ability to transmit multiple cameras on single camera runs with no information loss. Combined with the CopperLine CLFE(X)COAX series or CLFE(X)UTP series multi-port extenders up to 64 cameras can be transmitted to a central location on just 16 cables.

The CLFE4US1TPC can be powered using standard camera 12 VDC or 24 VAC power supplies. It also can be powered by PoE eliminating the need for remote site extra cost power supplies.

Type tested under NEMA-TS2 environmental standards for extended temperature operation from -40°C to +75°C. Certified for use with high-bandwidth megapixel or HD IP cameras and tested to network packet performance standards along with major manufacturer compatibility testing.

Fixed managed L2 functions include 802.1p Qos, support of 2k MAC addressing, learning and aging and a non-blocking switch fabric.

Packaged in a rugged aluminum housing, these units are designed for desktop or stand-alone mounting. See **Figure A** on **Page 5** for mounting instructions.

See **Figures 1 - 5** for complete installation details.

FIGURE 1 - CLFE4US1TPC

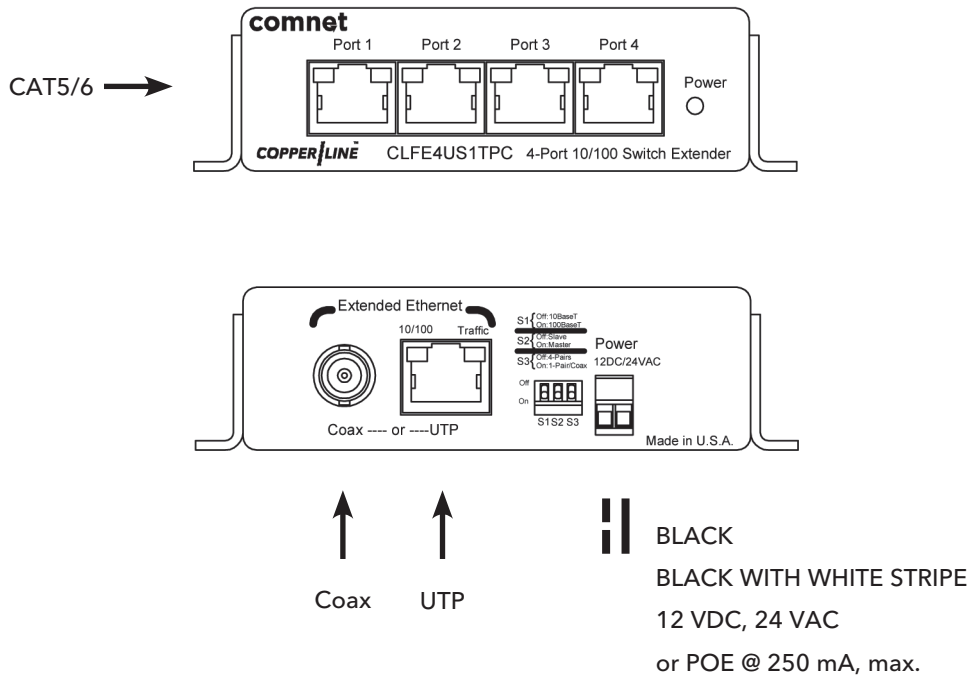
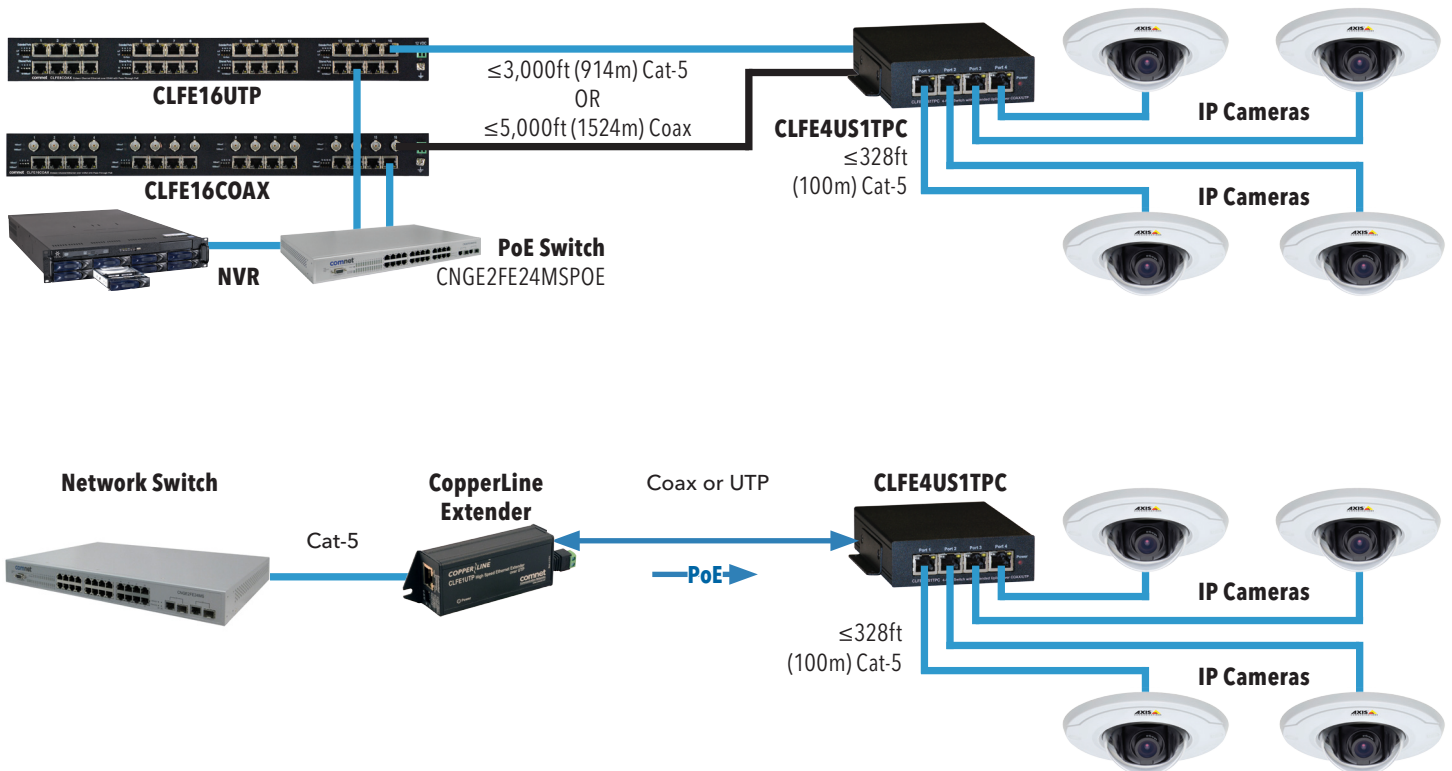
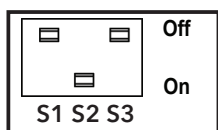


FIGURE 2 - POSSIBLE ETHERNET CONFIGURATION

Multiple Configurations are possible. Consult ComNet Design Center.



**IP CAMERA-END  
INSTALLATION (CLFE4US1TPC)**



Set the S1 10/100BaseT dip switch to the appropriate rate based on the required maximum data rate and maximum distance. OFF = 10BaseT; ON = 100BaseT

Set the S2 Master/Slave dip switch to ON for "Master" mode.

For Extended UTP connection, set the S3 1- or 4-pair dip switch ON for 1-pair or OFF for 4-pair operation.

For Extended Coax connection, set the S3-1 switch ON.

For systems not utilizing PoE, connect the 12V Power Supply to the power connector of the CLFE4US1TPC. A power adapter connector is provided to simplify connection.

Connect up to 4 IP cameras to the 10/100BaseT Ethernet port(s) of the CLFE4US1TPC using standard Cat5/6 cables, each 100m length (max).

The link LED on the 10/100 connector should be "ON" to indicate proper connection between the camera and the CLFE4US1TPC.

*Note: While each standard Ethernet port can operate at either 10 or 100 Mbps, the extended port is 100Mbps max. The recommended total bandwidth limitation should not exceed 54Mbps and is above the upper limit for transmitting four cameras.*

**FIGURE 3 - POWER LED INDICATORS**

	<b>POWER</b>
<b>RED</b>	Power is on
<b>OFF</b>	Power is off

**FIGURE 4 - EXTENDED LED INDICATORS**

	<b>TRAFFIC</b>	<b>10/100BaseT</b>
<b>GREEN</b>	-	Connection is OK, 10BaseT mode
<b>YELLOW</b>	Flashing, Traffic present	-
<b>ORANGE</b>	-	Connection is OK, 100BaseT mode
<b>OFF</b>	No traffic	-

**FIGURE 5 - ETHERNET LED INDICATORS**

	<b>TRAFFIC</b>	<b>LINK</b>
<b>GREEN</b>	Flashing - Connection is OK with traffic	-
<b>YELLOW</b>	-	Connection is OK
<b>OFF</b>	No connection	No connection

# MECHANICAL INSTALLATION INSTRUCTIONS

- Read and keep these directions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with a dry cloth.
- Install in accordance with the manufacturer's instructions.
- This installation should be made by a qualified service person and should conform to all local codes.
- DO NOT bundle UTP or Coax signals in the same conduit as high-voltage wiring.
- To reduce the risk of fire or electrical shock, do not expose these products to rain, moisture, dripping or splashing.
- No objects filled with liquids, such as vases, shall be placed on the equipment.
- DO NOT install the unit in a place where the operating ambient temperature exceeds 75°C.
- Make sure that the external power supply output voltage is in the recommended range.
- Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including DVRs) that produce heat.
- Protect the power cord from being walked on or pinched, particularly at the power source, convenience receptacles and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when a power supply cord or plug is damaged, liquid has been spilled, objects have fallen inside the apparatus, the apparatus has been exposed to rain or moisture, do not operate normally or has been dropped.
- The main plus is used as the disconnect device and shall remain readily operable.

**WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. This apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases shall be placed on the apparatus.

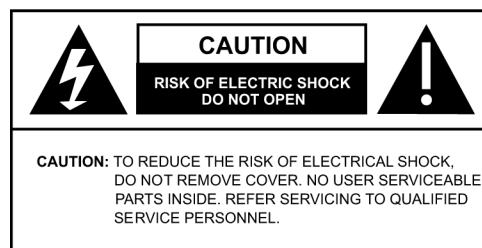
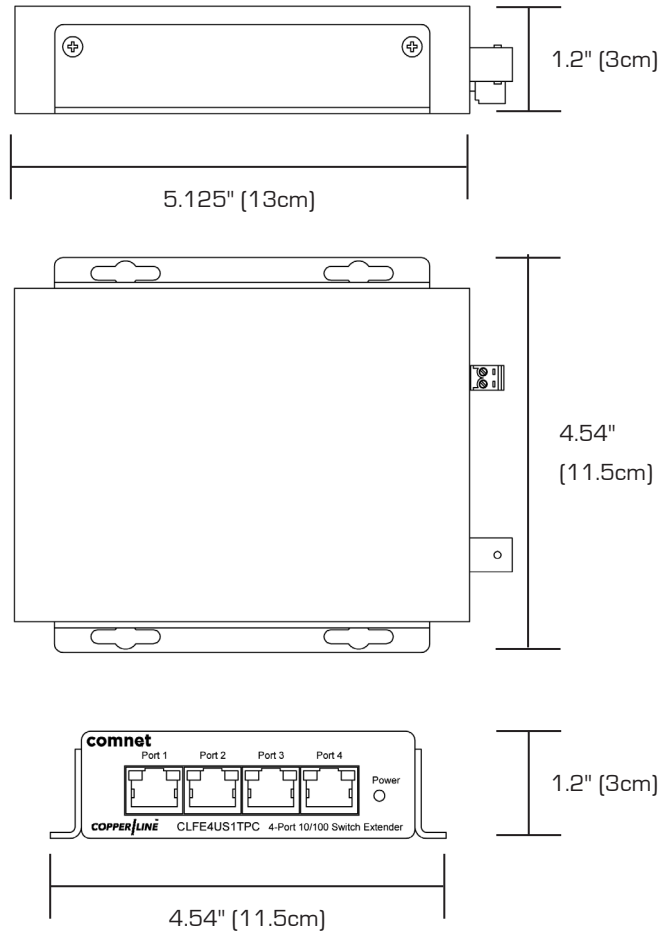
**WARNING:** This apparatus is a Class I product. This product must be connected to a mains socket outlet through an AC to DC power supply.

**WARNING:** The mains plug is used as the disconnect device and shall remain readily operable.

**WARNING:** For non-PoE applications, unit is to be connected to a mains socket outlet through a Listed Class I power supply rated 12 VDC or 24 VAC.

**FIGURE A**

Dimensions are for the CLFE4US1TPC standalone ComNet module



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