comnet
Communication Networks

COPPER|LINE®

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DESCRIPTION

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 -40C° to +75C°, the CLFE4US1TPC is the perfect solution for extended distance data and power transmission for warehouse, parking lot, campus and casino applications. Certified for use with high-bandwidth megapixel or HD IP cameras, the CLFE4US1TPC is tested to network packet performance standards along with major manufacturer compatibility testing. The CopperLine CLFE4US1TPC assures you of error free, quality operation. Fixed managed L2 functions include 802.1p Qos, support of 2k MAC addressing, learning and aging and a non-blocking switch fabric.

APPLICATIONS

› Retrofit existing analog CCTV installations to Ethernet-based systems

› CCTV systems for Casinos, airports, school campuses

FEATURES

› 4-port unmanaged switch combines four individual Ethernet data channels over a single standard COAX or UTP cable.

› Extends Ethernet distances: up to 5,000 feet (1524 m) over coax; or up to 3000 feet (914 m) over standard UTP*.

› High Density: High (4) channel count within a very small package; ideal for those installations where equipment cabinet space is limited

› Can be powered using 12 Volts DC, 24 Volts AC or PoE AF/AT power sources.

› High data rate, ideal for the high bandwidth requirements of Mega-pixel and HD cameras, multiple IP cameras systems, and cameras requiring jumbo frame transmission

› Symmetric bandwidth provides consistent upload and download with virtually zero packet loss over the total usable distance

› Type tested to RFC-2544 TCP/IP network bandwidth packet transmission standards

› Transceiver cable connectivity tester for fast and simple field diagnostics

› User-selectable data rate for maximum bandwidth and transmission distance utilization

› Complies with all major IEEE standards and RFC network protocols for UDP, TCP/IP, HTTP/HTTPS

› Designed for use in harsh operating environments: extended temperature operation from -40C° to +75C°and fully compliant with the environmental requirements of NEMA TS-1/TS-2 and the Caltrans Specification for Traffic Signal Control Equipment

› Rugged extruded aluminum housing: May be wall or stand-alone mounted.

› Designed and manufactured in the U.S.A.

› Lifetime Warranty

SPECIFICATIONS

Electrical

Ethernet Interface:	10/100BaseT
Ethernet Data Rate:	DIP-switch selectable 10/100Mbps Full data rate / full duplex up to the maximum rated distance
Transmission distance:	Coax* 75Ω: 5,000 feet (1524 m) at 10BaseT, or 1,800 feet (548 m) at 100BaseT; UTP* Cable: 3,000 feet (914 m) at 10BaseT, or 2,100 feet (640 m) at 100BaseT Using 50V PSE power source and external power supplies for extenders
Operating Power:	12 VDC, 24 VAC or POE @ 250 mA, max.
Status Indicating LEDs:	– Operating Power – Ethernet: Traffic – Link Extended Ethernet Traffic
Connectors:	Ethernet: 4 × RJ-45 Coaxial Cable: Female BNC. UTP/Twisted Copper Pair: RJ-45 Operating Power: Terminal Block
RFC:	2544 TCP/IP Packet Transmission
Standards Compatibility:	IEEE 802.3af PoE, IEEE 802.3at PoE, RFC 768 UDP, 2068 HTTP, 793 TCP 791 IP, 1783 TFTP, 894 IP over Ethernet
Jumbo Frame	Supported

Mechanical

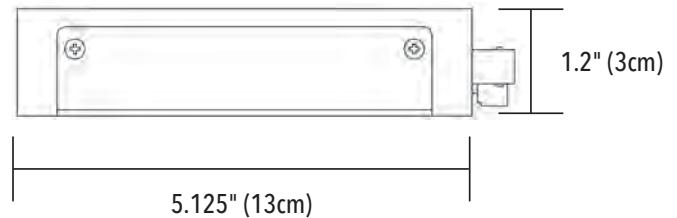|	
Dimensions (H x W x L)	1.2 × 5.125 × 4.54 in; (3 × 13 × 11.5 cm)
Weight:	0.7lbs (0.32kg)
Case Material:	Aluminum

Environmental

Operating Temp:	-40°C to +75°C
Storage Temp:	-40°C to +80°C
Relative Humidity:	0 to 95%, non-condensing

* Distance figures are obtained using in-house testing mirroring installations. Factors such as coaxial cable quality, the number of connectors in the cable run, the use of PoE, and environmental conditions encountered within the installation may affect the actual transmission distance, and should be taken into consideration. UTP distance is based on 4-pair Cat5 cable. Using 1-pair cable will limit distance.
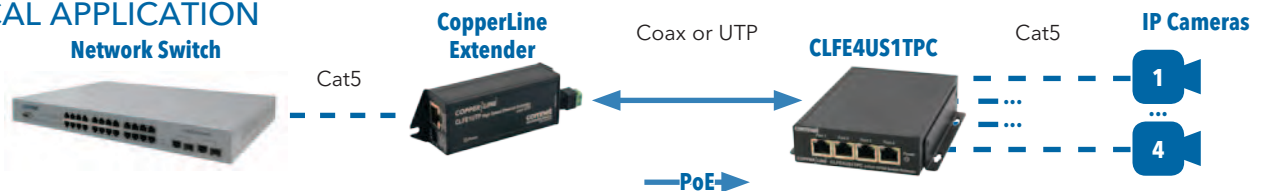
AGENCY COMPLIANCE

FC CE c(UL)us RoHS COMPLIANT MADE IN THE USA
PART 15 COMPLIANT E322911 N24621

DIMENSIONAL DRAWING

1.2" (3cm)

5.125" (13cm)

ORDERING INFORMATION

Part Number	Description	Maximum Distance without PoE†	Maximum Distance with PoE†
CLFE4US1TPC	4-port Ethernet Switch with UTP/Twisted Copper and Coaxial Cable Extender	5,000 ft (1524 m)	3,000 ft (909 m)
Accessories	120/240 VAC wall-mount power supply (one each provided with each extender unit)		

† Distance figures are based on RG-59U coaxial cable and a 50V PSE PoE power source, and external power supplies for the extenders.

Tested and certified by an independent laboratory for full compliance with the environmental requirements (ambient operating temperature, mechanical shock, vibration, humidity with condensation, high-line/low-line voltage conditions, and transient voltage protection) of NEMA TS-1/TS-2 and the Caltrans Specification for Traffic Signal Control Equipment.

TYPICAL APPLICATION

Network Switch — Cat5 — CopperLine Extender — Coax or UTP — CLFE4US1TPC — Cat5 — IP Cameras 1 ... 4

PoE