comnet
Communication Networks

COPPER LINE®

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DESCRIPTION

The ComNet™ CopperLine® CLFE(X)UTP Ethernet over UTP line consists of four models that support 100Mbps Ethernet as well as Pass-through Power over Ethernet (PoE)* over twisted pair cable (CAT5, UTP). These models support transmission distances of up to 3,000 feet (914m) at 10 Mbps, or 2,100 feet (640m) at 100 Mbps. The CLFE1UTP, the CLFE4UTP, CLFE8UTP and the CLFE16UTP transport, one, four, eight or sixteen channels respectively. The IEEE 802.3-compliant Ethernet electrical interface of these Ethernet extenders also meets the requirements for IEEE 802.3af PoE power, passing-through up to 30 watts of power per port to the powered device (PD). The CLFE(X)UTP series may also be used interchangeably with other CopperLine Ethernet-over-UTP extenders. LED indicators confirm operating status of the device. Packaged in a rugged aluminum housing, these units are designed for desktop or stand-alone mounting. The CLFE8UTP and CLFE16UTP are offered in EIA 19" 1U high rack for easy installation. Environmentally hardened to the requirements of NEMA TS-1/ TS-2 for most out-of-plant applications, and true plug-and-play design ensures ease of installation and operation.

APPLICATIONS

› Retrofit existing analog CCTV installations to Ethernet-based systems

› CCTV systems for Casinos, airports, school campuses

FEATURES

› Transmits individual Ethernet data channels with Pass-through PoE over standard UTP cable

› Extends Ethernet up to 3,000 feet (914 m) over UTP

› Extended temperature operation from -40C° to +75C°

› Extended Pass-through PoE meets the IEEE 802.3af standard for Power over Ethernet

› High-data rate, ideal for the high bandwidth requirements of Mega-pixel 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

› 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: Fully compliant with the environmental requirements of NEMA TS-1/TS-2 and the Caltrans specification for traffic signal Control equipment

› Aluminum housing

› Designed and manufactured in the USA

› Lifetime Warranty

* PoE Power and Pass-through PoE is only available in 4-wire mode and may require connectivity to a powered device (PD) to allow source power negotiation..

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: UTP Cable: 3,000 feet (914m) (10BaseT), 1,800 feet (548m) (100BaseT), 1,000 feet (304m) (100BaseT – 1 pair mode)†

Operating Power:
CLFE1UTP: 12 VDC @ 0.15A
24 VAC @ 0.15A
PoE (4 pair only) @ 1W
CLFE4UTP: 12 VDC @ .5 A
CLFE8UTP: 12 VDC @ 1.2 A
CLFE16UTP: 12 VDC @ 2.5 A

Status Indicating LEDs:
– Operating Power
– Ethernet: Traffic
– Link Extended Ethernet Traffic

Connectors:
Ethernet Interface: RJ-45
Extended Interface: RJ-45
Operating Power: Terminal Block

RFC: 2544 TCP/IP Packet Transmission

Standards Compatibility: IEEE 802.3af 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)

CLFE1UTP: 1.15 x 1.6 x 3.73 in; (3.0 × 4.0 × 9.5 cm) Weight: 0.27lb (0.12 kg)

CLFE4UTP: 1.15 × 3.6 × 3.3 in; (4.2 × 9.2 × 8.4 cm) Weight: 0.6lb (0.3kg)

CLFE8UTP: 1.75 × 17× 3.25 in; (4.4 × 43 × 8.25 cm) Weight: 3.1lb (1.4kg)

CLFE16UTP: 1.75 × 17× 3.25 in; (4.4 × 43 × 8.25 cm) Weight: 3.9lb (1.8kg)

Case Material: Aluminum

Environmental

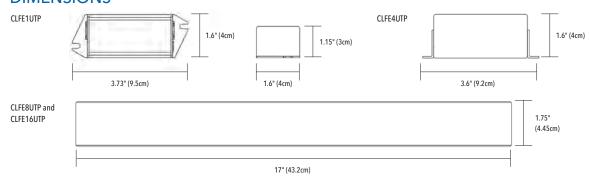Operating Temp: -40°C to +75°C

Storage Temp: -40°C to +80°C

Relative Humidity: 0 to 95%, non-condensing

† Maximum distance subject to PoE limitations (4 pair mode only). Distance figures are obtained using in-house testing mirroring installations. Factors such as 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 PART 15 COMPLIANT   CE   cULus E322911   RoHS COMPLIANT   N24621

MADE IN THE USA

DIMENSIONS

CLFE1UTP

1.6" (4cm)

3.73" (9.5cm)

1.15" (3cm)

1.6" (4cm)

CLFE4UTP

1.6" (4cm)

3.6" (9.2cm)

CLFE8UTP and CLFE16UTP

1.75" (4.45cm)

17" (43.2cm)

ORDERING INFORMATION

Part Number	Description	Maximum Distance‡
CLFE1UTP	1 Port UTP/Twisted Pair Ethernet Extender	3,000 ft (914 m)
CLFE4UTP	4 Port UTP/Twisted Pair Ethernet Extender	3,000 ft (914 m)
CLFE8UTP	8 Port UTP/Twisted Pair Ethernet Extender	3,000 ft (914 m)
CLFE16UTP	16 Port UTP/Twisted Pair Ethernet Extender	3,000 ft (914 m)
Accessories	12 VDC wall-mount power supply (one each provided with each extender unit)	
	19-Inch Rack-Mounting Ear Brackets (for use and provided with the 8 and 16 port models only)	

‡ Distance figures are based on 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.

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