Canary Bridging Converters

10/100/1000 Mbs With SFP Transceivers

Featuring:

- **Compliance with IEEE 802.3 u, z, ab & 802.1D Specifications**
- **RJ-45 plus a Choice of High Speed Fiber Optic Data Connections**
- **Connectors for Multi & Single-mode, Single-Fiber Bi-Directional & CWDM**

Canary's **CLE-10SF6** *10/100/1000 Bridging* Converters bring economical Copper-to-Fiber Conversion to mixed Gigabit, Fast Ethernet and legacy 10 Megabit networks.

CLE-10SF6 Converters, using Small Form Pluggable (SFP) type transceivers, bring a high degree of flexibility to network design and increased usability. They are ideal for university, workgroup, lab, business campus or any other remote mixed data rate environment.

CLE-10SF6 series Converters are compatible with a wide array of Fiber Optic connector types offering multi-mode, single-mode and Single-Fiber Bi-Directional links. Included are SFP short & long-reach CWDM transceivers.

Canary **CLE-10SF6** *Bridging* Converters are available in three basic configurations:

- **CLE-10SF6:** with one 10/100/1000 Mbps RJ-45 port and one flexible SFP-type transceiver slot (empty) that can be loaded with an extensive array of Fiber optic Transceiver interfaces.

- **CLE-10SF-SX:** has the same configuration as above but is shipped with a pre-installed. 850 ηm, multi-mode LC-type SFP Fiber optic connector

- **CLE-10SF-LX:** is similar in that it ships with a pre-installed 1310 ηm, single-mode SFP Fiber optic connector.

Other features include:

- 512 K bytes Buffer Size
- Automatic Flow Control
- 10/100/1000 Mbps Auto-negotiation
- RJ-45 port (MDI/MDI-X) Auto-Crossover
- DIP Switch Enabled 'Link Fault Signaling' (LFS) that *forwards* the loss of incoming Link on one port, to the next remote station

Canary Communications is an industry leader providing advanced connectivity solutions for the evolving network.

CLE-10SF6 Bridging Ethernet Converter

Small Form Pluggable Fiber Optic Connectors.

Interchangeable SFP (Small Form Pluggable) LC type connectors provide maximum flexibility in connection types and added user convenience.

Long Range, Fiber Links for Bridging Converters.

Extend data transmission distances to 120 Km over Fiber between converters and other remote devices.

Optional Single-Fiber Bi-Directional and CWDM Interfaces.

Increases the number of users and data handling capacity of simplex or duplex optical cable and maintains user investments in existing Fiber infrastructures.

Link Fault Signaling.

*Extend*s Loss of Link awareness between connected devices by forwarding the severed Link *(state)* of one host-to-converter pair to the second connected converter & station pair – making *them* aware of a loss of Link somewhere in the connection path.

Unparalleled, Network Integration and Versatility.

Use Canary's Bridging Media Converters for mixed 10/100/1000 Mbps environments where flexibility is a premium. One *CLE-10SF6* can function as a universal spare for many different units in large installations by merely changing SFP connectors. Similarly, one may substitute for many different CWDM end-points by simply changing the wavelength and power of its SFP optical transceivers.

Canary Communications

Main Features:

Diagnostic LEDs:

- System Alert Status:
  - (1) PWR: [ON]: Illuminated <u>ON</u> when operation is normal
  - (2) ALM: [OFF]: Turns <u>ON</u> for Fiber or Copper Link <u>failures</u>
- Link & Communications Status:
  - (3) LNK/ACT: RJ-45 port LED Illuminated when UTP Link Signals or when Data Traffic are present
  - (4) 1000: RJ-45 port LED Illuminated when UTP Link has Auto-negotiated up to Gigabit Ethernet
  - (5) LNK/ACT: SFP Fiber port [front panel] Illuminated when Fiber optic Link Signals & Traffic is present

Networking:

- RJ-45 Port: MDI / MDI-X Auto-Cross & Auto-negotiation
- Fiber Port: LC–type Small Form Pluggable (SFP) as in:

  CLE-10SF6: Unit without SFP Transceivers installed
  CLE-10SF-SX: Multi-Mode with 850ηm SFP Transceiver
  CLE-10SF-LX: Single-Mode with 1310ηm SFP Transceiver
  CLE-10SF-ZX: Long-Reach S/M - 1550ηm SFP Transceiver

Management & Configuration:

- Configuration Options:
  - (1) DIP Switch to enable Link Fault Signaling (LFS) circuit
  - (2) Auto-Negotiation for Full-Duplex operation at 10/100/1000 [Mbps] data-rate Ethernet Links
  - (3) Transparent to Flow Control Commands
- No Management or SNMP access to internal functions

Mechanical / Mounting:

- Desktop & Shelf
- DIN-Rail: Factory installed On Bottom [Back], On Side with choice of Network Cable (Wire) Connections [Up or Down]
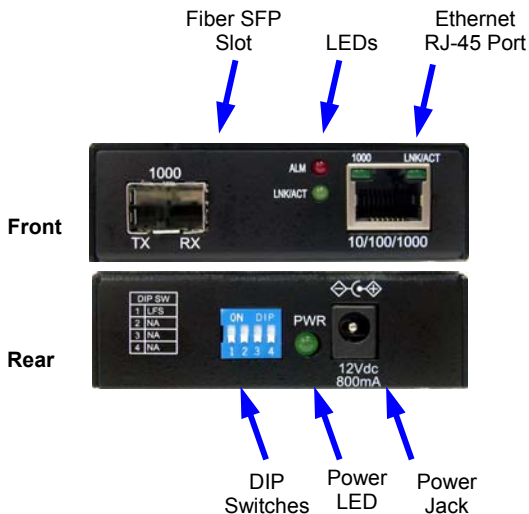- User makes DIN-Rail selection during order process as <u>Special Order</u> at time of placing purchase order

Power:

- 100/240 VAC Auto-ranging Power input & 12 VDC Power Jack

Specifications:

Standards:	IEEE 802.3, 802.3u, 802.3z, 802.3ab
	IEEE 802.1q VLAN Compatible
	IEEE 802.3x Flow Control Not Supported
Ports:	[1] SFP /LC: 1000BASE-SX, LX, ZX
	[1] 100BASE-TX (RJ-45)
Buffer Size:	512 K bytes
Max Distances:	Fiber: 0.5 - 2 Km (m/m), Up to 110 km (s/m)
	RJ-45 : 100 meters
Safety:	EN 60950, US 21 CFR (J) & EN 60825-1

Power:	Input:	100/240 VAC Max.
	Output:	12.0 VDC @ 0.8 Amps Nominal
Temperature:	Operating:	0º C to 50º C
	Storage:	-10º C to 66º C
Humidity:	Operating:	10% to 80% RH
	Storage:	5% to 95% RH
Emissions:	FCC Part 15 Class A & UL, CE Approved	
Dimensions:	4.4 in. X 2.9 in. X 1.00 in. (D x W x H)	
	[1.10 x 7.40 x 2.54 cm] (D x W x H)	
Weight:	2.4 lb. (1.1 Kg) (shipping weight)	

Fiber SFP Slot   LEDs   Ethernet RJ-45 Port

Front

1000   ALM   1000   LNK/ACT

LNK/ACT

TX   RX   10/100/1000

Rear

DIP SW
1 LFS
2 NA
3 NA
4 NA

ON DIP   PWR

1 2 3 4

12Vdc 800mA

DIP Switches   Power LED   Power Jack

Notes on CWDM Use:

ITU G-652.C/D compliant single-mode Fiber or better is required for applications using all eighteen CWDM wavelengths.

When ordering Canary CWDM transceivers, they will include two characters that exactly specify its working wavelength, where XX = the middle characters of the wavelength e.g. XX = 47 ~ 1470ηm and XX= 55 ~ 1550ηm.

Wavelengths range from 1290ηm thru 1610ηm in 20 ηm steps.

CLE-10SF6 (without SFP connectors)

CANARY
COMMUNICATIONS