

Canary CCM-1600 16-Slot Converter Chassis

Supporting:

- **10-Megabit, 100-Megabit & Gigabit Ethernet Links plus Fibre Channel** ▪
- **Sixteen Hot-Swappable Card-Slots ▪ Optional Redundant Power Supply** ▪
- **"We Deliver Increased Confidence and Peace of Mind to the Customer!"** ▪

Canary's CCM-1600 Media Converter Chassis provides an economical solution for utilizing Fiber Optic channels, to easily link remote network devices and I/P surveillance equipment to switches, servers and dedicated storage appliances.

The CCM-1600 is a low-profile, rack-able Chassis with sixteen, modular card slots and bays for Primary & Redundant, hot-swappable auto-sensing AC Power Supply modules that insure Chassis 24/7 availability. Individual converter cards support 10-Megabit, Fast Ethernet and Gigabit Ethernet links, plus 1.0625 *Gigabaud* Fibre-Channel connections.

CCM-1600 modules, depending on data-rate, offer a mix of hot-swappable, BNC-to-UTP, BNC-to-Fiber, UTP-to-Fiber and Fiber-to-Fiber media conversion. Single-Fiber Bi-Directional optical transceivers are available for most Fast & Gigabit Ethernet applications.

Versions, with Coarse Wavelength Division Multiplexing (CWDM) transceiver wavelengths, are available that enable up to eight optical channels (Chassis Multiplexer installed) or up to sixteen optical channels (if connected to an external Multiplexer) to be transported in parallel over a single Fiber Optic link. The CCM-1600 is the standard for making basic, reliable, no frills network connections.

CCM-1600 Chassis loaded with UTP-to-Fiber & Fiber-to-Fiber cards



Illustrated: Eight RJ-45 to Fiber and Eight Fiber-to-Fiber Card Modules

▪ **Plug-and-Go Connections:**

Continue to run existing applications via legacy UTP and BNC devices. Then simply port the traffic to a standalone Converter that forwards the traffic as a Fiber optic stream to one of sixteen CCM-1600 Converter modules that off-loads the traffic in the desired Ethernet or Fibre Channel protocol.

Power-up the CCM-1600, make the network connections (UTP ports employ auto-crossover), enable Auto-negotiation as needed and you are good to go.

▪ **Flexible, Network-User to Central Host Configurations:**

Remote to Central: Forwards & physically helps consolidate information from distributed sources into a central point for management, evaluation and action. Links remote devices configured with low-cost copper ports, to Central Office equipment providing individual access to enterprise servers (and services), switches, routers and specialized video storage.

Central to Remote: Enables centralized Management oversight of remote users and connected devices. Exploits the long-range benefits of Fiber cable to physically reach distant locations.

▪ **Designed-in Immunity from hardware obsolescence:**

Future product additions will enable users of installed CCM-1600 chassis to upgrade their units and keep them current with new product features and interfaces as network bandwidth, protocol advances and ongoing security challenges continue to force users to adapt.

Control physical access to your Canary CCM-1600 and safely deliver critical data where needed – *Easy, Secure, Information Availability!*

Canary Communications

Main Features:

Standards (Depends on Module type):

- IEEE 802.3 : 10BASE-T, 10BASE-FL (FOIRL), 10BASE-2
- IEEE 802.3u : 100BASE-TX, 100BASE-FX
- IEEE 802.3z : 1000BASE-T, 1000BASE-X (SX, LX, ZX)
- IEEE 802.1d: Spanning Tree Protocol: Supported
- IEEE 802.1w: Rapid Spanning Tree: Supported
- IEEE 802.1q: VLAN Tagging: Supported
- IEEE 802.3x: Flow Control: Supported (Gigabit)

Interfaces (Depends on Module type):

- Copper Connectors: RJ-45: 10 Mb, 100 Mb, 1000 Mb)
- Fiber Connectors: SC, ST, LC & CWDM wavelengths
- Fiber Types: Multi-mode, Single-mode & Single-Fiber Bi-Directional

Networking – Transparent to:

- VLAN (802.1q) VLAN Tagging
- Jumbo Frames (9000+ Octets)
- IPv4 & IPv6 Traffic Classes
- Compatible with EIA/TIA 568A/B Standards

Power:

- Hot-Swappable 100 ~ 240 VAC, 50/60 Hz. Auto-Sensing Power input
- One Power Supply installed as standard
- Redundant Power Supply Option

Mechanical & Environmental:

- 16-Channel 19-inch Rack-mountable unit
- Operating temperature: 0°C~50°C



Ordering and Specifications:

Card & Fiber-Port Naming Conventions:

Last Digit 1 = SC, 2 = ST, 6 = LC, 7 = SF-BD [SC]
55 = Gigabit m/m, 850nm and 31 = Gig s/m, 1310nm
[SM, S, s/m] = Single-mode, [L, E] = Extended Range & Extended Reach Single-mode optics

CWDM Wavelengths: 18 single-mode wavelengths range from 1470 nm to 1610 nm in 20 nm steps e.g. @ 1470 nm transmission wavelength > CCM-12W-47 & CCM-10W-47 and @ 1610 nm > CCM-12W-61 ETC.

Media Converter CCM Modules:

10 Mb UTP- Fiber, BNC-Fiber & UTP-BNC:
CCM-1202 (UTP, m/m ST), CCM-1201 (BNC, m/m ST)
CCM-1203 (UTP-BNC),

100 Mb UTP- Fiber:
CCM-1241 (m/m SC), CCM-1242 (m/m ST), CCM-1246 (m/m LC), CCM-1247 A & B (m/m SC Bi-Directional)
CCM-1241-SM (s/m SC), CCM-1242-SM (s/m ST)
CCM-1246-SM (s/m LC), CCM-1247 SA & SB (s/m SC Single-Fiber Bi-Directional)

100 Mb Fiber- Fiber:
CCM-2121 (m/m - m/m SC), CCM-2222 (m/m - m/m ST)
CCM-9121 (m/m - s/m SC), CCM-9222 (m/m - s/m ST)
CCM-9191 (s/m - s/m SC), CCM-9292 (s/m - s/m ST)

1000 Mb UTP- Fiber:
CCM-1055 (m/m SC 850 nm), CCM-1056 (m/m LC)
CCM-1031 (s/m, SC 1310 nm), CCM-1036 (s/m, LC)
CCM-1037 A & B (s/m SC Single-Fiber Bi-Directional)

1000 Mb Fiber- Fiber:
CCM-5555 (m/m - m/m SC), CCM-5656 (m/m - m/m LC)
CCM-5531 (m/m - s/m SC), CCM-5636 (m/m - s/m LC)
CCM-3131 (s/m - s/m SC), CCM-3636 (s/m - s/m LC)

Fibre-Channel 1.0625 Gbd Fiber- Fiber:
CCM-155-55 (m/m SC), CCM-156-56 (m/m LC)
CCM-131-31 (s/m-s/m SC), CCM-136-36 (s/m-s/m LC)
CCM-155-31 (m/m-s/m SC), CCM-156-36 (m/m-s/m LC)

Temperature:

Operating: 0° C to 50° C
Storage: -20° C to 70° C

Humidity:

Operating: 10% to 80% RH
Storage: 5% to 90% RH

Emissions:

FCC Part 15 of Class A & CE Approved

Safety:

EN 60950, UL, CE, CSA, TUV
RoHS Compliant

Class 1 Lasers Conform to US 21-CFR(J),
EN 60825-1, UL 1950 and IEC-825

Dimensions:

Height: 2.8" [7.1 cm]
Length: 11.2" [28.0 cm]
Width: 17.4" [43.5 cm]

Ship Weights:

Chassis: 8.0 lb. [3.6 Kg] (Empty)
Single Card: 1.0 lb. [0.4 Kg]

CCM-1600 Chassis:

CCM-1600 = 16-Slot Chassis with one AC Power Supply installed

CCM-12RPS = Redundant Power supply [Optional]

CCM-1600 plus CM-8MD6-E



CWDM Chan. Multiplexers

CM-4MD6-A: λs 1470,1510,1550,1590 nm
CM-4MD6-B: λs 1490,1530,1570,1610 nm
CM-8MD6-E: λs Combined A & B [eight λs]

For more information, please visit us at:
www.canarycom.com
info@canarycom.com

The Canary Communications QMS
is Certified to ISO 9001:2015

11-24-21 JM

