

Canary CCM-1600D Uni-Directional Diode Chassis

Featuring:

- **Mixed UTP-to-Fiber, One-Way Data Channels for Fast & Gigabit Ethernet** ▪
- **Eight EMC Resistant Channels** ▪ **Optional Redundant Power Supply** ▪
- **"We Deliver Increased Confidence and Peace of Mind to the Customer!"** ▪

CCM-1600D Chassis plus Mixed-Media Uni-Directional Modules

The Canary **CCM-1600D** presents a low-profile Rack-able Chassis with Eight, isolated/shielded modular Channel Card slots and two bays for auto-sensing AC Power Supply assemblies. Individual Card modules provide either Uni-Directional Fast Ethernet or Gigabit Ethernet Channel connections.

CCM-1600D is configured with up to Eight Uni-Directional Channel Cards that provide economical solutions for linking multiple Secure Servers to lower-security network nodes via hardware *enforced* one-way Single-Fiber links. The CCM-1600D does not utilize vulnerable software that can be compromised.

CCM-1600D UTP/Fiber Channel Cards utilize one-way Transmit-only and one-way Receive-only circuitry using Multi-mode & Single-mode Fiber [Transmitters and separate Receivers]. Similar module versions employing eighteen Coarse Wavelength Division Multiplexing (CWDM) wavelengths are available that allow up to eight one-way Channels to be transported in parallel over a single Fiber Optic cable via an eight-channel CWDM Multiplexer.

CCM-1600D future product additions are expected to enable users of installed chassis to upgrade their units to keep them current with new product features and interfaces as network bandwidth, protocol advances and evolving security challenges conspire to force continuing change and adaptation by users.



Eight Installed RJ-45-to-Fiber Uni-Directional [One-Way] Converter Cards

▪ **Plug-and-Go Connections:**

Configure your applications to run via UDP. Connect (8) *un-secure* devices to a CCM-1600D with *Uni-directional Transmit-only* Channel Cards that *forward* traffic to a separate, CCM-1600D with *Uni-directional Receive-only* Cards. The Receive-only Modules *copy* the traffic to eight Secure Server Destinations.

Reverse the above configuration for *Authorized* traffic transmission *from* Secure Server locations to *un-secure* Destinations.

▪ **Flexible, Secure Network/Host Configurations:**

Low to High: Forward information to a Higher Security environment while blocking the un-authorized release of sensitive Data in the reverse direction;

High to Low: Restrict Authorized user access. Maintain System and Data Security, Integrity and Availability while allowing the controlled export of selective information to lower security-level Destinations.

▪ **Hardwired Immunity from External Software threats:**

Canary *Uni-directional* Channel modules are hardware-centric devices. With tamper-resistant circuit design, there is no vulnerable, software, memory or buffers that can be exploited to attack and surreptitiously alter or disable secure one-way operation.

Using UDP or similar protocol over a point-to-point link eliminates the need for the usual transmission acknowledgments.

Control physical access to your Canary CCM-1600D 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 (possible)
- IEEE 802.3u : 100BASE-TX/100BASE-FX
- IEEE 802.3z : 1000BASE-T/1000BASE-X
- IEEE 802.1q: VLAN Tagging (Limited Applications)
- IEEE 802.1d: Spanning Tree Protocol (Not Supported)
- IEEE 802.1w : Rapid Spanning Tree (Not Supported)
- IEEE 802.3x: Flow Control (Not Supported)

Filter Interfaces (Depends on Module type):

- Copper Connectors: RJ-45: 100 Mb, 1000 Mb
- Fiber Connectors: SC, ST Simplex (Single-Fiber)
- Fiber Types: Multi-mode, Single-mode, CWDM

Networking – Transparent to:

- VLAN (802.1q) VLAN Tagging (static, one-way)
- 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:

- 4 or 8-Channel 19-inch Rack-mountable unit
- Operating temperature: 0°C~50°C



Ordering and Specifications:

Fiber Port Name Conventions:

Last Digit 1 = SC, 2 = ST; 55 = Gigabit m/m, 850nm
31 = Gig s/m 1310nm [L, E] = Extended Range
[SM, S, s/m] = Single-mode

Uni-Directional CCM Modules:

CCM-1241D: 100 Mb Tx only UTP- Fiber, m/m, SC
CCM-1242D: 100 Mb Tx only UTP - Fiber, m/m, ST
CCM-1241DR: 100 Mb Rx only Fiber -UTP, m/m, SC
CCM-1242DR: 100 Mb Rx only Fiber -UTP, m/m, ST
CCM-1241DS: 100 Mb Tx only UTP- Fiber, s/m, SC
CCM-1241RS: 100 Mb Rx only Fiber -UTP, s/m, SC
CCM-1055D: 1000BASE-SX, Tx only UTP-Fiber, SC
CCM-1055DR: 1000BASE-SX, Rx only Fiber-UTP SC
CCM-1031D: 1000BASE-LX, Tx only UTP-Fiber, SC
CCM-1031DR: 1000BASE-LX, Rx only Fiber-UTP SC
WD -XX & WR-XX = 1270 nm to 1610 nm CWDM
Wavelengths in 20 nm wavelength steps e.g.:
CCM-12WD-47 = 100 Mb 1470 nm Transmit-only and;
CCM-12WR-47 = 100 Mb 1470 nm Receive-only
CM-10WD-XX: 1000BAS-LX, UTP-Fiber, CWDM, SC

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:

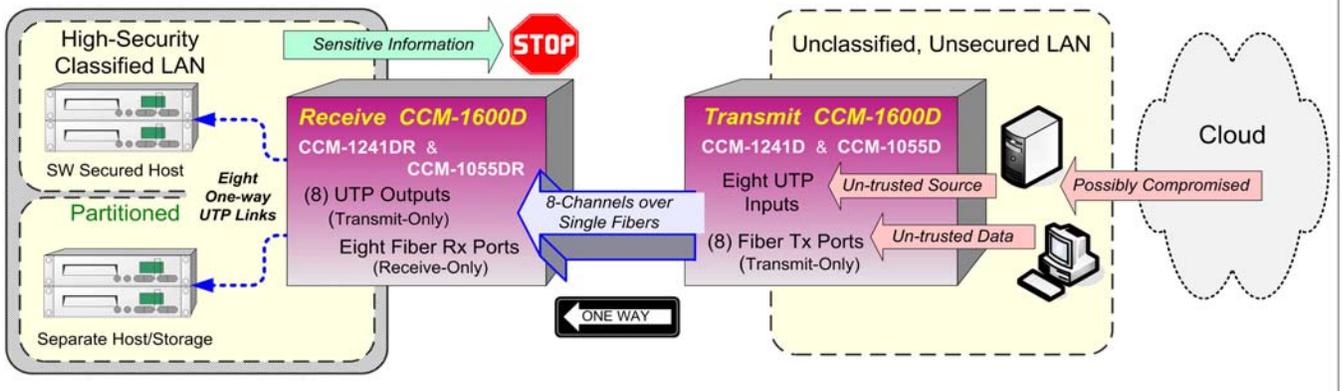
Chassis: 8.0 lb. [3.6 Kg] (Empty)
Single Card: 1.0 lb. [0.4 Kg]

CCM-1600D Chassis:

CCM-1600D = Shielded 8-Slot Chassis with one AC Power Supply installed

Redundant PWR Module:

CCM-12RPS = Redundant Power [Optional Purchase]



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For more information, please visit us at:
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The Canary Communications QMS
is Certified to ISO 9001:2015

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