New! Canary Uni-Directional Data Security Diodes

Provide:

▪ **One-Way, Two-Channel Data Transmission** ▪ **Reverse Transmissions Blocked** ▪

▪ **Single-Fiber Multiplexed Diode Links** ▪ **Choice of Fiber and 9 – 48VDC Power** ▪

▪ ***"We Deliver Increased Confidence and Peace of Mind to the Customer!"*** ▪

Canary Uni-Directional Data Security Diodes defend against a broad range of external or internal/insider cyber threats that can escape common security applications to reveal or corrupt sensitive data and make mission-critical information services non-available**.**

Protect secure servers and sensitive data from compromise. Place Data Security Diodes where un-restricted two-way, bi-directional communications increases the risk of malicious attack, penetration and Critical Data loss.

Application 1: Twin Input/output Data Security Diodes, forward data originating from two *un-secured* open sources, to a pair of restricted, High-Security destinations via two ***Multiplexed*** Fiber-optic channels *Combined* onto a *Single* Fiber cable. They simultaneously partition each data path to completely block sensitive data transmission in the reverse direction.

Application 2: Position a set of Data Security Diodes to *selectively forward* authorized data originating from trusted High-Security sources to a pair of weakly protected, *insecure* destinations linked by a Single Fiber cable.

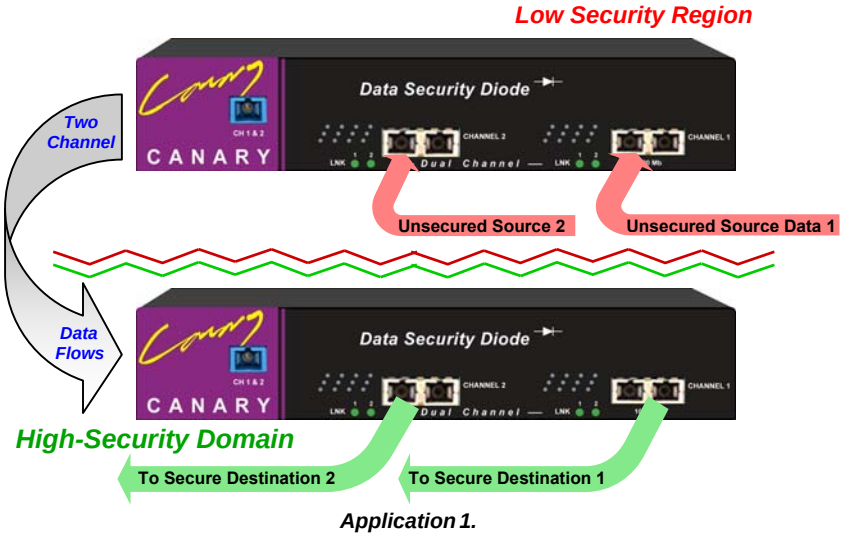
Security Diodes partition their data paths to *shield* secure sources from Trojans, malicious programs & other intrusion attempts and prevent the corruption, unintended release & exposure of critical data or its loss and non-availability.

Local Diode/Host Fiber connections are nominally full duplex. However, bi-directional traffic is never transmitted between linked Data Diodes. Data handling functions including IP acknowledgement, and error correction are completely disabled.

Optional: **9-48 VDC** [**-V**] Variable Input-Power & **Conformal Z-Coating** [**-Z**] for reduced Tin-Whisker effects and Environmental Hardening.

Another defensive layer for your critical data, Canary Data Security Diodes "*Deliver increased confidence and peace of mind!"*

CF-21TDM/ CF-21TRM & GF-31TDM/ GF-31TRM
Multiplexed Twin-Channel Fiber Data Diodes



Application 1.

▪ *Plug-and-Go UTP & Fiber Connections:*

Configure your applications to run via UDP. Connect (2) *un-secure* devices to *CF-21TDM* or *GF-31TDM* transmit-only *Data Security Diodes* that *forward* the traffic to remote, receive-only *CF-21TRM* or *GF-31TRM* Diodes using a ***single*** Fiber cable. The receive-only Diodes *copy* the traffic to a pair of secure Destination Hosts for safe, *parallel,* one-way data transmissions. (***Application 1***). Reverse configuration for ***Application 2***.

▪ *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 limited export of selective information to lower security-level destinations.

▪ *Hardwired Immunity from External Software threats:*

Canary *Data Security Diodes* execute their key functions in hardware. With tamper-resistant cases, there is no vulnerable, software, firmware, memory or buffers that can be exploited to attack and surreptitiously alter or disable Uni-directional operation.

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

Control physical access to your Canary Data Security Diodes and safely deliver critical data where needed – *Easy, Secure, Information Availability!*

Canary Communications

Main Features:

Interfaces – Inter-Diode Links & Local Connections:

- CF-21TDM: ***Tx-Only*** (One) Multiplexed, m/m (SC) 100Mb F/O **Tx** port & (Two) *Local* Source-Host, ***Rx*** Multi-mode (SC) Fiber ports *
- CF-21TRM: ***Rx-Only*** (1) Multiplexed F/O SC port & (2) *Local* SC ***Tx*** ports
- CF-91TDM & CF-91TRM: Same as above with (SC) Single-mode Fiber

* [21 ~ m/m SC-type Fiber connector, 22 ~ ST; 91 ~ SC s/m, 92 ~ ST type s/m]

- GF-55TDM: ***Tx-Only*** (One) Multiplexed m/m (SC/SX) 1000Mb **Tx** port & (Two) *Local* Source-Host ***Rx*** Multi-mode SC/SX Fiber ports +
- GF-55TRM: ***Rx-Only*** (1) Multiplex SC/SX port, (2) *Local* SC/SX ***Tx*** ports
- GF-31TDM & GF-31TRM: Same as above with SC/LX single-mode Fiber

\+ [X = 55 ~ Multi-mode SX/SC-type Fiber and X = 31 ~ Single-mode LX/SC]

- CF-21TDM-V / 21TRM-V [VZ] & GF-55TDM-V / 55TRM-V [VZ] Same as above models
- [**Z & VZ** ~ include **Conformal Z-Coating** for Environmental Hardening and Tin-Whisker resistance]

Networking – Local User Connections:

- 100BASE-FX & 1000BASE-SX/LX: Handshaking with Auto-configuration to enable Full duplex Ethernet Diode Links with *local* Source and separately, *remote* Destination equipment.

* 100 & 1000 Mbps Ethernet *Inter-Diode Links* do not forward full duplex bi-directional traffic. UDP Destination Address, Port Number & Checksum can be enabled by application *

Management:

- No management reporting or access to internal functions
- No provision for error handling/reporting

Mechanical & Environmental:

- Inside, Desktop locations or 19" rack-enclosures
- A pair of units can be mounted side-by-side on a standard 19"-wide shelf (available from Canary)

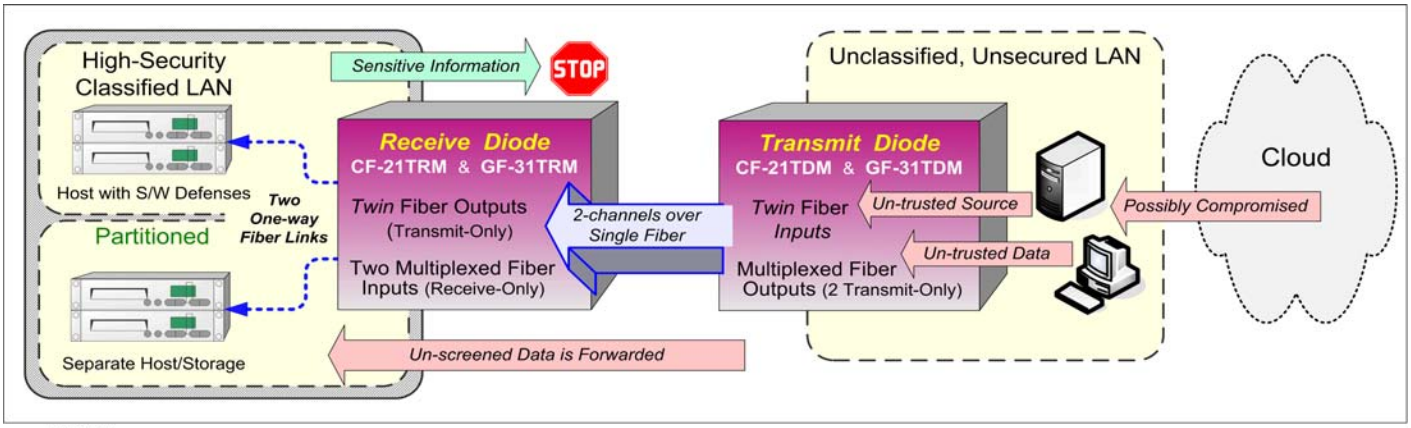
Please contact Canary for technical details on additional models.

FCC Class A · CE Approval · Laser Radiation · TÜV SÜD

Specifications:

Standards:	IEEE 802.3u	100BASE-FX
	IEEE 802.3z	1000BASE-X
	IEEE 802.1d	Spanning Tree: None
	IEEE 802.1q	VLAN: Limited Functionality
	IEEE 802.3x	Flow Control Not Supported
	RFC 2549	IETF IPoAC & QoS 4-01-99
Throughput:	CF-21TDM:	100 Mbps (One-way transmission)
	CF-21TRM:	Same
	GF-55TDM:	1000 Mbps (One-way transmission)
	GF-55TRM:	Same
Maximum Distances:	Fiber Optics:	100 Mb: 1 Km, 10, 20, 30, 40 Km 1000 Mb: 500 m, 5, 10, 20, 60 Km
Weight:	5.5 lb. (2.5 Kg)	(shipping wt.)

Power:	Typical 100 ~ 240 VAC Auto-ranging wall-mount **Optional:** 9 - 48 VDC input + Terminal Block [-**V**] [-**VZ**] versions use external DC Voltage Sources
9 - 48 VDC:	**CF-21TDM-V [VZ]** & **GF-31TDM-V [VZ]**
Temperature:	Operating: 0º C to 50º C Storage: -20º C to 70º C
Humidity:	Operating: 10% to 80% RH Storage: 5% to 90% RH
Emissions:	CE Mark EN60950 & EN55022 and FCC Part 15 of Class A
Safety:	US 21 CFR (J) & EN 60825-1 standards and UL 1950 applications, EN 60950, CE, TUV
Dimensions:	5.21 in. x 8.43 in. x 1.64 in. (D x W x H) [12.7 cm x 20.3 cm x 4.4 cm] (D x W x H)



JM 04.20.20

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

TÜV NORD TUV USA Inc. ISO 9001:2015

CANARY COMMUNICATIONS

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