Updated! Canary Uni-Directional Data Security Diodes

Provide:

▪ One-Way, Two-Channel Data Transmission ▪ Return Transmissions Blocked ▪

▪ Multi-mode or Single-mode Host Connections ▪ Optional 9 – 48 VDC 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 in environments where un-restricted two-way, bi-directional communications increase the risk of penetration, malicious attack and data loss.

Application 1: Data Security Diodes with *Dual* input/output channels, forward information originating from two *un-secured* open sources, to a pair of restricted, High-Security Host destinations using two Fiber-optic links. 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 two trusted High-Security sources, over a partitioned Fiber link, to a pair of unprotected *insecure* destinations.

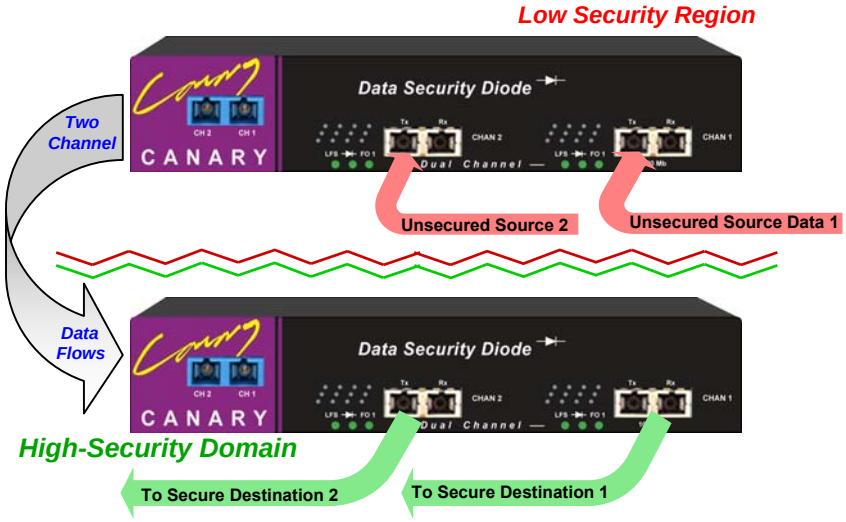
Security Diodes partition their data paths to *shield* secure sources from hidden Trojans, Malware and other intrusion attempts, and prevent the corruption, release or unintended exposure of sensitive information.

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, Flow-Control 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-21TD/ CF-21TR & GF-55TD/ GF-55TR –
Dual-Channel Data Diodes



Application 1.

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

Configure your applications to run via UDP. Connect (2) *un-secure* devices to *CF-21TD* or *GF-55TD* transmit-only *Data Security Diodes* that forward the traffic to remote, receive-only *CF-21TR* or *GF-55TR* Diodes. The receive-only Diodes copy the traffic to a pair of secure Destination Hosts. (***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-21TD: ***Tx-Only*** (Two) One-way Multi-mode (SC) 100Mb F/O ports & (Two) *Local* Source-Host ***Rx*** Multi-mode (SC) Fiber ports *
- CF-21TR: ***Rx-Only*** (2) (SC) Fiber ***Rx*** ports & (2) *Local* F/O SC ***Tx*** ports
- CF-91TD & CF-91TR: Same as above with (SC) Single-mode Fiber ports

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

- GF-55TD: ***Tx-Only*** (Two) One-way Multi-mode (SC/SX) 1000Mbps ports (Two) *Local* Source-Host ***Rx*** Multi-mode SC/SX Fiber ports +
- GF-55TR: ***Rx-Only*** (2) SC/SX Fiber ***Rx*** ports & (2) *Local* SC/SX ***Tx*** ports
- GF-31TD & GF-31TR: Same as above with SC/LX (s/m) Fiber ports

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

- CF-21TD-V & 21TR-V [VZ] & GF-55TD-V & 55TR-V [VZ] Same as above
- [**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 <u>not</u> 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
- Two units can be mounted side-by-side on a standard 19"-wide shelf (available from Canary)

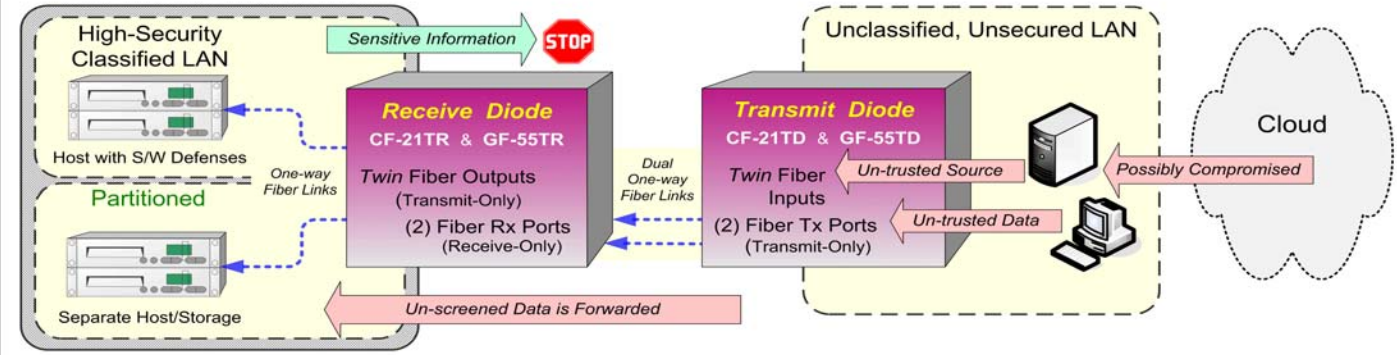
Please contact Canary for technical details on additional models.

FCC Class A CE Approval

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-21TD:	100 Mbps (One-way transmission)
	CF-21TR:	Same
	GF-55TD:	1000 Mbps (One-way transmission)
	GF-55TR:	Same
Maximum Distances:	Fiber Optics:	100 Mb: 2 Km, 20, 40, 60, 80 Km 1000 Mb: 500 m, 10, 20, 30, 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-21TD-V [VZ]** & **GF-55TD-V /TR-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)



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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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