

New! Canary Uni-Directional Data Security Diodes

Provide:

- **One-Way Source-Host IP Traffic Forwarding** ▪ **Reverse Transmissions Blocked** ▪
- **Two Input/Output Bi-Directional Host/Proxy IP Ports** ▪ **9 – 48 VDC Option** ▪
- **"We Deliver Increased Confidence and Peace of Mind to the Customer!"** ▪

Uni-Directional Data Security Diodes provide an additional defense against a broad range of internal/insider or external cyber threats that may escape common security applications and reveal, corrupt, or make mission-critical and essential data services non-available.

Place Canary Uni-Directional Data Security Diodes in environments where un-restricted two-way, bi-directional communications expose secure servers and their sensitive data to malicious attack or inadvertent corruption.

Application 1: Data Diode input/output ports provide a channel for Source-Host and Proxy device communication using TCP/IP. The un-secured source-side traffic is copied/forwarded to restricted, High-Security domains using Fiber-cable links to a second Data Diode. Uni-directional partitioning blocks transmission of sensitive data to the un-secure Source-Host.

Application 2: Position a Data Diode between a Secure Host and a local Proxy as they communicate. Each side of the TCP/IP conversation is separately copied and forwarded to the second Diode connected to a *low-security* host – as reverse traffic directed to the secure Domain and Source Host is blocked.

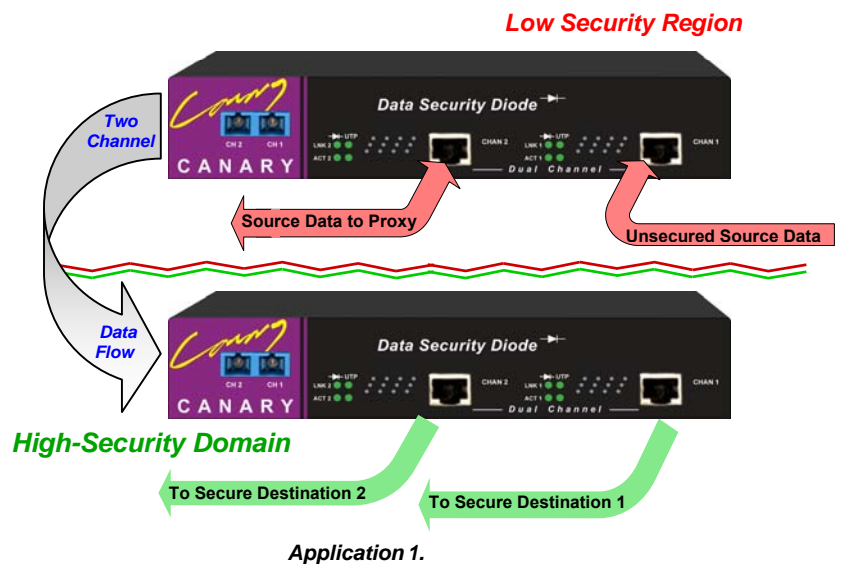
Security Diodes partition their data paths to *shield* secure source(s) from hidden malicious programs preventing the unintended corruption, release or exposure of sensitive information.

Local Diode/Host connections are nominally full-duplex. However, bi-directional traffic is not transmitted between linked Diodes. Data handling functions including Flow-Control, 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!"

CT-21TPD/ CT-21TR & GT-55TPD/ GT-55TR – Proxy-Channel Data Diodes



▪ Plug-and-Go UTP & Fiber Connections:

Connect a pair of *un-secure* Source & Proxy devices to a CT-21TPD or GT-55TPD transmit-only Data Security Diode that separately copies each side of a TCP/IP conversation to a remote CT-21TR or GT-55TR Receive-only Diode. The Receive-only Diode forwards each TCP copy half to a Secure Destination host. (**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. There is no vulnerable, software, firmware, memory or buffers that can be exploited to attack and surreptitiously alter or disable the Diode function.

Other Diode versions use UDP or similar protocol over a point-to-point link to eliminate 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:

- CT-21TPD: **Tx-Only** (Two) One-way Multi-mode (SC) 100Mb F/O ports & (Two) *Local* Source-Host – **Tx/Rx** Proxy RJ-45/UTP ports
- CT-21TR: **Rx-only** (Two) m/m SC Fiber plus (2) *Local* RJ-45 **Tx** ports *
- CT-91TPD & CT-91TR: Same as above with Single-mode SC Fiber ports
- * [21 ~ SC m/m Fiber Connector, 22 ~ ST-type; 91 ~ SC s/m FC, 92 ~ ST-type]
- GT-55TPD: **Tx-Only** (Two) One-way SC/SX (m/m) 1000Mb Fiber ports & (Two) *Local* Source-Host – **Tx/Rx** Proxy RJ-45/UTP ports *
- GT-55TR: **Rx-only** (Two) m/m SC/SX Fiber + (2) *Local* RJ-45 **Tx** ports *
- GT-31TPD & GT-31TR: Same as above but Single-mode SC/LX Fiber port
- + [55 ~ multi-mode, SC/SX-type Fiber connector, 31 ~ single-mode, SC/LX-type]
- CT-21TPD-V / 21TR-V [VZ] & GT-55TPD-V / 55TR-V [VZ] Same as above
- [Z & VZ ~ include **Conformal Z-Coating** for environmental hardening and Tin-Whisker resistance]

Please contact Canary for technical details on additional models



Networking:

- 100BASE-TX/FX & 1000BASE-T/X: Auto-negotiation and Auto-crossover enable full duplex Ethernet Links with *local*, Source & Proxy and separately with *remote* Destination equipment. Only *local* Source & Proxy devices exchange TCP/IP traffic acknowledgements.
- * 100 & 1000 Mbps Ethernet *Inter-Diode Links* do not allow full duplex bi-directional traffic between TPD and TR Diodes.

Management:

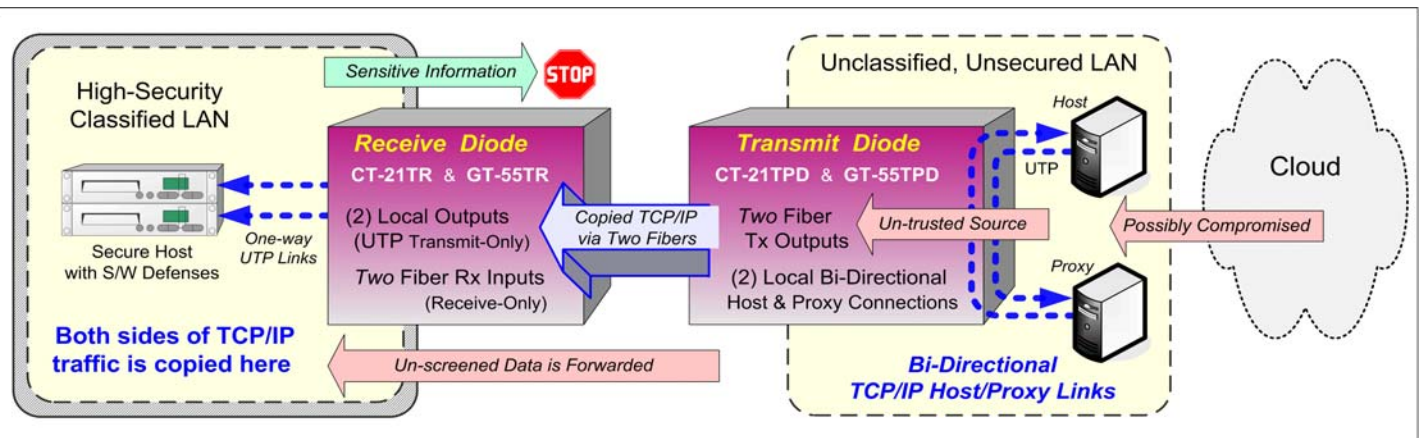
- No management reporting or access to internal functions
- No provision for error handling/reporting between Diodes

Mechanical & Environmental:

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

Specifications:

Standards:	IEEE 802.3u IEEE 802.3ab,z IEEE 802.1d IEEE 802.1q IEEE 802.3x RFC 2549	100BASE-TX, 100BASE-FX 1000BASE-T, 1000BASE-X, SX, LX Spanning Tree: Not functional VLAN: Limited Functionality Flow Control Not Supported IETF IPoAC & QoS 4-01-99	Power:	Typical: 100 ~ 240 VAC Auto-ranging wall-mount Optional: 9 - 48 VDC input + Terminal Block (-V) (-VZ) versions use external DC Voltage Sources
Throughput:	CT-21TPD: CT-21TR: GT-55TPD: GT-55TR:	100 Mbps (One-way transmission) Same 1000 Mbps (One-way transmission) Same	9 - 48 VDC:	CT-21TPD-V [VZ] and GT-55TPD-V [VZ]
Maximum Distances:	RJ-45/UTP: Fiber Optic:	100 meters 100 Mb: 2 Km; 20, 40, 60, 100 Km 1000 Mb: 500 m, 10, 20, 30, 60 Km	Temperature:	Operating: 0° C to 50° C Storage: -20° C to 70° C
Weight:	5.5 lb. (2.5 Kg)	(shipping wt.)	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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