

New! Canary Uni-Directional Data Security Diodes

Provide:

- **One-Way, Two-Channel Data Transmission** ▪ **Reverse Transmissions Blocked** ▪
- **Multiplexed Single-Fiber Diode Links** ▪ **Auto-Negotiation** ▪ **9 – 48VDC Option** ▪
- **"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 optically **Multiplexed** 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 pairs of weakly protected or *insecure* destinations linked by a Single Fiber cable.

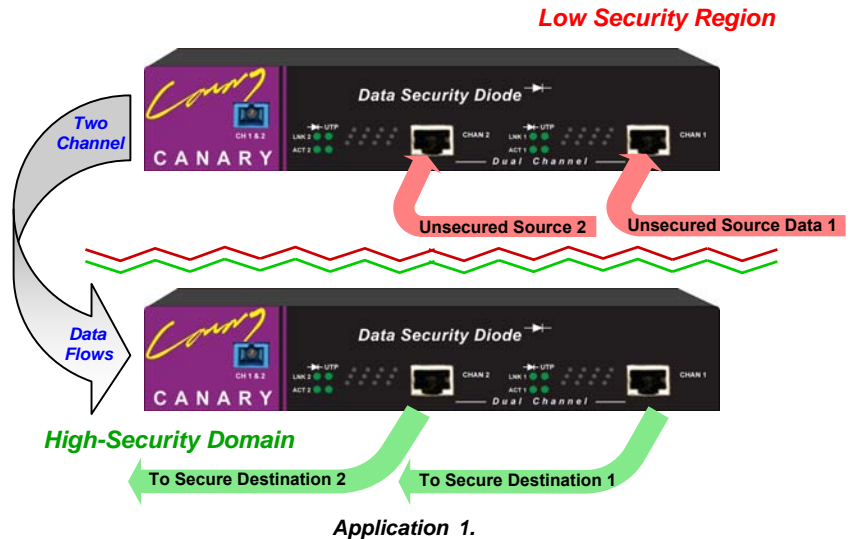
Security Diodes partition their data paths to *shield* secure sources from Trojans, malicious programs & other intrusion attempts and prevent the corruption, unintended release & exposure of critical data or its loss and non-availability.

Local Diode/Host connections employ *Auto-cross* & *Auto-negotiation* on RJ-45/ UTP links, and are nominally Full-Duplex. However, bi-directional traffic is never transmitted between linked Data 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-21TDM/ CT-21TRM & GT-31TDM/ GT-31/TRM Multiplexed, Twin-Channel Data Security Diodes



▪ Plug-and-Go Connections:

Configure your applications to run via UDP. Connect a *CT-21TDM* or *GT-55TDM* transmit-only *Data Security Diode* to a **pair of un-secure** devices; then link the transmit *Diode* to a *CT-21TRM* or *GT-55TRM* Receive-only *Security Diode* using a **single** Fiber cable. Next, connect the receive-only *Security Diode* to 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:

- CT-21TDM: **Tx-Only** (One) m/m (SC) Fiber, **Rx** (2) RJ-45 (100Mbps) *
 - CT-21TRM: **Rx-Only** (One) m/m (SC) Fiber, **Tx** (2) RJ-45 (100Mbps)
 - CT-91TDM & CT-91TRM ~ Single-mode SC versions of above models
 - * [21 ~ m/m SC-type Fiber connector, 22 ~ ST; 91 ~ SC s/m, 92 ~ ST type]
 - GT-55TDM: **Tx-Only** (One) m/m (SX-SC), **Rx** (2) RJ-45 (1000Mb) +
 - GT-55TRM: **Rx-Only** (One) m/m (SX-SC), **Tx** (2) RJ-45 (1000Mb)
 - GT-31TDM & GT-31TRM: ~ Single-mode LX versions of above models
 - + [55 ~ multi-mode SX, SC-type Fiber connector and 31 ~ s/m LX, SC-type]
- [Multiplexed Fiber Connectors are Limited Availability, Long Lead-time Optical components]
- CT-21TDM-V / 21TRM-V [VZ] & GT-55TDM-V / 55TRM-V [VZ] Same functions as above models
 - [Z & VZ ~ include **Conformal Z-Coating** for Environmental Hardening and Tin-Whisker resistance]

Networking:

- 100BASE-TX & 1000BASE-T: Auto-negotiation and Auto-crossover to establish Links with source & destination equipment. Links are typically configured as Full-duplex, however Full-duplex traffic is not forwarded bi-directionally.
- * 100 & 1000 Mbps Fiber *Inter-Diode Links* do not forward Full-duplex bi-directional traffic. UDP Destination Address, Port Number & Checksum are enabled by application as desired

Management:

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

Mechanical & Environmental:

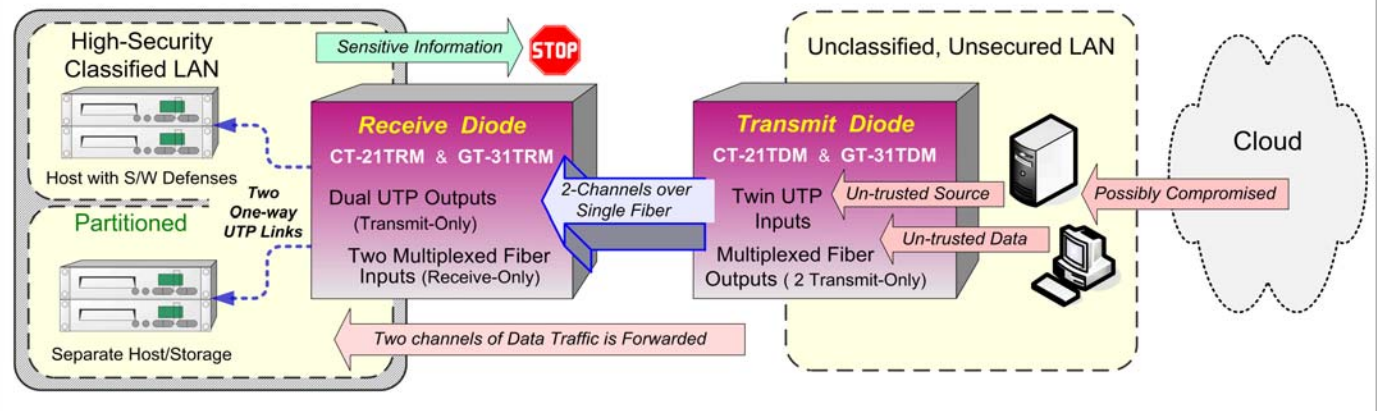
- Inside, Desktop locations or 19" rack-enclosures
- A pair of units can be mounted side-by-side on a standard 19"-wide shelf (available from Canary)

Please contact Canary for technical details on additional models.



Specifications:

Standards:	IEEE 802.3u IEEE 802.3ab,z IEEE 802.1d	100BASE-TX, 100BASE-FX 1000BASE-T, 1000BASE-SX/LX Spanning Tree: None	Power:	Typical: 100 ~ 240 VAC Auto-ranging wall-mount Optional: 9 - 48 VDC input + Terminal Block (-V) (-VZ) versions use external DC Voltage Sources:
	IEEE 802.1q IEEE 802.3x RFC 2549	VLAN: Limited Functionality Flow Control Not Supported IETF IPoAC & QoS 4-01-99	9 - 48 VDC:	CT-21TDM-V [VZ] & GT-55TDM-V [VZ] Operating: 0° C to 50° C Storage: -20° C to 70° C
Throughput:	CT-21TDM: GT-55TDM:	100 Mbps (One-way transmission) 1000 Mbps (One-way transmission)	Temperature:	Operating: 10% to 80% RH Storage: 5% to 90% RH
Maximum – Distances:	RJ-45/UTP: Fiber Optic:	100 meters 100 Mb: 1 Km; 10, 20, 30 Km 1000 Mb: 500 m, 10, 20, 30, 40 Km	Humidity:	Emissions: FCC Part 15 of Class B & CE Mark EN55022 Class 1, US 21 CFR (J) & EN 60825-1 standards; EN 60950 & UL 1950 applications
Weight:	5.5 lb. (2.5 Kg)	(Shipping Wt.)	Safety:	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)
			Dimensions:	



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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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