

Updated! Canary Uni-Directional Data Security Diodes

Provide:

- **One-Way, Two-Channel Data Transmission** ▪ **Unauthorized Transmissions Blocked** ▪
- **Auto-Negotiation & Auto-Cross Host Connections** ▪ **Optional 9 – 48 VDC Power** ▪
- **"We Deliver Increased Confidence and Peace of Mind to the Customer!"** ▪

Uni-Directional Data Security Diodes are one more defense layer against a broad range of internal/insider or external cyber threats that can escape common security applications – to reveal and corrupt sensitive data or make other mission-critical information 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 penetration and malicious attack.

Application 1: Twin Input/output Data Security Diodes, forward information originating from two un-secured open sources; to a pair of restricted, High-Security destinations via two Fiber-optic channels. They simultaneously partition each data path to completely block sensitive data from being transmitted 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, insecure destinations.

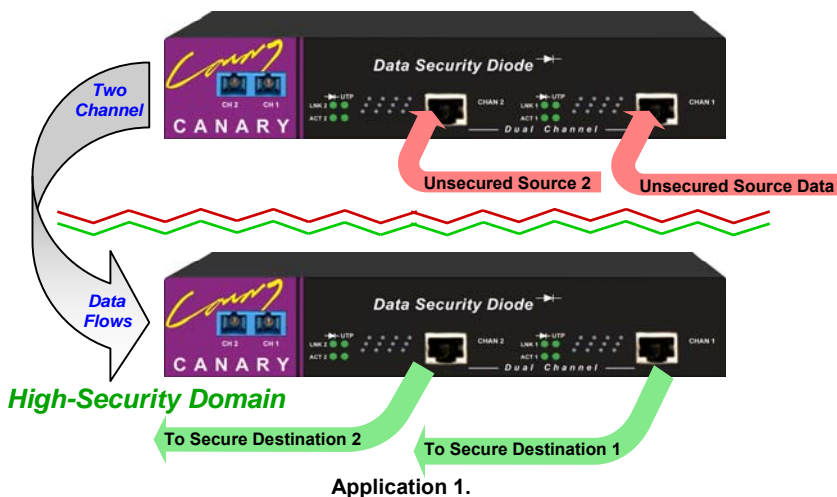
Security Diodes partition their data paths to shield secure sources from Trojans, malicious programs or other intrusion attempts and prevent the corruption, unintended release of critical data, or its loss and non-availability.

RJ-45 ports employ Auto-cross and Auto-negotiation on UTP twisted pair links and are nominally full-duplex. Diode/Host interfaces, never physically transmit bi-directional, traffic. Data handling functions including Flow-Control IP acknowledgements, 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-21TD/ CT-21TR & GT-55TD/ GT-55TR – Dual/ Twin Channel Data Diodes Low Security Environment



▪ Plug-and-Go Connections:

Configure your applications to run via UDP. Connect a CT-21TD or GT-55TD transmit-only Data Security Diode to a pair of un-secure devices; then link the transmit Diode to a CT-21TR or GT-55TR Receive-only Security Diode using a pair of Fiber cables. 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-21TD: **Tx-Only** (Two) One-way Multi-mode (SC) 100Mb F/O ports *
(Two) *Local Source-Host Rx* RJ-45 (100Mb) ports
 - CT-21TR: **Rx-Only** (2) m/m Fiber (SC) & (2) *Local Tx* RJ-45 100Mb ports
 - CT-91TD & CT-91TR ~ Single-mode (SC) versions of above models *
 - * [21 ~ m/m SC-type Fiber connector, 22 ~ ST; 91 ~ SC s/m, 92 ~ ST type]
 - GT-55TD: **Tx-Only** (Two) One-way Multi-mode (SC/SX) 1000Mb ports *
(Two) *Local Source-Host Rx* RJ-45 (1000Mb) ports *
 - GT-55TR: **Rx-Only** (2) m/m (SX/SC) F/O & (2) *Local Tx* Gig RJ-45 ports
 - GT-31TD & GT-31TR: ~ Single-mode (SC/LX) versions of above models *
 - [55 ~ multi-mode SX / SC-type Fiber connector and 31 ~ s/m LX / SC-type]
 - CT-21TD-V / 21TR-V [VZ] & GT-55TD-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 & 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:

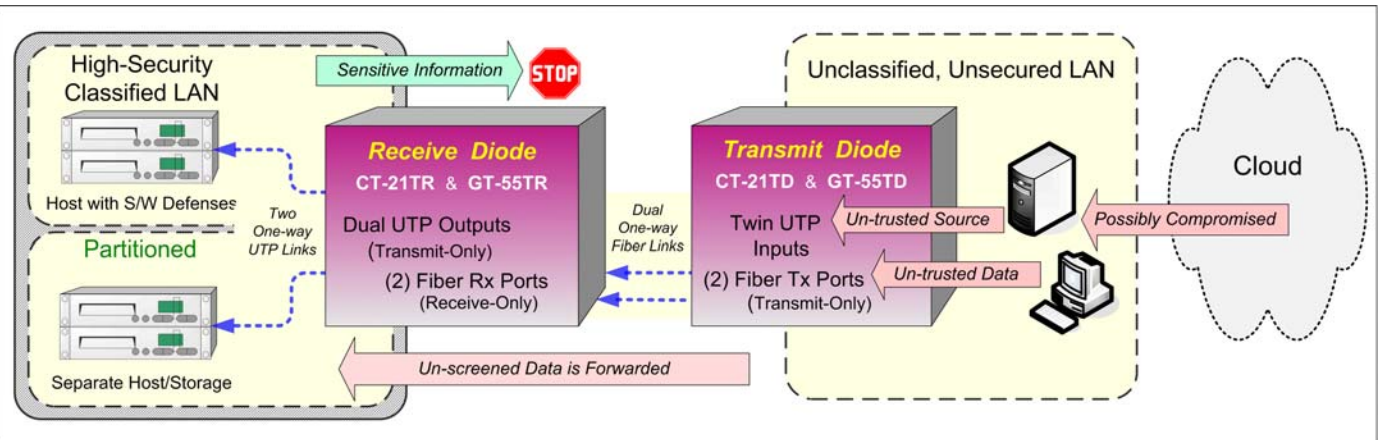
- Inside, Desktop locations or 19" rack-enclosures
- A pair of units can be mounted side-by-side on a standard 19"-wide shelf (available from Canary)



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-SX/LX Spanning Tree: None VLAN: Limited Functionality Flow Control Not Supported IETF IPoAC & QoS 4-01-99
Throughput:	CT-21TD: GT-55TD:	100 Mbps (One-way transmission) 1000 Mbps (One-way transmission) * (See Note – above/right) *
Maximum – Distances:	RJ-45/UTP: Fiber Optic:	100 meters 100 Mb : 2 Km; 20, 40, 60 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:	CT-21TD/TR-V [VZ] & GT-55TD/TR-V [VZ]
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 B & CE Mark EN55022
Safety:	Class 1, US 21 CFR (J) & EN 60825-1 standards; EN 60950 & UL 1950 applications
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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