New! Canary Uni-Directional Data Security Diodes

Featuring:

- One-Way, Air-Gapped Data Forwarding · Reversed Transmissions Blocked ·
- UTP Link Auto-Negotiation · 9 – 48 VDC Power + PCB Conformal Coating ·
- *"We Deliver Data Assurance and Increased Customer Confidence!"* ·

Canary Uni-Directional Data Security Diodes, with the **GT-10SD-VZ* NCDSMO – Listed**, help defend against a broad range of external, Cross-Domain and insider cyber threats that escape common security applications to reveal or corrupt sensitive information and make mission-critical Data Services non-available.

Protect secure servers and sensitive data from compromise. Data Security Diodes stand guard between domains where un-restricted, two-way communications increases risk of penetration, malicious attack and data loss.

Application 1: Canary Gigabit **GT-10SD-VZ*** and 100-Megabit **CT-20SD-VZ** Data Security Diodes forward information originating from an *un-secured* open source to restricted, High-Security destinations. Simultaneously, they *optically isolate* the data path to stop all return-path transmissions and completely block the reverse transmission of sensitive information.

Application 2: Position a Canary Data Security Diode to optically isolate a secured, trusted, information source and *selectively forward* authorized data to weakly protected *insecure* lower domain destinations.

The partitioned data path *shields the* Secure Source from hidden viruses, Trojans, malicious programs or other intrusion attempts and prevents the corruption or unintended release of critical data, or its loss and non-availability.

Local Diode/Host UTP connections are pseudo full-duplex. However bi-directional full-duplex traffic is not internally forwarded between Diode input and output ports. Flow-Control, IP acknowledgements, and CRC error correction are completely disabled.

Diode variants with **Variable [-V]** Input Power, enables flexible **9-48 VDC** Power choices; and **Conformal Z-Coating [-Z]** offer Environmental Hardening and reduced Tin-Whisker effects.

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

GT-10SD-VZ* & CT-20SD-VZ: Z – Conformal Coated UTP-to-UTP Single-Point Data Diodes

Application 1.
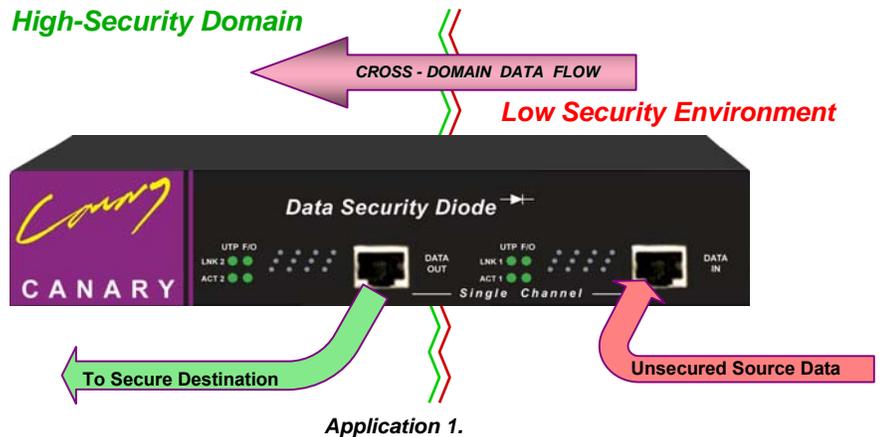
▪ Conformal [Z] Coating for Increased Humidity Resistance:

Conformal Coating toughens Data Diode PCB resistance to physical shock & vibration, atmospheric moisture and migration of Tin-Whisker fragments.

▪ Plug-and-Go UTP Connections:

Configure your application to run via UDP. Connect the *un-secure* device to the Listed *GT-10SD-VZ** or *CT-20SD-VZ Security Diode* "Data-In" port; then simply connect the *Security Diode* "Data-Out" port to the Secure Domain Host for restricted, optically isolated, one-way data transmission (**Application 1**). Reverse the connection scheme for **Application 2**.

▪ Flexible, Secure Network/Host Configurations:

Low to High: Forward information to a Higher Security domain 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 selected information to lower security-level destinations.

▪ Hardwired Immunity from External Software threats:

Canary *GT-10SD-VZ** and *CT-20SD-VZ 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 Diode Uni-Directional operation.

Using UDP or similar protocol over a point-to-point link, eliminates the need for standard TCP/IP (return-path) acknowledgment transmissions.

Protect critical data where needed – *Easy, Secure, Information Availability!*

Canary Communications

Main Features:

Interfaces – Local Connections:

- CT-20SD-Z & CT-20SD-VZ: Two 100BASE-TX (RJ-45) Ports *
- GT-10SD-Z* & GT-10SD-VZ: Two 1000BASE-T (RJ-45) Ports
- [Z & VZ ~ include **Conformal Z-Coating** for environmental hardening and Tin-Whisker resistance]

Networking – Local User Connections:

- 100BASE-TX & 1000BASE-T: Auto-negotiation and Auto-crossover to enable pseudo Full-Duplex Ethernet Diode Links with a *Local* Source and separately, with the *Remote* Destination equipment.

Management;

- No management reporting or access to internal functions
- No provision for Error Handling/Reporting/Checksum/CRC

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)
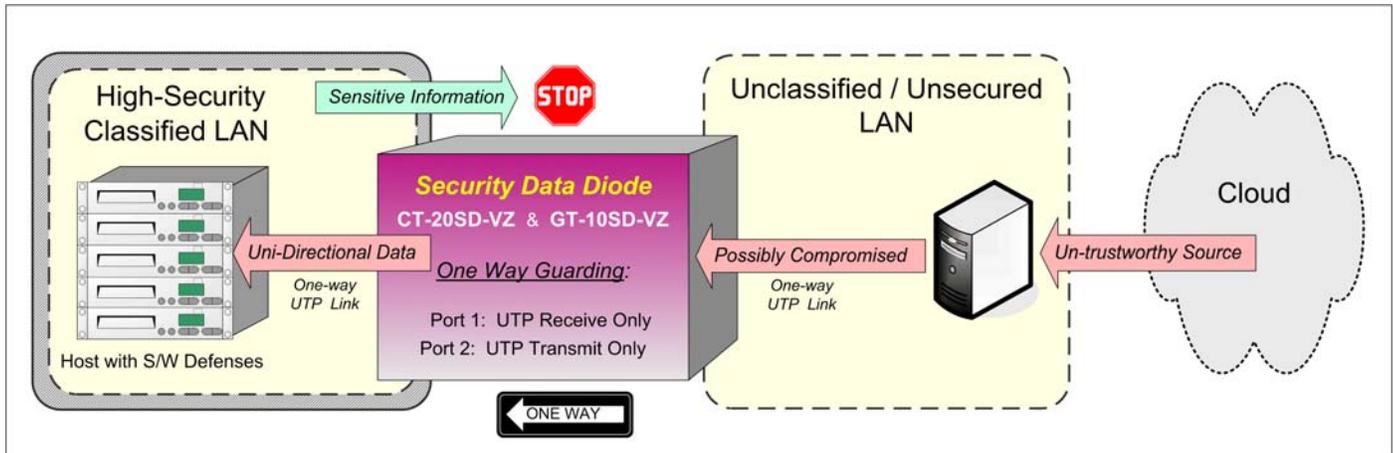
Please contact Canary for technical details on additional models.

FCC Class A   CE Approval

Specifications:

Standards:		
	IEEE 802.3u	100BASE-TX *
	IEEE 802.3ab	1000BASE-T *
	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
	NCDSMO	**GT-10SD-VZ** * NSA Approved List

Throughput:		
	CT-20SD-VZ	100 Mbps (One-way transmission)
	GT-10SD-VZ *	1000 Mbps (One-way transmission)

Max Distances: RJ-45/UTP : 100 meters

Max. Altitude: 2000 meters

Enclosure: NEMA 1 and International Protection: IPX0

Weight: 5.5 lb. (2.5 Kg) (Shipping Wt.)

Power: Typical: 100 ~ 240 VAC Auto-ranging wall-mount
9 - 48 VDC: **Optional: 9 - 48 VDC** Input + Terminal Block [-**V**] [-**VZ**] **CT-20SD-VZ** & **GT-10SD-VZ** Versions use external DC Voltage sources & function identically to Base units without the **Conformal Z-Coating**

Temperature: Operating: 0º C to 50º C
Storage: -20º C to 70º C

Humidity: Operating: 10% to 80% RH Non-Condensing
Storage: 5% to 90% RH Same above
Conformal: 5% to 95% RH Same

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)

High-Security Classified LAN — Sensitive Information — STOP — Unclassified / Unsecured LAN — Cloud

Security Data Diode
CT-20SD-VZ & GT-10SD-VZ

Uni-Directional Data — One-way UTP Link

One Way Guarding:
Port 1: UTP Receive Only
Port 2: UTP Transmit Only

Host with S/W Defenses

Possibly Compromised — One-way UTP Link

Un-trustworthy Source

ONE WAY

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