

Updated! Canary Uni-Directional Data Security Diodes

Provide:

- **One-Way, Air-Gapped Data Forwarding** ▪ **Reversed Transmissions Blocked** ▪
- **Auto-Negotiation + Auto-Cross UTP Connection** ▪ **9 – 48 VDC Power Option** ▪
- **"We Deliver Data Assurance and Increased Customer Confidence!"** ▪

Canary Uni-Directional Data Security Diodes help defend against a broad range of external, Cross-Domain and insider cyber threats that can escape common security applications to reveal or corrupt sensitive information & 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 100 Megabit **CT-20SD** and Gigabit **GT-10SD** Data Security Diodes forward information originating from an *un-secured* open source to a restricted High-Security destination. 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.

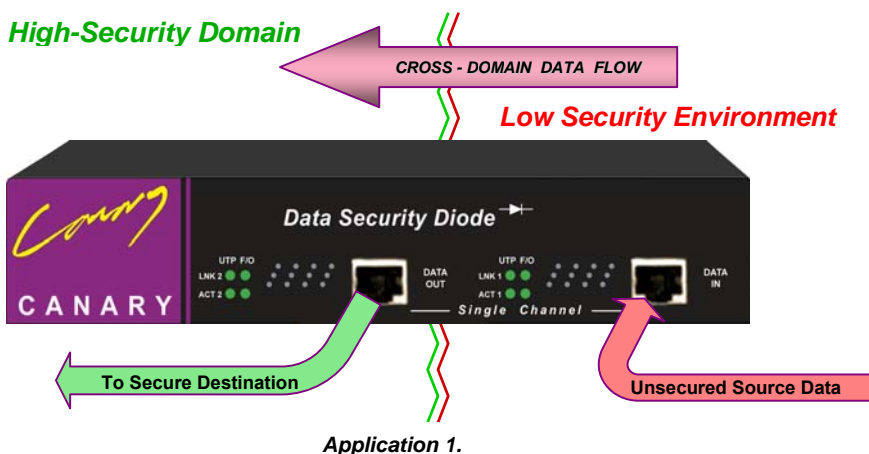
The partitioned data path *shields the* Secure Source from hidden viruses, Trojans, malicious programs or other intrusion attempts and prevents the corruption or unintended release of critical data, or its loss and non-availability.

Local Diode/Host UTP connections are nominally 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.

Diodes with **Variable [-V]** Input Power enable flexible **9-48 VDC** Power choices; optional **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!*"

CT-20SD & GT-10SD: UTP to UTP Single-Point Data Diodes



▪ Plug-and-Go UTP Connections:

Configure your application to run via UDP. Connect the *un-secure* device to the **CT-20SD** or **GT-10SD** 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 **CT-20SD** or **GT-10SD** 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 normal transmission acknowledgments.

Control physical access to your Canary Data Security Diodes and their cable connections to thwart unauthorized access and safely deliver critical data where needed – *Easy, Secure, Information Availability!*

Canary Communications

Main Features:

Interfaces – Local Connections:

- CT-20SD & CT-20SD-V: Two Local 100BASE-TX RJ-45 User Ports
- GT-10SD & GT-10SD-V: Two Local 1000BASE-T RJ-45 User Ports
- CT-20SD-VZ & GT-10SD-VZ: Same functions as above models
- [Z & VZ ~ include **Conformal Z-Coating** for Environmental Hardening and increased Tin-Whisker resistance]

Networking – Local User Connections:

- 100BASE-TX & 1000BASE-T: Auto-negotiation and Auto-crossover enable half/full duplex Ethernet Diode Links with *local* Source and separately, with *remote* Destination equipment.

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)

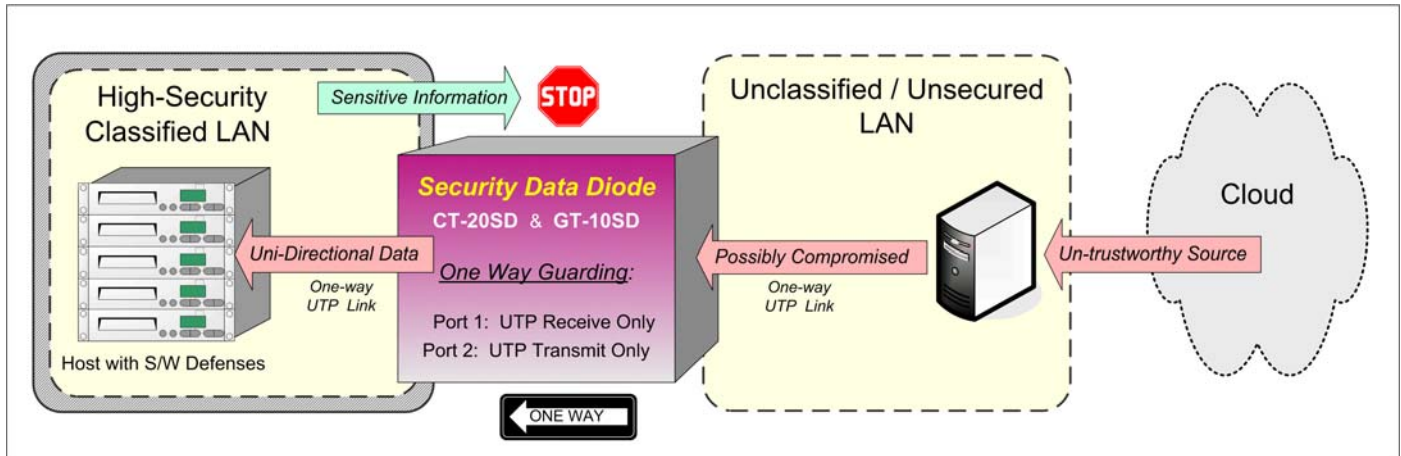
Please contact Canary for technical details on additional models.



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:	100 Mbps (One-way transmission)
	GT-10SD:	1000 Mbps (One-way transmission)
Max Distances:	RJ-45/UTP :	100 meters
Max. Altitude:		2000 meters
Enclosure:	NEMA 1 & International Protection: IPX0	
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-20SD-V & -VZ and GT-10SD-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:	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

11-24-21 JM

