Updated! Canary Uni-Directional Data Security Diodes

Provide:

▪ One-Way, Air-Gapped Data Forwarding ▪ Reversed Transmissions Blocked ▪

▪ Choice of Multi-Mode & Single-Mode Fiber ▪ 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 unavailable**.**

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

Application 1: Canary 100-Megabit ***CF-21SD*** and Gigabit ***GF-55SD*** 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.

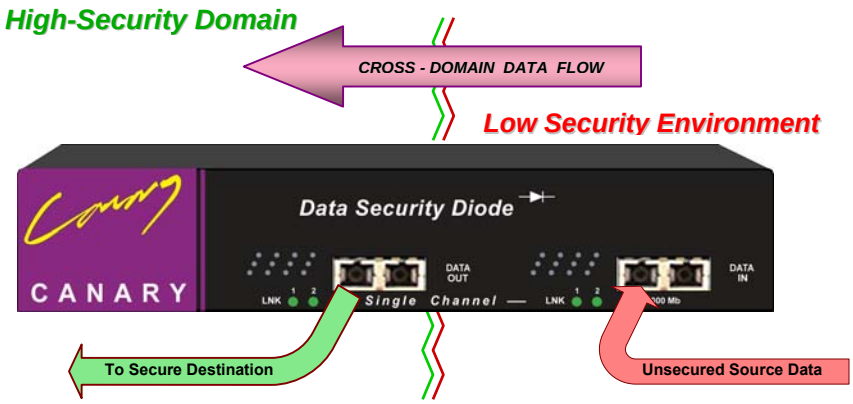
The partitioned data path *shields the* Secure Source from hidden viruses, Trojans, malicious programs or other intrusion attempts and prevents the corruption or unintended release of critical data, or its loss and non-availability.

Local Diode/Host Fiber connections are nominally full duplex. However, bi-directional traffic is never internally forwarded between Diode input and output ports. IP acknowledgement, Flow-Control and CRC error notification 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!"*

CF-21SD & GF-55SD – Fiber to Fiber Single-Point Diodes



Application 1.

▪ *Plug-and-Go Fiber Connections:*

Configure your application to run via UDP. Connect the *un-secure* device *to the CF-21SD or GF-55SD* 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 selective information to lower security-level destinations.

▪ *Hardwired Immunity from External Software threats:*

Canary *CF-21SD* and *GF-55SD 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 the 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:

- CF-21SD: (Two) 100BASE-FX (Multi-mode) *Local* User ports
- GF-55SD: (Two) 1000BASE-SX (Multi-mode) *Local* User ports
- CF-21SD-V [VZ] & GF-55SD-V [VZ] Same as above
- [**Z & VZ**~ include **Conformal Z-Coating** for environmental hardening and Tin-Whisker resistance]

* Fiber port Connector Identification – 100 Mbps* & 1000 Mbps +

* [21 ~ SC-type & 22 ~ ST-type m/m Fiber, 91 ~ SC & 92 ~ ST s/m Fiber]

\+ [55 ~ Multi-mode SX/SC-type Fiber and 31 ~ Single-mode LX/SC Fiber]

Networking – Local User Connections:

- 100BASE-FX & 1000BASE-SX/LX: Uses Fiber "Handshake" for pseudo Full-duplex Links with *Local* User Source-equipment. Diode connections operate as Full-duplex – but bi-directional traffic is NOT internally *forwarded* between [Local] Diode Input & Output ports.

Management:

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

Mechanical & Environmental:

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

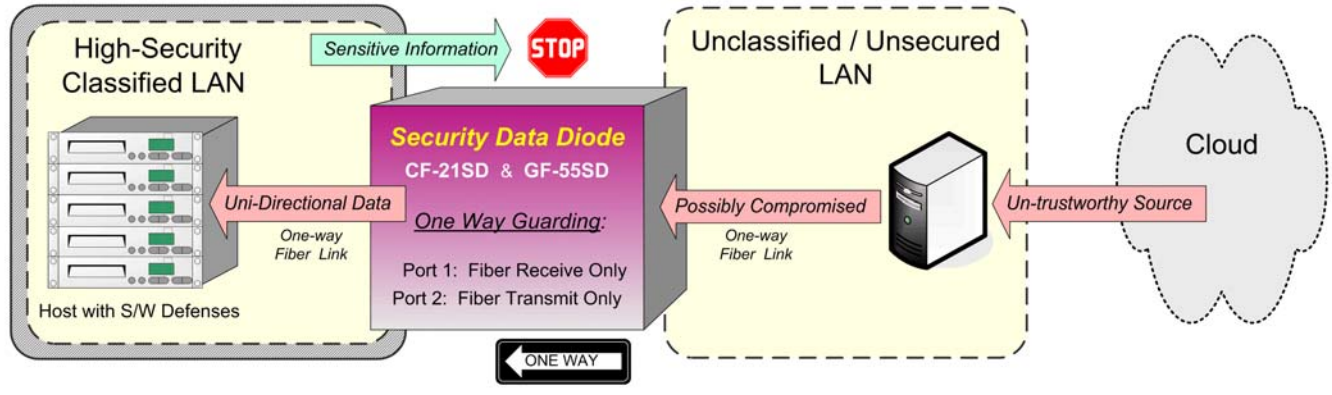
Please contact Canary for technical details on additional models.

FCC Class A CE Approval

Specifications:

Standards:	IEEE 802.3u IEEE 802.3z IEEE 802.1d IEEE 802.1q	100BASE-FX* or; 1000BASE-SX/LX* Spanning Tree: None VLAN: Limited Functionality
	IEEE 802.3x RFC 2549 NCDSMO	Flow Control Not Supported IETF IPoAC & QoS 4-01-99 **GF- 55SD** NSA Approved List
Throughput:	CF-21SD: GF-55SD:	100 Mbps (One-way transmission) 1000 Mbps (One-way transmission)
Max Distances:	Fiber Optic	100 Mb: 2 Km, 20, 40, 60, 80 Km 1000 Mb: 500m, 10, 20, 30, 60 Km
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:	**CF-21SD-V [VZ]** & **GF-55SD-V [VZ]**
Temperature:	Operating: 0º C to 50º C Storage: -20º C to 70º 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

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