

# New! Canary Uni-Directional Data Security Diodes

Featuring:

- **One-Way Data Transmission** ▪ **Unauthorized Transmissions Blocked** ▪
- **Fiber-Optic Mode and Wavelength Conversion Match Host Connections** ▪
- **"We Deliver Increased Confidence and Peace of Mind to the Customer!"** ▪

Place Canary *Uni-Directional*, Data Security Diodes into environments where two-way, bi-directional communications expose secure servers and their sensitive data to the risk of purposeful, malicious attack or inadvertent corruption. *Uni-Directional* Data Security Diodes provide additional data loss protection in the event that malware or hidden executables escape detection and penetrate commonly used network defenses.

**Application 1:** 100-Megabit **CF-21SD** and Gigabit **GF-55SD** Single-Point Data Security Diodes, forward information originating from an *un-secured*, open source to a restricted, High-Security destination. They simultaneously partition the data path to stop all return-path transmissions and completely block the reverse transmission of sensitive information.

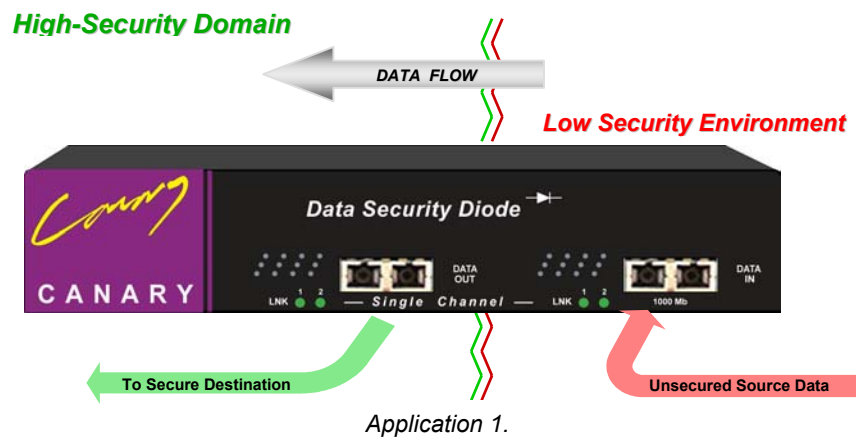
**Application 2:** Position a Canary Data Security Diode to *selectively forward* authorized data originating from a secured, trusted source to weakly-protected, *insecure* destinations.

It also blocks the return path to *shield* the secure source from hidden viruses, Trojans, malicious instructions or other intrusion attempts. This prevents the unintended release and exposure of critical data or its loss and corruption (non-availability).

**CF-21SD** and **GF-55SD**, "Data-Out" Fiber ports only forward one-way data on their links. Note: even if nominally Full-duplex, Fiber links are established at Data Diode/Host interfaces, they never physically transmit bi-directional, full-duplex traffic. Full-Duplex data handling functions including Flow-control are completely disabled and no internal or external means are available to restore bi-directional capability.

As 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



### ▪ Plug-and-Go Fiber Connections:

Configure your application to run via UDP and 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 protected, 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 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 **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:

- CF-21SD: Two: 100BASE-FX (multi-mode, single-mode)\*
- GF-55SD: Two: 1000BASE-SX (LX single-mode options)\*
- Fiber ports: SC, ST (100 Mbps); SC (1000 Mbps)

### Networking:

- 100BASE-FX\* & 1000BASE-SX/LX\*: Fiber Links are automatically established with Source & Destination equipment. Links may appear to be Full-duplex, however NO full-duplex traffic is transported or propagates bi-directionally.
- \* NOTE: 100 Mbps & 1000 Mbps Ethernet *Links* are without bi-directional TCP acknowledgments but optionally with UDP (application) Destination IP Address and Port Number \*

### 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)



Pending



## Specifications:

<b>Standards:</b>	IEEE 802.3u	100BASE-FX* or;
	IEEE 802.3ab,x	1000BASE-SX/LX*
	IEEE 802.1d	Spanning Tree: None
	IEEE 802.1q	VLAN: Limited Functionality
	IEEE 802.3x	Flow Control Not Supported

<b>Throughput:</b>	100 Mbps (One-way transmission Max.) or; 1000 Mbps (One-way transmission Max.)
	* See <i>Link and Data Rates</i> Note above *

<b>Max Distances:</b>	100 Mb: 2 Km; 20, 40, 60 Km
	1000 Mb: 500 m, 10, 20, 30, 60 Km

<b>Power:</b>	100 ~ 240 VAC Auto-ranging Power input; and +5 VDC Power Output
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<b>Temperature:</b>	Operating: 0° C to 50° C Storage: -20° C to 70° C
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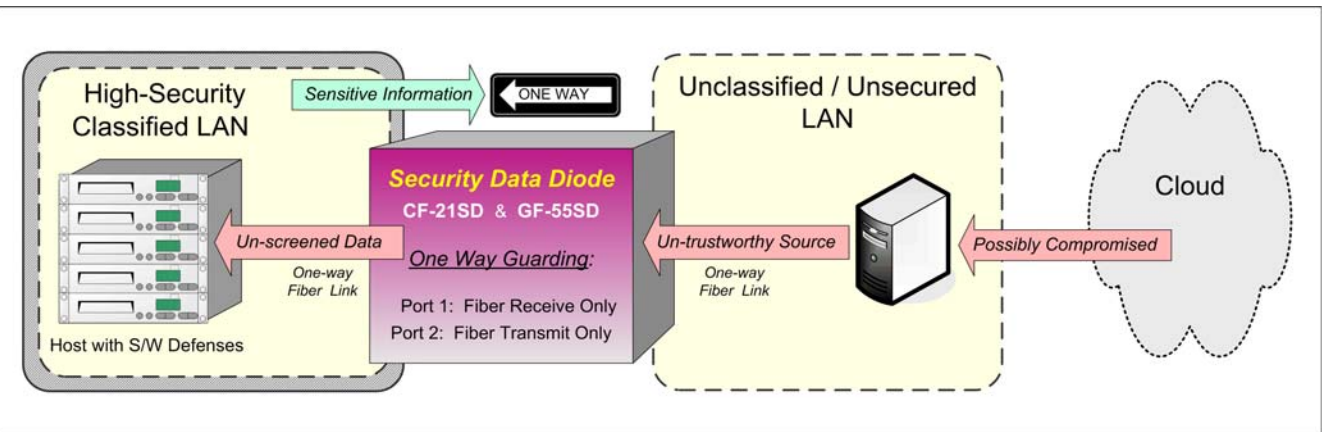
<b>Humidity:</b>	Operating: 10% to 80% RH Storage: 5% to 90% RH
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<b>Emissions:</b>	FCC Part 15 of Class B & CE: Pending
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<b>Safety:</b>	US 21 CFR (J) & EN 60825-1 standards and UL 1950 applications, EN 60950: Pending
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<b>Dimensions:</b>	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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<b>Weight:</b>	5.5 lb. (2.5 Kg) (Shipping Wt.)
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JM 04.04.11

Preliminary Specifications

For more information please visit us at:  
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Canary Communications is an  
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