Product Specifications

VANGUARD™ and VANGUARD™ CS
Fiber Optic Monitoring System

VANGUARD™ CS

VANGUARD™ INTRODUCTION

The VANGUARD™ Fiber Optic Network Monitoring System uses patented technologies to ensure the integrity and availability of network data by monitoring two or more dark (spare, unused) fibers within the optical cables making up the infrastructure. This 24/7/365 monitoring immediately detects and reports tampering or intrusion attempts conducted for the purposes of data theft (tapping) or denial of service. VANGUARD is used on standard single-mode or multimode fiber, and with Plug-and-Protect™ capability, VANGUARD can rapidly be added to new or existing network infrastructure.

Using patented hub and spoke technology, a single VANGUARD™ utilizing one rack space can monitor up to eight continuous optical circuits (zones), providing protection for multiple remote buildings or many dozens of user drops per zone in a facility. When dark data fibers are not available, VANGUARD+Plus can be used to monitor active fibers. A Remote Termination Unit (RTU) is required for each zone when using the VANGUARD+Plus.

VANGUARD™ Standard Features

- *VANGUARD is available in 1, 2, 4 and 8 (multimode only) channel platforms*
- *RS-232 serial port for system configuration*
- *10/100/1000Base-T connector for remote configuration and alarm reporting*
- *Relay alarm contact closures for monitoring and equipment alarm notification*
- *Auto-configure feature available to automatically set alarm thresholds*
- *Alarm parameters adjustable via serial port or Ethernet connection*
- *Dual redundant power supply*

VANGUARD™ CS

The VANGUARD™ CS is a bundled solution consisting of the VANGUARD™ and CyberSecure Infrastructure Management System, a software application that provides VANGUARD with the capability to centrally manage alarms, create PDS Standard Operating Procedures (SOPs), set alarm thresholds to eliminate nuisance alarms and automatically guide user responses to alarms and more.

VANGUARD™ CS Hardware Differences

Note: Except for those listed below, all features of a standard VANGUARD™ are still present in the VANGUARD™ CS version.

1. VANGUARD CS front panel Ethernet port operates at up to 1000Base-T gigabit Ethernet
2. VANGUARD CS includes a rear panel simplex ST optical port for connection to the optional VANGUARD CS-Cross Domain Communications Unit (XDU). See our website or contact us for additional information on the XDU.

NetworkIntegrity SYSTEMS

We Bring Security To Light™

VANGUARD™ Technical Specifications

Electrical

Power Input	100/240V, 60/50Hz, Max. Current approx. 250mA	IEC, 3 position power connector (IEC C14)
Battery (Controller Board)	Duracell: CR2032 Lithium-Manganese Dioxide (Not field replaceable ~ At Factory Only)

Environmental

Operating Temperature	0°C - 45°C
Storage Temperature	-10°C - 50°C
Operating Humidity	20% - 80% Non-Condensing

Physical

Dimensions	1U high, 19" Rack Mountable	HxWxD 4.5 x 43.2 x 36.8 cm (1.75 x 17.0 x 14.5 inches)

Weight

6.4 kg (14 lbs)

Ports

Console	DB-9 male
Ethernet	RJ-45 female
Alarm Contacts	Normally open or Normally closed – equipment alarm, global monitoring alarm and channel monitoring alarm	30 Vdc 0.5A maximum

System Management

Remote Management	SSH v2, Telnet, SNMP via 10/100/1000Base T Ethernet, and RS232 serial. 1000Base T to be used with shielded Cat6 cable. Maximum 2 concurrent user interface sessions	Maximum 1 concurrent SNMP query
Local Management	Channel LED indicators, Channel reset buttons
Alarm Notification	SNMP, Email, SMS, Relay Alarm Contracts

Optical Specifications

Channel Configuration	1, 2, 4, or 8 (multimode only) Channels
Max. Optical Receiver Input	-7.5 dBm SMF, -12.5 dBm MMF
Shutdown Reaction Time	< 100ms
Optical Connector Type	Either SC or LC duplex- CAUTION: UPC NON-ANGLED
Laser Safety Rating	IEC: Class 1(IEC60825-1 Ed. 2 (2007)) Ed. 3 (2014) CDRH: Class 1 (21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007)

Industry Certifications & Features

The VANGUARD™ is UL, FCC Part 15, IEC Class 1, CDR Class 1, and CE rated & certified Additional International Certifications - Inquire with Factory.

For specifications on all other products and extended warranty and support plans, please refer to our website at www.networkintegritysystems.com