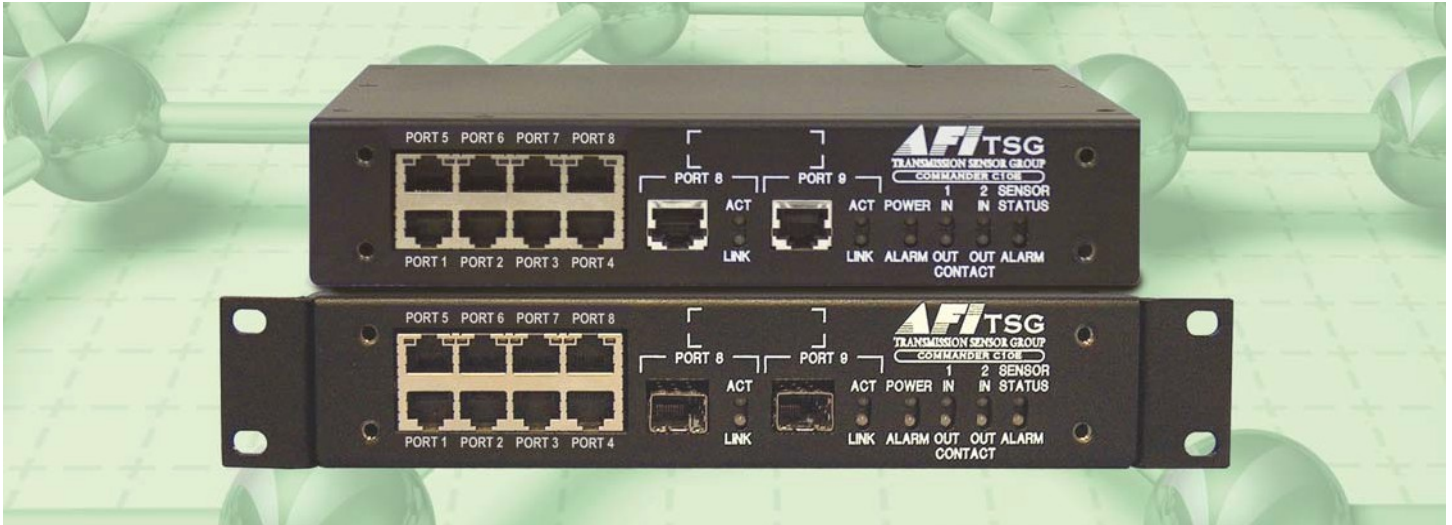


The Network Switch Security System Solution



FEATURES

The Commander Series are fully managed 10 port network switches designed to meet the growing requirements of data burdened security systems. Using separate set ups and operations for IT Directors and Security Directors, the Commander Series eliminates potential conflicts. IT Directors maintain complete control over network interfaces and operations, while Security Directors can route IP signals in a familiar manner similar to setting up a video matrix switcher. For greater distance applications, Commander's Gigabit ports can be ordered with fiber links for transmission over long distances.

With two Gigabit Ethernet ports Security Directors are assured large file generators such as IP cameras can be properly routed for viewing and recording. Commander's features move beyond standard network switches by providing hard contact alarm inputs and auxiliary outputs for real world alarm notifications and actions. All Commanders have internal and external environmental sensor for monitoring Commander status and temperature, airflow and humidity of external devices.* The number of sensors can be expanded using an external USB hub.

All Commander set ups, operations and

monitoring are done using a built in web server without the need for external client software. Status and alarm logs are maintained on Commander and can be easily accessed with most computers using most standard web browsers. Commander can be operated to poll sensors monitoring external DVRs, NVRS and other server based devices providing warnings and alarms set to specific environmental conditions. Alarm alerts and even complete log files can be automatically emailed or transferred to other computers using industry standard FTP (File Transfer Protocol). Commander's Web page can be easily minimized running in the background of any IP Camera, DVR, NVR or security server based system providing operator alerts without the need for extra cost of client software. Commander is compatible with any network security product displaying html web pages.

Front panel LEDs provide immediate status and alarm states for all network, alarm contact and environmental sensors. Pluggable SFP (Small Form Pluggable) format fiber optical transceiver offer complete flexibility for configuring Commander for any application.

Network enabled RS 232 and RS 485 commu-

nication ports compliant to RFC 2217 offering edge device communications and control.**

Wide operating temperature range between -30°C (-22°F) to +75°C (+167°F) for C10e-I and C10p-I models.

Network switching, alarm and auxiliary functions, environmental sensing for network equipment protection and the ability to satisfy the needs of both IT and Security Directors make up the Commander product series.

Monitoring of internal Processor, Fan and CPU, temperature and voltage levels with user programmable email alerts.

Fan Activity Mode regulates fan operation based on temperature requirements extending fan operating life and reducing maintenance costs.

**Requires purchasing of appropriate probes:
P-TA Temperature/Airflow
P-TAH Temperature/Airflow/Humidity*

***Requires Windows™ software programs with RFC 2217 compatible driver.*

Management

SUPPORTED PROTOCOLS FOR SERVER SIDE: Port Auto Sensing, 8 Ethernet ports 10/100Base T, 2 Ethernet ports 1000BASE-T, RS232, RS485, 1 USB Port

Auto Negotiation for half and full duplex mode for 10/100/1000BASE-T

IEEE Std. 802.3:2002 when using optional fiber SFP

IEEE 802.1w Rapid Spanning Tree Protocol

Per VLAN Spanning Tree for load sharing

802.1p (QoS) field classification with operator manual QoS priority assignments of up to 4 classifications per 10/100 base T ports and up to 8 classifications per 1000BASE-T ports.

IEEE 802.1x for dynamic port based security providing for user authentication per port.

SNMPv1, v2 for providing encrypted network security administrated traffic during SNMP sessions.

Conformity to MIB-11 Management Information Base

AFI Proprietary MIB for custom integration.

The ability to provide for private VLAN security and isolation between switch ports or groups of switch ports (can be labeled either as groups or more likely communities) to ensure that users cannot snoop on other users data (traffic)

Ability to create VLAN trunks from any port using 802.1Q tagging.

NTP: Ability to reference to NTP server.

Conformity to SNMPv1, v2c

MDI/MDIX support to eliminate need for cross over cables. Provision of "Forced Mode" to set programming and disable feature per port on 10/100BASE-T ports.

RS 232, RS 485 RFC 2217 compliant communication ports

>20,000 Event Logs with separate logs for polling, event and user access.

Compliant with AFI's Open Path with available API for custom interfacing.

Port Flow: Ability to monitor individual ports to operator assigned packet rates. Operator programmable warning and alarm levels with event and poll logging, and email alerts.

SUPPORTED PROTOCOLS FOR CLIENT SIDE

DHCP: allows a network administrator supervise and distribute IP addresses from a central point and automatically sends a new IP address when a computer is plugged into a different place in the network.

Three main security administration modes: Master/IT/Security with sub security levels of IT Admin with Security Views and Operating Views and Security Admin with IT Views and Operating Views.

Conformity to MIB-11 Management Information Base (RFC1213)

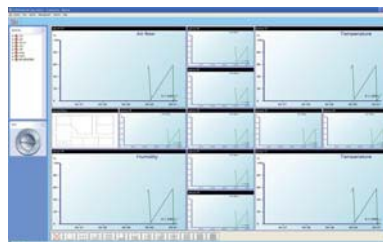
Priority MIB defined by AFI.

MAC address notification - with Admin notification of users added or removed from the network.

MAC address aging (with Admin ability to set aging)

Up to 4K unicast addresses entities per device as applied to self-learning capacity and table aging.

Web based Management and Configuration: The system will provide user access to an on-board web server TCP/IP (html pages) for set up, operations and status viewing. Existing programming will be able to be downloaded. New programming will be able to be uploaded. Logs and other information screens will be able to be downloaded in a format compatible with MS Word and Excel.



OPTIONS	PRODUCT SPECIFICATIONS:
P-TA: Temperature Airflow sensor probe	Humidity probe
P-TAH Temperature Airflow Dimensions	2.5" (D) x .875" (H) x 0.4" (W) 63.5mm (D) x 22.2mm x 10.2 (W)
Operating Temperature	0°C to 70°C (32°F to 158°F)
Operating Humidity	0% to 95% RH Non-Condensing
Weight (approx)	0.5 Ounces 14 grams
Sensing Range Temp:	0°C to 70°C (32°F to 158°F)
Sensing Airflow	Relative reading Detects 15% over full temperature range
Sensing Humidity (P-TAH only)	0% to 100% Relative Humidity
Connector	Mini-USB type B 5 pin Max. distance 25' For longer distances, contact factory.
Power	60 mA max
Data Transfer Rate	12 Mbit/sec (full speed USB)
Certifications:**	FCC: CFR Title 47, Part 15 Class A CE: EN55022 Emissions / EN55024 Immunity UL/CE: IEC 61010
P-RB	Probe Rack Mount Bracket
Mounting bracket	1.75" (44.45mm)
Input	Mini-USB type B 5pin
Output	Mini-USB type B 5pin
Length (Full extension)	11.5" (292.1mm)
Weight	0.5 pound
P-USB	USB Male to Mini Male Cable
Length	2 meters
Transfer rates	Up to 480Mbps RFI suppression ferrite clamp included

Pilot Management Software

Pilot CS (Commander/Scout) monitors combinations of Scout Environmental Sensing units and Commander Switches to create a seamless integrated data, environmental sensing, alarm, auxiliary and network switch control center. Alarm, Auxiliary, Network connections and Sensors Probes can be monitored from various network locations. Responses from one network location can be

programmed to trigger auxiliary relays at other network points. Pilot CS can also be used to manage Scout's RS232 and RS485 data ports. All Scout statuses are displayed in a tree with easy to read color status icons. Data from all network locations is contained with a common log for easy data searches and report generation detailing long term histories and trends. Operating with tool bar alerts Pilot can

run in the background of any web based server system, DVR, NVR or even IP Cameras. Pilot can operate with other AFI components or solely as a remote Scout control center. Pilot CS gives client operators the ability to to conduct Client to Client communications using text instant messaging (IM) and Voice over IP (VoIP) communications. Both can be recorded and stored.

Management Network Access and Information

MANAGEMENT SPECIFICATIONS

Port Status	
Auto-negotiate:	Half, Full, Auto for 10/100 Base T ports
Port Aging:	Applied to complete switch.
SQoS:	On: Using 802.1p tags Off: Ignoring 802.1p tags
Port Snooping:	IGMP Multicast
Bandwidth:	Egress Rate Limiting
Port Packet Priority	Off
QoS priority	Per port priority settings
Port Monitoring	Ingress and Egress redirects
Port Trunking	Assign ports to trunk

PROTOCOLS:

802.1p
802.3
802.3u
802.3x
802.1d
802.1w
802.1s
802.1x
802.3ab
802.3ac
RMON 1,2,3,9
802.3Q
802.3

Mac Addresses: Aging, Flushing, Static & Dynamic Control

Fan: Programmed alarm level
Programmed warning level

Processor:	Programmed alarm level Programmed warning level Current temperature level
Power supply:	Programmed alarm level Programmed warning level Current temperature level
Sensor probes:	P-TA, P-TAH, P-VFP
Temperature:	Programmed alarm level Programmed warning level Current temperature level
Airflow:	Programmed alarm level Programmed warning level Current temperature level
Humidity:	Programmed alarm level Programmed warning level Current temperature level
Voltage:	Programmed alarm level Programmed warning level Current temperature level
Frequency:	Programmed alarm level Programmed warning level Current temperature level
Power:	Programmed alarm level Programmed warning level Current temperature level
Alarm Sensor Current status	Normal / Alarm
Auxiliary Current status	Normal / Active

Features

STATUS:

LEDs

Per Port

10BASE-T No connection, normal connection, activity, alarm

100BASE-T No connection, normal connection, activity, alarm

1000BASE-X No connection, normal connection, activity, alarm

Power: No power, normal power, power below acceptable level, temperature alarm

VIA WEB BROWSER:

Contact alarm: Off, On, active state, previous alarm condition

Auxiliary: Off, On, active state, previous alarm condition

Sensor: No connection, normal connection, warning, alarm

CONNECTIONS

Ports:

10/100 BASE-T (8) C10e/C10p

RJ45 Female connection configurable via set up

1000BASE-T (2) C10e

RJ45 Female Connection configurable via set up

1000BASE-X (2) C10p SFP Socket

SFPs require AFI approved devices conforming to Multi Sources Agreement (MSA) Small form Factor Pluggable (SFP) Inclusion of (1 or 2) SFP modules is required for 1000BASE-X operation.

SFP-SX:

Wavelength: 850nm VCSEL

Output Power: -9.5 to -4 dBm Sensitivity: <-17dBm

Distance: 550m (50/125 um) - 275m (62.5/125 um)

SFP-LX

Distance: 10 km

Wavelength 1310 nm FP

Output Power -9.5 to -3 dBm Sensitivity: < -21dBm

SFP-ZX

Distance: 70 km

Wavelength 1550 nm DFB

Output Power: 0 - +5 dBm Sensitivity: -23 dBm

All SFP modules:

Date Rate: 1.25 Gbps NRZ RoHS Compliant Duplex LC Connector

Compliance IEEE 802.3z

EN60825-1 Laser Class 1 for eye safety

Industrial Temperature

Operating Range -20°C to 74°C

RS232 DB9 Male connector configurable via set up

RS485 RJ12 Female connector configurable via set up

Sensor Probes: Standard USB female connector using proprietary AFI communications

Alarm In Programmable as NO or NC for Alarm action, Contact to ground, Terminal block

Auxiliary out Terminal block, Form C

Power: 100-240 VAC @ 50-60Hz 55W Max

Power Connector: IEC-320 C13