EdgeFirewall Datasheet

Aiming to create better and safer working environments and life experiences through the products we deliver.

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Product Overview

Designed for industrial systems, Avcomm Industrial Firewall provides efficient security solutions for industrial control networks, with comprehensive security functions such as industrial Ethernet protocol depth analysis, instruction access control, and log auditing. Avcomm Industrial Firewall uses high-performance, high-stability multi-core hardware architecture to provide users with efficient and stable security guarantees. Avcomm Industrial Firewall can intelligently identify all external attacks in industrial communication, and warn and block it at the first time, protecting industrial information networks against various network attack methods such as source address spoofing, DOS attacks, address scanning, viruses and Trojans. This product has a sales license.

Product Features

High-performance hardware and software with intelligent algorithms

Avcomm industrial firewall is built on high-performance MIPS multi-core processors, providing a solid foundation for low-latency, high-throughput data processing. High-performance software and hardware combined with intelligent algorithms can truly achieve low latency and meet real-time requirements, even when deep packet detection (DPI) is enabled, it can achieve a throughput of 30,000PPS, and the delay is less than 50us under the condition of device full configuration policy.

Excellent network support

Avcomm Industrial Firewall is a plug-and-play firewall, advanced communication processing design, low latency deep packet parsing, fast store and forward program, its powerful functions can meet complex network requirements. The adaptive port can solve 10/100/1000BaseTX, MDIX, and duplex switching issues. For ease of use, LEDs are also provided to show the status and activity of the link ports.

Product truly suited to the industrial environment

Avcomm Industrial Firewall uses a highly reliable integrated software and hardware architecture, integrated hardware encryption engine and data exchange encryption engine, to ensure the security and reliability of the entire system. Hardware circuit structure design, system redundancy, delay, reliability, environmental requirements and other aspects meet the requirements of industrial environment.

Perfect cooperation between deep package analysis industrial control and security

It fully supports major mainstream industrial control protocols, and can quickly and targeted capture and deep analysis of various data packets. Supports Modbus TCP, Profinet, Ethercat, EthernetIP, DNP3, IEC104 and other protocols. The open platform interface supports customers to expand and support proprietary protocols and customize secondary development.

Product Features

- Support manual configuration of access control rules based on source IP, source MAC, destination IP, destination MAC, protocol (TCP/IP);
- Support access control policies based on whitelists;
- Support dynamic insertion of ACL rules and ACL period control;
- Support the host whitelist function to discover devices flowing through the network;
- Support the customization of industrial control protocol parsing, no secondary development is required;
- Support displaying the online and offline status and alarm status of the firewall;
- The packet delay under the full configuration policy ≤ 90us;
- Number of concurrent connections≥ 120000;
- The number of users is unlimited;
- Using RISC architecture, configure NS OS self-developed operating system;
- Five 10/100/1000M RJ45 service ports and one out-of-band RJ45 management port；
- The power supply adopts 1+1 redundant power supply;
- DIN rail mounting, fanless design;
- Support more than 100,000 sample points real-time query ;
- Support more than 10,000 sample points real-time writing ;
- Support no less than 2 Bypass;
- Support power-off Bypass and software "watchdog", bypass switching time ≤1s;
- Support OPC DA, HAD, A&E, DX, XML-DA and other operations, support the analysis of OPC operation point ID, data type, point value range, and fine-grained control of OPC value range;
- Support Modbus TCP range control, including 16-bit integer byte order, 32-bit integer byte order, 32-bit floating-point byte order, and 64-bit double byte;
- Support displaying and editing the current topology;
- Firewall devices self-discover and automatically appear in the list of devices on the right;
- Power consumption ≤ 10W;

Specifications

- Industrial firewall product supports deep message parsing of OPC Classic, Modbus TCP/RTU, Siemens S7, Ethernet/IP (CIP), IEC104, MMS, DNP3, Profinet, Omron Fins, NTP (Network Clock Synchronization) and other protocols.
- Support Siemens S7 protocol version number, source IP, destination IP, source IP mask, destination IP mask, read and write attributes, start address, end address, register area, DB area code, point type, point start address, value range, transport layer protocol, etc
- Support the in-depth analysis of other profinet protocols other than Profinet CBA, and support the control of Profinet transmission function codes and operation objects
- It has the ability to deeply analyze custom protocols at the functional code level
- Based on the association binding of Layer 2 MAC address and Layer 3 IP address, it avoids attacks on industrial control systems through IP spoofing
- Support hardware Bypass capability. When abnormal conditions such as equipment power loss or software downtime are detected, the bypass function is triggered, and service traffic is passed directly to ensure the availability of service communication.
- Support real-time event monitoring and event export function;
- Support event correlation analysis function;
- Support unknown device monitoring, real-time alarm for unknown device access in the system, quickly discover illegal access in the system, and support blocking function;
- Support real-time viewing of network session tables;
- Support unified and centralized management of equipment;
- Support automatic upgrade of equipment through the management platform;
- Support remote configuration of devices through graphical means;
- Support administrator hierarchical role management, management IP address restrictions and other security measures;
- Support learning mode, test mode and working mode, and users can configure independently;
- Support report function, users can view event, log and audit statistics through reports, and support report download;
- Support one-click remote factory reset;

Hardware Index

S2100	
Service port	4 x 10/100/1000Mbps Adaptive
Serial port	RJ45 debug port
Management port	1x10/100/1000Mbps Adaptive
USB	USB2.0
Firewall throughput	600Mbps
Packet delay	Under the condition of full allocation strategy< 50us
Concurrent connection	600000bps
Limit of the number of user	No
CPU	Dedicated network processor
Memory and storage	1G DDR3/ 4G Data storage
Power	
Input voltage	24DC(12-36VDC),
Access terminal	5-core 5.08mm pitch plug-in terminals
Power	<15W
Overload protection	Yes
Reverse connection protection	Yes
Redundant protection	Yes
Machanical	
Enclosure material	Metal
Heat dissipation method	Natural cooling, fanless
IP	IP40
Dimension	58mm×168mm×118mm(W×H×D)
Weight	<1.25 Kg
Installation	DIN rail
Environment	
Operating temperature	-40℃ ~ +70℃
Storage temperature	-40℃ ~ +85℃
Humidity	5 ~ 95% Non- Condensing
MTBF	1000000 hours
Warranty	5 years
Standard	
CE	
FCC	
Information Security Product EAL3 Certification (In the process of certification)	