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Hirschmann EAGLE40

Next-Generation Industrial Firewall

The multiport EAGLE40 next-generation firewall offers a comprehensive cybersecurity solution to maximize uptime in today's stringent automated environments.



Ensure heightened performance capabilities with more port options, each at one gigabit per second (Gbit/s) bandwidth.



Protect against physical and virtual threats with ruggedized housing and Stateful and Deep Packet Inspection (SPI/DPI) modules.



Gain unrivaled system configurability for all skill levels with a comprehensive graphical user interface and multi-layer encryption capabilities.

Key Features

- Three Gigabit Ethernet ports with up to 1 Gbit/s throughput
- HiSecOS with SPI and DPI capabilities
- Firewall Learning Mode for rule configuration
- IPsec VPN for secure data encryption
- Dynamic-routing support with OSPF and router redundancy VRRP
- Graphical HTML 5 web user interface
- Operating temperature range of -40 °C to +70 °C
- Convection-cooled metal housing
- Meets process automation standards: ISA-12.12.-01 Class 1 Div. 2 – Haz. Loc, ATEX-95 Category 3G (Zone 2)
- Assists with cybersecurity regulations: NERC CIP, IEC 62443, NIST
- Flexible management and monitoring: Industrial HiVision, Tripwire Enterprise, Tripwire Log Center
- Hardware for further DPI modules, advanced intrusion and anomaly detection capabilities (via future software upgrades)



Hirschmann's ruggedized EAGLE40 defies industrial firewall expectations – featuring Stateful and Deep Packet Inspection combined with next-generation multiport configurability for maximum cybersecurity performance.

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Your Benefits



Hirschmann's multiport EAGLE40 next-generation firewall delivers a comprehensive cybersecurity solution to ensure maximum protection for production among today's stringent industrial and process automation systems.

Evolving alongside data transfer demands, the EAGLE40 includes more port options with increased bandwidth and encryption capabilities. Supporting both OSPF dynamic routing and VRRP router redundancy, the device is an economically-sound approach to maximize uptime, regardless of network throughput.

The industrial firewall incorporates the Hirschmann Security Operating System (HiSecOS) and DPI modules to offer a customizable, around-the-clock solution that meets an infrastructure's unique cybersecurity demands.



Applications

Cybersecurity is a top priority in today's digital world. The Hirschmann EAGLE40 firewall was specifically designed to meet the critical demands of industrial and process automation environments. The device includes software optimized for DPI applications to meet a variety of industrial protocols. Thanks to continuous software upgrades, additional protocols and advanced intrusion detection capabilities will be added in the future. This makes the versatile and highly configurable firewall especially ideal across OT teams with various experience levels and skillsets.

With a convection-cooled metal housing and an extensive operating temperature range, the EAGLE40 supports the movement towards IT/OT convergence by providing a factory floor solution without compromising network uptime. Thus, the EAGLE40 is optimally suited to implement a zones and conduits concept according to ISA/IEC 62443, enabling a defense-in-depth network architecture.



Markets

Built to withstand harsh industrial environments, the EAGLE40 next-generation firewall is backed by robust industry approvals and infrastructure compliance standards appropriately suited for the oil and gas, as well as water and wastewater industries.

The extensive bandwidth and data encryption support also make the EAGLE40 an ideal firewall solution within machine building and general manufacturing settings, as well as for use across security networks.

The Hirschmann multiport EAGLE40 next-generation firewall expedites intrusion detection using DPI and SPI for hardened cybersecurity under the stringent conditions of today's industrial environments.



Technical Information

Product Description		
Type	EAGLE40-033T1	EAGLE40-03106
Description	3 Port Next-Generation Firewall with Stateful/Deep Packet Inspection and IPSec VPN	
Port Type and Quantity	2 x Gigabit Ethernet RJ45 LAN + 1 x Gigabit Ethernet RJ45 WAN	2 x Gigabit Ethernet RJ45 LAN + 1 x Gigabit Ethernet SFP WAN
Port Speeds	10/100/1000 Mbit/s RJ45 1000 Mbit/s SFP	
More Interfaces		
USB Interface	1 x USB 3.0 socket to connect an approved USB storage device	
Digital Input*	1 x plug-in terminal block, 2-pin	
Digital Output	1 x max. 60 V DC or max. 30 V AC, SELV, max. 1A	
Hardware		
CPU	Intel Atom E3825 @ 1.33GHz	
Encryption	TPM 2.0 (Trusted Platform Module)*	
Memory	DDR3L 2GB	
Bypass	2 x Gigabit Ethernet Copper (2 x 1) with Gen3 Bypass	
Storage	NAND Flash 4GB	
Power Requirements		
Operating Voltage	2 x 24/36/48 V DC (18 to 60 V DC)	
Power Consumption	max. 15 W	
Power Supply	1 x plug-in terminal block, 6-pin	
Ambient Conditions		
Operating Temperature	-40 °C to +70 °C (cold start at -20 °C)	
Storage/Transport Temperature	-40 °C to +85 °C	
Relative Humidity (non-condensing)	10% to 95%	
Protective Paint on PCB	Yes (conformal coating)	
Mechanical Construction		
Dimensions (W x H x D)	177 x 125.8 x 70 mm	
Mounting	DIN Rail 35 mm	
Enclosure	Rugged high-strength sheet metal	
Weight	1960 g	1960 g
Protection Class	IP20	
Approvals		
Basis Standard	CE, FCC, EN 61131	
Safety of Industrial Control Equipment	UL 62368	
Hazardous Locations	ISA-12.12.-01 Class 1 Div. 2 – Haz. Loc, ATEX-95 Category 3G (Zone 2)	
Reliability		
MTBF	> 25 years at 55 °C (MIL-HDBK-217)	
Warranty	5 years (standard)	
Software		
Software Version	HiSecOS 3.4	
Security	Firewall rules (incoming/outgoing, management), DoS prevention, IPSec VPN, Audit trail, Role based Access Control, IEEE1686 compliant configuration possible, Deep Packet Inspection (DPI) – OPC and Modbus, Firewall Learning Mode (FLM)	
Routing	Port based routing, static routing, multinetting, IP masquerading, 1-to-1 NAT, port forwarding, Static and Dynamic ARP entries, OSPFv2	
Multipoint VPN	IPSec, IKE v1/v2, 3DES, AES (-128, -192, -256), Pre-Shared Key (PSK), X.509v3 Zertifikate, MD5, SHA-1, NAT-T, Hub-and-Spoke	
Management	SNMPv3, SSH2/SFTP, HTTPS, Serial CLI, SNMPv1/2, local and central User Management (RADIUS), HiDiscovery, Industrial HiVision, HiView	
Diagnose	LEDs (Power, Link Status, Data, Status), Signal Contact (24 V DC/1 A), Log File, Syslog, Configuration check RMON (Statistik) Trap for changes and configuration saves	
Configuration	Command Line Interface (CLI), Web Interface, Auto Configuration Adapter (ACA22, ACA31), HiDiscovery, Industrial HiVision, HiView	
Protocols	HTTPS, SSH, SNMP V1/V2/V3, LLDP	
Redundancy Functions	VRRP (Virtual Router Redundancy Protocol), Tracking Framework for VRRP	
Other Services	NTP Client and Server, DHCP L3 Relay	
Performance	Throughput: Up to 1 Gbit/s	

* Available with future software updates.

NOTE: These are the prominent technical specifications. For complete technical specifications visit: www.hirschmann.com



EAGLE40 Configurations

EAGLE40 - 03 3T1 T CC Z9 HS R A NF XX.X.XX

Design/Model

EAGLE40 = Security Router and Firewall

Gigabit Ethernet Ports

03 = 3 x 1000 Mbit/s

Type Uplink Ports

3T1 = 3 x Twisted pair RJ45
 106 = 1 x SFP, 2 x Twisted pair RJ45

Temperature Range

S = 0 °C to +60 °C
T = -40 °C to +70 °C
E = -40 °C to +70 °C inclusive Conformal Coating

Voltage Range

CC = 2 x 24 to 48 V DC

Approvals

Z = CE, FCC, EN 61131
Y = Z9 + UL62368
X = Z9 + UL62368 + ISA 12.12 + ATEX

Approvals

9 = No additional Approval

OEM-Type

HS = Hirschmann Standard

Configuration

R = Router Mode

Intrusion Detection System (IDS)

A = No IDS

Security Modules

NF = No additional modules, firewall only
IN = Industrial Automation Protection Suite (Modbus + OPC Enforcer)

Software Version

XX.X.XX = Current Software Release
 03.4.00 = Software Release 3.4

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