



Hirschmann EAGLE40

Next-Generation Industrial Firewalls

The multiport EAGLE40 next-generation firewalls offer 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.

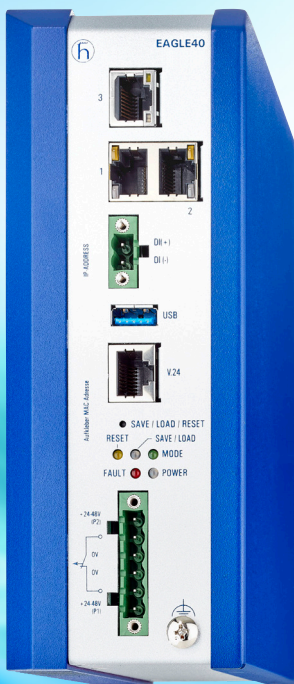
+ **Protect against physical and virtual threats** with ruggedized housing and Stateful and Deep Packet Inspection (SPI/DPI) modules.

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

Key Features

- Ethernet ports
 - EAGLE40-03: 3x GbE ports, up to 1 Gbps throughput
 - EAGLE40-07: 7x GbE ports, up to 5 Gbps 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
- EAGLE40-03: Meets process automation standards: ISA-12.12.-01 Class 1 Div. 2 – Haz. Loc, ATEX-95 Category 3G (Zone 2)
- EAGLE40-07: Meets Energy standards: Substation IEC 61850-3 and IEEE 1613
- 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

EAGLE40-03



EAGLE40-07



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

Be certain.
Belden.



Your Benefits

Hirschmann's multiport EAGLE40 next-generation firewalls deliver 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 devices include 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.

These industrial firewalls incorporate 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 firewalls were specifically designed to meet the critical demands of industrial and process automation environments. These devices include software optimized for DPI applications to meet a variety of industrial protocols. EAGLE40-07 comes with advanced intrusion detection and protection capabilities. Software will be updated continuously and support for additional protocols 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, EAGLE40 devices support the movement towards IT/OT convergence by providing a comprehensive multi-deployment solution without compromising network uptime. Thus, the EAGLE40 product family 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 firewalls are backed by robust industry approvals and infrastructure compliance standards appropriately suited for the oil and gas, power transmission and distribution, as well as water and wastewater industries.

The extensive bandwidth and data encryption support also make the EAGLE40 devices 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 firewalls expedite 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	EAGLE4-07206
Description	Next-Generation Firewall with Stateful/Deep Packet Inspection and IPSec VPN		
Port Type and Quantity	2 x GbE RJ45 LAN + 1 x GbE RJ45 WAN	2 x GbE RJ45 LAN + 1 x GbE SFP WAN	5 x GbE RJ45 ports + 2 x GbE SFP ports
Port Speeds	10/100/1000 Mbps RJ45 1000 Mbps SFP		10/100/10000 Mbps RJ45 1000 Mbps SFP
More Interfaces			
USB Interface	1 x USB 3.0 ports		2 x USB 3.0 ports
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		-
Serial Interface	V.24 console interface		2x DB9 serial interfaces for RS232 protocols
Hardware			
CPU	Intel Atom E3825 @ 1.33GHz		Intel Atom E3950 @ 1.6GHz
Encryption	TPM 2.0 (Hardware based anti-counterfeit, anti-tamper chip)		
Memory	DDR3L 2GB		DDR3L 8GB
Bypass	2 x GbE Copper (2 x 1) with Gen3 Bypass		2 x GbE Copper(2x1) with Gen3 Bypass
Storage	NAND Flash 4GB		64GB SSD storage
Software	HiSecOS		
Power Requirements			
Operating Voltage	2 x 24/36/48 V DC (18 to 60 V DC)		
Power Consumption	max. 15 W		12 - 14 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%		5% to 95%
Protective Paint on PCB	Yes (conformal coating optional, available upon request)		
Mechanical Construction			
Dimensions (W x H x D)	177 x 125.8 x 70 mm		160 x 166 x 53.5 mm
Mounting	DIN Rail 35 mm		
Enclosure	Rugged high-strength sheet metal		
Weight	1960 g		1.6 Kg
Protection Class	IP20		
Approvals			
Basis Standard	CE, FCC, EN 61131		CE, FCC
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)		-
Substation	-		EN 61850-3, IEEE 1613
Reliability			
MTBF	> 25 years at 55°C (MIL-HDBK-217)		According to Telcordia SR-332 Issue 4 387,288 hours GB at 25°C
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 (Statistic), Trap for changes and configuration saves		
Configuration	Command Line Interface (CLI), Web Interface, Auto Configuration Adapter (ACA22), 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		Throughput: Up to 5 Gbit/s

* Available with future software updates.

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



EAGLE40 Configurations

	Eagle 40-03	Eagle 40-07	E	A	G	L	E	4	0	-	0	3	3	T	1	T	C	C	Z	9	H	S	R	A	N	F	X	X	.	X	X	-	N	T		
Design/Model																																				
EAGLE40 = Security Router and Firewall	x	x																																		
Gigabit Ethernet Ports																																				
03 = 3 x 1000 Mbit/s	x																																			
07 = 7 x 1000 Mbit/s		x																																		
Type Uplink Ports																																				
3T1 = 3x Twisted pair RJ45	x																																			
106 = 1x SFP, 2x Twisted pair RJ45	x																																			
206 = 2x SFP, 5x Twisted pair RJ45		x																																		
Temperature Range																																				
S = 0°C to +60°C	x	x																																		
T = -40°C to +70°C	x	x																																		
E = -40°C to +70°C inclusive Conformal Coating	x	x																																		
Voltage Range																																				
CC = 2 x 24-48 V DC	x	x																																		
Approvals																																				
Z = CE, FCC, EN 61131, (EN 62368)	x																																			
A = CE, FCC, (EN 62368)		x																																		
Y = "Z" + UL62368	x																																			
B = "A" + UL62368		x																																		
X = "Z" + UL62368 + ISA 12.12 + ATEX	x																																			
C = "A" + IEC61850-3, IEE1613		x																																		
T = "Z" + EN 50121-4	x																																			
Approvals																																				
9 = No additional Approval	x	x																																		
Y = + UL62368	x	x																																		
OEM Type																																				
HS = Hirschmann Standard	x	x																																		
Configuration																																				
R = Router Mode	x	x																																		
S = Stealth Mode (Tofino)																																				
T = Transparent Mode	x	x																																		
Intrusion Detection System (IDS)																																				
A = Sensor	x	x																																		
B = Server																																				
Security Modules																																				
NF = No additional modules, firewall only	x	x																																		
IN = Industrial Automation Protection Suite (Ethernet/IP + Modbus + OPC Enforcer)	x	x																																		
SU = Substation Protection Suite (IEC104 + DNP3 + GOOSE + Modbus Enforcer)																																				
UN = Unified Protection Suite (All Enforcers)																																				
Software Version																																				
XX.X.XX = Current Software Release	x	x																																		
03.5.00 = Software Release 3.5	x	x																																		