EAGLE20/30 Industrial Firewalls with HiSecOS 3.0 Software

Multiport industrial firewalls, combined with Hirschmann's latest operating system, offer advanced security functionality and data inspection within a single device.

- Modular and customizable – with various configuration options, the multiport firewalls offer up to eight ports, including Fast Ethernet, Gigabit Ethernet, and Symmetrical High-speed Digital Subscriber Line (SHDSL).
- Networkwide security – HiSecOS 3.0's new features, including Deep Packet Inspection (DPI), ensure the integrity of every packet passing through a network and protect the network from malicious intents.
- Easy to configure – the Firewall Learning Mode (FLM) feature allows for one-click setup to create custom firewall rules for individual network needs.

Together, the EAGLE20/30 firewalls with Hirschmann Security Operating System (HiSecOS) 3.0 software offer a solution capable of securing and protecting an entire industrial network via strengthened security features. Customers can select from many options to create a device which exactly matches their requirements.

Applications

The multiport industrial firewall has features designed for use in automobile and machine building environments, process automation settings, and transportation industries. The flexibility of the EAGLE20/30 devices allows for custom interface options, such as local area network (LAN), SHDSL, and coming in 2016, cellular LTE (4G)/3G interfaces.

The EAGLE20/30 firewall with HiSecOS 3.0 – and its robust design and hardened housings – is also able to operate in any industrial application, including water and wastewater, food and beverage, general manufacturing, and oil and gas.

Your Benefits

The primary advantage of the EAGLE20/30 firewall is the combination of HiSecOS 3.0's advanced security features and the flexibility of the firewall. Eight ports are available per device, including four Fast Ethernet, two Gigabit Ethernet and two SHDSL ports. Security features, including Deep Packet Inspection (DPI) and Firewall Learning Mode (FLM), ensure the highest level of security for your industrial network.
The Hirschmann EAGLE20-0400 and EAGLE30-0402 are multi-port firewalls in convection-cooled, metal DIN rail housings, which support eight total ports.

The multiport EAGLE firewalls are designed to fulfill the requirements of the IEEE 1686 standard, including functions, such as security audit trails and user management with password policies. To exceed these requirements and be prepared for future standards, several secure configuration interfaces are part of the router’s functionality, as is a unique configuration encryption.

The new HiSecOS 3.0 gives customers a greater level of insight into network traffic. With the Firewall Learning Mode, the intentions of packets passing through the EAGLE20/30 industrial firewalls are evaluated, and based on the configured rules, safe packets are allowed to continue through while unwanted packets are discarded. Customized network rules can be created in no time using the advanced Graphical User Interface available with the device.

Benefits at a Glance

- Availability of multiple ports offers cost savings and flexibility
- DPI to ensure network packet integrity
- Easy firewall deployment and one-click rule setup
- Additional router redundancy protocols, including Virtual Router Redundancy Protocol (VRRP) to reduce downtime
- Support for SHDSL interfaces – allows WAN connectivity using legacy telephone cables
- Enhanced security, including Ingress Protection and ACL-based counters and filters
- Simple intrusion detection
- Small form-factor pluggable (SFP) support for twisted-pair Gigabit cables
- Meets various standards and approvals
  - Substation: EN 61850-3, IEEE 1613
  - Safety: EN 60850-1, UL 60950-1, EN 61131-2 (Class 1 Equipment)
  - Traffic Controllers: NEMA TS 2
  - Railway: EN 50121-4
  - Radio Equipment: CE, FCC
  - Hazardous Locations: ISA-12.12.01 Class 1 Div.
- Cellular LTE functionality (coming in 2016)
Technical Information

Product Description

**Type**
EAGLE20-0400  EAGLE30-0402

Stateful Inspection Firewall
Firewall rules (incoming/outgoing, management), IP masquerading, 1:1 NAT, Double-NAT, Masquerading NAT, Destination NAT, Hairpin NAT, DoS Protection, Access Control Lists (ACLs)

Description
Industrial Firewall, Router, Transparent (Bridging)

Port Type and Quantity
4 x 10/100BASE-TX, TP-cable, RJ45-socket, Autocrossing, Autonegotiation, Autopolarity  4 x 10/100BASE-TX, TP-cable, RJ45-socket, Autocrossing, Autonegotiation, Autopolarity; 2 x FE/GE SFP slot, optional 2 x SHDSL

Order-No.
see online configurator  see online configurator

Interfaces

V.24 Interface
1 x RJ11 socket (serial interface for device configuration)

USB Interface
1 x USB socket (to connect auto-configuration adapter ACA22-USB)

SD Interface
1 x SD socket (to connect auto-configuration adapter ACA31)

Power Requirements

Power Supply/Signaling Contact
For CC Power Supply: 2 x plug-in terminal block 2-pin, for K9 Power Supply: 1 x plug-in terminal block 3-pin

Power Consumption
max. 19 W

Operating Voltage
2 x 24/36/48 V DC (18 to 60 V DC), or 1 x 60/110/125/220/230 V DC (48 V to 320 V DC) and 110/120/220/230 V AC (88 to 265 V AC) or 2 x 48-320 V DC and 88-265 V AC

Software

Software Version
HiSecOS 03.0

Security
Firewall rules (incoming/outgoing, management), DoS prevention, IPSec VPN, Layer 3 and Layer 2 Access Control Lists (ACL), ACL flow based limiting, Audit trail, Management VLAN, Role based Access Control, IEEE 1686 compliant configuration possible, Ingress storm protection, Deep Packet Inspection (DPI) - IPS and Modbus, Firewall Leaning Mode (FLM), Authentication using LDAP

Routing
VLAN and port based routing, static routing, multilisting, Port, port forwarding, Static and Dynamic ARP entries, OSPFv2, Tracking Framework for Static Routing

Multipoint VPN
IPSec, IKE v1/v2, 3DES, AES (-128, -192, -256), Pre-Shared Key (PSK), X.509v3 certificates, MD5, SHA-1, Hub-and-Spoke

Management
SNMPv3, SSH2/SFTP, HTTPS, V.24 CLI, SNMPv1/v2, local and central User Management (RADIUS), HiDiscovery v2, Industrial HiVision, HiView

Diagnostics
LEDs (Power, Link Status, Data, Status, ACA, RM), Signal Contact (24 V DC/1 A), Log File, Syslog, Configuration check RMON (Statistic), SFP diagnostics (temperature, optical transmit and receive power), trap for changes and configuration saves, Counter for ACL Rules

Configuration
Command Line Interface (CLI), web interface, Auto Configuration Adapter (ACA22, ACA31), HiDiscovery v2, local & central user management (RADIUS), Industrial HiVision, HiView

Other Services
NTP, VLAN support (IEEE 802.1Q), rate limiter, QoS 8 classes, port prioritisation IEEE 802.1Q/p, VLAN IEEE 802.1Q

Redundancy Functions
VRRP (Virtual Router Redundancy Protocol), Tracking Framework for VRRP

Protocols
Serial, HTTPS, SSH, SNMP V1/V2/V3, LLDP

Mechanical Stability

IEC 60068-2-27 Shock
15 g, 11 ms duration, 18 shocks

IEC 60068-2-6 Vibration
1 mm, 2 Hz to 13.2 Hz, 0.7 g, 13.2 Hz to 100 Hz

Construction

Weight
1.2 to 1.9 kg

Mounting
DIN Rail 35 mm

Protection Class
IP20

Dimensions (W x H x D)
Temperature Standard (S): 90 x 164 x 120 mm (for WAN: 99); 108 x 164 x 120 mm (for WAN: H2)
Temperature Extended (T, E): 98 x 164 x 120 mm (for WAN: 99); 116 x 164 x 120 mm (for WAN: H2)

Ambient Conditions

Operating Temperature
-40 °C to +70 °C

Relative Humidity (non-condensing)
10% to 85%

Storage/Transport Temperature
-40 °C to +85 °C

Approvals

Germanischer Lloyd

Manufacturer Declaration of Conformity
CE, C-Tick, FCC

Safety of Industrial Control Equipment
CUL 508

Hazardous Locations
CUL Approval according to ISA-12.12.-01 Class 1 Div. 2 Group A, B, C, D

Substation
EN 61850-3, IEEE 1613

Traffic Controller
NEMA TS 2

Scope of Delivery and Accessories

Scope of Delivery
Device, terminal block, operating instructions, CD-manual

Accessories to Order Separately
Rail power supply SPS 30, SPS 80 EEC, SPS 120 EEC, terminal cable, network management Industrial HiVision, Auto-configuration adapter (ACA22-USB EEC or ACA31), 19" installation frame

Reliability

MTBF Range
46.3 to 67.1 years

Warranty
5 years standard

NOTE: These are the prominent technical specifications. For complete technical specifications visit: www.hirschmann.com
Multi-port Industrial Firewall Configurations
EAGLE20-0400 and EAGLE30-0402

Design/Model
- EAGLE20 = Security Router
- EAGLE30 = Security Router

Fast Ethernet Ports
- 04 = 4 x 10/100 Mbit/s

Gigabit Ethernet Ports
- 00 = 0 x 1000 Mbit/s
- 02 = 2 x 1000 Mbit/s

Type Uplink Ports
- 206 = All SFP slots
- 999 = Not available

Remaining Ports
- TT = All Twisted Pair

Cellular Ports
- 9 = Not available

WAN Ports
- 99 = Not present
- H2 = 2 x SHDSL

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 24/36/48 V DC
- K9 = 1 x 60/110/125/220/250 V DC and 110/120/220/230 V AC
- KK = 2 x 48-320 V DC and 88-265 V AC

Approvals
- Z9 = CE, FCC, EN 61131, (EN 60950)
- Y9 = Z9 + cUL508
- X9 = Z9 + cUL508 + ISA 12.12
- U9 = Z9 + GL (ABS, BV, DNV, LR)
- UX = U9 + cUL508 + ISA 12.12
- UT = U9 + cUL508 + EN50121-4
- Z9 + CE, FCC, EN 61131, (EN 60950)
- T9 = Z9 + IEC61850-3, IEEE1613
- V9 = Z9 + IEC61850-3, IEEE1613
- VY = V9 + cUL508
- UY = U9 + cUL508
- UX = U9 + cUL508 + ISA 12.12
- UT = U9 + cUL508 + EN50121-4
- Z9 + CE, FCC, EN 61131, (EN 60950)
- T9 = Z9 + IEC61850-3, IEEE1613
- V9 = Z9 + IEC61850-3, IEEE1613
- VY = V9 + cUL508
- UY = U9 + cUL508
- UX = U9 + cUL508 + ISA 12.12
- UT = U9 + cUL508 + EN50121-4
- Z9 + CE, FCC, EN 61131, (EN 60950)
- T9 = Z9 + IEC61850-3, IEEE1613
- V9 = Z9 + IEC61850-3, IEEE1613
- VY = V9 + cUL508
- UY = U9 + cUL508
- UX = U9 + cUL508 + ISA 12.12
- UT = U9 + cUL508 + EN50121-4
- Z9 + CE, FCC, EN 61131, (EN 60950)
- T9 = Z9 + IEC61850-3, IEEE1613
- V9 = Z9 + IEC61850-3, IEEE1613
- VY = V9 + cUL508
- UY = U9 + cUL508
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- T9 = Z9 + IEC61850-3, IEEE1613
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- T9 = Z9 + IEC61850-3, IEEE1613
- V9 = Z9 + IEC61850-3, IEEE1613
- VY = V9 + cUL508
- UY = U9 + cUL508
- UX = U9 + cUL508 + ISA 12.12
- UT = U9 + cUL508 + EN50121-4

OEM Type
- HS = Hirschmann Standard
- Configuration
- E = Standard Configuration

Software Level
- 3F = Layer 3 Firewall Software
- MB = 3F + Modbus Enforcer

Software Version
- XX.X.XX = Current Software Release
- 02.0.00 = Software Release 2.0
- 03.0.00 = Software Release 3.0

NOTE: The part number categories (OEM Type, Configuration and Software Version) are optional.