HIRSCHMANN

A **BELDEN** BRAND

EAGLE20 Security Router

**The new industrial security router –
now with a new ruggedized housing
and new EAGLE Software 4.3.**

EAGLE20 – playing it safe in industrial environments.

EAGLE20 family routers are deployed as "industrial firewalls" at the machine and subsystem level. They offer unparalleled simplicity and reliability, providing local support for the full range of control applications, remote operation, simple links to adjacent processes and VPN connectivity between multiple machines. Five devices – one software solution.

Five versions – one Software
- EAGLE20 TX/TX
- EAGLE20 TX/MM
- EAGLE20 TX/SM
- EAGLE20 MM/TX
- EAGLE20 MM/MM

High-performance industrial security router

Hardware-based VPN encryption

DIN rail mounted

Distributed security system

Simple integration into existing networks without interrupting production

Intuitive user interface

**Ruggedized design for industrial environments**

Redundant ring topology (Layer 2) or virtual firewall interface (Layer 3)

EAGLE Software 4.3 is based on the operating system VxWorks, Firewall with stateful packet inspection engine

NAT (Network Address Translation), port forwarding and full 1:1 NAT functionality
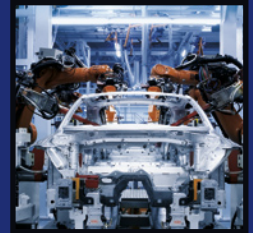
Tomorrow's distributed security solution: EAGLE20.
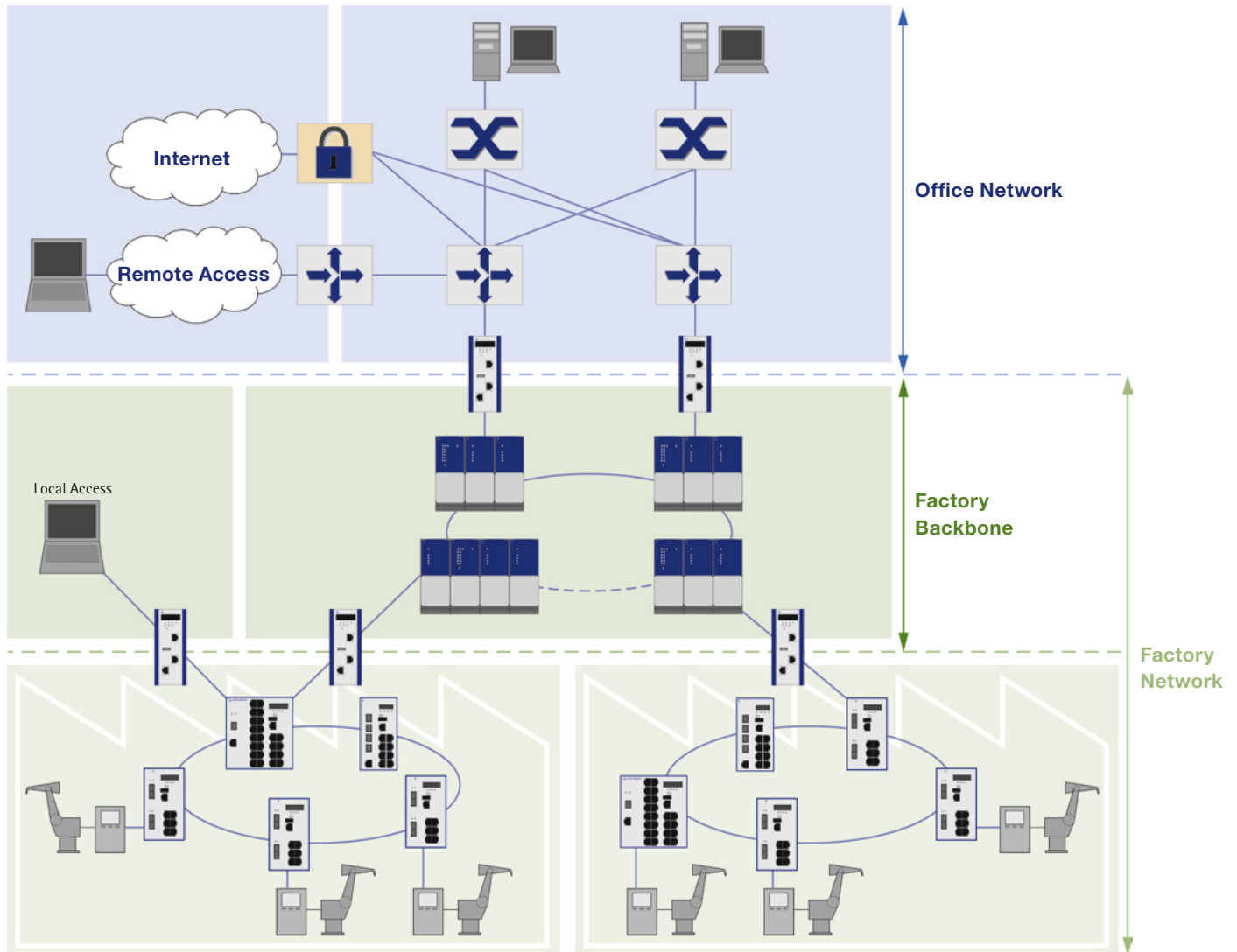
Times change, and so does your network equipment:
The new future-proof EAGLE20 generation from Hirschmann™ offers all the essential features of a security router including a new ruggedized metal housing and VxWorks-based EAGLE Software 4.3 in a choice of five versions. VPN functionality is built in right from the start.

The new EAGLE20 routers can be used to upgrade your security by splitting your company network into compartments. The EAGLE20 also acts as a

universal security module at the machine level where security requirements are becoming increasingly complex. The EAGLE20 protects sensitive areas of your production process and supports long-term integration of Office IT and Industrial IT networks in the company wide environment.

EAGLE20					
Product description	**EAGLE20 TX/TX**	**EAGLE20 TX/MM**	**EAGLE20 TX/SM**	**EAGLE20 MM/TX**	**EAGLE20 MM/MM**
Order No.	943 987-001	943 987-002	943 987-003	943 987-004	943 987-005
Description	Industrial Firewall/VPN router				
Modi	Router, Multi Client Transparent (MCT), PPPoE				
Port type and quantity	Trusted port: 1 x 10/100BASE-TX, TP cable, RJ45 socket, autocrossing, autonegotiation, autopolarity Untrusted port: 1 x 10/100BASE-TX, TP cable, RJ45 socket, autocrossing, autonegotiation, autopolarity	Trusted port: 1 x 10/100BASE-TX, TP cable, RJ45 socket, autocrossing, autonegotiation, autopolarity Untrusted port: 1 x 100BASE-FX, MM cable, SC socket	Trusted port: 1 x 10/100BASE-TX, TP cable, RJ45 socket, autocrossing, autonegotiation, autopolarity Untrusted port: 1 x 100BASE-FX, SM cable, SC socket	Trusted port: 1 x 100BASE-FX, MM cable, SC socket Untrusted port: 1 x 10/100BASE-TX, TP cable, RJ45-socket, autocrossing, autonegotiation, autopolarity	Trusted port: 1 x 100BASE-FX, MM cable, SC socket Untrusted port: 1 x 100BASE-FX, MM cable, SC socket
More interfaces					
Power supply/signal contact	1 x plug-in terminal block, 6-pin				
V.24 interface	1 x RJ11 socket, serial interface for device configuration				
USB interface	1 x USB socket to connect auto configuration adapter ACA 21-USB				
Network size – length of cable					
Twisted Pair (TP)	0 – 100 m	0 – 100 m	0 – 100 m	0 – 100 m	–
Multimode fiber (MM) 50/125 µm	–	0 – 5000 m, 8 dB link budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 800 MHz x km	–	0 – 5000 m, 8 dB link budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 800 MHz x km	0 – 5000 m, 8 dB link budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 800 MHz x km
Multimode fiber (MM) 62.5/125 µm	–	0 – 4000 m, 11 dB link budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 500 MHz x km	–	0 – 4000 m, 11 dB link budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 500 MHz x km	0 – 4000 m, 11 dB link budget at 1300 nm, A = 1 dB/km, 3 dB reserve, B = 500 MHz x km
Singlemode fiber (SM) 9/125 µm	–	–	0 – 32.5 km, 16 dB link budget at 1300 nm, A = 0.4 dB/km, 3 dB reserve, D = 3.5 ps/(nm x km)	–	–
Security					
Stateful Inspection firewall	Firewall rules (incoming/outgoing, modem access, management), IP masquerading, 1-to-1 NAT, DoS limiter, MAC filter, user firewall for external activation of FW rules				
Multipoint VPN	IPSec, IKEv2, DES, 3DES, AES (-128, -192, -256), Pre-Shared Key, X.509v3 certificates, MD5, SHA-1, NAT-T, Firewall rules for every VPN connection, configuration assistant in the web interface, remote enable/disable of connections				
Power requirements					
Operating voltage	9.6 up to 60 VDC, 18 up to 30 VAC				
Power consumption	at 24 VDC max. 6.9 W	at 24 VDC max. 8.1 W	at 24 VDC max. 8.1 W	at 24 VDC max. 8.1 W	at 24 VDC max. 9.5 W
Service					
Management	Command Line Interface (CLI), web interface, auto configuration adapter (ACA 21-USB), DHCP, HiDiscovery, Industrial HiVision				
Diagnostics	LEDs (power, link status, data, error, ACA, V24), signal contact (24 VDC/1 A), log file, syslog, configuration check				
Protocols	Serial, HTTPS, SSH, SNMP (v1/v2/v3), LLDP				
Other services	DHCP server/client, DHCP Relay/Option 82, DynDNS, firewall access via V.24 (PPP), SNTP, VLAN support (IEEE 802.1Q), port forwarding				
Redundancy					
Redundancy functions	Use in redundant network-/ring coupling, firewall redundancy (Layer 4), redundant 24 V power inputs				
Ambient conditions					
Operating temperature	−40°C up to +60°C				
Storage/transport temperature	−40°C up to +70°C				
Relative humidity	10 % up to 95 % (non-condensing)				
MTBF	27.4 years; MIL-HDBK 217F: Gb +25°C	26.6 years; MIL-HDBK 217F: Gb +25°C	25.2 years; MIL-HDBK 217F: Gb +25°C	26.5 years; MIL-HDBK 217F: Gb +25°C	25.7 years; MIL-HDBK 217F: Gb +25°C
Mechanical construction					
Dimensions (W x H x D)	60 mm x 145 mm x 125 mm				
Mounting	DIN rail 35 mm				
Weight	600 g	615 g	615 g	615 g	630 g
Protection class	IP20				

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Mechanical stability					
IEC 60068-2-27 shock	15 g, 11 ms duration, 18 shocks				
IEC 60068-2-6 vibration	1 mm, 2−13.2 Hz, 90 min.; 0.7 g, 13.2−100 Hz, 90 min.; 3.5 mm, 3−9 Hz, 10 cycles, 1 octave/min.; 1 g, 9−150 Hz, 10 cycles, 1 octave/min.				
EMC interference immunity					
EN 61000-4-2 electrostatic discharge (ESD)	6 kV contact discharge, 8 kV air discharge				
EN 61000-4-3 electromagnetic field	10 V/m (80−2000 MHz)				
EN 61000-4-4 fast transients (burst)	2 kV power line, 1 kV data line				
EN 61000-4-5 surge voltage	Power line: 2 kV (line/earth), 1 kV (line/line)				
EN 61000-4-6 conducted immunity	3 V (10 kHz−150 kHz), 10 V (150 kHz−80 MHz)				
EMC emitted immunity					
EMC emitted immunity	FCC CFR47 part 15 class A; EN 55022 class A				
Approvals					
Safety of industrial control equipment	cUL 508 (pending)				
German Lloyd	German Lloyd (pending)				
Scope of delivery and accessories					
Scope of delivery	Device, terminal block, operating instructions, CD-manual				
Accessories*	Rail power supply RPS 30, RPS 80 EEC, RPS 120 EEC, terminal cable, network management Industrial HiVision, modem cable, auto configuration adapter ACA 21-USB, 19" rack mount kit				

*must be ordered separately
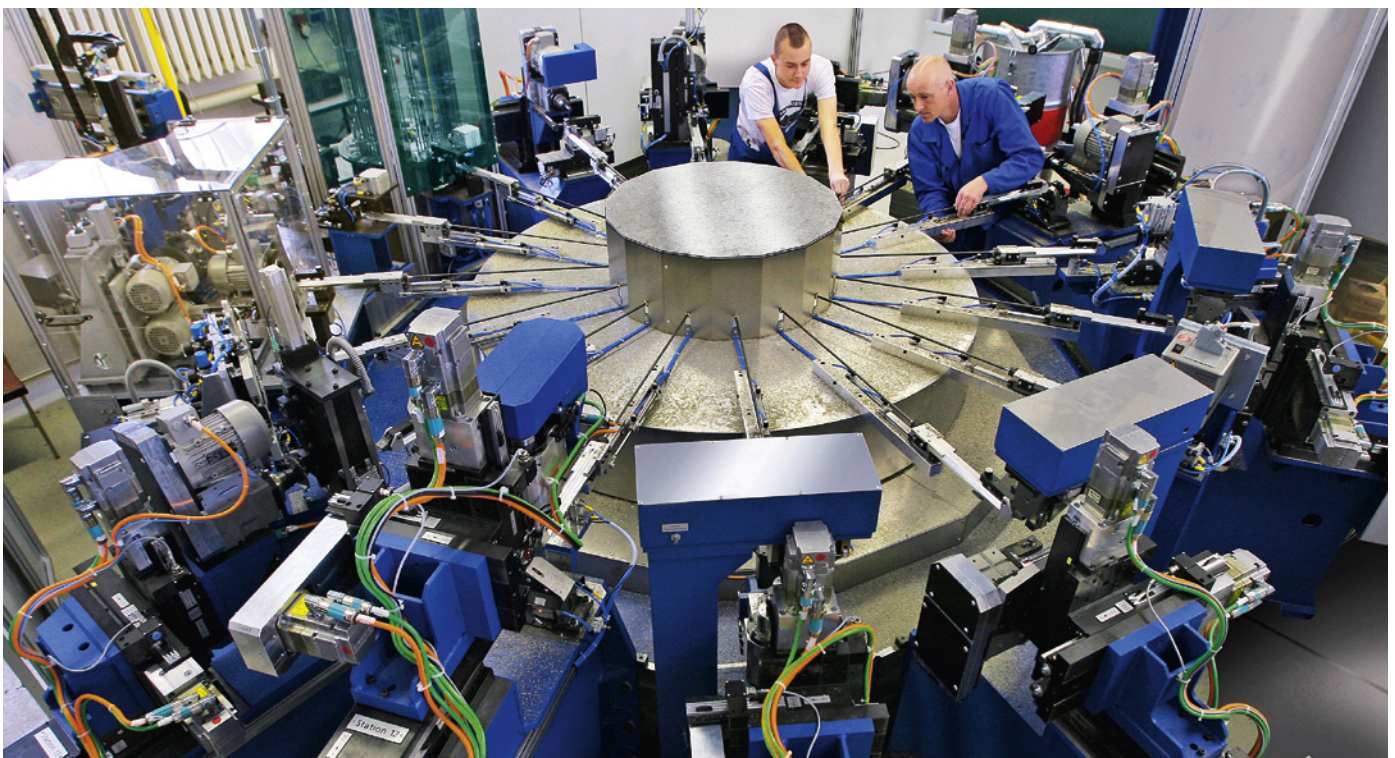
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