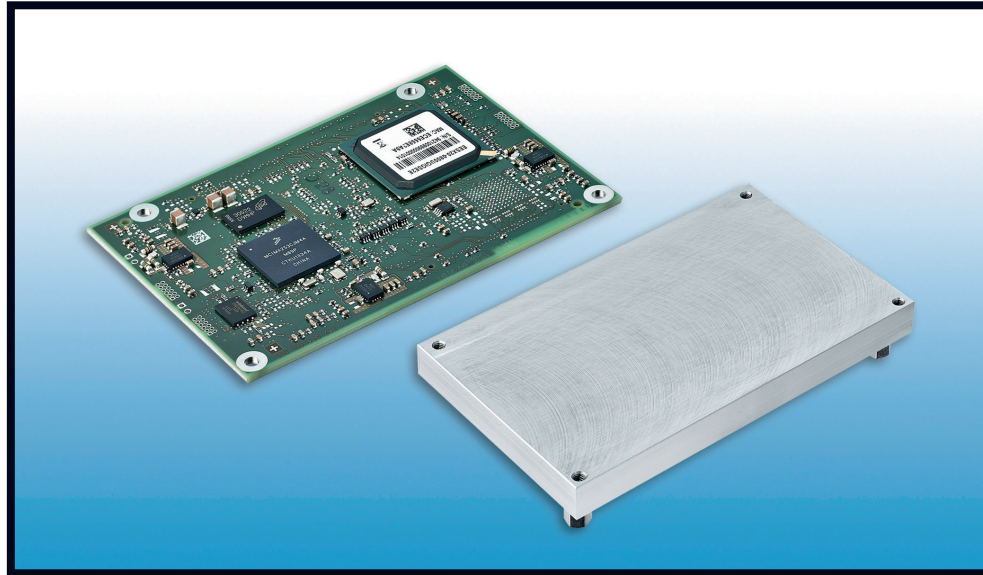# HIRSCHMANN

A **BELDEN** BRAND

Product Bulletin

PB 00006AG

Hirschmann™ Embedded Ethernet EESX20 and EESX30 switches

Cost-effective solution for integrating powerful Gigabit switch technology into automation equipment.

The new Embedded Ethernet EESX20 and EESX30 switches from Hirschmann provide powerful managed Gigabit switch capability for automation equipment.

- This module allows automation equipment to be extended to include state-of-the-art switch technology
- The additional network functionality gives the equipment sustained competitive advantages
- Development process and time-to-market are significantly shortened thanks to Embedded Ethernet

The new Embedded Ethernet EESX20 and EESX30 switches from Hirschmann provide automation equipment that already has an Ethernet interface with the complete functional scope of a managed standalone switch. The EESX20 offers eight Fast Ethernet ports. For high volumes of data and fast transmission, the EESX30 also features two additional Gigabit uplink ports. Since all the functions can be updated via a software update, the Embedded Ethernet switches from Hirschmann offer maximum flexibility and future security.

Both versions are implemented as compact modules and are mounted directly on the main board of the automation equipment. An optional development kit is also available, which enables manufacturers to quickly and easily design any products into their automation equipment.

Applications

The Embedded Ethernet EESX20 and EESX30 switches from Hirschmann can be used wherever automation equipment needs to be expanded and upgraded to include additional switch functions. They also facilitate space-saving solutions in other areas, such as safety devices in transformer stations, remote terminal units in wind turbines or control equipment in trains.

Your Benefits

Thanks to its modular design, the MSP30 can be used to create tailor-made and hence cost-effective solutions for your applications, allowing you to respond flexibly to future requirements without having to replace the entire switch. You can even use your existing MSP30 switch modules in the new routing version.

The MSP Layer 3 software brings routing to the shop floor and enables communication between physically separated networks. This allows segmentation of large networks, while the extremely robust design of the MSP enables the user to place the switch in harsh conditions, thus facilitating direct routing to other production floors without needing a backbone router.

A new product to serve your needs.
Be certain.

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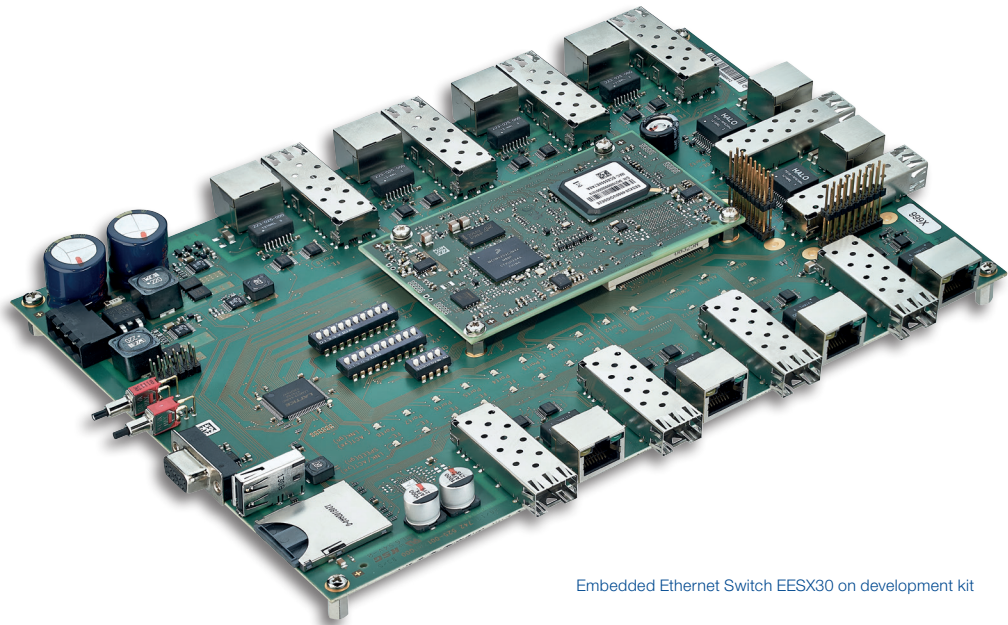**Hirschmann Embedded Ethernet Switches EESX20 and EEXS30**

The Embedded Ethernet EESX20 switch has eight Fast Ethernet ports that can be configured for either 10/100BASE-TX or 100BASE-FX. The EESX30 version has an additional two gigabit ports, configurable as 10/100/1000BASE-TX or 100/1000BASE-FX. Both variants offer extensive management and filter functions, plus a variety of redundancy protocols and port security.

The Embedded Ethernet EESX20 and EESX30 switches can be integrated into the Hirschmann network management software Industrial HiVision.

Hirschmann Embedded Ethernet EESX20 and EESX30 switches offer Fast Ethernet and Gigabit Ethernet layer 2 functions.

The Advantages at a Glance

- Eight fast Ethernet ports for 10/100BASE-TX or 100BASE-FX , and optional two Gigabit Ethernet ports for 10/100/1000BASE-TX or 100/1000BASE-FX
- Management via web browser, Simple Network Management Protocol (SNMP), Remote Monitoring (RMON), Virtual Local Area Network (VLAN), Multicast, Command Line Interface (CLI)
- Port and cyber security
- Redundancy protocols Rapid Spanning Tree Protocol (RSTP) and Media Redundancy Protocol (MRP)
- Functional scope can be upgraded via software update
- Extended temperature range from -40°C to +85°C
- Compact construction (102 mm x 69 mm x 8 mm)
- Easy to install
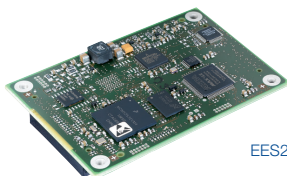- Typical power consumption 3 W/5 W at 3.3 V

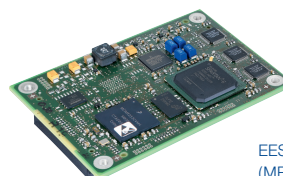Embedded Ethernet Switch EESX30 on development kit

Technical Information

Product Description		
Type: Embedded Ethernet Switch	**EESX20-0800xxx**	**EESX30-0802xxx**
Description	Managed Fast Ethernet Switch according to IEEE 802.3, store-and-forward-switching	
Port Type and Quantity	8 x 10/100 MBit/s ports	8 x 10/100 MBit/s + 2 x 10/100/1000 MBit/s ports
Order-No.	942 100-999 (configurable)	
More Interfaces		
Control/Status	RS232 (configuration), SPI (status), SNMP traps (alarms), SNMP	
Host Interface	120-pin and 80-pin male connectors	
Network		
Line-/Star Topology	Any	
Redundancy	RSTP, Media Redundancy Protocol (MRP, IEC 62439-2), 200 ms recovery	
Power Requirements		
Operating Voltage	+3.3 V +/- 5%	
Power Consumption	3 W	5 W
Software		
Management	Serial interface, web interface, SNMP v1/v2/v3, Telnet, SSHv2, HTTP, HTTPS, TFTP, SFTP, SCP	
Diagnostics	RMON (groups 1, 2, 3, 9), log file, syslog, port mirroring, SNMP traps (alarms)	
Configuration	Command line interface (CLI), TELNET, DHCP, BootP, HiDiscovery, text based configuration file	
Security	Port security, 802.1x, ingress storm protection	
Redundancy Functions	RSTP, MRP, link aggregation	
Filter	8 QoS classes, port priority, VLAN, IGMP snooping per VLAN, fast aging	
Time Synchronization	SNTP server and client	
Mechanical Construction		
Dimensions (W x H x D)	102 mm x 69 mm x 8 mm, with cooling adaptor 105 mm x 72 mm x 16 mm	
Weight	40 g	
Ambient Conditions		
Operating Temperature	-40°C to +85°C (16h) permanent +70°C	
PCB Protection	Optional: conformal coating	
Accessories		
Accessories to Order Separately	EESX30-0802 development kit – Order-No. 942 099-001	

Additional Hirschmann™ Embedded Ethernet Switches
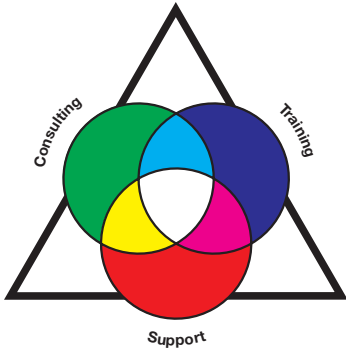

EES20: 6-port Fast Ethernet switch

EES25: 6-port switch with impact-free redundancy (MRP, HSR) and real time (IEEE 1588)

The Belden® Competence Center

As the complexity of communication and connectivity solutions has increased, so have the requirements for design, implementation and maintenance of these solutions. For users, acquiring and verifying the latest expert knowledge play a decisive role in this. As a reliable partner for end-to-end solutions, Belden offers expert consulting, design, technical support, as well as technology and product training courses from a single source: Belden Competence Center. In addition, we offer you the right qualification for every area of expertise through the world's first certification program for industrial networks. Up-to-date manufacturer's expertise, an international service network and access to external specialists guarantee you the best possible support for products from Belden®, GarrettCom®, Hirschmann™, Lumberg Automation™ and Tofino Security™. Irrespective of the technology you use, you can rely on our full support – from the imple-mentation to the optimization of every aspect of daily operations.

Always Stay Ahead with Belden

In a highly competitive environment, it is crucial to have reliable partners who are able to add value to your business. When it comes to signal transmissions, Belden is the number one solutions provider. We understand your business and want to know your specific challenges and targets to see how effective signal transmission solutions can push you ahead of the competition. By combining the strengths of our five leading brands, Belden®, GarrettCom®, Hirschmann™, Lumberg Automation™ and Tofino Security™, we are able to offer the solution you need. Today, it may be a single cable, a switch or a connector, thus solving a specific issue; tomorrow, it can be a complex range of integrated applications, systems and solutions.

About Belden

Belden Inc., a global leader in high quality, end-to-end signal transmission solutions, delivers a comprehensive product portfolio designed to meet the mission-critical network infrastructure needs of industrial, enterprise and broadcast markets. With innovative solutions targeted at reliable and secure transmission of rapidly growing amounts of data, audio and video needed for today's applications, Belden is at the center of the global transformation to a connected world. Founded in 1902, the company is headquartered in St. Louis, USA, and has manufacturing capabilities in North and South America, Europe and Asia.

For more information, visit us at www.beldensolutions.com and follow us on Twitter @BeldenInc.