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Product Bulletin

PB 1080HE

SPIDER II 16TX EEC and SPIDER II 16TX/2DS-S EEC from Hirschmann™

The new entry-level switches enable economic data communication solutions in harsh or potentially hazardous industrial environments. With their high port density, they offer excellent value for money.

For maximum flexibility, optical ports enable dual-speed optical uplinks and support Fast Ethernet and Gigabit Ethernet SFP transceivers. The strong metal housing, extra-wide operating temperature range, redundant power supply, ATEX and ISA 12.12.01 certifications guarantee a high level of reliability.

- 16 Fast Ethernet ports per switch for a highly competitive price per port
- Maximum flexibility provided by dual-speed optical uplinks for Fast Ethernet and Gigabit Ethernet SFP transceivers
- Wide range of applications, due to the robust design and approvals for use in potentially hazardous areas

The SPIDER II 16TX EEC and SPIDER II 16TX/2DS-S EEC entry-level Ethernet switches are DIN-Rail mountable and use plug-and-play technology for quick and reliable installation. The switches can be cascaded as often as required, permitting implementation of decentralized networks with short transmission paths, while considerably reducing the cost of cabling. Dual-speed optical uplinks and SFP transceivers for various types of fiber optic cables enable the bridging of distances up to 120 kilometers.

Using Gigabit SFP transceivers ensures that applications with high data volumes do not suffer from bottlenecks, so smooth communication is always guaranteed.

Applications

The SPIDER II 16TX EEC and SPIDER II 16TX/2DS-S EEC can be used anywhere where the network of devices is required via line or star topology. This makes these unmanaged switches suitable for a wide range of applications, including mechanical engineering and plant construction, where an ever-increasing number of IP devices require field-level networking. Finally yet most importantly, these unmanaged switches are ATEX and ISA 12.12.01 approved – providing secure data communications, even in potentially explosive atmospheres.

Customer benefits

The entry-level SPIDER II 16TX EEC and SPIDER II 16TX/2DS-S EEC high port density Ethernet switches provide low-cost entry into Industrial Ethernet technology. Dual-speed optical uplinks can be equipped with small form-factor pluggable (SFP) transceivers for various types of fiber optic cable to facilitate flexible backbone connections. In addition, the strong metal case design can withstand extreme temperature ranges. To further increase reliability, a second power supply can be connected.

A new product to serve your needs.
Be certain.

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SPIDER II 16TX EEC and SPIDER II 16TX/2DS-S EEC from Hirschmann™

The SPIDER II 16TX EEC and SPIDER II 16TX/2DS-S EEC have 16 RJ45 ports that support Fast Ethernet (10/100 Mbit/s).

The SPIDER II 16TX/2DS-S EEC, with its optical ports, also provides dual-speed (100/1000 Mbit/s) uplinks for which SFP transceivers for single or multi-mode fiber are available.

BIDI (bi-directional) SFP transceivers are available for applications requiring the transmission of data in both directions via a single fiber. Other features include an extra wide operating temperature range from -40°C to +70°C, high level of electromagnetic compatibility, resistance to impacts and vibration, a redundant 24 V power supply and a metal housing that is highly durable with one of the smallest form factors in the market.

The two new robust SPIDER family switches offer more flexibility and higher availability – and that's genuine added value!

Benefits at a glance

- High port density offering excellent value for money
- Greatest possible flexibility thanks to dual-speed optical uplinks for SFP transceivers, including BIDI versions
- Wide range of applications facilitated by the robust design and approvals for potentially explosive atmospheres (ATEX, ISA 12.12.01)
- Extra wide operating temperature range from -40°C to +70°C
- High level of electromagnetic compatibility, plus resistance to impacts and vibration
- Redundant 24 V power supply
- Compact dimensions (66 mm x 138 mm x 111 mm)
- Rail-mounted
- Activated by plug and play
- Cascadable for cost-effective cabling
- Perfectly geared to Ethernet cable from Belden® and the complete product portfolio of Hirschmann™ Ethernet Switches

Technical Information

Product Description		
Type	**SPIDER II 16TX EEC**	**SPIDER II 16TX/2DS-S EEC**
Description	Entry Level Industrial ETHERNET Rail-Switch, Store and Forward Switching Mode, Ethernet (10 Mbit/s) and Fast-Ethernet (100 Mbit/s)	Entry Level Industrial ETHERNET Rail-Switch, Store and Forward Switching Mode, 10/100/1000 Mbit/s Ethernet
Switching/Routing	Unmanaged	
Port type and Quantity	16 x 10/100BASE-TX, TP-cable, RJ45 sockets, auto-crossing, auto-negotiation, auto-polarity	16 x 10/100BASE-TX, 2 x FE/GE-SFP slots, TP-cable, RJ45 sockets, auto-crossing, auto-negotiation, auto-polarity
Order No.	942 120-001	942 121-001
More Interfaces		
Power supply/Signaling contact	1 plug-in terminal block, 5-pin, no signaling contact	
Network Size - Length of Cable		
Twisted pair (TP)	0 - 100 m	0 - 100 m
Multimode fiber (MM) 50/125 µm	n/a	0 - 550 m, 0 - 7,5 dB link budget (with M-SFP-SX/LC)
Multimode fiber (MM) 62,5/125 µm	n/a	0 - 275 m, 0 -7,5 dB Link Budget at 850 nm (with M-SFP-SX/LC)
Singlemode fiber (SM) 9/125 µm	n/a	0 - 20 km, 0 - 11 dB link budget (with M-SFP-LX/LC)
Singlemode fiber (LH) 9/125µm (long haul transceiver)	n/a	16 - 80 km, 6 - 22 dB link budget (with M-SFP-LH/LC); 44 - 120 km, 13 - 32 dB link budget (with M-SFP-LH+/LC)
Network Size - Cascadibility		
Line - / Star topology	Any	
Power Requirements		
Operating Voltage	18 to 32 V DC redundant	
Current Consumption at 24V DC	0,41 A	0,45 A
Power Consumption	9,8 W	10,7 W
Service		
Diagnostics	LEDs (power, link status, data, data rate)	
Ambient Conditions		
Operating Temperature	-40°C to +70°C	
Storage/Transport Temperature	-45°C to +85°C	
Relative Humidity (non-condensing)	5% to 95%	
Mechanical Construction		
Mounting	DIN Rail	
Protection Class	IP30	
Dimensions (WxHxD)	66 mm x 138 mm x 111 mm	
Weight	730 g	
Approvals		
Safety of Industrial Control Equipment	cUL 60950-1	
Hazardous Locations	ATEX, ISA 12.12.01	
Reliability		
MTBF	28 years	
Warranty	5 years (standard)	
Scope of Delivery and Accessories		
Scope of Delivery	Device, terminal block, operating manual	
Accessories	Rail power supply RPS 30, RPS 80 EEC or RPS 120 EEC	

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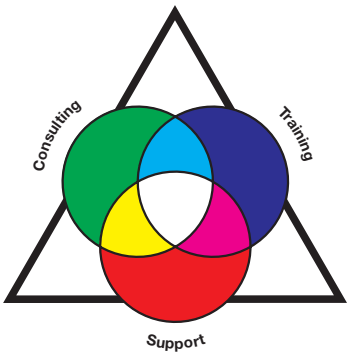
The Belden® Competence Center



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 implementation 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.

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