The SPIDER II 16TX EEC and SPIDER II 16TX/2DS-S EEC from Hirschmann™ provide excellent value for money in terms of high port density. With 16 Fast Ethernet ports per switch, their competitive price per port makes them a cost-effective choice for various applications.

**Applications**

The SPIDER II 16TX EEC and SPIDER II 16TX/2DS-S EEC can be used in a wide range of applications, including mechanical engineering and plant construction, where an increasing number of IP devices require field-level networking. These switches are ATEX and ISA 12.12.01 approved, ensuring secure data communications 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. The strong metal case design can withstand extreme temperature ranges, improving reliability. To further increase reliability, a second power supply can be connected.

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

**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.

**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 (138 x 65 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

<table>
<thead>
<tr>
<th>Product Description</th>
<th>SPIDER II 16TX EEC</th>
<th>SPIDER II 16TX/2DS-S EEC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>Entry Level Industrial ETHERNET Rail-Switch, Store and Forward Switching Mode, Ethernet (10 Mbit/s) and Fast-Ethernet (100 Mbit/s)</td>
<td>Entry Level Industrial ETHERNET Rail-Switch, Store and Forward Switching Mode, 10/100/1000 Mbit/s Ethernet</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>16 x 10/100BASE-TX, TP-cable, RJ45 sockets, auto-crossing, auto-negotiation, auto-polarity</td>
<td>16 x 10/100BASE-TX, 2 x FE/GE-SFP slots, TP-cable, RJ45 sockets, auto-crossing, auto-negotiation, auto-polarity</td>
</tr>
<tr>
<td><strong>Switching/Routing</strong></td>
<td>Unmanaged</td>
<td></td>
</tr>
<tr>
<td><strong>Port type and Quantity</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Order No.</strong></td>
<td>942 120-001 942 121-001</td>
<td>942 121-001</td>
</tr>
</tbody>
</table>

### More Interfaces
- **Power supply/Signaling contact**: 1 plug-in terminal block, 5-pin, no signaling contact

### Network Size - Length of Cable
- **Twisted pair (TP)**
  - SPIDER II 16TX EEC: 0 - 100 m
  - SPIDER II 16TX/2DS-S EEC: 0 - 100 m
- **Multimode fiber (MM) 50/125 μm**: n/a
  - SPIDER II 16TX EEC: 0 - 550 m, 0 - 7.5 dB link budget (with M-SFP-SX/LC)
  - SPIDER II 16TX/2DS-S EEC: 0 - 275 m, 0 - 7.5 dB Link Budget at 850 nm (with M-SFP-SX/LC)
- **Multimode fiber (MM) 62.5/125 μm**: n/a
  - SPIDER II 16TX EEC: 0 - 20 km, 0 - 11 dB link budget (with M-SFP-LX/LC)
  - SPIDER II 16TX/2DS-S EEC: 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)
- **Singlemode fiber (SM) 9/125 μm**: n/a
- **Singlemode fiber (LH) 9/125μm (long haul transceiver)**: n/a

### 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
  - SPIDER II 16TX EEC: 0.45 A
  - SPIDER II 16TX/2DS-S EEC: 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
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.