



**HIRSCHMANN**

A **BELDEN** BRAND

## Leading Networking Solutions for Industrial & Mission Critical Applications



**Edition 7**

**Hirschmann™ Networking  
Equipment Maximizes  
Throughput, Simplifies  
Installation, and Reduces  
Total Cost of Ownership**



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A **BELDEN** BRAND

Belden® Combines the Strength  
of Hirschmann™ Switches and Belden  
Ethernet Cables for a Complete  
End-to-End Connectivity Solution.

**You Can Depend On Us To Keep  
Your Mission-Critical Systems Up  
And Running.**





## More Convenience and More Solutions for Networks in Harsh Environments and Large-scale Infrastructures

### Belden Industrial Solutions

Belden has brought together a comprehensive line of industrial cabling, connectivity and networking devices, offering the most reliable communications solutions for your application. Whether you are networking your devices to the controllers, connecting the controllers to the control room, relaying data between the control room, the engineering department, and remote manufacturing sites – or all of the above – Belden has the products you need to seamlessly connect your communications.

From the petrochemical, automotive, pharmaceutical, power generation, pulp and paper, metals, food and beverage, or general manufacturing plant to the corporate headquarters – and everywhere in between – Belden has your signal transmission solution. Belden offers the most dependable network and communications system performance in tough and mission-critical environments.

### Our Synergy Ensures Continuous Performance

With the Hirschmann™ and Lumberg Automation™ product line additions to the Belden offering, our line of *Complete Industrial Solutions* is uniquely positioned to provide the best network and communications infrastructure possible. Belden products and systems expertise means that you can maintain ongoing operations without interruption and costly downtime – in any environment. Here are a few more good reasons why Belden is your best choice for industrial networking, communications and control:

- We have the expertise to integrate your industrial and commercial networks.
- Our products are engineered to perform in the harshest and most demanding environments.
- We offer the broadest selection of products, for a complete, end-to-end Ethernet solution.

- Our sales and engineering professionals can audit, recommend/design, configure and assemble the products and systems to your specific requirements.
- Our global manufacturing, distribution and support network make our products and services available to you globally.

### Offering Comprehensive Service & Support

Belden recognizes that comprehensive know-how is necessary to ensure an optimized, homogenous solution. We also know that consultation, support and training requires more than just a general understanding of the products, technologies and market trends. It requires a solid understanding of the application and the ability to provide the type of support that is needed – when and where it is needed. It requires the four key service and support areas that are critical to success:

- Network Design
- Training
- Technical Support
- System Performance

### Network Design

Belden eliminates your design challenges because we understand the issues surrounding the design and operation of networks in industrial and mission-critical environments. Our engineers are available to work with you to deliver high-availability networks that meet your enterprise-wide IT needs. Whether it's designing systems for Greenfield facilities, or integrating into existing IT environments, our highly-trained staff lifts the design burden from your shoulders to ours.

We'll consult with you to develop a strategy – or we'll develop and implement your full design – either way our staff is available to you.

### Training

Backed by years of meeting and exceeding the needs of a broad range of end-user applications, Belden is ideally suited to offer beginners and networking experts alike the opportunity to expand their understanding of mission-critical networks.

Belden has developed a series of training programs that are given by Belden-certified individuals – all experts in industrial networking and cabling.

### Technical Support

At Belden, our personnel are poised to assist our customers – ensuring maximum uptime and reliability. And with offices in North America, Asia and Europe, Belden can respond globally.

### System Performance

If Belden designs it, we guarantee performance – period. We are committed to ensuring world-class signal connectivity and to significantly improve your operational up-time. All Belden components are "designed" to deliver optimum performance: from connectors, to cable, to routers and switches. Based on this comprehensive product portfolio, we have the necessary industrial solutions DNA to deliver reliability.

For more information on our service and support offering, including our warranties, please go to the Belden web site at [www.belden.com/industrial](http://www.belden.com/industrial) to locate a Belden sales representative near you.

## The Hirschmann Brand of Ethernet Switches and Connectivity Products Set the Standard for Quality, Reliability and Service.

Hirschmann™ Switches  
Maximize Throughput,  
Simplify Installation, and  
Reduce Overall Costs.



Hirschmann™, A BELDEN BRAND provides the industry with leading Ethernet networking technology and sets the standards for quality, reliability and service.

**Robust** - Hirschmann's years as a networking leader and pioneer, the use of premium electronic components and effective (fan-less) thermal management translates to superior performance and the highest MTBF (mean time between failure) values possible - even at operational temperatures as high as +85°C.

**Easy to Configure** - Our managed switches are easy to configure with an integrated password controlled web interface, via SNMP or CLI (command line interface), providing secure remote configuration through the network. Configuration data and device OS/firmware can be saved and stored on an external flash-based configuration storage device, simplifying and automating commissioning and device replacement.

**Assured Enterprise Interoperability** - All switches have IT-compatible managed-switch functionality with SNMP and RMON and are compatible with industry standard network management tools and other name brand switches.

**Media Redundancy Options** - By using HIPER-Ring protocol, redundant network topologies are simplified - resulting in recovery from media failure within 50 ms (Gigabit ring) or 300 ms (100 Mbps ring). RSTP (Rapid Spanning Tree Protocol) and trunk/link aggregation is also available.

**EtherNet/IP and PROFINET Profiles** - Permits switch management and configuration from within RSLogix 5000 and Step 7. Examples include: displaying switch core temperature, redundancy, and link status, and security violations.

**Fault Contact(s) and SNMP Trap** - 97% of Hirschmann switches include a minimum of one configurable fault contact and all managed switches offer the ability to send a SNMP Trap, which enables clear indication when one or both power inputs are lost, a link is down, an unauthorized device is connected to the switch, or a predetermined temperature range has been breached, etc.

**Broad Product Line** - The breadth of our product line is un-matched and includes serial to fiber optic converters, fieldbus repeaters for all major fieldbus protocols, managed and unmanaged Ethernet switches (3-52 ports) with an almost limitless mix of copper/fiber ports, Layer 3 switches, media converters, wireless Access Points/Clients/Bridges, firewalls with VPN tunneling and deep packet inspection and network management software (SNMP and OPC).

**Network Software** - Monitoring and visualizing your network is made easy with the use of our Industrial HiVision network management software. Requiring little or no IT knowledge, Industrial HiVision allows users to monitor alarms, bandwidth utilization, and availability of networked devices - not just switches. Industrial HiVision allows the user to manage a single switch or multiple switches at the same time, significantly simplifying commissioning.

**Design Innovation** - Continuous product innovations to meet expanding customer needs. This includes Gigabit (even 10 Gigabit speeds) industrial profiles, software tools, various form factors, e.g. IP67 industrial watertight switches, and the integration of a USB port to facilitate quick recovery of a switch and the network.



## Accessories

### 10Gigabit Ethernet Transceivers

Part No.	Order No.	Description
M-XFP-ZR/LC	943 921-001	10GBASE-SX, 40–80 km 9/125 μm SM
M-XFP-ER/LC	943 920-001	10GBASE-SX, 10–40 km 9/125 μm SM
M-XFP-LR/LC	943 919-001	10GBASE-SX, 2–10 km 9/125 μm SM
M-XFP-SR/LC	943 917-001	10GBASE-SX, 33 m 50/125 μm MM or 300 m w/modal bandwidth 2000 [MHz x km] fiber



## Power Supplies and Programming/Configuration Tools

### Power Supplies

Part No.	Order No.	Description
RPS15	943 662-015	24 V DC rail power supply unit 1.3A at 100 - 240 V AC
RPS30	943 662-003	24 V DC rail power supply unit 1.3A
RPS80 EEC	943 662-080	24 V DC rail power supply unit 3.0A, –25° C up to +70° C
RPS120 EEC	943 662-120	24 V DC rail power supply unit 4.5A, –25° C up to +70° C
RPS120 EEC (CC)	943 662-121	Same as RPS120 EEC, accept with Conformal Coating
RPS60/48V EEC	943 952-001	48 V DC rail power supply unit 1.25A, –10° C up to +70° C
RPS90/48V HV, PoE	943 979-001	48 V DC PoE rail power supply unit 1.9A, –40° C up to +50° C
RPS90/48V LV, PoE	943 980-001	48 V DC PoE rail power supply unit 1.9A, –25° C up to +60° C
PSW 5-24	943 008-001	5 V DC Plug-in rail power supply 0° C up to +40° C
PC150/36V/48V-IP67	943 968-001	DC/DC converter with 36 V/48 V power output, IP 67 rated
PC150/72V/48V-IP67	943 968-001	DC/DC converter with 72 V/48 V power output, IP 67 rated



## ACA - Programming and Configuration Backup

### Programming and Configuration Backup

Part No.	Order No.	Description
ACA 21-USB EEC	943 271-002	USB configuration adapter for storage/backup and device replacement of (managed) RS, MS and MACH switches as well as EAGLE firewalls
ACA21-M12 EEC	943 913-002	M12 configuration adapter for storage/backup and device replacement of (managed) Octopus switches devices
ACA11 EEC	943 751-002	Similar to above ACA adapters, but communication via the device's RJ11 RS232 interface
ACA11-M12 (EEC)	943 972-001	M12 configuration adapter for storage/backup and device replacement of IP67 BAT (wireless) devices
ACA11-miniDIN (EEC)	943 973-001	Mini DIN configuration adapter for storage/backup and device replacement of DIN rail mounted BAT (wireless) devices
Serial/Terminal Cable	943 301-001	Terminal cable for managing and configuring managed switches via the RJ11 RS232 interface



ACA 21-USB EEC



ACA11-M12 (EEC)



ACA11 EEC



ACA11-miniDIN (EEC)



Serial/Terminal Cable