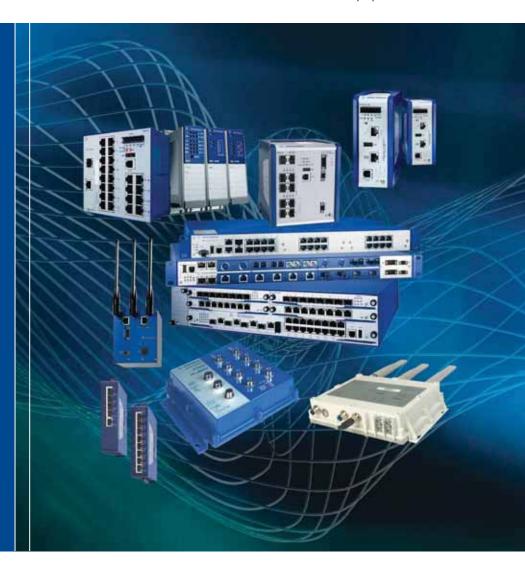# HIRSCHMANN

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

HIRSCHMANN

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** 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.

Compact Managed DIN Rail Mount Switches

EtherNet√IP™
conformance tested

PROFI NET

RS20-0800M2M2SDAE	943 434-003	6 x RJ45, 2 x SC
RS20-0800M2M2SDAP	943 434-004	6 x RJ45, 2 x SC
RS20-0800M4M4SDAE	943 434-017	6 x RJ45, 2 x ST
RS20-0800M4M4SDAP	943 434-018	6 x RJ45, 2 x ST
RS20-1600M2T1SDAE	943 434-025	15 x RJ45, 1 x SC
RS20-1600M2T1SDAP	943 434-026	15 x RJ45, 1 x SC
RS20-1600M2M2SDAE	943 434-005	14 x RJ45, 2 x SC
RS20-1600M2M2SDAP	943 434-006	14 x RJ45, 2 x SC
RS20-2400M2M2SDAE	943 434-043	22 x RJ45, 2 x SC
RS20-2400M2M2SDAP	943 434-044	22 x RJ45, 2 x SC

RS20 Series Compact Switches

300ms HiPer-Ring

All ports are 100 Mbps max.

- Available in 4 to 25-port densities, with and without fiber
- Fiber ports are available in multimode and/or singlemode
- Fully managed (web, SNMP and CLI) – VLAN, IGMP snooping (multicast filtering), port mirroring, port control, port security, link alarms, broadcast limiter, traffic diagnostics, ring redundancy and much more
- Dual power inputs, integrated fault relay and automated configuration recovery for fast device replacement
- 0° C to + 60° C, – 40° C to + 70° C, conformal coating available
- Differentiator between similar switches listed is the firmware level/features (last digit of part number). See page 27 for details.

All Copper

Part No.	Order No.	Ports
RS20-0400T1T1SDAE	943 434-007	4 x RJ45
RS20-0400T1T1SDAP	943 434-008	4 x RJ45
RS20-0800T1T1SDAE	943 434-021	8 x RJ45
RS20-0800T1T1SDAP	943 434-022	8 x RJ45
RS20-1600T1T1SDAE	943 434-023	16 x RJ45
RS20-1600T1T1SDAP	943 434-024	16 x RJ45
RS20-2400T1T1SDAE	943 434-041	24 x RJ45
RS20-2400T1T1SDAP	943 434-042	24 x RJ45

Multimode

Part No.	Order No.	Ports
RS20-0400M2T1SDAE	943 434-009	3 x RJ45, 1 x SC
RS20-0400M2T1SDAP	943 434-010	3 x RJ45, 1 x SC
RS20-0400M2M2SDAE	943 434-001	2 x RJ45, 2 x SC
RS20-0400M2M2SDAP	943 434-002	2 x RJ45, 2 x SC

Single-Mode

Part No.	Order No.	Ports
RS20-0400S2T1SDAE	943 434-011	3 x RJ45, 1 x SC
RS20-0400S2T1SDAP	943 434-012	3 x RJ45, 1 x SC
RS20-0400S2S2SDAE	943 434-013	2 x RJ45, 2 x SC
RS20-0400S2S2SDAP	943 434-014	2 x RJ45, 2 x SC
RS20-0800S2S2SDAE	943 434-019	6 x RJ45, 2 x SC
RS20-0800S2S2SDAP	943 434-020	6 x RJ45, 2 x SC
RS20-1600S2S2SDAE	943 434-027	14 x RJ45, 2 x SC
RS20-1600S2S2SDAP	943 434-028	14 x RJ45, 2 x SC
RS20-2400S2S2SDAE	943 434-045	22 x RJ45, 2 x SC
RS20-2400S2S2SDAP	943 434-046	22 x RJ45, 2 x SC

NOTE: Add an additional "-E" to switches for pre-config-ured IGMP Snooping, auto-negotiation on the uplinks and more (a factory-set configuration for EtherNet/IP). Please contact us for more details.

RS30 Series Compact Switches

FAST 30ms HiPer-Ring

Two ports are Gigabit, balance are 100 Mbps max.

- Available in 2x Gigabit plus 8 x, 16 x and 24 x 10/100 Mbps ports.
- Identical management and feature options as RS20
- Gigabit multimode or singlemode fiber via SFP socket

All Copper

Part No.	Order No.	Ports
RS30-0802T1T1SDAE	943 434-029	8 x 10/100 RJ45, 2 x 10/100/1000 RJ45
RS30-0802T1T1SDAP	943 434-030	8 x 10/100 RJ45, 2 x 10/100/1000 RJ45
RS30-1602T1T1SDAE	943 434-033	16 x 10/100 RJ45, 2 x 10/100/1000 RJ45

RS30-1602T1T1SDAP	943 434-034	16 x 10/100 RJ45, 2 x 10/100/1000 RJ45
RS30-2402T1T1SDAE	943 434-037	24 x 10/100 RJ45, 2 x 10/100/1000 RJ45
RS30-2402T1T1SDAP	943 434-038	24 x 10/100 RJ45, 2 x 10/100/1000 RJ45

Fiber

Part No.	Order No.	Ports
RS30-08020606SDAE	943 434-031	8 x 10/100 RJ45, 2 x Gigabit SFP
RS30-08020606SDAP	943 434-032	8 x 10/100 RJ45, 2 x Gigabit SFP
RS30-16020606SDAE	943 434-035	16 x 10/100 RJ45, 2 x Gigabit SFP
RS30-16020606SDAP	943 434-036	16 x 10/100 RJ45, 2 x Gigabit SFP
RS30-24020606SDAE	943 434-039	24 x 10/100 RJ45, 2 x Gigabit SFP
RS30-24020606SDAP	943 434-040	24 x 10/100 RJ45, 2 x Gigabit SFP

RS40 Series Compact Switches

FAST 30ms HiPer-Ring

All ports are Gigabit

- Available with 9 ports (4 of which are RJ45/SFP combo ports)
- Identical management and features as RS20 and RS30
- 5 x 10/100/1000 RJ45 and 4 x 100/1000 RJ45/SFP combo ports (function of one RJ45 is lost for each SFP utilized)
- Fiber uplink ports are available in multimode and/or singlemode by using Gigabit or 100 Mbps SFP transceivers

Compact Switches - RS40

Part No.	Ports
RS40-0009CCCCSDAE	9 x 10/100/1000 RJ45 4 x 100/1000 SFP
RS40-0009CCCCSDAP	9 x 10/100/1000 RJ45 4 x 100/1000 SFP

NOTE: A combo port is a combination 10/100/1000 Mbps RJ45 and 1000 Mbps SFP port (100 and 1000 Mbps SFPs are supported by RS40). Only one is active at a time. The use of one SFP port disables one RJ45 port. The use of two SFP ports disables two RJ45 ports, etc.

Don't see your configuration requirement? Build your own on page 11!