



HIRSCHMANN

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Product Bulletin

PB00008AG

Hirschmann™ GREYHOUND Switch

Gigabit Ethernet switch with extended range of software features, designed for use in harsh industrial environments with a need for cost-effective, entry-level devices.



As network needs change, the switches offer flexibility through field exchangeable port modules. They also feature a rugged design to handle demanding industrial applications, including power generation and distribution operations, like substations.

- Flexibility – the switches are designed with the future in mind through customizable and interchangeable media modules to keep pace with evolving network needs.
- Designed for industrial environments – built to withstand high temperatures, high vibration and electrostatic discharge often found in industrial automation and power utility settings.
- Reliability – achieve improved network availability through new management features, including redundancy protocols, diagnostic features and comprehensive security mechanisms.

For engineers, integrators and machine builders in need of an entry-level solution, Hirschmann introduces its new GREYHOUND family of Gigabit Ethernet switches. GREYHOUND is offered in several customizable variations, depending on the customer's copper, fiber or Gigabit port needs.

GREYHOUND is ideal for industrial businesses under pricing pressure, but that require ruggedized products to withstand extreme environmental conditions. The switches also enable customers to react quickly to changing network requirements, through flexible design and installation options, including varying port styles, more ports overall, no port location restrictions, interchangeable modules and enhanced software features.

Applications


For applications that face harsh environmental conditions and are under extreme pressure to keep both costs down and customer pricing low, the GREYHOUND switch is an ideal low-entry product. The ruggedized GREYHOUND switches have been specially designed to handle demanding electrical power generation and distribution applications, including new installations and retrofits of existing substations, where ambient temperatures can be extremely high. The devices also perform well in transportation and industrial automation applications. For example, with railroad optical networks, passenger and information systems in train stations, conveyor systems, as well as traffic surveillance on highways, bridges and in tunnels.

Your Benefits

The GREYHOUND switches offer a unique combination of price, ports and software features – compared to other Ethernet switches on the market. For all-around network protection and uptime, GREYHOUND offers enhanced features through Hirschmann's operating system, HiOS. The software feature range includes network management, diagnostics and filter functions, as well as comprehensive security mechanisms. Unlike standard products or even configurable products from the factory, GREYHOUND is not limited by design. Network administrators can react to changing needs in their application and adjust the product as many times as needed, all while in the field. The installation is fast, easy and flexible.

**A new product to
serve your needs.
Be certain.**

Technical Information

Product Description Media Modules for GREYHOUND	
Type	GRM20-xx
	
Port Type and Quantity	up to 8 FE ports, more details in the configurator for ST, SC, RJ45, SFP slots, 4 FE SFP slots/4 FE TX ports (PoE option), 8 FE TX ports (PoE option)
Power Consumption	2 to 9 W depending on the variant
Weight	450 to 650 g depending on the variant

NOTE: These are the prominent technical specifications. For complete technical specifications visit: www.hirschmann.com



Common Technical Data Basic Units and Media Modules

Gigabit ETHERNET Network Size	
Twisted Pair (TP)	0 to 100 m
Multimode Fiber (MM) 50/125 µm	0 to 550 m, 7.5 dB link budget; 62.5/125 µm 0 to 275 m, 7.5 dB link budget (with M-SFP-SX/LC)
Singlemode Fiber (SM) 9/125 µm	0 to 20 km, 11 dB link budget (with M-SFP-LX/LC); 14 to 42 km, 5 to 20 dB link budget (with M-SFP-LX+/LC)
Singlemode Fiber (LH) 9/125 µm	23 to 80 km, 5 to 22 dB link budget (with M-SFP-LH/LC); 71 to 128 km, 15 to 30 dB link budget (with M-SFP-LH+/LC)
Fast ETHERNET Network Size	
Twisted Pair (TP)	0 to 100 m
Multimode Fiber (MM) 50/125 µm	0 to 5000 m, 8 dB link budget; 62.5/125 µm, 0 to 4000 m, 11 dB link budget (with M-Fast SFP-MM/LC)
Singlemode Fiber (SM) 9/125 µm	0 to 25 km, 13 dB link budget (with M-Fast SFP-SM/LC); 25 to 65 km, 10 to 29 dB link budget (with M-Fast SFP-SM+/LC)
Singlemode Fiber (LH) 9/125 µm	47 to 104 km, 10 to 29 dB link budget (with M-Fast SFP-LH/LC)
Network Size - Cascadability	
Line-/Star Topology	Any
Ring Structure	>200 switches MRP
Ambient Conditions	
Operating Temperature	0 °C to +60 °C, or -40 °C to +70 °C, IEC 60068-2-2 Dry Heat Test +85 °C 16 hours, optional conformal coating
Relative Humidity (non-condensing)	5% to 95%
Approvals Configurable	
Safety of Industrial Control Equipment	EN 60950-1, EN 61131-2, cUL60950-1
Substation	IEC 61850-3, IEEE 1613
Ship	GL – Germanischer Lloyd (pending)
Hazardous Locations	ISA-12.12.-01 Class 1 Div. 2 Group A, B, C, D (pending)
Transportation	NEMA TS2, EN 50121-4
Accessories	
Device Replacement and Logging	ACA22-USB EEC 942 124-001

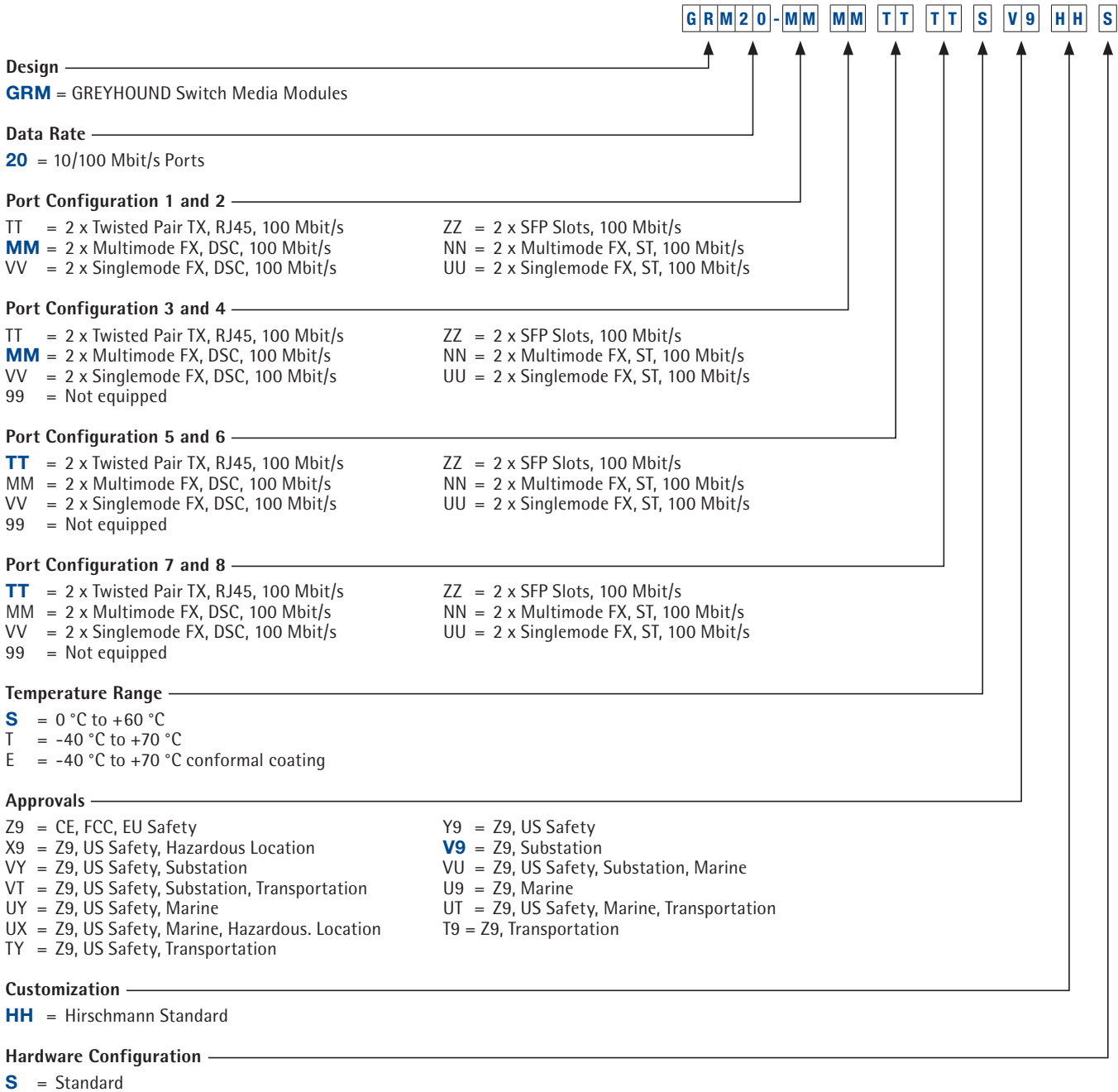
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Configurator



GREYHOUND GRM20 Media Modules Configurations





HiOS – Hirschmann™ Operating System

A new Operating System Generation for Managed Switches

Specially developed to meet requirements in the automation sector, this operating system is available in two Layer 2 versions (Standard and Advanced) and two Layer 3 versions (Standard and Advanced). The GREYHOUND family supports the version Layer 2 Standard. All versions provide numerous management and diagnostic options, plus a variety of redundancy protocols. Comprehensive security mechanisms protect networks against attacks and operating errors, so also contributing to high network availability.

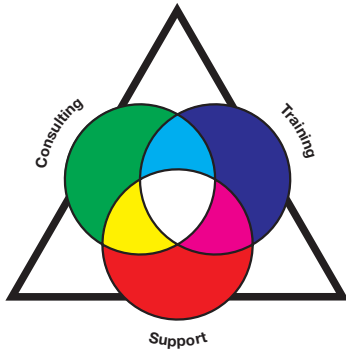
Management protocols include Telnet, SSHv2, HTTP, HTTPS, TFTP, SFTP, and SNMP v1/v2/v3. Redundancy protocols include MRP (Media Redundancy Protocol), RSTP (Rapid Spanning Tree Protocol), Link Aggregation and Link backup. Security mechanisms comprise MAC-based Port Security, Authentication (IEEE 802.1x), Guest/unauthenticated VLAN, Radius Client, Restricted Management Access, Local User Accounts, various Privilege Levels, Management Authentication via Radius, Account Locking, configurable Password Policy and Login Attempts, Audit Trail, CLI/SNMP Logging and HTTPS certified Management. Details can be found in the data sheet.





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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 plays 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 implementation to 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](https://twitter.com/BeldenInc).