



HIRSCHMANN

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Product Bulletin

PB 1078HE

Operating System HiOS 3.0 from Hirschmann™

The HiOS 3.0 operating system for Hirschmann switches guarantee maximum network availability all round protection against network attacks.



HiOS 3.0 expanded redundancy procedures ensure smooth data communications. In addition, an IEC61850 server and MMRP support enables the integration of switches into substation applications.

- Advanced redundancy protocols guarantee maximum network availability
- Effective security mechanisms protect your data communications from network attacks
- Comprehensive software functions permit optimal integration into energy sector applications

Version 3.0 of the Hirschmann operating system (HiOS) is currently available for Hirschmann RSP, RSPL, RSPS and EES switches as well as modular MSP systems and offers by far the widest range of standard functions and special features for the automation sector. These include support for the Multiple MAC Registration Protocol (MMRP), which runs on top of the Security Layer and registers group MAC addresses (e.g. for multicast) on multiple switches, or on an IEC61850 server for applications in the power supply industry. With its numerous security mechanisms, comprehensive management and diagnostic facilities, precise synchronization, and redundancy procedures HiOS 3.0 makes Hirschmann switches the most powerful industrial Ethernet devices on the market and ensures maximum network availability.

Applications

With the operating system HiOS 3.0, developed specifically for the requirements of the automation sector, Hirschmann switches in the RSP, RSPL, RSPS and EES families as well as modular MSP systems are ideally suited to virtually any application that calls for maximum network availability. Examples include automobile production, transportation or the energy sector, where IEC61850 servers can be used to pass diagnostic information directly to control systems, making the switches an integral part of applications such as protective equipment.

Customer benefits

With HiOS 3.0, you now have an operating system with unique redundancy and security features that offer you maximum network availability and data security, which means guaranteed economic production processes. Most importantly, HiOS 3.0 further extends the scope for Industrial Ethernet switches from Hirschmann. This particularly applies to the energy sector, because with an IEC61850 server and MMRP support, you can seamlessly integrate switches into a variety of applications. Many other industries can also benefit from an operating system that completely redefines the performance of automation networks.

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



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Its precise synchronization enables HiOS 3.0 to run applications with stringent real-time requirements.

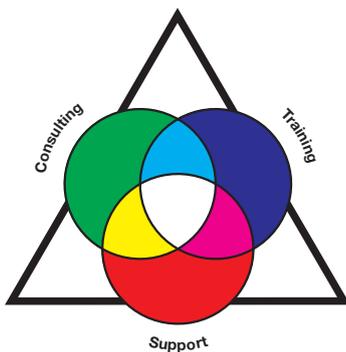
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The features offered by HiOS 3.0 include redundancy methods such as PRP (parallel redundancy protocol) and HSR (high-availability seamless redundancy), whose switching times of 0 ms ensure absolutely uninterrupted data communication. This high-performance operating system also supports link aggregation and allows combinations of multiple rings, so you can be sure of fast, standards-compliant network redundancy. The supported security mechanisms include authentication, RADIUS, role-based access, port security, SSHv2, HTTPS, SFTP and ACL. Further distinctive features of HiOS 3.0 include comprehensive management and diagnostic facilities, plus precise synchronization compliant with IEEE 1588v2.

Benefits at a glance

- Advanced redundancy protocols guarantee maximum network availability (MRP, PRP, HSR, link aggregation, MRP over link aggregation, RSTP)
- Ability to combine multiple rings ensures fast, standards-compliant network redundancy
- Comprehensive security mechanisms offer all-round protection against network attacks (authentication, RADIUS, role-based access, port security, SSHv2, HTTPS, SFTP and ACL)
- IEC61850 servers and MMRP support allow perfect integration into the applications of the energy industry
- Precision synchronization compliant with IEEE 1588v2 enables applications with stringent real-time demands
- Comprehensive management and diagnostic facilities guarantee maximum network transparency
- Can be used in Hirschmann™'s switch families RSP, RSPL, RSPS and EES as well as modular MSP systems

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™ and Lumberg Automation™. 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.

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.

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