Hirschmann Operating System (HiOS)

Seamlessly manage and secure modern industrial networks

PRODUCT BULLETIN

HiOS

Hirschmann™ Operating System

HiOS enables seamless integration into industrial control systems by meeting automation network requirements, supporting multiple communication protocols and leveraging Time-Sensitive Networking (TSN) technology.

- **Security:** Comprehensive functionality to build a secure network foundation

- **Redundancy:** Multiple technologies to match industrial network topologies, including MRP, MSTP, PRP, HSR, DLR and VRRP.

- **Future Proof:** Regular software updates, plus a brand-agnostic, built-in OPC UA server to bridge communication between all levels of automation.

- **Real-Time Communication:** Free, embedded and easily configurable TSN functionality with no special hardware, software or knowledge required.

Key Features

- Designed to withstand the harshest industrial conditions; ideal for industries such as power and electric utilities, energy (including oil & gas, nuclear, hydro, wind, and other alternatives), transportation, and process automation.

- Office and industrial management protocols for IT/OT convergence

- Embedded OPC UA server

- Extensive range of security functionality

- Standard and proprietary redundancy technologies

- TSN functionality and templates

- Supports converged and real-time networks

- Switching and routing functionality

- Single operating system for a complete range of hardware platforms

- Standardized multicast control

- Comprehensive VLAN technologies for network segmentation

- Unicast (RIP, OSPF) and multicast (PIM, DVMRP) routing

- Independently certified according to IEC 62443-4-1

The user-friendly Industrial HiVision network management software offers extensive configuration and monitoring functionality, both for products with installed HiOS software and for third-party devices.

Your Benefits

HiOS is designed with an intuitive graphical user interface and familiar command line interface, appealing to both automation engineers and IT specialists. Effortless configuration ensures rapid network deployment at minimum cost.

HiOS provides a wealth of security functionalities, including various user access levels, port security and advanced authentication, Denial of Service prevention, permanent audit trails, and more.

Additionally, HiOS offers TSN capabilities, enabling both deterministic and standard Ethernet data transmission on the same network. HiOS also features an embedded OPC UA server, providing a brand-agnostic, seamless and future-proof solution as industrial automation moves towards Industry 4.0.

Applications

HiOS is designed for use in industrial applications, providing customers with the information they need to supervise network infrastructure and resolve network problems quickly. It provides a communication bridge between all levels of the automation architecture, from embedded components on the factory floor to the enterprise.

For time-critical applications, HiOS enables manufacturers to run TSN protocols on off-the-shelf industrial Ethernet BOBCAT switches. With no added cost or components, network administrators can use these switches to transmit data from different applications on the same network.

HiOS runs on the following switch families: DRAGON MACH, GREYHOUND, OCTOPUS, MSP, RSP, RSPL/RSPS/RSPE, BRS, RED, RDD, EES, and EESX.

Markets

HiOS was developed specifically to meet the requirements of industrial networks. Examples include:

- Automotive production
- Transportation
- Power transmission and distribution
- Oil and gas
- Water and wastewater
- Renewable energy
- Consumer packaged goods
- General manufacturing
- Machine building
- Video surveillance