

Product:	Industrial Ethernet Switch
Description:	20-port managed Gigabit
Typenumber:	HN G9812

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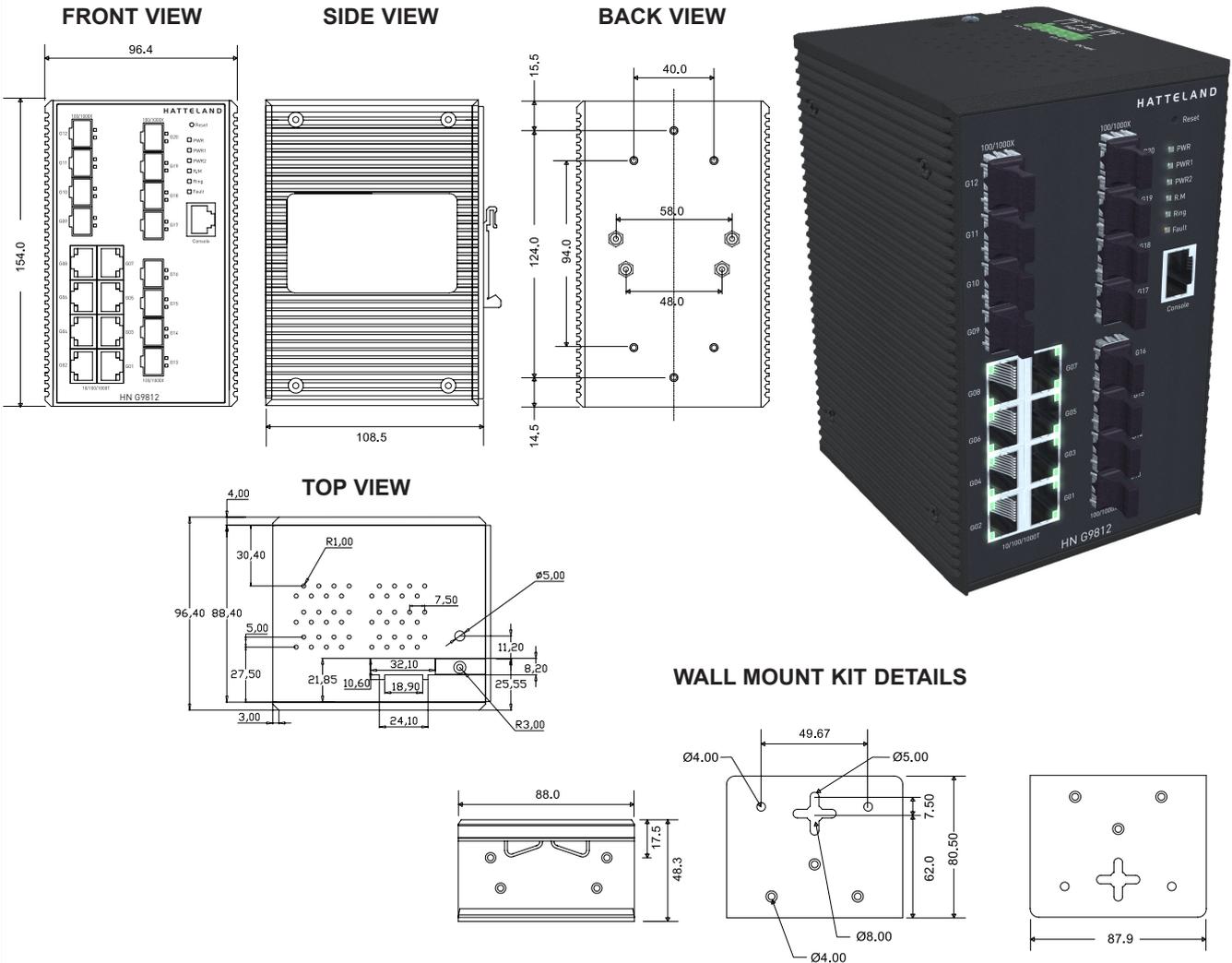
Industrial Ethernet Switch

Description:

The HATTELAND® industrial range of high quality reliable Network Switches can be used in connecting several Ethernet devices like Ethernet I/O, IP-Camera or other Ethernet switches. The HN G9812 is managed redundant ring Ethernet switch with 8x10/100/1000Base-T(X) ports and 12x100/1000Base-X SFP ports. With completely support of Ethernet Redundancy protocol, O-Ring (recovery time < 30ms) and MSTP (RSTP/STP compatible) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology. It supports wide operating temperatures from -40°C to 75°C. The HN G9812 can also be managed centralized and convenient by Open-Vision, Except the Web-based interface, Telnet and console (CLI) configuration.

Features:

- Supports recovery time < 30ms and MSTP (RSTP/STP compatible) for Ethernet Redundancy
- Allows multiple redundant network rings
- Supports standard IEC 62439-2 MRP (Media Redundancy Protocol)*
- Supports IEEE 1588v2 clock Synchronization
- Supports IPv6 new internet protocol version
- Supports Modbus TCP protocol
- Provided HTTPS/SSH protocol to enhance network security
- Supports IEEE 802.3az Energy-Efficient Ethernet technology
- Supports SMTP client and NTP server protocol
- Supports application-based QoS management
- Supports Device Binding security function
- * This function is available by request only
- Supports ACL and 802.1x User Authentication for security
- Supports Jumbo Frame up to 9.6k bytes
- Multiple notification for warning of unexpected event
- Supports DBU-01 backup unit device to quickly backup/restore configuration
- Web-based, Telnet, Console (CLI), and Windows utility (Open-Vision) configuration
- Supports LLDP Protocol
- Rigid IP-30 housing design
- DIN-Rail and wall mounting enabled
- Supports DOS/DDOS auto prevention
- IGMP v2/v3 (IGMP snooping support) for filtering multicast traffic
- Supports SNMP v1/v2c/v3 & RMON & 802.1Q VLAN Network Management



Dimensions might be shown with or without decimals and indicated as mm [inches]. Tolerance on drawings is +/- 1mm. For accurate measurements, check relevant DWG file.

Specifications:

• Physical Ports	- 8 x 10/100/1000Base-T(X) Ports in RJ45 Auto MDI/MDIX - 12 x 100/1000Base-X with SFP port
• Technology	- IEEE 802.3 for 10Base-T - IEEE 802.3u for 100Base-TX and 100Base-FX - IEEE 802.3ab for 1000Base-T - IEEE 802.z for 1000Base-X - IEEE 802.3x for Flow control - IEEE 802.3ad for LACP (Link Aggregation Control Protocol) - IEEE 802.1p for COS (Class of Service) - IEEE 802.1Q for VLAN Tagging - IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol) - IEEE 802.1s for MSTP (Multiple Spanning Tree Protocol) - IEEE 802.1x for Authentication - IEEE 802.1AB for LLDP (Link Layer Discovery Protocol) - MAC Table: 8192 MAC addresses - Priority Queues: 8 - Processing: Store-and-Forward - Share Data Buffer: 4Mbit - Switch Properties: Switching latency: 7 us, Switching bandwidth: 40Gbps, Max. Number of Available VLANs: 4095, VLAN ID Range: VID 1 to 4094, IGMP multicast groups: 128 for each VLAN, Port rate limiting: User Define - Jumbo frame: Up to 9.6k bytes - Security Features: Device Binding security feature, Enable/disable ports, MAC based port security, Port based network access control (802.1x), MAC-based authentication (802.1x), VLAN (802.1Q) to segregate and secure network traffic, SNMPv3 encrypted authentication and access security, Https / SSH enhance network security, Web and CLI authentication and authorization, IP source guard - Software Features: STP/RSTP/MSTP (IEEE 802.1D/w/s), Redundant Ring (O-Ring) with recovery time less than 30ms, TOS/DiffServ supported, Quality of Service (802.1p) for real-time traffic, VLAN (802.1Q) with VLAN tagging, IGMP Snooping, Application-based QoS management, DOS/DDOS auto prevention, Port configuration, status, statistics, monitoring, security, DHCP Server/Client/Relay, SMTP Client, Modbus TCP, NTP server - Network Redundancy: O-Ring, O-Chain, MRP*, MSTP (RSTP/STP compatible) (*This function is available by request only) - RS-232 Serial Console Port: RS-232 in RJ45 connector with console cable. 115200bps, 8, N, 1
• LED Indicators	- Power Indicator (PWR): Green: Power LED x 2 - Ring Master Indicator (R.M.): Green: Indicates that the system is operating in O-Ring Master mode - O-Ring Indicator (Ring): Green: Indicates that the system operating in O-Ring mode, Green Blinking: Indicates that the Ring is broken. - Fault Indicator (Fault): Amber: Indicate unexpected event occurred - 10/100/1000Base-T(X) RJ45 Port Indicator: Green for Port LINK/ACT indicator, Dual color LED for speed indicator: Green for 1000Mbps / Amber for 100Mbps / off-light for 10Mbps - 100/1000Base-X SFP Port Indicator: Green for port Link/Act.
• Fault Contact	- Relay output to carry capacity of 1A at 24VDC
• Reset Function	- < 5 sec: System reboot, > 5 sec: Factory default
• Power Specifications	- Redundant Input power: Dual DC inputs. 12 ~ 48VDC on 6-pin terminal block - Power consumption (Typ.): 10 Watts - Overload current protection: Present - Reverse Polarity Protection: Present
• Physical Characteristics	- Enclosure: IP-30 - Dimensions: W:96.40 [3.80"] x H:154.00 [6.06"] x D:105.50 [4.15"] mm [inch] - Weight: 1210g
• Environmental	- Storage Temperature: -40 to 85°C (-40 to 185°F) - Operating Temperature: -40 to 75°C (-40 to 167°F) - Operating Humidity: 5% to 95% Non-condensing
• Regulatory approvals	- EMC: CE EMC (EN 55024, EN 55032), FCC Part 15 B, EN 50155(EN 50121-3-2), EN 50121-4, AS/NZS CISPR 22, EN 61000-6-2&EN 61000-6-4 - EMI: EN 550232, CISPR32, EN 61000-3-2, EN 61000-3-3, FCC Part 15B class A - EMS: EN 55024 (IEC/EN 61000-4-2 (ESD), IEC/EN 61000-4-3 (RS), IEC/EN61000-4-4 (EFT), IEC/EN 61000-4-5 (Surge), IEC/EN 61000-4-6 (CS), IEC/EN 61000-4-8(PFMF), IEC/EN 61000-4-11(DIP)) - Shock: IEC 60068-2-27 - Free Fall: IEC 60068-2-31 - Vibration: IEC 60068-2-6 - Safety: EN60950-1 - Other: EN50155, IEC/EN 60945
• Type Approvals	- Hatteland Technology standard (tested / type approved by the following classification societies): IEC 60945 4th (EN 60945:2002), IACS E10 , DNV - Det Norske Veritas
• MTBF	- 670184 hours
• Warranty	- 5 years

Contents of Package:

• 1 x HN G9812
• 1 x Quick Installation Guide
• 1 x Din-Rail Kit
• 2 x Wall-Mount Kit
• 1 x Tool Software CD
• 1 x Console Cable

Available Accessories:

• SDR-120-24	: 1 x Power supply 24 VDC, 5A, 6-pin Terminal Block 5.08, Type Approved: DNV-GL
• SDR-120-48	: 1 x Power supply 48 VDC, 2.5A, 6-pin Terminal Block 5.08, Type Approved: DNV-GL
• SDR-240-24	: 1 x Power supply 24 VDC, 10A, 6-pin Terminal Block 5.08, Type Approved: DNV-GL
• SDR-240-48	: 1 x Power supply 48 VDC, 5A, 6-pin Terminal Block 5.08, Type Approved: DNV-GL
• SDR-480-24	: 1 x Power supply 24 VDC, 20A, 6-pin Terminal Block 5.08, Type Approved: DNV-GL
• SDR-480-48	: 1 x Power supply 48 VDC, 10A, 6-pin Terminal Block 5.08, Type Approved: DNV-GL
• HN SFP1G-LX10	: 1 x 1Gbps SFP optical transceiver, single-mode / 10km, 1310nm, -40 ~ +75°C
• HN SFP1G-SX	: 1 x 1Gbps SFP optical transceiver, multi-mode / 550m, 850nm, -40 ~ +75°C
• HN SFP1G-RJ	: 1 x 1Gbps SFP to 1000 Base-T transceiver, -40 ~ +75°C