MDS-G4020 Series

20G-port Layer 2 full Gigabit modular managed Ethernet switches



Features and Benefits

- · Multiple interface type 4-port modules for greater versatility
- Tool-free design for effortlessly adding or replacing modules without shutting down the switch
- · Ultra-compact size and multiple mounting options for flexible installation
- Passive backplane to minimize maintenance efforts
- · Rugged die-cast design for use in harsh environments
- Intuitive, HTML5-based web interface for a seamless experience across different platforms

Certifications



Introduction

The MDS-G4020 Series modular switches support up to 20 Gigabit ports, including 4 embedded ports, 4 interface module expansion slots, and 2 power module slots to ensure sufficient flexibility for a variety of applications. The highly compact MDS-G4000 Series is designed to meet evolving network requirements, ensuring effortless installation and maintenance, and features a hot-swappable module design that enables you to easily change or add modules without shutting down the switch or interrupting network operations.

The multiple Ethernet modules (RJ45, SFP, and PoE+) and power units (24/48 VDC, 110/220 VAC/VDC) provide even greater flexibility as well as suitability for different operating conditions, delivering an adaptive full Gigabit platform that provides the versatility and bandwidth necessary to serve as an Ethernet aggregation/edge switch. Featuring a compact design that fits in confined spaces, multiple mounting methods, and convenient tool-free module installation, the MDS-G4000 Series switches enable versatile and effortless deployment without the need for highly skilled engineers. With multiple industry certifications and a highly durable housing, the MDS-G4000 Series can reliably operate in tough and hazardous environments such as power substations, mining sites, ITS, and oil and gas applications. Support for dual power modules provides redundancy for high reliability and availability while LV and HV power module options offer additional flexibility to accommodate the power requirements of different applications.

In addition, the MDS-G4000 Series features an HTML5-based, user-friendly web interface providing a responsive, smooth user experience across different platforms and browsers.

Specifications

Ethernet Interface	
Pre-installed Modules	4 embedded Gigabit ports
Module	4 slots for optional 4-port FE/GE modules



Slot Combination	See the LM-7000H module series datasheet for more information. Note: The required power module depends on the choice of LM-7000H module. Refer to the following power/module combination requirements. LM-7000H non-PoE modules: Any power module LM-7000H PoE modules: PWR-HV-P48, PWR-LV-P48 only
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3ab for 1000BaseT(X) IEEE 802.3z for 1000BaseX IEEE 802.3x for flow control IEEE 802.3ad for Port Trunk with LACP IEEE 802.1Q for VLAN Tagging IEEE 802.1D-2004 for Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol IEEE 802.1p for Class of Service IEEE 802.1X for authentication
Ethernet Software Features	
Management	IPv4/IPv6 Flow control Back Pressure Flow Control DHCP Server/Client ARP RARP DHCP Relay Agent (Option 82) Fiber check Port Mirroring (SPAN, RSPAN) Linkup Delay LLDP SMTP SMTP SNMP Trap SNMP Trap SNMP Inform SNMPv1/v2c/v3 RMON TFTP SFTP HTTP SFTP HTTPS Telnet Syslog Private MIB
Filter	GMRP GVRP GARP 802.1Q VLAN IGMP Snooping v1/v2/v3 IGMP Querier
Redundancy Protocols	STP RSTP Turbo Ring v2 Turbo Chain Ring Coupling Dual-Homing Link Aggregation MRP MSTP Network Loop Protection
Security	Access control list Broadcast storm protection DHCP Snooping Dynamic ARP Inspection IP Source Guard Rate Limit



	Trust access control MAC authentication bypass MAC Sticky Static Port Lock HTTPS/SSL SSH RADIUS TACACS+ Login and Password Policy
Time Management	SNTP NTP Server/Client NTP Authentication
Protocols	IPv4/IPv6 TCP/IP UDP ICMP ARP RARP TFTP DNS NTP Client DHCP Server DHCP Client EtherNet/IP 802.1X QoS HTTPS HTTP Modbus TCP Telnet SMTP SNMPv1/v2c/v3 RMON Syslog
MIB	P-BRIDGE MIB Q-BRIDGE MIB IEEE8021-SPANNING-TREE-MIB IEEE8023-LAG-MIB LLDP-EXT-DOT1-MIB LLDP-EXT-DOT3-MIB SNMPv2-MIB RMON MIB Groups 1, 2, 3, 9
Power Substation	MMS
Switch Properties	
MAC Table Size	16 K
Max. No. of VLANs	256
VLAN ID Range	VID 1 to 4094
IGMP Groups	1024
Jumbo Frame Size	9.216 KB
Priority Queues	8
Packet Buffer Size	12 Mbits
Serial Interface	
Console Port	RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)
USB Interface	
USB Connector	USB Type A (Reserved)



Digital Inputs 1 (On MGMT Module) Digital Inputs -13 to 430 Vor state 1 -30 to 43 Vor state 0 Max. input current: 8 mA Aarm Contact Channels 3 (On MGMT, PWRI, PWR2 Module) Reley output with current carrying capacity of 2.4 8 30 VDC Power Parameters With PWR-HV-P48 installed: 110/220 VDC, 110 VAC, 60 H2, 200 VAC, 50 H2, PoE: 48 VDC With PWR-LV-P48 installed: 24/48 VDC, PoE: 48 VDC With PWR-LV-P48 installed: 24/48 VDC, POE: 48 VDC Operating Voltage With PWR-LV-P48 installed: 24/48 VDC, POE: 48 VDC Operating Voltage With PWR-LV-P48 installed: 24/48 VDC With PWR-LV-P48 installed: 24/48 VDC 200 VAC, 50 H2, PoE: 46 to 57 VDC With PWR-LV-P48 installed: 24/48 VDC 200 VAC, 47 to 63 H2, PoE: 46 to 57 VDC With PWR-LV-P48 installed: 18 to 72 VDC (24/48 VDC for hazardous location), PoE: 46 to 57 VDC (48 VDC for hazardous location) With PWR-HV-P48 installed: 18 to 72 VDC 200 VAC, 47 to 63 H2 With PWR-HV-P48/PWR-HV-NP installed: 18 to 72 VDC 200 VAC Max. 36 A 48 VDC PES Poel: For State 48 VDC Power Consumption (Max) With PWR-HV-P48/PWR-HV-NP installed: 100 VAC Max. 36 A 48 VDC PES PER module ontyl; Max. 36 A 48 VDC Max. 36 A 48 VDC PES PER module ontyl; Max. 36 A 48 VDC Mith PWR-HV-P48/PW	Input/Output Interface	
-30 to +3 V for state 0 Alarm Contact Channels 3 (On MGMT, PWFI, PWFI2 Module) Relay output with current carrying capacity of 2 A 8 30 VDC Power Parameters With PWR-HV-P48 installed: 110/220 VDC, 110 VAC, 50 HZ, 220 VAC, 50 Hz, PoE: 48 VDC With PWR-HV-P48 installed: 20/48 VDC, Power 8 4 VDC With PWR-HV-P48 installed: 20/48 VDC, Power 8 4 VDC Operating Voltage With PWR-HV-P48 installed: 20/48 VDC, POWER 100 FZ, 220 VAC, 50 Hz Operating Voltage With PWR-HV-P48 installed: 20/48 VDC, POWER 100 FZ, 220 VAC, 50 Hz Operating Voltage With PWR-HV-P48 installed: 20/48 VDC, POWER 100 FZ, 220 VAC, 50 Hz Operating Voltage With PWR-HV-P48 installed: 110/220 VDC, 110 VAC, 60 HZ, 220 VAC, 50 Hz With PWR-HV-P48 installed: 88 to 300 VDC 100 FZ Bito 300 VDC io 02 84 VAC, 47 to 63 Hz, POE: 46 to 57 VDC (48 VDC for hazardous location) Note: The same function is to 220 VAC, 47 to 63 Hz Input Current With PWR-HV-P48 installed: 18 to 220 VAC Note: The same function is to 220 VAC, 47 to 63 Hz Nax: 0.50 A @ 110 VAC Note: These are the input current ratings for the device with the maximum number of modules installed. Power Consumption (Max.) With PWR-HV-P48/PWR-HV-VP installed: Nax: 3.00 W @ 120 VDC Nax: 3.00 W @ 120 VDC	Digital Input Channels	1 (On MGMT Module)
Petay output with current carnying capacity of 2.4 @ 30 VDC Power Parameters Input Voitage With PWR-HV-P48 installed: 110/220 VDC, 110 VAC, 60 HZ, 220 VAC, 50 HZ, PoE: 48 VDC With PWR-HV-P48 installed: 2048 VDC, 100 VAC, 60 HZ, 220 VAC, 50 HZ, PoE: 48 VDC Operating Voitage With PWR-HV-P48 installed: 2048 VDC, 50 to 28 VAC, 47 to 63 HZ, PoE: 46 to 57 VDC With PWR-HV-P48 installed: 2048 VDC So VDC, 50 to 28 VAC, 47 to 63 HZ, PoE: 46 to 57 VDC With PWR-HV-P48 installed: 2048 VDC So VDC, 50 to 28 VAC, 47 to 63 HZ, PoE: 46 to 57 VDC (48 VDC for hazardous location), PoE: 46 to 57 VDC (48 VDC for hazardous location) Input Current With PWR-HV-P48 installed: 88 to 300 VDC, 50 to 28 VAC, 47 to 63 HZ, With PWR-HV-NP installed: 18 to 72 VDC (2448 VDC for hazardous location), PoE: 46 to 57 VDC (48 VDC for hazardous location) Input Current With PWR-HV-P48 installed: 88 to 300 VDC, 50 to 28 VAC, 47 to 63 HZ With PWR-HV-NP installed: State 220 VDC Max, 015 A € 20 VDC Max, 015 A € 220 VDC	Digital Inputs	-30 to +3 V for state 0
Input Voltage With PWR-HV-P48 Installed: 110/220 VDC, 110 VAC, 60 HZ, 220 VAC, 50 Hz, PoE: 48 VDC With PWR-HV-P6: s8 VDC With PWR-HV-P6: s8 VDC With PWR-HV-P8 Installed: 110/220 VDC, 110 VAC, 60 HZ, 220 VAC, 50 Hz With PWR-HV-P8 Installed: 110/220 VDC, 110 VAC, 60 HZ, 220 VAC, 50 Hz Operating Voltage With PWR-HV-P8 Installed: 110/220 VDC, 90 to 284 VAC, 47 to 63 Hz, PoE: 46 to 57 VDC (48 VDC for hazardous location), PoE: 46 to 57 VDC (48 VDC for hazardous location), PoE: 46 to 57 VDC (48 VDC for hazardous location), PoE: 46 to 57 VDC (48 VDC for hazardous location) Input Current With PWR-HV-P8/PWR-HV-NP Installed: 18 to 72 VDC Muth PWR-HV-P8/PWR-HV-NP Installed: 18 to 72 VDC Max. 0.30 A 0 110 VDC Max. 0.15 A 0 220 VAC Input Current With PWR-HV-P48/PWR-HV-NP Installed: Max. 0.30 A 0 110 VDC Max. 0.56 A 0 220 VAC With PWR-HV-P48/PWR-HV-NP Installed: Max. 0.50 A 0 100 VDC Max. 0.50 A 0 220 VAC With PWR-HV-P48/PWR-HV-NP Installed: Max. 0.50 A 0 100 VDC Max. 0.50 A 0 100 VDC Max. 0.50 A 0 400 VAC Power Consumption (Max.) With PWR-HV-P48/PWR-HV-NP Installed: Max. 3.00 W 0 210 VDC Max. 3.00 W 0 220 VAC Power Consumption (Max.) With PWR-HV-P48/PWR-HV-NP Installed: Max. 3.00 W 0 220 VAC Wat. PVR-MVR-MV-MP Installed: Max. 3.00 W 0 220 VAC Max. 3.00 W 0 220 VAC With PWR-HV-P48/PWR-HV-NP Installed: Max. 3.00 W 0 220 VAC Max. 3.00 W 0 220 VAC With PWR-HV-P48/PWR-HV-NP Installed: Max. 3.00 W 0 220 V	Alarm Contact Channels	
110/220 VDC, 110 VAC, 60 HZ, 220 VAC, 50 HZ, POE: 48 VDC With PWR-HV-NP installed: 110/220 VDC, 110 VAC, 60 HZ, 220 VAC, 50 HZ With PWR-HV-NP installed: 110/220 VDC, 110 VAC, 60 HZ, 220 VAC, 50 HZ With PWR-HV-NP installed: 110/220 VDC, 110 VAC, 60 HZ, 220 VAC, 50 HZ With PWR-HV-NP installed: 110/220 VDC, 110 VAC, 60 HZ, 200 VAC, 50 HZ With PWR-HV-NP installed: 110 VAC, 60 HZ, 200 VAC, 50 HZ With PWR-HV-NP installed: 110 VAC With PWR-HV-NP installed: 110 VAC, 60 HZ, 200 VAC, 47 to 63 HZ, POE: 46 to 57 VDC (48 VDC for hazardous location), PoE: 46 to 57 VDC (48 VDC for hazardous location) With PWR-HV-NP installed: 110 VZ VDC Input Current With PWR-HV-NP installed: Max. 0.30 A @ 110 VDC Max. 0.50 A @ 100 VDC Max. 0.50 A @ 100 VDC Max. 0.50 A @ 100 VDC Max. 0.50 A @ 200 VAC With PWR-HV-HVP48/PWR-HV-NP installed: Max. 0.50 A @ 100 VDC Max. 0.50 A @ 100 VDC Max. 0.50 A @ 42 VDC Max. 0.50 A @ 42 VDC Max. 0.50 A @ 40 VDC Power Consumption (Max.) With PWR-HV-P48/PWR-HV-NP ins	Power Parameters	
With PWR-HV-NP installed: 110/220 VDC, 110 VAC, 60 HZ, 220 VAC, 50 Hz Operating Voltage With PWR-HV-P48 installed: 24/48 VDC Operating Voltage With PWR-HV-P48 installed: 88 to 300 VDC, 90 to 264 VAC, 47 to 63 Hz, PoE: 46 to 57 VDC Operating Voltage With PWR-HV-P48 installed: 18 to 72 VDC (24/4 VDC for hazardous location), PoE: 46 to 57 VDC (48 VDC for hazardous location) Input Current With PWR-HV-NP installed: 18 to 72 VDC Input Current With PWR-HV-NP installed: 18 to 72 VDC Input Current With PWR-HV-NP installed: 18 to 72 VDC Input Current With PWR-HV-P48/PWR-HV-NP installed: 18 to 72 VDC Input Current With PWR-HV-P48/PWR-HV-NP installed: 18 to 72 VDC Input Current With PWR-HV-P48/PWR-HV-NP installed: Max. 0.54 @ 220 VAC With PWR-HV-P48/PWR-HV-NP installed: Max. 0.54 @ 220 VAC Max. 5.4 @ 220 VAC With PWR-HV-P48/PWR-HV-NP installed: Max. 0.54 @ 48 VDC PS (PoE models only): Max. 8.2 & 48 VDC Note: These are the input current ratings for the device with the maximum number of modules installed: Max. 38.0 W @ 210 VDC Max. 38.0 W @ 220 VDC Max. 38.0 W @ 24 VDC Max. PoE Power Output per Port 36 W Max. 80.0 W @ 24 VDC 1	Input Voltage	110/220 VDC, 110 VAC, 60 HZ, 220 VAC, 50 Hz, PoE: 48 VDC With PWR-LV-P48 installed:
24/48 VDC Operating Voltage With PWR-HV-P48 installed: 88 to 300 VDC, 90 to 264 VAC, 47 to 63 Hz, PoE: 46 to 57 VDC With PWR-LV-P48 installed: 18 to 72 VDC (24/44 VDC for hazardous location), PoE: 46 to 57 VDC (48 VDC for hazardous location) With PWR-HV-NP installed: 18 to 72 VDC Input Current With PWR-HV-NP installed: 18 to 72 VDC Mith PWR-HV-NP installed: 18 to 72 VDC Mith PWR-HV-NP installed: 18 to 72 VDC Max. 03 04 PI 10 VDC Max. 03 04 PI 10 VDC Max. 03 04 PI 10 VDC Max. 050 A PI 10 VDC Max. 350 W PI 20 VDC Max. 350 W PI 20 VDC Max. 350 W PI 10 VDC Max. 350 W PI		With PWR-HV-NP installed: 110/220 VDC, 110 VAC, 60 HZ, 220 VAC, 50 Hz
Bit to 300 VDC, 90 to 264 VAC, 47 to 63 Hz, PoE: 46 to 57 VDC With PWR-LV-P48 installed: 18 to 72 VDC (24/48 VDC for hazardous location), PoE: 46 to 57 VDC (48 VDC for hazardous location) With PWR-LV-NP installed: 88 to 300 VDC, 90 to 264 VAC, 47 to 63 Hz With PWR-LV-NP installed: 18 to 72 VDC Input Current With PWR-LV-NP installed: Max. 030 A @ 110 VDC Max. 030 A @ 110 VDC Max. 040 A @ 220 VDC Max. 040 A @ 220 VDC Max. 050 A @ 110 VDC Max. 050 A @ 120 VDC Max. 050 A @ 120 VDC Max. 050 A @ 120 VDC Max. 050 A @ 220 VDC Max. 050 A @ 220 VDC Max. 050 A @ 220 VDC Max. 050 A @ 240 VDC Power Consumption (Max.) With PWR-LV-P48/PWR-LV-NP installed: Max. 33.0 W @ 120 VDC Max. 34.0 W @ 220 VDC Max. 35.0 W @ 220 VDC		
18 to 72 VDC (24/48 VDC for hazardous location), PoE: 46 to 57 VDC (48 VDC for hazardous location) With PWR-HV-NP installed: 80 500 VDC, 90 to 264 VAC, 47 to 63 Hz With PWR-LV-NP installed: 18 to 72 VDC Input Current With PWR-HV-P48/PWR-HV-NP installed: Max. 015 A @ 200 VDC Max. 0.16 A @ 220 VAC With PWR-LV-P48/PWR-HV-NP installed: Max. 0.16 A @ 220 VAC With PWR-LV-P48/PWR-LV-NP installed: Max. 0.16 A @ 220 VAC With PWR-LV-P48/PWR-LV-NP installed: Max. 0.16 A @ 220 VAC With PWR-LV-P48/PWR-LV-NP installed: Max. 0.16 A @ 220 VAC With PWR-LV-P48/PWR-LV-NP installed: Max. 0.57 A @ 48 VDC EPS (PoE models only): Max. 8.2 A @ 48 VDC EPS (PoE models only): Max. 8.2 A @ 48 VDC EPS (PoE models only): Max. 3.2 0 W @ 110 VDC Max. 3.0 W @ 10 VDC Max. 3.0 W @ 220 VAC With PWR-LV-P48/PWR-LV-NP installed: Max. 3.0 W @ 220 VAC With PWR-LV-P49/PWR-LV-NP installed:	Operating Voltage	
88 to 300 VDC, 90 to 264 VAC, 47 to 63 Hz With PWR-LV-NP installed: 18 to 72 VDC Input Current With PWR-LV-NP installed: Max. 0.30 A @ 110 VDC Max. 0.30 A @ 110 VDC Max. 0.60 A @ 110 VAC Max. 0.60 A @ 110 VAC Max. 0.75 A @ 220 VDC Max. 0.75 A @ 420 VDC Max. 0.75 A @ 420 VDC Max. 0.75 A @ 420 VDC Max. 0.75 A @ 48 VDC EPS (PoE models only): Max. 8.2 A @ 48 VDC Note: These are the input current ratings for the device with the maximum number of modules installed. Max. 3.30 W @ 110 VDC Max. 3.30 W @ 120 VDC Max. 3.30 W @ 120 VDC Max. 3.30 W @ 120 VDC Max. 3.30 W @ 110 VDC Max. 3.30 W @ 120 VDC Max. 3.30 W @ 110 VDC Max. 3.30 W @ 120 VDC Max. 3.30 W @ 120 VDC Max. 3.30 W @ 220 VDC Max. 3.30 W @ 120 VDC Max. 3.60 W @ 220 VDC Max. 36.0 W @ 220 VDC Max. 36.0 W @ 220 VDC		18 to 72 VDC (24/48 VDC for hazardous location), PoE: 46 to 57 VDC (48 VDC for
18 to 72 VDC Input Current With PWR-HV-P48/PWR-HV-NP installed: Max. 0.30 A @ 110 VDC Max. 0.30 A @ 110 VDC Max. 0.15 A @ 220 VDC Max. 0.40 A @ 220 VAC With PWR-LV-P48/PWR-LV-NP installed: Max. 0.40 A @ 220 VAC With PWR-LV-P48/PWR-LV-NP installed: Max. 0.75 A @ 48 VDC Power Consumption (Max.) With PWR-HV-P48/PWR-HV-NP installed: Max. 3.2 A @ 48 VDC Note: These are the input current ratings for the device with the maximum number of modules installed. Power Consumption (Max.) With PWR-HV-P48/PWR-HV-NP installed: Max. 3.3.0 W @ 110 VDC Max. 33.0 W @ 120 VDC Max. 34.0 W @ 220 VDC Max. 33.0 W @ 220 VDC Max. 38.0 W @ 220 VDC Max. 38.0 W @ 220 VDC Max. 38.0 W @ 220 VDC Max. 38.0 W @ 220 VDC Max. 38.0 W @ 220 VDC Max. 38.0 W @ 220 VDC Max. 38.0 W @ 220 VDC Max. 38.0 W @ 220 VDC Max. 38.0 W @ 220 VDC Max. 38.0 W @ 220 VDC Max. 38.0 W @ 220 VDC Max. 38.0 W @ 220 VDC Max. 38.0 W @ 220 VDC Max. 38.0 W @ 220 VDC Max. 38.0 W @ 26 VDC Max. 38.0 W @ 26 VDC Max. 36.0 W @ 48 VDC Max. 36.0 W @ 48 VDC Max. 36.0 W @ 48 VDC Max. 36.0 W @ 48		
Max. 0.30 A @ 110 VDC Max. 0.15 A @ 220 VDC Max. 0.60 A @ 110 VAC Max. 0.60 A @ 110 VAC Max. 0.60 A @ 110 VAC Max. 0.40 A @ 220 VACWith PWR-LV-P48/PWR-LV-NP installed: Max. 1.5 A @ 24 VDC Max. 0.75 A @ 48 VDCEPS (PoE models only): Max. 8.2 A @ 48 VDCPower Consumption (Max.)With PWR-HV-P48/PWR-HV-NP installed: Max. 33.0 W @ 110 VDC Max. 35.8 W @ 110 VAC Max. 35.8 W @ 110 VAC Max. 35.8 W @ 110 VAC Max. 35.0 W @ 220 VDC Max. 35.8 W @ 110 VAC Max. 35.0 W @ 24 VDC Max. 36.0 W @ 24 VDC Max. 36.0 W @ 48 VDCMax. PoE Power Output per Port36 WTotal PoE Power BudgetMax. 360 W (with one power supply) for total PD consumption at 48 VDC input for PoE		
Max. 1.5 A @ 24 VDC Max. 0.75 A @ 48 VDCEPS (PoE models only): Max. 8.2 A @ 48 VDCNote: These are the input current ratings for the device with the maximum number of modules installed.Power Consumption (Max.)With PWR-HV-P48/PWR-HV-NP installed: Max. 34.0 W @ 110 VDC Max. 35.8 W @ 110 VAC Max. 35.8 W @ 110 VAC Max. 36.0 W @ 220 VACWith PWR-LV-P48/PWR-LV-NP installed: Max. 36.0 W @ 220 VACWith PWR-LV-P48/PWR-LV-NP installed: Max. 36.0 W @ 24 VDC Max. 36.0 W @ 48 VDCNote: These are the maximum power consumption ratings for the device with the maximum number of modules installed.Max. PoE Power Output per Port36 WTotal PoE Power BudgetMax. 360 W (with one power supply) for total PD consumption at 48 VDC input for PoE	Input Current	Max. 0.30 A @ 110 VDC Max. 0.15 A @ 220 VDC Max. 0.60 A @ 110 VAC
Max. 8.2 A @ 48 VDCNote: These are the input current ratings for the device with the maximum number of modules installed.Power Consumption (Max.)With PWR-HV-P48/PWR-HV-NP installed: Max. 33.0 W @ 110 VDC Max. 34.0 W @ 110 VDC Max. 36.0 W @ 110 VAC Max. 38.8 W @ 110 VAC Max. 38.0 W @ 220 VACWith PWR-LV-P48/PWR-LV-NP installed: Max. 36.0 W @ 24 VDC Max. 36.0 W @ 48 VDC Note: These are the maximum power consumption ratings for the device with the maximum number of modules installed.Max. PoE Power Output per Port36 WTotal PoE Power BudgetMax. 360 W (with one power supply) for total PD consumption at 48 VDC input for PoE		Max. 1.5 A @ 24 VDC
modules installed.Power Consumption (Max.)With PWR-HV-P48/PWR-HV-NP installed: Max. 33.0 W @ 110 VDC Max. 34.0 W @ 220 VDC Max. 35.8 W @ 110 VAC Max. 38.0 W @ 220 VACWith PWR-LV-P48/PWR-LV-NP installed: Max. 36.0 W @ 24 VDC Max. 36.0 W @ 48 VDC Note: These are the maximum power consumption ratings for the device with the maximum number of modules installed.Max. PoE Power Output per Port36 WTotal PoE Power BudgetMax. 360 W (with one power supply) for total PD consumption at 48 VDC input for PoE		
Max. 33.0 W @ 110 VDC Max. 34.0 W @ 220 VDC Max. 35.8 W @ 110 VAC Max. 35.8 W @ 110 VAC Max. 38.0 W @ 220 VACWith PWR-LV-P48/PWR-LV-NP installed: Max. 36.0 W @ 24 VDC Max. 36.0 W @ 48 VDCNote: These are the maximum power consumption ratings for the device with the maximum number of modules installed.Max. PoE Power Output per Port36 WTotal PoE Power BudgetMax. 360 W (with one power supply) for total PD consumption at 48 VDC input for PoE		
Max. 36.0 W @ 24 VDC Max. 36.0 W @ 48 VDCNote: These are the maximum power consumption ratings for the device with the maximum number of modules installed.Max. PoE Power Output per Port36 WTotal PoE Power BudgetMax. 360 W (with one power supply) for total PD consumption at 48 VDC input for PoE	Power Consumption (Max.)	Max. 33.0 W @ 110 VDC Max. 34.0 W @ 220 VDC Max. 35.8 W @ 110 VAC
maximum number of modules installed. Max. PoE Power Output per Port 36 W Total PoE Power Budget Max. 360 W (with one power supply) for total PD consumption at 48 VDC input for PoE		Max. 36.0 W @ 24 VDC Max. 36.0 W @ 48 VDC
Total PoE Power Budget Max. 360 W (with one power supply) for total PD consumption at 48 VDC input for PoE		
	Max. PoE Power Output per Port	36 W
systems	Total PoE Power Budget	Max. 360 W (with one power supply) for total PD consumption at 48 VDC input for PoE systems



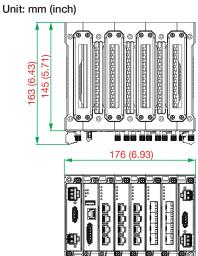
	Max. 360 W (with one power supply) for total PD consumption at 53 to 57 VDC input for PoE+ systems
	Max. 720 W (with two power supplies) for total PD consumption at 48 VDC input for PoE systems
	Max. 720 W (with two power supplies) for total PD consumption at 53 to 57 VDC input for PoE+ systems
Overload Current Protection	Supported
Reverse Polarity Protection	Supported
Physical Characteristics	
IP Rating	IP40
Dimensions	176 x 115 x 163.25 mm (6.93 x 4.53 x 6.44 in)
Weight	2500 g (5.51 lb)
Installation	DIN-rail mounting Wall mounting (with optional kit)
Environmental Limits	
Operating Temperature	Standard Temperature: -10 to 60°C (-14 to 140°F) Wide Temperature: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)
Standards and Certifications	
Safety	EN 62368-1 IEC 62368-1 UL 62368-1 IEC 60950-1
EMC	EN 55032/35 EN 61000-6-2/-6-4
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV IEC 61000-4-5 Surge: Power: 4 kV; Signal: 4 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF IEC 61000-4-11
Railway	EN 50121-4
Traffic Control	NEMA TS2
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-31
Vibration	IEC 60068-2-6
Hazardous Locations	ATEX Class I Division 2
Power Substation	IEEE 1613 IEC 61850-3

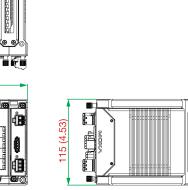


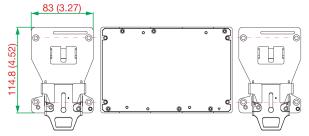
MTBF

Time	1,007,790 hrs
Standards	Telcordia SR332
Warranty	
Warranty Period	5 years
Details	See www.moxa.com/warranty
Package Contents	
Device	1 x MDS-G4020 Series switch
Cable	1 x RJ45-to-DB9 console cable
Installation Kit	Pre-install 2 x DIN-rail kit 2 x cap, plastic, for RJ45 port
Documentation	 x quick installation guide x product notice, Simplified Chinese x product certificates of quality inspection, Simplified Chinese x warranty card
Note	This product requires additional modules (sold separately) to function.

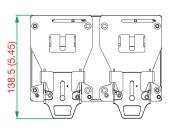
Dimensions







DIN-Rail Mount



Ordering Information

Model Name	Layer	Total No. of Ports	100/1000Base SFP Slots	10/100/ 1000BaseT(X) Ports RJ45 Connector	PoE 10/100/ 1000BaseT(X) Ports RJ45 Connector	10/ 100BaseT(X) Ports RJ45 Connector	PoE 10/ 100BaseT(X) Ports RJ45 Connector	Operating Temp.
MDS-G4020	2	20	Up to 16	Up to 20	Up to 16	Up to 16	Up to 16	-10 to 60°C
MDS-G4020-T	2	20	Up to 16	Up to 20	Up to 16	Up to 16	Up to 16	-40 to 75°C

10.9 (0.43)

39.9 (1.57)

Accessories (sold separately)

LM-7000H Module Series

LM-7000H-4GTX	Gigabit Ethernet module with 4 10/100/1000BaseT(X) ports
LM-7000H-4GPoE	Gigabit Ethernet module with 4 10/100/1000BaseT(X) IEEE 802.3af/at PoE+ ports



LM-7000H-4GSFP	Gigabit Ethernet module with 4 100/1000BaseSFP slots
LM-7000H-4TX	Fast Ethernet module with 4 10/100BaseT(X) ports
LM-7000H-4PoE	Fast Ethernet module with 4 10/100BaseT(X) IEEE 802.3af/at PoE+ ports
Dower Medulee	
Power Modules PWR-LV-P48	Power supply module (24/48 VDC) with system power input, relay, PoE power input
PWR-HV-P48	Power supply module (110/220 VAC/VDC) with system power input, relay, rol power input
PWR-LV-NP	Power supply module (24/48 VDC) with system power input, relay
PWR-HV-NP	Power supply module (110/220 VAC/VDC) with system power input, relay
Wall-Mounting Kits WK-112-01	Wall-mounting kit, 2 plates, 8 screws
WI(-112-01	Wai-mounting kit, 2 plates, 0 solows
Rack-Mounting Kits	
RK-3U-02	Rack-mounting kit with 4 L-shaped plates for the MDS-G4000 and MDS-G4000-4XGS Series
SFP Modules	
SFP-1FEMLC-T	SFP module with 1 100Base multi-mode, LC connector for 2/4 km transmission, -40 to 85°C operating temperature
SFP-1FESLC-T	SFP module with 1 100Base single-mode with LC connector for 40 km transmission, -40 to 85° C operating temperature
SFP-1FELLC-T	SFP module with 1 100Base single-mode with LC connector for 80 km transmission, -40 to 85° C operating temperature
SFP-1G10ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60° C operating temperature
SFP-1G10ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G10BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G10BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G20ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G20ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G20BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G20BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G40ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G40ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G40BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G40BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1GSXLC	SFP module with 1 1000BaseSX port with LC connector for $300m/550m$ transmission, 0 to $60^{\circ}C$ operating temperature
SFP-1GSXLC-T	SFP module with 1 1000BaseSX port with LC connector for 300m/550m transmission, -40 to 85° C operating temperature
SFP-1GLSXLC	SFP module with 1 1000BaseLSX port with LC connector for $1 \text{km}/2 \text{km}$ transmission, 0 to 60°C operating temperature



SFP-1GLSXLC-T	SFP module with 1 1000BaseLSX port with LC connector for 1km/2km transmission, -40 to 85°C operating temperature
SFP-1GLXLC	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, 0 to 60°C operating temperature
SFP-1GLXLC-T	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, -40 to 85° C operating temperature
SFP-1GLHLC	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, 0 to 60° C operating temperature
SFP-1GLHLC-T	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, -40 to 85° C operating temperature
SFP-1GLHXLC	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, 0 to 60°C operating temperature
SFP-1GLHXLC-T	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, -40 to 85° C operating temperature
SFP-1GZXLC	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, 0 to 60°C operating temperature
SFP-1GZXLC-T	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, -40 to 85° C operating temperature
SFP-1GEZXLC	SFP module with 1 1000BaseEZX port with LC connector for 110 km transmission, 0 to 60°C operating temperature
SFP-1GEZXLC-120	SFP module with 1 1000BaseEZX port with LC connector for 120 km transmission, 0 to 60°C operating temperature
SFP-1GTXRJ45-T	SFP module with 1 1000BaseT port with RJ45 connector for 100 m transmission, -40 to 75°C operating temperature
SFP-1GTXRJ45-T Power Supplies	
Power Supplies	temperature 60 W/2.5 A DIN-rail 24 VDC power supply, universal 85 to 264 VAC or 120 to 370 VDC input voltage, -30
Power Supplies HDR-60-24	temperature 60 W/2.5 A DIN-rail 24 VDC power supply, universal 85 to 264 VAC or 120 to 370 VDC input voltage, -30 to 70°C operating temperature 120 W/5.0 A DIN-rail 24 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage,
Power Supplies HDR-60-24 NDR-120-24	temperature 60 W/2.5 A DIN-rail 24 VDC power supply, universal 85 to 264 VAC or 120 to 370 VDC input voltage, -30 to 70°C operating temperature 120 W/5.0 A DIN-rail 24 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature 120 W/2.5 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage,
Power Supplies HDR-60-24 NDR-120-24 NDR-120-48	temperature 60 W/2.5 A DIN-rail 24 VDC power supply, universal 85 to 264 VAC or 120 to 370 VDC input voltage, -30 to 70°C operating temperature 120 W/5.0 A DIN-rail 24 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature 120 W/2.5 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature 240 W/5.0 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage,
Power Supplies HDR-60-24 NDR-120-24 NDR-120-48 NDR-240-48	temperature 60 W/2.5 A DIN-rail 24 VDC power supply, universal 85 to 264 VAC or 120 to 370 VDC input voltage, -30 to 70°C operating temperature 120 W/5.0 A DIN-rail 24 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature 120 W/2.5 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature 240 W/5.0 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage,
Power Supplies HDR-60-24 NDR-120-24 NDR-120-48 NDR-240-48 Software	temperature 60 W/2.5 A DIN-rail 24 VDC power supply, universal 85 to 264 VAC or 120 to 370 VDC input voltage, -30 to 70°C operating temperature 120 W/5.0 A DIN-rail 24 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature 120 W/2.5 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature 240 W/5.0 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature
Power SuppliesHDR-60-24NDR-120-24NDR-120-48NDR-240-48SoftwareMXview-50	temperature 60 W/2.5 A DIN-rail 24 VDC power supply, universal 85 to 264 VAC or 120 to 370 VDC input voltage, -30 to 70°C operating temperature 120 W/5.0 A DIN-rail 24 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature 120 W/2.5 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature 240 W/5.0 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature MXview license for 50 nodes
Power Supplies HDR-60-24 NDR-120-24 NDR-120-48 NDR-240-48 Software MXview-50 MXview-100	temperature 60 W/2.5 A DIN-rail 24 VDC power supply, universal 85 to 264 VAC or 120 to 370 VDC input voltage, -30 to 70°C operating temperature 120 W/5.0 A DIN-rail 24 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature 120 W/2.5 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature 240 W/5.0 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature MXview license for 50 nodes MXview license for 100 nodes
Power Supplies HDR-60-24 NDR-120-24 NDR-120-48 NDR-240-48 Software MXview-50 MXview-250	temperature 60 W/2.5 A DIN-rail 24 VDC power supply, universal 85 to 264 VAC or 120 to 370 VDC input voltage, -30 to 70°C operating temperature 120 W/5.0 A DIN-rail 24 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature 120 W/2.5 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature 240 W/5.0 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature MXview license for 50 nodes MXview license for 100 nodes MXview license for 250 nodes
Power Supplies HDR-60-24 NDR-120-24 NDR-120-48 NDR-240-48 Software MXview-50 MXview-250 MXview-500	temperature 60 W/2.5 A DIN-rail 24 VDC power supply, universal 85 to 264 VAC or 120 to 370 VDC input voltage, -30 to 70°C operating temperature 120 W/5.0 A DIN-rail 24 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature 120 W/2.5 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature 240 W/5.0 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature MXview license for 50 nodes MXview license for 50 nodes MXview license for 250 nodes MXview license for 500 nodes
Power Supplies HDR-60-24 NDR-120-24 NDR-120-48 NDR-240-48 Software MXview-50 MXview-100 MXview-500 MXview-1000 MXview-1000	temperature 60 W/2.5 A DIN-rail 24 VDC power supply, universal 85 to 264 VAC or 120 to 370 VDC input voltage, -30 to 70°C operating temperature 120 W/5.0 A DIN-rail 24 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature 120 W/2.5 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature 240 W/5.0 A DIN-rail 48 VDC power supply, universal 90 to 264 VAC or 127 to 370 VDC input voltage, -20 to 70°C operating temperature MXview license for 50 nodes MXview license for 50 nodes MXview license for 250 nodes MXview license for 500 nodes MXview license for 1000 nodes

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