28-port Rackmount Switch, 4 x Gbit/s ports

Westermo i-line MRI-128-F4G / MRI-128-F4G/DC

- 24-port Fast Ethernet and 4-port Gigabit SFP combo ports
- Advanced network management features
- HV range 90 – 264 VAC or Dual 24 V (12 – 48 V) DC input
- −25 to 70°C operating temperature
- Rugged aluminum case
- Fan-less design

CE FC c(UL)us LISTED   RoHS

The i-line MRI-128-F4G series, is a special design for control rooms where high-port density and performance are required. The 4 Gigabit Combo port design allows 10/100/1000 triple speed, and the SFP ports accept all types of Gigabit SFP transceivers for several connections and distances.

The device is mounted within the 19 inch rack, along with other 19 inch public servers or other network devices. When industrial switches are aggregated to the I-line MRI-128-F4G, the design allows connecting multiple rings and 2 Gigabit rings. Each of the ring has its own ring redundancy protection.

Robust Industrial Data Communications – Made Easy

Specifications

Technology	
Standard	IEEE 802.3 10Base-T Ethernet, IEEE 802.3u 100Base-TX Fast Ethernet, IEEE 802.3ab 1000Base-TX, IEEE 802.3z Gigabit Ethernet Fiber, IEEE 802.3x Flow Control and Back-pressure, IEEE 802.1p class of service, IEEE 802.1Q VLAN and GVRP, IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP), IEEE802.3ad Link Aggregation Control Protocol (LACP), IEEE802.1X Port based Network Access Control, IEEE802.1AB Link Layer Discovery Protocol (LLDP)

Performance	
Switch Technology	Store and Forward Technology, 12.8 Gbit/s Switch Fabric
System Throughput	14,880 pps for 10M Ethernet, 148,800 pps for 100M Fast Ethernet, 1,488,100 for Gigabit Ethernet
Transfer packet size	64 bytes to 1536 bytes
Jumbo Frame Enabled	Up to 9,216 bytes
MAC Address	8K
Packet Buffer	2 Mbits

Management	
Configuration	Cisco-Like CLI, HTTP, HTTPS, SSL, SSH and WeDashboard.
Jumbo Frame Enable/Disable	Up to 9,216 KBytes
LLDP	Link Layer Discovery Protocol to advertise system / port identity and capability on the local network
SNMP	SNMP V1, V2c and V3
Time synchronization	NTP – Network time protocol IEEE 1588 – High-precision time protocol
Port Mirroring	Online traffic monitoring
Port Trunk	Static Trunk and 802.3ad LACP , Up to 9 Trunk Group, 2 – 8 ports per trunk
Rate Control	Ingress and Egress rate limiting
VLAN	IEEE802.1Q VLAN and GVRP. Up to 256 VLANs
Quality of Service	IEEE802.1p COS and Layer 3 TOS/DiffServ
IGMP Snooping	IGMP Snooping V1/V2/V3 for multicast filtering and IGMP Query V1/V2
GMRP	GARP Multicast Registration Protocol
Network Security	Port Security – Assign authorized MAC to a specific port 802.1x – Port-based Network Access Control (PNAC) Access Control List – Permit/Deny access control lists RADIUS – Remote Authentication Dail In User Service
DHCP	DHCP-Server – Support 255 Dynamic IP poll DHCP Option 82 – Relay the DHCP request to remote server
E-mail Warning	Automatic warning by pre-defined events
Syslog	Message logged with server and client mode

Network Redundancy

Rapid Spanning Tree Protocol	IEEE802.1D-2004 Rapid Spanning Tree Protocol. Compatible with Legacy STP and IEEE802.1w
Multiple Super Ring (MSR)	Ring Redundancy Technology Failover less than 300 ms, Restoration time 0 ms, Includes Rapid Super Ring, Rapid Dual Homing, TrunkRing, MultiRing
Rapid Dual Homing (RDH)	Support multiple node to node, multiple path to one node to obtain more flexible and reliable architecture
TrunkRing	Provides port aggregate function in ring path to get more bandwidth for higher throughput ring architecture
Multiple Ring	New generation of ring coupling technology without extra control port – TangentRing

Interface

Number of Ports	10/100Base-TX: 24 x RJ-45, Auto MDI/MDI-X, Auto Negotiation 10/100/1000Base-TX: 4 x RJ-45, combo with SFP 1000Base-X: 4 x SFP with Hot Swappable
Cables	10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable (100 m) 100 Base-TX: 2/4-pair UTP/STP Cat. 5 cable (100 m) 1000 Base-T: 4-pair UTP/STP Cat. 5e, 6, 7 cable (100 m)
Diagnostic LED	System: Power (Green), Ring Master (Green) 10/100 RJ-45: Link/Activity: Green = 100M, Yellow = 10M; Duplex: On = Full, Off = Half Gigabit Copper/SFP: Link/Activity: Green = 1000M, Yellow = 10M or 100M; Duplex: On = Full, Off = Half) Gigabit SFP: Link/Activity (Green/Green Blinking)
RS-232 Console	DB-9 type, Pin: (2: TxD, 3: RxD, 5:GND)
Power	1 set of AC input (Westermo i-line MRI-128-F4G) 2 sets of DC inputs (Westermo i-line MRI-128-F4G/DC)

Power Requirements

Rated voltage	90 - 264 VAC (Westermo i-line MRI-128-F4G) 24 VDC (12 – 48 VDC) (Westermo i-line MRI-128-F4G/DC)
Power Consumption	Max. 20 Watts

Mechanical

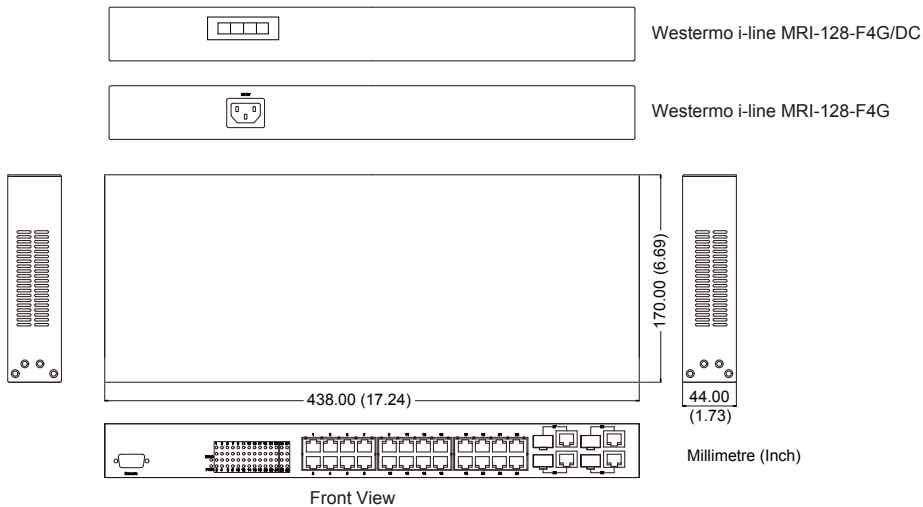|	
Installation	19-inch, 1U Rack Mount
Dimension	44 mm (H) x 438 mm (W) x 170 mm (D)
Weight	2.65 kg with package

Environmental

Operating Temperature	–25 to +70°C
Operating Humidity	5% to 95% (non-condensing)
Storage Temperature	–40 to +85°C

Regulatory Approvals

EMI	FCC Class A, CE/EN55022. Class A
EMS	EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
Safety	cUL (CSA22.2, UL60950-1) (Westermo i-line MRI-128-F4G)
Shock	IEC60068-2-29
Vibration	IEC60068-2-6
Free Fall	IEC60068-2-32
Warranty	5 years

Optional Accessories

1 Gbit/s SFP			
GMLC2-DDM	I-line, Multimode, LC-connector, 2 km, DDM, Operating Temp. –10 to +70°C	Art. number	1100-0442
GSLC10-DDM	I-line, Singlemode, LC-connector, 10 km, DDM, Operating Temp. –10 to +70°C		1100-0441

Dimensions (Unit – mm / In)

Westermo i-line MRI-128-F4G/DC

Westermo i-line MRI-128-F4G

170.00 (6.69)

438.00 (17.24)

44.00 (1.73)

Millimetre (Inch)

Front View

Ordering Information	
Art.no	**Description**
3624-0340	Westermo i-line MRI-128-F4G (without SFP transceivers) 28-port Rackmount Switch, 4 x Gbps SFP/C
	Rack Mount Kit
	Power Cord
	Console Cable
	Document CD
3624-0350	Westermo i-line MRI-128-F4G/DC (without SFP transceivers) 28-port Rackmount Switch, 4 x Gbps SFP/C
	Rack Mount Kit
	Power Cord
	Console Cable
	Document CD