

FM1048S/2xG

Layer 2 Stackable Fast Ethernet Switch

48-port stackable 10/100TX switch with 2 active SFP bays (unpopulated) and 2 standby 10/100/1000T ports (R -45)
 FM1048S/2xG provides high performance Layer 2 switching in an affordable stackable configuration platform.

This switch offers 48 10/100 ports, two fixed SFP Combo slots plus two integrated stacking connectors providing resilient stacking functionality. The stacking capability integrated into this platform is configured as a resilient ring topology designed to provide high reliability and simplified management for higher port density applications.

HIGHLIGHTS

- > Industry Standard CLI
- > Simple, intuitive, fully featured Web Interface
- > Secure encrypted WEB and CLI management with SSH v2 and SSL
- > SNMP
- > Provides standards based 802.3af
- > Single IP address Stack management
- > GbE ports providing resilient stacking
- > Across Stack Link Aggregation
- > Across Stack VLAN configuration
- > Across Stack Port Mirroring
- > Redundant standby stack master
- > 8 Priorities assigned to 4 queues
- > 802.1p for Layer 2 QoS
- > DSCP (Diffserv) for Layer 3 QoS
- > 802.1p to DSCP remarking traffic ready for transport to the Layer 3 core of the network
- > 802.1x and RADIUS network login: for advanced control of user authentication and accountability
- > Guest VLAN: to ensure visitors or unauthorized users connect only to services defined by System Administrators.
- > TACACS+: for ease of management security administration



TECHNICAL SPECIFICATIONS

SYSTEM CAPACITY

- > DRAM: 128 MB
- > Flash Memory: 32MB
- > CPU Freq.: 300Mhz
- > VLAN IDs: Up to 256
- > MAC addresses: 8,000

INTERFACE STANDARDS

- > IEEE 802.3 10Base-T
- > IEEE 802.3u 100Base-TX
- > IEEE 802.3z 1000base-SX
- > IEEE 802.3ab 1000Base-T

SYSTEM CONFIGURATION

- > W x D x H: 441 mm x 387 mm x 43.2 mm
(17.3 in x 15.2 in x 1.7 in)
- > Weight: 3,19 Kg
- > Mounting: 19" rack [1 Unit] mountable

PERFORMANCES

- > Wire speed switching on all Ethernet ports
- > 14,880pps for 10Mbps Ethernet
- > 148,800pps for 100Mbps fast Ethernet
- > 1,448,000pps for 1000Mbps Gigabit Ethernet
- > Forwarding rate: 9.5 Mpps
- > Chipset switching capacity: 12.8Gbps
- > MTBF 558K hours
- > Store and forward mode
- > Non blocking switch fabric
- > Auto-MDI/MDI-X
- > Port types and speed:
 - 10/100-TX RJ-45
 - 10/100/1000TX RJ-45
- > SFP optional modules :
 - SFP 850nm MM Fiber (500m)
 - SFP 1310nm SM Fiber (10Km)
 - SFP 1310nm SM Fiber (10Km) DDM
 - SFP 1310nm SM Fiber (40Km) DDM
 - SFP 1550nm SM Fiber (80Km) DDM
 - SFP 1550nm SM Fiber (100Km) DDM
- > RS232 DB9 pin, male port
- > Internal power supply

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GENERAL STANDARDS

- > IEEE 802.1d Bridging
- > IEEE 802.3x BackPressure/ Flow Control

REDUNDANCY STANDARDS

- > IEEE 802.1D Spanning Tree Protocol
- > IEEE 802.1W Rapid Spanning Tree
- > IEEE 802.1s Multiple Spanning Tree
- > IEEE 802.3ad LACP Link Aggregation (up to 8 members per group and up to 8 groups per device)

QUALITY OF SERVICES (QOS)

- > Layer 2 trusted mode (IEEE 802.1p tagging)
- > Layer 3 trusted mode (DSCP)
- > 4 priority queues per port
- > Weighted Round Robin (WRR) and Strict Queue Scheduling

VLANs

- > IEEE 802.1Q VLAN Tagging
- > Up to 256 VLANs
- > Port-based VLANs
- > GARP VLAN Registration Protocol (GVRP)

MULTICAST STANDARDS

- > RFC1112 IGMP snooping (ver. 1)
- > RFC2236 IGMP snooping (ver. 2)

MANAGEMENT AND MONITORING

- > WEB Interface
- > CLI Interface
- > Serial Interface
- > RFC 1157 SNMPv1/v2c
- > RFC1213 MIB-II
- > RFC 1215 TRAP MIB
- > RFC1493 Bridge MIB
- > RFC 2863 Interfaces group MIB
- > RFC 1643 Ethernet like MIB
- > RFC 1757 4 RMON groups: Stats, History, Alarms, Events
- > RFC 2674 802.1Q MIB
- > RFC 1866 HTML
- > RFC 2068 HTTP
- > RFC 854 Telnet
- > RFC 783 TFTP

IP ADDRESS ALLOCATION

- > RFC 951/ RFC 1542 BootP/ DHCP
- > Manual

SERVICES

- > RFC 2030 SNTP, Simple Network Time Protocol
- > Syslog Event

STACKING

- > Up to 6 units
- > Single chip appearance
- > Single IP management
- > Backup master
- > Full duplex link with 2Gbps performance
- > Trunking across stack
- > Port mirroring across stack
- > VLAN across stack

SECURITY

- > Management Security: user name and password protection
- > SSHv2 for Telnet management
- > SSLv3 for WEB management
- > RFC 1492 TACACS+
- > RFC 2138 RADIUS Authentication
- > IEEE 802.1x Port-based network access control
- > Guest VLAN
- > MAC based port security

FAULT PROTECTION

- > Broadcast Storm Control (Limit the amount of broadcast, multicast and destination lookup failed packets)

POWER CHARACTERISTICS

- > 100 - 240 VAC/ 50-60 Hz universal inputs

LEDs

- > Per Port (10/100 and Gigabit): Link, Speed, Duplex, Activity, Collision
- > Per Device: Power, Stack In, Stack Out, Master

ENVIRONMENTAL SPECIFICATIONS

- > Operating temperature: 0 to 45 °C
- > Storage temperature: -20 to 70°C
- > Operating rel. humidity: 10% - 90%
- > Storage rel. humidity: 10% - 95%
- > Operating altitude: 10,000 ft (3,000 m) maximum
- > Storage altitude: 10,000 ft (3,000 m) maximum

ELECTROMAGNETIC EMISSIONS

- > CE mark, commercial
- > FCC Part 15 Class A
- > VCCI Class A
- > EN 55022 (CISPR 22), Class A

ELECTROMAGNETIC IMMUNITY

- > EN55024

SAFETY

- > UL 1950 (UL/cUL), EN60950 (TUV)

PACKAGE CONTENTS

- > One switch unit
- > Power cord AC
- > Rackmount kit
- > Rubber feet for desktop installation
- > RS232 management cable
- > Install guide and user guide in CD
- > Warranty/Support Information card

RELATED PRODUCTS

- SFP Modules:
- > SFP 850nm MM Fiber (500m) (LCP-1250A4FSRA)
 - > SFP 1310nm SM Fiber (10Km) (LCP-1250B4QSRA)
 - > SFP 1310nm SM Fiber (10Km) DDM (LCP-1250B4QDR)
 - > SFP 1310nm SM Fiber (40Km) DDM (LCP-1250B4MDR)
 - > SFP 1550nm SM Fiber (80Km) DDM (LCP-1250D4RDR)
 - > SFP 1550nm SM Fiber (100Km) DDM (LCP-1250D4VDR)

Disclaimer

All statements, technical information and recommendations contained in this documentation have been carefully checked for reliability; however no responsibility is assumed for inaccuracies. The information contained in this documentation is subject to change without notice.