

# FM1024SPoE/2xG

Layer 2 Stackable PoE Fast Ethernet Switch

24-port stackable 10/100TX Power over Ethernet switch with 2 active SFP bays (unpopulated) and 2 standby 10/100/1000T ports (RJ-45) FM1024SPoE/2xG provides high performance Layer 2 switching in an affordable stackable configuration platform combined with Power over Ethernet to provide power to edge devices including IP Phones, Network Cameras and Wireless LAN Access points.

This switch offers 24 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
- > Power over Ethernet to all 24 10/100 ports
- > Support for up to 24 class 2 Powered devices at 7.3 watts
- > Support for up to 24 class 3 Powered devices at 15.4 watts
- > 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: 440 mm x 387 mm x 43.2 mm  
(17.3 in x 15.2 in x 1.7 in)
- > Weight: 7.493 Kg (16.52 lbs)
- > 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 334K 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.