

# CentreCOM<sup>®</sup> GS900MX/MPX Series

## Layer 3 Managed Gigabit Ethernet Stackable Switches





Allied Telesis CentreCOM GS900MX/MPX Series switches are cost-effective, fully managed, and stackable. The switches in this series can serve as an AMF node when an AMF Master switch is available in the network, which helps to reduce network running costs by automating and simplifying many day-to-day tasks.

### Overview

With a choice of 24- and 48-port 10/100/100T versions with 10G up link, Power over Ethernet (PoE), plus the ability to stack up to four units, the CentreCOM GS900MX/ GS900MPX Series switches are ideal for demanding applications at the edge of the network.

## Key Features

- ▶ Allied Telesis Autonomous Management Framework™ (AMF) edge node
- ▶ AMF secure mode
- ▶ AlliedWare Plus operating system
- ▶ Eco-friendly
- ▶ Mixed stacking up to four units
- ▶ IPv6 features
- ▶ IEEE 802.1x/MAC/Web authentication support
- ▶ Graphical User Interface (GUI) for easy management
- ▶ Basic L3 features supported
  - ▶ Static routing
  - ▶ RIP
- ▶ DHCP relay
- ▶ L2 Multicast 512 entries
- ▶ IPv4 ACL 256 entries

### Specifications

#### Performance

- ▶ 40Gbps of stacking bandwidth
- ▶ Supports 9216bytes jumbo frames
- ▶ Wirespeed multicasting

- ▶ Up to 16K MAC addresses
- ▶ 512MB DDR SDRAM
- ▶ 64MB flash memory

#### Power Characteristics

AT-GS924MX and AT-GS948MX  
AC model: 100-240 VAC, 1.0A maximum, 50/60 Hz  
AT-GS924MPX and AT-GS948MPX  
AC model: 100-240 VAC, 5.0A maximum, 50/60 Hz

#### Expandability

- ▶ Hardware Virtual Chassis Stacking (VCStack™) up to four units

#### Flexibility and Compatibility

- ▶ Port speed and duplex configuration can be set manually or by auto-negotiation diagnostic tools
- ▶ Automatic link flap detection and port shutdown
- ▶ Optical Digital Diagnostics Monitoring (DDM)
- ▶ Ping polling and TraceRoute for IPv4 and IPv6 Port mirroring

#### IP Features

- ▶ IPv4 static routing and RIP
- ▶ Device management over IPv6 networks with SNMPv6, Telnetv6, SSHv6
- ▶ NTPv6 client

#### Management

- ▶ Front panel 7-segment LED provides at-a-glance status and fault information
- ▶ Allied Telesis Autonomous Management Framework™ (AMF) enables powerful centralized management and zerotouch device installation and recovery
- ▶ AMF secure mode increases network security with management traffic encryption, authorization, and monitoring
- ▶ Console management port on the front panel for ease of access
- ▶ Eco-friendly mode allows ports and LEDs to be disabled to save power
- ▶ Industry-standard CLI with context-sensitive help
- ▶ Powerful CLI scripting engine
- ▶ Comprehensive SNMP MIB support for standards-based device management
- ▶ Built-in text editor
- ▶ Event-based triggers allow user-defined scripts to be executed upon selected system events
- ▶ USB interface allows software release files, configurations, and other files to be stored for backup and distribution to other devices

#### Quality of Service (QoS)

- ▶ Eight priority queues with a hierarchy of high-priority queues for real-time traffic, and mixed scheduling, for each switch port

- ▶ Limit bandwidth per port or per traffic class down to 64kbps
- ▶ Wirespeed traffic classification with low latency essential for VoIP and real-time streaming media applications
- ▶ Policy-based QoS based on VLAN, port, MAC and general packet classifiers
- ▶ Policy-based storm protection
- ▶ Extensive remarking capabilities
- ▶ Taildrop for queue congestion control
- ▶ Strict priority, weighted round robin or mixed scheduling
- ▶ IP precedence and DiffServ marking based on Layer 2, 3 and 4 headers

#### Resiliency Features

- ▶ Control Plane Prioritization (CPP) ensures the CPU always has sufficient bandwidth to process network control traffic
- ▶ Dynamic link failover (host attach)
- ▶ EPSRing™ (Ethernet Protection Switched Rings) with enhanced recovery
- ▶ Loop protection: loop detection and thrash limiting
- ▶ PVST+ compatibility mode
- ▶ STP root guard
- ▶ UniDirectional Link Detection (UDLD)

#### Security Features

- ▶ Access Control Lists (ACLs) based on Layer 2, 3 and 4 headers
- ▶ Configurable auth-fail and guest VLANs
- ▶ Authentication, Authorization, and Accounting (AAA)
- ▶ Bootloader can be password protected for device security
- ▶ BPDU protection
- ▶ DHCP snooping, IP source guard and Dynamic ARP Inspection (DAI)
- ▶ Dynamic VLAN assignment
- ▶ Network Access and Control (NAC) features manage endpoint security
- ▶ Port-based learn limits (intrusion detection)
- ▶ Private VLANs provide security and port isolation for multiple customers using the same VLAN
- ▶ Secure Copy (SCP)
- ▶ Strong password security and encryption
- ▶ Tri-authentication: MAC-based, Web-based and IEEE 802.1x

# CentreCOM GS900MX/MPX Series | Layer 3 Managed Gigabit Ethernet Stackable Switches

## Specifications

PRODUCT	10/100/1000T (RJ-45) COPPER PORTS	COMBO (100/1000X SFP PORTS OR 10/100/1000T, RJ-45 PORTS)	10 GIGABIT SFP+ PORTS OR 10 GIGABIT STACKING PORTS	MAX POE+ ENABLED PORTS	SWITCHING FABRIC	FORWARDING RATE
GS924MX	24	2	2		92Gbps	68.44Mpps
GS924MPX	24	2	2	24	92Gbps	68.44Mpps
GS948MX	48	2	2		140Gbps	104.16Mpps
GS948MPX	48	2	2	48	140Gbps	104.16Mpps

## Physical Specifications

PRODUCT	WIDTH X DEPTH X HEIGHT	WEIGHT	PACKAGED DIMENSIONS	WEIGHT
GS924MX	339 x 211 x 44 mm (13.4 x 8.3 x 1.72 in)	2.5 Kg (5.5 lb)	48 x 30 x 13 cm (18.9 x 11.8 x 5.1 in)	3.7 Kg (8.2 lb)
GS924MPX	441 x 356 x 44 mm (17.3 x 14.0 x 1.72 in)	5.3 Kg (11.6 lb)	56 x 51 x 15 cm (22.1 x 20.1 x 5.9 in)	7.4 Kg (16.3 lb)
GS948MX	441 x 356 x 44 mm (17.3 x 14.0 x 1.72 in)	4.5 Kg (9.9 lb)	58 x 46 x 15 cm (22.6 x 18.1 x 5.9 in)	6.2 Kg (13.6 lb)
GS948MPX	441 x 356 x 44 mm (17.3 x 14.0 x 1.72 in)	5.8 Kg (12.8 lb)	58 x 56 x 15 cm (22.8 x 22.1 x 5.9 in)	7.9 Kg (17.4 lb)

## Power and Noise Characteristics

PRODUCT	NO POE LOAD				FULL POE+ LOAD				
	MAX POWER CONSUMPTION	MAX HEAT DISSIPATION	TYPICAL NOISE	MAX NOISE	TYPICAL POWER CONSUMPTION	MAX POWER CONSUMPTION	MAX SYSTEM HEAT DISSIPATION	TYPICAL NOISE	MAX NOISE
GS924MX	30.7W	104.6 BTU/hr	27.1 dB	52.7 dB					
GS924MPX	53.6W	182.9 BTU/hr			464.3W	94.3W	321.7 BTU/hr	43.7 dB	57.7 dB
GS948MX	50.7W	173.1 BTU/hr	33.8 dB	58.1 dB					
GS948MPX	70.2W	239.5 BTU/hr			480.6W	110.6W	377.4 BTU/hr	42.0 dB	58.4 dB

PRODUCT	MAX POE POWER	MAX POE PORTS AT 7.0W PER PORT	MAX POE PORTS AT 15.4W PER PORT	MAX POE PORTS AT 30W PER PORT
GS924MPX	370W	24	24	12
GS948MPX	370W	48	24	12

## Latency

PRODUCT	64byte			1518byte		
	10Mbps	100Mbps	1000Mbps	10Mbps	100Mbps	1000Mbps
GS924MX	21.1µs	3.6µs	3.5µs	22.7µs	3.7µs	3.7µs
GS924MPX	21.1µs	3.6µs	3.5µs	22.7µs	3.7µs	3.7µs
GS948MX	21.1µs	3.6µs	3.5µs	22.7µs	3.7µs	3.7µs
GS948MPX	21.1µs	3.6µs	3.5µs	22.7µs	3.7µs	3.7µs

## Cryptographic Algorithms

### FIPS Approved Algorithms

Encryption (Block Ciphers):

- ▶ AES (ECB, CBC, CFB and OFB Modes)
- ▶ 3DES (ECB, CBC, CFB and OFB Modes)

Block Cipher Modes:

- ▶ CCM
- ▶ CMAC
- ▶ GCM
- ▶ XTS

Digital Signatures & Asymmetric Key Generation:

- ▶ DSA
  - ▶ ECDSA
  - ▶ RSA
- Secure Hashing:
- ▶ SHA-1
  - ▶ SHA-2 (SHA-224, SHA-256, SHA-384, SHA-512)

Message Authentication:

- ▶ HMAC (SHA-1, SHA-2(224, 256, 384, 512))

Random Number Generation:

- ▶ DRBG (Hash, HMAC and Counter)

### Non FIPS Approved Algorithms

- RNG (AES128/192/256)
  - DES
  - MD5
- ### Ethernet
- IEEE 802.1AX Link aggregation (static and LACP)
  - IEEE 802.2 Logical Link Control (LLC)
  - IEEE 802.3 Ethernet
  - IEEE 802.3ab 1000T
  - IEEE 802.3ae 10 Gigabit Ethernet
  - IEEE 802.3ad Static and dynamic link aggregation
  - IEEE 802.3af Power over Ethernet (PoE)
  - IEEE 802.3at Power over Ethernet plus (PoE+)
  - IEEE 802.3az Energy Efficient Ethernet (EEE)
  - IEEE 802.3u 100X
  - IEEE 802.3x Flow control - full-duplex operation
  - IEEE 802.3z 1000X

## IPv4 Features

- RFC 791 Internet Protocol (IP)
- RFC 792 Internet Control Message Protocol (ICMP)
- RFC 826 Address Resolution Protocol (ARP)
- RFC 894 Standard for the transmission of IP datagrams over Ethernet networks
- RFC 919 Broadcasting Internet datagrams
- RFC 922 Broadcasting Internet datagrams in the presence of subnets
- RFC 932 Subnetwork addressing scheme
- RFC 950 Internet standard subnetting procedure
- RFC 1042 Standard for the transmission of IP datagrams over IEEE 802 networks
- RFC 1071 Computing the Internet checksum
- RFC 1122 Internet host requirements
- RFC 1256 ICMP router discovery messages
- RFC 1518 An architecture for IP address allocation with CIDR
- RFC 1519 Classless Inter-Domain Routing (CIDR)
- RFC 1918 IP addressing





## Ordering Information

### GS900MX and GS900MPX Series

#### AT-GS924MX-xx

24-port 10/100/1000T stackable switch with 2 combo ports (10/100/1000T or 100/1000X SFP) and 2 SFP+ stacking/user ports

#### AT-GS924MPX-xx

24-port 10/100/1000T PoE+ stackable switch with 2 combo ports (10/100/1000T or 100/1000X SFP) and 2 SFP+ stacking/user ports

#### AT-GS948MX-xx

48-port 10/100/1000T stackable switch with 2 combo ports (10/100/1000T or 100/1000X SFP) and 2 SFP+ stacking/user ports

#### AT-GS948MPX-xx

48-port 10/100/1000T PoE+ stackable switch with 2 combo ports (10/100/1000T or 100/1000X SFP) and 2 SFP+ stacking/user ports

Where xx = 10 for US power cord  
20 for no power cord  
30 for UK power cord  
40 for Australian power cord  
50 for European power cord

### 1000Mbps SFP Modules

1G SFP speed on 10G port is not supported.

#### AT-SPSX

1000SX GbE multi-mode 850 nm fiber up to 550 m

#### AT-SPEX

1000X GbE multi-mode 1310 nm fiber up to 2 km

#### AT-SPLX10

1000LX GbE single-mode 1310 nm fiber up to 10 km

#### AT-SPLX10/I

1000LX GbE single-mode 1310 nm fiber up to 10 km industrial temperature

#### AT-SPBD10-13

1000LX GbE Bi-Di (1310 nm Tx, 1490 nm Rx) fiber up to 10 km

#### AT-SPBD10-14

1000LX GbE Bi-Di (1490 nm Tx, 1310 nm Rx) fiber up to 10 km

#### AT-SPLX40

1000LX GbE single-mode 1310 nm fiber up to 40 km

#### AT-SPZX80

1000ZX GbE single-mode 1550 nm fiber up to 80 km

#### AT-SPBD20-13/I

1000BX GbE Bi-Di (1310 nm Tx, 1550 nm Rx) fiber up to 20 km

#### AT-SPBD20-14/I

1000BX GbE Bi-Di (1490 nm Tx, 1310 nm Rx) fiber up to 20 km

### 100Mbps SFP Modules

#### AT-SPFX/2

100FX multi-mode 1310 nm fiber up to 2 km

#### AT-SPFX/15

100FX single-mode 1310 nm fiber up to 15 km

#### AT-SPFXBD-LC-13

100BX Bi-Di (1310 nm Tx, 1550 nm Rx) fiber up to 10 km

#### AT-SPFXBD-LC-15

100BX Bi-Di (1550 nm Tx, 1310 nm Rx) fiber up to 10 km

### 10GbE SFP+ Modules

#### AT-SP10SR

10GSR 850 nm short-haul, 300 m with MMF

#### AT-SP10SR/I

10GSR 850 nm short-haul, 300 m with MMF industrial temperature

#### AT-SP10LRM

10GLRM 1310 nm short-haul, 220 m with MMF

#### AT-SP10LR

10GLR 1310 nm medium-haul, 10 km with SMF

#### AT-SP10LR/I

10GLR 1310 nm medium-haul, 10 km with SMF industrial temperature

#### AT-SP10LR20/I

10GER 1310 nm long-haul, 20 km with SMF industrial temperature

#### AT-SP10ER40/I

10GER 1310 nm long-haul, 40 km with SMF industrial temperature

#### AT-SP10ZR80/I

10GER 1550 nm long-haul, 80 km with SMF industrial temperature

#### AT-SP10TW1

1 meter SFP+ direct attach cable, can also be used for stacking



## Feature Licenses

NAME	DESCRIPTION	INCLUDES
AT-FL-GS9X-UDLD	UniDirectional Link Detection	▶ UDLD