

# AMG560-24G SERIES 28 PORT INDUSTRIAL GRADE MANAGED LAYER 2 SWITCH



## Industrial Ethernet Solutions

AMG's fully managed layer 2 Ethernet switches provide 100Mbps, Gigabit and 10 Gigabit Ethernet switching for industrial edge network applications. Available with 24x RJ45 Gigabit ports supporting optional 30W PoE+ and 4x Gigabit SFP or 4x 1/10 Gigabit SFP+ ports.



Gigabit up to x24	Gigabit up to x24	Gigabit up to x4	1/10 Gb up to x4	Managed Full	Secure 802.1x	USB x1	Temp -40°C~+75°C	Mounting Rack/Surface	PSU x2 Dual

[ AMG560-24GAT-4XS-P300 ]

### OVERVIEW

AMG560 series layer 2 managed industrial Ethernet switches are designed in a 1U 19inch mount housing and have 28 Ethernet ports in total. 24 Gigabit Ethernet RJ45 ports plus an additional 4 Gigabit only or multi-rate SFP/SFP+ ports providing up to 10Gb speeds for data uplink and backbone connectivity. Fibre connectivity is determined by separate SFP device selection, providing application and site flexibility.

The 24 Gigabit Ethernet RJ45 ports optionally support IEEE802.3at 30W PoE+ and are suitable for powering PoE devices over a wide industrial operating temperature range.

The AMG560 series support a wide range of management functions as well as Rapid Spanning Tree, Multiple Spanning Tree and Ethernet Ring Protection Switching (ERPS) protocols for network redundancy. IGMP functionality is supported to handle the multicast traffic which is commonly used in IP CCTV deployments.

The integrated USB port provides easy access to save & restore configuration settings and system logs.

SFPs and DC PSUs need to be ordered separately.

### FEATURES

- 19inch 1U rack or desktop/shelf mount
- -40°C to +75°C temperature maintains performance in extreme conditions
- Available with 90-264VAC mains power input or combinations of AC & DC redundant power inputs
- Compliant with all IEEE 802.3 speeds (i/u/ab/z/ae)
- Dual Speed SFP+ ports (up to 10Gb Speed)
- Supports RSTP, MSTP, ERPS, SNMP v1-3 and IGMP v1-3
- Port trunk functionality available with LACP
- IEEE 802.1x port security enabled
- Supports up to 16K bytes jumbo frames
- Supports optional 15W and 30W PoE
- USB port for configuration free replacement
- AMG Lifetime Support Warranty

# Specifications.

## Standards.

IEEE 802.3i	10Base-T
IEEE 802.3u	100Base-TX
IEEE 802.3ab	1000Base-T
IEEE 802.3z	1000Base-X
IEEE 802.3ae	10GBase-R
IEEE 802.3x	Flow Control
IEEE 802.3ad	Port Trunk with LACP
IEEE 802.1D	Spanning Tree (STP)
IEEE 802.1w	Rapid Spanning Tree (RSTP)
IEEE 802.1s	Multiple Spanning Tree (MSTP)
IEEE 802.1p	QoS Priority Marking
IEEE 802.1Q	VLANs
IEEE 802.1X	Port Security
IEEE 802.3AB	LLDP
IEEE 802.3af	Power over Ethernet 15.4W
IEEE 802.3at	Power over Ethernet 30W
RFC1112	IGMP v1
RFC2236	IGMP v2
RFC3376	IGMP v3
RFC2030	Simple Network Time Protocol (SNTP)
RFC2131	Dynamic Host Configuration Protocol (DHCP)
ITU-T G.8032	Ethernet Ring Protection Switching (ERPS)
IEEE 1588v2	PTP Time Sync

## Hardware Features.

Architecture	Store-and-Forward
Switch Latency	<7µs
Switch Fabric	56Gbps (1GB Models) 128Gbps (10GB Models)
Address Table	16K MAC entries
Buffer Memory	12M bits
Jumbo Frames	9.2K bytes
VLAN's	4K
IGMP Groups	512
Throughput	41.66Mpps (1GB Models) 95.24Mpps (10GB Models)
Priority Queues	8
Bandwidth Control	Ingress Packet Filter and Egress Rate Limit

## Software Features.

Redundancy	STP RSTP MSTP ERPS (G.8032)
VLAN	802.1Q Port Based VLAN Q-in-Q
LACP	Link Aggregation Control Protocol
SFP Monitoring	DDM
IGMP Snooping	v1/v2/v3
IGMP Querier	

## QoS.

Class of Service	802.1p QoS & DSCP
Rate Limiting	Ingress / Egress
Priority Queue	WRR / Strict Priority

## Security.

Port Security	MAC-based
Storm Control	Rate Limiting
802.1x	RADIUS Authentication
TACACS+	
HTTPS/SSL	
SSH v2.0	
DHCP Snooping	

## Management.

DHCP	Client / Server / Relay Option 66/67/82
Event/Error Log	Syslog Client SMTP E-Mail USB
Management Access	SNMP Web GUI Telnet / SSH v2.0 CLI
SNMP	v1/v2c/v3
RMON	1/2/3/9 Groups
Port Mirroring	
Software Update	HTTP/HTTPS/USB
Config Export /Import	
SNTP	Client
LLDP	Link Layer Discovery Protocol
Time Zone & Daylight Savings	
Industrial Profiles	Modbus TCP & Ethernet/IP
IPv4 & IPv6	

# Specifications.

## PoE Management.

Scheduling  
Ping Watchdog with Reboot  
Enable/Disable, Priority Level, Power Level

## Alarms/Contact Closures.

Inputs	1x Digital Input (Isolated)
Input Current	8mA Max
State 1	+13 to +30V
State 0	-30 to +3V
Outputs	1x Relay Output
Type	Form A
Output Rating	24V <sub>DC</sub> @ 1A

## Interface.

LED Indicators	2x Power Fault Ring State Ring Master SFP Link/Activity RJ45 Link/Activity PoE
RJ45 Ports	24x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X and 1.5 kV Isolation Protection
SFP Slot	4x 1000FX SFP or
SFP+ Slot	4x 1/2.5/10G SFP+
Power - AC	1x IEC C14 Socket
Power - DC	1x 4 pin screw terminal
DI/Relay	1x 4 pin screw terminal
Serial Console	1x RJ45
Config/Firmware	USB Type A
Reset	Ultra-small Tactile Switch

## Power.

Power Inputs	1 or 2 (Model Dependent)
Operating Voltage:	
AC Input	90-264V <sub>AC</sub>
DC Inputs	48-56V <sub>DC</sub>
Power Consumption	18 Watts Max (1Gb Models)
(without PoE Load)	22 Watts Max (10Gb Models)
Total PoE Budget	300W Max (AC Power)
	720W Max (DC Power)
PSE Modes	Mode A
PoE Enabled Ports	Ports 1-24
Protection	Reverse Polarity, Overload Current

## USB.

Firmware Update  
Configuration Backup / Restore  
Boot Up & System Log

## Mechanical.

Housing	Metal
Dimensions:	(W x D x H) Excluding 19inch Brackets 440 x 331 x 44 mm 17.32 x 13.03 x 1.73 in
IP Rating	IP30
Installation	19inch Rack (1U) or Desktop
Weight	6kg / 13.23lb

## Environmental.

Operating Temp.	-40°C to +75°C (With 1Gb SFP) -40°C to +60°C (With 10Gb SFP+)
Storage Tempe.	-40°C to +85°C
Humidity	5% to 95% (non-condensing)
MTBF	>250,000 hours
MTBF Standard	Telcordia (Bellcore) GB
Heat Dissipation	1085 BTU/h (1Gb Models 300W PoE) 2518 BTU/h (1Gb Models 720W PoE) 75 BTU/h (10Gb Models Non-PoE) 1099 BTU/h (10Gb Models 300W PoE) 2532 BTU/h (10Gb Models 720W PoE)
Cooling	Passive
Noise Level	0 dBA

## Regulatory.

Safety	IEC/EN 62368-1
EMI	EN55032 Class A (CISPR 32) FCC Part 15B Class A
EMS	EN61000-4-2 (ESD) EN61000-4-3 (RS) EN61000-4-4 (EFT) EN61000-4-5 (Surge) EN61000-4-6 (CS) EN61000-4-8 (PFMF)
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6
Environmental	Reach, RoHS, WEEE

Designed to meet NEMA TS2 & EN 50121-4

# Part Numbers.

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## 1Gb Industrial Layer 2 Managed PoE Switches

AMG560-24GAT-4S-P300	24 x 10/100/1000TX 30W PoE (300W Max) & 4 x 1000M SFP (1 x AC Input)
AMG560-24GAT-4S-RP300-AD	24 x 10/100/1000TX 30W PoE (300W Max) & 4 x 1000M SFP (1 x AC + 1x DC Input)
AMG560-24GAT-4S-RP720-DD	24 x 10/100/1000TX 30W PoE (720W Max) & 4 x 1000M SFP (2 x DC Inputs)

## 10Gb Industrial Layer 2 Managed Switches

AMG560-24G-4XS	24 x 10/100/1000TX & 4 x 1G/2.5G/10G SFP+ (1 x AC Input)
AMG560-24G-4XS-RP-AD	24 x 10/100/1000TX & 4 x 1G/2.5G/10G SFP+ (1 x AC + 1x DC Input)
AMG560-24G-4XS-RP-DD	24 x 10/100/1000TX & 4 x 1G/2.5G/10G SFP+ (2 x DC Inputs)

## 10Gb Industrial Layer 2 Managed PoE Switches

AMG560-24GAT-4XS-P300	24 x 10/100/1000TX 30W PoE (300W Max) & 4 x 1G/2.5G/10G SFP+ (1 x AC Input)
AMG560-24GAT-4XS-RP300-AD	24 x 10/100/1000TX 30W PoE (300W Max) & 4 x 1G/2.5G/10G SFP+ (1 x AC + 1x DC)
AMG560-24GAT-4XS-RP720-DD	24 x 10/100/1000TX 30W PoE (720W Max) & 4 x 1G/2.5G/10G SFP+ (2 x DC Inputs)

# Recommended PSUs.

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## Non-PoE Models With DC Inputs

AMGPSU-I48-P60      DIN-Rail Mounting Industrial Grade PSU, -40 to +70°C, 48-56VDC, 60W

## PoE Models With DC Inputs

AMGPSU-I48-P240      DIN-Rail Mounting Industrial Grade PSU, -40 to +70°C, 48-53VDC, 240W

AMGPSU-I48-P480      DIN-Rail Mounting Industrial Grade PSU, -40 to +70°C, 48-55VDC, 480W

# Notes.

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Included Accessories:      19inch Mounting Brackets, Console Cable, Region Specific Line Cord (AC Models Only)  
Optional Accessories:      SFP/SFP+ modules - Optical/Copper see separate list, need to be ordered separately

*In a continuing effort to improve and advance technology, product specifications are subject to change without notice. Please visit [www.amgsystems.com](http://www.amgsystems.com) for the latest product specifications.*