

# AMG510-16G SERIES

## 18 PORT COMMERCIAL GRADE MANAGED LAYER 2+ SWITCH



### Commercial Ethernet Solutions

AMG's fully managed layer 2+ Ethernet switches provide 100Mbps and Gigabit Ethernet switching for commercial network applications. Available with 16x RJ45 Gigabit ports supporting optional 30W PoE+ and 2x Gigabit SFP or RJ45/SFP Combo ports.



Gigabit up to x16	Gigabit up to x16	Gigabit up to x2	100/1000 up to x2	Managed Full	Secure 802.1x	Stacking Virtual	Temp 0 ~ +50°C	Mounting Rack/Surface	PSU Mains

[ AMG510-16G Series ]

#### / OVERVIEW

AMG510 series layer 2+ managed Ethernet switches are designed for 19inch rack or desktop mounting within commercial grade applications. The AMG510-16G series has 16 Gigabit Ethernet RJ45 ports with optional IEEE 802.3at compliant 30W PoE+ and an additional 2 multi-rate SFP only or RJ45/SFP combo ports that support both 100Mb and 1Gb speeds for data uplink into core networks, providing application and site flexibility.

AMG's industry leading virtual stacking capability greatly simplifies the installation and on-going site maintenance by providing the users with a single web GUI interface from which all switches within the virtual stack can be configured and monitored eliminating the need for multiple browser tabs and having to remember many IP management addresses. The virtual stack can be used between all AMG510 series models even when installed in dispersed physical locations.

The AMG510 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.

#### / FEATURES

- 19inch 1U rack or desktop/shelf mount
- 0°C to +50°C temperature for commercial grade applications
- 90-264VAC mains power input
- Compliant with all IEEE 802.3 speeds (i/u/ab/z)
- Dual Speed SFP ports (100Mb and 1Gb Supported)
- Supports RSTP, MSTP, ERPS, SNMP v1-3 and IGMP v1-3
- Port trunk functionality available with LACP
- IEEE 802.1x port security enabled
- Supports 9.6K bytes jumbo frames
- Virtual Stacking supported
- Layer 3 Static Routing
- AMG 3 Year Support Warranty

# Specifications.

## Standards.

IEEE 802.3i	10Base-T
IEEE 802.3u	100Base-TX & 100Base-FX
IEEE 802.3ab	1000Base-T
IEEE 802.3z	1000Base-X
IEEE 802.3x	Flow Control
IEEE 802.3ad	Port Trunk with LACP
IEEE 802.3az	Energy Efficient Ethernet
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 802.1v	VLAN Classification
IEEE 802.1X	Port Security
IEEE 802.3AB	LLDP
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)

## Hardware Features.

Architecture	Store-and-Forward
Switch Latency	<7µs
Switch Fabric	36Gbps
Address Table	8K MAC Entries
Buffer Memory	4M bits
Jumbo Frames	9.6K bytes
CPU	400MHz
SDRAM	128Mb
Flash	16Mb
VLAN's	4K
IGMP Groups	1024
IPv6 MLD Groups	1024
Throughput	26.78Mpps @ 64bytes
Priority Queues	8
Bandwidth Control	Ingress Packet Filter and Egress Rate Limit

## Layer 3 Features.

Static Routing:	
Interfaces	8 Max
Routes	32 Max
DHCP	Server (IPv4)

## Software Features.

Redundancy	STP RSTP MSTP ERPS (G.8032)*
VLAN	802.1Q Port Based VLAN Private VLAN Voice VLAN Multicast VLAN Registration Dynamic Trunk Static Trunk DDM*
MVR LACP	
SFP Monitoring GARP/GVRP IGMP Snooping IGMP Querier MLD Snooping MLD Querier IPMC Virtual Stacking*	v1/v2/v3 (8 VLAN's Max)  IPv6 (8 VLAN's Max) IPv6 64 Profiles (128 Rules Each) Unlimited Units (All Speeds Supported)

## QoS.

Class of Service	802.1p QoS & DSCP
Diffserv	RFC2474
Rate Limiting	Ingress / Egress
Priority Queue	WRR / Strict / Hybrid Priority

## Security.

Port Security	MAC/IP Based
Storm Control	Rate Limiting
802.1x	RADIUS Authentication
TACACS+	
HTTPS/SSL	
BPDU Guard	
DHCP Snooping	
Loop Protection	
IP Source Guard	IPv4 & IPv6
IP Authorisation Managers	
Access (Policy) Control List (ACL L2/3/4)	
Custom User Rights	15 Levels (20 Users Max)

\* Features available July 2020

# Specifications.

## PoE Management.

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

## Management.

DHCP	Client / Relay (IPv4 & IPv6) Option 66/67/82
Event/Error Log	Syslog Client
Management Access	SNMP Web GUI Telnet / SSH v2.0 / CLI
Access Management	Filtering
SNMP	v1/v2c/v3
RMON	1/2/3/9 Goups
Port Mirroring	
Software Update	HTTP/HTTPS
Config Export /Import	
Dual Firmware Images	
SNTP	Client (IPv4 & IPv6)
Configuration	IPv4 & IPv6
LLDP	Link Layer Discovery Protocol
LLDP-MED	
sFlow	
Time Zone & Daylight Savings	
Cable Diagnostics	

## Interface.

LED Indicators	1x Power SFP Link/Activity RJ45 Link/Activity RJ45 Speed (Non-PoE Models Only) PoE (PoE Models Only)
RJ45 Ports (depending on model)	16x 10/100/1000T(X) RJ45 or 18x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X
SFP Slot	2x 100/1000FX SFP
Power	1x IEC C14 Socket
Serial Console	RJ45

## Power.

Power Inputs	1
Operating Voltage	90-264V <sub>AC</sub>
Power Consumption	19 Watts Max (without PoE Load)
Total PoE Budget	290W Max
PSE Modes	Upper Ports (Odd) Mode A Lower Ports (Even) Mode B
PoE Enabled Ports	Ports 1-16

## Packaging.

Shipping Weight	3.0kg / 6.61lb (Non-PoE Models) 3.4kg / 7.50lb (PoE Models)
Dimensions (W x D x H)	405 x 305 x 91 mm 15.95 x 12.01 x 3.58 in

## Mechanical.

Housing	Metal
Dimensions:	(W x D x H) Excluding 19inch Brackets 330 x 210 x 44 mm 12.99 x 8.27 x 1.73 in
IP Rating	IP30 (Non-PoE Models) IP20 (PoE Models)
Installation	19inch Rack (1U) or Desktop
Weight	2.1kg / 4.63lb (Non-PoE Models) 2.5kg / 5.51lb (PoE Models)

## Environmental.

Operating Temp.	0°C to +50°C
Storage Temp.	-20°C to +80°C
Humidity	5% to 90% (non-condensing)
MTBF	113,394 hours (Non-PoE Models) 116,936 hours (PoE Models)
MTBF Standard	MIL-HDBK-217F GB
Heat Dissipation	65 BTU/h (Non-PoE Models) 1054 BTU/h (with Max PoE Load)
Cooling	Passive Cooling (Non-PoE Models) 1x Cooling Fan (PoE Models)
Airflow	Left to Right
Noise Level	0 dBA (Non-PoE Models) 56 dBA (PoE Models)

## 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) EN61000-4-11 (Dips)
Environmental	Reach RoHS WEEE

# Part Numbers.

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## 1Gb Commercial Layer 2+ Managed Switches

AMG510-16G-2S	16 × 10/100/1000TX & 2 × 100/1000FX SFP
AMG510-16GAT-2C-P290	16 × 10/100/1000TX 30W PoE (290W Budget) & 2 × 100/1000M RJ45/SFP Combo

## Notes.

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Included Accessories: 19inch Mounting Brackets, 4x Rubber Feet, Console Cable, Region Specific Line Cord  
Optional Accessories: 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.*