AMG577 SERIES
11 PORT INDUSTRIAL GRADE MANAGED LAYER 2+ 1U 19INCH SWITCH WITH 30/90W POE

Industrial Ethernet Solutions

AMG's fully managed layer 2+ Ethernet switches provide 100Mbps, Gigabit and 2.5 Gigabit Ethernet switching for industrial network applications. Available with 8x RJ45 Gigabit ports supporting optional 30/60/90W PoE and 3x 100Mb/1Gb/2.5Gb SFP ports.



Gigabit	Gigabit	Gigabit	1/2.5 Gb	Managed	Contacts	Temp	Mounting	Protection	Input	NDAA/TAA
up to x8	up to x4	up to x8	x3	Layer 2+	1 In / 2 Out	-40°C~+75°C	Rack/Wall	IP30	IEC C14	Compliant

[AMG577-8GAT-3S-P240]

OVERVIEW

AMG577 series layer 2+ managed industrial Ethernet switches are designed in a thermally efficient, passively cooled 1U 19inch rack mount, desktop/shelf or wall mount housing and have 8 Gigabit Ethernet RJ45 ports with an additional 3 multi-rate SFP ports that support 100Mb, 1Gb and 2.5Gb for high speed data uplink into core networks, providing application and site flexibility.

Available as a non-PoE model as well as multiple PoE models for IEEE802.3at 30W and/or IEEE802.3bt 60/90W they are suitable for powering the latest high powered PoE devices over a wide industrial operating temperature range.

The AMG577 series support a wide range of layer 2+ management functions and are available with numerous optional accessories designed to increase the functionality including an 8 port surge protector and accessory tray for 3rd party device mounting.

A fully integrated primary industrial power supply provides unit and PoE power from a universal 85-305VAC mains input. A second internal auxillary 65W or 120W power supply can be optioned to provide power to 3rd party equipment at 12, 24 or 48VDC.

FEATURES

- Innovative thermally efficient housing ensures high levels of device reliability under full load
- -40°C to +75°C temperature maintains performance in extreme conditions
- 19inch 1U rack, desktop/shelf or wall mount
- Compliant with all IEEE 802.3 speeds (i/u/ab/z)
- Triple Speed SFP ports (100Mb, 1Gb, 2.5Gb)
- Supports RSTP, MSTP, ERPS, MRP, SNMP and IGMP
- IEEE 802.1x port security enabled
- Supports 10K bytes jumbo frames
- Supports optional 15W, 30W, 60W and 90W PoE
- Optional 2nd auixllary power supply supporting 65W or 120W 3rd party loads at 12, 24 or 48VDC
- Designed in the USA & UK. Manufactured in the United Kingdom
- AMG Lifetime Support Warranty

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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 802.1AB	LLDP
IEEE 802.3at	30W PoE+
IEEE 802.3bt	60 & 90W PoE
RFC1112, 2236, 3376, 4604, 5711	IGMP v1, v2, v3
RFC2236, 3376	IGMP Snooping
RFC8907	TACACS
RFC2865, 2866	RADIUS
RFC5424	Syslog
RFC4250 - 4254	SSH
RFC5246	TLS1.2 / HTTPS
RFC854	Telnet
RFC2030	SNTP
RFC2131	DHCP
IEC 62439-2	Media Redundancy Protocol
ITU-T G.8032	Ethernet Ring Protection Switching (ERPS)

Hardware Features.

Architecture	Store-and-Forward
Switch Latency	<7µs
Switch Fabric	31 Gbps (Non-Blocking Wire Speed On All Ports. 99.999% Error Free Data Integrity)
Address Table	4K MAC Entries
Buffer Memory	1.75M bits
Jumbo Frames	10K Bytes
CPU	500MHz
SDRAM	2Gb
Flash	512Mb
VLAN's	4K
IGMP Groups	1024
IPv6 MLD Groups	1024
Throughput	23.07Mpps @ 64 bytes
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 Routing. Consult AMG Technical Services For Application Support

Software Features.

Redundancy	STP RSTP MSTP MRP ERPS (G.8032)
VLAN	802.1Q Port Based VLAN Private VLAN Voice VLAN
MVR	Multicast VLAN Registration
MRP/GVRP	VLAN Registration
LACP	Dynamic Trunk, Static Trunk
SFP Monitoring	DDM
IGMP Snooping	v1/v2/v3 (8 VLAN's Max)
IGMP Querier	
MLD Snooping	IPv6 v1 (8 VLAN's Max)
MLD Querier	IPv6
IPMC	64 Profiles (128 Rules Each)
PTP	Client

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
Dynamic ARP Inspection	
Sticky MAC	
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)

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Specifications.

Alarms/Contact Closures.

Inputs	1x Dry Input
Outputs	1x Form A Relay
Alarm Outputs	1x Form A Relay
Output Rating	400V_{DC} @ 0.1A Max

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	
FTP/TFTP/SCP/SFTP	
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 AC Power, 1x DC Power
	Fault
	SFP Link/Activity
	RJ45 Link/Activity
	PoE (PoE Models Only)
RJ45 Ports	8x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X and 1.5 kV Isolation Protection
SFP Slot	3x 100M/1G/2.5G SFP
Power AC	1x IEC C14 Socket with locking security bracket
Power DC In/Out	2x 2-Way Screw Terminals
I/O, Alarm	1x 4-Way Screw Terminal
Serial Console	USB Type C

Packaging.

Shipping Weight:	
(All Models **Without** Aux PSU)	3.00kg / 6.61lb
(All Models **With** Aux PSU)	3.15kg / 6.94lb
Dimensions	(W x D x H)
	300 × 270 × 138 mm
	11.81 × 10.63 × 5.43 in

Power.

Power Inputs	2 (1x AC + 1x DC Redundant)^
Mains Input Voltage:	
(All Models **Without** Aux PSU)	85-305V_{AC} or 120-430V_{DC}
(All Models **With** Aux PSU)	85-264V_{AC} or 120-370V_{DC}
DC Input Voltage^:	
(Non-PoE Models)	12-56V_{DC}
(30W PoE Models)	50-56V_{DC}
(90W PoE Models)	52-56V_{DC}
Input Frequency	47-63 Hz
Input Current:	
(All Models **Without** Aux PSU)	4A (115V_{AC}) / 2A (230V_{AC})
(All Models **With** Aux PSU)	6A (115V_{AC}) / 3A (230V_{AC})
Power Consumption	10 Watts Max (without PoE & Aux Load)
Total PoE Budget	300W Max (model dependent) (refer to de-rating chart)
PSE Modes	Mode A (30W Ports)
	Mode A, Mode B (60/90W Ports)
PoE Enabled Ports	Ports 1-8 (model dependent)
Protection	Reverse Polarity (DC input only)
	Overload
Aux Power Outputs	1 (factory order option, refer to ordering table)
Aux Output Voltage:	
(AP1 & AP2 Models)	12V_{DC}
(AP3 & AP4 Models)	24V_{DC}
(AP5 & AP6 Models)	48V_{DC}
Aux Output Power:	
(AP1, AP3 & AP5 Models)	65W (refer to de-rating chart)
(AP2, AP4 & AP6 Models)	120W (refer to de-rating chart)

For more details on auxilaary psu output please refer to the AMG577 application note.

Mechanical.

Housing	Metal
Dimensions:	(W x D x H)
Excluding Rack/Wall Mounts	265 × 230 × 44 mm
	10.43 × 9.06 × 1.73 in
IP Rating	IP30
Installation	19inch Rack (1U)
	Desktop / Shelf
	Wall (requires wall brackets, sold separately)
Weight:	
(All Models **Without** Aux PSU)	2.25kg / 4.96lb
(All Models **With** Aux PSU)	2.40kg / 5.29lb

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Specifications.

Environmental.

Operating Temp.	
Air Gap Install*:	-40 to +75°C / -40 to +167°F
Sealed Enclosure	-40 to +65°C / -40 to +149°F
40 LFM Vented Enclosure	-40 to +70°C / -40 to +158°F
200 LFM Fan/Blower Enclosure	-34 to +75°C / -29 to +167°F
No Air Gap Install*:	-40 to +65°C / -40 to +149°F
Sealed Enclosure	-40 to +60°C / -40 to +140°F
40 LFM Vented Enclosure	-40 to +65°C / -40 to +149°F
200 LFM Fan/Blower Enclosure	-34 to +65°C / -29 to +149°F
Storage Temp.	-40 to +85°C / -40 to +185°F
Humidity	5% to 95% (non-condensing)
MTBF	>300,000 hours
MTBF Standard	MIL-HDBK-217F GF 25°C
Heat Dissipation	34 BTU/h (Non-PoE Models, No Aux)
	853 BTU/h (with 240W PoE Load, No Aux)
	1024 BTU/h (with 300W PoE Load, No Aux)
Cooling	Passive Cooling
Noise Level	0 dBA

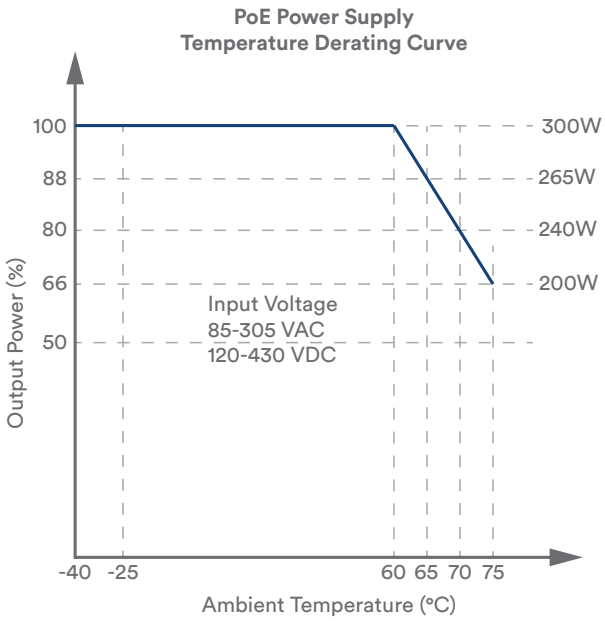
* Air gap installations provide a minimum 0.5U space (22mm, 0.87in) directly above the AMG577 unit for air circulation to the heatsink.
No air gap installations do not provide any space directly above the AMG577 unit and therefore the unit will operate with a restricted maximum upper temperature.

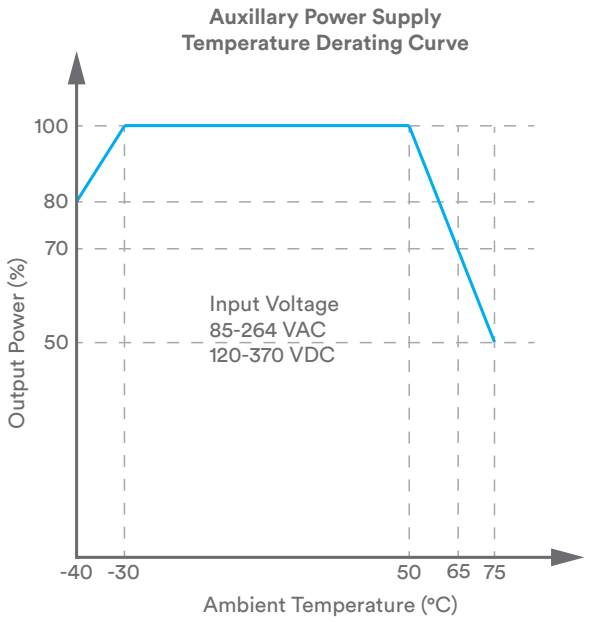
^ DC Power Supply Sold Separately
DC Input Powers Switch Only. Does Not Provide Power To Auxillary DC PSU

Regulatory. (pending)

Safety	EN62368-1
EMI	EN55032 Class A
	CISPR32
	FCC Part 15B Class A
	IEC/EN61000-3-2
	IEC/EN61000-3-3
EMS	IEC/EN61000-4-2 (ESD)
	IEC/EN61000-4-3 (RS)
	IEC/EN61000-4-4 (EFT)
	IEC/EN61000-4-5 (Surge)
	IEC/EN61000-4-6 (CS)
	IEC/EN61000-4-11 (Dip)
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Environmental	Reach
	RoHS
	WEEE
Traffic	NEMA TS2
	BS / EN50293 (Road Traffic Systems)
Supply Chain	NDAA & TAA Compliant

Product Characteristic Curve.





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Part Numbers.

Industrial Layer 2+ Managed 1U 19inch Switches (Without Auxillary Power Supply)

AMG577-8G-3S	8x 10/100/1000TX, 3x 100M/1G/2.5G SFP
AMG577-8GAT-3S-P240	8x 10/100/1000TX (8x 30W PoE), 3x 100M/1G/2.5G SFP
AMG577-2GBT-4GAT-2G-3S-P300	8x 10/100/1000TX (2x 90W, 4x 30W PoE & 2x Non-PoE), 3x 100M/1G/2.5G SFP
AMG577-4GBT-4G-3S-P300	8x 10/100/1000TX (4x 90W PoE & 4x Non-PoE), 3x 100M/1G/2.5G SFP

Auxillary Power Supply Options

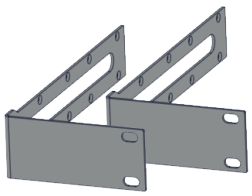
-AP1	65W $12V_{DC}$ Auxillary Power Supply Output	-AP2	120W $12V_{DC}$ Auxillary Power Supply Output
-AP3	65W $24V_{DC}$ Auxillary Power Supply Output	-AP4	120W $24V_{DC}$ Auxillary Power Supply Output
-AP5	65W $48V_{DC}$ Auxillary Power Supply Output	-AP6	120W $48V_{DC}$ Auxillary Power Supply Output

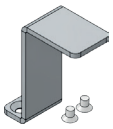
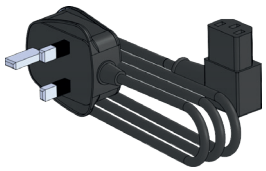
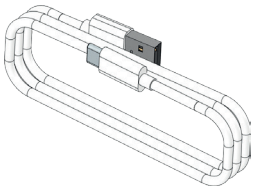
To include the factory fitted auxillary power supply output to the AMG577 add the appropriate part code suffix listed above to the end of the model number. Example:

AMG577-8GAT-3S-P240-AP4
This model would feature the 120W $24V_{DC}$ auxillary power supply output.

Included Accessories.

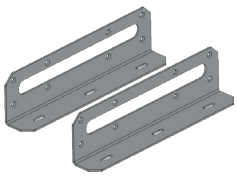
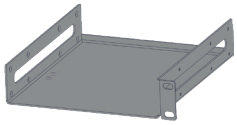
19inch Mounting Brackets	2x Rack Brackets & Screws For 1U 19inch Mounting AMG577 Series Products
Adhesive Rubber Feet	4x Grey Rubber Adhesive Feet For Desktop Mouting AMG577 Series Products
Cable Ties & Bases	2x Cable Ties, Bases & Screws For Securing Cables To The Included 19inch Rack Mounting Brackets
IEC Plug Locking Bracket	Angled Locking Bracket & Screws To Secure The Included Left Angle IEC Line Cord
Left Angle IEC Cable	Region Specific UK/EU/US Left Angled IEC Line Cord
USB Console Cable	USB Type A to Type C Console Cable (1.5M, 5ft)



Optional Accessories.

AMGMNT-WALL-03	2x Wall Mouting Brackets & Screws For Wall / Surface Mouting AMG577 Series
AMG577-TR	Accessory Tray For Mounting AMG Mini & Standard Units or 3rd Party Devices Next To AMG577 Series
AMG110R-8N-SP	8 Channel Industrial 1/2.5Gb Surge Protector, 90W PoE Support With Mounting Accessories For AMG577 Series
SFP Modules	100Mb, 1Gb & 2.5Gb Optical/Copper Modules 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 for the latest product specifications.

Proud to be a UK & USA Manufacturer

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