AMG MULTI-SERVICE ETHERNET SWITCH (MSES2) INDUSTRIAL HARDENED SERIES

Industrial Hardened Ethernet Solutions

AMG's Multi-Service Ethernet Switch offers unique features which will prove of huge benefit when implementing, for example, IP-based integrated security systems.

Gigabit	100/1000	Data	Contacts	Managed	Temp	Secure
Up to x16	Up to x4	232/422/485	In/Out	Full	-40~+75°C	802.1x

[AMG9HM2P-8G-2S-4S16C]

OVERVIEW

As well as supporting Layer 2 Managed Ethernet functionality, this product also supports the integration of low-speed I/O, allowing Serial Ports and Alarm Contacts to be directly connected to the switch, without any requirements for additional hardware.

Historically, this requirement has been dealt with through the use of third-party Serial port and Contact-closure I/O servers, resulting in a disparate, multi-vendor product mix and corresponding issues with product integration.

This product uniquely offers a common web-browser interface for configuration of all aspects of the device - Ethernet as well as Serial ports and Alarm I/O.

Serial ports and Alarm I/O can be configured as either point-to-point circuits, or as virtual circuits when interfaced with Management Systems.

These flexible, compact and easy to use fully managed Ethernet switches also have the benefit of Spanning Tree and Rapid Spanning Tree Protocols, and IGMP functionality to deal with the multicast traffic which is commonly used in IP CCTV deployments.

FEATURES

- Standalone and rackmount formats
- 10/100/1000 Mbps full bandwidth Ethernet
- Low-speed I/O data integration support
- Compliant with all IEEE 802.3 variants (u/ab/x/z)
- Large range of Port Count options available
- Dual Speed SFP ports (100 and 1000 Mbps)
- Supports RSTP, SNMP v1-3 and IGMP v1-3
- IEEE 802.1x Port Security
- Extended operating temperature compared with industry equivalents -40°C to +75°C
- Optional on-board PoE

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D27046-05

Specifications.

Standards.

IEEE 802.3i	10Base-T
IEEE 802.3u	100Base-TX, 100Base-FX
IEEE 802.3z	1000Base-X
IEEE 802.3ab	1000Base-TX
IEEE 802.3x	Flow Control and Back
IEEE 802.3ac	Pressure
IEEE 802.3az	Frame Size Extension
IEEE 802.1D	Energy Efficient Ethernet
IEEE 802.1w	Spanning Tree
IEEE 802.1s	Rapid Spanning Tree
IEEE 802.1p	Multiple Spanning Tree
IEEE 802.1Q	QoS Priority Marking (Q4 2017)
IEEE 802.1x	VLANs
IEEE 802.3at/af	Port Security
RFC1112	Power over Ethernet
RFC2236	IGMP v1
RFC3376	IGMP v2
RFC2030	IGMP v3
RFC2131/3736	Simple Network Time Protocol Dynamic Host Configuration
ITU-T G.8032	Protocol (client/server - IPv4) Ethernet Ring Protection Switching (ERPS) (Q4 2017)
Other	SNMP v1, v2c, v3 Synchronous Ethernet Ingress Rate Limiting (storm Control) (Q4 2017)
Backplane	1Gbps Max
Wake-on-LAN	Per Port
Processing Type	Store-and-Forward
Address Table Size	1K MAC addresses
Jumbo Frames	up to 10K
Bandwidth Control	Ingress Packet Filter and Egress Rate Limit The packet filter rate can be set from 100K to 250Mbps

Interface.

LED Indicators	
Per port	10/100/1000, FDX/HDX
Data	IN, OUT,
Contacts	IN, OUT
PoE	Each PoE enabled Ethernet Port
Data/CC Connector	Removable/Sprung for all Serial Data and Alarm contact I/O
Software Update	Remote Programmable
Configuration	Web Browser, CLI Port SNMP

Ethernet.

Auto MDI/MDIX	
RJ45 Ports UTP	4x, 6x, 8x, 12x or 16x 10/100/1000T
SFP Ports	1x, 2x, 3x or 4x 100/1000M

Serial Data.

Data Rate	Maximum 115.2kb/s
Low Speed Interface	4x RS485 / RS422 / RS232

Alarms/Contacts.

I/O	16 x CC (Alarms) In or Out
Input level	47kΩ pull-up to 3v3
Output	
Interface	MOSFET open drain circuit, 4.7Ω
Outputcurrent	250mA
Maximum voltage	+24Vdc

Power.

Input Voltage	
No PoE	DC +12V to +24V
PoE	DC +48V to +56V
Power Consumption	6 Watts
Reverse Polarity Protection	Yes

Note: Redundant PSUs are supported

PoE/PoE+.

Output Power	15 to 30W
Output Voltage	DC +50V to +57V
Output Current Max	600mA
Total PoE Power Budget	Max 600W

General.

Operating Temp.	-40°C to +75°C
Storage Tempe.	-50°C to +85°C
Ambient Relative Humidity	0% to 95% (Non-condensing)
MTBF	>310,000 hrs

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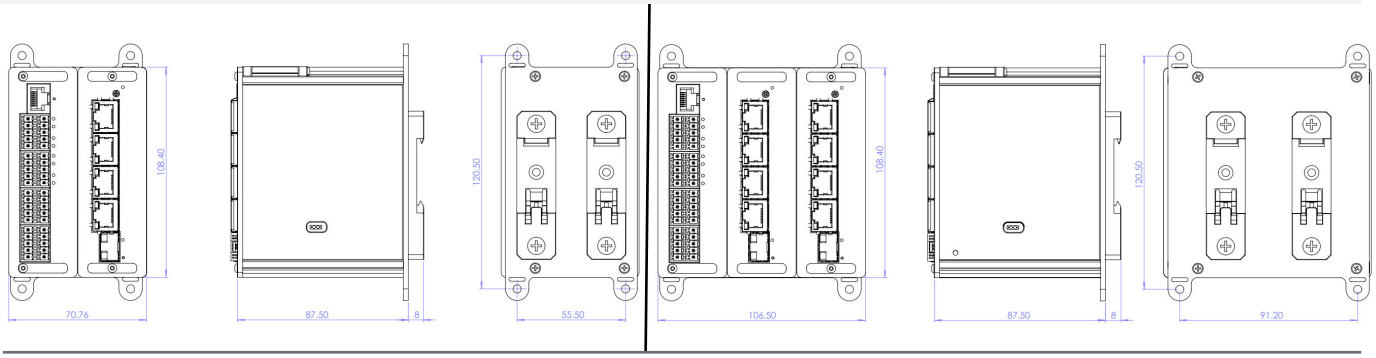
Specifications.

Mechanical.

Casing	IP 30 Protection Metal case
Dimensions	W × H × D
1 SFP ports	70.8 × 121 × 95.5 mm
2 SFP ports	106.5 × 121 × 95.5 mm
3 SFP ports	142 × 121 × 95.5 mm
4 SFP ports	177.5 × 121 × 95.5 mm
Note: Depth 95.5mm includes 8mm DIN-Rail bracket.	
Weight	1kg
Installation	Wall Mount or DIN-Rail Design

Regulatory.

Europe	CE
US	FCC



Part Numbers.

AMG9HM2P-4G-1S-4S16C	4x 10/100/1000TX, 1x 100/1000M SFP, 4x Bi-directional data, 16x Contact closure, -40°C to +75°C
AMG9HM2P-8G-2S-4S16C	8x 10/100/1000TX, 2x 100/1000M SFP, 4x Bi-directional data, 16x Contact closure, -40°C to +75°C
AMG9HM2P-12G-3S-4S16C	12x 10/100/1000TX, 3x 100/1000M SFP, 4x Bi-directional data, 16x Contact closure, -40°C to +75°C
AMG9HM2P-16G-4S-4S16C	16x 10/100/1000TX, 4x 100/1000M SFP, 4x Bi-directional data, 16x Contact closure, -40°C to +75°C
AMG9HM2P-4GH-1S-4S16C-P120	4x 10/100/1000TX with 802.3at PoE+, 1x 100/1000M SFP, 4x Bi-directional data, 16x Contact closure, -40°C to +75°C (PoE budget 120W)
AMG9HM2P-8GH-2S-4S16C-P240	8x 10/100/1000TX with 802.3at PoE+, 2x 100/1000M SFP, 4x Bi-directional data, 16x Contact closure, -40°C to +75°C (PoE budget 240W)
AMG9HM2P-12GH-3S-4S16C-P360	12x 10/100/1000TX with 802.3at PoE+, 3x 100/1000M SFP, 4x Bi-directional data, 16x Contact closure, -40°C to +75°C (PoE budget 360W)
AMG9HM2P-16GH-4S-4S16C-P480	16x 10/100/1000TX with 802.3at PoE+, 4x 100/1000M SFP, 4x Bi-directional data, 16x Contact closure, -40°C to +75°C (PoE budget 480W)

Recommended PSUs.

Non-PoE	AMG2004	15VDC, 24W PSU, DIN-Rail mounting.
PoE Variants	AMG2016	48-56VDC 1.25A, 60W PSU, DIN rail mount
	AMG2019	48-56VDC 2.5A, 120W PSU, DIN rail mount
	AMG2012	48-56VDC 5.0A 240W PSU, DIN rail mount
	AMG2013	48-56VDC 10.0A 480W PSU, DIN rail mount

Notes.

Other port and PoE options are also available.
Optional Accessories: SFP modules - Optical/Copper see separate list, need to be ordered separately

Proud to be a British Manufacturer

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