TRANSMISSION **WITH INNOVATION**

AMG

TRANSMISSION **WITH INNOVATION**

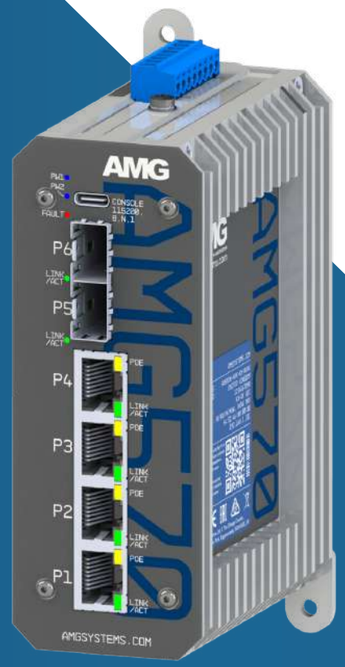
AMG Systems are a UK manufacturer and leading global provider of environmentally robust IP/Ethernet, Wireless and Hybrid communication transmission solutions.

AMG

For more than 25 years, the AMG brand has been synonymous with excellence in data transmission technology.

We're market leaders in providing environmentally robust Fibre, Analogue, IP/Ethernet, Wireless & Hybrid communication transmission solutions to global industries.

We have a fantastic team of engineers, designers, and managers who work together to ensure you have the right products for your system solution. Our solutions span a wide range of industries across the globe, so whichever market you operate in, we have the experience and products for your network.



AMG570 - 4+2
Industrial Managed Switch

British manufacturing is vital to the prosperity of the UK economy.

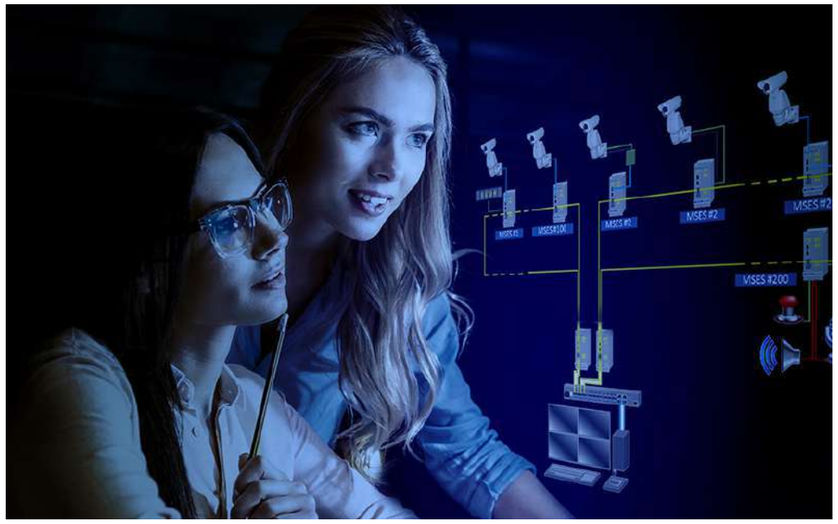
AMG Systems have nearly three decades of experience in design and manufacturing and during that time have increased production and investment in our internal UK hardware and software engineering teams.

As we manufacture in Britain we do not have to solely rely on imports and in return, this helps us deliver solutions quicker. We also believe in supporting British companies and where possible we strive to source local materials and expertise.

AMG System Design

AMG provides a complete range of network transmission solutions. Our pre-sales system design service is free of charge, and applies to all our products, regardless of who completes the installation. Take advantage of our combined experience and expertise and get in touch to start your system design.

AMG is committed to providing efficient, manageable, scalable and cost-effective infrastructure designs. Our solutions meet our customers' capability requirements and budget, coupled with our strong project management experience and expert knowledge. AMG provides complete solutions for video and data transmission, from inception and tender specification to installation and customer acceptance testing.



AMG can also assist you with specific cabling requirement, from sourcing the right cable – be it fibre or coax – to installation and termination. We pride ourselves on our flexible style of working, our client relationship and our ability to continue to add value over the entire life cycle of any project. Whether it's budget proposals for consultants or recommendations for systems integrators, our expertise has been proven time and again through some of the most prestigious projects in the world.

Professional Services

From the initial design stage through to the configuration of the network switches. AMG can provide a range of professional services to ensure a robust ethernet environment.

AMG are a solutions focused manufacturer and therefore offer a range of professional services relating to the design and configuration of Ethernet transmission systems.

Our capabilities, gained from over 25 years experience, applies to our entire range of services and processes that comprise an effective reliable IP network.

AMG provides a complete Ethernet transmission solution. From inception and tender specification to low level design and pre-staging of equipment, AMG's end-to-end design and manufacturing service goes above and beyond the competition.

AMG8870F-06-2
Outdoor wireless radio

Custom Services

As a UK manufacturer, AMG have complete control of the design and build processes. Our software and hardware development teams are able to build custom products to bespoke specifications.
This makes AMG uniquely positioned to offer an end-to-end design and build service.

OEM Services

AMG have the ability to provide UK made OEM (other equipment manufacturer) products that can be re-branded with your unique identity.

The majority of AMG's standard product range can be supplied on an OEM basis.

- Customised product labelling & plain white packaging
- Re-branding of AMG graphical user interface to incorporate your company logo
- Assignment of your companies own MAC addresses

This, alongside the benefit of hardware and software being made and developed in the UK, allows AMG OEM products to be installed on high security projects where items manufactured in certain countries might be disallowed.

AMG250 2-2
Dual Channel Industrial
Media Converter

ODM Services

Some requirements cannot be met with our standard products, that's why AMG Systems can build customised products, designed specifically for your solutions. From redesigning product housing to advancing user interfaces or simply designing bespoke products, AMG's ODM (original design manufacturer) services aim to fulfil your design objectives.

Secure by Design

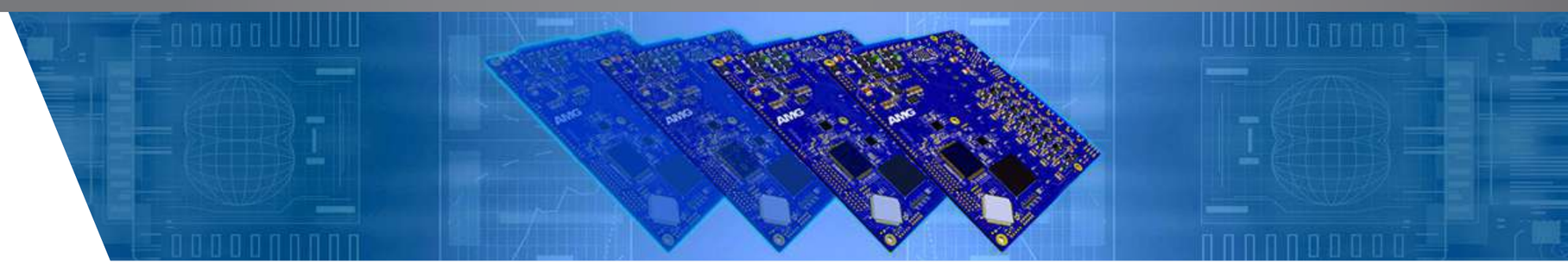
AMG is proud to be designing and manufacturing the complete solution, through their internal UK hardware and software engineering teams.

Where other suppliers are known to import their products from overseas, often with critical operational software written by unknown entities, AMG is proud to be designing and manufacturing the complete solution in-house through their UK and US software engineering teams.

Choosing to install a complete AMG system for your application gives you a fully secure solution. Not just with our lifetime support warranty on hardware but also through our internally written and assured operational software, designed to be safeguarded from malicious malware intrusion and failures.

All this offers AMG customers what other manufacturers can't - complete accountability and peace of mind.

AMG750 Angled Antenna
Industrial Grade
Managed 4G Router



AMG operate across a wide range of industries, all over the globe

We have been manufacturing products and providing solutions for these industries for nearly 30 years. These are some of the projects we are authorised to discuss. AMG are also heavily involved in other highly classified secured sites and government projects worldwide.

AMG150-2GBT-P180
Industrial PoE Injector

SECURITY

Designed for the global Security industry

Large area environments such as city centres, prisons, heavy plant industries and educational facilities rely on large-scale CCTV control systems. These extensive networks can comprise of hundreds of devices, all connected through a range of technologies.

AMG specialise in connecting security-related devices over Ethernet and fibre optic networks, when the monitoring of multiple buildings, perimeter boundaries, public places, and other critical areas is required.

AMG is a Juniper networks partner with the expertise to provide equipment for full Layer 2 and Layer 3 networks with the option of utilising AMG's services to manage low-level network design and commissioning of your project.

Contact our technical sales team to realise the potential of your network and discover the value of services AMG can offer.

OIL AND GAS

Solutions for the global Oil and Gas sector

Building transmission networks in adverse territories come with many challenges. Equipment needs to be built to withstand some of the most demanding environments on the planet. From the hot and dusty climates of the Middle East to the unforgiving conditions on offshore platforms, AMG Systems' products are designed to perform consistently and reliably within these environments.

AMG has been supplying transmission and networking equipment for the global oil, gas, and petrochemical industries for many years. A continuous operation is essential not only to the running and monitoring of a facility but more importantly to the safety of workers and the protection of the environment they're located in. It is vital that these systems are supported by the most robust and dependable transmission infrastructure, with resilience and reliability at the core of its design.

From video and data communications specially designed for deep-sea operations to off-shore voice evacuation, life safety, and large-scale refinery CCTV network systems, AMG has a track record of providing standard and custom-built, transmission solutions. AMG's understanding of the dynamic challenges and client needs, are key factors as to why we are the number one supplier of choice within this sector.

TRANSPORT

Secure transmissions for the Transport sector

Supply, reliability, and robust performance are typical requirements of these systems which can be complex and cover thousands of miles of infrastructure, whilst demanding decades of failure-free, around-the-clock operation.

AMG Systems have been providing large-scale transmission systems to the Transportation sector for over 25 years. Primarily for the transmission of video from CCTV, however the advent of Smart motorways has changed this. Now adding; data collation transmission, signal integration, detection, and measurement, increasing the scope considerably. AMG has developed bespoke analogue and IP/Ethernet products that integrate with new and legacy equipment, enabling multiple types of systems to share a common infrastructure without compromise. AMG's innovative Multi-Serial Ethernet Switches were created especially for the highways sector enabling hundreds of analogue cameras, IP cameras, signage, voice and data signals to share a single 130km ring of fibre.

Product performance and specification are important, but when it is not possible to access critical parts of a system, reliability is essential. This, combined with the guaranteed longevity of supply, are just two key reasons why AMG Systems are a market leader in this sector.

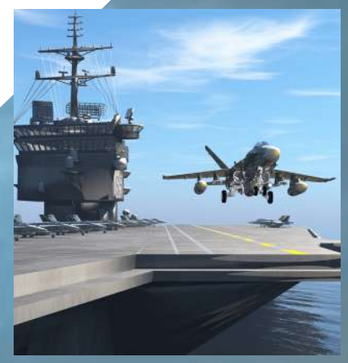
INFRASTRUCTURE

Solutions for Infrastructure and critical industries

Such sites include; communication networks, emergency services, energy production, financial services, food production, government facilities, healthcare, transport, water, defence, chemicals, and medicines. The compromise or loss of these essential services would be devastating for society.

Protecting the networks that control this infrastructure is paramount. These sites are often located in harsh or challenging environments, so it is vital that the equipment installed to support it can withstand a wide range of extreme temperatures, without the need for additional cooling or heating, all whilst not compromising overall system performance.

Critical infrastructure requires reliable, high-performance transmission equipment. AMG has years of experience in designing and supplying industrial transmission solutions for major projects across the globe and understands the importance of a secure transmission network.



DEFENCE

Defence and Secure sites

Ranging from CCTV infrastructure for prisons and detention centres, to wireless field-based equipment, AMG's solutions can cover the deployment of AMG products as well as designing bespoke communication systems for highly secure and remote government sites.

AMG is proud to have provided transmission systems for many of the UK's prisons and detention facilities. Some of these have included:

- HMP Belmarsh
- HMP Nottingham
- HMP Shrewsbury
- HMP Littlehey
- HMP New Jurby, Isle of Man
- HMP Doncaster
- HMP Altcourse, Fazakerley
- HMP Hemel Hempstead
- HMP Cookhamwood
- HMP Parc
- HMYOI Swinfen Hall
- New Delhi Police

WHY AMG?

Manufactured in the UK

We design and manufacture our hardware and software through our in-house production teams.

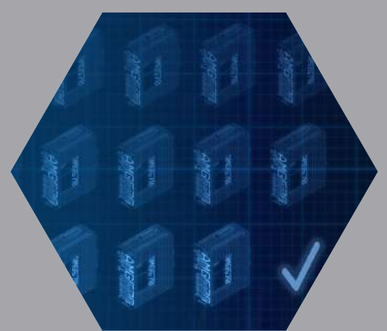
25 Years Industry Experience

Spanning a range of industries our wide skill-set comes with proven global success.

AMG350-2GAT-2S-P60
Industrial Hardened 4 Port
Unmanaged Add/Drop Switch

Design, Build and Support

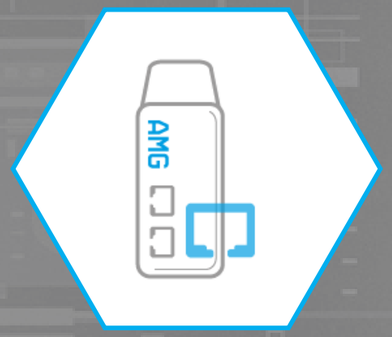
Our U.K technical team are here to support you all the way, from inception to installation.



Industry Leading Warranties

We offer the complete solution with lifetime support warranties across our industrial range.

Explore our products



Media Converters

AMG's Media Converters provide 100Mb, 1Gb or 10Gb Ethernet uplinks over fibre via the SFP port(s) with optional 30W or 60/90W PoE. Available in single, dual & quad channel models in both commercial and industrial types, AMG have a media converter for every application.

COAX/UTP Ethernet Extenders

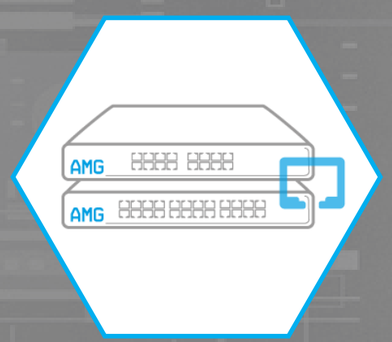
AMG's Coax/UTP Ethernet Extender range provides equipment to extend Ethernet and PoE over long distances of copper cable. Multiple different technologies are available, with transmission distances up to 3Km possible. AMG have a product to achieve almost any long distance Ethernet extension requirement.

Unmanaged Switches

AMG's Unmanaged Switches support 100Mb & 1Gb Ethernet in multiple combinations of RJ45 & SFP ports with many models supporting optional 30W or 60/90W PoE. Available in DIN rail & rack card types with port counts from 4-10 ports.

Wireless Ethernet

AMG's Wireless Ethernet range provides secure & reliable transmission over the 5GHz wireless band. User-configurable for Point-to-Point (PtP) or Point-to-Multipoint (PtMP) topologies with transmission speeds of up to 870Mbps supported. Models are available with integrated or external antennas.

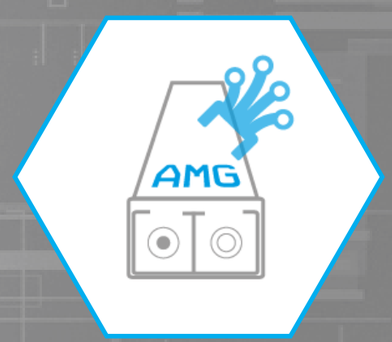


Managed Switches

AMG's Managed Switches support 100Mb, 1Gb & 10Gb Ethernet in multiple combinations of RJ45 & SFP/SFP+ ports with many models supporting optional 30W or 60/90W PoE. Available in commercial and industrial types with port counts from 4-52 ports.

SFP Modules

AMG's optical & copper transceivers are compliant with the Small Form-Factor Pluggable (SFP) Multi-Source Agreement (MSA) standards. They offer previously unavailable system cost, upgrade, and reliability benefits by virtue of being hot-pluggable. All AMG SFP modules feature Digital Diagnostic Monitoring (DDM) as standard.



Lifetime warranty

AMGs foundations are built on the quality of our products and by supporting customers systems no matter how long they have been installed.
In May 2020 AMG introduced the industry leading lifetime support warranty for our range of industrial grade products.

But what does lifetime support warranty mean in the simplest terms? AMG will provide warranty service for industrial products purchased after May 2020 for the life cycle of the product plus 5 years after the date of discontinuation. AMG will also support a system of any age with free estimates of repair costs for out of warranty products, along with our technical teams enthusiasm to answer any support questions.

AMGPSU-I48-P120
Power Supply

AMG510
Managed Switches

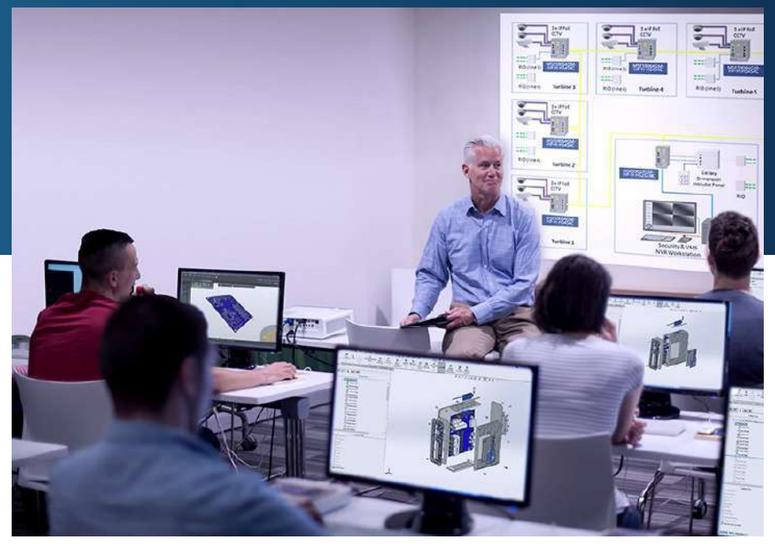
AMG Training

Our training courses aim to support our customers in designing and implementing a quality, cost effective and scalable transmissions solution. AMG offer a comprehensive range of bespoke courses in product, technology and system design as well as standard training packages.

Anyone that has bought AMG products, is working on projects where AMG are being considered or would simply like to explore available technologies and system design options are encouraged to utilise AMG's wide range of training options to match their specific requirements.

Being experts in our field, AMG takes pride in being able to share our knowledge and education with our clients, system integrators, consultants and partners at no additional costs.

Bespoke courses can include any AMG related technology, design, product selection and requirements. We'd be delighted to discuss your precise needs and expectations, and create courses to meet your team's aims and objectives.



Standards we proud to abide to.

As a global leader in Ethernet and Fibre Optic transmission solutions, AMG Systems operates to the highest design, manufacturing, and service delivery standards.

AMG are an ISO 9001 accredited company so you can be assured of our ongoing commitment to service and quality.

AMG570-4GBT-4G-3S-P360
Industrial Managed Switch

AMG 210M Series
Media Converters

How to contact us

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SG18 8QB, UK.

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1Gb/s, dual-fibre.

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AMG

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AMG

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in the U.K.

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Company Registration Number 2838846.
Registered Address: Brigham House, High Street, Biggleswade, Bedfordshire, SG18 0LD

AMG350-5G SERIES INDUSTRIAL UNMANAGED SWITCHES WITH OPTIONAL 30W POE

Industrial Ethernet Solutions

AMG's unmanaged Ethernet switches provide 100Mbps or Gigabit Ethernet switching for simple edge network applications with optional 30W PoE. Available with 5x Gigabit RJ45 ports.

Gigabit	Gigabit	Temp	Mounting	PSU	Protection	NDAA/TAA
up to x5	up to x4	-40°C~+75°C	DIN/Surface	x2 Dual	IP40	Compliant

[AMG350-5G Series]

OVERVIEW

Designed in a compact DIN rail or wall mount housing, the AMG350 series unmanaged Ethernet switches are ideally suited for connecting edge devices to Ethernet networks where more complex management functions are not required.

Available in both non-PoE models as well as PoE models for IEEE802.3at 30W they are suitable for powering PoE devices over a wide industrial operating temperature range.

Fitted with dual redundant power inputs ensures maximum operating reliability and the highest levels of performance.

A wide range of models are available in the AMG350 product range to suit all unmanaged switch design requirements.

PSUs need to be ordered separately.

FEATURES

- Compact size – ideal for confined spaces, including camera poles and roadside cabinets
- Innovative thermally efficient housing ensures high levels of device reliability under full load
- -40°C to +75°C temperature maintains performance in extreme conditions
- Plug & Play – no need for any user configuration
- DIN rail mountable – quick to install and remove
- Dual redundant power inputs
- Supports optional 15W and 30W PoE
- Auto-Negotiation (802.3u) – automatically determines the best connection speed
- Supports wide ranging DC or AC power inputs
- Designed in the USA & UK. Manufactured in the United Kingdom
- AMG Lifetime Support Warranty

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D33403-03
amgsystems.com

Specifications.

Standards.

IEEE802.3i	10Base-T
IEEE802.3u	100Base-TX
IEEE802.3ab	1000Base-T
IEEE802.3af	15W PoE
IEEE802.3at	30W PoE+
IEEE802.3x	Flow Control
Jumbo Frames	9.6Kbytes
Address Table	2K MAC Entries
Switch Fabric	10 Gbps
Buffer Memory	1M bits

Interface.

LED Indicators	2x Power RJ45 Link/Activity RJ45 Speed (Non-PoE Models Only) PoE (PoE Models Only)
RJ45 Ports	5x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X with 2 kV Isolation Protection
Power	1x 4-way Screw Terminal

Power.

Power Inputs	2
Operating Voltage:	
Non-PoE Models	12-60V_{DC} or 18-36V_{AC}
30W PoE Models	48-56V_{DC}
Power Consumption	3W Max (without PoE Load)
Total PoE Budget	120W Max (model dependent)
PSE Modes	Mode A
PoE Enabled Ports	Ports 1-4 (model dependent)
Protection	Reverse Polarity Overload Current

Packaging.

Shipping Weight	0.59kg / 1.30lb
Dimensions	(W x D x H) 220 × 170 × 40 mm 8.66 × 6.69 × 1.57 in

Mechanical.

Housing	Anodised Aluminium
Dimensions: Excluding DIN & Wall Mounts	(W x D x H) 37 × 88 × 107 mm 1.46 × 3.46 × 4.21 in
IP Rating	IP40
Installation	Wall Mount or DIN-Rail
Weight	0.47kg / 1.04lb

Environmental.

Operating Temp.	-40 to +75°C / -40 to +167°F
Storage Temp.	-40 to +85°C / -40 to +185°F
Humidity	5% to 95% (non-condensing)
MTBF	>500,000 hours
MTBF Standard	MIL-HDBK-217F GF 25°C
Heat Dissipation	10 BTU/h (Non-PoE) 420 BTU/h (30W PoE)
Cooling	Passive Cooling
Noise Level	0 dBA

Regulatory.

Safety	IEC/EN 62368-1
EMI	EN 55032 Class A CISPR 32 EN55024 FCC Part 15B Class A
EMS	EN 61000-4-2 (ESD) EN 61000-4-4 (EFT) EN 61000-4-5 (Surge)
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Environmental	Reach RoHS WEEE
Traffic	NEMS TS2
Supply Chain	NDAA & TAA Compliant

Designed to meet EN 50121-4

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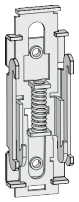
Part Numbers.

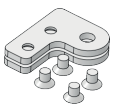
5 Port Unmanaged 1Gb Ethernet Switches

AMG350-5G	5x 10/100/1000TX
AMG350-4GAT-1G-P120	4x 10/100/1000TX 30W PoE (120W Max), 1x 10/100/1000TX

Included Accessories.

DIN Rail Adapter	Rear Mounted Metal DIN Rail Clip & Screws For DIN Rail Mounting AMG350 Series Products
Wall Mounting Brackets	2x Wall Mouting Brackets & Screws For Wall / Surface Mouting AMG350 Series Products





Recommended PSUs.

Non-PoE Models

AMGPSU-W12-P25	Plug Top Mounting Light Industrial Grade PSU, 0 to +70°C, 12VDC, 25W, UK/EU/US Plug Heads Included
AMGPSU-I12-P24	DIN-Rail Mount Industrial Grade PSU, -40 to +70°C, 12VDC, 24W*

PoE Models

AMGPSU-I48-P120	DIN-Rail Mounting Industrial Grade PSU, -40 to +70°C, 47-53VDC, 120W*^
AMGPSU-I48-P240	DIN-Rail Mounting Industrial Grade PSU, -40 to +70°C, 48-53VDC, 240W*^

* Also available in kit form including mains line cord, DC cable and DIN rail. Order with -K at the end of the part code (e.g. AMGPSU-I48-P120-K).
^ Also available with no exposed mains terminals and direct IEC input kit. Order with -IEC at the end of the part code (e.g. AMGPSU-I48-P120-IEC).

Optional Accessories.

AMG2035	Side Mounted Wall Bracket Adapter Kit For DIN Rail Mounting AMG350 Series Products In Depth Restricted Installations. Adapter Kit Can Be Extended Using The Included Extension Kit To Also Mount A DIN Rail Power Supply Up To 480W

Proud to be a British Manufacturer

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AMG350-4GAT-1G-P75-PD INDUSTRIAL UNMANAGED 90W PD POWERED SWITCH WITH 30W POE

Industrial Ethernet Solutions

AMG's unmanaged PoE powered Ethernet switches provide 100Mbps or Gigabit Ethernet switching for simple edge network applications with 30W PoE.
Available with 5x Gigabit RJ45 ports.

Gigabit	Gigabit	Temp	Mounting	PSU	Protection	NDAA/TAA
x4	x1	-40°C~+75°C	DIN/Surface	802.3bt PoE	IP40	Compliant

[AMG350-4GAT-1G-P75-PD]

OVERVIEW

Designed in a compact DIN rail or wall mount housing, the AMG350 series unmanaged PoE powered Ethernet switches are ideally suited for connecting edge devices to Ethernet networks where more complex management functions are not required and where there is no local power available or installing local power would be cost prohibitive.

The switch is powered by an IEEE802.3at or bt PoE PD input on port 5 and provides IEEE802.3af/at 15/30W outputs on ports 1-4 (max 75W) and is suitable for powering PoE devices over a wide industrial operating temperature range.

The switch is compatible with any manufacturers IEEE802.3at or bt compliant PoE source device (PSE) and can act as a multi-port repeater for situations where distances above 100M (328ft) are required.

A wide range of models are available in the AMG350 product range to suit all unmanaged switch design requirements.

FEATURES

- Compact size – ideal for confined spaces, including camera poles and roadside cabinets
- Innovative thermally efficient housing ensures high levels of device reliability under full load
- -40°C to +75°C temperature maintains performance in extreme conditions
- Plug & Play – no need for any user configuration
- DIN rail mountable – quick to install and remove for maintenance
- IEEE802.3at/bt 30/60/90W PoE PD power input
- Supports 15W and 30W PoE outputs (75W Max)
- Auto-Negotiation (802.3u) – automatically determines the best connection speed
- Designed in the USA & UK. Manufactured in the United Kingdom
- AMG Lifetime Support Warranty

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Specifications.

Standards.

IEEE802.3i	10Base-T
IEEE802.3u	100Base-TX
IEEE802.3ab	1000Base-T
IEEE802.3af	15W PoE
IEEE802.3at	30W PoE+
IEEE802.3bt	60/90W PoE (PD Only)
IEEE802.3x	Flow Control
Jumbo Frames	9.6Kbytes
Address Table	2K MAC Entries
Switch Fabric	10 Gbps
Buffer Memory	1M bits

Interface.

LED Indicators	1x Power RJ45 Link/Activity PoE PD BT PoE
RJ45 Ports	5x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X with 2 kV Isolation Protection
Power	IEEE802.3at/bt 30/60/90W Powered PD

Power.

Power Inputs	1x IEEE802.3at/bt RJ45 Port
Operating Voltage:	
PoE Input	42.5-56V_{DC}
Power Consumption	4W Max (without PoE Load)
Total PoE Budget:	
50M (164ft) Cable	75W Max (with IEEE802.3bt PoE Input)
100M (328ft) Cable	65W Max (with IEEE802.3bt PoE Input)
PSE Modes	Mode A
PoE Enabled Ports	Ports 1-4
Protection	Reverse Polarity Overload Current

Packaging.

Shipping Weight	0.58kg / 1.28lb
Dimensions	(W x D x H) 220 × 170 × 40 mm 8.66 × 6.69 × 1.57 in

Mechanical.

Housing	Anodised Aluminium
Dimensions: Excluding DIN & Wall Mounts	(W x D x H) 37 × 88 × 107 mm 1.46 × 3.46 × 4.21 in
IP Rating	IP40
Installation	Wall Mount or DIN-Rail
Weight	0.46kg / 1.01lb

Environmental.

Operating Temp.	-40 to +75°C / -40 to +167°F
Storage Temp.	-40 to +85°C / -40 to +185°F
Humidity	5% to 95% (non-condensing)
MTBF	>537,083 hours
MTBF Standard	Telcordia SR-332 GB 50°C
Heat Dissipation	14 BTU/h (No PoE Load) 270 BTU/h (Max 75W PoE)
Cooling	Passive Cooling
Noise Level	0 dBA

Regulatory.

Safety	IEC/EN 62368-1
EMI	EN 55032 Class A CISPR 32 EN55024 FCC Part 15B Class A
EMS	EN 61000-4-2 (ESD) EN 61000-4-4 (EFT) EN 61000-4-5 (Surge)
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Environmental	Reach RoHS WEEE
Supply Chain	NDAA & TAA Compliant

Designed to meet NEMA TS2 & EN 50121-4

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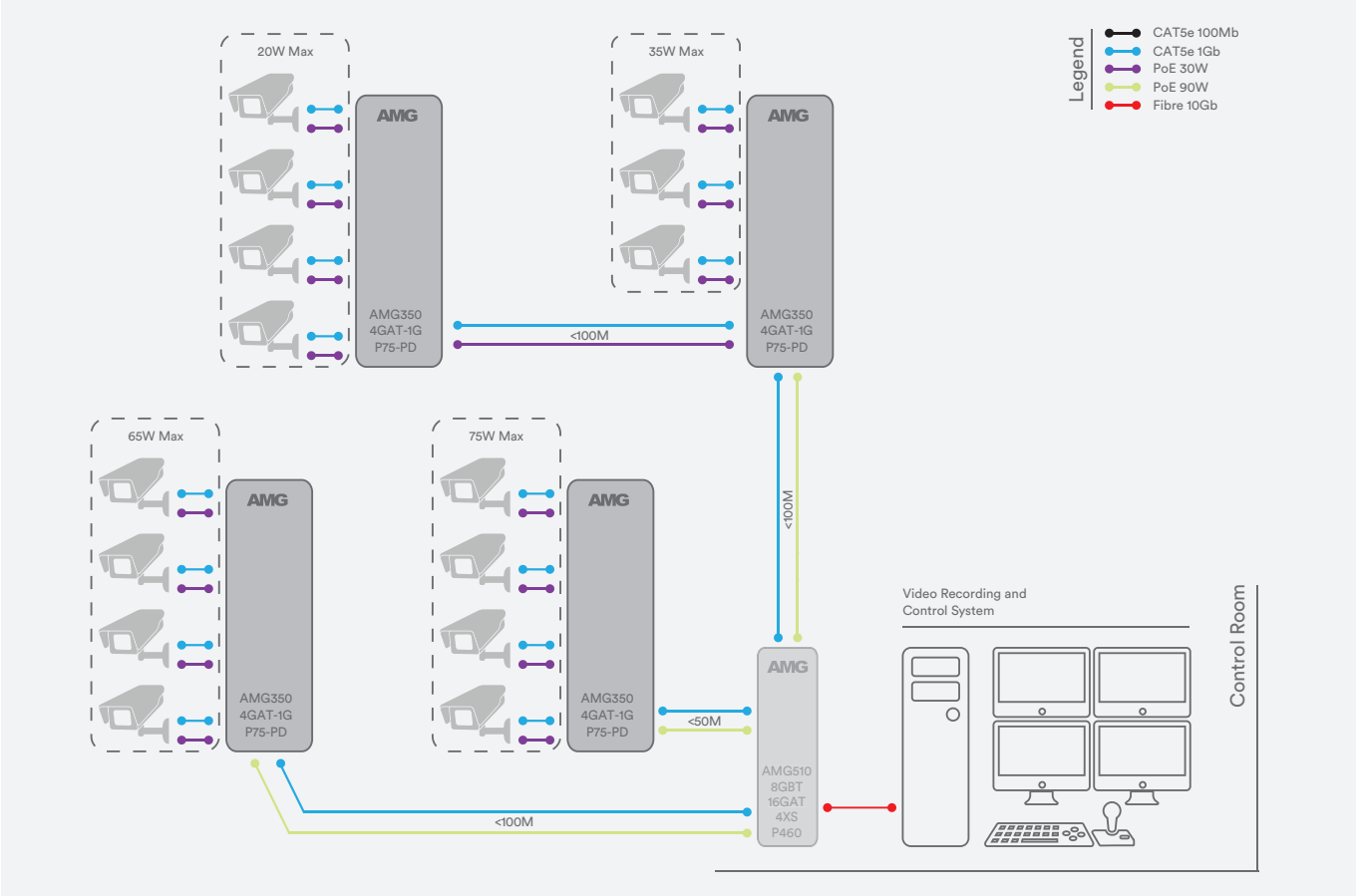
Application Diagram.



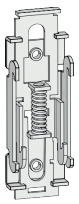
Part Numbers.

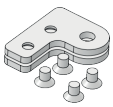
5 Port Unmanaged PoE Powered 1Gb Ethernet Switches

AMG350-4GAT-1G-P75-PD	4x 10/100/1000TX 30W PoE (75W Max), 1x 10/100/1000TX IEEE802.3bt 90W Input

Included Accessories.

DIN Rail Adapter	Rear Mounted Metal DIN Rail Clip & Screws For DIN Rail Mounting AMG350 Series Products
Wall Mounting Brackets	2x Wall Mouting Brackets & Screws For Wall / Surface Mouting AMG350 Series Products





Optional Accessories.

AMG2035	Side Mounted Wall Bracket Adapter Kit For DIN Rail Mounting AMG350 Series Products In Depth Restricted Installations. Adapter Kit Can Be Extended Using The Included Extension Kit To Also Mount A DIN Rail Power Supply Up To 480W or Multiple Units.

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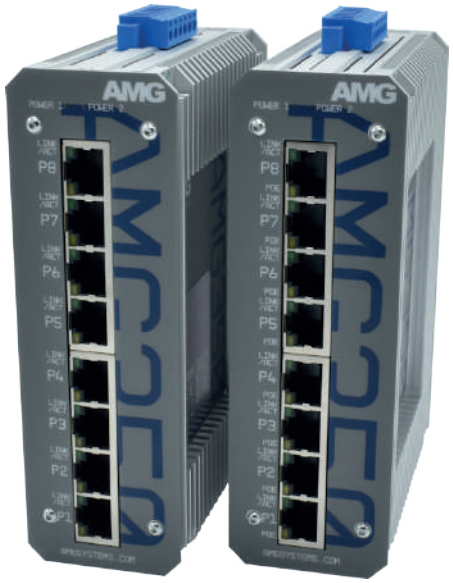
AMG350-8G SERIES INDUSTRIAL UNMANAGED SWITCHES WITH OPTIONAL 30W POE

Industrial Ethernet Solutions

AMG's unmanaged Ethernet switches provide 100Mbps or Gigabit Ethernet switching for simple edge network applications with optional 30W PoE. Available with 8x Gigabit RJ45 ports.



Gigabit	Gigabit	Temp	Mounting	PSU	Protection	NDAA/TAA
up to x8	up to x8	-40°C~+75°C	DIN/Surface	x2 Dual	IP40	Compliant

[AMG350-8G Series]

OVERVIEW

Designed in a compact DIN rail or wall mount housing, the AMG350 series unmanaged Ethernet switches are ideally suited for connecting edge devices to Ethernet networks where more complex management functions are not required.

Available in both non-PoE models as well as PoE models for IEEE802.3at 30W they are suitable for powering PoE devices over a wide industrial operating temperature range.

Fitted with dual redundant power inputs and power failure alarm relay ensures maximum operating reliability and the highest levels of performance.

A wide range of models are available in the AMG350 product range to suit all unmanaged switch design requirements.

PSUs need to be ordered separately.

FEATURES

- Compact size – ideal for confined spaces, including camera poles and roadside cabinets
- Innovative thermally efficient housing ensures high levels of device reliability under full load
- -40°C to +75°C temperature maintains performance in extreme conditions
- Plug & Play – no need for any user configuration
- DIN rail mountable – quick to install and remove for maintenance
- Dual redundant power inputs with fault relay
- Supports optional 15W and 30W PoE
- Auto-Negotiation (802.3u) – automatically determines the best connection speed
- Designed in the USA & UK. Manufactured in the United Kingdom
- AMG Lifetime Support Warranty

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Specifications.

Standards.

IEEE802.3i	10Base-T
IEEE802.3u	100Base-TX
IEEE802.3ab	1000Base-T
IEEE802.3af	15W PoE
IEEE802.3at	30W PoE+
IEEE802.3x	Flow Control
Jumbo Frames	9.6Kbytes
Address Table	4K MAC Entries
Switch Fabric	16 Gbps
Buffer Memory	1M bits

Interface.

LED Indicators	2x Power RJ45 Link/Activity PoE (PoE Models Only)
RJ45 Ports	8x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X with 2 kV Isolation Protection
Power/Relay	1x 6-way removable terminal block with locking screws

Power.

Power Inputs	2
Operating Voltage:	
Non-PoE Models	12-56V_{DC}
30W PoE Models	48-56V_{DC}
Power Consumption	5W Max (without PoE Load)
Total PoE Budget	200W Max (model dependent)
PSE Modes	Mode A
PoE Enabled Ports	Ports 1-8 (model dependent)
Protection	Reverse Polarity Overload Current
Fault Relay	Form A 24V @ 1A Max

Packaging.

Shipping Weight	1.01kg / 2.23lb
Dimensions	(W x D x H) 260 × 200 × 60 mm 10.24 × 7.87 × 2.36 in

Mechanical.

Housing	Anodised Aluminium
Dimensions: Excluding DIN & Wall Mounts	(W x D x H) 47 × 106 × 144 mm 1.85 × 4.17 × 5.67 in
IP Rating	IP40
Installation	Wall Mount or DIN-Rail
Weight	0.81kg / 1.79lb

Environmental.

Operating Temp.	-40 to +75°C / -40 to +167°F
Storage Temp.	-40 to +85°C / -40 to +185°F
Humidity	5% to 95% (non-condensing)
MTBF	>500,000 hours
MTBF Standard	MIL-HDBK-217F GF 25°C
Heat Dissipation	17 BTU/h (Non-PoE) 700 BTU/h (30W PoE)
Cooling	Passive Cooling
Noise Level	0 dBA

Regulatory.

Safety	IEC/EN 62368-1
EMI	EN 55032 Class A CISPR 32 EN55024 FCC Part 15B Class A
EMS	EN 61000-4-2 (ESD) EN 61000-4-4 (EFT) EN 61000-4-5 (Surge)
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Environmental	Reach RoHS WEEE
Traffic	NEMS TS2
Supply Chain	NDAA & TAA Compliant

Designed to meet EN 50121-4

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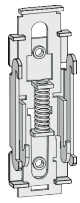
Part Numbers.

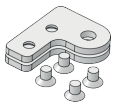
8 Port Unmanaged 1Gb Ethernet Switches

AMG350-8G	8x 10/100/1000TX
AMG350-8GAT-P200	8x 10/100/1000TX 30W PoE (200W Max)

Included Accessories.

DIN Rail Adapter	Rear Mounted Metal DIN Rail Clip & Screws For DIN Rail Mounting AMG350 Series Products
Wall Mounting Brackets	2x Wall Mouting Brackets & Screws For Wall / Surface Mouting AMG350 Series Products





Recommended PSUs.

Non-PoE Models

AMGPSU-W12-P25	Plug Top Mounting Light Industrial Grade PSU, 0 to +70°C, 12VDC, 25W, UK/EU/US Plug Heads Included
AMGPSU-I12-P24	DIN-Rail Mount Industrial Grade PSU, -40 to +70°C, 12VDC, 24W*

PoE Models

AMGPSU-I48-P120	DIN-Rail Mounting Industrial Grade PSU, -40 to +70°C, 47-53VDC, 120W*^
AMGPSU-I48-P240	DIN-Rail Mounting Industrial Grade PSU, -40 to +70°C, 48-53VDC, 240W*^

* Also available in kit form including mains line cord, DC cable and DIN rail. Order with -K at the end of the part code (e.g. AMGPSU-I48-P120-K).
^ Also available with no exposed mains terminals and direct IEC input kit. Order with -IEC at the end of the part code (e.g. AMGPSU-I48-P120-IEC).

Optional Accessories.

AMG2035	Side Mounted Wall Bracket Adapter Kit For DIN Rail Mounting AMG350 Series Products In Depth Restricted Installations. Adapter Kit Can Be Extended Using The Included Extension Kit To Also Mount A DIN Rail Power Supply Up To 480W

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AMG350-4G-1C-1S SERIES INDUSTRIAL UNMANAGED SWITCHES WITH OPTIONAL 30/60/90W POE

Industrial Ethernet Solutions

AMG's unmanaged Ethernet switches provide 100Mbps or Gigabit Ethernet switching for simple edge network applications with optional 30W or 60/90W PoE. Available with a combination of 4x RJ45, 1x RJ45/SFP combo and 1x SFP port for maximum system flexibility.

Gigabit	Gigabit	Gigabit	Gigabit	100/1000	Temp	Mounting	PSU	Protection	NDAA/TAA
up to x4	up to x4	up to x4	x1	x1	-40°C~+75°C	DIN/Surface	x2 Dual	IP40	Compliant

[AMG350-4G-1C-1S Series]

OVERVIEW

Designed in a compact DIN rail or wall mount housing, the AMG350 series unmanaged Ethernet switches are ideally suited for connecting edge devices to Ethernet networks where more complex management functions are not required. Long distance connections are supported using all types of fiber through the integrated SFP port(s). Fiber connectivity is determined by separate SFP device selection, providing application and site flexibility.

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

Fitted with dual redundant power inputs and power failure alarm relay ensures maximum operating reliability and the highest levels of performance.

A wide range of models are available to suit all design requirements.

SFPs and PSUs need to be ordered separately.

FEATURES

- Compact size – ideal for confined spaces, including camera poles and roadside cabinets
- -40°C to +75°C temperature maintains performance in extreme conditions
- Plug & Play – no need for any user configuration
- DIN rail mountable – quick to install and remove for maintenance
- All SFP ports are multirate 100Mb/Gigabit – support single and multimode, single or dual fiber options up to 120Km
- Dual redundant power inputs with fault relay
- Supports optional 15W, 30W, 60W and 90W PoE
- Auto-Negotiation (802.3u) – automatically determines the best connection speed
- Designed in the USA & UK. Manufactured in the United Kingdom
- AMG Lifetime Support Warranty

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Specifications.

Standards.

IEEE802.3i	10Base-T
IEEE802.3u	100Base-TX & 100Base-FX
IEEE802.3ab	1000Base-T
IEEE802.3z	1000Base-X
IEEE802.3af	15W PoE
IEEE802.3at	30W PoE+
IEEE802.3bt	60 & 90W PoE
IEEE802.3x	Flow Control
Jumbo Frames	9.6Kbytes
Address Table	1K MAC Entries
Switch Fabric	12 Gbps
Buffer Memory	1M bits

Interface.

LED Indicators	2x Power SFP Link/Activity RJ45 Link/Activity PoE (PoE Models Only) Alarm (Non-PoE & 30W PoE Models Only) Speed (90W PoE Models Only)
RJ45 Ports	5x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X with 2 kV Isolation Protection
SFP Slots	2x 100/1000FX SFP
Power/Relay	1x 6-way Screw Terminal
DIP Switch	1x 2-way DIP Switch (For SFP Speed & Port 5 Tx/SFP Combo Selection)

Power.

Power Inputs	2
Operating Voltage:	
Non-PoE Models	12-56V_{DC}
30W PoE Models	48-56V_{DC}
90W PoE Models	52-56V_{DC}
Power Consumption	6W Max (without PoE Load)
Total PoE Budget	240W Max (model dependent)
PSE Modes	Mode A (30W Ports) Mode A, Mode B (60/90W Ports)
PoE Enabled Ports	Ports 1-4 (model dependent)
Protection	Reverse Polarity Overload Current
Alarm Relay	Form A 24V @ 1A Max

Packaging.

Shipping Weight:	
Non-PoE & 30W PoE Models	1.01kg / 2.23lb
90W PoE Models	1.09kg / 2.40lb
Dimensions:	(W x D x H)
	260 × 200 × 60 mm
	10.24 × 7.87 × 2.36 in

Mechanical.

Housing	Anodised Aluminium
Dimensions:	(W x D x H) (Excluding DIN & Wall Mounts)
Non-PoE & 30W PoE Models	47 × 106 × 144 mm 1.85 × 4.17 × 5.67 in
90W PoE Models	50 × 106 × 144 mm 1.97 × 4.17 × 5.67 in
IP Rating	IP40
Installation	Wall Mount or DIN-Rail
Weight:	
Non-PoE & 30W PoE Models	0.81kg / 1.79lb
90W PoE Models	0.89kg / 1.96lb

Environmental.

Operating Temp.	-40 to +75°C / -40 to +167°F
Storage Temp.	-40 to +85°C / -40 to +185°F
Humidity	5% to 95% (non-condensing)
MTBF	>500,000 hours
MTBF Standard	MIL-HDBK-217F GF 25°C
Heat Dissipation	20 BTU/h (Non-PoE) 430 BTU/h (with 120W PoE load) 839 BTU/h (with 240W PoE load)
Cooling	Passive Cooling
Noise Level	0 dBA

Regulatory.

Safety	IEC/EN 62368-1
EMI	EN 55032 Class A CISPR 32 EN55024 FCC Part 15B Class A
EMS	EN 61000-4-2 (ESD) EN 61000-4-4 (EFT) EN 61000-4-5 (Surge)
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Environmental	Reach, RoHS, WEEE
Traffic	NEMA TS2
Supply Chain	NDAA & TAA Compliant

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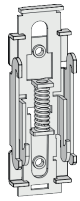
Part Numbers.

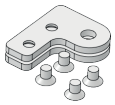
6 Port Unmanaged 1Gb Ethernet Switches

AMG350-4G-1C-1S	4x 10/100/1000TX, 1x 100M/1G RJ45/SFP Combo, 1x 100M/1G SFP
AMG350-4GAT-1C-1S-P120	4x 10/100/1000TX 30W PoE (120W Max), 1x 100M/1G RJ45/SFP Combo, 1x 100M/1G SFP
AMG350-4GBT-1C-1S-P240	4x 10/100/1000TX 90W PoE (240W Max), 1x 100M/1G RJ45/SFP Combo, 1x 100M/1G SFP

Included Accessories.

DIN Rail Adapter	Rear Mounted Metal DIN Rail Clip & Screws For DIN Rail Mounting AMG350 Series Products
Wall Mounting Brackets	2x Wall Mouting Brackets & Screws For Wall / Surface Mouting AMG350 Series Products





Recommended PSUs.

Non-PoE Models

AMGPSU-W12-P25	Plug Top Mounting Light Industrial Grade PSU, 0 to +70°C, 12VDC, 25W, UK/EU/US Plug Heads Included
AMGPSU-I12-P24	DIN-Rail Mount Industrial Grade PSU, -40 to +70°C, 12VDC, 24W*

PoE Models

AMGPSU-I48-P120	DIN-Rail Mounting Industrial Grade PSU, -40 to +70°C, 47-53VDC, 120W*^
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*^

* Also available in kit form including mains line cord, DC cable and DIN rail. Order with -K at the end of the part code (e.g. AMGPSU-I48-P120-K).
^ Also available with no exposed mains terminals and direct IEC input kit. Order with -IEC at the end of the part code (e.g. AMGPSU-I48-P120-IEC).

Optional Accessories.

AMG2035	Side Mounted Wall Bracket Adapter Kit For DIN Rail Mounting AMG350 Series Products In Depth Restricted Installations. Adapter Kit Can Be Extended Using The Included Extension Kit To Also Mount A DIN Rail Power Supply Up To 480W

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AMG350-2G-2S SERIES INDUSTRIAL UNMANAGED SWITCHES WITH OPTIONAL 30/60/90W POE

Industrial Ethernet Solutions

AMG's unmanaged Ethernet switches provide Gigabit Ethernet switching for simple edge network applications with optional 30W or 60/90W PoE. Available with a combination of 2x RJ45 and 2x SFP ports for maximum system flexibility.

Gigabit	Gigabit	Gigabit	100/1000	Temp	Mounting	PSU	Protection	NDAA/TAA
up to x2	up to x2	up to x2	x2	-40°C~+75°C	DIN/Surface	x2 Dual	IP40	Compliant

[AMG350-2GBT-2S-P180]

OVERVIEW

Designed in a compact DIN rail or wall mount housing, the AMG350-2G-2S series unmanaged Ethernet switches are ideally suited for connecting edge devices to Ethernet networks where more complex management functions are not required. Long distance connections are supported using all types of fiber through the integrated SFP ports. Fiber connectivity is determined by separate SFP device selection, providing application and site flexibility.

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

Fitted with dual redundant power inputs and power failure alarm relay ensures maximum operating reliability and the highest levels of performance.

A wide range of models are available to suit all design requirements.

SFPs and PSUs need to be ordered separately.

FEATURES

- Compact size – ideal for confined spaces, including camera poles and roadside cabinets
- -40°C to +75°C temperature maintains performance in extreme conditions
- Plug & Play – no need for any user configuration
- DIN rail mountable – quick to install and remove for maintenance
- All SFP ports are multirate 100Mb/Gigabit – support single and multimode, single or dual fiber options up to 120Km
- Dual redundant power inputs with fault relay
- Supports optional 15W, 30W, 60W and 90W PoE
- Auto-Negotiation (802.3u) – automatically determines the best connection speed
- Designed in the USA & UK. Manufactured in the United Kingdom
- AMG Lifetime Support Warranty

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Specifications.

Standards.

IEEE802.3i	10Base-T
IEEE802.3u	100Base-TX & 100Base-FX
IEEE802.3ab	1000Base-T
IEEE802.3z	1000Base-X
IEEE802.3af	15W PoE
IEEE802.3at	30W PoE+
IEEE802.3bt	60 & 90W PoE
IEEE802.3x	Flow Control
Jumbo Frames	9.2Kbytes
Address Table	2K MAC Entries
Switch Fabric	8Gbps

Interface.

LED Indicators	2x Power SFP Link/Activity RJ45 Link/Activity PoE
RJ45 Ports	2x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X with 1.5 kV Isolation Protection
SFP Slots	2x 100/1000FX SFP
Power/Relay	1x 6 pin removable terminal block with locking screws

Power.

Power Inputs	2
Operating Voltage:	
Non-PoE Models	10-36V_{DC}
30W PoE Models	48-56V_{DC}
90W PoE Models	52-56V_{DC}
Power Consumption:	4W Max (without PoE Load)
PSE Modes:	
30W Models	Mode A
60/90W Models	Mode A, Mode B
Protection	Reverse Polarity Overload Current
Fault Relay	Form A 60V @ 2A Max

Packaging.

Shipping Weight	0.60kg / 1.32lb
Dimensions	(W x D x H) 220 × 170 × 40 mm 8.66 × 6.69 × 1.57 in

Mechanical.

Housing	Anodised Aluminium
Dimensions: (Excluding DIN & Wall Mounts)	(W x D x H) 36 × 88 × 107 mm 1.42 × 3.46 × 4.21 in
IP Rating	IP40
Installation	Wall Mount or DIN-Rail
Weight	0.48kg / 1.06lb

Environmental.

Operating Temp.	-40 to +75°C / -40 to +167°F
Storage Temp.	-40 to +85°C / -40 to +185°F
Humidity	5% to 95% (non-condensing)
MTBF	2,573,692 hours (Non-PoE Models) 2,332,497 hours (PoE Models)
MTBF Standard	Telcordia SR-332 GF 30°C
Heat Dissipation	14 BTU/h (Non-PoE) 218 BTU/h (30W PoE) 628 BTU/h (90W PoE)
Cooling	Passive Cooling
Noise Level	0 dBA

Regulatory.

Safety	IEC/EN 62368-1
EMI	EN 55032 Class A CISPR 32 FCC Part 15B Class A
EMS	EN 61000-4-2 (ESD) EN 61000-4-3 (RS) EN 61000-4-4 (EFT) EN 61000-4-5 (Surge) EN 61000-4-6 (CS) EN 61000-4-8 (PFMF)
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Environmental	Reach RoHS WEEE
Traffic	NEMA TS2
Supply Chain	NDAA & TAA Compliant

Designed to meet EN 50121-4

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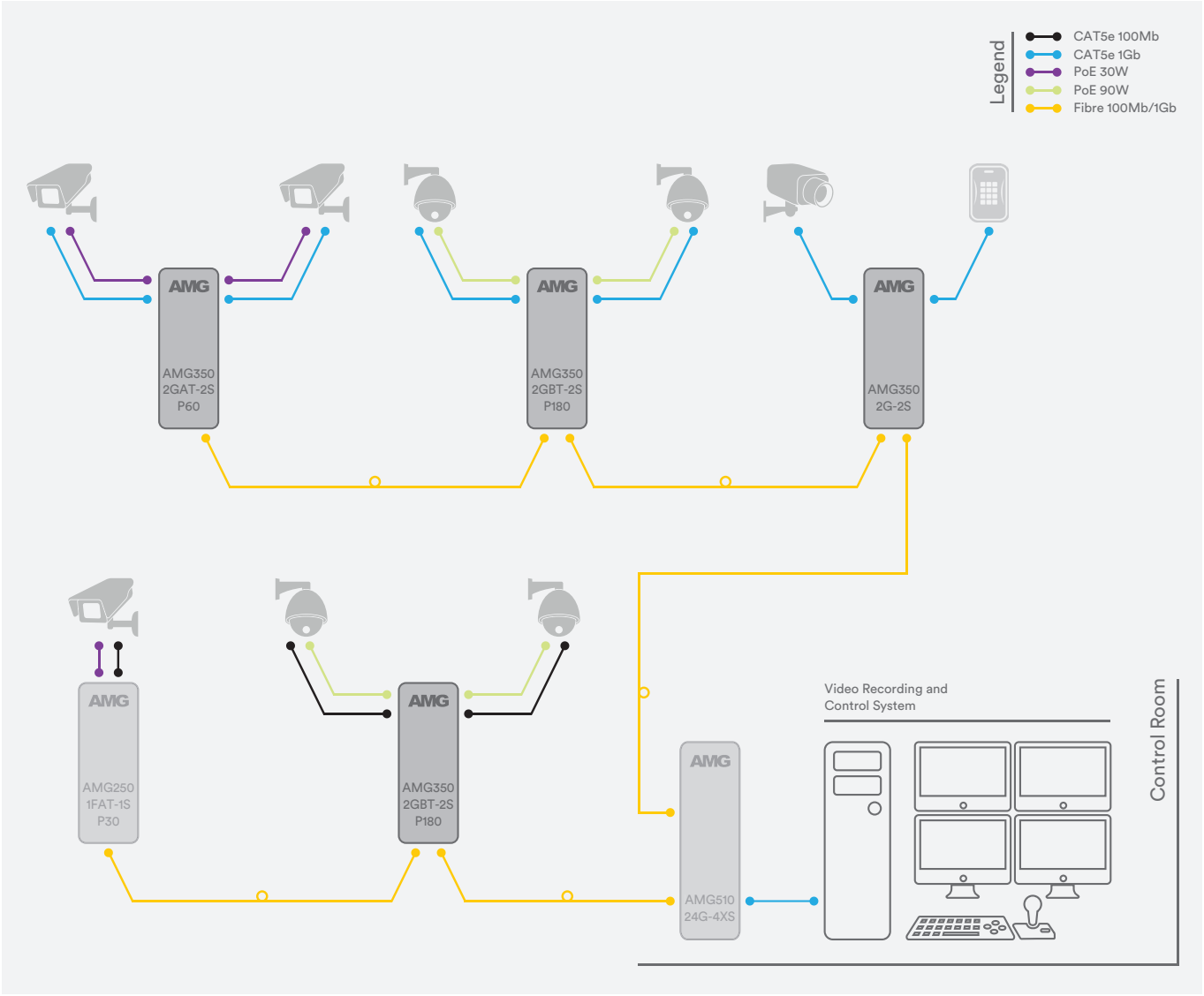
Application Diagram.



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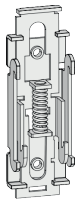
Part Numbers.

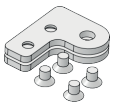
4 Port Unmanaged 1Gb Ethernet Switches

AMG350-2G-2S	2 × 10/100/1000BaseT(x) RJ45, 2 × 100/1000BaseFx SFP
AMG350-2GAT-2S-P60	2 × 10/100/1000BaseT(x) RJ45 with 30W PoE+, 2 × 100/1000BaseFx SFP
AMG350-2GBT-2S-P180	2 × 10/100/1000BaseT(x) RJ45 with 60/90W PoE+, 2 × 100/1000BaseFx SFP

Included Accessories.

DIN Rail Adapter	Rear Mounted Metal DIN Rail Clip & Screws For DIN Rail Mounting AMG350 Series Products
Wall Mounting Brackets	2x Wall Mouting Brackets & Screws For Wall / Surface Mouting AMG350 Series Products





Recommended PSUs.

Non-PoE Models

AMGPSU-W12-P25	Plug Top Mounting Light Industrial Grade PSU, 0 to +70°C, 12VDC, 25W, UK/EU/US Plug Heads Included
AMGPSU-I12-P24	DIN-Rail Mount Industrial Grade PSU, -40 to +70°C, 12VDC, 24W*

PoE Models

AMGPSU-I48-P60	DIN-Rail Mounting Industrial Grade PSU, -40 to +70°C, 43-56VDC, 60W*
AMGPSU-I48-P120	DIN-Rail Mounting Industrial Grade PSU, -40 to +70°C, 47-53VDC, 120W*^
AMGPSU-I48-P240	DIN-Rail Mounting Industrial Grade PSU, -40 to +70°C, 48-53VDC, 240W*^

* Also available in kit form including mains line cord, DC cable and DIN rail. Order with -K at the end of the part code (e.g. AMGPSU-I48-P120-K).
^ Also available with no exposed mains terminals and direct IEC input kit. Order with -IEC at the end of the part code (e.g. AMGPSU-I48-P120-IEC).

Optional Accessories.

AMG2035	Side Mounted Wall Bracket Adapter Kit For DIN Rail Mounting AMG350 Series Products In Depth Restricted Installations. Adapter Kit Can Be Extended Using The Included Extension Kit To Also Mount A DIN Rail Power Supply Up To 480W

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AMG350R SERIES INDUSTRIAL RACK MOUNTED UNMANAGED SWITCHES

Industrial Ethernet Solutions

AMG's unmanaged Ethernet switches provide Gigabit Ethernet switching for simple edge network applications. Available with a combination of 2x RJ45 and 2x SFP ports for maximum system flexibility.

Gigabit	100/1000	Temp	Mounting	NDAA/TAA
x2	x2	-40°C~+75°C	Rack	Compliant

[AMG350R-2G-2S]

OVERVIEW

Designed to be installed into the AMG2009, AMG2015 3U or AMG2031 1U card cages, the AMG350R series unmanaged Ethernet switches are ideally suited for connecting edge devices to Ethernet networks where more complex management functions are not required. Long distance connections are supported using all types of fibre through the integrated SFP port(s). Fibre connectivity is determined by separate SFP device selection, providing application and site flexibility.

Available in 2 port RJ45 with 2 port SFP format the AMG350R series provide high density rack mounted unmanaged switch solutions.

When installed within the AMG2015-DR or AMG2031 card cages dual redundant power inputs and power failure alarm relay ensures maximum operating reliability and the highest levels of performance.

SFPs need to be ordered separately.

FEATURES

- Compact single slot size – ideal for high density rack mount requirements
- -40°C to +75°C temperature maintains performance in extreme conditions
- Plug & Play – no need for any user configuration
- Rack mount card cages available in 1U or 3U heights
- All SFP ports are multirate 100Mb/Gigabit – support single and multimode, single or dual fibre options up to 120Km
- Gigabit Ethernet copper ports provide high bandwidth support
- Auto-Negotiation (802.3u) – automatically determines the best connection speed
- Designed in the USA & UK. Manufactured in the United Kingdom
- AMG Lifetime Support Warranty

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Specifications.

Standards.

IEEE802.3i	10Base-T
IEEE802.3u	100Base-TX & 100Base-FX
IEEE802.3ab	1000Base-T
IEEE802.3z	1000Base-X
IEEE802.3x	Flow Control
Jumbo Frames	9.2Kbytes
Address Table	2K MAC Entries
Switch Fabric	8Gbps

Interface.

LED Indicators	Power SFP Link/Activity RJ45 Link/Activity
RJ45 Ports	2x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X and 1.5 kV Isolation Protection
SFP Slots	2x 100/1000FX SFP
Power	Supplied From Rack
Front Ports	2x RJ45 Ports 2x SFP Ports
Rear Ports	None

Note: Redundant PSUs are supported with fault alarm in AMG2015-DR and AMG2031 racks

Power.

Power Inputs	1 or 2 (Dependent On Rack Model Used)
Operating Voltage	10-36V_{DC}
Power Consumption	4W Max
Protection	Overload Current

Packaging.

Shipping Weight	0.75kg / 1.65lb
Dimensions	(W x D x H) 250 × 190 × 50 mm 9.84 × 7.48 × 1.97 in

Mechanical.

Casing	Anodised Aluminium
Dimensions	(W x D x H) 35 × 172 × 128 mm 1.38 × 6.77 × 5.04 in
IP Rating	IP30
Installation	AMG Card Cages
Rack Slots	1
Weight	0.55kg / 1.21lb

Environmental.

Operating Temp.	-40 to +75°C / -40 to +167°F
Storage Temp.	-40 to +85°C / -40 to +185°F
Humidity	5% to 95% (non-condensing)
MTBF	2,573,692 hours
MTBF Standard	Telcordia SR-332 GF 30°C
Heat Dissipation	14 BTU/h
Cooling	Passive Cooling
Noise Level	0 dBA

Regulatory.

Safety	IEC/EN 62368-1
EMI	EN 55032 Class A CISPR 32 FCC Part 15B Class A
EMS	EN 61000-4-2 (ESD) EN 61000-4-3 (RS) EN 61000-4-4 (EFT) EN 61000-4-5 (Surge) EN 61000-4-6 (CS) EN 61000-4-8 (PFMF)
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Environmental	Reach RoHS WEEE
Supply Chain	NDAA & TAA Compliant

Designed to meet NEMA TS2 & EN 50121-4

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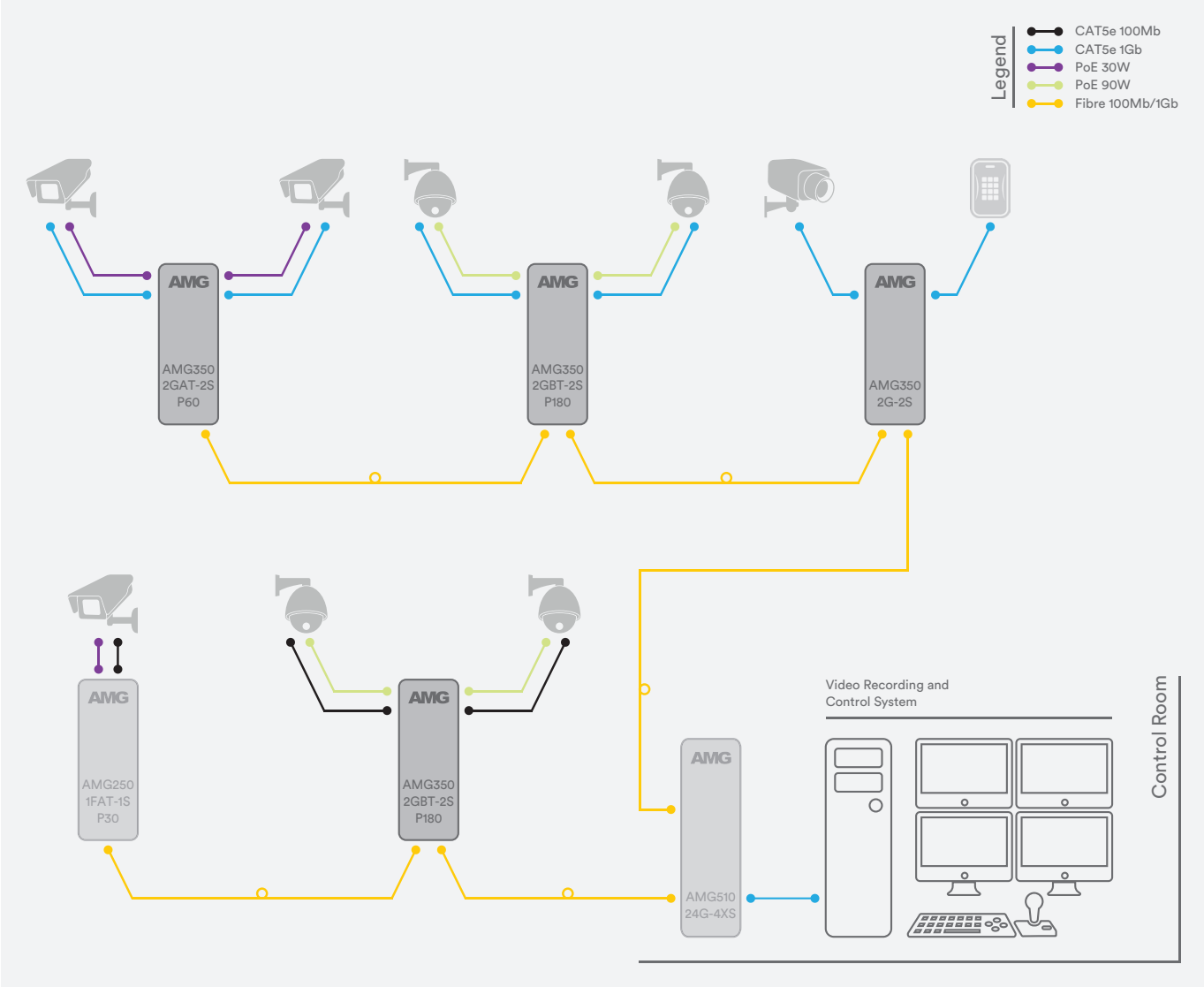
Application Diagram.



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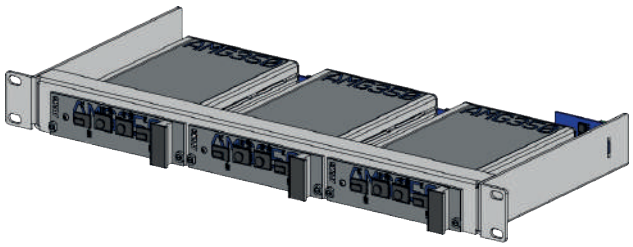
Part Numbers.

4 Port Unmanaged 1Gb Rack Mount Ethernet Switches

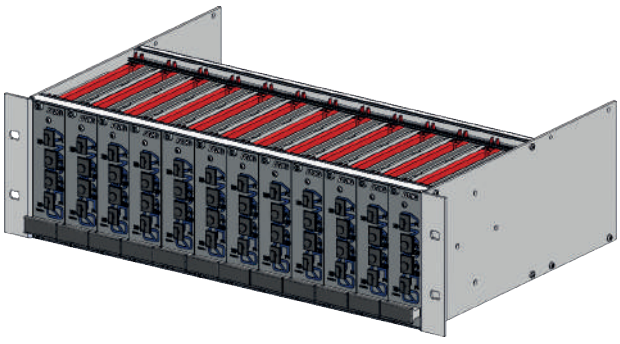
AMG350R-2G-2S	2 × 10/100/1000BaseT(x) RJ45, 2 × 100/1000BaseFx SFP, Rack Mount

Recommended Racks.

AMG2031	1U 19inch 3 Slot Rack With Dual Redundant PSU Inputs, 12-24VDC (Single PSU included. Additional PSU can be ordered separately)
AMG2015	3U 19inch 12 Slot Rack With Single PSU, 100-240VAC
AMG2015-DR	3U 19inch 12 Slot Rack With Dual Redundant PSU's, 100-240VAC



AMG2031 - 1U 19inch 3 Slot Rack



AMG2015[-DR] - 3U 19inch 12 Slot Rack

Notes.

Optional Accessories: SFP modules - Optical/Copper see separate list, need to be ordered separately

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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.

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AMG570-4G-2S SERIES
6 PORT INDUSTRIAL GRADE MANAGED LAYER 2+ SWITCHES

Industrial Ethernet Solutions

AMG's fully managed compact layer 2+ Ethernet switches provide 100Mbps, Gigabit and 2.5 Gigabit Ethernet switching for industrial network applications. Available with 4x RJ45 Gigabit ports supporting optional 30/60/90W PoE and 2x 100Mb/1Gb/2.5Gb SFP ports.

Gigabit	Gigabit	Gigabit	1/2.5 Gb	Managed	Contacts	Temp	Mounting	Protection	PSU	NDAA/TAA
up to x4	up to x2	up to x4	x2	Layer 2+	1 In / 2 Out	-40°C~+75°C	DIN/Surface	IP40	x2 Dual	Compliant

[AMG570-4GAT-2S-P120]

OVERVIEW

AMG570 series layer 2+ managed industrial Ethernet switches are designed in a compact thermally efficient DIN rail or wall mount housing and have 4 Gigabit Ethernet RJ45 ports with an additional 2 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 AMG570 series support a wide range of management functions as well as Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), Media Redundancy Protocol (MRP) and Ethernet Ring Protection Switching (ERPS) for network redundancy. IGMP functionality is supported to handle the multicast traffic which is commonly used in IP CCTV deployments.

SFPs and PSUs need to be ordered separately.

FEATURES

- Innovative compact thermally efficient housing ensures high levels of device relaibility under full load
- -40°C to +75°C temperature maintains performance in extreme conditions
- DIN rail or wall mountable - quick to install and remove for maintenance
- 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
- Layer 3 Static Routing
- Designed in the USA & UK. Manufactured in the United Kingdom
- AMG Lifetime Support Warranty

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D36098-11

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
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	18Gbps (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	13.39Mpps @ 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 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)

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	2x Power
	Fault
	SFP Link/Activity
	RJ45 Link/Activity
	PoE (PoE Models Only)
RJ45 Ports	4x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X and 1.5 kV Isolation Protection Half & Full Duplex Support
SFP Slot	2x 100M/1G/2.5G SFP
Power, I/O, Alarm	1x 8-Way Screw Terminal
Serial Console	USB Type C
	(All Ports Comply With EIA Ethernet Data Communication Requirements)

Packaging.

Shipping Weight	0.8kg / 1.76lb
Dimensions	(W x D x H)
	220 × 175 × 54 mm
	8.66 × 6.89 × 2.13 in

Power.

Power Inputs	2
Operating Voltage:	
Non-PoE Models	$12\text{-}56V_{DC}$
30W PoE Models	$50\text{-}56V_{DC*}$
90W PoE Models	$52\text{-}56V_{DC*}$

*Low Voltage PoE Booster Models Avaialable (see separate data sheet)

Power Consumption	8 Watts Max (without PoE Load)
Total PoE Budget	240W Max (model dependent)
PSE Modes	Mode A (30W Ports)
	Mode A, Mode B (60/90W Ports)
PoE Enabled Ports	Ports 1-4
Protection	Reverse Polarity
	Overload

Mechanical.

Housing	Anodised Aluminium
Dimensions:	(W x D x H)
Excluding DIN & Wall Mounts	48 × 93 × 126 mm
	1.89 × 3.66 × 4.96 in
IP Rating	IP40
Installation	Wall Mount or DIN-Rail
Construction	All Parts & Conductive Surfaces Are Non-Corrosive Materials
	No Self-Tapping Screws
Weight	0.7kg / 1.54lb

Environmental.

Operating Temp:	-40 to +75°C / -40 to +167°F
40 LFM Vented Enclosure	-40 to +70°C / -40 to +158°F
Sealed Enclosure	-40 to +60°C / -40 to +140°F
200 LFM Fan/Blower Enclosure	-34 to +75°C / -29 to +167°F
Storage Temp.	-40 to +85°C / -40 to +185°F
Humidity	0% to 95% (non-condensing)
MTBF	907,476 hours
MTBF Standard	Telcordia SR-332 GF 30°C
Heat Dissipation	27 BTU/h (Non-PoE Models)
	437 BTU/h (with 120W PoE Load)
	846 BTU/h (with 240W PoE Load)
Cooling	Passive Cooling
Noise Level	0 dBA

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Specifications.

Regulatory.

Safety	IEC/EN 62368-1
EMI	EN55032 Class A
	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	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Environmental	Reach, RoHS, WEEE
Traffic	NEMA TS2
Supply Chain	NDAA & TAA Compliant

Designed to meet EN 50121-4

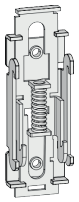
Part Numbers.

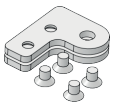
Industrial Layer 2+ Managed Switches

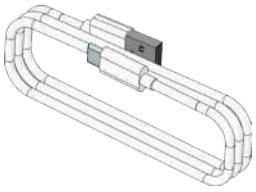
AMG570-4G-2S	4x 10/100/1000TX, 2x 100M/1G/2.5G SFP
AMG570-4GAT-2S-P120	4x 10/100/1000TX (4x 30W PoE), 2x 100M/1G/2.5G SFP
AMG570-2GBT-2GAT-2S-P240	4x 10/100/1000TX (2x 90W PoE + 2x 30W PoE), 2x 100M/1G/2.5G SFP

Included Accessories.

DIN Rail Adapter	Rear Mounted Metal DIN Rail Clip & Screws For DIN Rail Mounting AMG570 Series Products
Wall Mounting Brackets	2x Wall Mouting Brackets & Screws For Wall / Surface Mouting AMG570 Series Products
USB Console Cable	USB Type A to Type C Console Cable (1.5M)







Recommended PSUs.

Non-PoE Models

AMGPSU-W12-P25	Plug Top Mounting Light Industrial Grade PSU, 0 to +70°C, 12VDC, 25W, UK/EU/US Plug Heads Included
AMGPSU-I12-P24	DIN-Rail Mounting Industrial Grade PSU, -40 to +70°C, 12VDC, 24W*

PoE Models

AMGPSU-I48-P120	DIN-Rail Mounting Industrial Grade PSU, -40 to +70°C, 48-53VDC, 120W*^
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*^

* Also available in kit form including mains line cord, DC cable and DIN rail. Order with -K at the end of the part code (e.g. AMGPSU-I48-P120-K).
^ Also available with no exposed mains terminals and direct IEC input kit. Order with -IEC at the end of the part code (e.g. AMGPSU-I48-P120-IEC).

Optional Accessories.

AMG2035	Side Mounted Wall Bracket Adapter Kit For DIN Rail Mounting AMG570 Series Products In Depth Restricted Installations. Adapter Kit Can Be Extended Using The Included Extension Kit To Also Mount A DIN Rail Power Supply Up To 480W
SFP Modules	Optical / Copper SFP Modules, 100Mb, 1Gb, 2.5Gb

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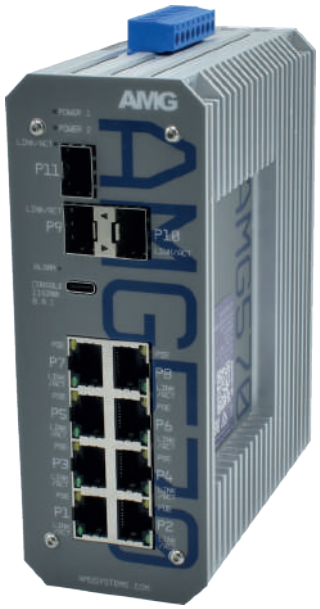
AMG570-8G-3S SERIES
11 PORT INDUSTRIAL GRADE MANAGED LAYER 2+ SWITCHES

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	PSU	NDAA/TAA
up to x8	up to x4	up to x8	x3	Layer 2+	1 In / 2 Out	-40°C~+75°C	DIN/Surface	IP40	x2 Dual	Compliant

[AMG570-8GAT-3S-P240]

OVERVIEW

AMG570 series layer 2+ managed industrial Ethernet switches are designed in a thermally efficient DIN rail 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 AMG570 series support a wide range of management functions as well as Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), Media Redundancy Protocol (MRP) and Ethernet Ring Protection Switching (ERPS) for network redundancy. IGMP functionality is supported to handle the multicast traffic which is commonly used in IP CCTV deployments.

SFPs and PSUs need to be ordered separately.

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
- DIN rail or wall mountable - quick to install and remove for maintenance
- 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
- Layer 3 Static Routing
- 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 802.3AB	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 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)

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	2x 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 Half & Full Duplex Support
SFP Slot	3x 100M/1G/2.5G SFP
Power, I/O, Alarm	1x 8-Way Screw Terminal
Serial Console	USB Type C

(All Ports Comply With EIA Ethernet Data Communication Requirements)

Packaging.

Shipping Weight	1.35kg / 2.98lb
Dimensions	(W x D x H)
	260 × 200 × 60 mm
	10.24 × 7.87 × 2.36 in

Power.

Power Inputs	2
Operating Voltage:	
Non-PoE Models	12-56V_{DC}
30W PoE Models	50-56V_{DC}*
90W PoE Models	52-56V_{DC}*

*Low Voltage PoE Booster Models Avaialable (see separate data sheet)

Power Consumption	10 Watts Max (without PoE Load)
Total PoE Budget	360W Max (model dependent)
PSE Modes	Mode A (30W Ports)
	Mode A, Mode B (60/90W Ports)
PoE Enabled Ports	Ports 1-8 (model dependent)
Protection	Reverse Polarity
	Overload

Mechanical.

Housing	Anodised Aluminium
Dimensions:	(W x D x H)
Excluding DIN & Wall Mounts	59 × 123 × 156 mm
	2.32 × 4.84 × 6.14 in
IP Rating	IP40
Installation	Wall Mount or DIN-Rail
Construction	All Parts & Conductive Surfaces Are Non-Corrosive Materials
	No Self-Tapping Screws
Weight	1.15kg / 2.54lb

Environmental.

Operating Temp:	-40 to +75°C / -40 to +167°F
40 LFM Vented Enclosure	-40 to +70°C / -40 to +158°F
Sealed Enclosure	-40 to +60°C / -40 to +140°F
200 LFM Fan/Blower Enclosure	-34 to +75°C / -29 to +167°F
Storage Temp.	-40 to +85°C / -40 to +185°F
Humidity	5% to 95% (non-condensing)
MTBF	907,476 hours
MTBF Standard	Telcordia SR-332 GF 30°C
Heat Dissipation	34 BTU/h (Non-PoE Models)
	853 BTU/h (with 240W PoE Load)
	1262 BTU/h (with 360W PoE Load)
Cooling	Passive Cooling
Noise Level	0 dBA

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D36097-14

Specifications.

Regulatory.

Safety	IEC/EN 62368-1
EMI	EN55032 Class A
	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	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Environmental	Reach, RoHS, WEEE
Traffic	NEMA TS2
Supply Chain	NDAA & TAA Compliant

Designed to meet EN 50121-4

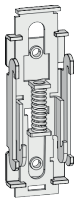
Part Numbers.

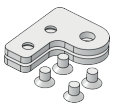
Industrial Layer 2+ Managed Switches

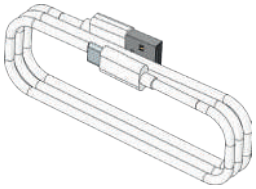
AMG570-8G-3S	8x 10/100/1000TX, 3x 100M/1G/2.5G SFP
AMG570-8GAT-3S-P240	8x 10/100/1000TX (8x 30W PoE), 3x 100M/1G/2.5G SFP
AMG570-2GBT-4GAT-2G-3S-P300	8x 10/100/1000TX (2x 90W, 4x 30W PoE & 2x Non-PoE), 3x 100M/1G/2.5G SFP
AMG570-4GBT-4G-3S-P360	8x 10/100/1000TX (4x 90W PoE & 4x Non-PoE), 3x 100M/1G/2.5G SFP

Included Accessories.

DIN Rail Adapter	Rear Mounted Metal DIN Rail Clip & Screws For DIN Rail Mounting AMG570 Series Products
Wall Mounting Brackets	2x Wall Mouting Brackets & Screws For Wall / Surface Mouting AMG570 Series Products
USB Console Cable	USB Type A to Type C Console Cable (1.5M)







Recommended PSUs.

Non-PoE Models

AMGPSU-W12-P25	Plug Top Mounting Light Industrial Grade PSU, 0 to +70°C, 12VDC, 25W, UK/EU/US Plug Heads Included
AMGPSU-I12-P24	DIN-Rail Mounting Industrial Grade PSU, -40 to +70°C, 12VDC, 24W*

PoE Models

AMGPSU-I48-P120	DIN-Rail Mounting Industrial Grade PSU, -40 to +70°C, 48-53VDC, 120W*^
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*^

* Also available in kit form including mains line cord, DC cable and DIN rail. Order with -K at the end of the part code (e.g. AMGPSU-I48-P120-K).
^ Also available with no exposed mains terminals and direct IEC input kit. Order with -IEC at the end of the part code (e.g. AMGPSU-I48-P120-IEC).

Optional Accessories.

AMG2035	Side Mounted Wall Bracket Adapter Kit For DIN Rail Mounting AMG570 Series Products In Depth Restricted Installations. Adapter Kit Can Be Extended Using The Included Extension Kit To Also Mount A DIN Rail Power Supply Up To 480W
SFP Modules	Optical / Copper SFP Modules, 100Mb, 1Gb, 2.5Gb

Proud to be a British Manufacturer

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.

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AMG560 SERIES INDUSTRIAL 12/20 PORT MANAGED LAYER 2 SWITCHES

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 either 8 or 16x RJ45 Gigabit ports and with 8x Gigabit SFP ports and either 4x Gigabit only or 4x 1/10 Gigabit SFP+ ports.

Gigabit	100/1000	Gigabit	1/10 Gb	Managed	Secure	USB	Temp	Mounting	PSU
up to x16	up to x8	up to x4	up to x4	Full	802.1x	x1	-40°C~+75°C	DIN/Surface	x2 Dual

[AMG560 Series]

OVERVIEW

AMG560 series layer 2 managed industrial Ethernet switches are designed in a DIN rail or wall mount housing and have 12 or 20 Ethernet ports in total (depending on model). 8 or 16 Gigabit Ethernet RJ45 ports, 8 100Mb/ Gigabit SFP 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 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.

A USB port is provided for easy configuration upload/ download as well as automatic firmware upgrade, configuration settings on boot up and log file storage.

SFPs and PSUs need to be ordered seperately.

FEATURES

- Compact size - ideal for confined spaces, including camera poles and roadside cabinets
- -40°C to +75°C temperature maintains performance in extreme conditions
- DIN rail or wall mountable - quick to install and remove for maintenance
- Compliant with all IEEE 802.3 speeds (i/u/ab/z/ae)
- Dual Speed SFP or 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
- Digital input & relay output
- USB port for configuration free replacement
- AMG Lifetime Support Warranty

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D39126-02

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 802.3ae	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
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	24Gbps (12 Port 1GB Models) 40Gbps (20 Port 1GB Models) 96Gbps (12 Port 10GB Models) 112Gbps (20 Port 10GB Models)
Address Table	16K MAC entries
Buffer Memory	12M bits
Jumbo Frames	16K bytes
VLAN's	4K
IGMP Groups	1023
Throughput	16.86Mpps (12 Port 1GB Models) 29.76Mpps (20 Port 1GB Models) 71.42Mpps (12 Port 10GB Models) 83.32Mpps (20 Port 10GB Models)
Priority Queues	8
Bandwidth Control	Ingress Packet Filter and Egress Rate Limit The packet filter rate can be set from 100K to 250Mbps

Software Features.

Redundancy	STP RSTP MSTP ERPS (G.8032)
VLAN	802.1Q Port Based VLAN Q-in-Q
LACP	Link Agrregation 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	

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Specifications.

USB.

Firmware Update
Configuration Backup / Restore
Boot Up & System Log

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	$24V_{DC}$ @ 1A

Interface.

LED Indicators	2x Power Fault Ring State Ring Master SFP Link/Activity RJ45 Link/Activity
RJ45 Ports	8 or 16x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X and 1.5 kV Isolation Protection
SFP Slot	8x 100/1000FX SFP and/or 4x 1000FX SFP
SFP+ Slot	4 x 1/2.5/10G SFP+
Power	1x 4 pin removable terminal
DI/Relay	1x 4 pin removable terminal
Serial Console	1x RJ45
Config/Firmware	USB Type A
Reset	Ultra-small Tactile Switch

Power.

Power Inputs	2
Operating Voltage	12-48V_{DC}
Power Consumption:	14 Watts Max (12 Port 1Gb Model) 19 Watts Max (20 Port 1Gb Model) 16 Watts Max (12 Port 10Gb Model) 19 Watts Max (20 Port 10Gb Model)
Protection	Reverse Polarity, Overload Current

Mechanical.

Housing	Aluminium
Dimensions:	(W x D x H)
12 Port Models	72 × 113 × 145 mm 2.83 × 4.45 × 5.71 in
20 Port Models	91 × 118 × 145 mm 3.58 × 4.65 × 5.71 in
IP Rating	IP30
Installation	Wall Mount or DIN-Rail
Weight	0.87kg / 1.92lb (12 Port Models) 0.97kg / 2.14lb (20 Port Models)

Environmental.

Operating Temp.	-40°C to +75°C
Storage Tempe.	-40°C to +85°C
Humidity	5% to 95% (non-condensing)
MTBF	>250,000 hours
MTBF Standard	Telcordia (Bellcore) GB
Heat Dissipation	48 BTU/h (12 Port 1Gb Model) 65 BTU/h (20 Port 1Gb Model) 55 BTU/h (12 Port 10Gb Model) 65 BTU/h (20 Port 10Gb Model)
Cooling	Passive

Regulatory.

Safety	CE/EN60950-1
EMI	EN55032 Class A 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)
EMC	EN61000-6-2 EN61000-6-4
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

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Part Numbers.

1Gb Industrial Layer 2 Managed Switches

AMG560-8G-4S	8 × 10/100/1000TX & 4 × 1000M SFP
AMG560-16G-4S	16 × 10/100/1000TX & 4 × 1000M SFP
AMG560-8G-12S	8 × 10/100/1000TX, 8 × 100/1000M SFP & 4 × 1000M SFP

10Gb Industrial Layer 2 Managed Switches

AMG560-8G-4XS	8 × 10/100/1000TX & 4 × 1000M/2.5G/10G SFP+
AMG560-16G-4XS	16 × 10/100/1000TX & 4 × 1000M/2.5G/10G SFP+
AMG560-8G-8S-4XS	8 × 10/100/1000TX, 8 × 100/1000M SFP & 4 × 1000M/2.5G/10G SFP+

Recommended PSUs.

AMGPSU-I12-P24	DIN-Rail Mounting Industrial Grade PSU, -40 to +70°C, 12VDC, 24W

Notes.

Optional Accessories: SFP modules - Optical/Copper see separate list, need to be ordered separately

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

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

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D39136-01

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 Agrregation 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	

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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	$24V_{DC}$ @ 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	$90\text{-}264V_{AC}$
DC Inputs	$48\text{-}56V_{DC}$
Power Consumption (without PoE Load)	18 Watts Max (1Gb Models) 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 × 331 × 44 mm 17.32 × 13.03 × 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

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Part Numbers.

1Gb Industrial Layer 2 Managed PoE Switches

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

10Gb Industrial Layer 2 Managed Switches

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

10Gb Industrial Layer 2 Managed PoE Switches

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

Recommended PSUs.

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.

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 for the latest product specifications.

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AMG510-8G SERIES
10 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 8x RJ45 Gigabit ports supporting optional 30W PoE+ and 2x Gigabit SFP ports.

Gigabit	Gigabit	100/1000	Managed	Secure	Temp	Mounting	PSU	NDAA/TAA
up to x8	up to x8	x2	Full	802.1x	0 ~ +50°C	Rack/Surface	Mains	Compliant

[AMG510-8G Series]

OVERVIEW

AMG510 series layer 2+ managed Ethernet switches are designed for 19inch rack or desktop mounting within commercial grade applications. The AMG510-8G series has 8 Gigabit Ethernet RJ45 ports with optional IEEE 802.3at compliant 30W PoE+ and an additional 2 multi-rate SFP ports that support both 100Mb and 1Gb speeds for data uplink into core networks, providing application and site flexibility.

Support for the latest in security features ensure that the AMG510 series can provide robust security and reliability as part of an overall secure network design strategy.

The AMG510 series support a wide range of management functions as well as Rapid Spanning Tree Protocol (RSTP) and Multiple Spanning Tree Protocol (MSTP) for network redundancy. IGMP functionality is supported to handle the multicast traffic which is commonly used in IP CCTV deployments.

SFPs need to be ordered separately.

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, 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
- Layer 3 Static Routing
- AMG 3 Year 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 802.3AB	LLDP
IEEE 802.3at	30W 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

Hardware Features.

Architecture	Store-and-Forward
Switch Latency	<7µs
Switch Fabric	20Gbps
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	14.88Mpps @ 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
VLAN	802.1Q
	Port Based VLAN
	Private VLAN
	Voice VLAN
MVR	Multicast VLAN Registration
LACP	Dynamic Trunk
	Static Trunk
GARP/GVRP	
IGMP Snooping	v1/v2/v3 (8 VLAN's Max)
IGMP Querier	
MLD Snooping	IPv6 (8 VLAN's Max)
MLD Querier	IPv6
IPMC	64 Profiles (128 Rules Each)

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)

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	8x 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_{AC}
Power Consumption	12 Watts Max (without PoE Load)
Total PoE Budget	210W Max
PSE Modes	Mode B
PoE Enabled Ports	Ports 1-8

Packaging.

Shipping Weight	2.9kg / 6.39lb (Non-PoE Models)
	3.1kg / 6.83lb (PoE Models)
Dimensions	(W x D x H)
	405 × 305 × 91 mm
	15.95 × 12.01 × 3.58 in

Mechanical.

Housing	Metal
Dimensions:	(W x D x H) Excluding 19inch Brackets
	330 × 210 × 44 mm
	12.99 × 8.27 × 1.73 in
IP Rating	IP30 (Non-PoE Models)
	IP20 (PoE Models)
Installation	19inch Rack (1U) or Desktop
Weight	2.0kg / 4.41lb (Non-PoE Models)
	2.2kg / 4.85lb (PoE Models)

Environmental.

Operating Temp.	0 to +50°C / 32 to +122°F
Storage Temp.	-20 to +80°C / -4 to +176°F
Humidity	5% to 90% (non-condensing)
MTBF	147,595 hours (Non-PoE Models)
	126,424 hours (PoE Models)
MTBF Standard	MIL-HDBK-217F GB
Heat Dissipation	41 BTU/h (Non-PoE Models)
	758 BTU/h (with Max PoE Load)
Cooling	Passive Cooling (Non-PoE Models)
	1x Cooling Fan (PoE Models)
	0-120W PoE Load - Fan Turned Off
	>120W PoE Load - Dynamic Fan On
Airflow	Left to Right
Noise Level	0 dBA (Non-PoE Models)
	0-56 dBA (PoE Models. See Note Above)

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	
Supply Chain	NDAA & TAA Compliant	

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Part Numbers.

1Gb Commercial Layer 2+ Managed Switches

AMG510-8G-2S	8 × 10/100/1000TX & 2 × 100/1000FX SFP
AMG510-8GAT-2S-P210	8 × 10/100/1000TX 30W PoE (210W Budget) & 2 × 100/1000FX SFP

Notes.

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

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

[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.

Support for the latest in security features ensure that the AMG510 series can provide robust security and reliability as part of an overall secure network design strategy.

The AMG510 series support a wide range of management functions as well as Rapid Spanning Tree Protocol (RSTP) and Multiple Spanning Tree Protocol (MSTP) for network redundancy. IGMP functionality is supported to handle the multicast traffic which is commonly used in IP CCTV deployments.

SFPs need to be ordered separately.

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, 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
- Layer 3 Static Routing
- AMG 3 Year 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 802.3AB	LLDP
IEEE 802.3at	30W 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

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
VLAN	802.1Q
	Port Based VLAN
	Private VLAN
	Voice VLAN
MVR	Multicast VLAN Registration
LACP	Dynamic Trunk
	Static Trunk
GARP/GVRP	
IGMP Snooping	v1/v2/v3 (8 VLAN's Max)
IGMP Querier	
MLD Snooping	IPv6 (8 VLAN's Max)
MLD Querier	IPv6
IPMC	64 Profiles (128 Rules Each)

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)

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	16x 10/100/1000T(X) RJ45 or
(depending on model)	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_{AC}
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 × 305 × 91 mm
	15.95 × 12.01 × 3.58 in

Mechanical.

Housing	Metal
Dimensions:	(W x D x H) Excluding 19inch Brackets
	330 × 210 × 44 mm
	12.99 × 8.27 × 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 to +50°C / 32 to +122°F
Storage Temp.	-20 to +80°C / -4 to +176°F
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
Supply Chain	NDAA & TAA Compliant

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Part Numbers.

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.

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

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AMG510-22G SERIES
26 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 22x RJ45 Gigabit ports and 2x Gigabit RJ45/SFP Combo ports supporting optional 30W PoE+ along with 2x 100Mb/1Gb SFP Ports.

Gigabit	Gigabit	Gigabit	Gigabit	100/1000	Managed	Secure	Temp	Mounting	PSU	NDAA/TAA
up to x22	up to x22	up to x2	up to x2	x2	Full	802.1x	0 ~ +50°C	Rack/Surface	Mains	Compliant

[AMG510-22G Series]

OVERVIEW

AMG510 series layer 2+ managed Ethernet switches are designed for 19inch rack or desktop mounting within commercial grade applications. The AMG510-22G series has 22 Gigabit Ethernet RJ45 ports and an additional 2 Gigabit RJ45/SFP combo ports with optional IEEE 802.3at compliant 30W PoE+ as well as 2 multi-rate SFP only ports that support both 100Mb and 1Gb speeds for maximum flexibility.

Support for the latest in security features ensure that the AMG510 series can provide robust security and reliability as part of an overall secure network design strategy.

The AMG510 series support a wide range of management functions as well as Rapid Spanning Tree Protocol (RSTP) and Multiple Spanning Tree Protocol (MSTP) for network redundancy. IGMP functionality is supported to handle the multicast traffic which is commonly used in IP CCTV deployments.

SFPs need to be ordered separately.

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 (supporting 100Mb & 1Gb speeds)
- Supports RSTP, MSTP, 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
- Layer 3 Static Routing
- AMG 3 Year 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 802.3AB	LLDP
IEEE 802.3at	30W 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

Hardware Features.

Architecture	Store-and-Forward
Switch Latency	<7µs
Switch Fabric	52Gbps
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	38.68Mpps
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
VLAN	802.1Q Port Based VLAN Private VLAN Voice VLAN
MVR	Multicast VLAN Registration
LACP	Dynamic Trunk Static Trunk
GARP/GVRP	
IGMP Snooping	v1/v2/v3 (8 VLAN's Max)
IGMP Querier	
MLD Snooping	IPv6 (8 VLAN's Max)
MLD Querier	IPv6
IPMC	64 Profiles (128 Rules Each)

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	
Manufacturer OUI Port Security	
Access (Policy) Control List (ACL L2/3/4)	
Custom User Rights	15 Levels (20 Users Max)

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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
	PoE (PoE Models Only)
RJ45 Ports	22x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X
Combo Ports	2x 10/100/1000T(X) RJ45 or 2x 100/1000FX SFP
SFP Slots	2x 100/1000FX SFP
Power	1x IEC C14 Socket
Serial Console	RJ45

Power.

Power Inputs	1
Operating Voltage	90-264V_{AC}
Power Consumption	30 Watts Max (without PoE Load)
Total PoE Budget	460W Max
PSE Modes	Mode A
PoE Enabled Ports	Ports 1-24

Packaging.

Shipping Weight	3.4kg / 7.50lb (Non-PoE Models)
	5.5kg / 12.13lb (PoE Models)
Dimensions	(W x D x H)
(Non-PoE Models)	500 × 310 × 91 mm
	19.69 × 12.20 × 3.58 in
(PoE Models)	515 × 417 × 96 mm
	20.28 × 16.42 × 3.78 in

Mechanical.

Housing	Metal
Dimensions:	(W x D x H) Excluding 19inch Brackets
(Non-PoE Models)	440 × 220 × 44 mm
	17.32 × 8.66 × 1.73 in
(PoE Models)	440 × 330 × 44 mm
	17.32 × 12.99 × 1.73 in
IP Rating	IP30 (Non-PoE Models)
	IP20 (PoE Models)
Installation	19inch Rack (1U) or Desktop
Weight	2.5kg / 5.51lb (Non-PoE Models)
	4.3kg / 9.48lb (PoE Models)

Environmental.

Operating Temp.	0 to +50°C / 32 to +122°F
Storage Temp.	-20 to +80°C / -4 to +176°F
Humidity	5% to 90% (non-condensing)
MTBF	125,897 hours (Non-PoE Models)
	105,225 hours (PoE Models)
MTBF Standard	MIL-HDBK-217F GB
Heat Dissipation	102 BTU/h (Non-PoE Models)
	1672 BTU/h (with Max PoE Load)
Cooling	Passive Cooling (Non-PoE Models)
	2x Cooling Fans (Temp Controlled)
Airflow	Front to Back
Noise Level	0 dBA (Non-PoE Models)
	61 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	
Supply Chain	NDAA & TAA Compliant	

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Part Numbers.

1Gb Commercial Layer 2+ Managed Switches

AMG510-22G-2C-2S	22 × 10/100/1000TX & 2 × 100/1000M RJ45/SFP Combo & 2 × 100/1000FX SFP
AMG510-22GAT-2CAT-2S-P460	22 × 10/100/1000TX & 2 × 100/1000M RJ45/SFP Combo 30W PoE (460W Budget) & 2 × 100/1000FX SFP

Notes.

Included Accessories: 19inch Mounting Brackets, 4x Rubber Feet, Console Cable, Region Specific Line Cord
Optional Accessories: SFP/SFP+ modules - Optical/Copper see separate list, need to be ordered separately

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AMG510-24G SERIES
28 PORT COMMERCIAL GRADE MANAGED LAYER 2+ SWITCH

Commercial Ethernet Solutions

AMG's fully managed layer 2+ Ethernet switches provide 100Mbps, Gigabit and 10 Gigabit Ethernet switching for commercial network applications. Available with 24x RJ45 Gigabit ports supporting optional 30W PoE+ or 60/90W PoE++ and 4x 1/10 Gigabit SFP+ ports.

Gigabit	Gigabit	Gigabit	1/10 Gb	Managed	Secure	Temp	Mounting	PSU	NDAA/TAA
up to x8	up to x24	up to x24	up to x4	Full	802.1x	0 ~ +50°C	Rack/Surface	Mains	Compliant

[AMG510-24G Series]

OVERVIEW

AMG510 series layer 2+ managed Ethernet switches are designed for 19inch rack or desktop mounting within commercial grade applications. The AMG510-24G series has 24 Gigabit Ethernet RJ45 ports with optional IEEE 802.3at compliant 30W PoE+ or 802.3bt compliant 60/90W PoE++ and 4 multi-rate SFP+ ports that support 100Mb, 1Gb, 2.5Gb or 10Gb speeds for maximum flexibility.

Support for the latest in security features ensure that the AMG510 series can provide robust security and reliability as part of an overall secure network design strategy.

The AMG510 series support a wide range of management functions as well as Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP) and Ethernet Ring Protection Switching (ERPS) for network redundancy. IGMP functionality is supported to handle the multicast traffic which is commonly used in IP CCTV deployments.

SFPs need to be ordered separately.

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/ae)
- Available with 802.3at or bt PoE ports up to 90W
- Multi-Rate 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 9.6K bytes jumbo frames
- Layer 3 Static Routing
- AMG 3 Year 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 802.3ae	10GBase-R
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
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
ITU-T G.8032	Ethernet Ring Protection Switching (ERPS)

Hardware Features.

Architecture	Store-and-Forward
Switch Latency	<7µs
Switch Fabric	128Gbps
Address Table	32K MAC Entries
Buffer Memory	32M bits
Jumbo Frames	9.6K bytes
CPU	400MHz
SDRAM	1Gb
Flash	16Mb
VLAN's	4K
IGMP Groups	1024
IPv6 MLD Groups	1024
Throughput	95.24Mpps
Priority Queues	8
Bandwidth Control	Ingress Packet Filter and Egress Rate Limit

Layer 3 Features.

Static Routing:	
Interfaces	128 Max
Routes	128 Max
DHCP	Server (IPv4)

Software Features.

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

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	
Manufacturer OUI Port Security	
Access (Policy) Control List (ACL L2/3/4)	
Custom User Rights	15 Levels (20 Users Max)

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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
	PoE (PoE Models Only)
RJ45 Ports	24x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X
SFP+ Slots	4x 100M/1G/2.5G/10G SFP+
Power	1x IEC C14 Socket
Serial Console	RJ45

Power.

Power Inputs	1
Operating Voltage	90-264V_{AC}
Power Consumption	30 Watts Max (without PoE Load)
Total PoE Budget	460W Max
PSE Modes	Mode A or Mode A&B (90W ports)
30W PoE Ports	Ports 1-24 (30W only models)
	Ports 9-24 (90W models)
60/90W PoE Ports	Ports 1-8 (90W models)

Packaging.

Shipping Weight	3.4kg / 7.50lb (Non-PoE Models)
	5.5kg / 12.13lb (PoE Models)
Dimensions	(W x D x H)
(Non-PoE Models)	500 × 310 × 91 mm
	19.69 × 12.20 × 3.58 in
(PoE Models)	515 × 417 × 96 mm
	20.28 × 16.42 × 3.78 in

Mechanical.

Housing	Metal
Dimensions:	(W x D x H) Excluding 19inch Brackets
(Non-PoE Models)	440 × 220 × 44 mm
	17.32 × 8.66 × 1.73 in
(PoE Models)	440 × 330 × 44 mm
	17.32 × 12.99 × 1.73 in
IP Rating	IP30 (Non-PoE Models)
	IP20 (PoE Models)
Installation	19inch Rack (1U) or Desktop
Weight	2.5kg / 5.51lb (Non-PoE Models)
	4.3kg / 9.48lb (PoE Models)

Environmental.

Operating Temp.	0 to +50°C / 32 to +122°F
Storage Temp.	-20 to +80°C / -4 to +176°F
Humidity	5% to 90% (non-condensing)
MTBF	152,782 hours (Non-PoE Models)
	122,110 hours (PoE Models)
MTBF Standard	MIL-HDBK-217F GB
Heat Dissipation	102 BTU/h (Non-PoE Models)
	1672 BTU/h (with Max PoE Load)
Cooling	Passive Cooling (Non-PoE Models)
	2x Cooling Fans (Temp Controlled)
Airflow	Front to Back
Noise Level	0 dBA (Non-PoE Models)
	61 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	
Supply Chain	NDAA & TAA Compliant	

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Part Numbers.

10Gb Commercial Layer 2+ Managed Switches

AMG510-24G-4XS	24x 10/100/1000TX & 4x 100M/1G/2.5G/10G SFP+
AMG510-24GAT-4XS-P460	24x 10/100/1000TX 30W PoE (460W Budget) & 4x 100M/1G/2.5G/10G SFP+
AMG510-8GBT-16GAT-4XS-P460	24x 10/100/1000TX 8x 90W + 16x 30W PoE (460W) & 4x 100M/1G/2.5G/10G SFP+*

* Also available with an 860W power supply. Please contact sales for further information and availability.

Notes.

Included Accessories: 19inch Mounting Brackets, 4x Rubber Feet, Console Cable, Region Specific Line Cord
Optional Accessories: SFP/SFP+ modules - Optical/Copper see separate list, need to be ordered separately

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AMG510-48G SERIES
52 PORT COMMERCIAL GRADE MANAGED LAYER 2+ SWITCH

Commercial Ethernet Solutions

AMG's fully managed layer 2+ Ethernet switches provide 100Mbps, Gigabit and 10 Gigabit Ethernet switching for commercial network applications. Available with 48x RJ45 Gigabit ports supporting optional 30W PoE+ and 4x 1/10 Gigabit SFP+ ports.

Gigabit	Gigabit	1/10 Gb	Managed	Secure	Temp	Mounting	PSU	NDAA/TAA
up to x48	up to x48	x4	Full	802.1x	0 ~ +50°C	Rack/Surface	Mains	Compliant

[AMG510-48G Series]

OVERVIEW

AMG510 series layer 2+ managed Ethernet switches are designed for 19inch rack or desktop mounting within commercial grade applications. The AMG510-48G series has 48 Gigabit Ethernet RJ45 ports with optional IEEE 802.3at compliant 30W PoE+ and an additional 4 multi-rate SFP+ ports that support 100Mb, 1Gb, 2.5Gb or 10Gb speeds for data uplink into core networks, providing application and site flexibility.

Support for the latest in security features ensure that the AMG510 series can provide robust security and reliability as part of an overall secure network design strategy.

The AMG510 series support a wide range of management functions as well as Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP) and Ethernet Ring Protection Switching (ERPS) for network redundancy. IGMP functionality is supported to handle the multicast traffic which is commonly used in IP CCTV deployments.

SFPs need to be ordered separately.

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/ae)
- Dual Speed SFP or 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 9.6K bytes jumbo frames
- Layer 3 Static Routing
- AMG 3 Year Support Warranty

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D39133-06

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 802.3ae	10GBase-R
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
IEEE 802.3at	30W 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
ITU-T G.8032	Ethernet Ring Protection Switching (ERPS)

Hardware Features.

Architecture	Store-and-Forward
Switch Latency	<7µs
Switch Fabric	176Gbps
Address Table	32K MAC Entries
Buffer Memory	32M bits
Jumbo Frames	9.6K bytes
CPU	400MHz
SDRAM	1Gb
Flash	16Mb
VLAN's	4K
IGMP Groups	1024
IPv6 MLD Groups	1024
Throughput	130.94Mpps
Priority Queues	8
Bandwidth Control	Ingress Packet Filter and Egress Rate Limit

Layer 3 Features.

Static Routing:	
Interfaces	128 Max
Routes	128 Max
DHCP	Server (IPv4)

Software Features.

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

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	
Manufacturer OUI Port Security	
Access (Policy) Control List (ACL L2/3/4)	
Custom User Rights	15 Levels (20 Users Max)

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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
	PoE (PoE Models Only)
RJ45 Ports	48x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X
SFP+ Slot	4x 100M/1G/2.5G/10G SFP+
Power	1x IEC C14 Socket
Serial Console	RJ45

Power.

Power Inputs	1
Operating Voltage	90-264V_{AC}
Power Consumption	60 Watts Max (without PoE Load)
Total PoE Budget	860W Max
PSE Modes	Mode A
PoE Enabled Ports	Ports 1-48

Packaging.

Shipping Weight	6.2kg / 13.67lb (Non-PoE Models)
	7.1kg / 15.65lb (PoE Models)
Dimensions	(W x D x H)
(Non-PoE Models)	515 × 417 × 96 mm
	20.28 × 16.42 × 3.78 in
(PoE Models)	560 × 560 × 130 mm
	22.05 × 22.05 × 5.12 in

Mechanical.

Housing	Metal
Dimensions:	(W x D x H) Excluding 19inch Brackets
(Non-PoE Models)	440 × 330 × 44 mm
	17.32 × 12.99 × 1.73 in
(PoE Models)	440 × 380 × 44 mm
	17.32 × 14.96 × 1.73 in
IP Rating	IP20
Installation	19inch Rack (1U) or Desktop
Weight	5.0kg / 11.02lb (Non-PoE Models)
	5.4kg / 11.91lb (PoE Models)

Environmental.

Operating Temp.	0 to +50°C / 32 to +122°F
Storage Temp.	-20 to +80°C / -4 to +176°F
Humidity	5% to 90% (non-condensing)
MTBF	113,368 hours (Non-PoE Models)
	108,182 hours (PoE Models)
MTBF Standard	MIL-HDBK-217F GB
Heat Dissipation	205 BTU/h (Non-PoE Models)
	3139 BTU/h (with Max PoE Load)
Cooling	2x Cooling Fans (Temp Controlled)
Airflow	Front to Back
Noise Level	50 dBA (Non-PoE Models)
	74 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	
Supply Chain	NDAA & TAA Compliant	

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Part Numbers.

10Gb Commercial Layer 2+ Managed Switches

AMG510-48G-4XS	48 × 10/100/1000TX & 4 × 100M/1G/2.5G/10G SFP+
AMG510-48GAT-4XS-P860	48 × 10/100/1000TX 30W PoE (860W Budget) & 4 × 100M/1G/2.5G/10G SFP+

Notes.

Included Accessories: 19inch Mounting Brackets, 4x Rubber Feet, Console Cable, Region Specific Line Cord
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 for the latest product specifications.

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AMG510-24G RP SERIES
28 PORT COMMERCIAL GRADE MANAGED LAYER 2+ SWITCH

Commercial Ethernet Solutions

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

Gigabit	Gigabit	1/10 Gb	Managed	Secure	Temp	Mounting	PSU	NDAA/TAA
up to x24	up to x24	x4	Full	802.1x	0 ~ +50°C	Rack/Surface	x2 Dual	Compliant

[AMG510-24G RP Series]

OVERVIEW

AMG510 series layer 2+ managed Ethernet switches are designed for 19inch rack or desktop mounting within commercial grade applications. The AMG510-24G series has 24 Gigabit Ethernet RJ45 ports with optional IEEE 802.3at compliant 30W PoE+ and 4 multi-rate SFP+ ports that support 100Mb, 1Gb, 2.5Gb or 10Gb speeds for maximum flexibility. Dual redundant user replaceable hot swappable power supplies provide redundancy in the event of a single psu failure.

Support for the latest in security features ensure that the AMG510 series can provide robust security and reliability as part of an overall secure network design strategy.

The AMG510 series support a wide range of management functions as well as Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP) and Ethernet Ring Protection Switching (ERPS) for network redundancy. IGMP functionality is supported to handle the multicast traffic which is commonly used in IP CCTV deployments.

SFPs need to be ordered separately.

FEATURES

- 19inch 1U rack or desktop/shelf mount
- 0°C to +50°C temperature for commercial grade applications
- Dual redundant user replaceable hot swappable 90-264VAC mains power inputs
- Compliant with all IEEE 802.3 speeds (i/u/ab/z/ae)
- Multi-Rate 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 9.6K bytes jumbo frames
- Layer 3 Static Routing
- AMG 3 Year Support Warranty

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D39150-05

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 802.3ae	10GBase-R
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
IEEE 802.3at	30W 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
ITU-T G.8032	Ethernet Ring Protection Switching (ERPS)

Hardware Features.

Architecture	Store-and-Forward
Switch Latency	<7µs
Switch Fabric	128Gbps
Address Table	32K MAC Entries
Buffer Memory	32M bits
Jumbo Frames	9.6K bytes
CPU	400MHz
SDRAM	1Gb
Flash	16Mb
VLAN's	4K
IGMP Groups	1024
IPv6 MLD Groups	1024
Throughput	95.24Mpps
Priority Queues	8
Bandwidth Control	Ingress Packet Filter and Egress Rate Limit

Layer 3 Features.

Static Routing:	
Interfaces	128 Max
Routes	128 Max
DHCP	Server (IPv4)

Software Features.

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

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	
Manufacturer OUI Port Security	
Access (Policy) Control List (ACL L2/3/4)	
Custom User Rights	15 Levels (20 Users Max)

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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	Power
	SFP Link/Activity
	RJ45 Link/Activity
	RJ45 Speed
	PoE (PoE Models Only)
RJ45 Ports	24x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X
SFP+ Slots	4x 100M/1G/2.5G/10G SFP+
Power	2x IEC C14 Sockets
Serial Console	RJ45

Power.

Power Inputs	2 (Dual Redundant)
Operating Voltage	90-264V_{AC}
Power Consumption	30 Watts Max (without PoE Load)
Total PoE Budget	540W Max
PSE Modes	Mode A
PoE Enabled Ports	Ports 1-24

Packaging.

Shipping Weight	6.1kg / 13.45lb (Non-PoE Models)
	7.5kg / 16.53lb (PoE Models)
Dimensions	(W x D x H)
	560 × 560 × 130 mm
	22.05 × 22.05 × 5.12 in

Mechanical.

Housing	Metal
Dimensions:	(W x D x H) Excluding 19inch Brackets
	440 × 330 × 44 mm
	17.32 × 12.99 × 1.73 in
IP Rating	IP20
Installation	19inch Rack (1U) or Desktop
Weight	4.2kg / 9.26lb (Non-PoE Models)
	5.6kg / 12.35lb (PoE Models)

Environmental.

Operating Temp.	0 to +50°C / 32 to +122°F
Storage Temp.	-20 to +80°C / -4 to +176°F
Humidity	5% to 90% (non-condensing)
MTBF	113,368 hours (Non-PoE Models)
	108,182 hours (PoE Models)
MTBF Standard	MIL-HDBK-217F GB
Heat Dissipation	102 BTU/h (Non-PoE Models)
	1945 BTU/h (with Max PoE Load)
Cooling	Passive Cooling (Non-PoE Models)
	2x Cooling Fans (Temp Controlled)
Airflow	Front to Back
Noise Level	0 dBA (Non-PoE Models)
	74 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
Supply Chain	NDAA & TAA Compliant

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Part Numbers.

10Gb Commercial Layer 2+ Managed Switches With Redundant Power Supplies

AMG510-24G-4XS-RP	24 × 10/100/1000TX & 4 × 100M/1G/2.5G/10G SFP+, Dual Redundant Hot Swappable PSU's
AMG510-24GAT-4XS-RP540	24 × 10/100/1000TX 30W PoE (540W Budget*) & 4 × 100M/1G/2.5G/10G SFP+, Dual Redundant Hot Swappable PSU's

* Also available with dual 860W power supplies. Please contact sales for further information and availability.

Notes.

Included Accessories: 19inch Mounting Brackets, 4x Rubber Feet, Console Cable, 2x Region Specific Line Cords
Optional Accessories: SFP/SFP+ modules - Optical/Copper see separate list, need to be ordered separately

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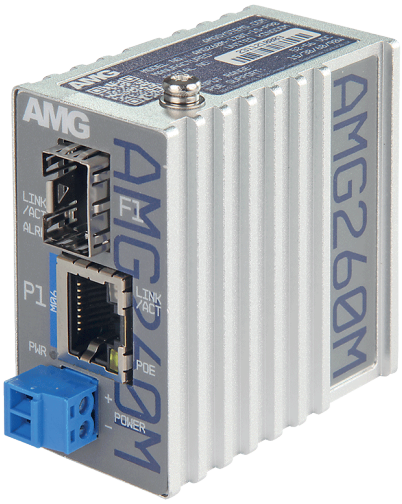
AMG260M SERIES INDUSTRIAL MINI MEDIA CONVERTER WITH OPTIONAL 30/60/90W POE OR PD

Industrial Ethernet Solutions



AMG's mini media converters provide a multirate 100Mb/Gigabit Ethernet uplink over fiber via the SFP port with optional 30W or 60/90W PoE or PD. Additional features are supported by user-configurable DIP switches for advanced functionality.

Gigabit	Gigabit	Gigabit	Gigabit	100/1000	Temp	Protection	Mounting	Mounting	NDAA/TAA
x1	x1	x1	x1	x1	-40°C~+75°C	IP40	DIN/Surface	Magnetic	Compliant

[AMG260M-1GBT-1S-P90]

OVERVIEW

Designed in an ultra compact DIN rail or wall mount housing, the AMG260M series miniature media converters are ideally suited for connecting equipment to Ethernet networks over long distances using all types of fiber through the integrated SFP port. Fiber connectivity is determined by separate SFP device selection, providing application and site flexibility.

Available in both non-PoE models as well as PoE models for IEEE802.3at 30W or IEEE802.3bt 60/90W they are suitable for powering the latest high powered PoE devices over a wide industrial operating temperature range. A PoE PD powered model is also available for installation in locations without any local power.

User selectable DIP switches allow for configuration of the intelligent link fault pass-through feature for remote end failure detection as well as remote device reset to allow end device reboots from the control room and 250M extended distance mode on the RJ45 port.

A wide range of models are available to suit all design requirements and are fully compatible with all of the AMG250/260 model range.

FEATURES

- Ultra compact size – ideal for confined spaces, including camera housings and roadside cabinets
- -40°C to +75°C temperature maintains performance in extreme conditions
- DIN rail or wall mountable - quick to install and remove for maintenance (an optional magnetic mount is also available)
- All SFP ports are multirate 100Mb/Gigabit – support single and multimode, single or dual fiber options up to 120Km
- DIP switch selection of link fault pass-through, remote device reset and extended distance modes
- Supports optional 15W, 30W, 60W and 90W PoE
- Auto-Negotiation (802.3u) – automatically determines the best connection speed
- Designed in the USA & UK. Manufactured in the United Kingdom
- AMG Lifetime Support Warranty

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Specifications.

Standards.

IEEE802.3i	10Base-T
IEEE802.3u	100Base-TX & 100Base-FX
IEEE802.3ab	1000Base-T
IEEE802.3z	1000Base-X
IEEE802.3af	15W PoE
IEEE802.3at	30W PoE+
IEEE802.3bt	60 & 90W PoE
IEEE802.3x	Flow Control
Jumbo Frames	9.2Kbytes
Address Table	2K MAC Entries

Interface.

LED Indicators	1x Power SFP Link/Activity RJ45 Link/Activity PoE or PD Alarm
RJ45 Ports	1x 10/100TX RJ45 or 1x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X and 2 kV Isolation Protection
SFP Slot	1x 100/1000FX SFP
Power	1x 2-way Screw Terminal (Not Present On PD Models)

Switches.

Switch	1x 4 Position DIP Switch
Switch Functions	Link Fault Pass-Through Mode Remote Reset Mode Extended Distance Mode

Power.

Power Inputs	1
Operating Voltage:	
Non-PoE Models	12-56V_{DC}
30W PoE Models	48-56V_{DC}
90W PoE Models	52-56V_{DC}
PoE PD Models	IEEE 802.3af Class 1 Device
Power Consumption	2.5W Max (without PoE Load)
PSE Modes:	
30W Models	Mode A
60/90W Models	Mode A, Mode B
Protection	Reverse Polarity Overload Current

Packaging.

Shipping Weight	0.24kg / 0.53lb
Dimensions	(W x D x H) 155 × 145 × 50 mm 6.10 × 5.71 × 1.97 in

Mechanical.

Housing	Anodised Aluminium
Dimensions: Excluding DIN & Wall Mounts	(W x D x H) 31 × 57 × 57 mm 1.22 × 2.24 × 2.24 in
IP Rating	IP40
Installation	Wall Mount or DIN-Rail Optional Magnetic Mounts
Weight	0.14kg / 0.31lb

Environmental.

Operating Temp.	-40 to +75°C / -40 to +167°F
Storage Temp.	-40 to +85°C / -40 to +185°F
Humidity	5% to 95% (non-condensing)
MTBF	>500,000 hours
MTBF Standard	Telcordia SR-332 GF 30°C
Heat Dissipation	7 BTU/h (Non-PoE & PD) 109 BTU/h (30W PoE) 314 BTU/h (90W PoE)
Cooling	Passive Cooling
Noise Level	0 dBA

Regulatory.

Safety	IEC/EN 62368-1
EMI	EN 55032 Class A CISPR 32 FCC Part 15B Class A
EMS	EN 61000-4-2 (ESD) EN 61000-4-3 (RS) EN 61000-4-4 (EFT) EN 61000-4-5 (Surge) EN 61000-4-6 (CS) EN 61000-4-8 (PFMF)
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Environmental	Reach, RoHS, WEEE
Traffic	NEMA TS2
Supply Chain	NDAA & TAA Compliant

Designed to meet EN 50121-4

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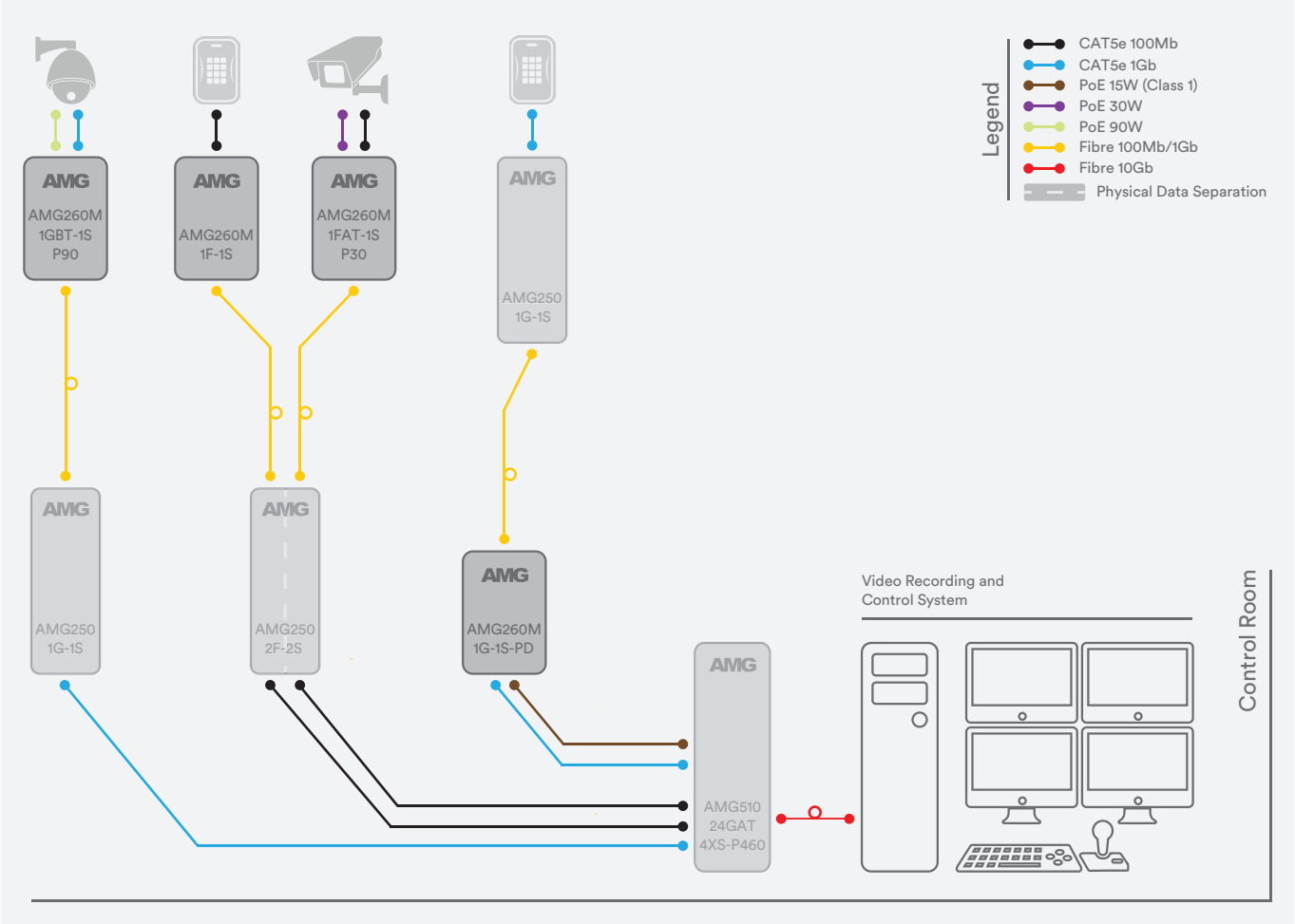
Application Diagram.



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Part Numbers.

Single Channel Mini Non-PoE Media Converters (1+1)

AMG260M-1F-1S	1 × 10/100BaseT(x) RJ45, 1 × 100/1000BaseFx SFP, Mini
AMG260M-1G-1S	1 × 10/100/1000BaseT(x) RJ45, 1 × 100/1000BaseFx SFP, Mini

Single Channel Mini PoE Media Converters (1+1)

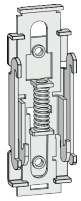
AMG260M-1FAT-1S-P30	1 × 10/100BaseT(x) RJ45 with 30W PoE+, 1 × 100/1000BaseFx SFP, Mini
AMG260M-1FBT-1S-P90	1 × 10/100BaseT(x) RJ45 with 60/90W PoE+, 1 × 100/1000BaseFx SFP, Mini
AMG260M-1GAT-1S-P30	1 × 10/100/1000BaseT(x) RJ45 with 30W PoE+, 1 × 100/1000BaseFx SFP, Mini
AMG260M-1GBT-1S-P90	1 × 10/100/1000BaseT(x) RJ45 with 60/90W PoE+, 1 × 100/1000BaseFx SFP, Mini

Single Channel Mini PoE Powered PD Media Converters (1+1)

AMG260M-1F-1S-PD	1 × 10/100BaseT(x) RJ45 with PoE PD Class 1 Input, 1 × 100/1000BaseFx SFP, Mini
AMG260M-1G-1S-PD	1 × 10/100/1000BaseT(x) RJ45 with PoE PD Class 1 Input, 1 × 100/1000BaseFx SFP, Mini

Included Accessories.

DIN Rail Adapter	Rear/Side/Bottom Mounted Metal DIN Rail Clip & Screws For DIN Rail Mounting AMG260M Series Products
Wall Mount Adapter	Rear/Side/Bottom Mounted Wall Mounting Plate & Screws For Wall / Surface Mounting AMG260M Series Products



Optional Accessories.

AMGMNT-MAG-02	2x Rear/Side/Bottom Mounted Magnets & Screws Kit For AMG260M Series, need to be ordered separately
SFP Modules	100Mb & 1Gb Optical/Copper Modules see separate list, need to be ordered separately

Recommended PSUs.

Non-PoE Models

AMGPSU-W12-P25	Plug Top Mounting Lite Industrial Grade PSU, 0 to +70°C, 12VDC, 25W, UK/EU/US Plug Heads Included
AMGPSU-I12-P24	DIN-Rail Mount Industrial Grade PSU, -40 to +70°C, 12VDC, 24W*

PoE Models

AMGPSU-I48-P60	DIN-Rail Mounting Industrial Grade PSU, -40 to +70°C, 43-56VDC, 60W*
AMGPSU-I48-P120	DIN-Rail Mounting Industrial Grade PSU, -40 to +70°C, 48-53VDC, 120W*^

* Also available in kit form including mains line cord, DC cable and DIN rail. Order with -K at the end of the part code (e.g. AMGPSU-I48-P120-K).
^ Also available with no exposed mains terminals and direct IEC input kit. Order with -IEC at the end of the part code (e.g. AMGPSU-I48-P120-IEC).

Proud to be a British Manufacturer

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AMG250 SERIES INDUSTRIAL MEDIA CONVERTERS WITH OPTIONAL 30/60/90W POE

Industrial Ethernet Solutions

AMG's media converters provide a multirate 100Mb/Gigabit Ethernet uplink across fiber via the SFP port with optional 30W or 60/90W PoE. Available in both single and dual channel models along with a single channel model with dual RJ45 ports provides for maximum design flexibility.

Gigabit	Gigabit	Gigabit	100/1000	Temp	Mounting	PSU	Protection	NDAA/TAA
up to x2	up to x2	up to x2	up to x2	-40°C~+75°C	DIN/Surface	x2 Dual	IP40	Compliant

[AMG250 Series]

OVERVIEW

Designed in a compact DIN rail or wall mount housing, the AMG250 series media converters are ideally suited for connecting equipment to Ethernet networks over long distances using all types of fiber through the integrated SFP port(s). Fiber connectivity is determined by separate SFP device selection, providing application and site flexibility.

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

Fitted with dual redundant power inputs and power failure alarm relay ensures maximum operating reliability and the highest levels of performance.

A wide range of models are available to suit all design requirements.

SFPs and PSUs need to be ordered separately.

FEATURES

- Compact size – ideal for confined spaces, including camera poles and roadside cabinets
- -40°C to +75°C temperature maintains performance in extreme conditions
- Plug & Play – no need for any user configuration
- DIN rail mountable – quick to install and remove for maintenance
- All SFP ports are multirate 100Mb/Gigabit – support single and multimode, single or dual fibre options up to 120Km
- Dual redundant power inputs with fault relay
- Supports optional 15W, 30W, 60W and 90W PoE
- Auto-Negotiation (802.3u) – automatically determines the best connection speed
- Designed in the USA & UK. Manufactured in the United Kingdom
- AMG Lifetime Support Warranty

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D33031-08

Specifications.

Standards.

IEEE802.3i	10Base-T
IEEE802.3u	100Base-TX & 100Base-FX
IEEE802.3ab	1000Base-T
IEEE802.3z	1000Base-X
IEEE802.3af	15W PoE
IEEE802.3at	30W PoE+
IEEE802.3bt	60 & 90W PoE
IEEE802.3x	Flow Control
Jumbo Frames	9.2Kbytes
Address Table	2K MAC Entries

Interface.

LED Indicators	2x Power SFP Link/Activity RJ45 Link/Activity PoE
RJ45 Ports	1 or 2x 10/100TX RJ45 or 1 or 2x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X and 1.5 kV Isolation Protection
SFP Slot	1 or 2x 100/1000FX SFP
Power/Relay	1x 6 pin removable terminal block with locking screws

Power.

Power Inputs	2
Operating Voltage:	
Non-PoE Models	10-36V_{DC}
30W PoE Models	48-56V_{DC}
90W PoE Models	52-56V_{DC}
Power Consumption:	
Single Channel	2W Max (without PoE Load)
Dual Channel	4W Max (without PoE Load)
PSE Modes:	
30W Models	Mode A
60/90W Models	Mode A, Mode B
Protection	Reverse Polarity Overload Current
Fault Relay	Form A 60V @ 2A Max

Packaging.

Shipping Weight	0.60kg / 1.32lb
Dimensions	(W x D x H) 220 × 170 × 40 mm 8.66 × 6.69 × 1.57 in

Mechanical.

Housing	Anodised Aluminium
Dimensions: (Excluding DIN & Wall Mounts)	(W x D x H) 36 × 88 × 107 mm 1.42 × 3.46 × 4.21 in
IP Rating	IP40
Installation	Wall Mount or DIN-Rail
Weight	0.48kg / 1.06lb

Environmental.

Operating Temp.	-40 to +75°C / -40 to +167°F
Storage Temp.	-40 to +85°C / -40 to +185°F
Humidity	5% to 95% (non-condensing)
MTBF	2,573,692 hours (Non-PoE Models) 2,332,497 hours (PoE Models)
MTBF Standard	Telcordia SR-332 GF 30°C
Heat Dissipation	7 BTU/h (1Ch Non-PoE) 14 BTU/h (2Ch Non-PoE) 109 BTU/h (1Ch 30W PoE) 218 BTU/h (2Ch 30W PoE) 314 BTU/h (1Ch 90W PoE) 628 BTU/h (2Ch 90W PoE)
Cooling	Passive Cooling
Noise Level	0 dBA

Regulatory.

Safety	IEC/EN 62368-1
EMI	EN 55032 Class A CISPR 32 FCC Part 15B Class A
EMS	EN 61000-4-2 (ESD) EN 61000-4-3 (RS) EN 61000-4-4 (EFT) EN 61000-4-5 (Surge) EN 61000-4-6 (CS) EN 61000-4-8 (PFMF)
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Environmental	Reach RoHS WEEE
Traffic	NEMS TS2
Supply Chain	NDAA & TAA Compliant

Designed to meet EN 50121-4

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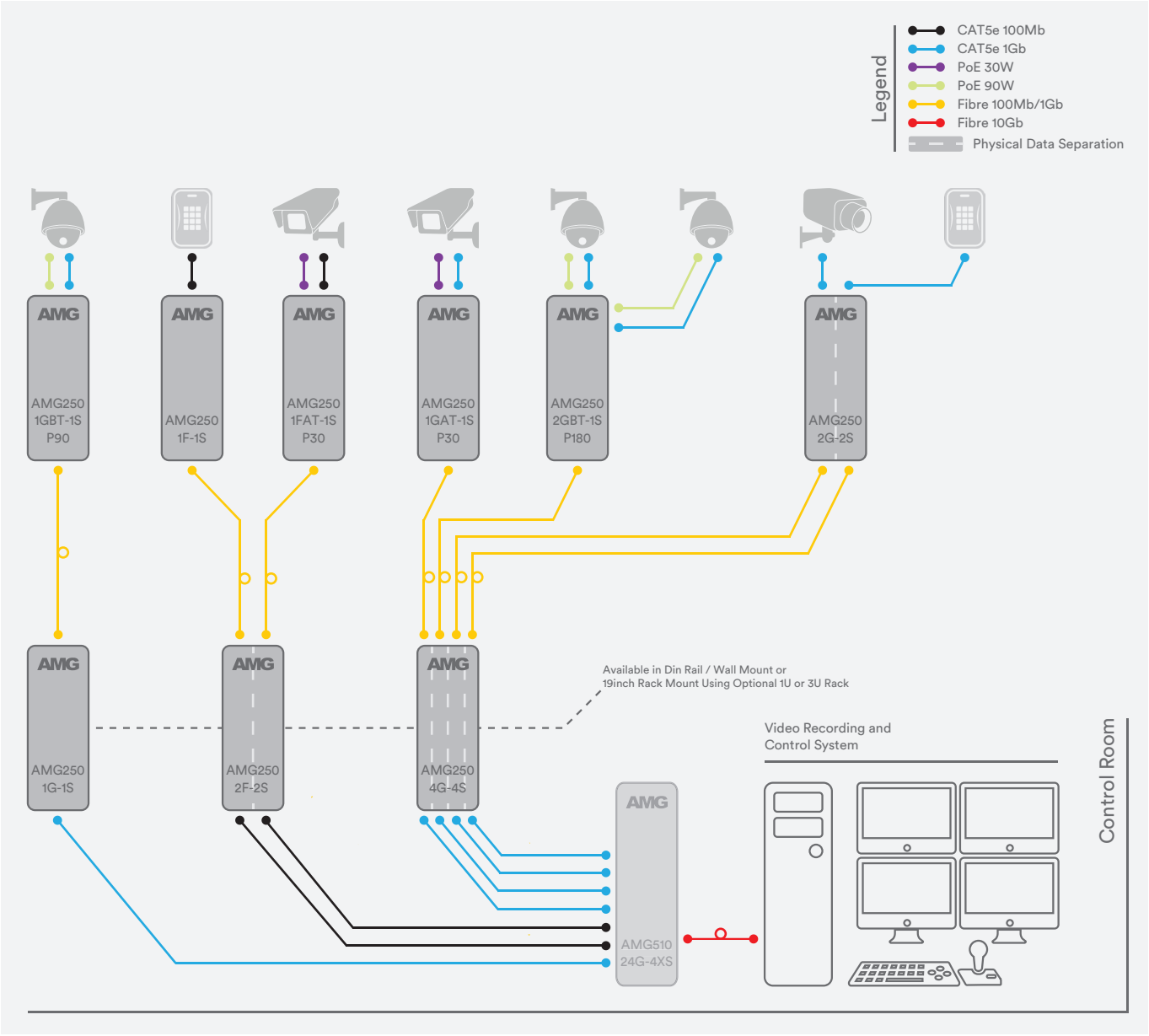
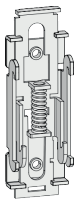
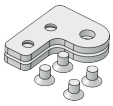
Application Diagram.



Included Accessories.

DIN Rail Adapter	Rear Mounted Metal DIN Rail Clip & Screws For DIN Rail Mounting AMG250 Series Products
Wall Mounting Brackets	2x Wall Mouting Brackets & Screws For Wall / Surface Mouting AMG250 Series Products





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Part Numbers.

Single Channel Media Converters (1+1)

AMG250-1F-1S	1 × 10/100BaseT(x) RJ45, 1 × 100/1000BaseFx SFP
AMG250-1FAT-1S-P30	1 × 10/100BaseT(x) RJ45 with 30W PoE+, 1 × 100/1000BaseFx SFP
AMG250-1FBT-1S-P90	1 × 10/100BaseT(x) RJ45 with 60/90W PoE+, 1 × 100/1000BaseFx SFP
AMG250-1G-1S	1 × 10/100/1000BaseT(x) RJ45, 1 × 100/1000BaseFx SFP
AMG250-1GAT-1S-P30	1 × 10/100/1000BaseT(x) RJ45 with 30W PoE+, 1 × 100/1000BaseFx SFP
AMG250-1GBT-1S-P90	1 × 10/100/1000BaseT(x) RJ45 with 60/90W PoE+, 1 × 100/1000BaseFx SFP

Single Channel Dual Port Media Converters (2+1)

AMG250-2F-1S	2 × 10/100BaseT(x) RJ45, 1 × 100/1000BaseFx SFP
AMG250-2FAT-1S-P60	2 × 10/100BaseT(x) RJ45 with 30W PoE+, 1 × 100/1000BaseFx SFP
AMG250-2FBT-1S-P180	2 × 10/100BaseT(x) RJ45 with 60/90W PoE+, 1 × 100/1000BaseFx SFP
AMG250-2G-1S	2 × 10/100/1000BaseT(x) RJ45, 1 × 100/1000BaseFx SFP
AMG250-2GAT-1S-P60	2 × 10/100/1000BaseT(x) RJ45 with 30W PoE+, 1 × 100/1000BaseFx SFP
AMG250-2GBT-1S-P180	2 × 10/100/1000BaseT(x) RJ45 with 60/90W PoE+, 1 × 100/1000BaseFx SFP

Dual Channel Media Converters (2+2)

AMG250-2F-2S	2 × 10/100BaseT(x) RJ45, 2 × 100/1000BaseFx SFP
AMG250-2FAT-2S-P60	2 × 10/100BaseT(x) RJ45 with 30W PoE+, 2 × 100/1000BaseFx SFP
AMG250-2FBT-2S-P180	2 × 10/100BaseT(x) RJ45 with 60/90W PoE+, 2 × 100/1000BaseFx SFP
AMG250-2G-2S	2 × 10/100/1000BaseT(x) RJ45, 2 × 100/1000BaseFx SFP
AMG250-2GAT-2S-P60	2 × 10/100/1000BaseT(x) RJ45 with 30W PoE+, 2 × 100/1000BaseFx SFP
AMG250-2GBT-2S-P180	2 × 10/100/1000BaseT(x) RJ45 with 60/90W PoE+, 2 × 100/1000BaseFx SFP

Recommended PSUs.

Non-PoE Models

AMGPSU-W12-P25	Plug Top Mounting Light Industrial Grade PSU, 0 to +70°C, 12VDC, 25W, UK/EU/US Plug Heads Included
AMGPSU-I12-P24	DIN-Rail Mount Industrial Grade PSU, -40 to +70°C, 12VDC, 24W*

PoE Models

AMGPSU-I48-P60	DIN-Rail Mounting Industrial Grade PSU, -40 to +70°C, 43-56VDC, 60W*
AMGPSU-I48-P120	DIN-Rail Mounting Industrial Grade PSU, -40 to +70°C, 47-53VDC, 120W*^
AMGPSU-I48-P240	DIN-Rail Mounting Industrial Grade PSU, -40 to +70°C, 48-53VDC, 240W*^

* Also available in kit form including mains line cord, DC cable and DIN rail. Order with -K at the end of the part code (e.g. AMGPSU-I48-P120-K).
^ Also available with no exposed mains terminals and direct IEC input kit. Order with -IEC at the end of the part code (e.g. AMGPSU-I48-P120-IEC).

Optional Accessories.

AMG2035	Side Mounted Wall Bracket Adapter Kit For DIN Rail Mounting AMG250 Series Products In Depth Restricted Installations. Adapter Kit Can Be Extended Using The Included Extension Kit To Also Mount A DIN Rail Power Supply Up To 480W

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AMG255 SERIES INDUSTRIAL MAINS POWERED MEDIA CONVERTERS WITH OPTIONAL 30W POE

Industrial Ethernet Solutions

AMG's media converters provide a multirate 100Mb/Gigabit Ethernet uplink across fibre via the SFP port with optional 30W PoE. Available with an integrated mains PSU in both single and dual channel models along with a single channel model with dual RJ45 ports provides for maximum flexibility.

10/100	Gigabit	100/1000	Temp	Mounting	PSU	Protection	NDAA/TAA
up to x2	up to x2	up to x2	-40~+70°C	DIN/Surface	AC & DC	IP30	Compliant

[AMG255 Series]

OVERVIEW

Designed in a compact DIN rail or wall mount housing, the AMG255 series mains powered media converters are ideally suited for connecting equipment to Ethernet networks over long distances using all types of fibre through the integrated SFP port(s). Fibre connectivity is determined by separate SFP device selection, providing application and site flexibility.

Available in both non-PoE models as well as PoE models for IEEE802.3at 30W they are suitable for powering the latest PoE devices over a wide industrial operating temperature range.

Fitted with an integrated fully industrial mains power supply along with a redundant DC power input and power failure alarm relay ensures maximum operating reliability and the highest levels of performance. The integrated mains power supply can also provide any remaining power as a standard DC voltage output to power 3rd party external devices.

A wide range of models are available to suit all design requirements.

SFPs need to be ordered separately.

FEATURES

- Compact size – ideal for confined spaces, including camera poles and roadside cabinets
- -40°C to +70°C temperature maintains performance in extreme conditions
- Plug & Play – no need for any user configuration
- DIN rail mountable – quick to install and remove
- All SFP ports are multirate 100Mb/Gigabit – support single and multimode, single or dual fibre options up to 120Km
- Integrated mains power supply with $12V_{DC}$ @ 20W or $48V_{DC}$ @ 60W output and a 2nd DC power input for redundancy
- Fault relay for dual power input failure notification
- Supports optional 15W and 30W PoE
- Designed in the USA & UK. Manufactured in the United Kingdom
- AMG Lifetime Support Warranty

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D33279-01

Specifications.

Standards.

IEEE802.3i	10Base-T
IEEE802.3u	100Base-TX & 100Base-FX
IEEE802.3ab	1000Base-T
IEEE802.3z	1000Base-X
IEEE802.3af	15W PoE
IEEE802.3at	30W PoE+
IEEE802.3x	Flow Control
Jumbo Frames	9.2Kbytes
Address Table	2K MAC Entries

Interface.

LED Indicators	2x Power DC Power Output SFP Link/Activity RJ45 Link/Activity PoE (PoE Models Only)
RJ45 Ports	1 or 2x 10/100TX RJ45 or 1 or 2x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X and 1.5 kV Isolation Protection
SFP Slot	1 or 2x 100/1000FX SFP
Mains Power	1x IEC C14 Socket or 1x 3-Way Barrier Screw Terminal
DC Power/Relay	1x 6 pin removable terminal block with locking screws

Power.

Power Inputs	2
Input 1 Voltage	85-264V_{AC} or 100-370V_{DC}
Input 1 Frequency	47-63 Hz
Input 1 Current:	
Non-PoE Models	0.44A (115V_{AC}) / 0.26A (230V_{AC})
PoE Models	1.8A (115V_{AC}) / 1.0A (230V_{AC})
Input 1 Fuse	3.15A/250V Slow-Blow
Input 2 Voltage:	
Non-PoE Models	10-36V_{DC}
PoE Models	48-56V_{DC}
Power Consumption:	
Single Channel	2W Max (without PoE Load)
Dual Channel	4W Max (without PoE Load)
Integrated PSU Type:	
Non-PoE Models	12V_{DC} @ 20W (Refer to derating chart)
PoE Models	48V_{DC} @ 60W (Refer to derating chart)
PSE Mode	Mode A
Protection	Reverse Polarity (DC Input Only), Overload Current
Fault Relay	Form A, 60V @ 2A Max

Packaging.

Shipping Weight	0.85kg / 1.87lb (Barrier Terminal Models) 1.03kg / 2.27lb (IEC Models)
Dimensions	(W x D x H) 220 × 170 × 80 mm 8.66 × 6.69 × 3.15 in

Mechanical.

Housing	Anodised Aluminium
Dimensions:	(W x D x H)
Excluding DIN & Wall Mounts	68 × 96 × 108 mm 2.68 × 3.78 × 4.25 in
Including DIN & Wall Mounts	68 × 104 × 132 mm 2.68 × 4.09 × 5.20 in
IP Rating	IP30
Installation	Wall Mount or DIN-Rail
Weight	0.7kg / 1.54lb

Environmental.

Operating Temp.	-40 to +70°C / -40 to +158°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 GB 25°C
Heat Dissipation	7 BTU/h (1Ch Non-PoE, No Ext. Load) 14 BTU/h (2Ch Non-PoE, No Ext. Load) 109 BTU/h (1Ch 30W PoE, No Ext. Load) 218 BTU/h (2Ch 30W PoE, No Ext. Load)
Cooling	Passive Cooling
Noise Level	0 dBA

Regulatory.

Safety	IEC/EN 62368-1 Class II
EMI	EN 55032 Class B CISPR 32 FCC Part 15B Class B
EMS	EN 61000-4-2 (ESD) EN 61000-4-3 (RS) EN 61000-4-4 (EFT) EN 61000-4-5 (Surge) EN 61000-4-6 (CS) EN 61000-4-11 (Dips)
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Environmental	Reach, RoHS, WEEE
Traffic	NEMA TS2
Supply Chain	NDAA & TAA Compliant

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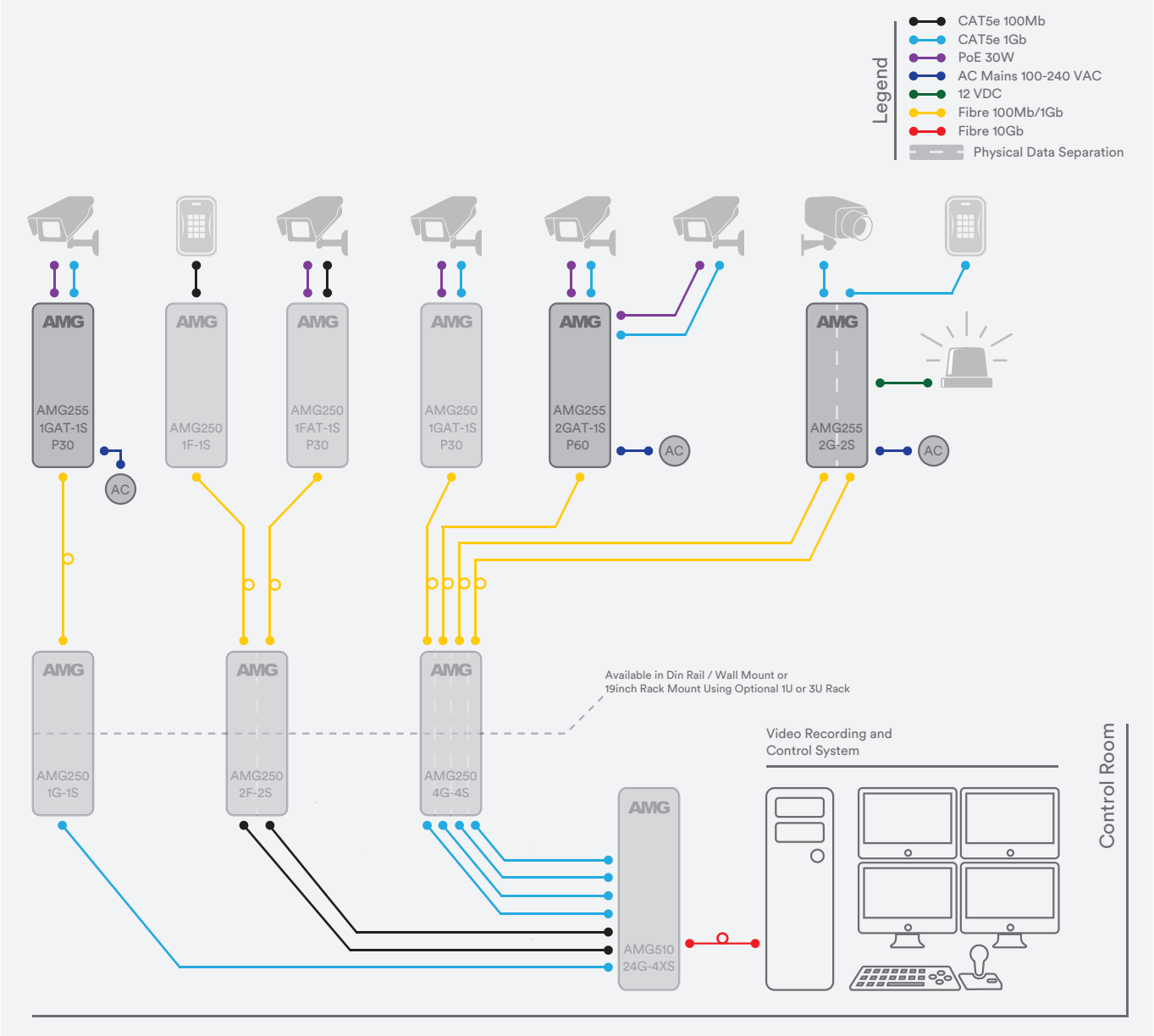
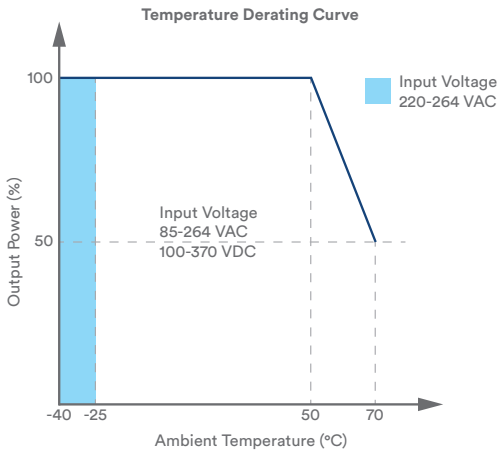
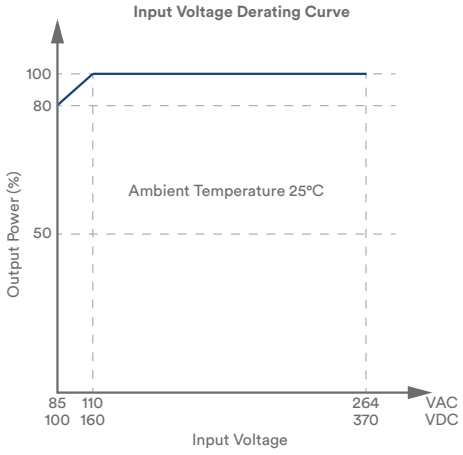
Application Diagram.



Product Characteristic Curves.





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Part Numbers.

Single Channel Mains Powered Media Converters (1+1)

AMG255-1F-1S	1 × 10/100BaseT(x) RJ45, 1 × 100/1000BaseFx SFP, Integrated 20W PSU
AMG255-1FAT-1S-P30	1 × 10/100BaseT(x) RJ45 with 30W PoE+, 1 × 100/1000BaseFx SFP, Integrated 60W PSU
AMG255-1G-1S	1 × 10/100/1000BaseT(x) RJ45, 1 × 100/1000BaseFx SFP, Integrated 20W PSU
AMG255-1GAT-1S-P30	1 × 10/100/1000BaseT(x) RJ45 with 30W PoE+, 1 × 100/1000BaseFx SFP, Integrated 60W PSU

Single Channel Mains Powered Dual Port Media Converters (2+1)

AMG255-2F-1S	2 × 10/100BaseT(x) RJ45, 1 × 100/1000BaseFx SFP, Integrated 20W PSU
AMG255-2FAT-1S-P60	2 × 10/100BaseT(x) RJ45 with 30W PoE+, 1 × 100/1000BaseFx SFP, Integrated 60W PSU
AMG255-2G-1S	2 × 10/100/1000BaseT(x) RJ45, 1 × 100/1000BaseFx SFP, Integrated 20W PSU
AMG255-2GAT-1S-P60	2 × 10/100/1000BaseT(x) RJ45 with 30W PoE+, 1 × 100/1000BaseFx SFP, Integrated 60W PSU

Dual Channel Mains Powered Media Converters (2+2)

AMG255-2F-2S	2 × 10/100BaseT(x) RJ45, 2 × 100/1000BaseFx SFP, Integrated 20W PSU
AMG255-2FAT-2S-P60	2 × 10/100BaseT(x) RJ45 with 30W PoE+, 2 × 100/1000BaseFx SFP, Integrated 60W PSU
AMG255-2G-2S	2 × 10/100/1000BaseT(x) RJ45, 2 × 100/1000BaseFx SFP, Integrated 20W PSU
AMG255-2GAT-2S-P60	2 × 10/100/1000BaseT(x) RJ45 with 30W PoE+, 2 × 100/1000BaseFx SFP, Integrated 60W PSU

All of the above model numbers ship with an IEC C14 mains connector on the product as standard.
For the optional Barrier Terminal Block mains connector add **-T** to the end of the part code. Example: **AMG255-1F-1S-T**

Recommended Redundant PSUs.

Non-PoE Models
AMGPSU-I12-P24 DIN-Rail Mounting Industrial Grade PSU, 12VDC, 24W

PoE Models
AMGPSU-I48-P60 DIN-Rail Mounting Industrial Grade PSU, 48-56VDC, 60W

Notes.

Included Accessories: Left Angle Region Specific IEC Line Cord (For Barrier Terminal Block Models No Line Cord Is Included)
Optional Accessories: SFP modules - Optical/Copper see separate list, need to be ordered separately

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AMG140 SERIES INDUSTRIAL ETHERNET REPEATERS WITH 30/60/90W POE

Industrial Ethernet Solutions

AMG's Extend-Net™ industrial Ethernet repeaters provide 10/100/1000Mb Ethernet extension over UTP cable with support for pass-through 30W or 60/90W PoE. These single channel models feature dual RJ45 ports and provide an additional 100 meter range over standard Cat5/6 cable.

Gigabit	Repeater	PoE	Temp	Mounting	Protection	NDAA/TAA
x1 In x1 Out	x1	30/60/90W	-40°C~+75°C	DIN/Surface	IP40	Compliant

[AMG140-1GR Series]

OVERVIEW

Designed in a compact tube style housing that can be DIN rail or wall mounted using the included accessory brackets, the AMG140 Extend-Net™ series industrial Ethernet repeaters are ideally suited for extending standard Ethernet networks over longer distances using Cat5/6 cables.

Each device allows an additional 100 meters of distance to be achieved at full 10/100/1000Mb speeds and multiple units can be used to extend distances further.

The AMG140 series support IEEE802.3at 30W and IEEE802.3bt 60/90W PoE pass-through and are suitable for powering the latest high powered PoE devices over a wide industrial operating temperature range at extended distances. The units can also be configured to operate as a PD device where the edge network equipment does not require PoE.

The advanced model offers additional DIP switch functionality including Link Fault Pass-Through capability to ensure remote faults can be notified to the head end equipment. In addition the extension distance can also be increased up to 250 meters between devices at 10Mb speeds.

FEATURES

- Compact size – ideal for confined spaces, including conduit, camera poles and roadside cabinets
- -40°C to +75°C temperature maintains performance in extreme conditions
- DIP switches for PoE Pass-Through or PD modes
- Increase cable range by 100 meters per unit (up to 250m is also possible on advanced model @ 10Mb)
- Standalone, DIN rail or wall mountable – flexible mounting options are included with every unit
- Powered by PoE (no local power supply required)
- Plug & Play design ensures maximum ease of use
- Supports 15W, 30W, 60W & 90W PoE Pass-Through
- Unicast, Multicast & Jumbo Frames are supported along with full symmetrical bandwidth performance
- Designed in the USA & UK. Manufactured in the UK
- AMG Lifetime Support Warranty

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D37287-01

Specifications.

Standards.

IEEE802.3i	10Base-T
IEEE802.3u	100Base-TX
IEEE802.3ab	1000Base-T
IEEE802.3af	15W PoE
IEEE802.3at	30W PoE+
IEEE802.3bt	60 & 90W PoE
IEEE802.3x	Flow Control
Jumbo Frames	9.2Kbytes

Interface.

LED Indicators	Power Ethernet Link/Activity PoE Fault* Extended Distance Enabled*
RJ45 Ports	2x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X and 1.5 kV Isolation Protection

Switches.

Switch	1 or 2x 2 Position DIP Switches
Switch Functions	PoE Pass-Through Mode PoE PD Mode Link Fault Pass-Through* Extended Distance Mode*
Jumper	2x PoE Jumpers*
Jumper Functions	30W / 60W Type 3 PoE 90W Type 4 PoE

Power.

Power Inputs	None (Powered by PoE)
Operating Voltage	48-56V_{DC} PoE
Power Consumption	1.3W Max
Protection	High Impedance PoE Pass-Through with Start-up Voltage Detection and Current Limiting

Distance.

Standard Model	100 meters @ 10/100/1000Mb
Advanced Model*	100 meters @ 10/100/1000Mb or up to 250 meters @ 10Mb using Extended Distance mode

*Advanced Model Only Fetaures

Packaging.

Shipping Weight	0.22kg / 0.49lb
Dimensions	(W x D x H) 192 × 102 × 35 mm 7.56 × 4.02 × 1.38 in

Mechanical.

Housing	Anodised Aluminium
Dimensions:	(W x D x H)
Excluding Wall Bracket	89 × 35 × 32 mm 3.50 × 1.38 × 1.26 in
Including Wall Bracket	113 × 35 × 35 mm 4.45 × 1.38 × 1.38 in
IP Rating	IP40
Installation	Wall Mount or DIN-Rail
Weight	0.14kg / 0.31lb

Environmental.

Operating Temp.	-40°C to +75°C
Storage Temp.	-40°C to +85°C
Humidity	5% to 95% (non-condensing)
MTBF	>500,000 hours
MTBF Standard	Telcordia SR-332 GF 30°C
Heat Dissipation	5 BTU/h (No PoE Pass-Through) 107 BTU/h (30W PoE Pass-Through) 210 BTU/h (60W PoE Pass-Through) 312 BTU/h (90W PoE Pass-Through)
Cooling	Passive Cooling
Noise Level	0 dBA

Regulatory.

Safety	IEC/EN 62368-1
EMI	EN 55032 Class A CISPR 32 FCC Part 15B Class A
EMS	EN 61000-4-2 (ESD) EN 61000-4-3 (RS) EN 61000-4-4 (EFT) EN 61000-4-5 (Surge) EN 61000-4-6 (CS) EN 61000-4-8 (PFMF)
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Environmental	Reach, RoHS, WEEE
Supply Chain	NDAA & TAA Compliant

Designed to meet NEMA TS2 & EN 50121-4

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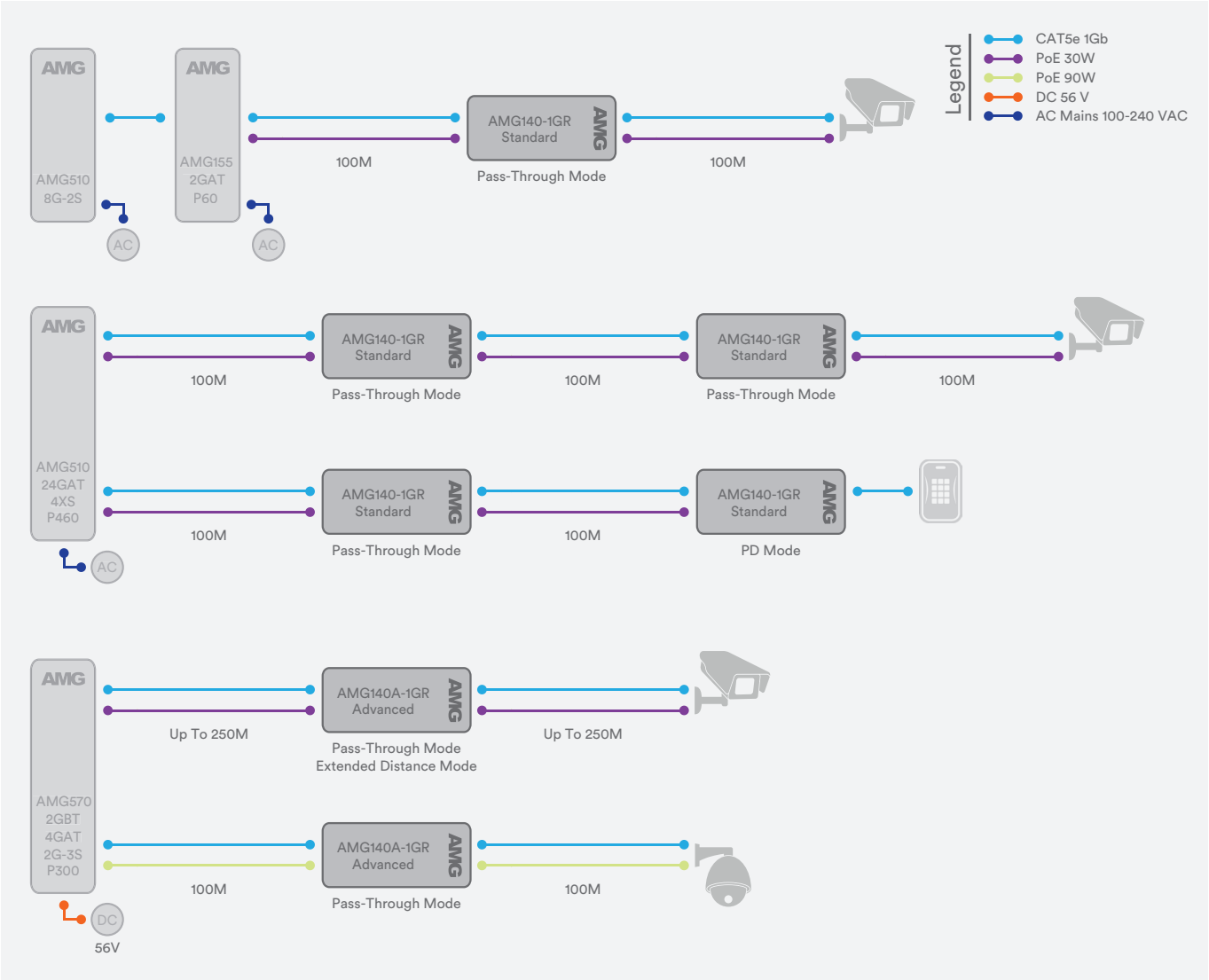
Application Diagram.



PoE Available.

PoE Source	Maximum Power Available	
	at 200m (1 x AMG140 Used)	at 300m (2 x AMG140 Used)
IEEE 802.3af 15W PoE Switch or Injector	12W	9W
IEEE 802.3at 30W PoE Switch or Injector[1]	25W	20W
IEEE 803.3bt 90W PoE Switch or Injector[2]	71W	42W

[1] Assumes that the PoE voltage output is >50 VDC.
[2] Assumes that the PoE voltage output is >55 VDC.

It is possible to use the AMG140-1GR series beyond 300M by utilising additional units to achieve distances of 800M or above however beyond 300M it is recommended that the AMG160 series would be used provided that 10/100Mb data rates are enough as this will provide a more cost effective solution and requires only a single pair of devices.

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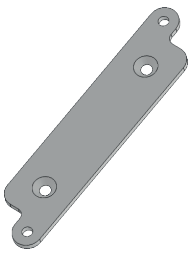
Part Numbers.

Extend-Net™ Single Channel Industrial Ethernet Repeaters

AMG140-1GR	Standard Model 1 × 10/100/1000BaseT(x) RJ45 In, 1 × 10/100/1000BaseT(x) RJ45 Out, 30W PoE
AMG140A-1GR	Advanced Model 1 × 10/100/1000BaseT(x) RJ45 In, 1 × 10/100/1000BaseT(x) RJ45 Out, 30/60/90W PoE

Included Accessories.

DIN Rail Adapter	Rear Mounted Plastic DIN Rail Clip & Screws For DIN Rail Mounting AMG140 Series Products (Black)
Wall Mount Adapter	Rear Mounted Aluminium Wall Mounting Plate & Screws For Wall / Surface Mounting AMG140 Series Products (Silver)



Notes.

Distance figures are based on specific PoE power sources and voltages as shown. Distance figures are obtained using in-house testing mirroring installations. Factors such as copper cable quality, the number of connectors and joints in the cable run, the use of PoE, and environmental conditions encountered within the installation might affect the actual transmission distance and should be taken into consideration.

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.

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AMG160 SERIES INDUSTRIAL ETHERNET EXTENDERS OVER COAX WITH 30W POE

Industrial Ethernet Solutions

AMG's Extend-Net™ industrial Ethernet extenders provide 10/100Mb Ethernet over long distances of coax cable with support for pass-through 30W PoE. These single channel models feature coaxial connectors and support distances up to 1Km.

10/100	Extender	PoE	Temp	Mounting	Protection	NDAA/TAA
x1	Coax x1	15/30W	-40°C~+75°C	DIN/Surface	IP40	Compliant

[AMG160-1F-1EC]

OVERVIEW

Designed in a compact tube style housing that can be DIN rail or wall mounted using the included accessory brackets, the AMG160 Extend-Net™ series industrial Ethernet Extenders are ideally suited for connecting equipment to Ethernet networks over long distances using standard Coax cables.

Distances up to 550m (1,800 ft) @ 100Mb speed and 1000m (3,280 ft) @ 10Mb speed are possible over standard Coax cables.

The AMG160 Coax series support IEEE802.3af 15.4W and IEEE802.3at 30W PoE pass-through and are suitable for powering the latest PoE devices over a wide industrial operating temperature range at extended distances.

A 24-56V_{DC} local power input is provided for instances where local power is available and the maximum possible PoE level is required at the remote device but this is not required for operation when used with a PoE enabled edge device such as an IP camera as the units also support pass-through PoE powering.

PSUs need to be ordered separately.

FEATURES

- Compact size – ideal for confined spaces, including conduit, camera poles and roadside cabinets
- -40°C to +75°C temperature maintains performance in extreme conditions
- DIP switches for Local/Remote & 10/100Mb modes
- Standalone, DIN rail or wall mountable – flexible mounting options are included with every unit
- Extends Ethernet up to 550m (1,800 ft) at 100Mbps
- Extends Ethernet up to 1000m (3,280 ft) at 10Mbps
- Supports 15W & 30W PoE Pass-Through
- Integrated surge protection on Extend-Net™ port
- Unicast, Multicast & Jumbo Frames are supported along with full symetrical bandwidth performance
- Designed in the USA & UK. Manufactured in the United Kingdom
- AMG Lifetime Support Warranty

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Specifications.

Standards.

IEEE802.3i	10Base-T
IEEE802.3u	100Base-TX
IEEE802.3af	15W PoE
IEEE802.3at	30W PoE+
Jumbo Frames	10Kbytes

Interface.

LED Indicators	1x Power Ethernet Link/Activity Ethernet 100Mb Speed Extend-Net™ Link/Activity
Ethernet Port	1x 10/100TX RJ45 with Auto MDI/MDI-X and 1.5 kV Isolation Protection
Extend-Net™ Port	1x BNC with Surge Protection
Power	1x 2 pin removable terminal block

DIP Switch.

Switch Type	2 Position
Functions	10Mb or 100Mb Mode Remote or Local Operation

Power.

Power Inputs	1
Operating Voltage	24-56V_{DC} or PoE Pass-Through
Power Consumption	1.5W Max
Protection	Overload Current

Extend-Net™.

Maximum Distance:	
100Mb	550m (1,800 ft)*
10Mb	1000m (3,280 ft)*
	*Refer to Distance Table
Cable Types	Coaxial RG59, RG11 etc.

Surge Protection.

IEC 61000-4-2 (ESD)	±8kV Contact Discharge ±8kV Air Gap Discharge
IEC 61000-4-5 (Surge)	5A (8/20µs)

Packaging.

Shipping Weight	0.22kg / 0.49lb
Dimensions	(W x D x H)
	192 × 102 × 35 mm
	7.56 × 4.02 × 1.38 in

Mechanical.

Housing	Anodised Aluminium
Dimensions:	(W x D x H)
Excluding Wall Bracket	89 × 35 × 32 mm
	3.50 × 1.38 × 1.26 in
Including Wall Bracket	113 × 35 × 35 mm
	4.45 × 1.38 × 1.38 in
IP Rating	IP40
Installation	Wall Mount or DIN-Rail
Weight	0.14kg / 0.31lb

Environmental.

Operating Temp.	-40 to +75°C / -40 to +167°F
Storage Temp.	-40 to +85°C / -40 to +185°F
Humidity	5% to 95% (non-condensing)
MTBF	>1,000,000 hours
MTBF Standard	Telcordia SR-332 GF 30°C
Heat Dissipation	5 BTU/h (No PoE)
	58 BTU/h (15.4W PoE)
	107 BTU/h (30W PoE)
Cooling	Passive Cooling
Noise Level	0 dBA

Regulatory.

Safety	IEC/EN 62368-1
EMI	EN 55032 Class A
	CISPR 32
	FCC Part 15B Class A
EMS	EN 61000-4-2 (ESD)
	EN 61000-4-3 (RS)
	EN 61000-4-4 (EFT)
	EN 61000-4-5 (Surge)
	EN 61000-4-6 (CS)
	EN 61000-4-8 (PFMF)
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Environmental	Reach, RoHS, WEEE
Traffic	NEMA TS2
Supply Chain	NDAA & TAA Compliant

Designed to meet EN 50121-4

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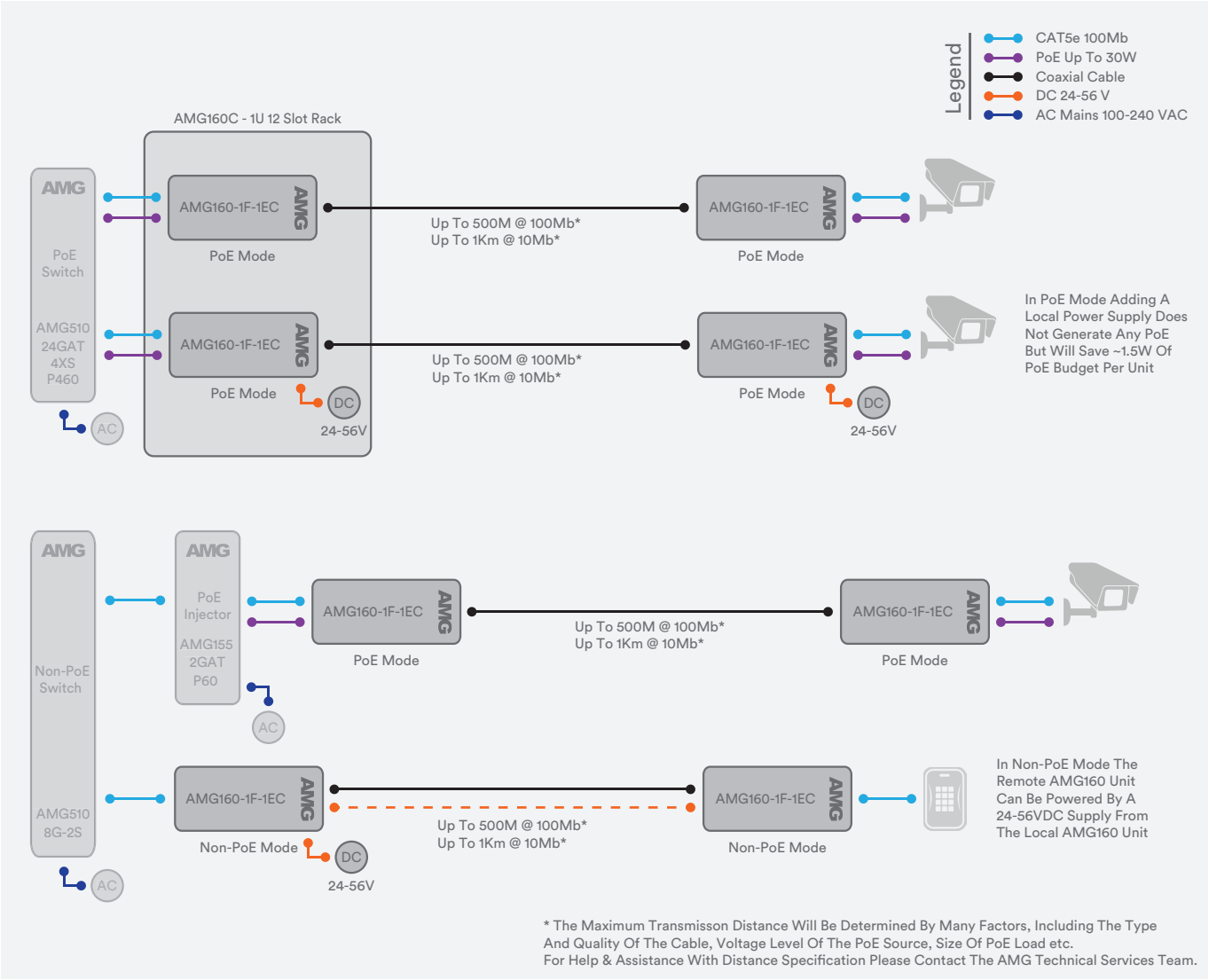
Application Diagram.



* The Maximum Transmisson Distance Will Be Determined By Many Factors, Including The Type And Quality Of The Cable, Voltage Level Of The PoE Source, Size Of PoE Load etc.
For Help & Assistance With Distance Specification Please Contact The AMG Technical Services Team.

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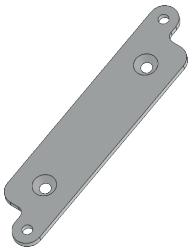
Part Numbers.

Extend-Net™ Single Channel Industrial Ethernet Extenders over Coax Cable

AMG160-1F-1EC	1 × 10/100BaseT(x) RJ45, 1 x Extend-Net™ Coax Ethernet Extender (Coaxial Connector)

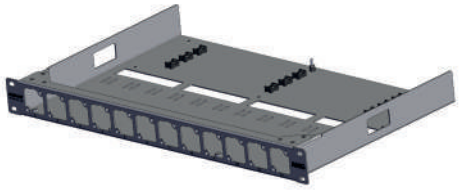
Included Accessories.

DIN Rail Adapter	Rear Mounted Plastic DIN Rail Clip & Screws For DIN Rail Mounting AMG160 Series Products (Black)
Wall Mount Adapter	Rear Mounted Aluminium Wall Mounting Plate & Screws For Wall / Surface Mounting AMG160 Series Products (Silver)



Optional Mounting Solutions.

AMG160C-BR	Industrial Rack Bracket For AMG160-1F Units, 12 Positions, 1U 19inch Rack Mount
AMG160C-TR	Industrial Rack Tray For AMG160-1F Units, 12 Positions, 1U 19inch Rack Mount, Location For 3rd Party PSU's
AMG160C-RP-XX	Industrial Rack Chassis For AMG160-1F Units, 12 Positions, 1U 19inch Rack Mount, Integrated Single Or Dual PSU's



Recommended PSUs.

AMGPSU-I24-P36	DIN-Rail Mounting Industrial Grade PSU, 22-29VDC, 36W*

* Also available in kit form including mains line cord, DC cable and DIN rail. Order with -K at the end of the part code (e.g. AMGPSU-I24-P36-K).

Notes.

Distance figures are based on a 50V PSE PoE power source, and external power supplies for the extenders. Distance figures are obtained using in-house testing mirroring installations. Factors such as copper cable quality, the number of connectors and joints in the cable run, the use of PoE, and environmental conditions encountered within the installation might affect the actual transmission distance and should be taken into consideration.

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AMG172 SERIES INDUSTRIAL GIGABIT ETHERNET HIGH SPEED VDSL2 EXTENDERS

Industrial Ethernet Solutions

AMG's industrial high-speed VDSL2 Ethernet Extenders provide transmission of high-speed Ethernet data over legacy cabling infrastructure including UTP, Coax, Alarm, Bell or Telephone cables.

[AMG172-1G-1V Series]

Gigabit	VDSL2	Temp	Mounting	Protection	NDAA/TAA
x1	x1	-20~+65°C	DIN/Surface	IP30	Compliant

OVERVIEW

The AMG172 series are industrial high speed Gigabit Ethernet VDSL2 extenders that support an aggregated bandwidth up to 300Mbps (Downstream 150Mbps, Upstream 150Mbps).

The units feature a Gigabit Ethernet port with an RJ45 connector and a high speed VDSL2 port with an RJ45 connector (coax and screw terminal adapters are also included in the package) in a rugged metal housing to provide reliable operation in harsh environments.

The units are completely transparent to protocols, codes, and applications ensuring compatibility with any IP camera and its management software or any other IP device and operate in a simple unmanaged mode.

It is a perfect solution for sending video links from remote camera installations which are beyond the 100m (328ft) distance limit of Ethernet standards.

Support for Symmetric and Asymmetric profiles is included providing the option to maintain equal speeds in both directions or to have higher speeds in one direction for installations with IP cameras or other devices with high traffic flow in one direction.

FEATURES

- Compact size – ideal for confined spaces, including camera poles and roadside cabinets
- Gigabit Ethernet port supports high speed VDSL2
- High speed Ethernet extension over UTP, Coax, CAT 5e/6/7, Alarm or Telephone cables (1 Pair)
- Compatible with AMG and 3rd party VDSL2 DSLAM units when operating in Remote (RT) mode
- Distances up to 2000m (6560ft) over coax cable or up to 2700m (8858ft) over CAT5e/6 UTP cable
- IEEE 802.1Q VLAN tag transparent
- Supports 8 selectable profiles (G.INP/Interleaved, Target SNR 6/8/12/24 dB, Symmetric/Asymmetric modes)
- Compatible with J-Y(ST)Y 4×2×0.8 or J-Y(ST)Y 6×2×0.6 etc twisted pair cable
- Supports ITU-T G.993.5, G.vectoring and G.INP
- AMG Lifetime Support Warranty

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Specifications.

Standards.

IEEE802.3i	10Base-T
IEEE802.3u	100Base-TX
IEEE802.3ab	1000Base-T
ITU-T G993.1, G993.2, G993.5, G997.1, G998, G.INP	VDSL DMT Encoding

Interface.

LED Indicators	Power Remote (RT) VDSL2 Link/Activity Ethernet Link/Activity Ethernet Speed
Ethernet Ports	1x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X and 1.5 kV Isolation Protection
VDSL2 Ports	1x RJ45 with Surge Protection (2 pins used - 4 & 5)
Power	1x 2 pin screw terminal block

Dip Switch.

Switch Type	4 Position
Functions	Central (Master) or Remote (RT) 8 VDSL2 Profiles: (G.INP, Target SNR 6/8/12/24dB, Symmetric / Asymmetric Modes)

Power.

Power Inputs	1
Operating Voltage	9-30V_{DC}
Power Consumption	4.5W Max
Protection	Reverse Polarity Overload Current

Packaging.

Shipping Weight	0.52kg / 1.15lb
Dimensions	(W x D x H) 220 × 170 × 40 mm 8.66 × 6.69 × 1.57 in

Mechanical.

Housing	Metal
Dimensions:	(W x D x H) 95 × 73 × 23 mm 3.74 × 2.87 × 0.91 in
IP Rating	IP30
Installation	Wall Mount or DIN-Rail
Weight	0.3kg / 0.66lb

Environmental.

Operating Temp.	-20 to +65°C / -4 to +149°F
Storage Temp.	-40 to +85°C / -40 to +185°F
Humidity	0% to 95% (non-condensing)
MTBF	799,011 hours
MTBF Standard	MIL-HDBK-217F GB 25°C
Heat Dissipation	15 BTU/h
Cooling	Passive Cooling
Noise Level	0 dBA

Regulatory.

Safety	IEC/EN 62368-1
EMI	EN 55032 Class A CISPR 32 EN 300 386 FCC Part 15B Class A EN 61000-3-2 EN 61000-3-3
EMS	EN 55024 CISPR 24 EN 61000-4-2 (ESD) EN 61000-4-3 (RS) EN 61000-4-4 (EFT) EN 61000-4-5 (Surge) EN 61000-4-6 (CS) EN 61000-4-8 (PFMF) EN 61000-4-11 (Dip)
Environmental	Reach RoHS WEEE
Supply Chain	NDAA & TAA Compliant

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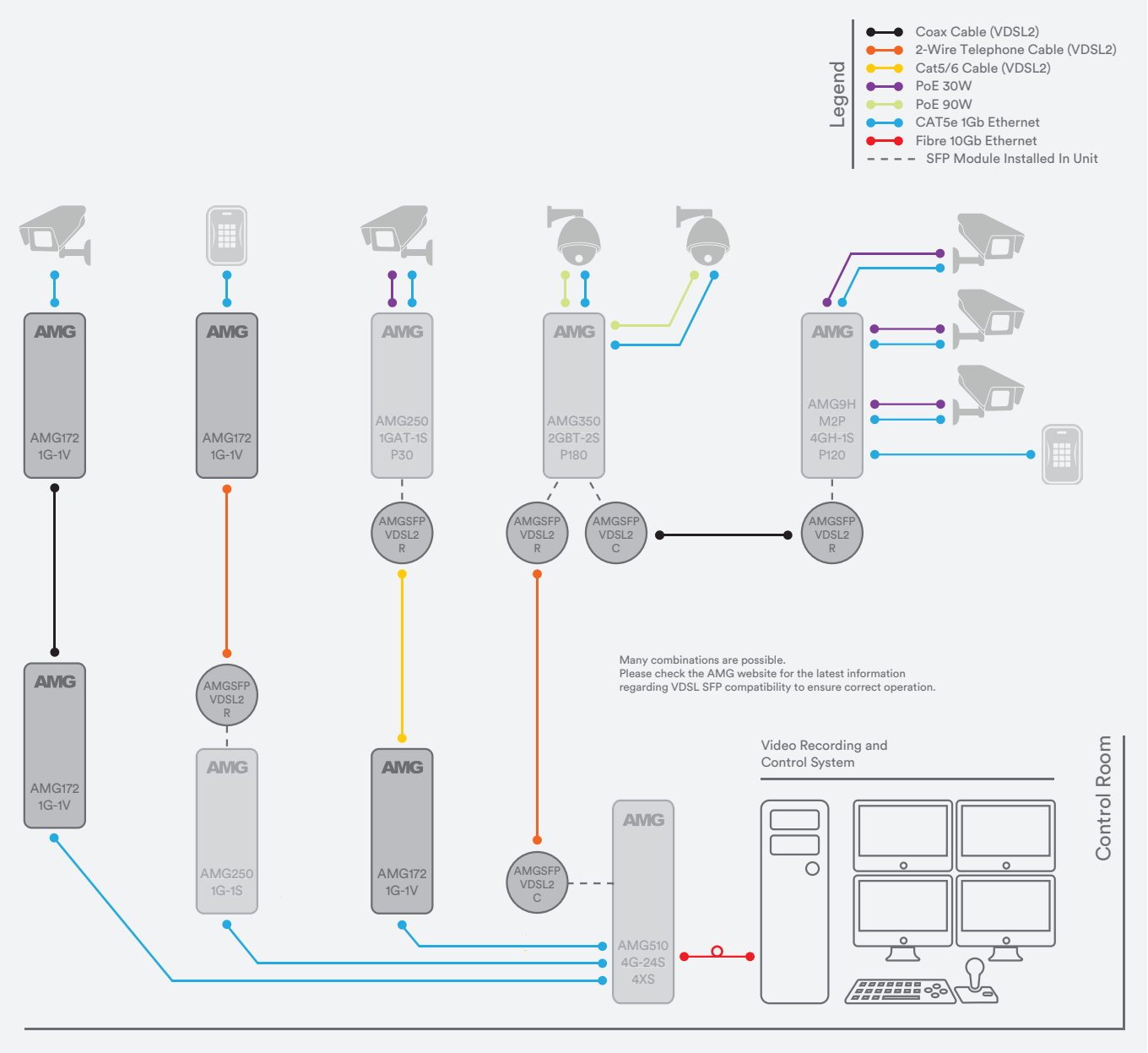
Application Diagram.



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Data Rate Performance.

UTP Cable - 26AWG (0.45mm)			
Profile Setting: **Symmetric**, SNR 8dB, G.INP			
Distance (m)	Distance (ft)	Central to RT Speed (Mbps)	RT to Central Speed (Mbps)
150	492	158	155
300	984	126	122
450	1,476	80	75
600	1,968	56	48
750	2,460	38	28
900	2,953	28	23

UTP Cable - 26AWG (0.45mm)			
Profile Setting: **Asymmetric**, SNR 8dB, G.INP			
Distance (m)	Distance (ft)	Central to RT Speed (Mbps)	RT to Central Speed (Mbps)
150	492	200	100
300	984	129	54
450	1,476	112	49
600	1,968	84	39
750	2,460	60	23
900	2,953	45	11
1,200	3,937	40	6
1,800	5,906	31	1
2,700	8,858	4	0.36

The performance data shown in these tables is for reference only, the actual data rate may vary depending on the quality of the copper cable as well as environmental factors.

When using Asymmetric mode the maximum speed will be achieved in the direction from Central (Master) device to RT device as shown above.

Part Numbers.

Industrial Gigabit Ethernet VDSL2 Extenders

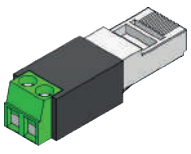
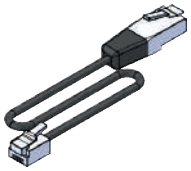
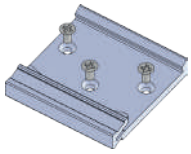
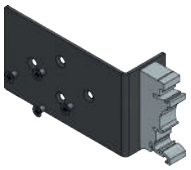
AMG172-1G-1V	1 x 10/100/1000BaseT(x) RJ45, 1 x VDSL2 RJ45 For UTP, Coax or Telephone Cable, Rear Mount DIN Rail Adapter Included
AMG172-1G-1V-DS	1 x 10/100/1000BaseT(x) RJ45, 1 x VDSL2 RJ45 For UTP, Coax or Telephone Cable, Side Mount DIN Rail Adapter Included

*Fully compatible with the VDSL2 SFP series (AMGSFP-VDSL2-C/R) which can be installed within AMG media converters and switches. Contact your local AMG team for more information.

Included Accessories.

RJ45 to Coax Cable	RJ45 to Coax Adapter Cable For Use With VDSL2 Port & Coaxial Cable
RJ45 to 2-Wire Adapter	RJ45 to 2-Pin Screw Terminal Adapter For Use With VDSL2 Port & 2-Wire Cable (Telephone, Bell, J-Y(ST)Y etc.)
RJ45 to RJ11 Cable	RJ45 to RJ11 Adapter Cable For Use With VDSL2 Port & Legacy Telephone Sockets & Cable
Rear DIN Rail Adapter	Rear Mounted Metal DIN Rail Clip & Screws For DIN Rail Mounting AMG172 Series Products (Silver)
or	
Side DIN Rail Adapter^	Side Mounted Metal DIN Rail Clip & Screws For DIN Rail Mounting AMG172 Series Products (Black)

^Side DIN Rail Adapter included with the -DS model only in place of the standard Rear DIN Rail Adapter.

Recommended PSUs.

AMGPSU-W12-P25	Plug Top Mounting Light Industrial Grade PSU, 0 to +70°C, 12VDC, 25W, UK/EU/US Plug Heads Included
AMGPSU-I12-P24	DIN-Rail Mount Industrial Grade PSU, -40 to +70°C, 12VDC, 24W*

* Also available in kit form including mains line cord, DC cable and DIN rail. Order with -K at the end of the part code (e.g. AMGPSU-I48-P120-K).

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AMG8870F-06 SKYWAVE III™ WIRELESS RADIO

Outdoor Wireless Radio

Optimised for long range point to point and point to multipoint applications.

Gigabit	Wireless	Waterproof	Temp	PSU	Secure
x1	Up to 6km	IP66	-40~+65°C	24V passive	802.1x

[AMG8870F-06]

OVERVIEW

The AMG8870F-06 delivers the highest performance and stability available in the 5GHz 802.11ac class. The product combines a highly advanced radio core containing MIMO 2x2 technology with integrated, high-gain, dual polarization directional antenna.

The feature-rich operating system is optimised for ultra-high performance wireless communication, 450 Mbps throughput - the result of a powerful hardware platform with 802.11ac technology based radio and a proprietary data transmission protocol Smart Station Coordination Function (SSCF). Incorporating a QCA 9563 CPU (750 MHz), a QCA 9882 radio and 64 MBytes of RAM and 16 Mbytes of flash memory, the AMG8870F-06 radio is an ideal solution for capacity demanding applications.

The 24V Gigabit Ethernet port (passive PoE) allows utilising the full capacity of the radio when used in a point-to-point or point-to-multipoint network design.

FEATURES

- Base station / Satellite, PtP
- Smart Station Coordination Function (SSCF)
- Up to 6km (integrated antenna)
- Up to 450Mbps compressed video throughput
- 5/10/20/40/80MHz Channelization support
- User Configurable gain up to 23dBm (30dBm max)
- 24V passive PoE
- Extremely compact and light
- IP66 Rated Enclosure
- -40°C to +65°C Operating Range

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D26090-04

Specifications.

Wireless.

WLAN Standard	IEEE 802.11 a/n/ac, SSCF
Radio Mode	MIMO 2x2
Radio Frequency Band	5.150 - 5.850 GHz models (FCC 5.150-5.250 and 5.725-5.850GHz)
Transmit Power	Up to 30dBm (Country Dependent)
Channel Size	5, 10, 20, 40, 80 MHz
Modulation Schemes	802.11 a/n: OFDM (64-QAM, 16-QAM, QPSK, BPSK) 802.11 ac: OFDM (256-QAM, 64-QAM, 16-QAM, QPSK, BPSK)
Data Rates	802.11 ac@40MHz: 400, 360, 300, 270, 240, 180, 120, 90, 60, 30 Mbps 802.11 ac@80MHz: 866, 780, 650, 585, 520, 390, 260, 195, 130, 65 Mbps
Error Correction	FEC, LDPC
Duplexing Scheme	Time Division Duplex
MTBF	450,000 hrs

Antenna.

Type	Integrated dual-polarized 16° directional panel antenna
Gain	20dBi

Ethernet.

Interface	10/100/1000 Base-T, RJ45

Software.

Wireless Operating Modes	Access point (auto WDS), access point, station (WDS), station (ARP NAT)
Wireless Techniques	Smart station polling, smart auto-channel, adaptive auto modulation, automatic transmit power control (ATPC)
Wireless Security	WPA/WPA2 personal, WPA/WPA2 enterprise, WACL, user isolation
Wireless QoS	4 queues prioritization
Network Operating Modes	Bridge, router IPv4, router IPv6
Network Techniques	Routing with and without NAT, VLAN
WAN Protocols	Static IP, DHCP client, PPPoE client
Services	DHCP server, SNMP, NTP client, router advertisement daemon, ping watchdog
Management	HTTP(S) GUI, SSH, SNMP read, WNMS, Telnet
Tools	Site survey, link test, antenna alignment

Physical.

Dimensions	Width 183mm, Height 184mm, Depth 87mm
Weight	413g
Mounting	Pole mounting bracket included

Power.

Power supply	24VDC passive PoE (24V passive PoE adapter is included in the package)
Power Source	100 - 240VAC
Max Power Consumption	10W

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D26090-04

Specifications.

Environmental.

Operating Temperature	-40°C to +65°C
Humidity	0% to 90% Relative Humidity

Management.

System Monitoring	SNMP v1/2c/3 server, Syslogs, system alerts via e-mail and SNMP trap
Configuration	Web UI

Regulatory.

Certification	FCC/IC/CE

Wireless performance.

40 MHz	Modulation, Mbps	400	360	300	270	240	180	120	90	60	30
	TX Power, dBm	26	27	28	29	30	30	30	30	30	30
	Receive sensitivity, dBm	-70	-72	-76	-78	-80	-84	-87	-92	-94	-95
80 MHz	Modulation, Mbps	866	780	650	585	520	390	260	195	130	65
	TX Power, dBm	24	25	25	26	27	28	28	29	29	29
	Receive sensitivity, dBm	-64	-66	-70	-72	-74	-78	-81	-85	-88	-90

A selection of Antennae and Cable options are available on request.

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D26090-04

Smart Station Coordination Function (SSCF).

AMG's multiple client coordination, when the base-station is transmitting, decreases latency. The multi-coordination feature is operating in hybrid mode, when different client groups are divided into categories based on the client activity. More active stations are put in the main scheduler window, which performs a round-robin operation with every active CPE by allocating them a data slot as well as a time-slot for transmission (TDD) which is limited by the downlink/uplink ratio.

AMG's hardware accelerated QoS (allows prioritising mission critical data and delivery of different services). The hardware QoS is realised by re-using the available wireless multimedia extensions (WME) capability available in HCCA and EDCA standards. The lower priority queues, which are usually used for http, ftp, torrent etc. enables traffic only when a connected station receives the "permit-token" from the AB/BTS, otherwise the data is buffered until the token is received. The higher priority queues, like video or voice, which require low latency and jitter free performance are allowed to transmit data without receiving permission from the AP/BTS.

The dynamic uplink/downlink ratio (improves throughput for high density client scenarios, where downlink is more critical then uplink). The uplink/downlink ratio is controlled by the AP/BTS, which decides based on the amount of active clients in the scheduler, what ratio is appropriate for the current situation.

New form factor

The shape of the enclosure is now smaller, lighter but retains the IP-66 water protection rating. Smaller packaging reduces freight costs and makes them less obvious. The new design has no metal parts, which makes them lighter and corrosion resistant.

New mounting

The adjustable mounting bracket is very easy to assemble and install. It consists of two easy to connect parts that allow tilting the device up and down when installing on the pole. A metal strap is included to securely tighten the device. This design includes additional reinforcements and thicker materials to ensure survival in extreme climate conditions.

Part Numbers.

AMG8870F-06	Up to 450Mbps video, Integrated 16° directional antenna, Up to 6 km, Includes 1x radio and 1x pole bracket
AMG8870F-06-2	Up to 450Mbps video, Integrated 16° directional antenna, Up to 6km, Pair of radios (Base + Satellite), Includes 2x radio and 2x pole bracket

Recommended PSUs.

24VDC passive PoE adapter is included in the package.

NOTE: Passive PoE does not perform a handshake, so it is extremely important to know what PoE voltage your device requires before plugging in the Ethernet cable and powering it up. If you connect the wrong voltage you may cause permanent electrical damage to the device.

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AMG8870F-03-90 SKYWAVE III™ WIRELESS RADIO

Outdoor Wireless Radio

Optimised for long range point to point and point to multipoint applications.

Gigabit	Wireless	Waterproof	Temp	PSU	Secure
x1	Up to 3km	IP66	-40~+65°C	24V passive	802.1x

[AMG8870F-03-90]

OVERVIEW

The AMG8870F-03-90 delivers the highest performance and stability available in the 5GHz 802.11ac class. The product combines a highly advanced radio core containing MIMO 2x2 technology with integrated, high-gain, dual polarization 90° sector antenna.

The feature-rich operating system is optimised for ultra-high performance wireless communication, 450 Mbps throughput - the result of a powerful hardware platform with 802.11ac technology based radio and a proprietary data transmission protocol Smart Station Coordination Function (SSCF). Incorporating a QCA 9563 CPU (750 MHz), a QCA 9882 radio and 64 MBytes of RAM and 16 Mbytes of flash memory, the AMG8870F-06 radio is an ideal solution for capacity demanding applications.

The 24V Gigabit Ethernet port (passive PoE) allows utilising the full capacity of the radio when used in a point-to-point or point-to-multipoint network design.

FEATURES

- Base station / Satellite, PtP
- Smart Station Coordination Function (SSCF)
- Up to 3km (integrated antenna)
- Up to 450Mbps compressed video throughput
- 5/10/20/40/80MHz Channelization support
- User Configurable gain up to 23dBm (30dBm max)
- 24V passive PoE
- Extremely compact and light
- IP66 Rated Enclosure
- -40°C to +65°C Operating Range

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D26091-02

Specifications.

Wireless.

WLAN Standard	IEEE 802.11 a/n/ac, SSCF
Radio Mode	MIMO 2x2
Radio Frequency Band	5.150 - 5.850 GHz models (FCC 5.150-5.250 and 5.725-5.850GHz)
Transmit Power	Up to 30dBm (Country Dependent)
Channel Size	5, 10, 20, 40, 80 MHz
Modulation Schemes	802.11 a/n: OFDM (64-QAM, 16-QAM, QPSK, BPSK) 802.11 ac: OFDM (256-QAM, 64-QAM, 16-QAM, QPSK, BPSK)
Data Rates	802.11 ac@40MHz: 400, 360, 300, 270, 240, 180, 120, 90, 60, 30 Mbps 802.11 ac@80MHz: 866, 780, 650, 585, 520, 390, 260, 195, 130, 65 Mbps
Error Correction	FEC, LDPC
Duplexing Scheme	Time Division Duplex
MTBF	450,000 hrs

Antenna.

Type	Integrated dual-polarized 90° directional panel antenna
Gain	18dBi

Ethernet.

Interface	10/100/1000 Base-T, RJ45

Software.

Wireless Operating Modes	Access point (auto WDS), access point, station (WDS), station (ARP NAT)
Wireless Techniques	Smart station polling, smart auto-channel, adaptive auto modulation, automatic transmit power control (ATPC)
Wireless Security	WPA/WPA2 personal, WPA/WPA2 enterprise, WACL, user isolation
Wireless QoS	4 queues prioritization
Network Operating Modes	Bridge, router IPv4, router IPv6
Network Techniques	Routing with and without NAT, VLAN
WAN Protocols	Static IP, DHCP client, PPPoE client
Services	DHCP server, SNMP, NTP client, router advertisement daemon, ping watchdog
Management	HTTP(S) GUI, SSH, SNMP read, WNMS, Telnet
Tools	Site survey, link test, antenna alignment

Physical.

Dimensions	Length 380mm, width 100mm, height 35mm
Weight	413g
Mounting	Pole mounting bracket included

Power.

Power supply	24VDC passive PoE (24V passive PoE adapter is included in the package)
Power Source	100 - 240VAC
Max Power Consumption	10W

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Specifications.

Environmental.

Operating Temperature	-40°C to +65°C
Humidity	0% to 90% Relative Humidity

Management.

System Monitoring	SNMP v1/2c/3 server, Syslogs, system alerts via e-mail and SNMP trap
Configuration	Web UI

Regulatory.

Certification	FCC/IC/CE

Wireless performance.

40 MHz	Modulation, Mbps	400	360	300	270	240	180	120	90	60	30
	TX Power, dBm	26	27	28	29	30	30	30	30	30	30
	Receive sensitivity, dBm	-70	-72	-76	-78	-80	-84	-87	-92	-94	-95
80 MHz	Modulation, Mbps	866	780	650	585	520	390	260	195	130	65
	TX Power, dBm	24	25	25	26	27	28	28	29	29	29
	Receive sensitivity, dBm	-64	-66	-70	-72	-74	-78	-81	-85	-88	-90

A selection of Antennae and Cable options are available on request.

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Smart Station Coordination Function (SSCF).

AMG's multiple client coordination, when the base-station is transmitting, decreases latency. The multi-coordination feature is operating in hybrid mode, when different client groups are divided into categories based on the client activity. More active stations are put in the main scheduler window, which performs a round-robin operation with every active CPE by allocating them a data slot as well as a time-slot for transmission (TDD) which is limited by the downlink/uplink ratio.

AMG's hardware accelerated QoS (allows prioritising mission critical data and delivery of different services). The hardware QoS is realised by re-using the available wireless multimedia extensions (WME) capability available in HCCA and EDCA standards. The lower priority queues, which are usually used for http, ftp, torrent etc. enables traffic only when a connected station receives the "permit-token" from the AB/BTS, otherwise the data is buffered until the token is received. The higher priority queues, like video or voice, which require low latency and jitter free performance are allowed to transmit data without receiving permission from the AP/BTS.

The dynamic uplink/downlink ratio (improves throughput for high density client scenarios, where downlink is more critical then uplink). The uplink/downlink ratio is controlled by the AP/BTS, which decides based on the amount of active clients in the scheduler, what ratio is appropriate for the current situation.

New form factor

The shape of the enclosure is now smaller, lighter but retains the IP-66 water protection rating. Smaller packaging reduces freight costs and makes them less obvious. The new design has no metal parts, which makes them lighter and corrosion resistant.

New mounting

The adjustable mounting bracket is very easy to assemble and install. It consists of two easy to connect parts that allow tilting the device up and down when installing on the pole. A metal strap is included to securely tighten the device. This design includes additional reinforcements and thicker materials to ensure survival in extreme climate conditions.

Part Numbers.

AMG8870F-03-90	Up to 450Mbps video, Integrated 90° directional antenna, Up to 3 km, Includes 1x radio and 1x pole bracket

Recommended PSUs.

24VDC passive PoE adapter is included in the package.

NOTE: Passive PoE does not perform a handshake, so it is extremely important to know what PoE voltage your device requires before plugging in the Ethernet cable and powering it up. If you connect the wrong voltage you may cause permanent electrical damage to the device.

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AMG8870F-M-E SKYWAVE III™ WIRELESS RADIO

Outdoor Wireless Radio

Optimised for long range point to point and point to multipoint applications.

[AMG8870F-M-E]

Gigabit	Wireless	Waterproof	Temp	PSU	Secure
x1	Up to 20km	IP67	-40~+65°C	24V passive	802.1x

OVERVIEW

The AMG8870F-M-E delivers the highest performance and stability available in the 5GHz 802.11ac class. This product combines a highly advanced radio core containing MIMO 2x2 technology with two N-type connectors allowing the connection of external antennas suited for a wide range of applications.

The feature-rich operating system is optimised for ultra-high performance wireless communication, 450 Mbps throughput - the result of a powerful hardware platform with 802.11ac technology based radio and a proprietary data transmission protocol Smart Station Coordination Function (SSCF). Incorporating a QCA 9563 CPU (750 MHz), a QCA 9882 radio and 64 MBytes of RAM and 16 Mbytes of flash memory, the AMG8870F-M-E radio is an ideal solution for capacity demanding applications.

The 24V Gigabit Ethernet port (passive PoE) allows utilising the full capacity of the radio when used in a point-to-point or point-to-multipoint network design.

FEATURES

- Base station / Satellite, PtP, PtMP
- Smart Station Coordination Function (SSCF)
- Up to 20km+ (antenna dependent)
- Up to 450Mbps compressed video throughput
- 5/10/20/40/80MHz Channelization support
- User Configurable gain up to 23dBm (30dBm max)
- 24V passive PoE
- Extremely compact and light
- IP67 Rated Enclosure
- -40°C to +65°C Operating Range

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Specifications.

Wireless.

WLAN Standard	IEEE 802.11 a/n/ac, SSCF
Radio Mode	MIMO 2x2
Radio Frequency Band	5.150 - 5.850 GHz models (FCC 5.150-5.250 and 5.725-5.850GHz)
Transmit Power	Up to 30dBm (Country Dependent)
Channel Size	5, 10, 20, 40, 80 MHz
Modulation Schemes	802.11 a/n: OFDM (64-QAM, 16-QAM, QPSK, BPSK) 802.11 ac: OFDM (256-QAM, 64-QAM, 16-QAM, QPSK, BPSK)
Data Rates	802.11 ac@40MHz: 400, 360, 300, 270, 240, 180, 120, 90, 60, 30 Mbps 802.11 ac@80MHz: 866, 780, 650, 585, 520, 390, 260, 195, 130, 65 Mbps
Error Correction	FEC, LDPC
Duplexing Scheme	Time Division Duplex
MTBF	450,000 hrs

Antenna.

Type	External N-type connectors
Gain	Antenna Dependant

Ethernet.

Interface	10/100/1000 Base-T, RJ45

Software.

Wireless Operating Modes	Access point (auto WDS), access point, station (WDS), station (ARP NAT)
Wireless Techniques	Smart station polling, smart auto-channel, adaptive auto modulation, automatic transmit power control (ATPC)
Wireless Security	WPA/WPA2 personal, WPA/WPA2 enterprise, WACL, user isolation
Wireless QoS	4 queues prioritization
Network Operating Modes	Bridge, router IPv4, router IPv6
Network Techniques	Routing with and without NAT, VLAN
WAN Protocols	Static IP, DHCP client, PPPoE client
Services	DHCP server, SNMP, NTP client, router advertisement daemon, ping watchdog
Management	HTTP(S) GUI, SSH, SNMP read, WNMS, Telnet
Tools	Site survey, link test, antenna alignment

Physical.

Dimensions	Length 150mm, width 115mm, height 55mm
Weight	450g
Mounting	Combination wall/pole mount with quick swap bracket included

Power.

Power supply	24VDC passive PoE (24V passive PoE adapter is included in the package)
Power Source	100 - 240VAC
Max Power Consumption	10W

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Specifications.

Environmental.

Operating Temperature	-40°C to +65°C
Humidity	0% to 90% Relative Humidity

Management.

System Monitoring	SNMP v1/2c/3 server, Syslogs, system alerts via e-mail and SNMP trap
Configuration	Web UI

Regulatory.

Certification	FCC/IC/CE

Wireless performance.

40 MHz	Modulation, Mbps	400	360	300	270	240	180	120	90	60	30
	TX Power, dBm	26	27	28	29	30	30	30	30	30	30
	Receive sensitivity, dBm	-70	-72	-76	-78	-80	-84	-87	-92	-94	-95
80 MHz	Modulation, Mbps	866	780	650	585	520	390	260	195	130	65
	TX Power, dBm	24	25	25	26	27	28	28	29	29	29
	Receive sensitivity, dBm	-64	-66	-70	-72	-74	-78	-81	-85	-88	-90

A selection of Antennae and Cable options are available on request.

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Smart Station Coordination Function (SSCF).

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AMG's hardware accelerated QoS (allows prioritising mission critical data and delivery of different services). The hardware QoS is realised by re-using the available wireless multimedia extensions (WME) capability available in HCCA and EDCA standards. The lower priority queues, which are usually used for http, ftp, torrent etc. enables traffic only when a connected station receives the "permit-token" from the AB/BTS, otherwise the data is buffered until the token is received. The higher priority queues, like video or voice, which require low latency and jitter free performance are allowed to transmit data without receiving permission from the AP/BTS.

The dynamic uplink/downlink ratio (improves throughput for high density client scenarios, where downlink is more critical then uplink). The uplink/downlink ratio is controlled by the AP/BTS, which decides based on the amount of active clients in the scheduler, what ratio is appropriate for the current situation.

Part Numbers.

AMG8870F-M-E	Up to 450Mbps video, Requires external antenna, N-Type connectors, Includes 1x radio and 1x pole/wall bracket

Recommended PSUs.

24VDC passive PoE adapter is included in the package.

NOTE: Passive PoE does not perform a handshake, so it is extremely important to know what PoE voltage your device requires before plugging in the Ethernet cable and powering it up. If you connect the wrong voltage you may cause permanent electrical damage to the device.

Accessories.

ANT-03S-S3	2.5°, up to 20km, 5GHz 30dBi 2x2 MIMO N-Type Sector Antenna with short flying leads, including mounting bracket (2x extension leads reqd)
ANT-60S-S3	60°, up to 6km, 5GHz 17dBi 2x2 MIMO N-Type Sector Antenna with short flying leads, including mounting bracket (2x extension leads reqd)
ANT-90S-S3	90°, up to 6km, 5GHz 16dBi 2x2 MIMO N-Type Sector Antenna with short flying leads, including mounting bracket (2x extension leads reqd)
ANT-120S-S3	120°, up to 6km, 5GHz 14.5dBi 2x2 MIMO N-Type Sector Antenna with short flying leads, including mounting bracket (2x extension leads reqd)
ANT-360S-S3	360°, up to 3km diameter, 5GHz 10dBi 2x2 MIMO N-Type Omni Antenna. Dual Polarized including short flying leads and mounting bracket (2x extension leads reqd)
CAB2	Antenna Cable 2m, N-TypeM - N-TypeM
CAB4	Antenna Cable 4m, N-TypeM - N-TypeM
CAB8	Antenna Cable 8m, N-TypeM - N-TypeM

A selection of Antennae and Cable options are available on request.

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SFP-100M SERIES
INDUSTRIAL 100MB ETHERNET SFP MODULES

Industrial Ethernet Solutions

AMG's industrial 100Mb SFP's provide transmission of 100Mb Ethernet data over Multimode or Singlemode optical fibre or copper (Cat5 or higher) cables depending on the model selected.

Fibre Multimode	Fibre Singlemode	10/100 Copper	100 FX Compliant	DDM Diagnostics	Temp -40~+85°C	NDAA/TAA Compliant

[SFP-100M Series]

OVERVIEW

The AMG SFP-100M series are industrial 100Mb Ethernet SFP's offering support for multiple cable types including copper (Cat5 or higher) as well as Multimode or Singlemode optical fibre.

The units are compatible with most 100BASE-X SFP ports on Ethernet switches and media converters[1] and feature industry standard LC connectors for fibre models and RJ45 connectors for copper models.

The SFP modules are a perfect solution for extending the capability of SFP enabled Ethernet devices to support links from remote locations which are beyond the normal 100m (328ft) distance limit of copper Ethernet standards.

Each optical fibre model supports full Digital Diagnostic Monitoring (DDM) to provide the user with valuable information on critical operating parameters such as device temperature, Tx and Rx optical power levels, speed, optical wavelength as well as device part code, serial number and manufacturer data.

FEATURES

- Compatible with most 100BASE-X SFP Ports [1]
- Supports Ethernet speeds of up to 100Mbps
- Hot pluggable design allows for easy field replacement or upgrades
- Digital Diagnostic Monitoring (DDM) included on all optical models
- Distances up to 100m (Copper), 2Km (Multimode Fibre) or 40Km (Singlemode Fibre)
- INF-8074 and SFF-8472 compliant
- Low EMI metal housing with excellent ESD protection
- Programmed and tested in the UK
- Industry standard Small Form-Factor Pluggable (MSA compliant)
- AMG Lifetime Support Warranty

[1] Check the AMG website for a full list of compatible AMG switches and media converter models. If you are unsure please check with the AMG Technical Services team before ordering to ensure compatibility with your chosen SFP capable switch or media converter.

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Specifications.

Standards.

IEEE802.3i	10Base-T
IEEE802.3u	100Base-TX & 100Base-FX
SFF-8472	Diagnostic Monitoring Interface
INF-8074	SFP Transceiver
MSA	Multi-Source Agreement

Interface.

SFP Slot	100BASE-X SFP
Fibre Port	Multimode or Singlemode Single or Dual LC Connector
RJ45 Port	10/100BASE-T(X) RJ45* with Auto MDI/MDI-X

Power.

Power Inputs	From SFP Port
Operating Voltage	$3.3V_{DC}$
Power Consumption	1W Max (Fibre Models) 1.2W Max^ (Copper Models)

Packaging.

Single Unit Packaging

Shipping Weight	0.04kg / 0.09lb
Dimensions:	(W x D x H) 58 × 106 × 25 mm 2.28 × 4.17 × 0.98 in

Ten Unit Packaging

Shipping Weight	0.26kg / 0.57lb
Dimensions:	(W x D x H) 192 × 152 × 20 mm 7.56 × 5.98 × 0.79 in

Mechanical.

Housing	Aluminium
Dimensions:	(W x D x H)
Fiber Models	57 × 14 × 12 mm 2.24 × 0.55 × 0.47 in
Copper Models	69 × 14 × 14 mm 2.71 × 0.55 × 0.55 in
IP Rating	IP40
Installation	SFP Slot
Weight	0.02kg / 0.04lb

Environmental.

Operating Temp:	(Celsius / Fahrenheit)
SFP Case	-40 to +85°C / -40 to +185°F
Storage Temp.	-40 to +85°C / -40 to +185°F
Humidity	5% to 90% (non-condensing)
MTBF	>250,000 hours
MTBF Standard	Telcordia SR-332 GF 30°C
Heat Dissipation	3.4 BTU/h (Fibre Models) 4.1 BTU/h (Copper Models)
Cooling	Passive Cooling
Noise Level	0 dBA

Regulatory.

EMI	EN 55022 Class B CISPR 22 VCCI Class B FCC Part 15B Class B
EMS	MIL-STD-883 (Method 3015) EN 61000-4-2 (ESD) EN 61000-4-3 (RS)
Laser Safety	FDA 21CFR 1040.10 FDA 21CFR 1040.11 EN/IEC 60825-1 EN/IEC 60825-2
Environmental	Reach RoHS WEEE
Traffic	NEMA TS2
Supply Chain	NDAA & TAA Compliant

Part Numbers.

Multimode - Dual Fibre

Part Number	Description	Distance	Tx Wavelength	Tx Power (dBm)	Rx Sensitivity (dBm)
SFP-MM-100M-FX2-31	SFP Multimode, 100Mb, 2 Fibres, 2Km, LC Connectors, 1310nm Tx/Rx, DDM	2Km	1310nm	-14 ~ -20 dBm	<-34dBm

Multimode - Single Fibre

Part Number	Description	Distance	Tx Wavelength	Tx Power (dBm)	Rx Sensitivity (dBm)
SFP-MM-100M-BX2-31	SFP Multimode, 100Mb, 1 Fibre, 2Km, LC Connector, 1310nm Tx / 1550nm Rx, DDM (Mates With SFP-MM-100M-BX2-55)	2Km	1310nm	-14 ~ -20 dBm	<-32dBm
SFP-MM-100M-BX2-55	SFP Multimode, 100Mb, 1 Fibre, 2Km, LC Connector, 1550nm Tx / 1310nm Rx, DDM (Mates With SFP-MM-100M-BX2-31)	2Km	1550nm	-14 ~ -20 dBm	<-32dBm

Singlemode - Dual Fibre

Part Number	Description	Distance	Tx Wavelength	Tx Power (dBm)	Rx Sensitivity (dBm)
SFP-SM-100M-LX20-31	SFP Singlemode, 100Mb, 2 Fibres, 20Km, LC Connectors, 1310nm Tx/Rx, DDM	20Km	1310nm	-8 ~ -15 dBm	<-34dBm
SFP-SM-100M-EX40-31	SFP Singlemode, 100Mb, 2 Fibres, 40Km, LC Connectors, 1310nm Tx/Rx, DDM	40Km	1310nm	0 ~ -8 dBm	<-34dBm

Singlemode - Single Fibre

Part Number	Description	Distance	Tx Wavelength	Tx Power (dBm)	Rx Sensitivity (dBm)
SFP-SM-100M-BX20-31	SFP Singlemode, 100Mb, 1 Fibre, 20Km, LC Connector, 1310nm Tx / 1550nm Rx, DDM (Mates With SFP-SM-100M-BX20-55)	20Km	1310nm	-8 ~ -15 dBm	<-32dBm
SFP-SM-100M-BX20-55	SFP Singlemode, 100Mb, 1 Fibre, 20Km, LC Connector, 1550nm Tx / 1310nm Rx, DDM (Mates With SFP-SM-100M-BX20-31)	20Km	1550nm	-8 ~ -15 dBm	<-32dBm

Copper - RJ45

Part Number	Description	Distance	Tx Wavelength	Tx Power (dBm)	Rx Sensitivity (dBm)
SFP-CU-100M	SFP Copper, 10/100BASE-T RJ45 Port*, 100BASE-X SFP Interface, 100m	100m	N/A	N/A	N/A

* Note - 10/100Base-T(X) operation requires the host system to have an SGMII interface. With a SERDES interface that does not support SGMII, the module will operate at fixed 100Base-TX only.
^ Note - The power consumption and surge current of the copper module is higher than the specified values in the SFP MSA.

Note - Light source aging is already considered in the Tx Power and Rx Sensitivity values mentioned above. A separate consideration is not required in the optical link budget calculation.

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SFP-1G SERIES
INDUSTRIAL 1GB ETHERNET SFP MODULES

Industrial Ethernet Solutions

AMG's industrial 1Gb SFP's provide transmission of 1000Mb Ethernet data over Multimode or Singlemode optical fibre or copper (Cat5E or higher) cables depending on the model selected.

[SFP-1G Series]

Fibre	Fibre	Gigabit	1000 FX	DDM	Temp	NDAA/TAA
Multimode	Singlemode	Copper	Compliant	Diagnostics	-40~+85°C	Compliant

OVERVIEW

The AMG SFP-1G series are industrial high speed 1000Mb Ethernet SFP's offering support for multiple cable types including copper (Cat5E or higher) as well as Multimode or Singlemode optical fibre.

The units are compatible with most 1000BASE-X SFP ports on Ethernet switches and media converters[1] and feature industry standard LC connectors for fibre models and RJ45 connectors for copper models.

The SFP modules are a perfect solution for extending the capability of SFP enabled Ethernet devices to support links from remote locations which are beyond the normal 100m (328ft) distance limit of copper Ethernet standards.

Each optical fibre model supports full Digital Diagnostic Monitoring (DDM) to provide the user with valuable information on critical operating parameters such as device temperature, Tx and Rx optical power levels, speed, optical wavelength as well as device part code, serial number and manufacturer data.

FEATURES

- Compatible with most 1000BASE-X SFP Ports [1]
- Supports Ethernet speeds of up to 1000Mbps
- Hot pluggable design allows for easy field replacement or upgrades
- Digital Diagnostic Monitoring (DDM) included on all optical models
- Distances up to 100m (Copper), 2Km (Multimode Fibre) or 120Km (Singlemode Fibre)
- INF-8074 and SFF-8472 compliant
- Low EMI metal housing with excellent ESD protection
- Programmed and tested in the UK
- Industry standard Small Form-Factor Pluggable (MSA compliant)
- AMG Lifetime Support Warranty

[1] Check the AMG website for a full list of compatible AMG switches and media converter models. If you are unsure please check with the AMG Technical Services team before ordering to ensure compatibility with your chosen SFP capable switch or media converter.

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Specifications.

Standards.

IEEE802.3i	10Base-T
IEEE802.3u	100Base-TX
IEEE802.3ab	1000Base-T
IEEE802.3z	1000Base-X
SFF-8472	Diagnostic Monitoring Interface
INF-8074	SFP Transceiver
MSA	Multi-Source Agreement

Interface.

SFP Slot	1000BASE-X SFP
Fibre Port	Multimode or Singlemode Single or Dual LC Connector
RJ45 Port	10/100/1000BASE-T(X) RJ45* with Auto MDI/MDI-X

Power.

Power Inputs	From SFP Port
Operating Voltage	$3.3V_{DC}$
Power Consumption	0.825W Max (MM 850nm Model) 1W Max (Fibre Models) 1.2W Max^ (Copper Models)

Packaging.

Single Unit Packaging

Shipping Weight	0.04kg / 0.09lb
Dimensions:	(W x D x H)
	58 × 106 × 25 mm
	2.28 × 4.17 × 0.98 in

Ten Unit Packaging

Shipping Weight	0.26kg / 0.57lb
Dimensions:	(W x D x H)
	192 × 152 × 20 mm
	7.56 × 5.98 × 0.79 in

Mechanical.

Housing	Aluminium
Dimensions:	(W x D x H)
Fiber Models	57 × 14 × 12 mm
	2.24 × 0.55 × 0.47 in
Copper Models	69 × 14 × 14 mm
	2.71 × 0.55 × 0.55 in
IP Rating	IP40
Installation	SFP Slot
Weight	0.02kg / 0.04lb

Environmental.

Operating Temp:	(Celsius / Fahrenheit)
SFP Case	-40 to +85°C / -40 to +185°F
Storage Temp.	-40 to +85°C / -40 to +185°F
Humidity	5% to 90% (non-condensing)
MTBF	>250,000 hours
MTBF Standard	Telcordia SR-332 GF 30°C
Heat Dissipation	2.8 BTU/h (MM 850nm Model)
	3.4 BTU/h (Fibre Models)
	4.1 BTU/h (Copper Models)
Cooling	Passive Cooling
Noise Level	0 dBA

Regulatory.

EMI	EN 55022 Class B
	CISPR 22
	VCCI Class B
	FCC Part 15B Class B
EMS	MIL-STD-883 (Method 3015)
	EN 61000-4-2 (ESD)
	EN 61000-4-3 (RS)
Laser Safety	FDA 21CFR 1040.10
	FDA 21CFR 1040.11
	EN/IEC 60825-1
	EN/IEC 60825-2
Environmental	Reach
	RoHS
	WEEE
Traffic	NEMA TS2
Supply Chain	NDAA & TAA Compliant

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Part Numbers.

Multimode - Dual Fibre

Part Number	Description	Distance	Tx Wavelength	Tx Power (dBm)	Rx Sensitivity (dBm)
SFP-MM-1G-SX05-85	SFP Multimode, 1Gb, 2 Fibres, 500m, LC Connectors, 850nm Tx/Rx, DDM	500m	850nm	-3 ~ -9 dBm	<-18dBm
SFP-MM-1G-SX2-31	SFP Multimode, 1Gb, 2 Fibres, 2Km, LC Connectors, 1310nm Tx/Rx, DDM	2Km	1310nm	-3 ~ -9 dBm	<-20dBm

Multimode - Single Fibre

Part Number	Description	Distance	Tx Wavelength	Tx Power (dBm)	Rx Sensitivity (dBm)
SFP-MM-1G-BX05-31	SFP Multimode, 1Gb, 1 Fibre, 500m, LC Connector, 1310nm Tx / 1550nm Rx, DDM (Mates With SFP-MM-1G-BX05-55)	500m	1310nm	-3 ~ -9 dBm	<-21dBm
SFP-MM-1G-BX05-55	SFP Multimode, 1Gb, 1 Fibre, 500m, LC Connector, 1550nm Tx / 1310nm Rx, DDM (Mates With SFP-MM-1G-BX05-31)	500m	1550nm	-3 ~ -9 dBm	<-21dBm

Singlemode - Dual Fibre

Part Number	Description	Distance	Tx Wavelength	Tx Power (dBm)	Rx Sensitivity (dBm)
SFP-SM-1G-LX20-31	SFP Singlemode, 1Gb, 2 Fibres, 20Km, LC Connectors, 1310nm Tx/Rx, DDM	20Km	1310nm	-3 ~ -9 dBm	<-22dBm
SFP-SM-1G-EX40-31	SFP Singlemode, 1Gb, 2 Fibres, 40Km, LC Connectors, 1310nm Tx/Rx, DDM	40Km	1310nm	0 ~ -5 dBm	<-24dBm
SFP-SM-1G-ZX80-55	SFP Singlemode, 1Gb, 2 Fibres, 80Km, LC Connectors, 1550nm Tx/Rx, DDM	80Km	1550nm	3 ~ -2 dBm	<-26dBm

Copper - RJ45

Part Number	Description	Distance	Tx Wavelength	Tx Power (dBm)	Rx Sensitivity (dBm)
SFP-CU-1G	SFP Copper, 10/100/1000BASE-T(X) RJ45 Port*, 1000BASE-X SFP Interface, 100m	100m	N/A	N/A	N/A

Part code tables continued on next page.

* Note - 10/100/1000Base-T(X) operation requires the host system to have an SGMII interface. With a SERDES interface that does not support SGMII, the module will operate at fixed 1000Base-T only.
^ Note - The power consumption and surge current of the copper module is higher than the specified values in the SFP MSA.

Note - Light source aging is already considered in the Tx Power and Rx Sensitivity values mentioned above and below. A separate consideration is not required in the optical link budget calculation.

Part Numbers Continued.

Singlemode - Single Fibre

Part Number	Description	Distance	Tx Wavelength	Tx Power (dBm)	Rx Sensitivity (dBm)
SFP-SM-1G-BX20-31	SFP Singlemode, 1Gb, 1 Fibre, 20Km, LC Connector, 1310nm Tx / 1550nm Rx, DDM (Mates With SFP-SM-1G-BX20-55)	20Km	1310nm	-3 ~ -9 dBm	<-22dBm
SFP-SM-1G-BX20-55	SFP Singlemode, 1Gb, 1 Fibre, 20Km, LC Connector, 1550nm Tx / 1310nm Rx, DDM (Mates With SFP-SM-1G-BX20-31)	20Km	1550nm	-3 ~ -9 dBm	<-22dBm
SFP-SM-1G-BX40-31	SFP Singlemode, 1Gb, 1 Fibre, 40Km, LC Connector, 1310nm Tx / 1550nm Rx, DDM (Mates With SFP-SM-1G-BX40-55)	40Km	1310nm	0 ~ -5 dBm	<-24dBm
SFP-SM-1G-BX40-55	SFP Singlemode, 1Gb, 1 Fibre, 40Km, LC Connector, 1550nm Tx / 1310nm Rx, DDM (Mates With SFP-SM-1G-BX40-31)	40Km	1550nm	0 ~ -5 dBm	<-24dBm
SFP-SM-1G-BX80-31	SFP Singlemode, 1Gb, 1 Fibre, 80Km, LC Connector, 1310nm Tx / 1550nm Rx, DDM (Mates With SFP-SM-1G-BX80-55)	80Km	1310nm	5 ~ 1 dBm	<-29dBm
SFP-SM-1G-BX80-55	SFP Singlemode, 1Gb, 1 Fibre, 80Km, LC Connector, 1550nm Tx / 1310nm Rx, DDM (Mates With SFP-SM-1G-BX80-31)	80Km	1550nm	5 ~ 1 dBm	<-29dBm
SFP-SM-1G-BX120-49	SFP Singlemode, 1Gb, 1 Fibre, 120Km, LC Connector, 1490nm Tx / 1550nm Rx, DDM (Mates With SFP-SM-1G-BX120-55)	120Km	1490nm	5 ~ 0 dBm	<-32dBm
SFP-SM-1G-BX120-55	SFP Singlemode, 1Gb, 1 Fibre, 120Km, LC Connector, 1550nm Tx / 1490nm Rx, DDM (Mates With SFP-SM-1G-BX120-49)	120Km	1550nm	5 ~ 0 dBm	<-32dBm

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SFP-2.5G SERIES
INDUSTRIAL 2.5GB ETHERNET SFP MODULES

Industrial Ethernet Solutions

AMG's industrial 2.5Gb SFP's provide transmission of 2.5Gb Ethernet data over Multimode or Singlemode optical fibre or copper (Cat5E or higher) cables depending on the model selected.

Fibre Multimode | **Fibre** Singlemode | **2.5 Gb** Copper | **2.5G FX** Compliant | **DDM** Diagnostics | **Temp** -40~+85°C | **NDAA/TAA** Compliant

[SFP-2.5G Series]

OVERVIEW

The AMG SFP-2.5G series are industrial high speed 2.5Gb Ethernet SFP's offering support for multiple cable types including copper (Cat5E or higher) as well as Multimode or Singlemode optical fibre.

The units are compatible with most 2.5GBASE-X SFP ports on Ethernet switches and media converters[1] and feature industry standard LC connectors for fibre models and RJ45 connectors for copper models.

The SFP modules are a perfect solution for extending the capability of SFP enabled Ethernet devices to support links from remote locations which are beyond the normal 100m (328ft) distance limit of copper Ethernet standards.

Each optical fibre model supports full Digital Diagnostic Monitoring (DDM) to provide the user with valuable information on critical operating parameters such as device temperature, Tx and Rx optical power levels, speed, optical wavelength as well as device part code, serial number and manufacturer data.

FEATURES

- Compatible with most 2.5GBASE-X SFP Ports [1]
- Supports Ethernet speeds of up to 2.5Gbps
- Hot pluggable design allows for easy field replacement or upgrades
- Digital Diagnostic Monitoring (DDM) included on all optical models
- Distances up to 100m (Copper), 300m (Multimode Fibre) or 80Km (Singlemode Fibre)
- INF-8074 and SFF-8472 compliant
- Low EMI metal housing with excellent ESD protection
- Programmed and tested in the UK
- Industry standard Small Form-Factor Pluggable (MSA compliant)
- AMG Lifetime Support Warranty

[1] Check the AMG website for a full list of compatible AMG switches and media converter models. If you are unsure please check with the AMG Technical Services team before ordering to ensure compatibility with your chosen SFP capable switch or media converter.

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Specifications.

Standards.

IEEE802.3u	100Base-TX
IEEE802.3ab	1000Base-T
IEEE802.3z	1000Base-X
IEEE802.3bz	2.5GBase-T
SFF-8472	Diagnostic Monitoring Interface
INF-8074	SFP Transceiver
MSA	Multi-Source Agreement

Interface.

SFP Slot	2.5GBASE-X SFP
Fibre Port	Multimode or Singlemode Single or Dual LC Connector
RJ45 Port	100/1000/2.5GBASE-T(X) RJ45* with Auto MDI/MDI-X

Power.

Power Inputs	From SFP Port
Operating Voltage	$3.3V_{DC}$
Power Consumption	0.825W Max (MM 850nm Model) 1W Max (Fibre Models) 1.2W Max^ (Copper Models)

Packaging.

Single Unit Packaging

Shipping Weight	0.04kg / 0.09lb
Dimensions:	(W x D x H)
	58 × 106 × 25 mm
	2.28 × 4.17 × 0.98 in

Ten Unit Packaging

Shipping Weight	0.26kg / 0.57lb
Dimensions:	(W x D x H)
	192 × 152 × 20 mm
	7.56 × 5.98 × 0.79 in

Mechanical.

Housing	Aluminium
Dimensions:	(W x D x H)
Fiber Models	57 × 14 × 12 mm
	2.24 × 0.55 × 0.47 in
Copper Models	69 × 14 × 14 mm
	2.71 × 0.55 × 0.55 in
IP Rating	IP40
Installation	SFP Slot
Weight	0.02kg / 0.04lb

Environmental.

Operating Temp:	(Celsius / Fahrenheit)
SFP Case	-40 to +85°C / -40 to +185°F
Storage Temp.	-40 to +85°C / -40 to +185°F
Humidity	5% to 90% (non-condensing)
MTBF	>250,000 hours
MTBF Standard	Telcordia SR-332 GF 30°C
Heat Dissipation	2.8 BTU/h (MM 850nm Model)
	3.4 BTU/h (Fibre Models)
	4.1 BTU/h (Copper Models)
Cooling	Passive Cooling
Noise Level	0 dBA

Regulatory.

EMI	EN 55022 Class B
	CISPR 22
	VCCI Class B
	FCC Part 15B Class B
EMS	MIL-STD-883 (Method 3015)
	EN 61000-4-2 (ESD)
	EN 61000-4-3 (RS)
Laser Safety	FDA 21CFR 1040.10
	FDA 21CFR 1040.11
	EN/IEC 60825-1
	EN/IEC 60825-2
Environmental	Reach
	RoHS
	WEEE
Traffic	NEMA TS2
Supply Chain	NDAA & TAA Compliant

Part Numbers.

Multimode - Dual Fibre

Part Number	Description	Distance	Tx Wavelength	Tx Power (dBm)	Rx Sensitivity (dBm)
SFP-MM-2.5G-SX03-85	SFP Multimode, 2.5Gb, 2 Fibres, 300m, LC Connectors, 850nm Tx/Rx, DDM	300m	850nm	-3 ~ -10 dBm	<-18dBm

Singlemode - Dual Fibre

Part Number	Description	Distance	Tx Wavelength	Tx Power (dBm)	Rx Sensitivity (dBm)
SFP-SM-2.5G-LX20-31	SFP Singlemode, 2.5Gb, 2 Fibres, 20Km, LC Connectors, 1310nm Tx/Rx, DDM	20Km	1310nm	0 ~ -6 dBm	<-18dBm
SFP-SM-2.5G-EX40-31	SFP Singlemode, 2.5Gb, 2 Fibres, 40Km, LC Connectors, 1310nm Tx/Rx, DDM	40Km	1310nm	0 ~ -5 dBm	<-20dBm
SFP-SM-2.5G-ZX80-55	SFP Singlemode, 2.5Gb, 2 Fibres, 80Km, LC Connectors, 1550nm Tx/Rx, DDM	80Km	1550nm	5 ~ -2 dBm	<-28dBm

Singlemode - Single Fibre

Part Number	Description	Distance	Tx Wavelength	Tx Power (dBm)	Rx Sensitivity (dBm)
SFP-SM-2.5G-BX20-31	SFP Singlemode, 2.5Gb, 1 Fibre, 20Km, LC Connector, 1310nm Tx / 1550nm Rx, DDM (Mates With SFP-SM-2.5G-BX20-55)	20Km	1310nm	0 ~ -6 dBm	<-18dBm
SFP-SM-2.5G-BX20-55	SFP Singlemode, 2.5Gb, 1 Fibre, 20Km, LC Connector, 1550nm Tx / 1310nm Rx, DDM (Mates With SFP-SM-2.5G-BX20-31)	20Km	1550nm	0 ~ -6 dBm	<-18dBm
SFP-SM-2.5G-BX40-31	SFP Singlemode, 2.5Gb, 1 Fibre, 40Km, LC Connector, 1310nm Tx / 1550nm Rx, DDM (Mates With SFP-SM-2.5G-BX40-55)	40Km	1310nm	0 ~ -5 dBm	<-20dBm
SFP-SM-2.5G-BX40-55	SFP Singlemode, 2.5Gb, 1 Fibre, 40Km, LC Connector, 1550nm Tx / 1310nm Rx, DDM (Mates With SFP-SM-2.5G-BX40-31)	40Km	1550nm	0 ~ -5 dBm	<-20dBm

Copper - RJ45

Part Number	Description	Distance	Tx Wavelength	Tx Power (dBm)	Rx Sensitivity (dBm)
SFP-CU-2.5G	SFP Copper, 100/1000/2.5GBASE-T(X) RJ45 Port*, 2.5GBASE-X SFP Interface, 100m	100m	N/A	N/A	N/A

* Note - 100/1000/2.5GBase-T(X) operation requires the host system to have an SGMII interface. With a SERDES interface that does not support SGMII, the module will operate at fixed 2.5GBase-T only.
^ Note - The power consumption and surge current of the copper module is higher than the specified values in the SFP MSA.

Note - Light source aging is already considered in the Tx Power and Rx Sensitivity values mentioned above and below. A separate consideration is not required in the optical link budget calculation.

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SFP-10G SERIES
INDUSTRIAL 10GB ETHERNET SFP+ MODULES

Industrial Ethernet Solutions

AMG's industrial 10Gb SFP's provide transmission of 10Gb Ethernet data over Multimode or Singlemode optical fibre or copper (Cat6A or higher) cables depending on the model selected.

[SFP-10G Series]

Fibre Multimode	Fibre Singlemode	10 Gb Copper	10G R Compliant	DDM Diagnostics	Temp -40~+85°C	NDAA/TAA Compliant

OVERVIEW

The AMG SFP-10G series are industrial high speed 10Gb Ethernet SFP's offering support for multiple cable types including copper (Cat6A or higher) as well as Multimode or Singlemode optical fibre.

The units are compatible with most 10GBASE-R SFP+ ports on Ethernet switches and media converters[1] and feature industry standard LC connectors for fibre models and RJ45 connectors for copper models.

The SFP+ modules are a perfect solution for extending the capability of SFP enabled Ethernet devices to support links from remote locations which are beyond the normal 100m (328ft) distance limit of copper Ethernet standards.

Each optical fibre model supports full Digital Diagnostic Monitoring (DDM) to provide the user with valuable information on critical operating parameters such as device temperature, Tx and Rx optical power levels, speed, optical wavelength as well as device part code, serial number and manufacturer data.

FEATURES

- Compatible with most 10GBASE-R SFP+ Ports [1]
- Supports Ethernet speeds of up to 10Gbps
- Hot pluggable design allows for easy field replacement or upgrades
- Digital Diagnostic Monitoring (DDM) included on all optical models
- Distances up to 30m* (Copper), 300m (Multimode Fibre) or 80Km (Singlemode Fibre)
- SFF-8431, SFF-8432 and SFF-8472 compliant
- Low EMI metal housing with excellent ESD protection
- Programmed and tested in the UK
- Industry standard Small Form-Factor Pluggable (MSA compliant)
- AMG Lifetime Support Warranty

[1] Check the AMG website for a full list of compatible AMG switches and media converter models. If you are unsure please check with the AMG Technical Services team before ordering to ensure compatibility with your chosen SFP+ capable switch or media converter.

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Specifications.

Standards.

IEEE802.3ab	1000Base-T
IEEE802.3bz	2.5GBase-T / 5GBase-T
IEEE802.3an	10GBase-T
IEEE 802.3ae	10GBase-R
SFF-8472	Diagnostic Monitoring Interface
SFF-8431	SFP+ Transceiver
SFF-8432	Improved Pluggable Form-Factor
MSA	Multi-Source Agreement

Interface.

SFP+ Slot	10GBASE-R SFP+
Fibre Port	Multimode or Singlemode Single or Dual LC Connector
RJ45 Port	1000/2.5/5/10GBASE-T RJ45 with Auto MDI/MDI-X

Power.

Power Inputs	From SFP+ Port
Operating Voltage	$3.3V_{DC}$
Power Consumption	1W Max (All Fibre Models Excluding 80Km) 1.8W Max (80Km Fibre Model) 2W Max (Copper Models)

Packaging.

Single Unit Packaging

Shipping Weight	0.04kg / 0.09lb
Dimensions:	(W x D x H)
	58 × 106 × 25 mm
	2.28 × 4.17 × 0.98 in

Ten Unit Packaging

Shipping Weight	0.26kg / 0.57lb
Dimensions:	(W x D x H)
	192 × 152 × 20 mm
	7.56 × 5.98 × 0.79 in

Mechanical.

Housing	Aluminium
Dimensions:	(W x D x H)
Fiber Models	57 × 14 × 12 mm
	2.24 × 0.55 × 0.47 in
Copper Models	71 × 14 × 14 mm
	2.8 × 0.55 × 0.55 in
IP Rating	IP40
Installation	SFP+ Slot
Weight	0.02kg / 0.04lb

Environmental.

Operating Temp:	(Celsius / Fahrenheit)
SFP Case	-40 to +85°C / -40 to +185°F
Storage Temp.	-40 to +85°C / -40 to +185°F
Humidity	5% to 90% (non-condensing)
MTBF	>250,000 hours
MTBF Standard	Telcordia SR-332 GF 30°C
Heat Dissipation	3.4 BTU/h (Fibre Models Excluding 80Km) 6.1 BTU/h (80Km Fibre Model) 6.8 BTU/h (Copper Models)
Cooling	Passive Cooling
Noise Level	0 dBA

Regulatory.

EMI	EN 55022 Class B CISPR 22 VCCI Class B FCC Part 15B Class B
EMS	MIL-STD-883 (Method 3015) EN 61000-4-2 (ESD) EN 61000-4-3 (RS)
Laser Safety	FDA 21CFR 1040.10 FDA 21CFR 1040.11 EN/IEC 60825-1 EN/IEC 60825-2
Environmental	Reach RoHS WEEE
Supply Chain	NDAA & TAA Compliant

Designed to meet NEMA TS2

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Part Numbers.

Multimode - Dual Fibre

Part Number	Description	Distance	Tx Wavelength	Tx Power (dBm)	Rx Sensitivity (dBm)
SFP-MM-10G-SR03-85	SFP+ Multimode, 10Gb, 2 Fibres, 300m, LC Connectors, 850nm Tx/Rx, DDM	300m	850nm	1 ~ -6 dBm	<-11dBm

Singlemode - Dual Fibre

Part Number	Description	Distance	Tx Wavelength	Tx Power (dBm)	Rx Sensitivity (dBm)
SFP-SM-10G-LR10-31	SFP+ Singlemode, 10Gb, 2 Fibres, 10Km, LC Connectors, 1310nm Tx/Rx, DDM	10Km	1310nm	1 ~ -6 dBm	<-12.6dBm
SFP-SM-10G-ER40-31	SFP+ Singlemode, 10Gb, 2 Fibres, 40Km, LC Connectors, 1310nm Tx/Rx, DDM	40Km	1310nm	5 ~ -2 dBm	<-15dBm
SFP-SM-10G-ZR80-55	SFP+ Singlemode, 10Gb, 2 Fibres, 80Km, LC Connectors, 1550nm Tx/Rx, DDM	80Km	1550nm	5 ~ -1 dBm	<-23dBm

Singlemode - Single Fibre

Part Number	Description	Distance	Tx Wavelength	Tx Power (dBm)	Rx Sensitivity (dBm)
SFP-SM-10G-BX10-27	SFP+ Singlemode, 2.5Gb, 1 Fibre, 10Km, LC Connector, 1270nm Tx / 1330nm Rx, DDM (Mates With SFP-SM-10G-BX10-33)	10Km	1270nm	1 ~ -7 dBm	<-14dBm
SFP-SM-10G-BX10-33	SFP+ Singlemode, 10Gb, 1 Fibre, 10Km, LC Connector, 1330nm Tx / 1270nm Rx, DDM (Mates With SFP-SM-10G-BX10-27)	10Km	1330nm	1 ~ -7 dBm	<-14dBm
SFP-SM-10G-BX40-27	SFP+ Singlemode, 10Gb, 1 Fibre, 40Km, LC Connector, 1270nm Tx / 1330nm Rx, DDM (Mates With SFP-SM-10G-BX40-33)	40Km	1270nm	5 ~ 1 dBm	<-15dBm
SFP-SM-10G-BX40-33	SFP+ Singlemode, 10Gb, 1 Fibre, 40Km, LC Connector, 1330nm Tx / 1270nm Rx, DDM (Mates With SFP-SM-10G-BX40-27)	40Km	1330nm	5 ~ 1 dBm	<-15dBm

Copper - RJ45

Part Number	Description	Distance	Tx Wavelength	Tx Power (dBm)	Rx Sensitivity (dBm)
SFP-CU-10G	SFP+ Copper, 1000/2.5/5/10GBASE-TX RJ45 Port, 10GBASE-R SFP Interface, 30m*	30m*	N/A	N/A	N/A

* Note
Supports 10GBase-T up to 30m using CAT6A or higher cables
Supports 5GBase-T up to 70m using CAT5E or higher cables
Supports 2.5Base-T up to 100m using CAT5E or higher cables
Supports 1000Base-T up to 100m using CAT5E or higher cables

Note - Light source aging is already considered in the Tx Power and Rx Sensitivity values mentioned above and below. A separate consideration is not required in the optical link budget calculation.

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SFP-CW-1G SERIES INDUSTRIAL 1GB ETHERNET CWDM SFP MODULES

Industrial Ethernet Solutions

AMG's industrial 1Gb CWDM SFP's provide transmission of 1000Mb Ethernet data over Singlemode optical fibre using industry standard 20nm wavelength spacing.

Fibre Singlemode | **1000 FX** Compliant | **DDM** Diagnostics | **Temp** -40~+85°C | **NDAA/TAA** Compliant

[SFP-CW-1G Series]

OVERVIEW

The AMG SFP-CW-1G series are industrial high speed 1000Mb Ethernet CWDM SFP's offering support for Singlemode optical fibre using industry standard 20nm wavelength spacing.

The units are compatible with most 1000BASE-X SFP ports on Ethernet switches and media converters[1] and feature industry standard LC connectors.

The SFP modules are a perfect solution for extending the capability of SFP enabled Ethernet devices to support links from remote locations which are beyond the normal 100m (328ft) distance limit of copper Ethernet standards.

Each optical fibre model supports full Digital Diagnostic Monitoring (DDM) to provide the user with valuable information on critical operating parameters such as device temperature, Tx and Rx optical power levels, speed, optical wavelength as well as device part code, serial number and manufacturer data.

FEATURES

- Compatible with most 1000BASE-X SFP Ports [1]
- Supports Ethernet speeds of up to 1000Mbps
- Hot pluggable design allows for easy field replacement or upgrades
- Digital Diagnostic Monitoring (DDM) included on all optical models
- Distances up to 40Km (Singlemode Fibre)
- INF-8074 and SFF-8472 compliant
- Low EMI metal housing with excellent ESD protection
- Programmed and tested in the UK
- Industry standard Small Form-Factor Pluggable (MSA compliant)
- AMG Lifetime Support Warranty

[1] Check the AMG website for a full list of compatible AMG switches and media converter models. If you are unsure please check with the AMG Technical Services team before ordering to ensure compatibility with your chosen SFP capable switch or media converter.

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Specifications.

Standards.

IEEE802.3z	1000Base-X
SFF-8472	Diagnostic Monitoring Interface
INF-8074	SFP Transceiver
MSA	Multi-Source Agreement

Interface.

SFP Slot	1000BASE-X SFP
Fibre Port	Singlemode Dual LC Connector

Power.

Power Inputs	From SFP Port
Operating Voltage	$3.3V_{DC}$
Power Consumption	1W Max

Packaging.

Single Unit Packaging

Shipping Weight	0.04kg / 0.09lb
Dimensions:	(W x D x H)
	58 × 106 × 25 mm
	2.28 × 4.17 × 0.98 in

Ten Unit Packaging

Shipping Weight	0.26kg / 0.57lb
Dimensions:	(W x D x H)
	192 × 152 × 20 mm
	7.56 × 5.98 × 0.79 in

Mechanical.

Housing	Aluminium
Dimensions:	(W x D x H)
	57 × 14 × 12 mm
	2.24 × 0.55 × 0.47 in
IP Rating	IP40
Installation	SFP Slot
Weight	0.02kg / 0.04lb

Environmental.

Operating Temp:	(Celsius / Fahrenheit)
SFP Case	-40 to +85°C / -40 to +185°F
Storage Temp.	-40 to +85°C / -40 to +185°F
Humidity	5% to 90% (non-condensing)
MTBF	>250,000 hours
MTBF Standard	Telcordia SR-332 GF 30°C
Heat Dissipation	3.4 BTU/h
Cooling	Passive Cooling
Noise Level	0 dBA

Regulatory.

EMI	EN 55022 Class B
	CISPR 22
	VCCI Class B
	FCC Part 15B Class B
EMS	MIL-STD-883 (Method 3015)
	EN 61000-4-2 (ESD)
	EN 61000-4-3 (RS)
Laser Safety	FDA 21CFR 1040.10
	FDA 21CFR 1040.11
	EN/IEC 60825-1
	EN/IEC 60825-2
Environmental	Reach
	RoHS
	WEEE
Supply Chain	NDAA & TAA Compliant

Designed to meet NEMA TS2

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Part Numbers.

Singlemode - Dual Fibre

Part Number	Description	Distance	Tx Wavelength	Tx Power (dBm)	Rx Sensitivity (dBm)
SFP-CW-1G-EX40-27	SFP Singlemode CWDM, 1Gb, 2 Fibres, 40Km, LC Connectors, 1270nm Tx/Rx, DDM	40Km	1270nm	0 ~ -5 dBm	<-24dBm
SFP-CW-1G-EX40-29	SFP Singlemode CWDM, 1Gb, 2 Fibres, 40Km, LC Connectors, 1290nm Tx/Rx, DDM	40Km	1290nm	0 ~ -5 dBm	<-24dBm
SFP-CW-1G-EX40-31	SFP Singlemode CWDM, 1Gb, 2 Fibres, 40Km, LC Connectors, 1310nm Tx/Rx, DDM	40Km	1310nm	0 ~ -5 dBm	<-24dBm
SFP-CW-1G-EX40-33	SFP Singlemode CWDM, 1Gb, 2 Fibres, 40Km, LC Connectors, 1330nm Tx/Rx, DDM	40Km	1330nm	0 ~ -5 dBm	<-24dBm
SFP-CW-1G-EX40-35	SFP Singlemode CWDM, 1Gb, 2 Fibres, 40Km, LC Connectors, 1350nm Tx/Rx, DDM	40Km	1350nm	0 ~ -5 dBm	<-24dBm
SFP-CW-1G-EX40-37	SFP Singlemode CWDM, 1Gb, 2 Fibres, 40Km, LC Connectors, 1370nm Tx/Rx, DDM	40Km	1370nm	0 ~ -5 dBm	<-24dBm
SFP-CW-1G-EX40-39	SFP Singlemode CWDM, 1Gb, 2 Fibres, 40Km, LC Connectors, 1390nm Tx/Rx, DDM	40Km	1390nm	0 ~ -5 dBm	<-24dBm
SFP-CW-1G-EX40-41	SFP Singlemode CWDM, 1Gb, 2 Fibres, 40Km, LC Connectors, 1410nm Tx/Rx, DDM	40Km	1410nm	0 ~ -5 dBm	<-24dBm
SFP-CW-1G-EX40-43	SFP Singlemode CWDM, 1Gb, 2 Fibres, 40Km, LC Connectors, 1430nm Tx/Rx, DDM	40Km	1430nm	0 ~ -5 dBm	<-24dBm
SFP-CW-1G-EX40-45	SFP Singlemode CWDM, 1Gb, 2 Fibres, 40Km, LC Connectors, 1450nm Tx/Rx, DDM	40Km	1450nm	0 ~ -5 dBm	<-24dBm
SFP-CW-1G-EX40-47	SFP Singlemode CWDM, 1Gb, 2 Fibres, 40Km, LC Connectors, 1470nm Tx/Rx, DDM	40Km	1470nm	0 ~ -5 dBm	<-24dBm
SFP-CW-1G-EX40-49	SFP Singlemode CWDM, 1Gb, 2 Fibres, 40Km, LC Connectors, 1490nm Tx/Rx, DDM	40Km	1490nm	0 ~ -5 dBm	<-24dBm
SFP-CW-1G-EX40-51	SFP Singlemode CWDM, 1Gb, 2 Fibres, 40Km, LC Connectors, 1510nm Tx/Rx, DDM	40Km	1510nm	0 ~ -5 dBm	<-24dBm
SFP-CW-1G-EX40-53	SFP Singlemode CWDM, 1Gb, 2 Fibres, 40Km, LC Connectors, 1530nm Tx/Rx, DDM	40Km	1530nm	0 ~ -5 dBm	<-24dBm
SFP-CW-1G-EX40-55	SFP Singlemode CWDM, 1Gb, 2 Fibres, 40Km, LC Connectors, 1550nm Tx/Rx, DDM	40Km	1550nm	0 ~ -5 dBm	<-24dBm
SFP-CW-1G-EX40-57	SFP Singlemode CWDM, 1Gb, 2 Fibres, 40Km, LC Connectors, 1570nm Tx/Rx, DDM	40Km	1570nm	0 ~ -5 dBm	<-24dBm
SFP-CW-1G-EX40-59	SFP Singlemode CWDM, 1Gb, 2 Fibres, 40Km, LC Connectors, 1590nm Tx/Rx, DDM	40Km	1590nm	0 ~ -5 dBm	<-24dBm
SFP-CW-1G-EX40-61	SFP Singlemode CWDM, 1Gb, 2 Fibres, 40Km, LC Connectors, 1610nm Tx/Rx, DDM	40Km	1610nm	0 ~ -5 dBm	<-24dBm

Note - Light source aging is already considered in the Tx Power and Rx Sensitivity values mentioned above and below. A separate consideration is not required in the optical link budget calculation.

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