

# **Designed** in the UK & USA, and Manufactured in the UK.

The market leaders in providing environmentally robust IP/Ethernet, Wireless and Hybrid communication transmission solutions to industries around the world.

Operating to the highest design, manufacturing & service delivery standards. AMG are an ISO 9001 accredited company, so customers can be assured of an ongoing commitment to service and quality.

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For 30+ years, the AMG brand has been synonymous with excellence in data transmission technology.



Meet the T Why AMG?

Profession

Industries/

Product Ca

AMG150/1

AMG140/1

AMG250/2

AMG510/5

AMG350 S

AMG750 8

AMGFIB S

AMGPSU S

Accessorie

AMG Stan

Locations

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# CONTENTS

eam		4-5
2		6
al Services		7
Market Verticals		8-9
ategories		10-11
55 Series	Power Injectors & Splitters	12
60 Series	Extend-Net <sup>™</sup> Ethernet Repeaters & Extenders	12
255 & AMG260M Series	Media & Mini Media Converters	13
570 Series	Managed Switches	14
eries & SFP	Unmanaged PoE Switches & SFP Modules	15
AMG8870F	Wireless Ethernet Range & 4G Router	16
eries	Fibre Transmission Modules	17
eries	AMG Power Supply Units	18
S	AMG2034, AMG2035 & AMG510-RB55	18-19
dards		21
& Contact		22
is.com		23



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# Why AMG?

### UK/USA DESIGN & UK MANUFACTURE

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

AMG have **complete control** over the design and build process through their in-house UK and USA software and hardware engineering teams.

#### SECURE BY DESIGN

Where other suppliers are known to import their products from overseas, often with critical operational software written by unknown entities, 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.

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**ON SITE SURVEY** 

FAT/UAT

### **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.

#### NETWORK ARCHITECTURE DESIGN

Providing customers with a number of possible network designs based on their requirement. Low level detail of the design will not be included i.e. IP addressing, vlans, cable schedules and protocol tuning.

Where a customer is unsure of the best approach to physically deploying a network, AMG may be able to offer on site surveys to help with best practice deployment for a given network.

#### LOW LEVEL NETWORK DESIGN

LLD documentation will be produced for the network or system including customer workshops to ascertain the full scope and requirements of the project. This documentation will give fine detail sufficient to build and configure the network however, will not include configuration generation.

#### NETWORK CONFIGURATION FILE GENERATION

Option for AMG to generate configuration files for devices based on the LLD document that has been signed off.

#### DEVICE CONFIGURATION

Devices to be deployed under the scope of the LLD will be configured before shipping. Per device charge.

Provide factory acceptance testing and / or support user acceptance testing. This service is costed based on days required which will be scoped based on individual customer requirements.

**PRODUCT / NETWORK TRAINING** will be delivered to the customer either remotely or at a specified location in order to ensure they are comfortable and have sufficient knowledge to maintain and troubleshoot the network. Full scope of training requirements will be discussed with the customer to define the training course and therefore cost.



## Oil & Gas

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 custombuilt, 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

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 30 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.

# Defence

Some of these have included:

- HMP Belmarsh HMP Nottingham
- HMP Shrewsbury
- HMP Littlehey
- HMP Doncaster

# Security

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 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.

AMG can offer



### Infrastructure

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.

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.

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.

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# AMG operate across a wide range of industries, all over the globe We have been manufacturing products and providing solutions for these industries for over 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.

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.

- HMP Altcourse, Fazakerley
- HMP Hemel Hempstead

- HMP New Jurby, Isle of Man

- HMP Cookhamwood
- HMP Parc
- HMYOI Swinfen Hall
- New Delhi Police



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.

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





CONVERTERS

MEDIA



UNMANAGED

SWITCHES



MANAGED

SWITCHES



POE INJECTORS 19 INCH

uplinks over fibre via the SFP port(s)

Available in single, dual & guad and industrial types ensures AMG have a media converter for

and operate in extreme conditions

in multiple combinations of RJ45 & SFP ports with many models 60/90W PoE.

types with port counts from

and operate in extreme conditions from -40°C to +75°C.

100Mb, 1Gb, 2.5Gb & 10Gb Ethernet in multiple combinations

industrial types with port counts

100Mb, 1Gb, 2.5Gb, 5Gb & 10Gb DIN rail models or eight, sixteen or

ensures that AMG have a PoE

from -40°C to +75°C.









# RACK MOUNT

COAX/UTP ETHERNET **EXTENDERS** 

#### WIRELESS ETHERNET

#### SFP MODULES

& 10Gb 1U commercial grade

Ethernet and PoE over long distances

Multiple different technologies distances up to 3Km possible which ensures that AMG have a product

the UK, and operate from -40°C to

transmission over the 5GHz

User-configurable for Point-to-Point of up to 870Mbps supported. or external antennas.

+65°C.

Factor Pluggable (SFP) Multi-Source

All AMG optical SFP modules Monitoring (DDM) as standard.

system cost, upgrade, and reliability pluggable.

Industrial Operating temperature

## AMG150 & AMG155 SERIES **POWER INJECTORS & SPLITTERS**

AMG's PoE Injector range support 100Mb, 1Gb, 2.5Gb, 5Gb & 10Gb Ethernet speeds and provide 15W, 30W or 60/90W of PoE from either one, two, four, six and eight ports.

These units are designed in the USA & UK and manufactured in the UK, operate in extreme conditions from  $-40^{\circ}$ C to  $+75^{\circ}$ C and come with an AMG Lifetime Support Warranty.

# AMG140 SERIES **EXTENDENT** ETHERNET REPEATER

Standard and Advaned Models available, Industrial 1 Channel PoE Ethernet Repeater.

# AMG160 SERIES EXTENDENT ETHERNET EXTENDERS

AMG's Coax/UTP Ethernet Extender range provides equipment to extend Ethernet and PoE over long distances of copper cable. Supporting transmission distances of up to 1Km and with PoE support for 30W or 60/90W ensures that AMG have a product to achieve almost any long distance Ethernet extension requirement.

These units are designed in the USA & UK and manufactured in the UK, operate in extreme conditions from -40°C to +75°C and come with an AMG Lifetime Support Warranty.

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AMG155 SERIES





AMG160 SERIES



IENee Nei



All SFP ports are multi-rate 100Mb/Gigabit and support single and multi-mode, single or dual fibre options up to 120Km. There is a DIP switch selection of link fault pass-through, remote device reset and extended distance modes.

Auto-Negotiation (802.3u) – automatically determines the best connection speed.

## AMG250 & AMG255 SERIES MEDIA CONVERTERS

Available in single, dual & quad channel models in both commercial and industrial types, ensures AMG have a media converter for every application.

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.

These units are designed in the USA & UK and manufactured in the UK, operate in extreme conditions from -40°C to +75°C and come with an AMG Lifetime Support Warranty.







AMG250 SERIES

## AMG260M SERIES MINI MEDIA CONVERTERS

Ultra compact size is ideal for confined spaces, including camera housings and roadside cabinets. The units are DIN rail or wall mountable – quick to install and remove for maintenance (an optional magnetic mount is also available).

These units are designed in the USA & UK and manufactured in the UK, operate in extreme conditions from -40°C to +75°C and come with an AMG Lifetime Support Warranty.

Shown Actual Size

AMG255 SERIES

### AMG510 SERIES MANAGED SWITCHES



AMG's fully managed layer 2+ Ethernet switches provide 100Mbps, Gigabit and 10 Gigabit Ethernet switching for commercial network applications and are designed for 19inch rack or desktop mounting.

Available in 10 to 52 port models supporting 30W PoE+ or 60/90W PoE on each copper port as well as multiple 1Gb and 10Gb SFP port options.

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





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.

# AMG570 SERIES MANAGED SWITCHES

AMG570 series layer 2+ managed industrial Ethernet switches are designed in a thermally efficient DIN rail or wall mount housing and have 4 or 8 Gigabit Ethernet RJ45 ports with an additional 2 or 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, 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.

These units are designed in the USA & UK and manufactured in the UK, operate in extreme conditions from -40°C to +75°C and come with an AMG Lifetime Support Warranty.



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## AMG350 SERIES UNMANAGED SWITCHES

Available in DIN rail & rack card types with port counts from 4-16 ports.

These units are manufactured in the UK, operate in extreme conditions from -40°C to +75°C and come with an AMG Lifetime Support Warranty.

## SFP MODULES OPTICAL & COPPER TRANSCEIVERS

AMG's optical & copper transceivers are compliant with the Small Form-Factor Pluggable (SFP) Multi-Source Agreement (MSA) standards.

All AMG optical SFP modules feature Digital Diagnostic Monitoring (DDM) as standard.

They offer previously unavailable system cost, upgrade, and reliability benefits by virtue of being hot-pluggable.

These units operate in extreme conditions from -40°C to +85°C and come with an AMG Lifetime Support Warranty.



## AMG750 INDUSTRIAL 4G/LTE POE ROUTER

AMG's 4G/LTE Routers allow secure & reliable transmission over the public cellular network providing off-grid sites or mobile applications with a robust high-speed cellular and/or WAN connection.

Supporting dual SIM cards for multiple provider fail-over redundancy.

These units operate in extreme conditions from  $-40^{\circ}$ C to  $+75^{\circ}$ C and come with an AMG Lifetime Support Warranty.





SD/HD VIDEO optical fibre.

Support for camera resolutions up to 1960p with SD, HD, 2/3/4/5 megapixel camera types supported from all major brands.

These units are designed in the USA & UK and manufactured in the UK, operate in extreme conditions from -40°C to +75°C and come with an AMG Lifetime Support Warranty.

CONTACT CLOSURE AMG's Contact Closure product range provides digital transmission of contact closure channels for remote input detection and relay control over multi-mode or single-mode optical fibre.

These units are designed in the USA & UK and manufactured in the UK, operate in extreme conditions from -40°C to +75°C and come with an AMG Lifetime Support Warranty.

SERIAL DATA

These units are designed in the USA & UK and manufactured in the UK, operate in extreme conditions from -40°C to +75°C and come with an AMG Lifetime Support Warranty.

## AMG8870F WIRELESS ETHERNET RANGE

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.

These units operate in extreme conditions from -40°C to +65°C and come with an AMG Lifetime Support Warranty.



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# **AMGFIB** SERIES FIBRE TRANSMISSION



AMG's SD & HD video product range provides transmission of CVBS (PAL, NTSC, SECAM), CVI, TVI & AHD video formats along with optional serial data and contact closure signals over multi-mode or single-mode

AMG's Serial Data product range provides digital transmission of serial data and contact closure channels for remote input detection and relay control over multi-mode or single-mode optical fibre.





# AMGPSU SERIES

#### AMG POWER SUPPLY RANGE

AMG's Power Supply range offers a complete line of commercial & industrial devices to provide high quality & reliable power for all AMG equipment in any environment. They are available with voltages from 12-56vdc & output powers from 15-480W.

These units operate in extreme conditions from  $-40^{\circ}$ C to  $+70^{\circ}$ C.



# Accessories

# AMG510-RB55 **RECESSED MOUNTING BRACKETS**



# AMG2034

#### AMG PULL-OUT AND RETRACTABLE 19INCH RACK

AMG's 19inch Racks provide easy to use and elegant mounting solutions for many of the AMG products in standard rack cabinets fitted with 19inch rails. 4U height with single or dual redundant power supply options.

These units are designed in the USA & UK and manufactured in the UK and come with an AMG Lifetime Support Warranty.



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## AMG2035 90° DIN RAIL MOUNTING BRACKET

Industrial grade, 90 degree DIN rail wall mounting bracket with extension, supports single or dual unit mounting for depth restricted installations (wall fixing screws not included).







Pair of recessed mounting brackets for AMG510 Series switches. Enables the switch to be recessed 55mm from the front of the 19inch rack allowing for improved clearance for RJ45 & fibre patch cables.



# Celebrating 30th Anniversary



# Standards We Comply With

AMG Systems products are also NDAA and TAA compliant.

AMG Transmission Products exceed the NEMA TS-2 Standard for use in unconditioned roadside environments, tested for shock,  $-40^{\circ}$ C to  $+75^{\circ}$ C ambient operating temperature, mechanical shock, vibration, humidity with condensation, high-line/low-line voltage conditions and transient voltage protection.

cyber attacks.

AMG gather staff from around the globe to celebrate their 30th Anniversary.

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

AMG Systems now have the NCSC Cyber Essentials certification effective, which is a Government backed minimum standard scheme that protects against the most common









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For more up-to-date and more detailed information about our products, company news, events and policies you can visit our website where you will find:

- Terms and Conditions Carbon Reduction Policy Anti-Slavery Policy
- **Product Information:**
- Detailed Hardware Specifications Software Specifications **Dimensional Drawings**
- Series Manuals & Data sheets
- Company News and Events AMG Powered - 3rd Party Device Testing





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