

# 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 fibre 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.



|                    |                     |                      |                     |                         |                |
|--------------------|---------------------|----------------------|---------------------|-------------------------|----------------|
|                    |                     |                      |                     |                         |                |
| 10/100<br>up to x2 | Gigabit<br>up to x2 | 100/1000<br>up to x2 | Temp<br>-40°C~+75°C | Mounting<br>DIN/Surface | PSU<br>x2 Dual |

[ 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 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 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
- Manufactured in the United Kingdom
- AMG Lifetime Support Warranty

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

## Power.

|                    |                                       |
|--------------------|---------------------------------------|
| Power Inputs       | 2                                     |
| Operating Voltage: |                                       |
| Non-PoE Models     | 10-36V <sub>DC</sub>                  |
| 30W PoE Models     | 48-56V <sub>DC</sub>                  |
| 90W PoE Models     | 52-56V <sub>DC</sub>                  |
| 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,<br>Overload Current |
| Fault Relay        | Form A<br>60V @ 2A Max                |

## Packaging.

|                 |                                                          |
|-----------------|----------------------------------------------------------|
| Shipping Weight | 0.52kg / 1.15lb                                          |
| Dimensions      | (W x D x H)<br>175 x 160 x 50 mm<br>6.89 x 6.3 x 1.97 in |

## Mechanical.

|                             |                        |
|-----------------------------|------------------------|
| Housing                     | Anodised Aluminium     |
| Dimensions:                 | (W x D x H)            |
| Excluding DIN & Wall Mounts | 35 x 88 x 108 mm       |
| Including DIN & Wall Mounts | 1.38 x 3.46 x 4.25 in  |
| IP Rating                   | IP30                   |
| Installation                | Wall Mount or DIN-Rail |
| Weight                      | 0.3kg / 0.66lb         |

## Environmental.

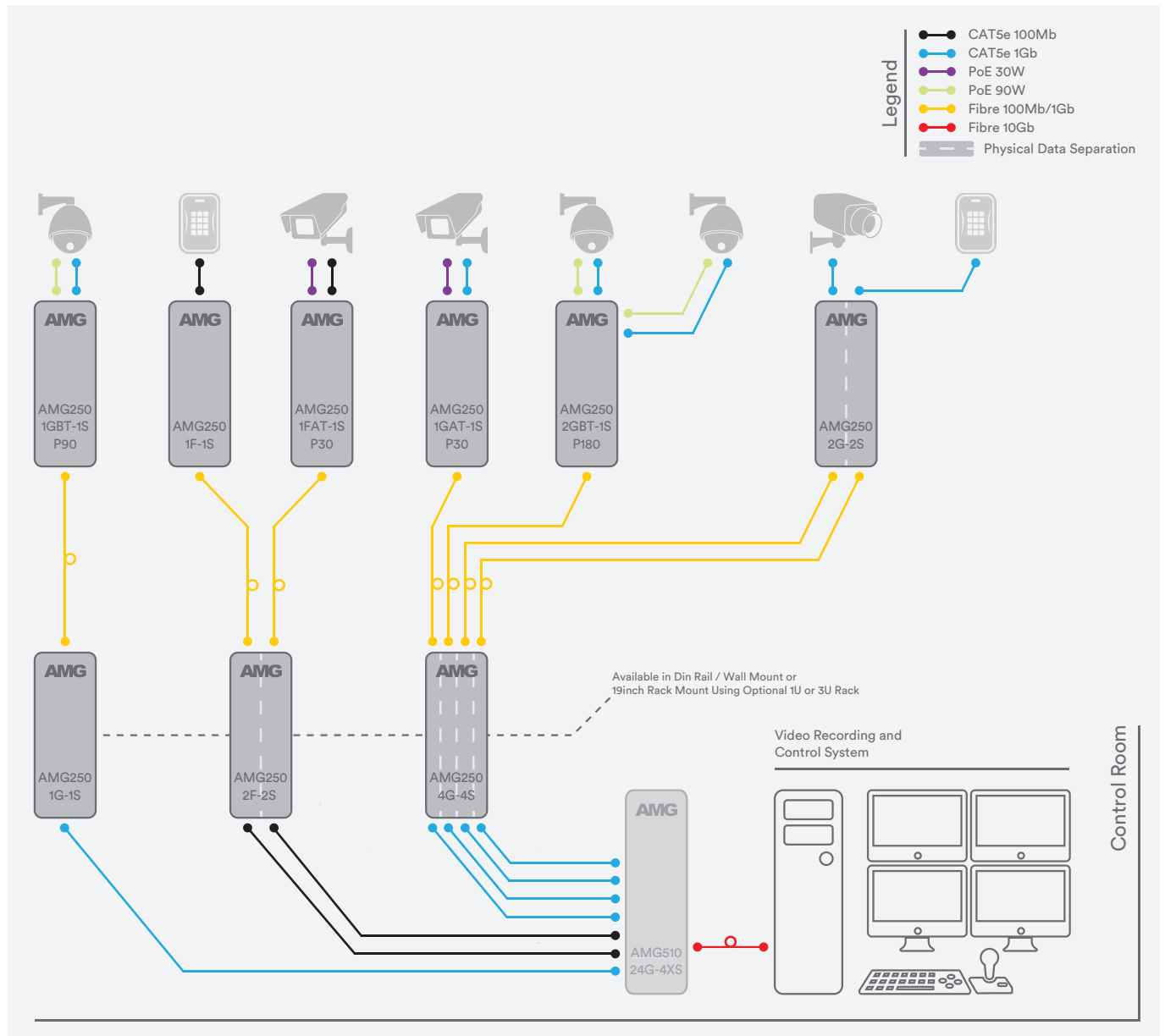
|                  |                                                                                                                                                             |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|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

## Regulatory.

|               |                                                                                                                                                           |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Safety        | IEC/EN 62368-1                                                                                                                                            |
| EMI           | EN 55032 Class A<br>CISPR 32                                                                                                                              |
| EMS           | FCC Part 15B Class A<br>EN 61000-4-2 (ESD)<br>EN 61000-4-3 (RS)<br>EN 61000-4-4 (EFT)<br>EN 61000-4-5 (Surge)<br>EN 61000-4-6 (CS)<br>EN 61000-4-8 (PFMF) |
| Shock         | IEC 60068-2-27                                                                                                                                            |
| Free Fall     | IEC 60068-2-32                                                                                                                                            |
| Vibration     | IEC 60068-2-6                                                                                                                                             |
| Environmental | IEC 60068-2-1 (-40°C Cold)<br>IEC 60068-2-2 (+75°C Hot)<br>IEC 60068-2-14 (Temp Change)                                                                   |
|               | Reach<br>RoHS<br>WEEE                                                                                                                                     |

Designed to meet NEMA TS2 & EN 50121-4

# Application Diagram.



# 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-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-I48L-P120    DIN-Rail Mounting Light Industrial Grade PSU, -20 to +60°C, 48-55VDC, 120W  
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

# Notes.

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

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](http://www.amgsystems.com) for the latest product specifications.*