

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 x1	 VDSL2 x1	 Temp -20~+65°C	 Mounting DIN/Surface	 Protection IP30
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/ 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 4x2x0.8 or J-Y(ST)Y 6x2x0.6 etc twisted pair cable
- Supports ITU-T G.993.5, G.vectoring and G.INP
- AMG Lifetime Support Warranty

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) 175 x 160 x 50 mm 6.89 x 6.3 x 1.97 in

Mechanical.

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

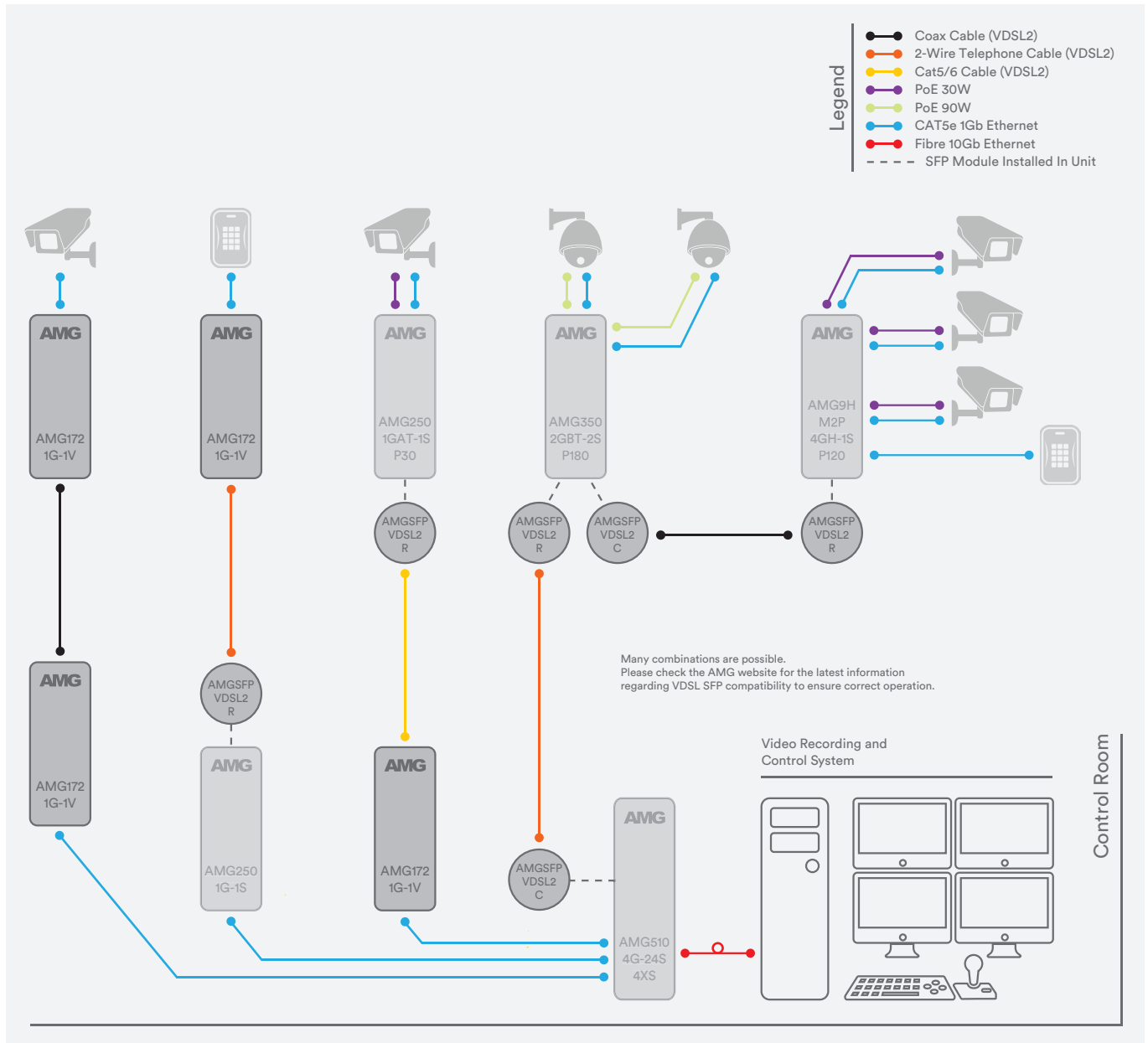
Environmental.

Operating Temp.	-20°C to +65°C
Storage Temp.	-40°C to +85°C
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

Application Diagram.



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.

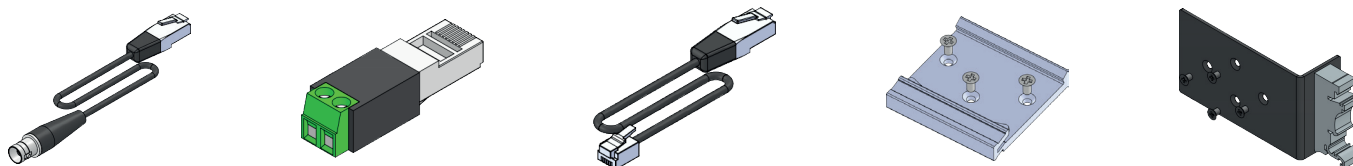
RJ45 to Coax Cable
 RJ45 to 2-Wire Adapter
 RJ45 to RJ11 Cable

RJ45 to Coax Adapter Cable For Use With VDSL2 Port & Coaxial Cable
 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 Adapter Cable For Use With VDSL2 Port & Legacy Telephone Sockets & Cable

Rear DIN Rail Adapter
 or
 Side DIN Rail Adapter^

Rear Mounted Metal DIN Rail Clip & Screws For DIN Rail Mounting AMG172 Series Products (Silver)
 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.

AMG2001 Desktop Commercial Grade PSU, 15VDC, 15W
 AMGPSU-I12-P24 DIN-Rail Mount Industrial Grade PSU, 12VDC, 24W

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.