







# AMG173 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.



 Gigabit x1	 VDSL2 x1	 Temp -20~+65°C	 Mounting DIN/Surface	 Protection IP30	 NDA/TAA Compliant
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[ AMG173-1G-1V ]

### / OVERVIEW

The AMG173 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)
- Supports VDSL2 profiles 35b / 30a / 17a
- 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
- Integrated surge protection
- 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 <sub>DC</sub>
Power Consumption	4.5W Max
Protection	Reverse Polarity Overload Current

## Packaging.

Shipping Weight	0.43kg / 0.95lb
Dimensions	(W x D x H) 220 x 170 x 40 mm 8.66 x 6.69 x 1.57 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	0.22kg / 0.49lb

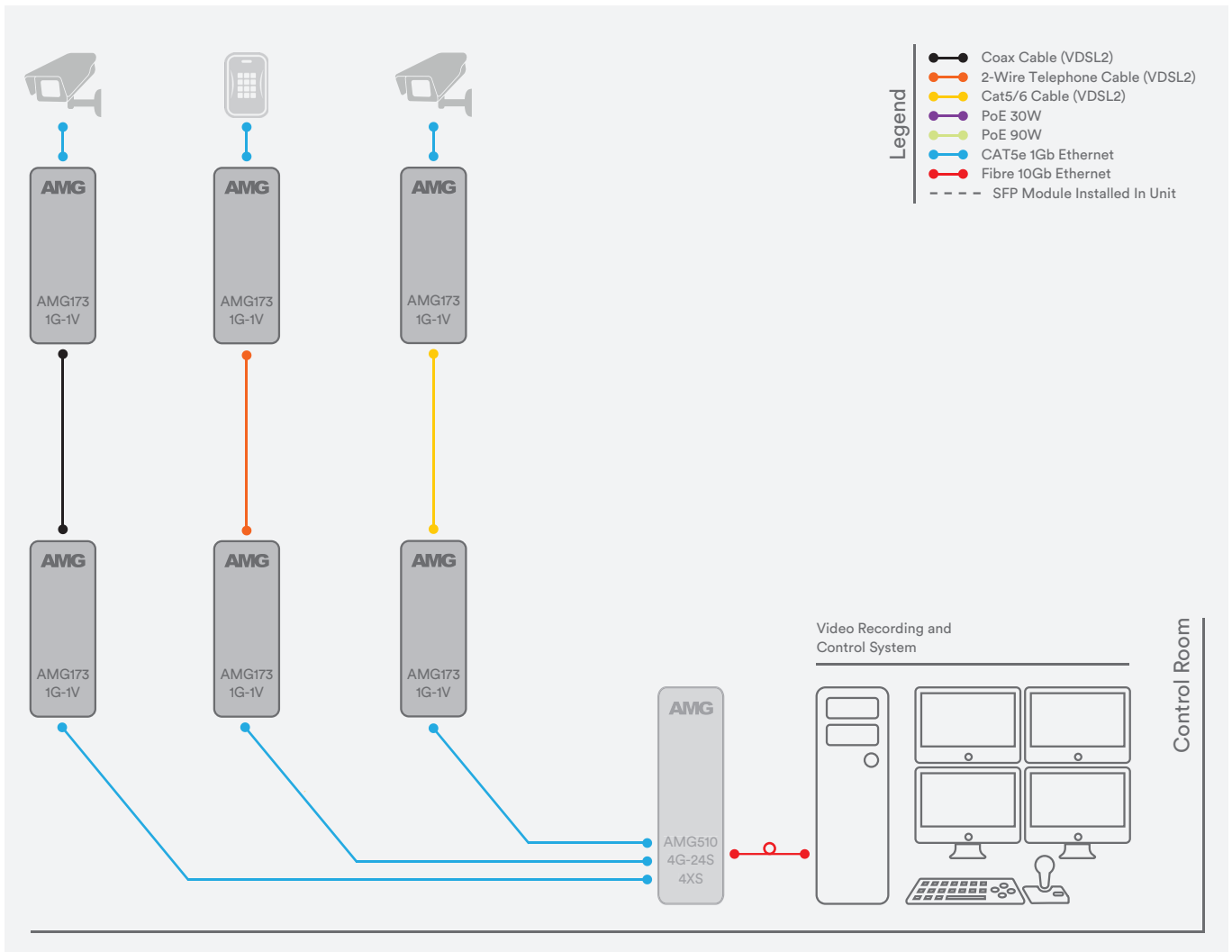
## Environmental.

Operating Temp.	-20 to +65°C / -4 to +149°F
Storage Temp.	-40 to +70°C / -40 to +158°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

# Application Diagram.



# Data Rate Performance.

UTP Cable - 26AWG (0.45mm)			
Profile Setting: <b>Symmetric</b> , SNR Low, G.INP			
Distance (m)	Distance (ft)	Central to RT Speed (Mbps)	RT to Central Speed (Mbps)
150	492	162	146
300	984	112	116
600	1,968	61	35
900	2,953	30	28

UTP Cable - 26AWG (0.45mm)			
Profile Setting: <b>Asymmetric</b> , SNR Low, G.INP			
Distance (m)	Distance (ft)	Central to RT Speed (Mbps)	RT to Central Speed (Mbps)
150	492	284	64
300	984	171	59
600	1,968	67	31
900	2,953	35	10

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

AMG173-1G-1V

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

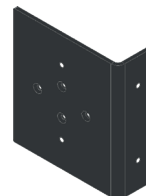
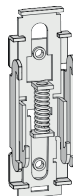
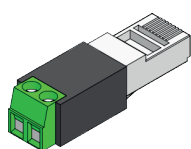
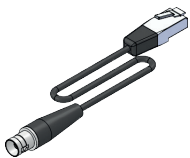
## Included Accessories.

RJ45 to Coax Cable  
RJ45 to 2-Wire Adapter

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.)

DIN Rail Clip  
Rear/Side DIN Adapter

Metal DIN Rail Clip & Screws For DIN Rail Mounting AMG173 Series Products  
Adapter Plate & Screws For Rear Or Side DIN Rail Mounting AMG173 Series Products



## Recommended PSUs.

AMGPSU-W12-P25  
AMGPSU-I12-P24

Plug Top Mounting Light Industrial Grade PSU, 0 to +70°C, 12VDC, 25W, UK/EU/US Plug Heads Included  
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-I12-P24-K).

*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.*