

# AMG160 SERIES INDUSTRIAL ETHERNET EXTENDERS OVER UTP WITH 30/60/90W POE



## Industrial Ethernet Solutions

AMG's Extend-Net™ industrial Ethernet extenders provide 10/100Mb Ethernet over long distances of UTP cable with support for pass-through 30W or 60/90W PoE. These single channel models feature dual RJ45 ports and support distances up to 1km.



 10/100 x1	 Extender UTP x1	 PoE 30/60/90W	 Temp -40°C~+75°C	 Mounting DIN/Surface	 Protection IP40	 NDA/TAA Compliant
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[ AMG160-1F-1EU ]

### / 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 UTP cables such as Cat5/6.

Distances up to 550m (1,800 ft) @ 100Mb speed and 1000m (3,280 ft) @ 10Mb speed are possible over standard UTP cables with automatic 1-pair or 4-pair cable selection.

The AMG160 UTP 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 operating temperature range at extended distances.

A 24-56V<sub>DC</sub> 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, 60W & 90W PoE Pass-Through
- Integrated surge protection on Extend-Net™ port
- Unicast, Multicast & Jumbo Frames are supported along with full symmetrical bandwidth performance
- Designed in the USA & UK. Manufactured in the United Kingdom
- AMG Lifetime Support Warranty

# Specifications.

## Standards.

IEEE802.3i	10Base-T
IEEE802.3u	100Base-TX
IEEE802.3af	15W PoE
IEEE802.3at	30W PoE+
IEEE802.3bt	60 & 90W PoE

Jumbo Frames	10Kbytes
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## Interface.

LED Indicators	1x Power Ethernet Link/Activity Ethernet 100Mb Speed Extend-Net™ Link/Activity Extend-Net™ 100Mb Speed
Ethernet Port	1x 10/100TX RJ45 with Auto MDI/MDI-X and 1.5 kV Isolation Protection
Extend-Net™ Port Power	1x RJ45 with Surge Protection 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 <sub>DC</sub> 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 Pairs:	
No PoE	Requires 1 or 4 Pair Cable
PoE	Requires 4 Pair Cable
Cable Types	Cat 3/5/5e/6/7

## 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

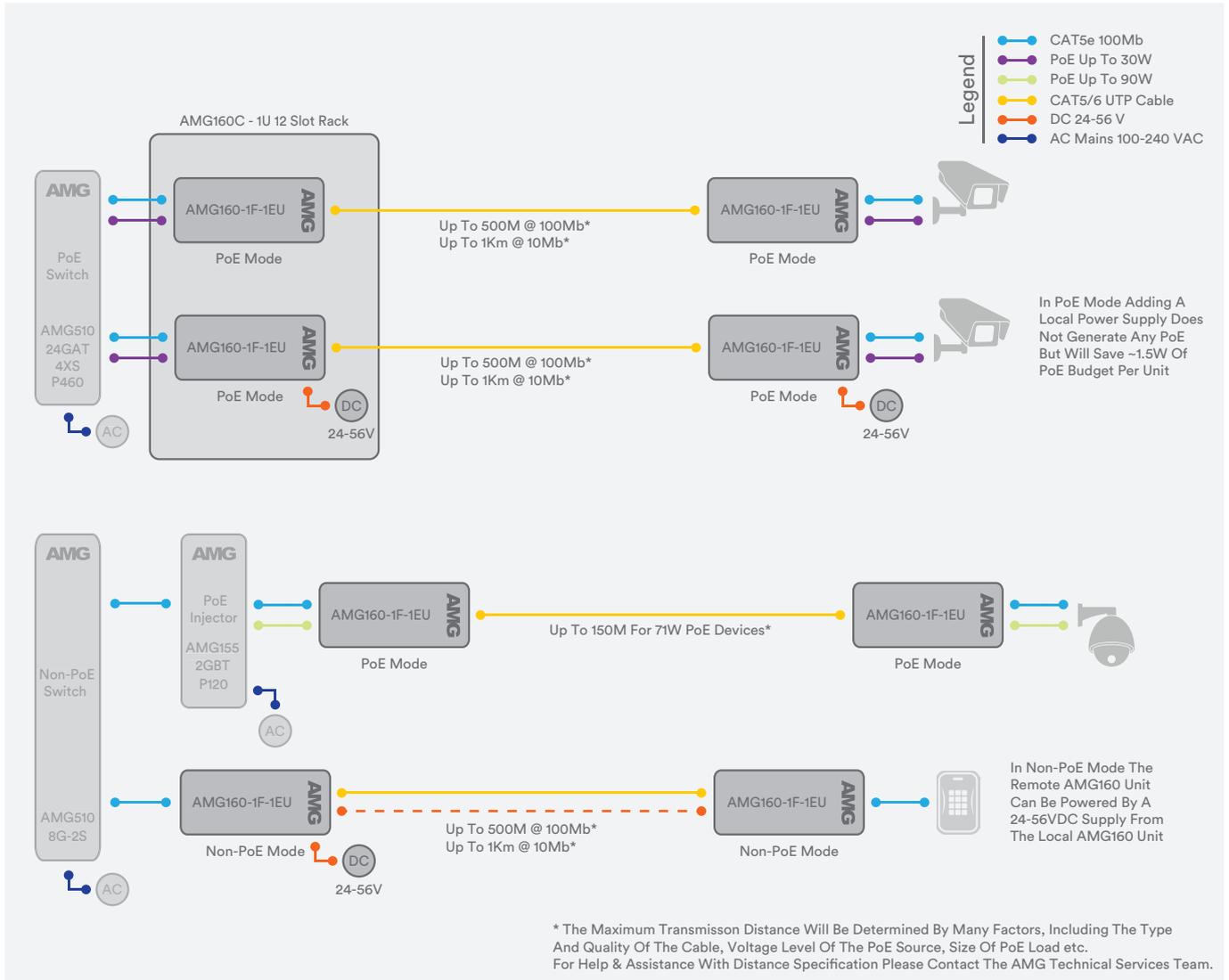
## Environmental.

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) 107 BTU/h (30W) 312 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	

# Application Diagram.



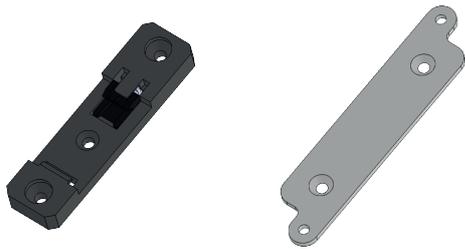
# Part Numbers.

## Extend-Net™ Single Channel Industrial Ethernet Extenders over UTP

AMG160-1F-1EU	1 x 10/100BaseT(x) RJ45, 1 x Extend-Net™ UTP Ethernet Extender RJ45
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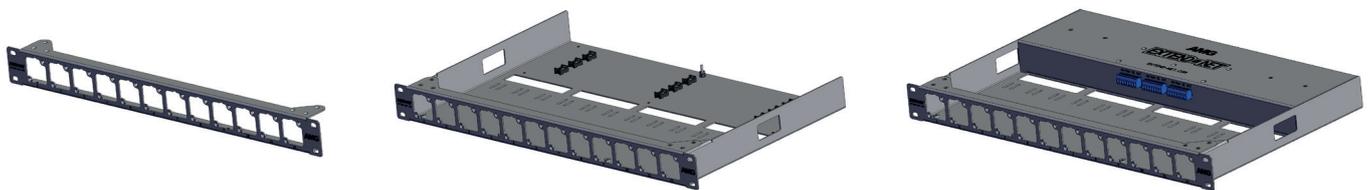
## Included Accessories.

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*
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\* 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. Pass-Through PoE is only possible in 4-pair mode.

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.

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