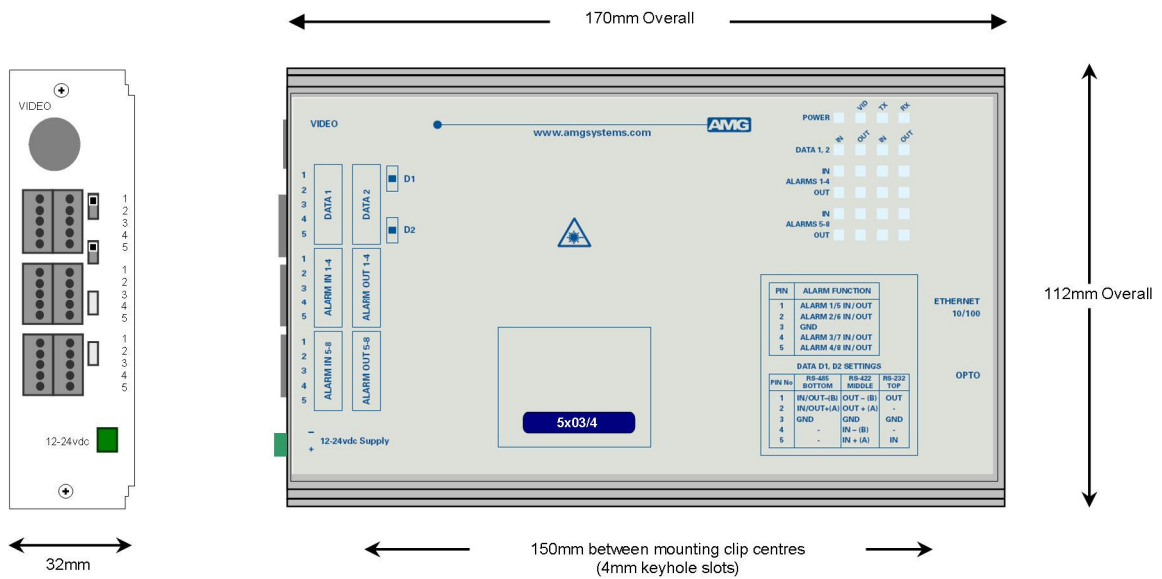




# AMG5801 Instruction Manual

## 100BASE-TX Ethernet Media Converter Transmit Unit for a Multimode Fibre Link



The **AMG5801** is a standalone Ethernet Media Converter transmit unit designed to provide 100BASE-TX full duplex Ethernet connectivity over one multimode fibre.

The **AMG5801** is designed to be powered using an **AMG2001** standalone power supply.

The **AMG5801** is designed to operate with an **AMG5802** standalone or **AMG5802R** rackmount Ethernet data receive unit in a point to point configuration.

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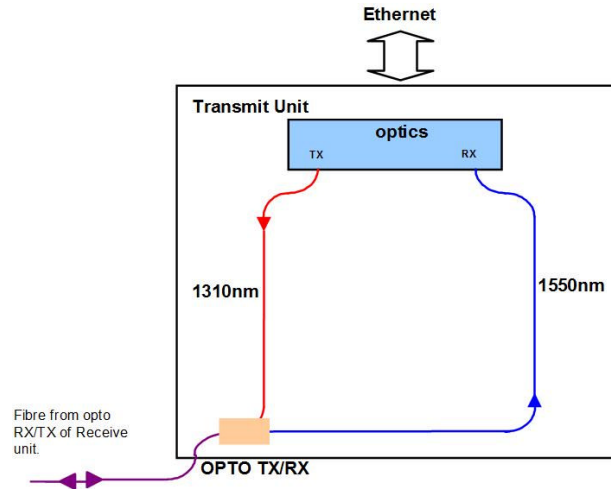
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## Introduction

### Unit Functional Schematic

The **AMG5801** transmits Ethernet data to the **AMG5802R** receive unit.

It also receives Ethernet data transmitted from the **AMG5802R**.



### Optical Connection

The **AMG5801R** connections are illustrated in the following example which shows an **AMG5801R** data transmit unit together with an **AMG5802R** rackmount data receive unit configured as a point to point system.



## Connections

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### **Optical Connection Multimode**

Optical Fibre .....Multimode 50/125 or 62.5/125\*\*  
Connector .....SC/PC

Minimum Optical Launch Power .....-10dBm  
Transmit Wavelength ..... 1310nm  
Minimum Optical Sensitivity .....-30dBm  
Receive Wavelength ..... 1550nm  
Minimum Optical Dynamic Range .....20dB.

\*\*Note: the transmission distance is limited by the bandwidth of the Multimode optical fibre. The optical data rate is 155Mbps/s, which may restrict operation to a maximum fibre length of 7km, although in most cases the units will operate successfully over longer fibre lengths. It is advisable however for distances greater than 7km, to have the optical fibre tested.

### **Power Connection**

Connector Type .....Removable 2-pin, 3.81mm, Screw Terminal  
Connector Partno.....Phoenix 1803578  
Supply Voltage.....+12 to +15 Volts DC  
Maximum Power .....5 Watts

### **Ethernet Connection**

Ethernet Data Connector .....RJ45  
Interface .....Auto MDI/MDIX 100BASE-TX  
Ethernet Data Rate .....Maximum 100Mb/s full duplex

## **Front Panel Indicators**

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### **Power LED**

POWER .....	Green	-	Power is present
	Off	-	Power is not present
VIDEO .....	Off	-	Not used
OPTO TX.....	Green	-	Tx opto. present
	Off	-	Tx opto. is not present
OPTO RX .....	Green	-	Rx opto. sync.
	Off	-	Rx opto. is not sync.

### **Ethernet Data LEDs**

Link not Present .....	Yellow	-	Link not present
	Off	-	Link is present
Link Integrity .....	Green	-	Link integrity is good, Idle state
	GBlink	-	Data transfer
	Off	-	Link not present

## ***Ethernet Operation***

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The Ethernet interface supports "Auto-Negotiation" and will operate at either 10Mbits/s half duplex or 100Mbit/s full duplex. Data is transmitted from one port the other port with minimum delay or buffering.

The port also implements "Auto MDI/MDIX" i.e. it may be connected with aeither a straight-though or cross-over cable to an appropriate device such as external switch, PC or other DCE/DTE.

Two LED indicators are provided adjacent to the RJ-45 port: Green indicates Link / Data transfer and Yellow when in half-duplex mode.

## **Physical Information**

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### **Dimensions**

Height ..... 112mm  
Width ..... 170mm (excluding connectors)  
Depth ..... 7HP  
Weight ..... 1000grams

### **Mounting Details**

The AMG unit is supplied with a clip-on mounting bracket which should be attached to a panel or wall using 2 off 4.0mm screws, see diagram on page 1 for dimensions. The unit is clipped into the mounting bracket, and is then held firmly in position.

## **Safety**

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AMG Optical Fibre Products use Class 1 laser systems in accordance with EN 60825-2:2000.

It is always advisable to follow good practice when working with optical fibre systems. This includes:

- Do not stare with unprotected eyes or with any unapproved collimating device at fibre ends or connector faces, or point them at other people.
- Use only approved filtered or attenuating viewing aids

For other safety issues and advice on good practice associated with optical fibre systems, please see EN 60825-2:2000 or your local safety officer.

## **Maintenance and Repair**

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There are no user serviceable parts within AMG products. See unit data sheet for full specification. In case of problem or failure, please call your local support centre or contact: **AMG Systems Ltd.** at 3 The Omega Centre, Stratton Business Park, Biggleswade, Beds., SG18 8QB, UK.

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