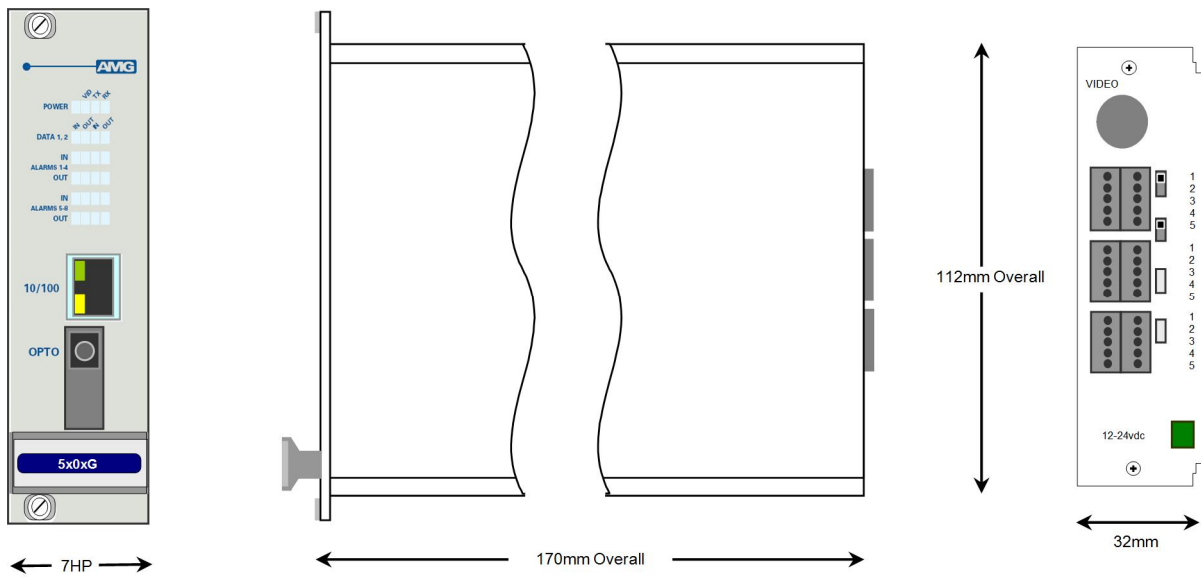


# AMG5902HPG Instruction Manual

## 100BASE-TX Ethernet Media Converter Receive Unit for a Singlemode Fibre Link with High Power Optical Transceivers



The **AMG5902HPG** is a rackmount Ethernet Media Converter receive unit designed to provide 100BASE-TX full duplex Ethernet connectivity over one singlemode fibre. The HP suffix in the partno. indicates High Power optical transceivers.

The **AMG5902HPG** is designed to be powered using an **AMG2003** standalone or equivalent power supply. The G suffix in the partno. indicates a 3rd party subrack mounting configuration.

The **AMG5902HPG** is designed to operate with an **AMG5901HP** standalone or **AMG5901HPG** rackmount Ethernet data transmit unit in a point to point configuration.

# Contents

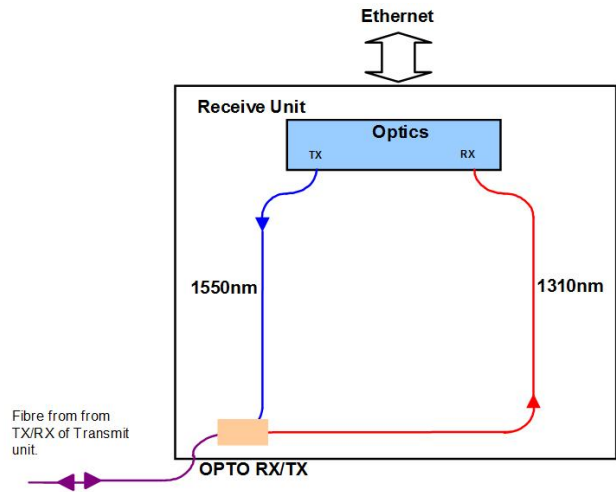
|                                     |          |
|-------------------------------------|----------|
| <b>Introduction</b>                 | <b>3</b> |
| Unit Functional Schematic.....      | 3        |
| Optical Connection .....            | 3        |
| <b>Connections</b>                  | <b>4</b> |
| Optical Connection Singlemode ..... | 4        |
| Power Connection .....              | 4        |
| Ethernet Connection .....           | 4        |
| <b>Front Panel Indicators</b>       | <b>5</b> |
| Power LED.....                      | 5        |
| Ethernet Data LEDs.....             | 5        |
| <b>Ethernet Operation</b>           | <b>5</b> |
| <b>Physical Information</b>         | <b>6</b> |
| Dimensions .....                    | 6        |
| Mounting Details.....               | 6        |
| <b>Safety</b>                       | <b>6</b> |
| <b>Maintenance and Repair</b>       | <b>6</b> |

## Introduction

### Unit Functional Schematic

The **AMG5902HPG** transmits Ethernet data to the **AMG5901HPG** transmit unit.

It also receives Ethernet data transmitted from the **AMG5901HPG**.



### Optical Connection

The **AMG5902HPG** connections are illustrated in the following example which shows an **AMG5901HPG** data transmit unit together with an **AMG5902HPG** rackmount data receive unit configured as a point to point system.



## Connections

---

### **Optical Connection Singlemode**

Optical Fibre ..... Singlemode  
Connector ..... SC/PC

Primary Optical Launch Power ..... 0dBm  
Transmit Wavelength ..... 1550nm

Primary Optical Sensitivity ..... -34dBm  
Receive Wavelength ..... 1310nm

Minimum Optical Dynamic Range ..... 34dB.

### **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**

---

### **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**

---

The Ethernet interface supports 100Mbit/s full duplex operation only. Data is transmitted from one port the other port with minimum delay or buffering.

The port implements "Auto MDI/MDIX" i.e. it may be connected with either a straight-through 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 indicates no Ethernet connection.

## **Physical Information**

---

### **Dimensions**

Height.....3U Plug-in  
Width.....7HP  
Depth .....170mm excluding connectors  
Weight.....1000grams

### **Mounting Details**

The unit is designed to be mounted within a non AMG Subrack on standard card guides.

## **Safety**

---

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**

---

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.

|                   |                            |
|-------------------|----------------------------|
| Phone             | +44 (0) 1767 600 777       |
| Technical Support | +44 (0) 1767 604 491       |
| Email             | techsupport@amgsystems.com |

This page is intentionally blank.

This page is intentionally blank.