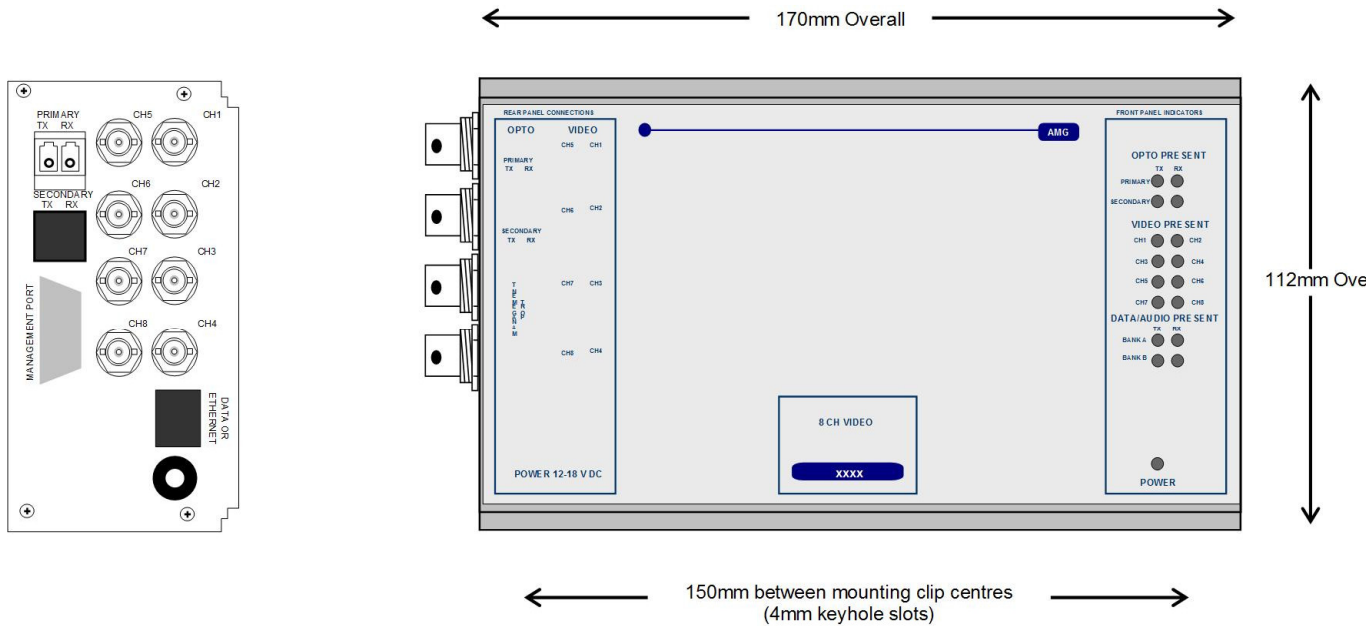


## 8 Channel Video Transmit Unit operating at 1550nm wavelength with integral WDM Coupler



The **AMG4681-1550-C** is a standalone eight channel video transmit unit designed to transmit 8 video signals to an **AMG4682-1550-C** or rackmount equivalent **AMG4682R-1550-C**, 8 channel receiver. It requires one Multimode optical fibre for the transmission of the video. It incorporates a 1550nm/1310nm wavelength division multiplexer. This allows the user to combine a signal from a unit transmitting at 1310nm wavelength onto the same fibre.

The **AMG4681-1550-C** is designed to be powered using an **AMG2003** standalone power supply.

The **AMG4681-1550-C** is designed to operate with **AMG4682-1550-C** or rackmount equivalent **AMG4682R-1550-C** eight channel video receive unit in a point to point configuration.

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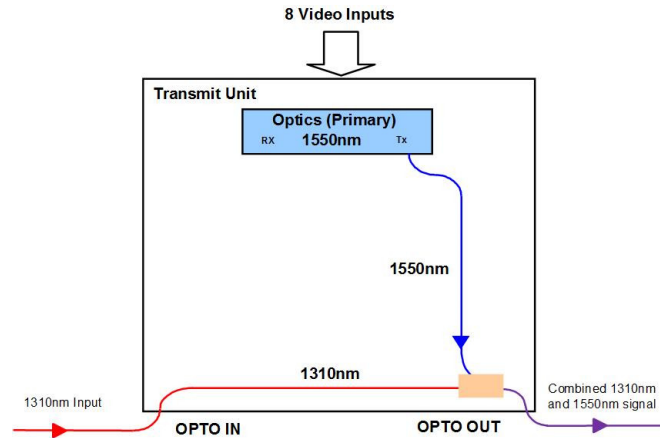
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# Introduction

## Unit Functional Schematic

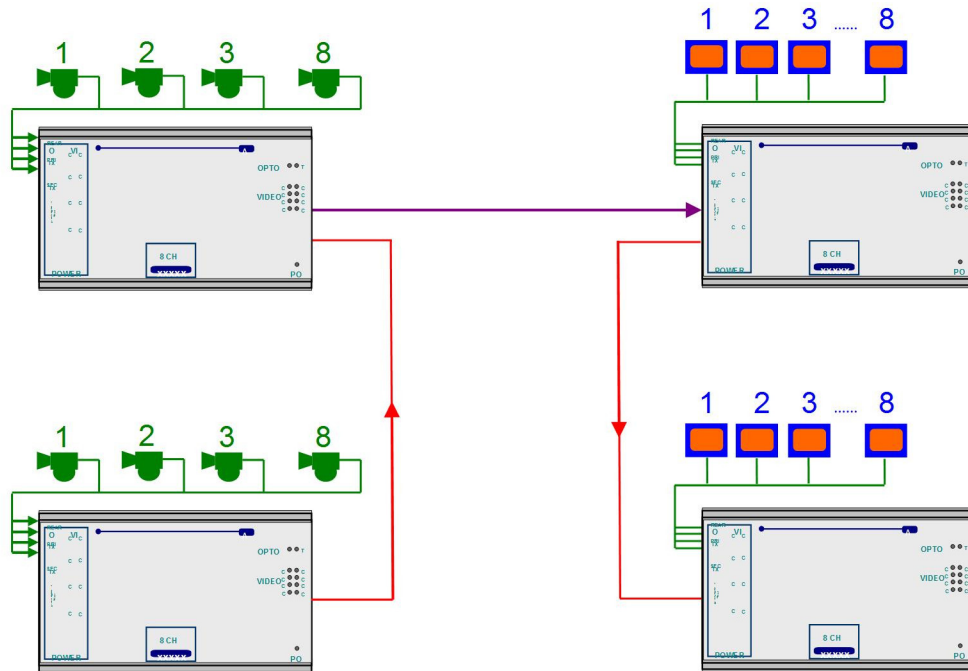
The **AMG4681-1550-C** transmits up to 8 video signals to a **AMG4682-1550-C**.

It incorporates a 1550nm/1310nm wavelength division multiplexer. This allows the user to combine a signal from a unit transmitting at 1310nm wavelength onto the same fibre.



## Optical Connection

The **AMG4681-1550-C** is connected as illustrated below when used with an **AMG4682-1550-C** 8-channel receive unit acting as a point to point system.



## Connections

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### Video Input Connections

No. of channels .....8  
Connector .....75 ohm BNC Socket.  
Input Impedance .....75 ohm terminated.  
Input Level .....1 volt p-p nominal  
Frequency Response.....10Hz to 7MHz.

### Optical Connections

#### PRIMARY OPTO OUT

This carries the 1550nm signal from this unit together with a 1310nm signal from an additional 1310nm unit.

Connector .....LC/PC  
Primary Optical Launch Power .....-6dBm  
Wavelength .....1550nm & 1310nm  
Optical Fibre .....Multimode 50/125 or 62.5/125\*\*

#### PRIMARY OPTO IN

1310nm signal input

Connector .....LC/PC  
Wavelength .....1310nm  
Optical Fibre .....Multimode 50/125 or 62.5/125\*\*

\*\*Note: the transmission distance is limited by the bandwidth of the Multimode optical fibre. The optical data rate is 1.25Gbits/s. The maximum bandwidth specification at this data rate for Multimode fibre is 500m. although in most cases the units will operate successfully over longer fibre lengths. It is advisable however for distances greater than 500m, to have the optical fibre tested.

### Power Connection

Connector Type .....2.1mm screw lock long power jack – centre positive  
Connector Partno.....Switchcraft S761K, AMG G16125-00  
Supply Voltage.....13.5 to 18.0 Volts DC.  
Maximum Power .....5 Watts

## **Front Panel Indicators**

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### **Power LED**

Power .....	Green	-	unit powered
	Off	-	no power applied to unit

### **Video Input LED's**

Video Present CH1-8 .....	Green	-	video signal present on input BNC
	R/G	-	channel present but no video on I/P BNC

### **Fibre Optic LED's**

Primary Opto Sync TX.....	Green	-	optical channel transmitting
	Off	-	optical channel not transmitting

Primary Opto Sync RX ..... Not used

## **Physical Information**

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### **Dimensions**

Height..... 112mm  
Width..... 170mm (excluding connectors)  
Depth ..... 70mm  
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.

### **Removal / replacement from / to the Case**

Note: - The AMG unit PCB's are static sensitive. Handle with proper care and use normal electrostatic discharge (ESD) procedures. Use properly grounded protection (for example, wrist straps) when handling the PCB.

To remove units from the case to access the data expansion boards and the daughter boards, remove the 2 or 4 fixing screws on the rear panel and slide the PCB's out of the case. Ensure that the fibres do not snag or get trapped.

To replace the PCB's into the case, slide the PCB's gently into the case aligning the boards with the appropriate slots. Ensure that the fibre do not snag or get trapped.

## **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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