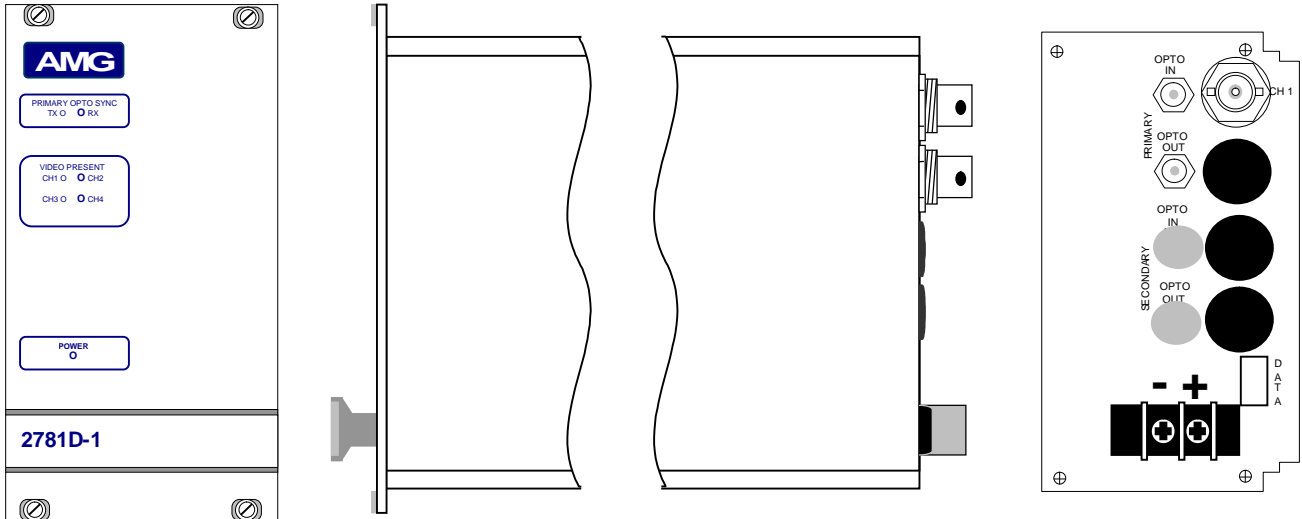




AMG2781D-1 Instruction Manual

Single Channel Video Insert Unit



AMG2781D-1 is a single channel video insert unit designed to transmit a video signal on to a single optical fibre. The **AMG2781D-1** unit is supplied mounted in a 3U 19" subrack frame as shown below.

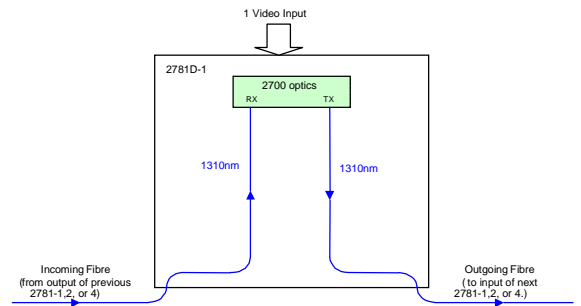


The **AMG2781D-1** is designed to operate with the **AMG2782R** eight channel video receivers. Each receiver will 'drop off' up to eight video channels which are being transmitted on a single fibre spur.

Introduction

Unit Functional Schematic

The **AMG2781D-1** receives a 1310nm optical signal and inserts a video signal onto the outgoing 1310nm optical signal. The video signal is inserted on 1 of 8 channels available on the optical signal. The insert channel number is set by SW1 inside the unit (see below). If the video channel is set to a channel that already has a video signal on it, this unit will over-write this in-coming video signal.



Connections

Video Input Connection

Connector 75 ohm BNC Socket.
 Input Impedance 75 ohm terminated.
 Input Level 1 volt p-p nominal
 Frequency Response 10Hz to 5.75MHz min.
 See below for **video input channel configuration**

Optical Connections

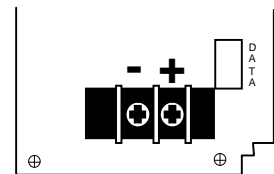
OPTO OUT
 Connector FC/PC
 Primary Optical Launch Power -5dBm
 Wavelength 1310nm

OPTO IN
 Connector FC/PC
 Primary Optical Sensitivity -22dBm
 Wavelength 1310nm

Power Connection

Connector screw terminal connector
 Power requirement 12 volts to 16 volt DC @ 500mA

Connections See schematic
 +ve in right hand terminal



Indicators

| | | |
|-------------------------|-------|---|
| Power | Green | - unit powered |
| | Off | - no power applied to unit |
| Opto Sync TX | Green | - Optical channel transmitting |
| | Off | - Optical channel not transmitting |
| Opto Sync RX | Green | - Optical channel receiving |
| | Off | - Optical channel not receiving |
| Video Present CH1 | Green | - video signal present on video input BNC |
| | Off | - no video present on video input BNC |

Physical Information

Dimensions

Height 3U
Width..... 19" rackmount
Depth 280mm
Weight..... 1000grams

Mounting Details

The unit is designed to be mounted in a 19" rack

Video input channel configuration

The video present on the video input can be inserted on one of eight video channels transmitted on the optical fibre. The input channel number is set by SW1 on the primary channel TX board. (See below for **removal of the PCB** and access to SW1)

The channel number is set by the SW1 switch positions 1 to 3 – see below.

| Video Input Channel Number | SW1 position 1 | SW1 position 2 | SW1 position 3 |
|----------------------------|----------------|----------------|----------------|
| 1 | OFF | OFF | OFF |
| 2 | ON | OFF | OFF |
| 3 | OFF | ON | OFF |
| 4 | ON | ON | OFF |
| 5 | OFF | OFF | ON |
| 6 | ON | OFF | ON |
| 7 | OFF | ON | ON |
| 8 | ON | ON | ON |

It is normal to set each AMG2700 insert unit to a different channel number. If a number is used twice the second unit connected 'down stream' on the primary optical route will 'over-write' the first unit and the video signal will be lost.

Only switch positions 1 to 3 should be set by the user, all other switch settings are set at the factory.

Removal From the Case

Note: - The 2700 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. The switch positions can be accessed without pulling out the boards from the case fully. It is recommended that the boards are slid out just sufficient to access the switches (~40mm) in order to reduce the possibility of damage to the optical fibres and electrical circuits.

In order to remove the case (to access SW1)

- 1.1. Loosen and remove the four screws on the top and bottom of the unit's rear panel.
- 1.2. Slide the PCB assembly connected to the rear panel back from the case.
- 1.3. Ensure that the optical fibre is not trapped.

SW1 can be found on the bottom right hand corner of each board, close to the rear panel and is labelled. The switch positions are labelled on the switch, switch position 1 is always the furthest from the edge of the PCB.

When re-inserting the main PCB into the housing take care not to trap the optical fibre or the board interconnection cables.

Fasten the rear panel with the screws.

Safety

The 2700 series of products uses a Class 1 laser system in accordance with EN 60825-2:2000.

However 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 the optical fibres systems see EN 60825-2:2000 or your local safety officer.

There are no user serviceable parts within the AMG2700 products.

In case of problem or failure contact your local support centre or AMG Systems Ltd, Technical Support Department on tel. +44 (0) 1767 600777.

See unit data sheet for full specification.