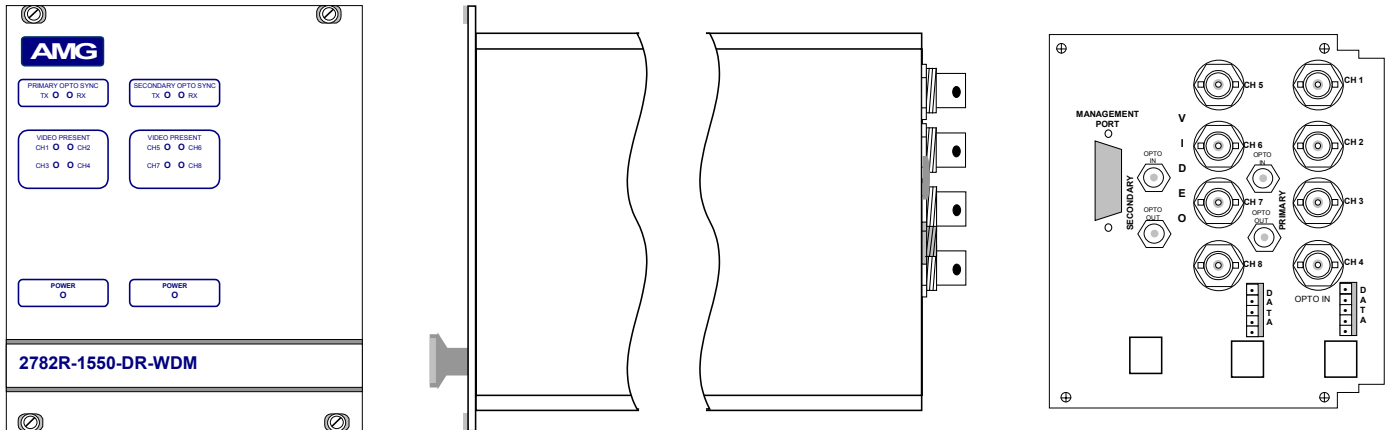




AMG2782R-1550-WDM-DR Instruction Manual

Eight Channel Video RX Unit with integral WDM splitters for the separation of 1310nm signals also providing a dual path input for a dual redundant point to point system



AMG2782R-1550-DR-WDM is an eight channel video only receive unit designed to receive eight video signals from either of two separate singlemode fibres for dual routed redundant systems. It also includes two 1310/1550nm optical splitters so that either an additional 4 or 8 video channels can be received down both fibre optic paths operating at 1310nm. These further 4 or 8 channels require the use of an **AMG2782R-DR** or **AMG2742R-DR** unit. See below for connection and operation. The **AMG2782R-1550-DR-WDM** is designed to plug into an **AMG2000** or an **AMG2005** subrack which in turn fits into a 19" rack system.

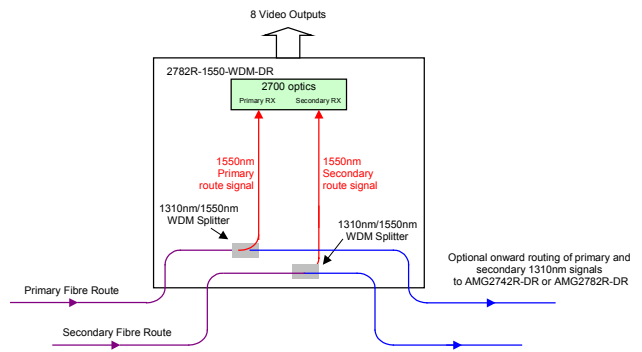
The **AMG2782R-1550-DR-WDM** is designed to operate with **AMG2781R-1550-DR-WDM** eight channel video only transmit unit which combined with either a **AMG2781R** or **AMG2741R** can transmit a total of either 12 or 16 video channels respectively via two routes. The system will operate in a way such that if either route should fail there will be no loss of video channels.

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Introduction

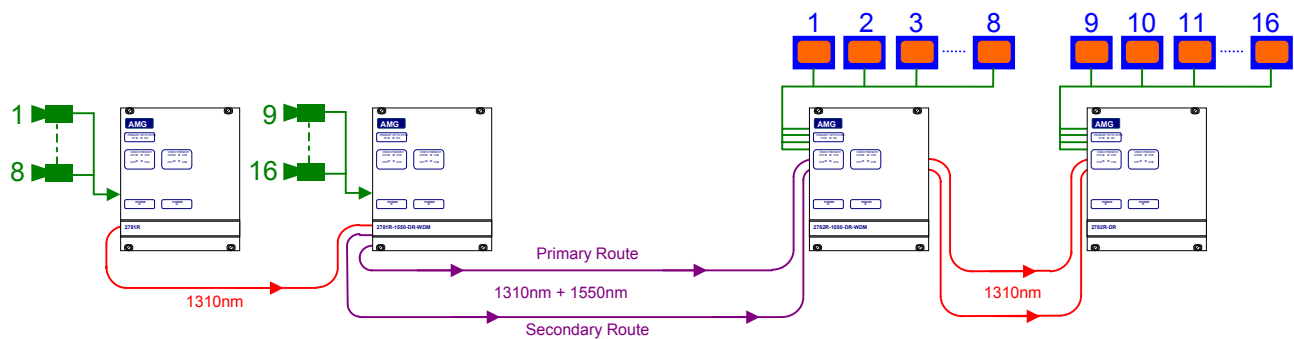
Unit Functional Schematic

The unit receives optical signal at 1550nm (and 1310nm if inserted at the transmitter) from two fibre optic paths. It first separates out the 1310nm signals from each route for onward connection to an AMG2700 1310nm receiver. The unit then demultiplexes the eight video signals on the 1550nm primary optical fibre route. If no signal is present on the primary optical fibre route the unit then demultiplexes the eight video signals on the 1550nm secondary optical fibre route.



Optical System Connection

The units are designed to be connected a point to point system as shown below.



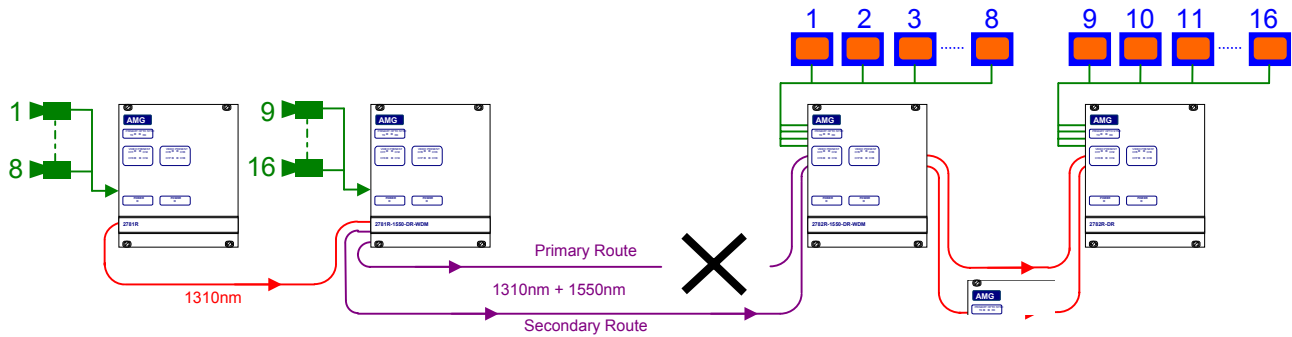
The schematic above shows 16 channel operation. For 12 channel operation a 2741R should be used instead of the 2781R and a 2742R-DR should be used instead of a 2782R-DR.

For 8 channel operation the 2781R and 2782R-DR need not be used. However the same functionality can be done using the 2781R-DR and the 2782R-DR as these units do not include the WDM couplers and operate at 1310nm.

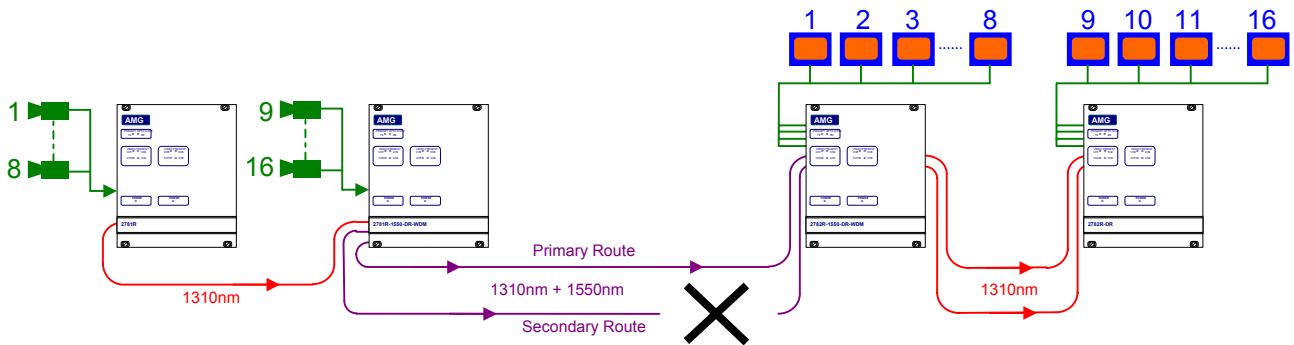
Dual Redundant Operation

The optical signal is transmitted simultaneously along both the primary optical route and the secondary optical route. In the event of a break in either the primary optical route or the secondary optical route the transmission of the 16 video channels will not be affected and no video signals will be lost at the receiver. See below.

Primary Route Break



Secondary Route Break



Connections

Video Output Connections

No of Channels 8
 Connectors 75 ohm BNC Socket.
 Output Impedance 75 ohm terminated.
 Output Level 1 volt p-p nominal
 Frequency Response 10Hz to 5.75MHz min.

Optical Connections

OPTO IN PRIMARY
 Connector FC/PC
 Min. optical RX Power -22dBm min at 1550nm
 OPTO IN SECONDARY
 Connector FC/PC
 Min. optical RX Power -22dBm min at 1550nm

OPTO OUT - PRIMARY

Connector FC/PC
 1310nm Primary Through Loss 1dB

OPTO OUT - SECONDARY

Connector FC/PC
 1310nm Primary Through Loss 1dB

Power Connection

Power supply from plug in connection on the 2000 or 2005 subrack
 Power consumption 20 Watts max.

Indicators

Power.....	Green	– unit powered
	Off	– no power applied to unit
Primary Opto Sync RX	Green	– primary optical channel receiving
	Off	– primary optical channel not receiving
Primary Opto Sync TX.....	Not used	
Secondary Opto Sync RX.....	Green	– secondary optical channel receiving
	Off	– secondary optical channel not receiving
Secondary Opto Sync TX.....	Not used	
Video Present	Green	– video signal present on video the channel indicated.
	Red/Green	– video channel available on the fibre but no video signal being transmitted
	Off	– no video channel available on the fibre.

Physical Information

Dimensions

Height	3U Plug-in
Width.....	21HP
Depth	170mm excluding connectors
Weight.....	1100grams

Mounting Details

The unit is designed to be mounted within a 2000 or 2005 Subrack on standard card guides. Note the AMG standard racks are supplied with guide rails every 7HP. In order to fit this unit in the subrack, 2 sets of card guides have to be removed by pulling gently on the card guides.

The 2000 series subrack is fitted with a 50 watt power supply. A maximum of 2 units may be fitted into one 2000 series subrack.

The 2005 series subrack is fitted with a 100 watt power supply. A maximum of 3 units may be fitted into one 2005 series subrack limited by the 70HP rack space.

Safety

The 2700 series of products uses a Class 1 laser system 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 the optical fibres systems see EN 60825-2:2000 or your local safety officer.

Maintenance and Repair

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.