








THE AMG4600 & AMG4700 SERIES



Multi Channel Fibre Optic CCTV Transmission Solutions

The AMG4600 & AMG4700 series are designed for low cost, multi-channel point-to-point video transmission together with associated Ethernet and low speed data and audio signals.



 Video 1x to 128x	 Data 232/422/485	 Contacts In/Out	 Audio In/Out	 10/100 up to x16	 Temp -15~+70°C	 Single-mode Multi-mode
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[AMG4600 & AMG4700]

/ OVERVIEW

The AMG4600 series is designed for multimode fibre, whilst the AMG4700 series is designed for singlemode fibre.

The system can provide a highly resilient, managed, low cost, transmission system for both compressed and uncompressed video signals. It allows the user to pick and choose the best from all technologies both now and in the future, by making sure the system can cater for all the future needs from the outset.

The video is transmitted in a real time full bandwidth digital format. This ensures high quality transmission regardless of distance. As no compression of the video is used, there is no latency or compromise on quality.

When configured in a dual redundant/self-healing ring option, the AMG4600 & AMG4700 ensure no loss of signal during a catastrophic fibre failure.

Please Note: The AMG dual optical redundancy does not utilise mechanical switches or couplers. Both transmission paths are continually monitored.

/ FEATURES

- Real time digital transmission format - no signal quality degradation with distance
- Wide link dynamic range - no link margin adjustment required for installation, just plug in and switch on
- Single fibre as well as dual fibre configurations
- Simultaneous multiple video, Ethernet, data and audio transmission - covers all signal transmission needs on one set of equipment
- High capacity with up to 128 video signals, 1.6Gbit/s of Ethernet and 256 data/audio signals transmitted simultaneously on one fibre
- Front panel LED status indicators provides at a glance status monitoring
- Plug in module for AMG2000 series of 19" subracks - ability to mix multimode and singlemode products in the same rack
- Data interface daughter board configurable - ability to address any interface protocol

// OVERVIEW

Using Coarse Wavelength Division Multiplexing, CWDM, up to 16 wavelength channels can be used to provide transmission capacity of up to 128 video channels on one singlemode optical fibre together with the associated data/audio and Ethernet.

The AMG4600 & AMG4700 can be delivered with a dedicated Network Management System, NMS, providing alarms associated with the breaks in the optical fibre together with loss of video signals and power failure. The NMS system can also operate with SNMP management.

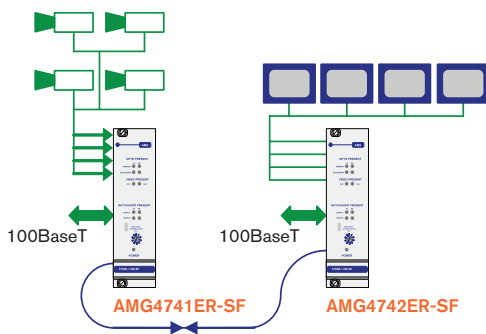
For drop and insert options, AMG offers the AMG3600 & AMG3700 Series.

// FEATURES

- Standalone and rackmount formats for minimum space usage
- Multiple Management options including SNMP compliant network management for remote fault reporting and diagnosis

Example Topologies.

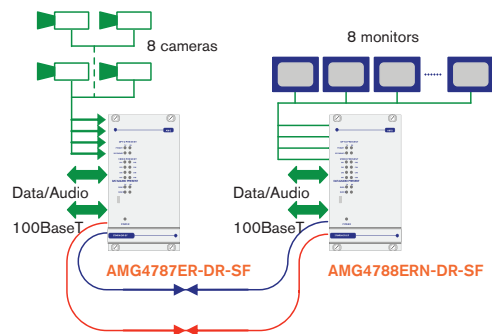
// Four Channel Point-to-Point Video with Ethernet & SF



Four channels uni-directional video and bi-directional 100BaseT Ethernet transmitted over a single singlemode fibre using SF option.

Ethernet can be used for: PC network, IP cameras, VOIP phones, Wi-Fi hotspots, access control, alarm systems, remote DVR's.

// Eight Channel Video with Data/Audio, Ethernet, DR, SF, N



Eight channels uni-directional video and up to 16 bi-directional data/audio channels & Ethernet transmitted over dual singlemode fibres. All 16 data/audio channels can be individually configured by separately specifying the required daughter boards. DR option provides dual redundancy -primary path in blue, secondary path in red. SF option minimises the fibre usage, and includes integral couplers. N option on the receiver provides a management port. Both optical routes continually monitored.

Specifications.

Video.

Video compression	none, un-compressed
Input/output level	1V pk to pk nominal
Input/output impedance	75Ω unbalanced
Frequency response	10Hz to 7.0MHz
Differential gain	±1%
Differential phase	±1%
Signal to noise ratio	67dB, 10 bit conversion
Video standards	NTSC/PAL

Standard Data/Audio Channels.

Each link has two Data/Audio Channels, A & B, with or without Ethernet.

For simple options Channel A and Channel B can be provided as individual data channels, with Channel A being switchable between RS232/RS422/RS485 and Channel B being configured by the addition of a daughter board.

See Model Number Builder for all options.

Expanded Data/Audio Channels.

Either one or both of Channel A & Channel B can be expanded to 8 individual channels with an expansion card, providing a maximum of 16 individual channels. When expanded each individual channel is configured with a separate daughter board.

Channel A.

Available channels	1
Interface options	
external switch:	RS232, RS422, RS485
Connector	RJ45

Channel B.

Available channels	1
Interface options	determined by daughter board
Connector	RJ45

Expanded Channel A.

Available channels	8
Interface options	determined by daughter boards
Connector	37 way D-type socket

Expanded Channel B.

Available channels	8
Interface options	determined by daughter boards
Connector	37 way D-type socket

Audio.

Input impedance	600Ω
Output impedance	600Ω
Input level	-40dBm-0dBm
Input overload level	+6dBm
Frequency response	10Hz to 15kHz
Note:	When using Expanded Channels A & B, a combined maximum of 8 audio channels is available.

Data.

Data rate	
without Ethernet:	up to 512kb/s per channel
with Ethernet:	up to 256kb/s per channel

Ethernet.

Data interface	10/100BaseT autonegotiate
Data connector	RJ45

Optical.

Fibre	
4600	50/125 or 62.5/125 multimode
4700	9/125 singlemode
Wavelength	1310nm
1550 option	1550nm
-SF option	1310nm/1550nm
-CWDM option	1310nm - 1610nm
Path loss	17dB min.
-HP option	22dB min.
-CWDM option	22dB min.
Transmission distance	
4600	< 2km
4600 -SF option	< 500m
4700	> 40km
Connector	LC on rear panel

Specifications.

General.

Operating Temp.	-15°C to +70°C
Operating humidity	0 to 95% non condensing
Video connector	BNC
Emissions	CE approved
Mechanical	3U high, 170mm deep 7/14/21HP wide, rackmount or stand alone see Model Number Builder
Power requirements	+12V to +18V _{DC} @ 500mA
MTBF	> 180,000hrs
Indicators	front panel status LEDs

Sample Part Numbers.

AMG4681	8 Channel Video Tx, Multimode, Standalone
AMG4643E	4 Channel Video Tx + RS232/422/485 + Ethernet, Multimode, Standalone
AMG4747A-DR-SF	4 Channel Video Tx + 8 Data/Audio Slots , Single Fibre, Dual Redundant, Singlemode, Standalone
AMG4783B2E-DR-SF-CWDM1/2-C	8 Channel Video Tx + RS232/422/485 + RS232 + Ethernet, Single Fibre, Dual Redundant, CWDM1/2, with Couplers, Singlemode, Standalone
AMG4684ER	8 Channel Video Rx + RS232/422/485 + Ethernet, Multimode, Rackmount
AMG4788A-DR-SF	8 Channel Video Rx + 8 Data/Audio Slots , Single Fibre, Dual Redundant, Singlemode, Standalone
AMG4784B2ERN-DR-SF-CWDM1/2-C	8 Channel Video Rx + RS232/422/485 + RS232 + Ethernet, Single Fibre, Dual Redundant, CWDM1/2, with Couplers, with Management Port, Singlemode, Rackmount

See 'Model Number Builder' for full range

Recommended PSUs.

Standalone	AMG2003	15V _{DC} @ 2A standalone PSU. For Indoor use only.
Rackmount	AMG2015	19" Subrack, 12 Slot c/w PSU
	AMG2015-DR	19" Subrack, 12 Slot c/w dual PSU

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