AMG210M Series Mini Media Converter

Installation Manual - Hardware

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AMG210M

/ OVERVIEW

Designed in an ultra compact housing, these mini media converters are ideally suited for connecting equipment to Ethernet networks over long distances using all types of fibre through the integrated SFP or SFP+ port.

User selectable DIP switches allow for configuration of advanced features such as link fault pass-through, port isolation, jumbo frames, automatic laser shutdown and SFP speed selection.

The 10Gb models support 1G, 2.5G, 5G & 10G modes as well as 3R functions for equalization amplification, clock extraction and integer regeneration for the highest 10G data performance with low transmission jitter.

The mini media converters can be used standalone, wall mounted using the included mounting kit or can be installed within an AMG210C rack where up to 12 units can be located within a 1U 19inch rack space. The rack chassis solution provides ultra high density rack mount options.

PSUs are included with each unit and SFPs can either be included (depending on model ordered) or can be ordered separately allowing for selection from AMG's extensive range of SFP and SFP+ modules designed to suit any application.

VLAN traffic is transparently supported on all of the AMG210M mini media converter models.

/ PACKING LIST

The following items should be included in the box:

- Mini Media Converter
- In-line DC Power Supply (with region specific plug)
- Installation & DIP Switch Manual
- Wall Mounting Bracket (with 4 screws)
- SFP Module* (*only included with some models)

If any of the above items are missing or damaged please contact your supplier or distributor.

/ POWER

The mini media converter is powered by a $5\text{-}12V_{DC}$ or $6\text{-}12V_{AC}$ power supply. A DC type power supply is included with each unit.

The centre pin is positive while the outer sleeve is negative. The connector type is a 2.1MM input jack.
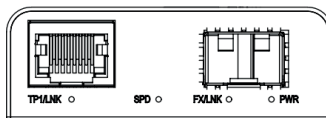
The power consumption of the AMG210M mini media converters are detailed below:

- 100Mb Models   <3W*
- 1Gb Models   <3W*
- 10Gb Models   <5W*

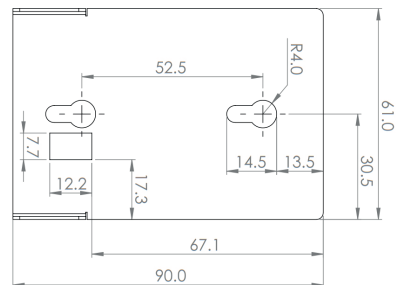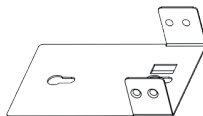 *Excludes SFP/SFP+ Module

/ LED INDICATORS

The mini media converters feature LED indicators to aid in system operation and fault diagnosis. The meaning of each LED is described in the table below:

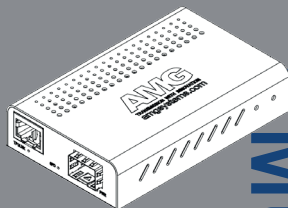|	
TP/LNK	Solid: RJ45 is connected but no data is being received
	Flashing: RJ45 is connected and data is being received
SPD	On: RJ45 is connected at the highest possible speed
	Off: RJ45 is not connected or is connected at a speed slower than the highest possible
FX/LNK	Solid: SFP is connected but no data is being received
	Flashing: SFP is connected and data is being received
PWR	On: Unit is powered up
	Off: Unit is not powered up

/ WALL MOUNTING

The mini media converter can be mounted to a wall using the included wall mounting bracket.

/ RACK MOUNTING

The AMG210M series mini media converters can be rack mounted using the optional AMG210C series rack chassis. A maximum of 12 units can be installed in a 1U 19inch rack space. For more details please refer to the AMG210C installation manual.

AMG210M Series Mini Media Converter

Installation Manual - DIP Switch Settings

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/ AMG210M-1F-1S
100MB SFP MEDIA CONVERTER

No.	Function	Status	Description
1	LFP	OFF	Disable
		ON	Enable
2	Pass-Through Mode	OFF	Disable
		ON	Enable
3	TX-Duplex Mode	OFF	Full Duplex
		ON	Half Duplex
4	TX-Speed Mode	OFF	100Mb
		ON	10Mb

LFP - Link Fault Pass-Through. When enabled a failure on either the RJ45 or SFP will cause the corresponding port to link down so that the fault can be detected by other connected devices.

Pass-Through Mode - When enabled the converter starts forwarding the frame before the whole frame has been received. In this mode the unit supports jumbo frames up to 2Kbytes. When disabled the converter operates in standard store-and-forward mode and supports standard Ethernet frames up to 1522 bytes.

TX-Duplex Mode - When enabled the RJ45 port operates in half duplex mode. When disabled the RJ45 port operates in full duplex.

TX-Speed Mode - When enabled the RJ45 port operates in 10Mb mode and when disabled the RJ45 port operates in 100Mb mode.

Note: After changing any DIP switch settings please cycle power to the unit to ensure the new settings are applied.

/ AMG210M-1G-1S
100MB/1Gb SFP MEDIA CONVERTER

No.	Function	Status	Description
1	LFP	OFF	Disable
		ON	Enable
2	ALS	OFF	Disable
		ON	Enable
3	FX Reset	OFF	Enable
		ON	Disable
4	FX Speed	OFF	1000Mb
		ON	100/1000Mb

LFP - Link Fault Pass-Through. When enabled a failure on either the RJ45 or SFP will cause the corresponding port to link down so that the fault can be detected by other connected devices.

ALS - Automatic Laser Shutdown. When enabled if the fibre link is broken or disconnected then the laser will be turned off except for sending periodic signals to check if the fibre link has been re-established. The ALS function helps to extend the life of the optical device and reduce power consumption.

FX Reset - When enabled (DIP Switch OFF) if the fibre link goes down then the media converter will perform an automatic power cycle to try and re-establish the fibre link operation.

FX Speed - When enabled the SFP port supports both 100Mb and 1Gb speeds. When disabled the SFP port is locked to 1Gb speed.

Note: After changing any DIP switch settings please cycle power to the unit to ensure the new settings are applied.

/ AMG210M-2G-1S
100MB/1Gb DUAL PORT SFP MEDIA CONVERTER

No.	Function	Status	Description
1	Reserved	N/A	N/A
2	Jumbo Frame	OFF	Disable
		ON	Enable
3	Port Isolation	OFF	Disable
		ON	Enable
4	FX Speed	OFF	1000Mb
		ON	100Mb

Jumbo Frame - When enabled the media converter supports jumbo frames up to 9.6Kbytes. When disabled standard Ethernet frames are supported up to 1522 bytes.

Port Isolation - When enabled the two RJ45 ports are fully isolated from each other so no traffic can flow between these two ports. This function allows for multicast support without causing flooding to the alternate RJ45 port. (In this mode an AMG210M-2G-1S dual port unit should be used at both ends of the link and the Port Isolation feature should be enabled on both units.) Data from RJ45 Port 1 wil only flow to RJ45 Port 1 on the opposing unit and data from RJ45 Port 2 will only flow to RJ45 Port 2 on the opposing unit. In this mode transparent VLAN tags are not supported as the units use VLAN tags internally.

FX Speed - When enabled the SFP port is locked to 100Mb speed. When disabled the SFP port is locked to 1Gb speed.

Note: After changing any DIP switch settings please cycle power to the unit to ensure the new settings are applied.

/ AMG210M-1X-1XS
1/2.5/10Gb SFP+ MEDIA CONVERTER

No.	Function	Status	Description
1	LFP	OFF	Disable
		ON	Enable
2	ALS	OFF	Disable
		ON	Enable
3	FX Speed Option A	ON	SFP Port Speed Follows The RJ45 Port Speed 1 / 2.5 & 10Gb Modes
4		OFF	
3	FX Speed Option B	OFF	SFP Port Speed Is Locked To 10Gb
4		ON	

LFP - Link Fault Pass-Through. When enabled a failure on either the RJ45 or SFP will cause the corresponding port to link down so that the fault can be detected by other connected devices.

ALS - Automatic Laser Shutdown. When enabled if the fibre link is broken or disconnected the the laser will be turned off except for sending periodic signals to check if the fibre link has been re-established. The ALS function helps to extend the life of the optical device and reduce power consumption.

FX Speed Option A - If the RJ45 port is connected at 10/100/1000Mb then the SFP operates at 1Gb. If the RJ45 port is connected at 2.5Gb then the SFP operates at 2.5Gb. If the RJ45 port is connected at 5Gb or 10Gb then the SFP+ operates at 10Gb.

FX Speed Option B - The SFP+ port speed is locked to 10Gb.

Note: After changing any DIP switch settings please cycle power to the unit to ensure the new settings are applied.