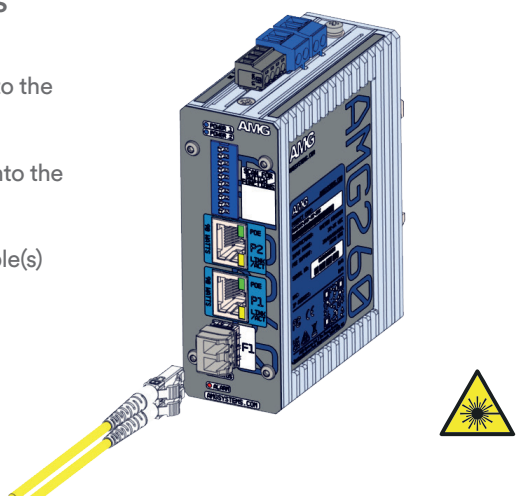
## INTERFACE CONNECTIONS

① Insert the SFP module into the SFP slot(s).

② Insert the Cat5/6 cable into the RJ45 port(s).

③ Insert the fiber patch cable(s) into the SFP module(s).




## PORT SPEEDS

Example part code:

**AMG260-2GAT-1S-P60**

| Character | RJ45 Port Speed | SFP* Port Speed |
|---|---|---|
| F | 10/100 Base-T(X) | 100/1000 Base-FX |
| G | 10/100/1000 Base-T(X) | |

*SFP's supplied separately. Refer to AMG website and SFP Datasheets for available models.

## POE CAPABILITIES

Example part code:

**AMG260-2GBT-1S-P180**

| Characters | PoE Standard Supported |
|---|---|
| None | Non-PoE Model |
| AT | IEEE 802.3at 30W Port |
| BT | IEEE 802.3bt 60/90W Port |

| Characters | PoE Budget |
|---|---|
| P60 | 60W Max |
| P180 | 180W Max |
| PD | Class 1 PD |

Ensure the PSU size used is at least equal to the maximum PoE budget figure.

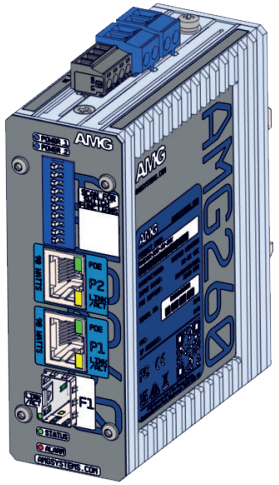
Check the product label to determine the PoE power supported on each port and the units total maximum PoE budget.

**IEEE 802.3at Models**
Type 1 & 2 PoE support
Mode A PSE only

**IEEE 802.3bt Models**
Type 1, 2, 3 & 4 PoE support. Mode A and/or Mode B PSE

**AMG Systems Ltd.** 4 Pioneer Way, Castleford, WF10 5QU, UK T: +44 (0) 1767 600 777 E: technical@amgsystems.com
**AMG Systems Inc.** 62 Spring Hill Road, Trumbull, CT 06611, USA T: +1-855-AMGPOE1 (855-264-7631)
D33871-01 www.amgsystems.com

SCAN ME



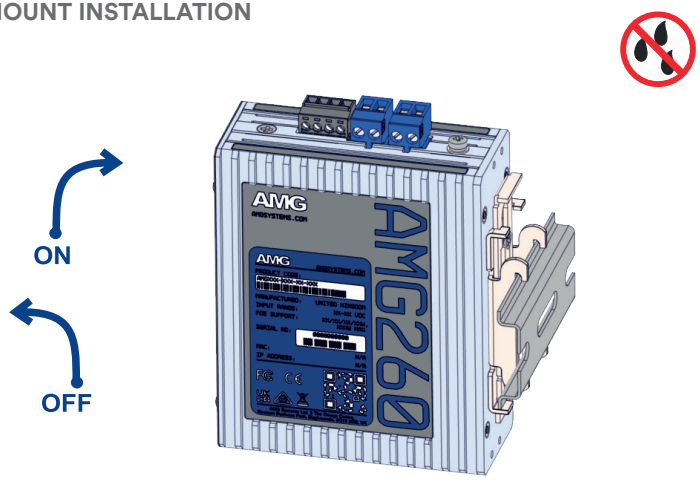

# AMG260

# AMG260 2+1 Series Industrial Media Converter

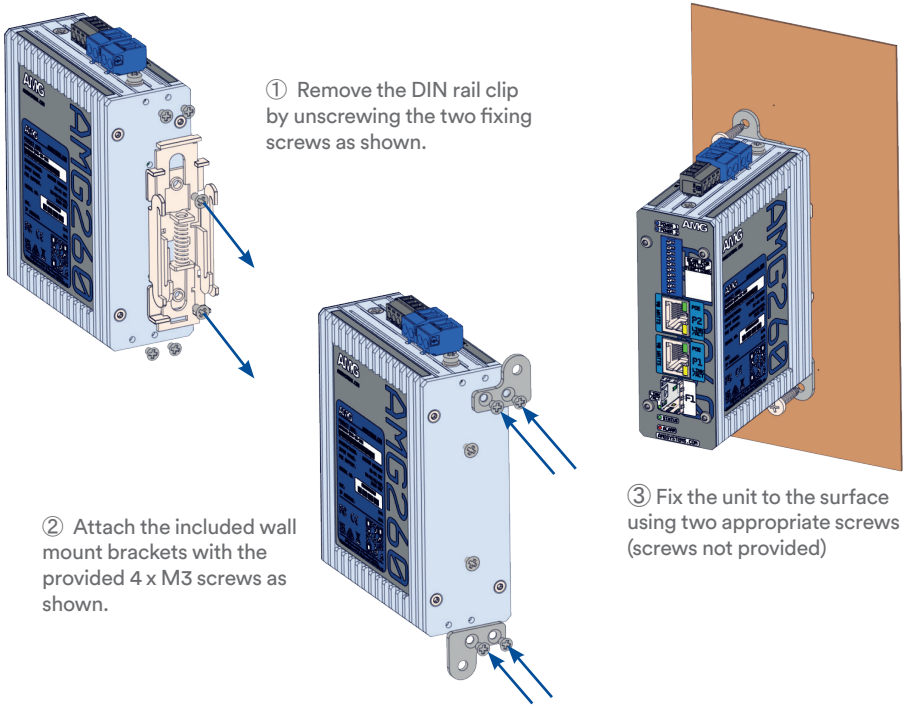
## Installation Manual - Hardware

AMG
amgsystems.com

## DIN RAIL MOUNT INSTALLATION




## SURFACE MOUNT INSTALLATION




① Remove the DIN rail clip by unscrewing the two fixing screws as shown.

② Attach the included wall mount brackets with the provided 4 x M3 screws as shown.

③ Fix the unit to the surface using two appropriate screws (screws not provided)

1 Optional magnetic mounting kit is available separately. Order part code: AMGMNT-MAG-04

## DIP SWITCH 10 - FAULT RELAY MODE

The Fault Relay Mode provides two different operation modes for the fault relay. Fault relay is normally closed and will open on fault condition. The specific fault conditions which operate the fault relay are dependant on the position of DIP switch 10 as described below:

The Fault / Alarm Relay is rated to 400 VDC @ 100mA Max.
Low On-Resistance of 8Ω typical.
Exceeding the rated voltage or current will damage the device.

### DIP Switch 10 - OFF Position

In this mode the AMG260 media converter fault / alarm relay output operates only as a power failure relay.

The unit will continually monitor which power inputs are connected. If only a single PSU is connected to either Power 1 or Power 2 then the unit will trigger the fault relay if this power input fails.
If dual power inputs are being used and both Power 1 and Power 2 are connected the unit will monitor for a failure of either power input and trigger the alarm relay on loss of either power input. In this case the AMG260 will remain active powered by the remaining power input.
If the power supply input is restored the fault relay will clear and return to it's default normally closed state.

### DIP Switch 10 - ON Position

In this mode the AMG260 media converter fault / alarm relay output operates as a power failure relay (as described in the above section) and also as a fault condition relay as described below.

In this mode the fault relay will also be triggered by any of the below fault conditions:

- SFP Link Loss
- Link Fault Pass-Through Triggered
- Remote Device Reset Triggered

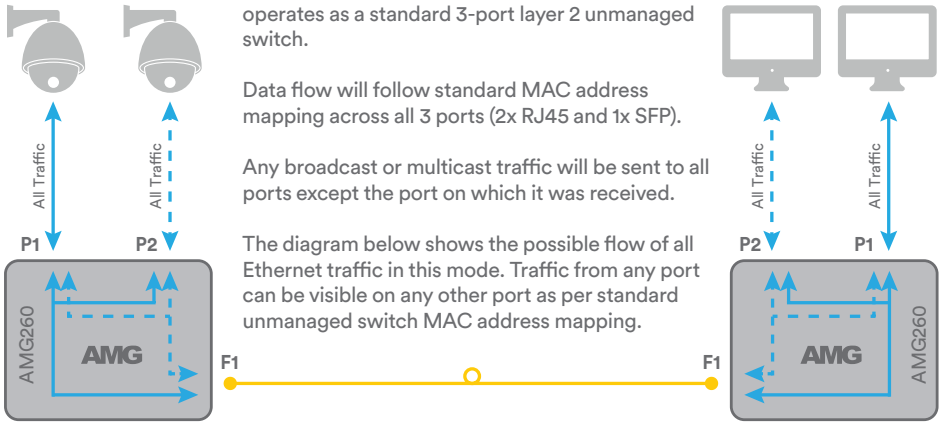
In these modes the fault relay will change to open circuit for the same duration as the red alarm LED on the AMG260 unit. For some conditions this will be a momentary relay change in line with the alarm LED display. The connected device will need to be able to react to momentary relay changes in these modes.
For SFP Link Loss to be correctly monitored the SFP module should be installed into the AMG260 media converter before power is applied to the unit. If the SFP module is changed then the AMG260 unit should be power cycled to ensure correct fault monitoring.

## DIP SWITCH 7 - DUAL PORT ISOLATION MODE

Legend
- CAT5e 1Gb
- PoE 90W
- Fiber 100Mb/1Gb

The Dual Port Isolation Mode feature is designed to provide isolation for each RJ45 port. This feature replicates two media converters operating over a single SFP link.

### DIP Switch 7 - OFF Position



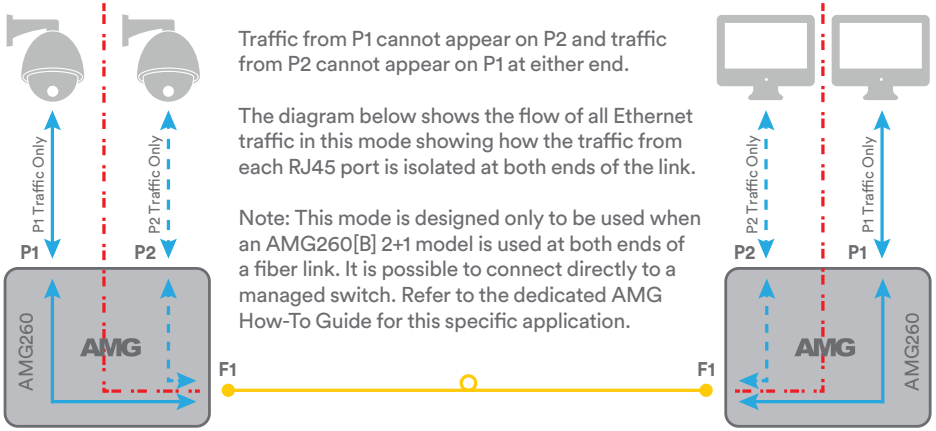

In this mode the AMG260 media converter operates as a standard 3-port layer 2 unmanaged switch.

Data flow will follow standard MAC address mapping across all 3 ports (2x RJ45 and 1x SFP).

Any broadcast or multicast traffic will be sent to all ports except the port on which it was received.

The diagram below shows the possible flow of all Ethernet traffic in this mode. Traffic from any port can be visible on any other port as per standard unmanaged switch MAC address mapping.

### DIP Switch 7 - ON Position




In this mode all traffic from P1 and P2 is isolated from each other and then passed over the SFP port (F1). At the opposing AMG260[B] 2+1 unit the traffic is then split out to P1 and P2.

Traffic from P1 cannot appear on P2 and traffic from P2 cannot appear on P1 at either end.

The diagram below shows the flow of all Ethernet traffic in this mode showing how the traffic from each RJ45 port is isolated at both ends of the link.

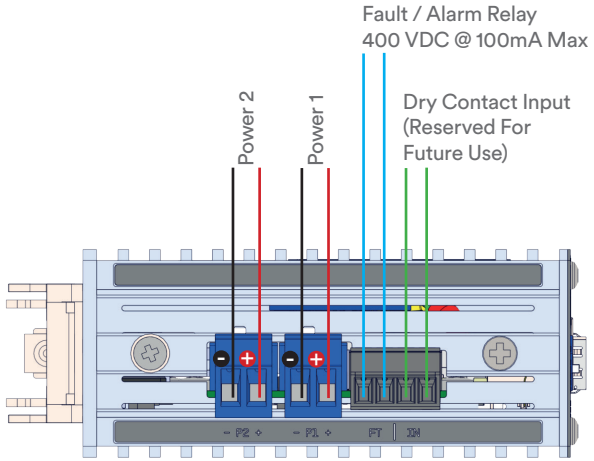
Note: This mode is designed only to be used when an AMG260[B] 2+1 model is used at both ends of a fiber link. It is possible to connect directly to a managed switch. Refer to the dedicated AMG How-To Guide for this specific application.



## POWER

Fault relay is normally closed and will open on either power failure or fault condition depending on the position of DIP switch 10. Refer to DIP switch 10 details on page 10.

| Model Type | Voltage |
|---|---|
| Non-PoE Models | 12-56 VDC |
| 30W PoE Models | 48-56 VDC |
| 90W PoE Models | 52-56 VDC |

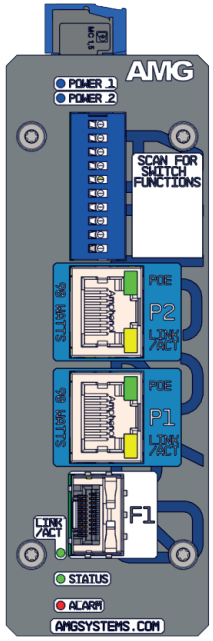



| Model Type | Power |
|---|---|
| DC Models | 3W Max* |
| PD Model | 802.3af Class 1 |

*Excludes PoE Load

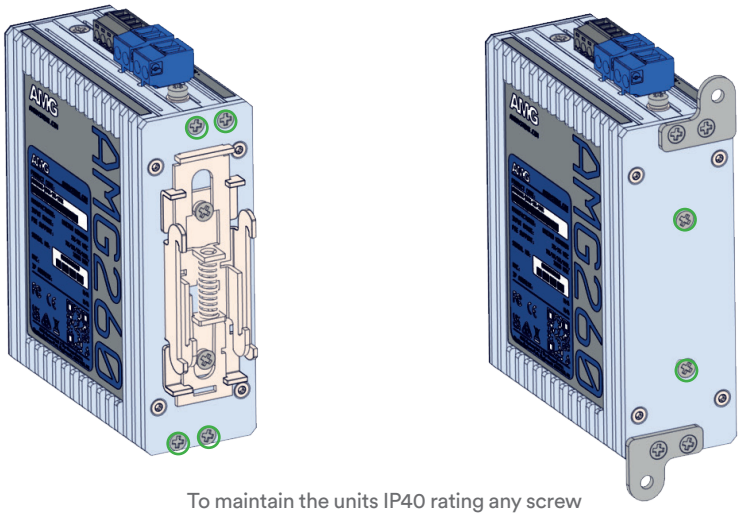
Warning
Do not exceed the rated voltage
Observe correct voltage polarity

## LED INDICATORS



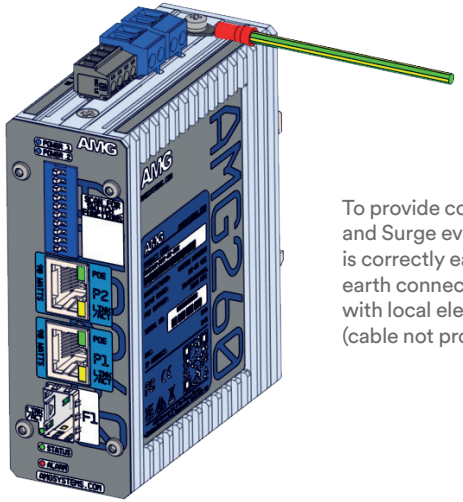

| LED | Colour | Description |
|---|---|---|
| POWER 1 | Blue | DC input present on Power 1 |
| POWER 2 | Blue | DC input present on Power 2 |
| STATUS | Green | Unit CPU operating correctly |
| ALARM | Red | Alarm condition triggered |
| SFP LINK/ACT | Off | No SFP link connection |
| | Green | SFP link present (flashes with data traffic activity) |
| RJ45 LINK/ACT | Off | No Ethernet link connection |
| | Green | Ethernet link present (flashes with data traffic activity) |
| RJ45 POE | Flashing | No PoE being supplied |
| | Yellow | PoE is being delivered |
| RJ45 PD | Off | No PoE input detected |
| | Yellow | PoE input is active |

## IP RATING




To maintain the units IP40 rating any screw holes that are not used should still have their screws installed as shown in green above.

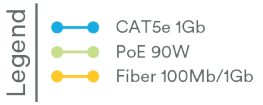
## EARTH PROTECTION




To provide correct protection from ESD and Surge events ensure that the unit is correctly earthed using the provided earth connection point in accordance with local electrical codes & standards. (cable not provided)



## DIP SWITCH 6 - DIRECTED TRAFFIC MODE




The Directed Traffic Mode feature is designed to prevent network video flooding of multicast traffic on the dual port AMG260 media converter.

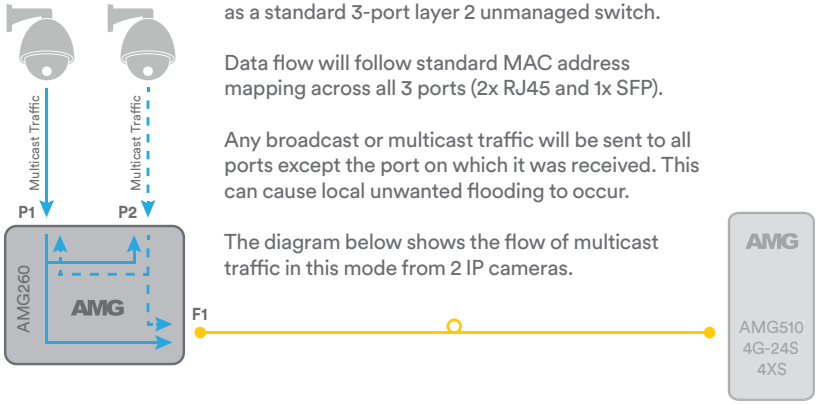
### DIP Switch 6 - OFF Position

In this mode the AMG260 media converter operates as a standard 3-port layer 2 unmanaged switch.

Data flow will follow standard MAC address mapping across all 3 ports (2x RJ45 and 1x SFP).

Any broadcast or multicast traffic will be sent to all ports except the port on which it was received. This can cause local unwanted flooding to occur.

The diagram below shows the flow of multicast traffic in this mode from 2 IP cameras.

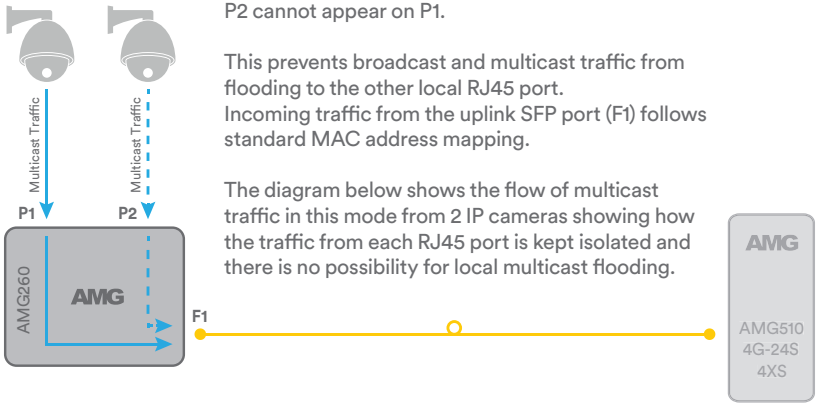



### DIP Switch 6 - ON Position

In this mode inbound traffic to the RJ45 ports (P1 & P2) is only forwarded to the SFP uplink port (F1). Traffic from P1 cannot appear on P2 and traffic from P2 cannot appear on P1.

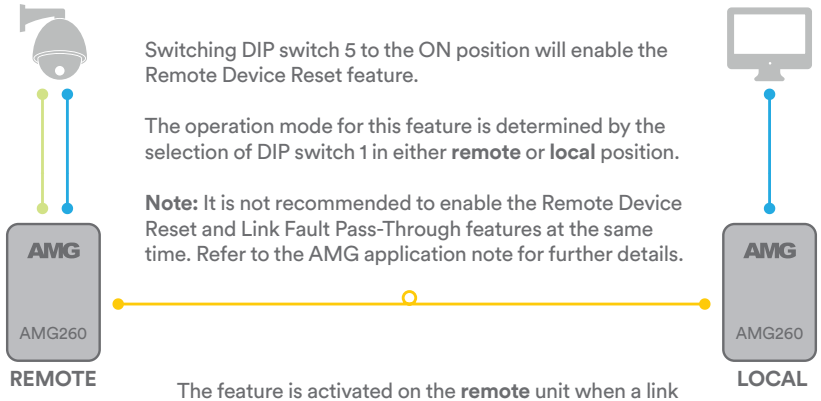
This prevents broadcast and multicast traffic from flooding to the other local RJ45 port.
Incoming traffic from the uplink SFP port (F1) follows standard MAC address mapping.

The diagram below shows the flow of multicast traffic in this mode from 2 IP cameras showing how the traffic from each RJ45 port is kept isolated and there is no possibility for local multicast flooding.



## DIP SWITCH 5 - REMOTE DEVICE RESET

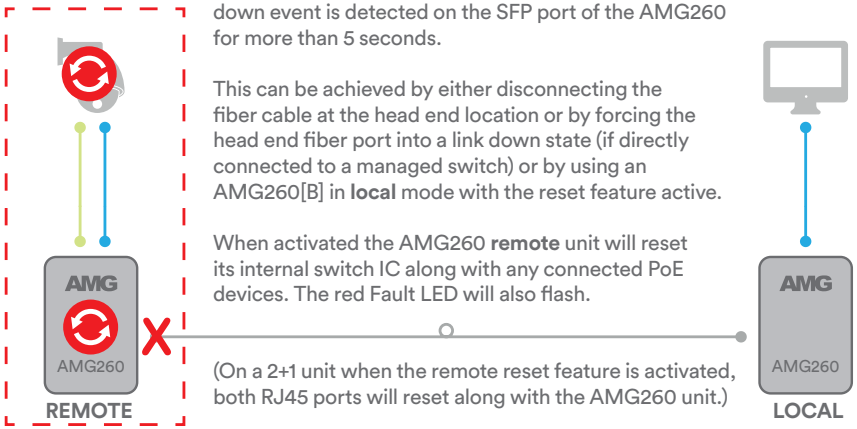
Legend
- CAT5e 1Gb
- PoE 90W
- Fiber 100Mb/1Gb




Switching DIP switch 5 to the ON position will enable the Remote Device Reset feature.

The operation mode for this feature is determined by the selection of DIP switch 1 in either **remote** or **local** position.

**Note:** It is not recommended to enable the Remote Device Reset and Link Fault Pass-Through features at the same time. Refer to the AMG application note for further details.

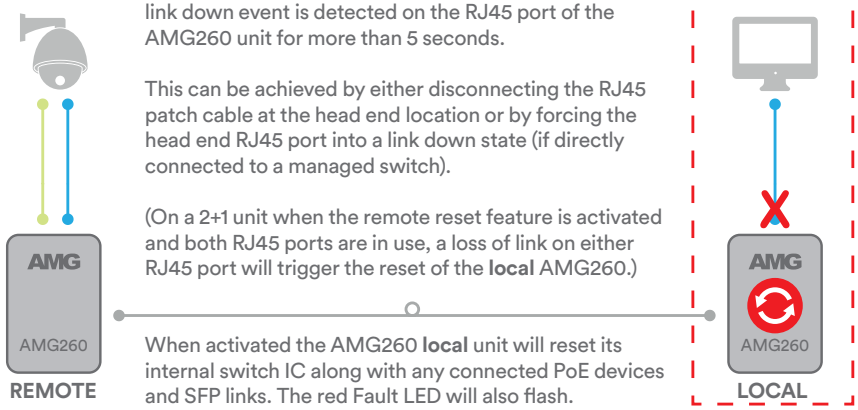



The feature is activated on the **remote** unit when a link down event is detected on the SFP port of the AMG260 for more than 5 seconds.

This can be achieved by either disconnecting the fiber cable at the head end location or by forcing the head end fiber port into a link down state (if directly connected to a managed switch) or by using an AMG260[B] in **local** mode with the reset feature active.

When activated the AMG260 **remote** unit will reset its internal switch IC along with any connected PoE devices. The red Fault LED will also flash.

(On a 2+1 unit when the remote reset feature is activated, both RJ45 ports will reset along with the AMG260 unit.)




The feature is activated on the **local** unit when a link down event is detected on the RJ45 port of the AMG260 unit for more than 5 seconds.

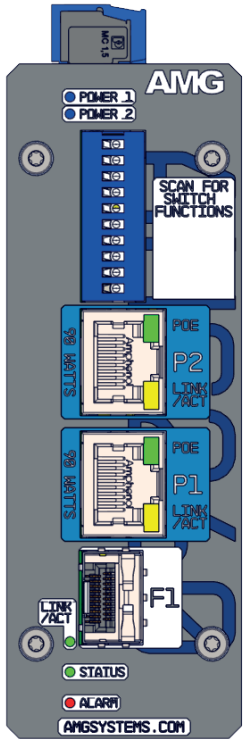
This can be achieved by either disconnecting the RJ45 patch cable at the head end location or by forcing the head end RJ45 port into a link down state (if directly connected to a managed switch).

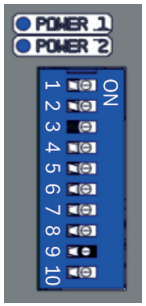
(On a 2+1 unit when the remote reset feature is activated and both RJ45 ports are in use, a loss of link on either RJ45 port will trigger the reset of the **local** AMG260.)

When activated the AMG260 **local** unit will reset its internal switch IC along with any connected PoE devices and SFP links. The red Fault LED will also flash.



## DIP SWITCHES

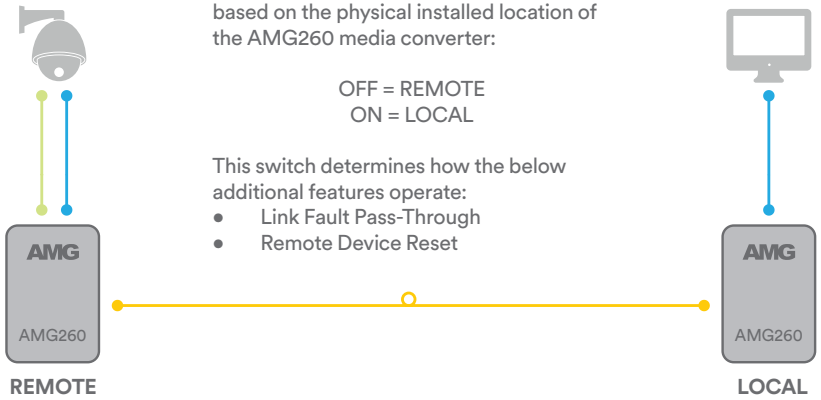



For detailed DIP switch information refer to the following pages in the manual or scan the above QR code or visit the AMG support webpage: amg-support.com/AMG260DIP

| Switch | Description |
|---|---|
| 1 | Remote / Local Device Mode |
| 2 | Link Fault Pass-Through |
| 3 | P1 250M Extended Distance Mode |
| 4 | P2 250M Extended Distance Mode |
| 5 | Remote Device Reset |
| 6 | Directed Traffic Mode |
| 7 | Dual Port Isolation Mode |
| 8 | Reserved |
| 9 | Reserved |
| 10 | Fault Relay Mode |

## DIP SWITCH 1 - REMOTE/LOCAL DEVICE MODE

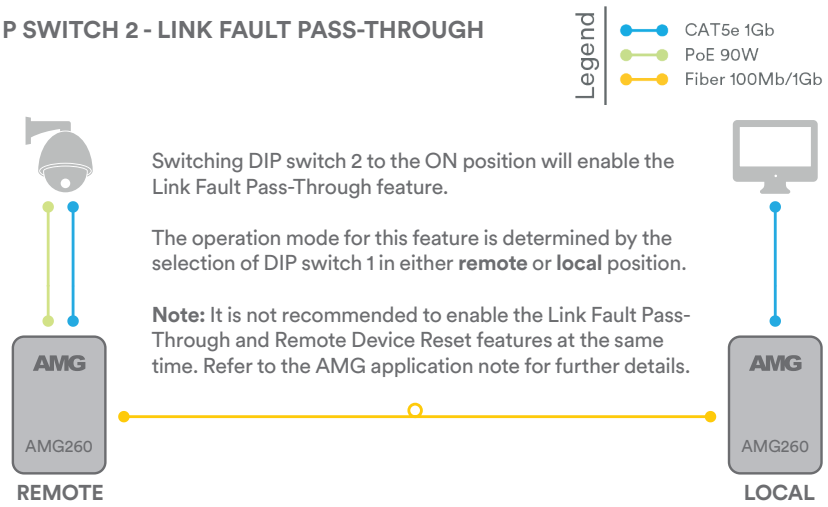



Switch DIP switch 1 to the correct position based on the physical installed location of the AMG260 media converter:

OFF = REMOTE
ON = LOCAL

This switch determines how the below additional features operate:
- Link Fault Pass-Through
- Remote Device Reset

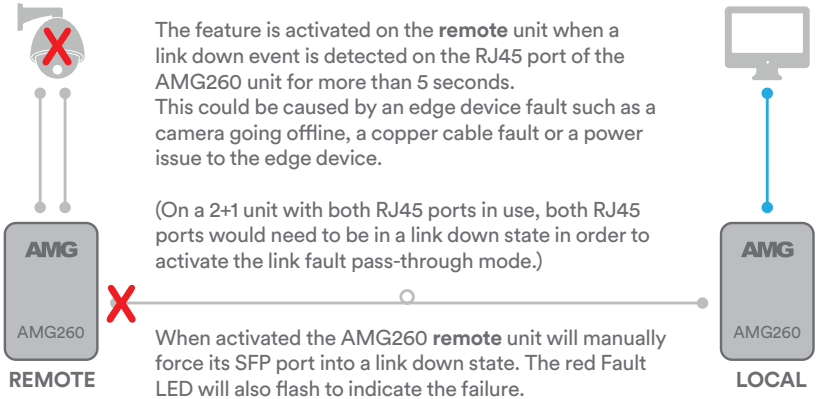
## DIP SWITCH 2 - LINK FAULT PASS-THROUGH




Switching DIP switch 2 to the ON position will enable the Link Fault Pass-Through feature.

The operation mode for this feature is determined by the selection of DIP switch 1 in either **remote** or **local** position.

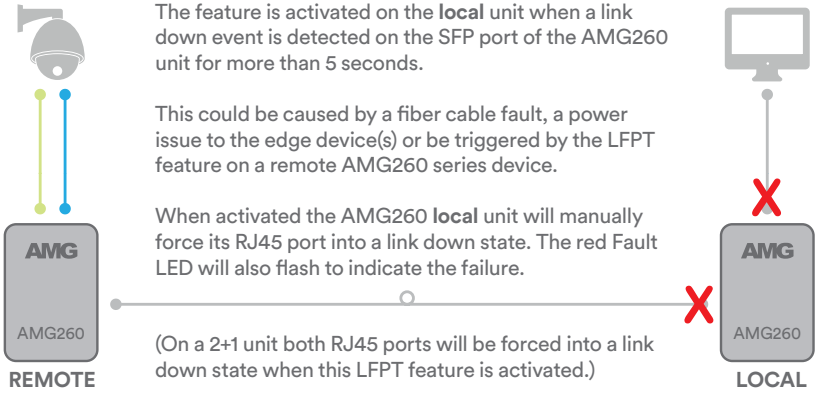
**Note:** It is not recommended to enable the Link Fault Pass-Through and Remote Device Reset features at the same time. Refer to the AMG application note for further details.




The feature is activated on the **remote** unit when a link down event is detected on the RJ45 port of the AMG260 unit for more than 5 seconds.
This could be caused by an edge device fault such as a camera going offline, a copper cable fault or a power issue to the edge device.

(On a 2+1 unit with both RJ45 ports in use, both RJ45 ports would need to be in a link down state in order to activate the link fault pass-through mode.)

When activated the AMG260 **remote** unit will manually force its SFP port into a link down state. The red Fault LED will also flash to indicate the failure.




The feature is activated on the **local** unit when a link down event is detected on the SFP port of the AMG260 unit for more than 5 seconds.

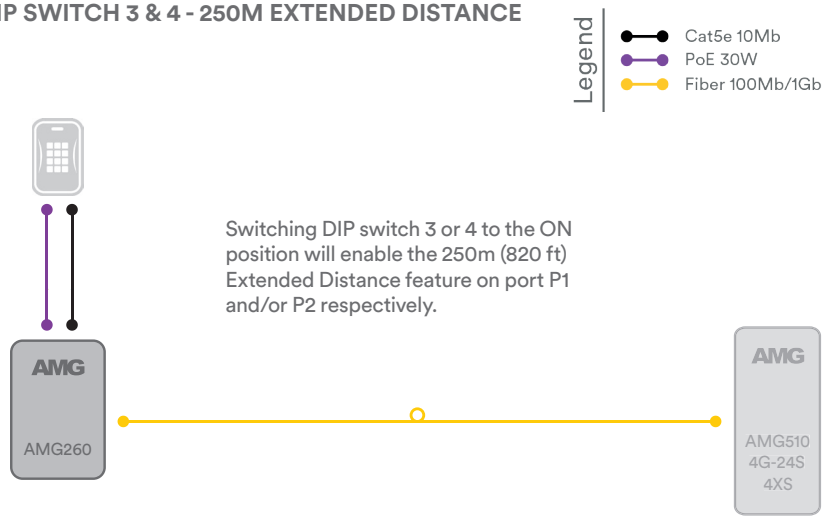
This could be caused by a fiber cable fault, a power issue to the edge device(s) or be triggered by the LFPT feature on a remote AMG260 series device.

When activated the AMG260 **local** unit will manually force its RJ45 port into a link down state. The red Fault LED will also flash to indicate the failure.

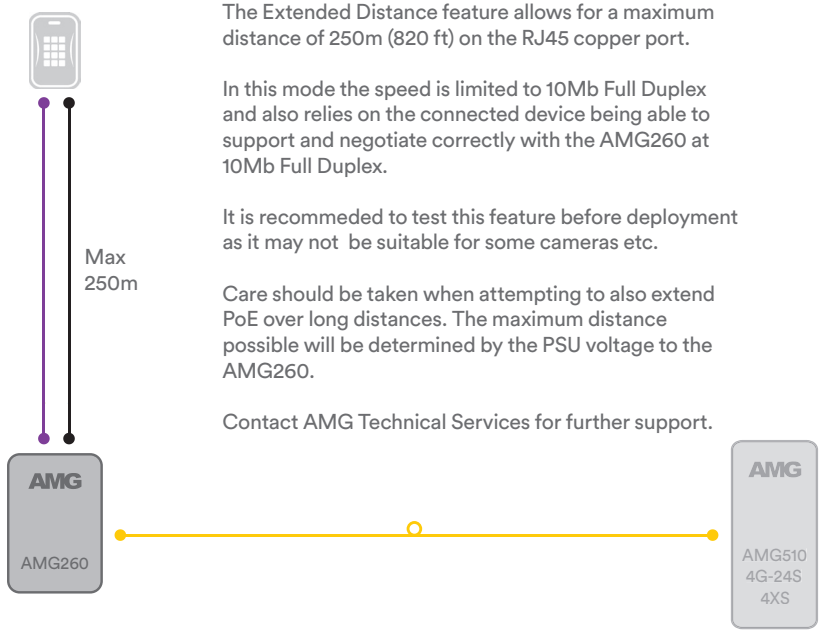
(On a 2+1 unit both RJ45 ports will be forced into a link down state when this LFPT feature is activated.)



## DIP SWITCH 3 & 4 - 250M EXTENDED DISTANCE




Switching DIP switch 3 or 4 to the ON position will enable the 250m (820 ft) Extended Distance feature on port P1 and/or P2 respectively.




The Extended Distance feature allows for a maximum distance of 250m (820 ft) on the RJ45 copper port.

In this mode the speed is limited to 10Mb Full Duplex and also relies on the connected device being able to support and negotiate correctly with the AMG260 at 10Mb Full Duplex.

It is recommeded to test this feature before deployment as it may not be suitable for some cameras etc.

Care should be taken when attempting to also extend PoE over long distances. The maximum distance possible will be determined by the PSU voltage to the AMG260.

Contact AMG Technical Services for further support.