

1

# Physical connection

The AiM loggers built to manage rear cameras are provided with a female metallic 5pins Binder connector, placed on the device bottom and labelled as "VIDEO IN" (following image).



5 pins Binder female connector pinout external view (camera input)

Pin	Function
1	Video input 1
2	GND
3	+Vb output camera
4	GND
5	Video input 2



The Video In connector allows the connection of two different analog cameras, that may be activated as here down described.

There is a wide number of analog cameras on the market. We have tested one of them, of which the Amazon Code is: **ASIN B01H1RFZYA**.

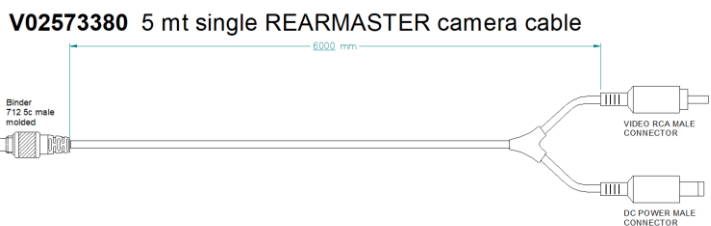
This camera offers a couple of interesting options:

- the possibility to reverse the image
- the possibility to enable or disable the parking overlay view.

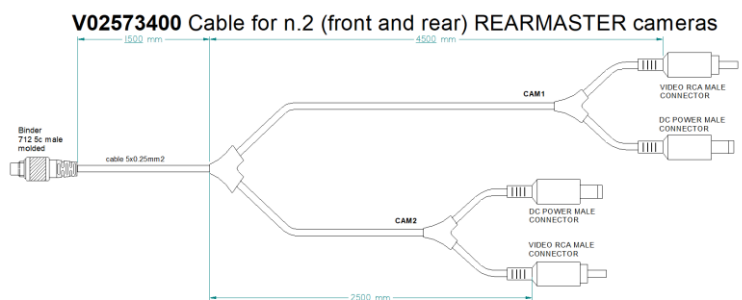
It has, as most of the analog cameras, a connection through standard RCA connectors (following right image), for which we have developed the patch cables:



- **Single RearMaster camera** (cable length: 5m) ended with:
  - **Male metallic 5pins Binder connector** for connection to AiM loggers;
  - **DC Power Connector (yellow)** to be connected to the camera one;
  - **Video RCA Connector (red)** to be connected to the camera one.



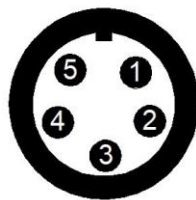
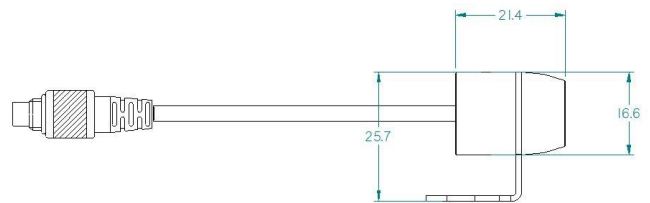
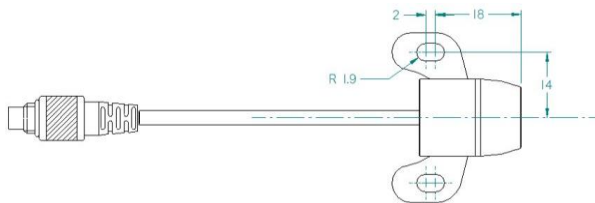
- **Double RearMaster camera** (cable length: 6m) ended with:
  - **Male metallic 5pins Binder connector** for connection to AiM loggers;
  - **X2 DC Power Connector (yellow)\*** to be connected to the camera one;
  - **X2 Video RCA Connector (red)\*** to be connected to the camera one.



\* The two **DC Power** and **Video RCA** cables couples are respectively 4m and 6m long, in order to allow both front camera and rear camera connection.



AiM offers the same camera with a more reliable Binder connection (P.N.: XB1ZCAMHD00; Binder connector pinouts are specified below):



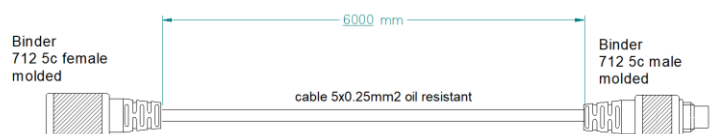
Binder 712 5c male pins solder view

①	Video Input 1	WHITE
②	GND	BLACK
③	+Vb output camera	BLUE
④	nc	
⑤	nc	

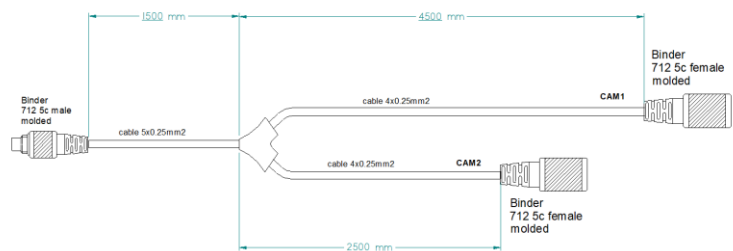
The patch cables available are:

- **Single AiM Mirror Camera** (6m length) ended with:
  - **Male metallic 5pins Binder connector** for connection to AiM loggers;
  - **Female metallic 5pins Binder connector** for Mirror Camera connection.
- **Double AiM Mirror Camera:** ended with:
  - **Male metallic 5pins Binder connector** for connection to AiM loggers;
  - **X2 female metallic Binder connectors:** each one must be used to connect the Mirror Camera (cable lengths 4m – front camera – and 6m – rear camera).

**V02551170** 6mt single AIM backup camera cable



**V02573410** Cable for n.2 (front&rear) AIM backup cameras



## 2

## Configuration through Race Studio 3

Once the connection has been executed, it is necessary to configure the device, defining a specific event that causes the camera image displaying. For example, if you wish to turn ON the camera when you insert the Reverse Gear, these are the steps to follow:

- Open Race Studio 3, connect your system via Wi-Fi or USB and create a new configuration (or modify an existing one).
- The Gear, of course, is supposed to be one of the available channels. It is possible to obtain it:

- Through analog sensor, plugging it into one of the device analog channels, which must be configured as expressed on the right (Channels tab). The "Use reverse gear" box must be ticked.

- Through ECU, selecting the compatible protocol with your vehicle ECU from the ECU Stream tab.

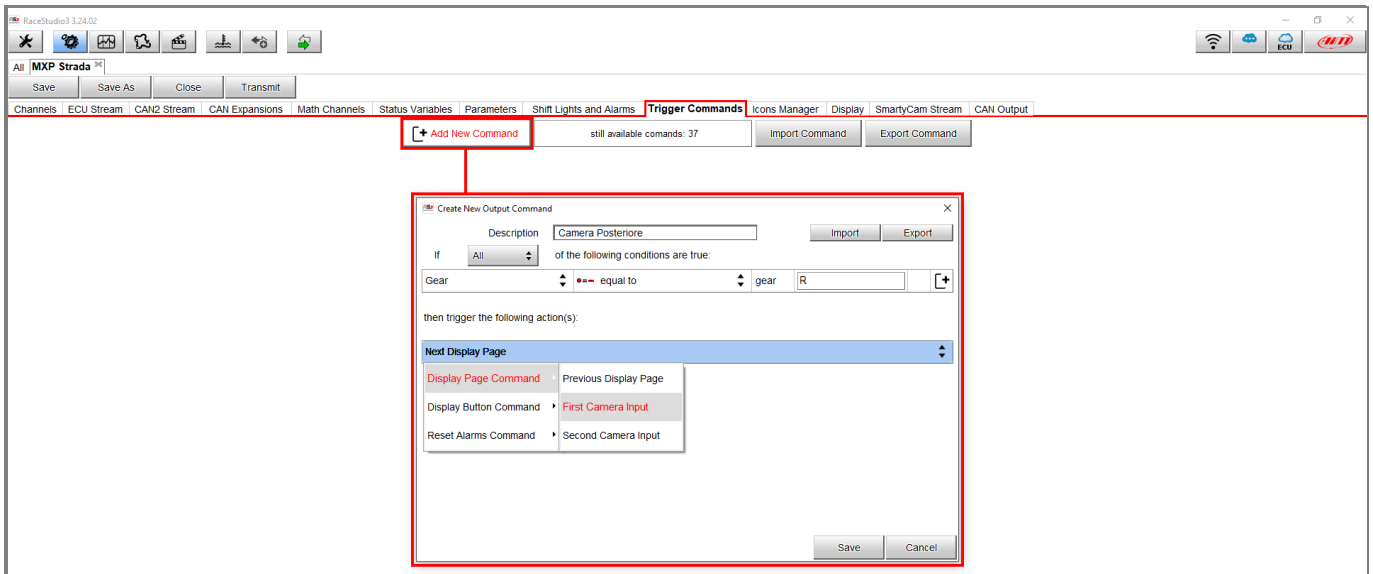
ECU: **BMW - F\_Series** Change ECU ?

Enable the CAN Bus 120 Ohm Resistor  
 Silent on CAN Bus

Enabled Channels (Max. 120) **42 / 42**

ID	<input checked="" type="checkbox"/>	Name	Function	Unit	Freq
CC01	<input checked="" type="checkbox"/>	RPM	Engine RPM	rpm	10 Hz
CC07	<input checked="" type="checkbox"/>	Gear	Gear	gear	10 Hz
CC14	<input checked="" type="checkbox"/>	Speed	Vehicle Spd	km/h 0.1	10 Hz
CC18	<input checked="" type="checkbox"/>	Wheel Speed RL	Wheel Spd	km/h 0.1	10 Hz
CC19	<input checked="" type="checkbox"/>	Wheel Speed RR	Wheel Spd	km/h 0.1	10 Hz

- Open the Trigger Commands tab and click "Add New Command": select "First Camera Input Page" as a command to activate when the Gear is equal to "R".



### 3

## Settings through AiM device menu

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The camera parameters setting must be executed from the device menu directly, as explained below:

- Press "MENU/<<" button.
- Pressing "PREV" and "NEXT", move on the VIDEO IN icon and press "ENTER".
- The system offers the possibility to set the image format (PAL or NTSC – according to the camera technical specs), brightness and contrast for each available input.



If no key is pressed, after 5 seconds the menu disappears, showing the camera image in live streaming, so that it can be better positioned.

