

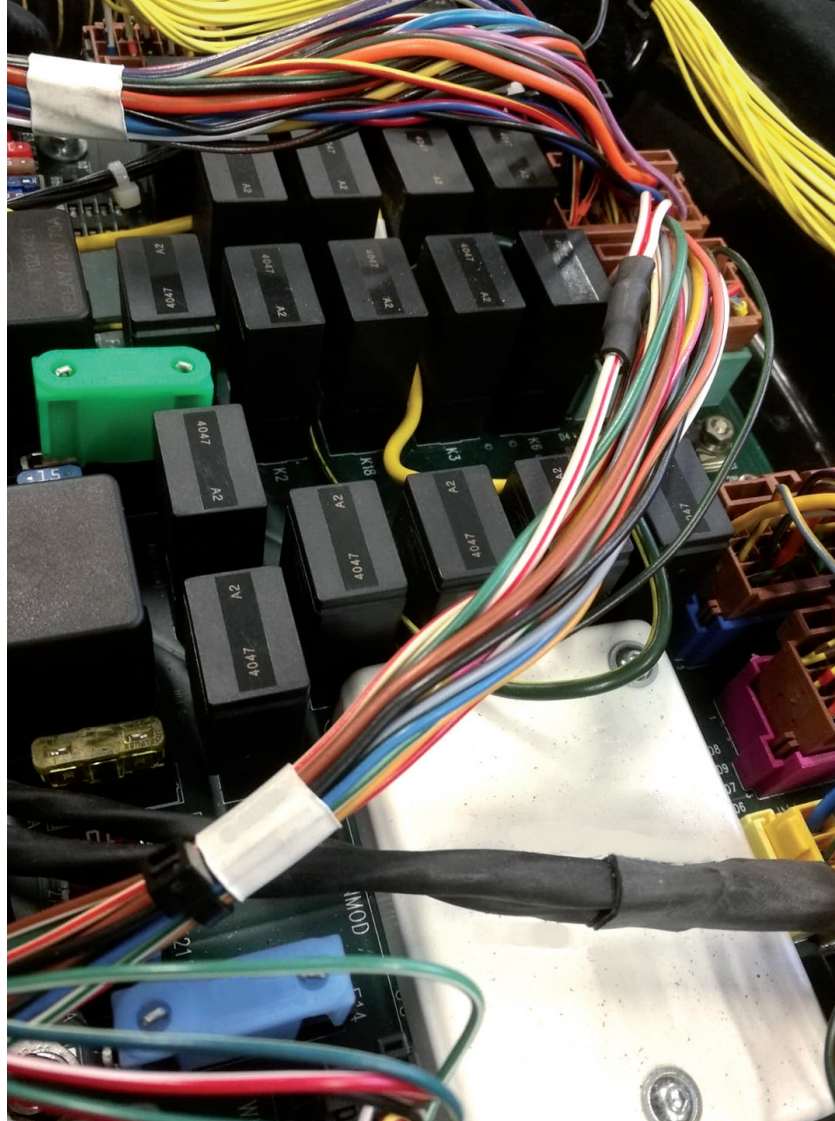


PDM32/PDM08 KIT

Much More
Than a
Power Distribution
Module



From the past





..... to the future

PDM32 and PDM08 Power Distribution Modules are designed to distribute power to multiple circuits on your vehicle, easily replacing traditional fuse and relay systems.

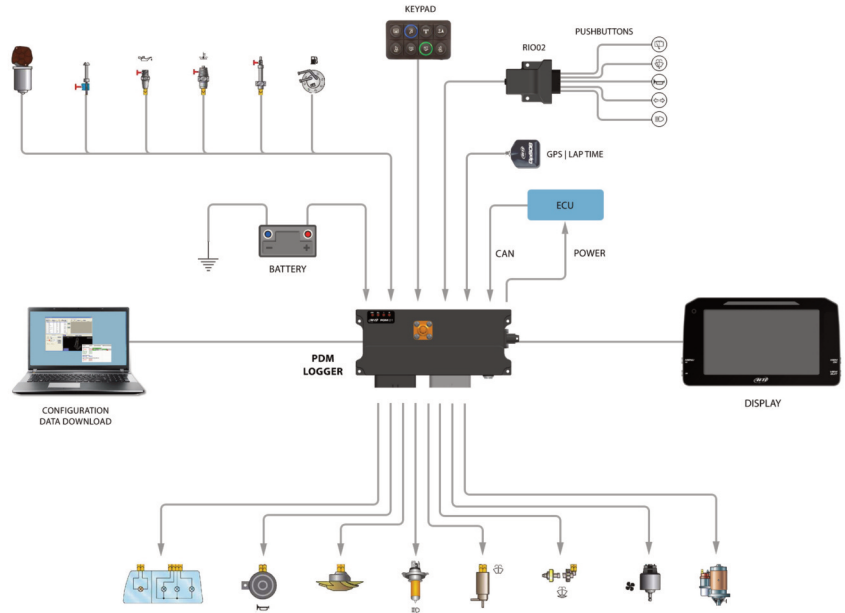


PDM32/PDM08 KIT

Our PDMs, housed in an anodized billet aluminum case, are designed to handle the rigors of motorsport and include a complete professional data logger and internal dash controller.

An AiM PDM at the center of vehicle electronics will greatly simplify your wiring harness and electronics installation while providing much more control.





PDM 32 and PDM08 offer also some interesting features, like:

- ECU connection, for getting data from your ECU
- Datalogging, for avoiding adding another logger to your car
- GPS Module, for having automatic lap times and track positions
- Display controller, for easily managing a 6" or 10" display
- 9 axis EMU platform
- Mirror camera, for easily getting a back view while you drive your car in reverse in the paddock.





The PDM Kit includes:

- New INTEGRATED Power Distribution Module
+ 4 gigabytes Datalogger
+ Dash controller
- Dash 6" or 10"
- GPS Module for automatic Lap Time
and track position.

In two different proposals:

- **PDM32** with 28 High Side Outputs and 4 Half Bridge Outputs
- **PDM08** with 08 High Side Outputs

Power Outputs

The PDMs offer four different Power Outputs Levels:

	PDM 32	PDM 08
High Power: continuous current	4	
Medium Power: continuous current	12	8
Low Power: continuous current	12	
Half Bridge:	4	
Total continuous max current	120A	120A

Each output provides status feedback for open circuit, short circuit, high temperature, over current, under voltage, and over voltage. Inrush current, number of fault retries, and the time between retries are all definable.

For every output, a multicolor LED shows the status:

- Enabled/disabled
- Activated or not
- Fault

All the outputs may be configurable as PWM and allow soft start/stop.





An elegant visual interface allows flexible and powerful configuration for every power output.

The screenshot displays the RaceStudio software interface. A 'Modify Output Signal' dialog box is open, showing configuration for 'High Power Out 3'. The dialog includes the following fields and options:

- Name:** High Power Out 3 on Black Connector (35 Pin Male) Pin: 24, 25
- Type:** Direct Current (High when TRUE)
- Maximum Value of Requested Load:** 35 A (set to 35.0 A)
- Over Current Latch-Off Time:** 55 sec
- Number of Retries:** 1
- Retry Delay:** 55 sec
- Rate TRUE:** when following condition is TRUE for at least 5 sec
- Rate FALSE:** when following condition is FALSE for at least 5 sec or if FALSE only when the device is turned on
- Conditions:**
 - ECU ENCL 1: greater than 15°C (TRUE after 5 sec; FALSE after 10 sec)
 - ECU OIL T: greater than 13°C (TRUE after 5 sec; FALSE after 10 sec)
- Related Channels:**
 - 10 High Power Out 2
 - 11 High Power Out 1
 - 12 Low Power Out 1
 - 13 Low Power Out 2
 - 14 Low Power Out 3
 - 15 Low Power Out 4
 - 16 Low Power Out 5
 - 17 Low Power Out 6
 - 18 Low Power Out 7
 - 19 Low Power Out 8
 - 20 High Power Out 2
 - 21 High Power Out 3
 - 22 High Power Out 4
 - 23 High Power Out 5
 - 24 High Power Out 6
 - 25 High Power Out 7
 - 26 High Power Out 8
 - 27 Low Power Out 11
 - 28 Low Power Out 12
 - 29 HPB01
 - 30 HPB02
 - 31 HPB03
 - 32 HPB04
- Legend of Status Values:**

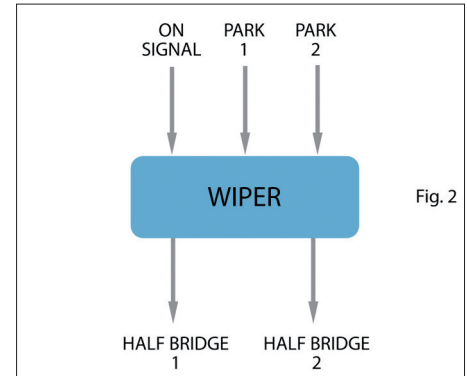
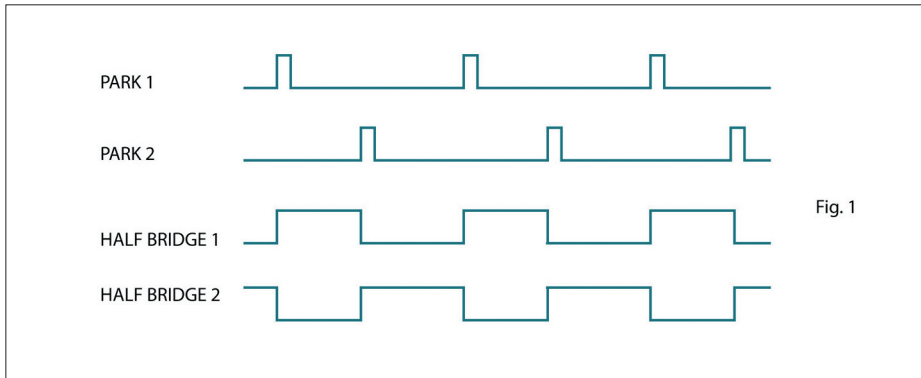
Value	0	1	2	4	8	16	32
Lowest	ok	sc	open	temp	over	swall	ovolt
Description	ok	short circuit	open circuit	high temperature	over current	under voltage	over voltage

Special Functions

Some “black boxes” are available for simplifying the configuration.

For example, the Wiper may be managed by the LIN connection, or using the Half Bridges.

In this case, you may take advantage by a virtual object like the following one:

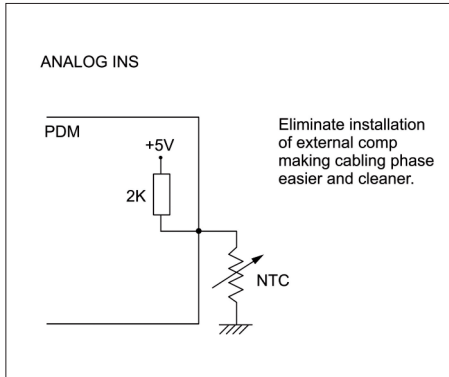


Inputs

PDMs feature the following Inputs channels:

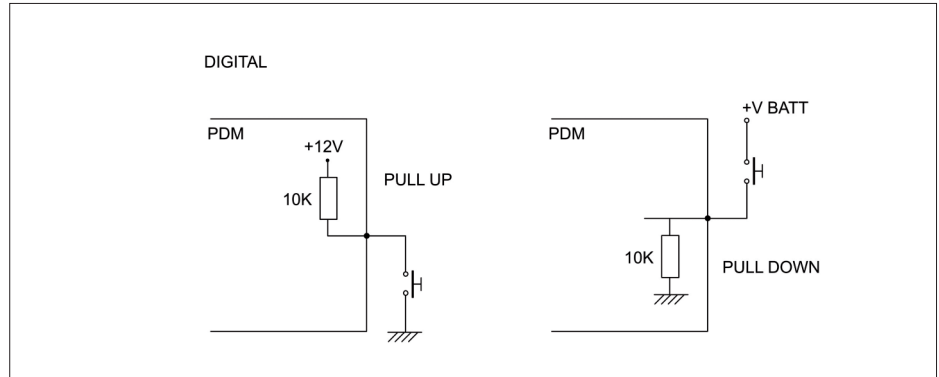
	PDM 32	PDM 08
Analog/Digital	8	6
Only digital	4	-
Speed	2	2

Analog inputs



If configured as Analog inputs, it is possible to activate an internal 2K Ohm resistor, for connecting most of the sensors directly.

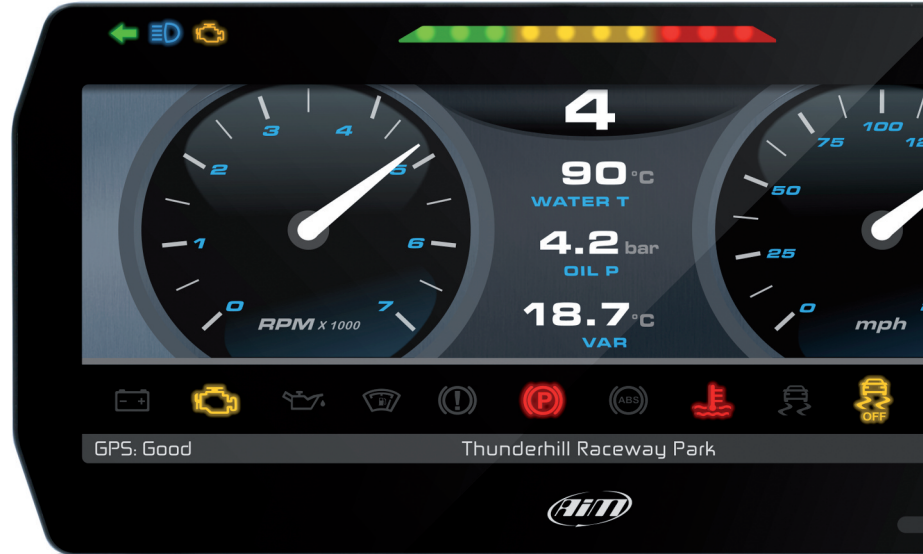
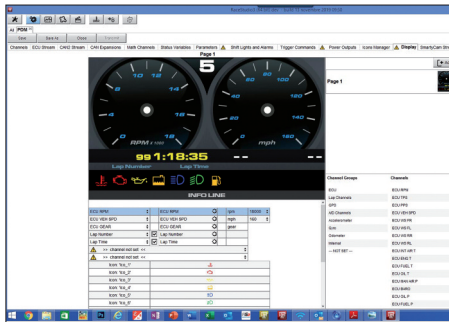
Digital inputs



If configured as Digital Inputs, it is possible to activate a 10K Ohm Pull Up or a 10K Ohm Pull Down.

Dash

Both the PDM08 and PDM32 support the new 6" and 10" TFT displays.
Both fully configurable with RaceStudio3.



Mirror Camera

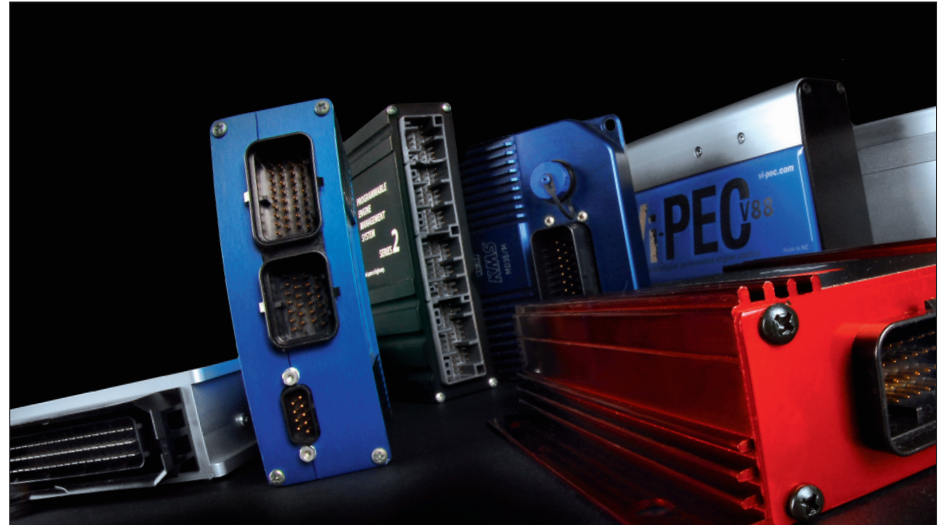
PDM32 features two analog camera inputs that allow you to swap your display into a mirror camera with the press of a button or through configurable event logic-reverse gear most commonly.



Data management

The PDMs receive, use and record data from:

- ECU : more than 1000 protocols available
- Digital / Analog inputs
- Internal 9 axis EMU
- GPS: position and Lap Time
- Expansions
- Pushbuttons, from RIO 02 Module (see page 16 of this brochure) or from any commercial CAN keypad, thanks to the simple configurability of the CAN protocols.
- All the currents and status of all the power outputs
- Other user defined math channels



GPS

PDMs come with 4000 tracks in their database, and automatically select the one you are driving on, in order to calculate Lap Time when you pass the start/finish line.



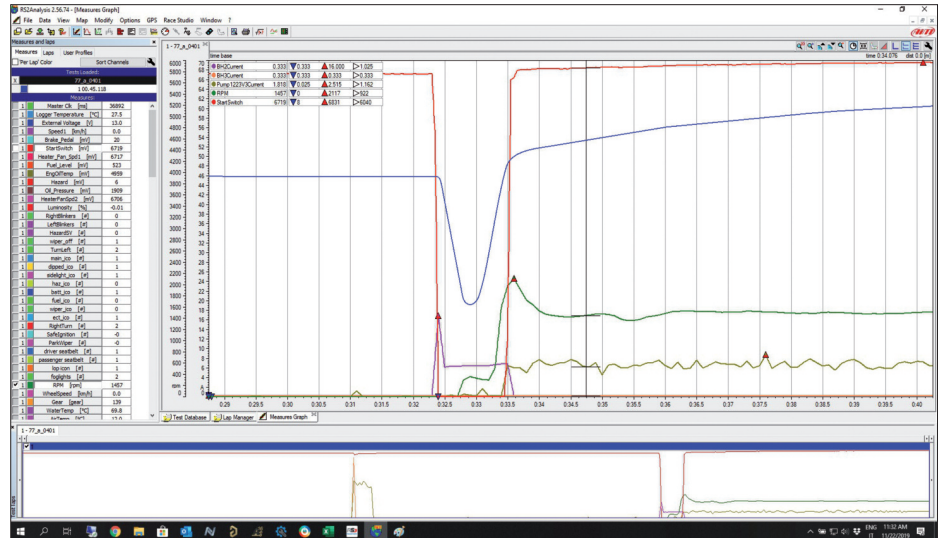
A screenshot of a software interface for track management. The interface is divided into several sections. On the left, there are navigation tabs for 'All Tracks (2240 of 2293)', 'Nations', 'Smart Collections', and 'Manual Collections'. Below these is a 'Connected Devices' section showing 'Emmett Brown' connected via 'Bluetooth'. The main area displays a list of tracks under the 'United States' filter. The tracks listed are: 1. Indiana State Fair (1/2 mi Oval Dirt), 2. Indianapolis 2017 Pinoffs (4.1 km Race Track Paved), 3. Indianapolis Motor Speedway (3.9 km Race Track Paved), 4. Indianapolis Speedrome (1/5 mi Oval Paved), 5. Lucas Oil Raceway (1.5 km Oval Paved), 6. Marion County Fairgrounds (1/5 mi Oval Dirt), 7. Midl Indy Speedway (1/25 mi Oval Paved), and 8. Mendevilla Karting and Motor Club (1.5 km Kart Track Paved). On the right, there is a detailed view of the 'Indianapolis Motor Speedway' track, including its name, address (4790 W 16th St - 46222 Indianapolis, Indiana, United States), phone number (+1 317-482-6500), and website (www.indianapolisindymotor Speedway.com). Below the track name is a map showing the track's layout. At the bottom right, the start/finish line is marked with a flag icon, and the coordinates are given as Latitude 39.791410° N and Longitude 86.289120° W.

Data Logger

An internal datalogger is available, capable of recording all the analog inputs, digital inputs, ECU channels, GPS values, Currents, status of all the Power Outputs.

Here an example of what the recorded data may show, during engine cranking.

- In Red, the ignition pushbutton
- In Blue, the battery voltage drop
- In Purple, the current absorbed by the solenoid.
- In Dark Green, the current absorbed by the fuel pump.
- In Green, RPM Value.



	PDM32	PDM08
■ Inputs	14 fully configurable, max 500 Hz each: 8 analog/digital 4 digital inputs of which 2 speed input	6 fully configurable, max 500 Hz each
■ Power Outputs	4 rated up to 35 A (high power) 12 rated up to 20 A (mid power) 12 rated up to 10 A (low power) 4 rated up to 30 A (Half Bridge)	8 rated up to 20 A (mid power)
	Protected for: over voltage, under voltage, over current, over temperature Total max current: 120 A	Protected for: over voltage, under voltage, over current, over temperature
■ Lin bus	1	1
■ CAN connections	3	3
■ Inertial platform	3 axis ±5G accelerometer + 3 axis gyro + 3 axis magnetometer	3 axis ±5G accelerometer + 3 axis gyro + 3 axis magnetometer
■ Internal memory	4 GB	4 GB
■ External modules	GPS Module, Channel Expansion, TC Hub, Lambda Controller, SmartyCam HD, Remote IO Pushbutton Module	GPS Module, Channel Expansion, TC Hub, Lambda Controller, SmartyCam HD, Remote IO Pushbutton Module
■ External Analog Camera input	2	NO
■ Body	Anodized Aluminum	Anodized Aluminum
■ Waterproof	IP65	IP65
■ Dimensions	234.5 x 94.6 x 49.5 mm	161 x 100.6 x 50.6 mm

Accessory

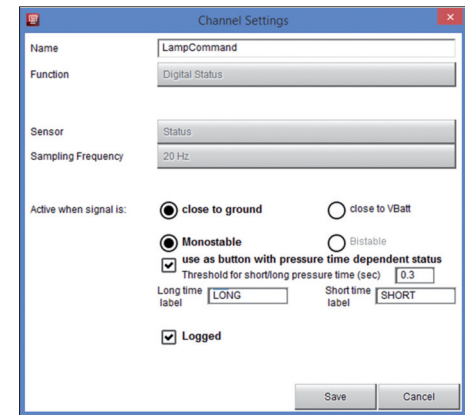
RIO02 Remote Input Output Module



The RIO02 Remote Input/Output Module is dedicated to pushbutton management when the available inputs are not enough.

It features :

- 19 inputs, primarily dedicated to push button management. Easily configure momentary, two-position, and multi-status, with momentary controls for long and short push.
- 2 Low side , max 2A, Digital Outputs.



Digital inputs Configuration panel example

TECHNICAL SPECIFICATIONS

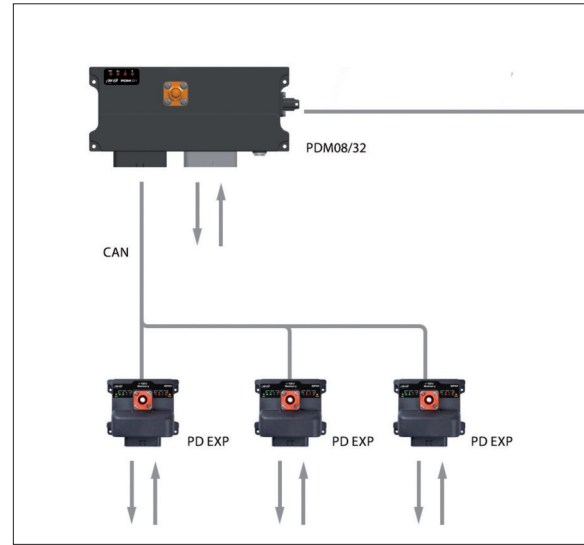


Example of installation:
all the pushbuttons and switches of the new Ariel Atom IV are managed by a RIO 02.

■ CAN connections	1
■ Inputs	19 of which: 8 programmable: Switch to Batt, Switch to ground 11 Switch to Ground
■ Outputs	2 Low side Max 2 A
■ Body	Plastic
■ Dimensions	99.2 x 80 x 40.1 mm
■ Weight	120 g
■ Waterproof	IP65

Accessory

EPM Expansion Power Module



TECHNICAL SPECIFICATIONS

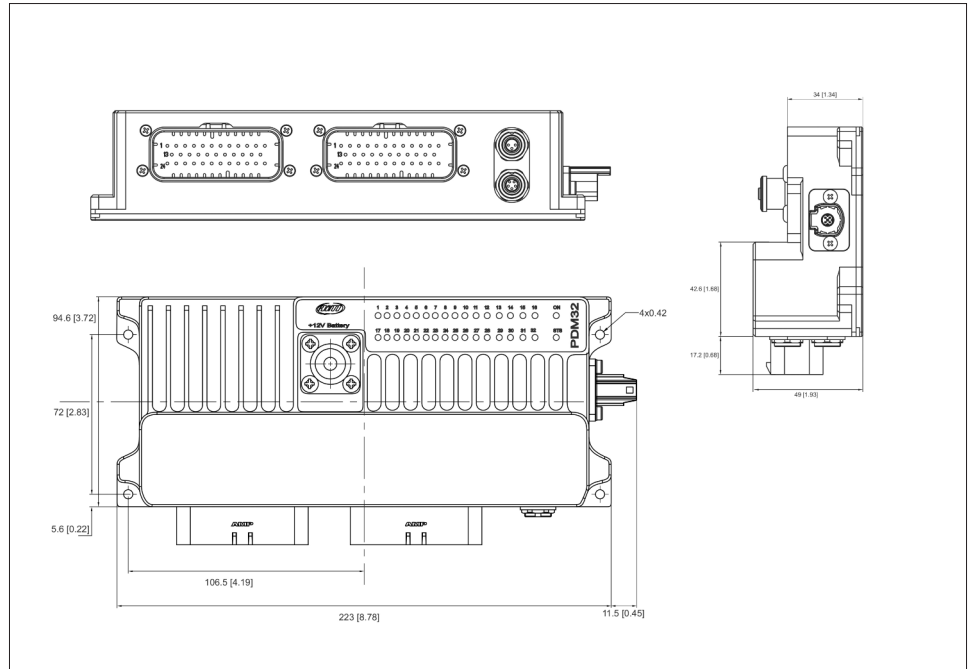
■ Power outputs	8 rated up to 30 A (high power)
■ Inputs	8 programmable: Switch to Batt, Switch to ground
■ CAN connections	1 dedicated to AiM network
■ Body	Plastic
■ Dimensions	99.2 x 80 x 40.1 mm
■ Weight	120 g
■ Waterproof	IP65

The EPM, Expansion Power Module, offers the possibility to add more outputs and more inputs

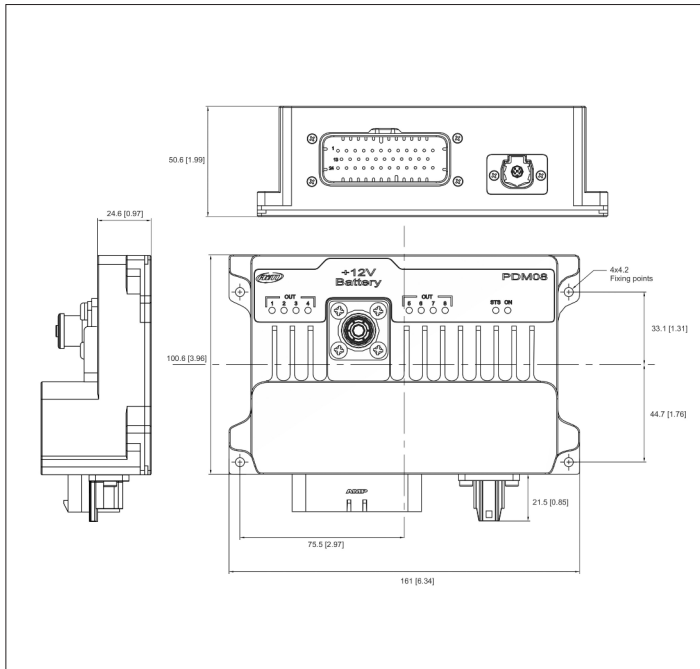


DASH

PDM32



PDM08



RIO02

