

POWER CONTROL MODULE 2

A NEW HORIZON IN POWER MANAGEMENT



A new horizon in power management

OBR's Power Control Module 2 thrusts the concept of intelligent power management to new pinnacles. It provides a freely programmable, open and unique system upon which to build total control of a racing car's electrical system.

Based on the competitive success, knowledge and experience gleaned from OBR's first PCM incarnation, PCM2 is the most technologically advanced, powerful and flexible unit ever seen. It acts as a complete electronic central nervous system.

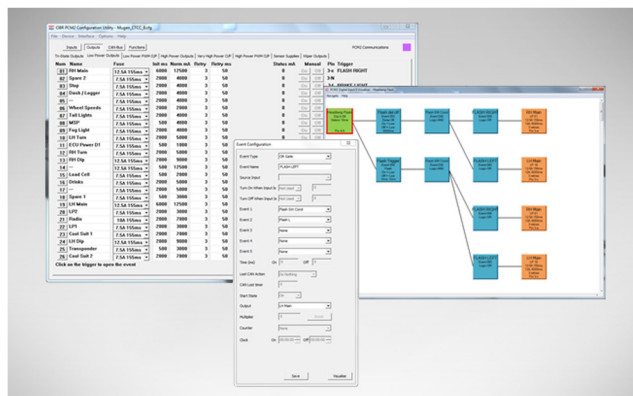
PCM2 has unrivalled high current handling and measuring abilities spread across its 48 individual power output channels, each of which can be controlled by any number and type of input or trigger. All power outputs have self-recovery features suitable for use with motors and resistive and inductive loads. Some outputs handle peak currents in excess of 300A.

The PCM2 effortlessly exchanges data with other modules in the car primarily over its multiple CAN ports. This means that every value and data packet that is exchanged, recorded or seen e.g. current draw and channel status can be exported and shared over all of the PCM2's open CAN network. The PCM2 also supports CAN routing meaning data can be exchanged from one bus to another bus freely, exported to wherever the user defines.

All CAN data channels are completely free for the user to configure, there are no limitations to CAN address or how the protocol is configured. The PCM2 will therefore interface easily with any other CAN based product found on the market.

In addition to the free CAN structure, the PCM2 has 16 analogue sensor inputs and 14 digital inputs. Analogue inputs can be paired individually to become differential inputs.

PCM2 is also equipped with a real time clock and data recording capabilities.



Software

The PC Tool used to configure the PCM2 has been logically laid out and is simple to use.

A special feature of the PC Tool is the graphic visualizer which makes calibration, modification and fault finding of the unit's configuration near to effortless.

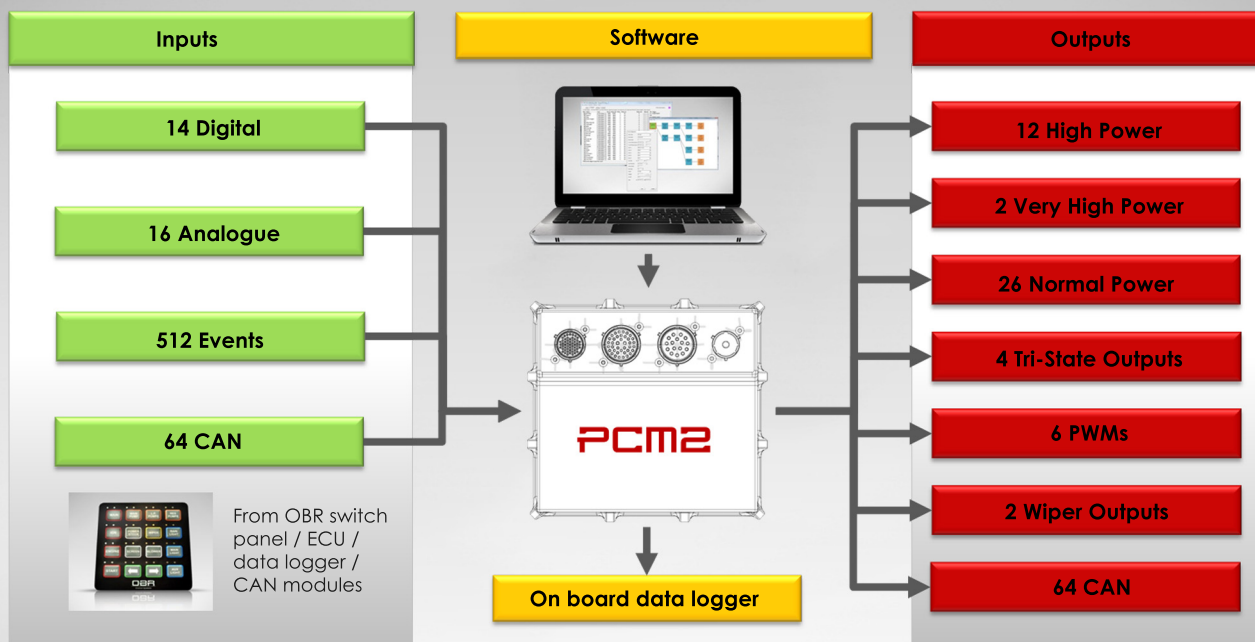
Event based handling

PCM2 is controlled by configurable software events. Events are used to define and create specific conditions, simple as well as complex, which then controls an output or other events. Multiple events can be placed within other events, creating almost unlimited control conditions.

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Flow Overview



General Specifications

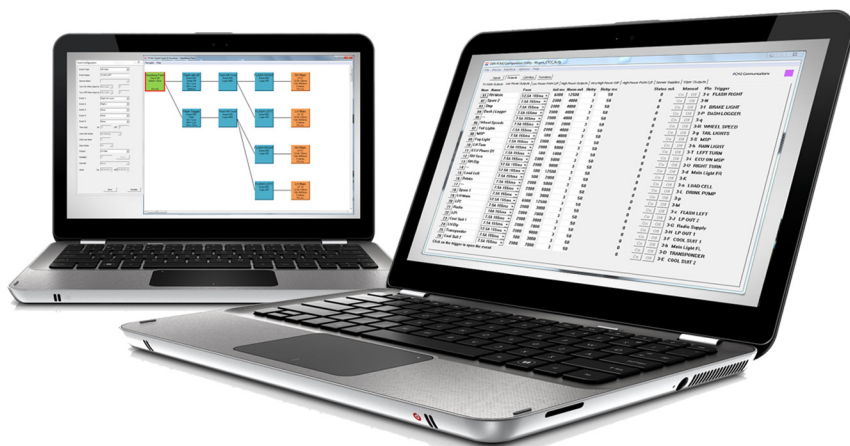
- 48 Power outputs
- 14 Digital inputs
- 16 Analogue sensor inputs
- 64 Individually programmable CAN inputs, 11 or 29 bit identifiers, with bit operator
- 4 Individually programmable CAN bus with **No limitation on CAN id's**
- 1 LIN Bus
- Ethernet Connection
- Real Time Clock
- RS232 Link
- 4 Tri-state outputs (a tri-state output is only for use as an ECU trigger)
- 3 VREF sensor supplies
- Fault warning light
- CNC machined and anodized enclosure (O-ring sealed)
- Deutsch Autosport connectors
- Weight 1190 grams

Electrical Specifications

- Supply voltage 6 to 30 volts
- Maximum operating temperature $\leq 85^{\circ}\text{C}$
- Typical temperature rise over ambient $< 25^{\circ}\text{C}$ @ 140A; 30 minutes
- Maximum recommended continuous output current 300A
- In-rush current capability 1000A

Software Specifications

- 512 individually programmable events
- Automatic and user-defined pre-set channel shutdown protection
- Programmable inrush current levels and inrush times
- Programmable fuse thresholds, retries and retry time intervals
- Manual reset function for all overloaded channels
- Current draw and channel status diagnostics
- Compatible with OBR's range of membrane switch panels (software selectable)



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