

<b>Document Number</b>		RG_SPEC-0085	
<b>Title</b>		Steering Wheel	
<b>Revision</b>	<b>Date</b>	<b>Prepared By</b>	<b>Change History</b>
1.0	11/7/2017	HW	Initial Release

## Part # STEERING WHEEL RG.DV.PT0100-xxx

### Description:

The Racegrade MSW-272 is a lightweight, composite steering wheel incorporating a MoTeC C125 display and logger for use in both slave and standalone applications. It contains momentary buttons, rotary knobs, paddle inputs and Opto isolated outputs.

The MoTeC C125 is a 5 inch (127 mm) TFT LCD anti-reflective colour display with an 800 x 400 resolution and anti-aliased graphics. Up to 3 pages can be configured with selectable layouts and user defined color schemes.

The MSW-272 has 12 flush cap momentary buttons that are LED backlit. The LED's have two brightness settings that can be configured through the MoTeC C125 software. Six rotary knobs are also available, each with 12 positions. These include 4 on the front face plate and 2 thumb wheels.

Paddle shift inputs are wired directly to the MoTeC C125. These are also wired through the steering column connector for direct connection to an Engine control module.

All Button and rotary positions are user configurable and can be transmitted via CAN for other ancillary devices. The MoTeC C125 has 10 customizable LED's for shift lights, warnings etc. Each LED can be set to 8 different colors with 0-100 percent brightness settings.



### Mechanical Specifications:

- Base Material: Composite Material  
Carbon fibre filled
- Hand Grips: Polyurethane mold
- Weight: 2.80 lbs(Including QR)
- Operating Temp: -20°C to 70° C
- Size: 11.9" x 7.6 "x 4.1 "  
303 mm x 192 mm x 96 mm
- Quick Release: Krontec

### Technical Specifications:

- Supply Voltage: 6.0v – 32.0v
- Current: 0.625A (excluding sensors)
- Buttons: 12 Momentary (can be latching via software)
- Rotary Positions: 6 x 12 positions (4 front, 2 thumb wheels)
- Paddle inputs: 2 inputs (4 optional)
- Communications: Ethernet
- CAN Comms: 1 x CAN Bus 2.0

**Pin Out:****Center Column**

Connector: Autosport AS012-35PN  
 (\* Souriau modification available)  
 Mating Connector: AS612-35SN

Pin	Signal	Description
1	12v	Power
2	GND	Ground
3	RC Signal	Right Clutch Signal
4	C 0v	Clutch 0v
5	LC Sig	Left Clutch Signal
6	PL Sig	Paddle Left Signal
7	PR Sig	Paddle Right Signal
8	Opto 1 in	Opto 1 In
9	Opto 1 Out	Opto 1 Out
10	Rot 1	Rotary 1 signal
11	Rot 0v	Rotary 0v
12	Rot 2	Rotary 2 Signal
13	Opto 2 in	Opto 2 In
14	Opto 2 Out	Opto 2 Out
15	RS232 Rx	RS232 Rx (GPS, ECU)
16	RS232 Tx	RS232 Tx (Telemetry)
17	ETH RX+	Ethernet RX+
18	ETH TX+	Ethernet TX+
19	ETH RX-	Ethernet Rx-
20	CAN LO	CAN Low
21	CAN HI	CAN High
22	ETH TX-	Ethernet TX-

**Paddle Connection**

Main Connector: ASU003-03PN  
 Mating Connector: ASU603-03SN

Pin	Signal	Description
1	0v	Sensor 0v
2	PL Sig	Paddle Left Signal
3	5v	Sensor Power

Pin	Signal	Description
1	0v	Sensor 0v
2	PR Sig	Paddle Right Signal
3	5v	Sensor Power

**C125 Specifications:****Display**

- Selectable fixed layouts with channel and label configurability (3 Pages)
- 48 user defined scrollable messages

**Inputs/Outputs**

- Optional hardwired button and rotary knob inputs
- Compatible with CAN expanders

**Internal**

- 3-axis G sensor, Dash Temp and Battery Voltage
- Sensor supply voltage

**C125 Upgrades:**

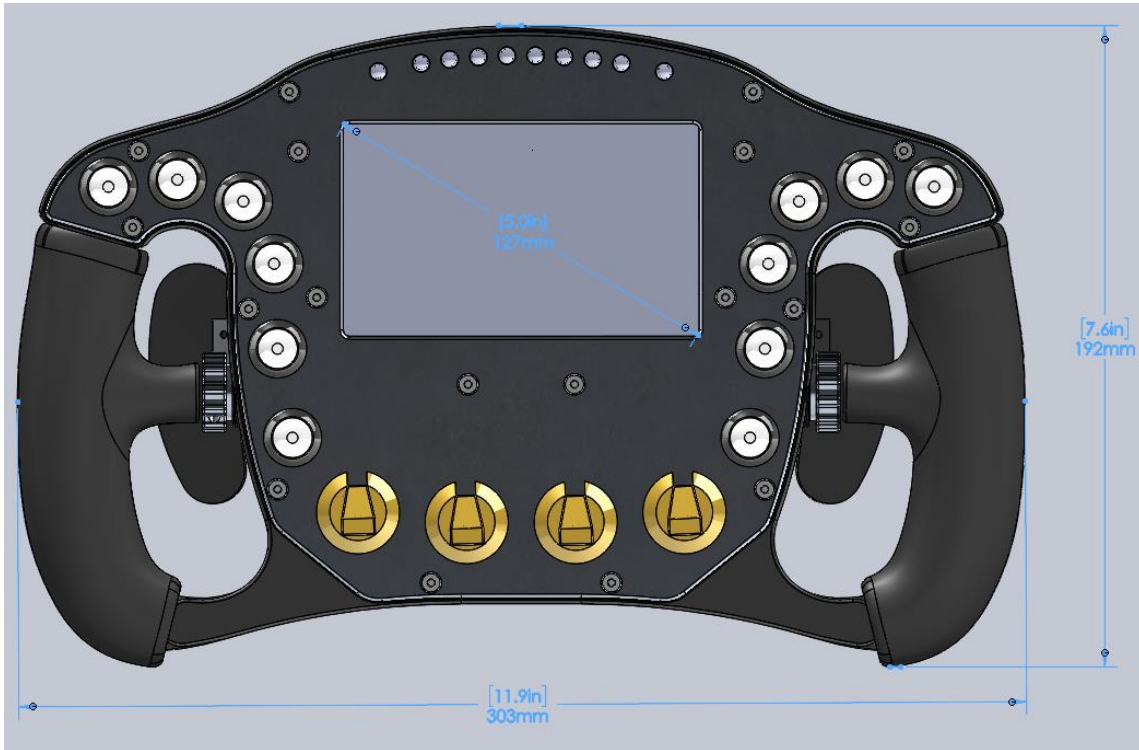
**Display Creator** – enables a full customisation of display graphics including imported images, logos, custom icons, and extra pages.

**Logging Level 1** – 120 MB internal datalogging, up to 500 samples/ second

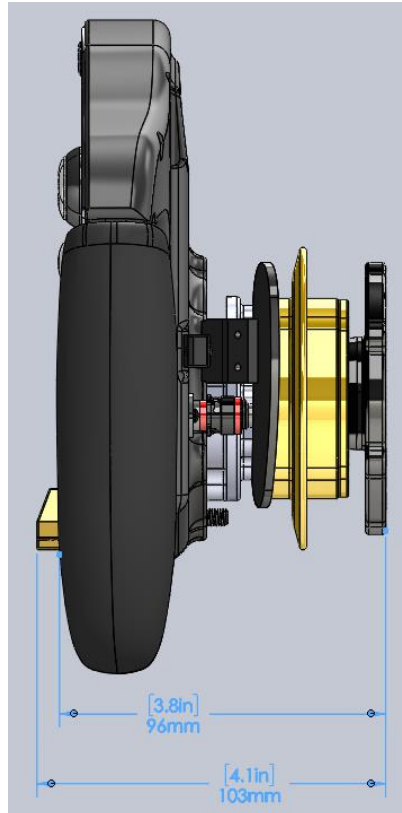
**Pro Analysis** – Provides access to advanced i2 Pro data analysis software with multiple graphs overlays, X-Y plots, Advanced math functions, synchronised video alignment, and flexible layouts.

**T2 Telemetry** – Allows use of MoTeC Telemetry software.

**Dimensional Drawings:**



**Figure 1:** Front face of MSW-277



**Figure2:** Side View of MSW-272