

CCW MK3

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CCW Mk3



Overview

- 284mm FIA certified Ultra lightweight carbon steering wheel
- Native MATLAB Autocoding supported on request
- Configurable with up to 6 paddles
- Configurable backlit buttons, rotaries for colour and brightness
- On board High-Speed Solid-State Logger

The Cosworth Carbon Wheel *Mk3* (CCW *Mk3*) is the latest generation of professional motorsport steering wheels developed through decades of engineering experience within high end motorsport prototype applications. Its combination of 12 backlit RGB LED push buttons, 4 x 12-way backlit RGB LED rotary switches, and 4 x 16 way thumbwheel encoders offer fast efficient control to the endurance driver.

The CCW *Mk3* has dedicated inputs for up to two push-pull digital paddles and four analogue paddles. All buttons and rotaries are backlit and fully configurable using the highly acclaimed Cosworth toolchain APIs incorporating advanced Math, Logic, and Autocoding. For example, users can configure the colour of the

backlight independently for each button or rotary and brightness controlled in two zones - button backlight and rotary backlight.

All inputs and embedded diagnostics system channels can be transmitted over 2 failover CAN ports for use with other peripheral systems on the car. The CCW *Mk3* incorporates an industry leading sunlight viewable 1000nit, 800x480 WVGA, 16.7M colour 5" TFT display that is fully controllable by Cosworth's range of ECUs, VCUs, PDMs, and Data loggers, or it can be run in full stand-alone mode with built in ultra-high-speed solid-state storage, offering up to 4GB for data logging directly on the wheel.

Electrical data	
Operating Voltage	7 to 30V
Current consumption ^{*1}	~900mA @ 14.4V
Operating Internal Temp	-10°C to + 55°C
Storage Temp	-20°C to + 60°C
Communication	
Ethernet	1x 1000MB/S
CAN Ports	2x CAN 2.0B
Debug	RS232

Mechanical data	
Size	158 x 284 x 88 mm
Weight	1700 grams
Environmental	IP65
Vibration	Cosworth DV-V®
Case	Prepreg Carbon Fibre
Grips	55A Shore PU
Metal Parts	6802-T2 Anodized
Quick Release Mechanism	Cosworth Krontec 8STA

Display data	
Screen	TFT Active matrix
Resolution	800 x 400
Viewable Area	108mm x 64.8mm
Contrast Ratio	600:1
Brightness	1000 nit
Display Colours	16.7M
Viewable Angle	D70 ° U60 ° L&R75 °
LEDs	32 x RGB LEDs



Product Variant Matrix

Hardware Options

Hardware Variant	01D-641350-G	01D-641350-GC	01D-641350-GCA
2x Gear Shift Paddles Fitted	YES	YES	YES
2x Clutch Paddles Fitted	-	YES	YES
2x Analogue Paddle Fitted	-	-	YES

Software Token Options

Software Variant	320 (Default)	340	360
Token Part Number	01P-641350-320	01P-641350-340	01P-641350-360
Logging Enabled	-	YES	YES
Logging Capacity (MB)	-	1,024	4,096
Bandwidth (bytes/sec)	-	50,000	100,000
Cont. Sampling Rate (Hz)	-	500	1,000
Burst Sampling Rates (Hz)	-	500	1,000
Math Channels	200	500	1,000
Logic Channels	Enabled	Enabled	Enabled
Analogue Paddles	Up to 4	Up to 4	Up to 4
Digital Paddles (Push Pull)	2	2	2
CAN Ports	2	2	2
Ethernet Port (100MB/s)	1	1	1
Ethernet Display Support	YES	YES	YES
Ethernet Display Pages	48 (Per Display)	48 (Per Display)	48 (Per Display)
Toolset Display Builder	YES	YES	YES
RGB LED Backlit Control	YES	YES	YES
RLU Remote Logging	YES	YES	YES
Setup Locking Option	YES	YES	YES
Auto-Coding Customer	-	-	Enabled
Auto-Coding Developer	-	-	Upgrade Option

Ordering information





CCW Mk3 8STA Gear Only	01D-641350-G
CCW Mk3 8STA Gear and Clutch	01D-641350-GC
CCW Mk3 8STA Gear Clutch Analogue	01D-641350-GCA

Compatible devices

Badenia 2	01L-650100
Badenia 5	01L-650080
Centaurus 5 MK2	01I-610140
Antares 8 TLA	01E-501120*

*Aux Display support available September 2024

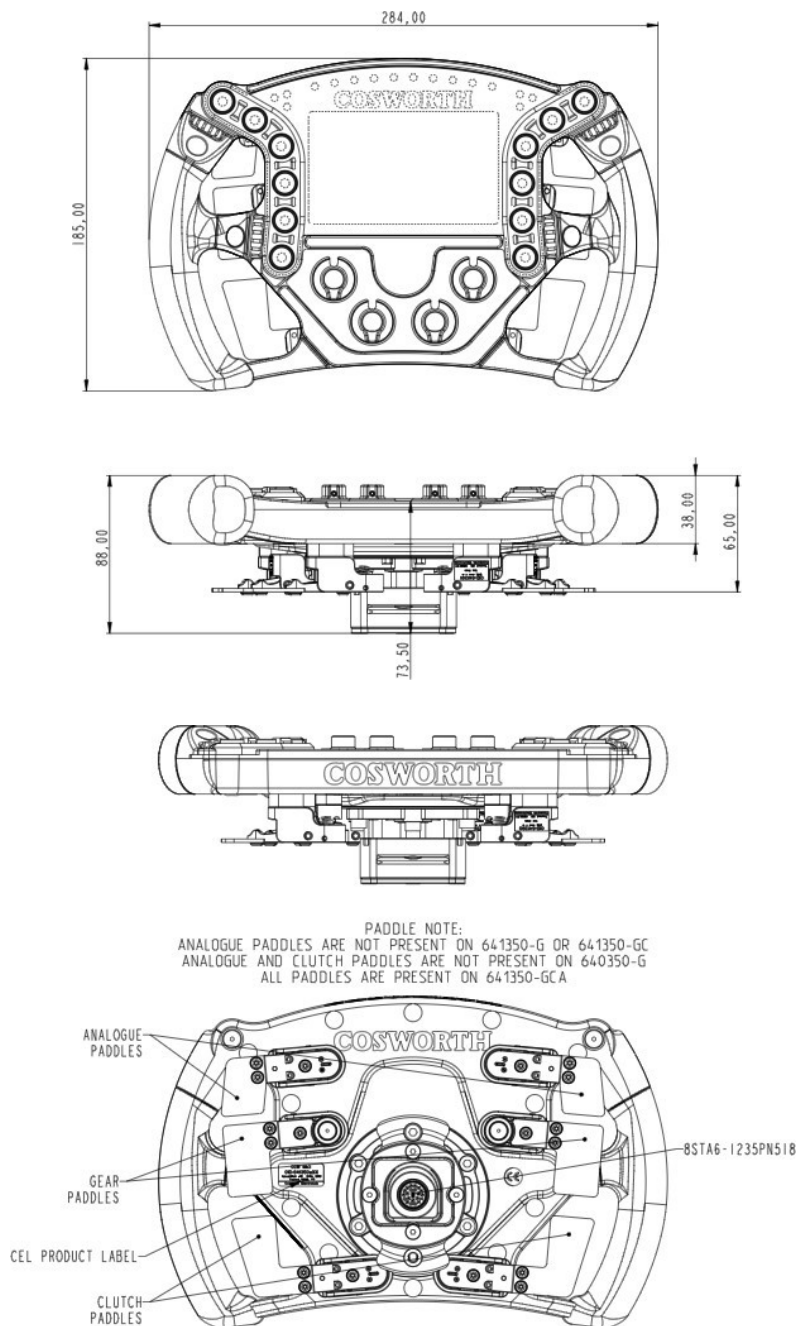
Software information

	Pi Toolset	Configuration software for power control and logging (v9 and above)
	Pi Toolbox	Professional Data Analysis (v10 and above)
	API	Cosworth DAE Engine for Real time Data pipelines.
	Auto-Coding via MATLAB/Simulink®	Customer auto-coding are available via MATLAB/ Simulink® and Cosworth Workspace Editor



CCW Mk3

Dimensions



Installation

- Make sure that the unit is protected against severe vibrations.
- Make sure that the unit is positioned in an area with sufficient cooling air flow to prevent overheating.
- Make sure that the unit is mounted away from sources of electrical interference.
- Make sure that the correct Cosworth Column/Car side male QR is used as this is a proprietary part that ensures correct hermetical sealing of the Autosport column connector.



Connector information

Please note, pin allocation is in functional order, not pin number order.

Connector	Mating connector
8STA612-35PN518	8STA012-35SN518

Pin	Function	Min gauge	Cable	Description
1	Batt+	22AWG		ALL Batt+ pins MUST be connected
12	Batt+	22AWG		
2	Chassis Gnd	22AWG		ALL Chassis Gnd pins MUST be connected
4	Chassis Gnd	22AWG		
10	Chassis Gnd	22AWG		
20	CANL1	28AWG	Twisted Pair	CAN 1 with 120Ohm software selectable termination
21	CANH1	28AWG		
13	CANL2	28AWG	Twisted Pair	CAN 2 with 120Ohm software selectable termination
14	CANH2	28AWG		
17	ENET RX+	26AWG	Ethernet PIC	Ethernet 1 100BaseT for PC / expansion comms
18	ENET TX+	26AWG		
19	ENET RX-	26AWG		
22	ENET TX-	26AWG		
15	RS232 RX	26AWG	Twisted Pair	Debug connections only
16	RS232 TX	26AWG		
8	OPTO IN	26AWG		Software selectable control
9	OPTO OUT	26AWG		
6	Shift L Sig	28AWG		Software selectable 10k pull up to 5v3
7	Shift R Sig	28AWG		Software selectable 10K pull up to 5v3
5	Clutch L Sig	28AWG		1M Pull Down
3	Clutch R Sig	28AWG		1M Pull Down
11	Ref Gnd	28AWG		Analogue paddle reference



Recycling and Environmental Protection

Cosworth Electronics is committed to conducting its business in an environmentally responsible manner and strive for high environmental standards.

Manufacture: Cosworth products comply with the appropriate requirements of the Restriction of Hazardous Substance (RoHS)

Disposal: Electronic equipment should be disposed of in accordance with the regulations in force and in particular in accordance with the Waste in Electrical and Electronic Equipment directive (WEEE).

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