

Cosworth GT Wheel (CGW)

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GT Wheel - CGW

Overview

- 310mm lightweight aluminium steering wheel
- Configurable with up to 6 paddles inc Push/Pull
- Configurable RGB backlit buttons and rotaries with colour customisation, and dynamic adjustment over CAN
- Integrated blended LED lightbar for Shift lights/alarms
- Opto Isolated Output
- Removable grips
- CAN 2.0/CAN FD

Cosworth Electronics is leveraging decades of motorsport experience and the standout success of the CCW Mk3 to enter the GT market with a product that sets a new benchmark. The goal was to bring the flagship technical features of the CCW Mk3 into a dedicated GT wheel. Delivering world-class capability in a cost-effective package, with no compromise on quality, safety, or technical delivery.

The GT Wheel is built on Cosworth's latest electronic architecture utilising TI's AM263X family of uP. The AM26X is an Automotive Grade AEC-Q100 device with Arm Cortex-R5F Real-Time core(s) making it a perfect candidate for demanding applications. A lightweight aluminium body with a carbon fibre inlay means the Cosworth GT Wheel combines strength, durability, and performance with a premium finish. This is a wheel



designed not just to meet GT demands, but to exceed them.

Market leading LED configuration is included with full RGB backlit buttons with complete control of brightness and colour, including CAN-driven flashing and status indication. Utilise the diffused LED light bar for shift lights, alarms, lap deltas and much more.

Up to 6 paddles can be configured, inclusive of push-pull gear type, along with removable grips means the CGW can be tailored to a variety of GT based applications.

With the GT Wheel, Cosworth brings proven technology to GT racing, delivering uncompromising performance, flexibility, and reliability in a package tailored for teams who demand the very best.

Electrical data

Operating Voltage	Nominal 12V (9 to 16V) Shutdown UV:6V OV:30V
Current consumption	~400mA @ VNom (All LEDs white @ 100%)
Operating Internal Temp	-10°C to + 70°C
Storage Temp	-20°C to + 80°C
Communication	
CAN Ports	2x CAN 2.0B/FD
Debug	RS232

Mechanical data

Size	170 x 310 x 50 mm
Weight	1580-1740 grams
Environmental	IP65
Case	6082-T6 Anodized Aluminium
Grips Assembly	7075-T7351 Aluminium Insert 60A Shore TPU
Quick Release Mechanism	See QR Section

Product Variant Matrix

Connector Options

The GCW is available with 2x electrical vehicle connection options, this is either via Column Connector – ‘CC’ (22w Souriau 8STA connector), or External Connector – ‘EC’ (13w Deutsch AS connector in the rear casing.)

Hardware Variant	01D-641530-CC-XXX	01D-641530-EC-XXX
Column Connector	YES	-
External Connector	-	YES

‘XXX’ denotes paddle variant shown in paddle options table above

Paddle Options

Hardware Variant	01D-641530-XX-G	01D-641530-XX-GC	01D-641530-XX-GCA	01D-641530-XX-GCD
2x Gear Shift Paddles Fitted	YES	YES	YES	YES
2x Clutch Paddles Fitted	-	YES	YES	YES
2x Analogue Paddles Fitted	-	-	YES	-
2x Digital Paddles Fitted	-	-	-	YES

‘XX’ denotes connector variant shown in connector options table above

Ordering information

Column Connector	Part Number
CGW 8STA Gear Only	01D-641530-CC-G
CGW 8STA Gear and Clutch	01D-641530-CC-GC
CGW 8STA Gear Clutch Analogue	01D-641530-CC-GCA
CGW 8STA Gear Clutch Digital	01D-641530-CC-GCD
External Connector	
CGW EC 13W Gear Only	01D-641530-EC-G
CGW EC 13W Gear and Clutch	01D-641530-EC-GC
CGW EC 13W Gear Clutch Analogue	01D-641530-EC-GCA
CGW EC 13W Gear Clutch Digital	01D-641530-EC-GCD
Quick Releases*	
Cosworth Krontec QR-03	31M-0041
Krontec QR-04 (New for 2025)	31M-0050

*please refer to Quick Release Information on page 7

Compatible devices

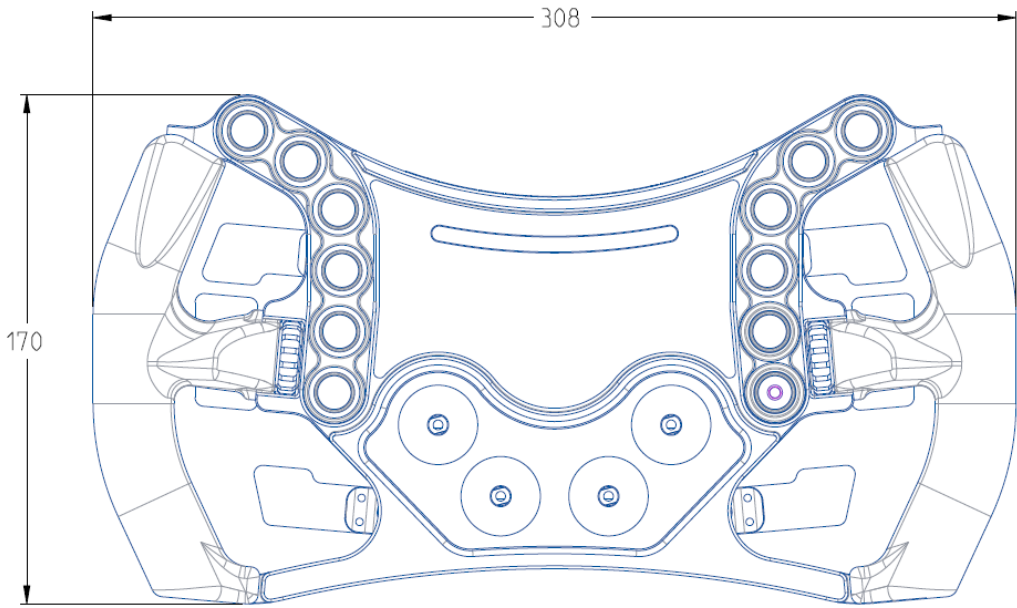
Badenia 2	01L-650100
Badenia 5	01L-650080
Centaurus 3	01I-610160
Centaurus 5 MK2	01I-610140
Antares 4	01E-501154
Antares 6	01E-501156
Antares 8	01E-501120

Software information

	Pi Toolset	Configuration software for power control and logging (v11 and above)
	Pi Toolbox	Professional Data Analysis (v13 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

Dimensions

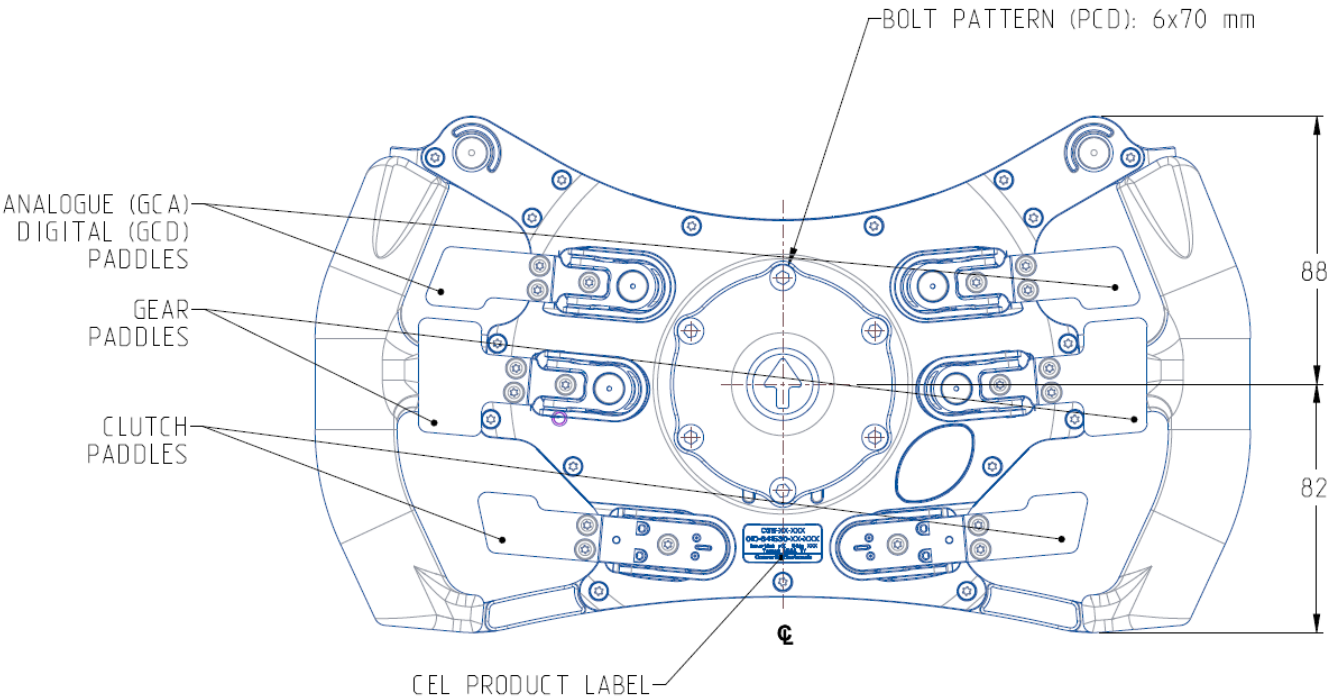
Front View (all variants)



Rear View (CC – Column Connector)

PADDLE NOTE:

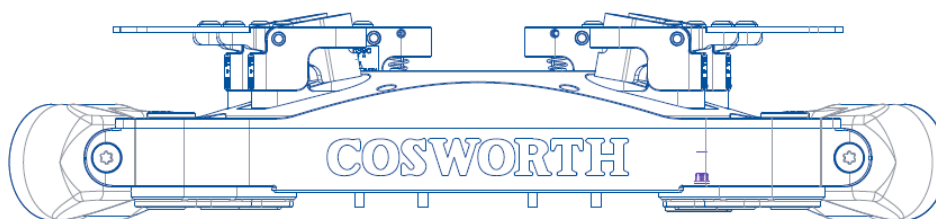
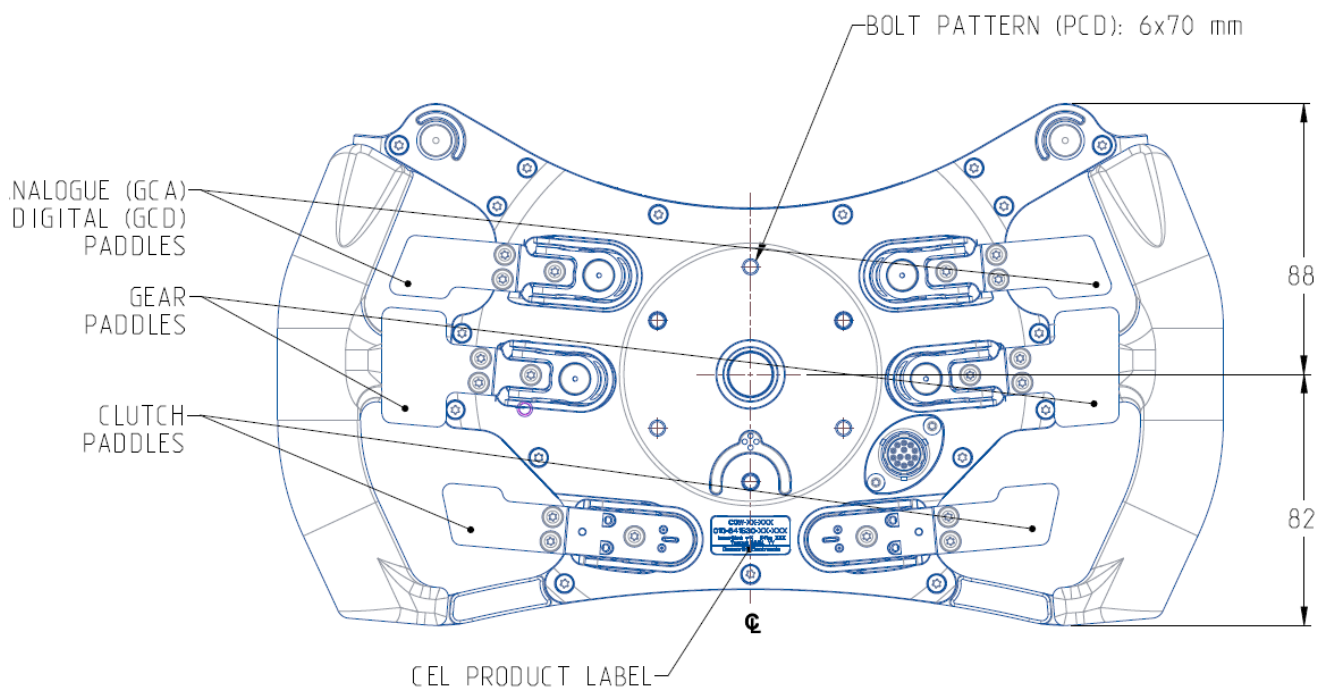
GEAR PADDLES ARE PRESENT ON 640530-CC-G
GEAR AND CLUTCH PADDLES ARE PRESENT ON 641530-CC-GC
GEAR, CLUTCH AND ANALOGUE PADDLES ARE PRESENT ON 641530-CC-GCA
GEAR, CLUTCH AND DIGITAL PADDLES ARE PRESENT ON 641530-CC-GCD



Rear View (EC – External Connector)

PADDLE NOTE:

GEAR PADDLES ARE PRESENT ON 640530-EC-G
GEAR AND CLUTCH PADDLES ARE PRESENT ON 641530-EC-GC
GEAR, CLUTCH AND ANALOGUE PADDLES ARE PRESENT ON 641530-EC-GCA
GEAR, CLUTCH AND DIGITAL PADDLES ARE PRESENT ON 641530-EC-GCD



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.

Pinout information - Column Connector Variant

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 Base operation CAN 2.0B / CANFd available on request.
21	CANH1	28AWG		
13	CANL2*	28AWG	Twisted Pair	*Reserved for future development
14	CANH2*	28AWG		
17	n/a	n/a		Reserved for future development
18	n/a	n/a		
19	n/a	n/a		
22	n/a	n/a		
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	Up Shift	28AWG		Left Push OR Right Pull Software selectable 10K pull up to 5v3 Right Push OR Left Pull
7	Down Shift	28AWG		
5	Clutch L Sig	28AWG		1M Pull Down
3	Clutch R Sig	28AWG		1M Pull Down
11	Ref Gnd	28AWG		Analogue paddle reference

Pinout information External Connector Variant

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

Connector	Mating connector
AS010-35PN	AS610-35SN

Pin	Function	Min gauge	Cable	Description
1	OPTO IN	22AWG		Software selectable control
2	OPTO OUT	22AWG		
3	Chassis Gnd	22AWG		ALL Chassis Gnd pins MUST be connected
4	Chassis Gnd	22AWG		
5	Batt+	22AWG		ALL Batt+ pins MUST be connected
6	Batt+	22AWG		
7	CANH1	22AWG	Twisted Pair	CAN 1 with 120Ohm software selectable termination Base operation CAN 2.0B / CAN FD available on request.
8	CANL1	22AWG		
9	RS232 TX	22AWG	Twisted Pair	Configuration and debug and connections
13	RS232 RX	22AWG		
10	Down Shift	22AWG		Right Push OR Left Pull Software selectable 10K pull up to 5v3 Left Push OR Right Pull
11	Up Shift	22AWG		
12	Ref Gnd	22AWG		Analogue paddle reference

Quick Release Information

Due to the vast choice of Quick Release available on the market, by default the CGW does not ship with a QR. On CC variants a transportation cap is affixed to support the 8STA connector.

The customer now has the choice of which QR to affix to the wheel. The compatible products are shown in the table below:

Manufacturer	Manufacturer Part Number	Cosworth Part Number	Description	Variant Compatibility
Cosworth/Krontec	Available only from Cosworth	31M-0041	Cosworth Krontec QR-03	CC & EC
Krontec	QR-46	31M-0050	Krontec QR-04 (New for 2025)	CC & EC
MPI	MPI-QR-RX-06-MK3	n/a	MPI QR RX06	CC & EC
Other	n/a	n/a	ANY 6x70mm Bolt Pattern QR subject to release clasp clearance	EC

Please ensure you add the appropriate QR part number to your steering wheel order if required.

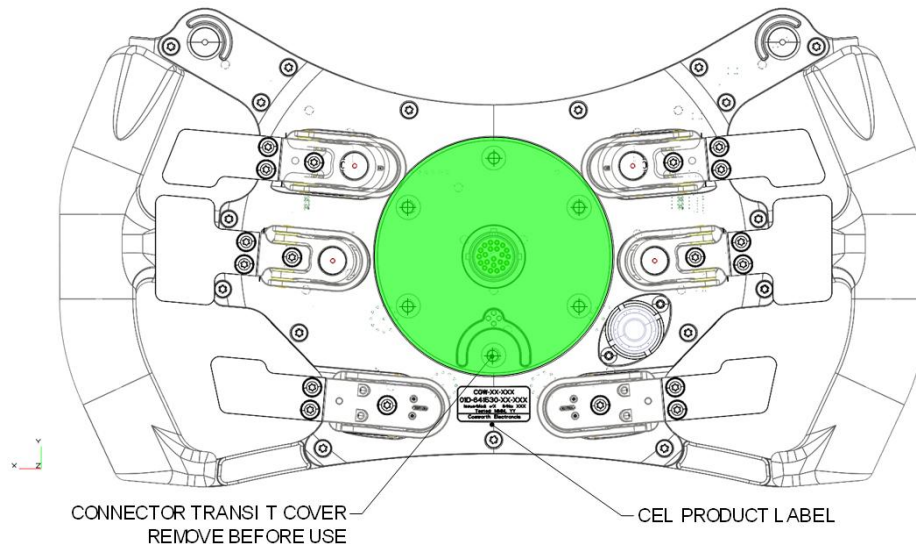
Quick Release Installation

-EC Quick Release Fitment

- Ensure chosen Quick Release is compatible with wheel.
- Check mounting flange thickness to calculate correct bolt lengths, bolts indicated below are based on a flange thickness of 7mm. (3x M5x16mm, 3x M5x40mm)

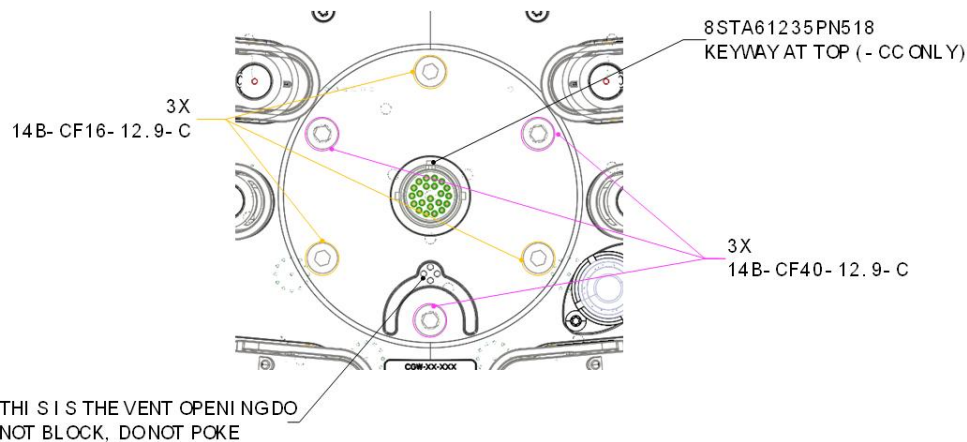
-CC Only Transit Cover Removal and Quick Release Fitment

- Remove 6x M5 bolts then carefully pull off connector transit cover 10D-641507 to expose 8STA612-35PN518 column connector.



NOTE Transit Cover should be retained for future use.

Ensure connector is correctly seated along with its O-ring and the main keyway at the top.



NOTE supplied cover screws have not been torqued so can be reused

Mount QR over the connector ensuring keyway is located into QR and fix in place with the 6x bolts removed from cover, ensure bolts are fitted in the correct locations as above.

Tighten 6x M5 bolts in 2 passes with a final torque setting of 9Nm

If the QR is removed/replaced all 6 QR bolts should be replaced.



Testing

Testing Data	Specification
Electrical	ISO16750-2
Mechanical	ISO16750-3
Climatic	ISO16750-4
Chemical	ISO16750-5
IP	ISO20653
EMC & Disturbance	UNECE Reg.10
Transient Power Lines	ISO7637-2
Conducted/Radiated Emissions	CISPR25
Radiated Immunity	ISO11452-3
ESD	ISO10605

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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