

Document Number		USPEC-0001	
Title		RaceGrade Cellular Gateway	
Revision	Date	Prepared By	Change History
1.0	7/16/2015	JW	Initial Release
1.1	12/07/2015	DG	Super Capacitor Supply Holdup
2.0	02/05/16	JW	Update to new enclosure design

***RaceGrade* Cellular Gateway**

The RaceGrade LTE Cellular Gateway system provides real time telemetry data from a vehicle to base station. It uses Verizon's 4G cellular network to provide data coverage at any venue with cellular coverage. International venues are supported with an alternate SIM card that supports other networks. The gateway provides fast update rates to allow accurate data while simplifying trackside setup by utilizing smaller antennas and eliminating the necessity of repeaters. The gateways come preconfigured to work seamlessly upon power up.

Custom configurations can be implemented with an upgrade. The gateway connections are all on the top surface to improve flexibility in mounting arrangement. The case is water resistant and features 3 antenna connections and two Autosport connectors for signals and supplies. Continuous device uptime during transient voltage operation, such as power cycling or starting the vehicle, is achieved via an internal super-capacitor system.

Note: It is suggested that gateway be mounted on soft Velcro or some other form of vibration isolation.

Standard Features:

- Replacement for any RS232 Serials Comms based telemetry system and adapters to FGR2 connectors can be purchased
- Can run telemetry system at maximum RS232 Serial Comms bandwidth (230.4 kbps), MoTeC's logger support a maximum of 115.2 kbps
- Telemetry Monitor and T2 compatible
- 2 gigabyte of bandwidth per month standard
- 2 cellular antennas for signal diversity*
- Gateways use Verizon's 4G LTE Network
- European and Canadian support coming soon.

Specifications:

- Dimensions: 6.12"x 3.725" x 1.22" (15.5 cm x 9.5 cm x 3.0 cm)
- Weight: .92 lbs. (417 grams)
- Main Connector:AS006-05PN (Mating Connector: AS606-05SN)
- Ethernet Connector:AS006-05PA (Mating Connector: AS606-05SA)
- Cellular Connectors: Female SMA
- Wi-Fi Connector: Male SMA
- Status LEDs for Power, Signal, Network and activity
- Water Resistant Enclosure
- Ethernet Interface
- Current Use: <1 Amp Maximum during normal use, <3 Amps Maximum during internal supply charging (60 seconds maximum charge time)
- Voltage Range: 7V -30V
- Super-Capacitor Hold Up Time: 10 seconds w/ gateway loaded, 40 seconds w/ gateway idle



Connection:

Main: ASL606-35SN Mating Connector

- Pin 1- Ground
- Pin 2- Reserved
- Pin 3- Power
- Pin 4- RS232 Serial RX
- Pin 5- RS232 Serial TX

Ethernet (Eth): ASL606-35SA Mating Connector

- Pin 1- Ethernet RX (+)
- Pin 2- Ethernet RX (-)
- Pin 3- Reserved
- Pin 4- Ethernet TX (+)
- Pin 5- Ethernet TX (-)