Piccolo Hybrid- Dual Mode for Trailer Tracking

Packaged in an IP65 waterproof enclosure with rechargeable lithium back up battery, the unit will automatically switch from regular vehicle tracking mode to asset tracking mode when the external power is disconnected. For example, when the trailer is disconnected from the cabin, the unit will automatically switch to be powered by the backup battery and will enter "asset tracking mode". In this mode, instead of sending GPS in the normal predetermined interval of 1-2 minutes, the unit will send GPS data in longer intervals.

When disconnected from power, a possible scenario could be that the unit will send data once a day when parked and will wake up automatically and send an alarm when vibration is detected, then switch to send data every XX minutes for as long as the vibration continues (asset is in motion or vibration is detected).

The unit will also send notifications to the server when and where the external power is disconnected and switch to operate on internal backup battery. Also, the unit sends a notification to the server when and where the external power is reconnected.

With every GPS message, the unit sends the battery level it currently operates on.





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Piccolo Hybrid inputs:

- Two digital inputs one ground sense and one 5VDC- 32VDC positive sense.
- One analog 0-5VDC input
- Integrated temperature sensor

Technical Specifications:

- GSM/GPRS or EDGE/HSPA+ (3G)
- Frequency bands Quad-Band 850/900/1800/1900/2100MHZ
- Enclosure Flame retardant ABS/PC
 - o Flame rating UL94V-0
 - o Waterproof IP65 enclosure with a blind cover, no LEDs
- GPS Technology SIRF Star IV 48 receiving channels
- Dimensions 4" x 2.3" x 1.2" LWD (100mm x 58mm x 30mm)
 Additional 0.35" (9mm) on each side for mounting brackets
- Weight: 3.8oz (110g) without the cable

Environmental Specifications:

- Operating Temperature: -22° to 176°F (-30° to 80°C)
- Storage Temperature: -40° to 221°F (-40° to 105°C)
- Humidity: 0 to 99% 110°F(40°C), non-condensing
- Shock/Vibration/Mechanical: meets or exceeds EIA standard RS-316B 3G (operating), 20G (non-operating) XYZ 3 directions. Meets SAE J1455.



Electrical Specifications:

- Power source: 6VDC 32VDC tethered to vehicle battery or portable with cigarette plug connector
- ESD 4kV contact,15kV air
- When external power is disconnected, the unit automatically switches to backup 1800mAh, 3.7
 VDC lithium rechargeable battery. When fully charged, the unit can send up to 1200 GPS locations
- Optionally a second 1800mAh can be added for a total of around 2400 GPS transmissions when fully charged
- Protection internal resettable 1A fuse



Current Consumption:

Transmit mode: 200mA at 12VDC

Running mode: 70mA at 12VDC

• Standby (Hibernation mode: 20mA at 12VDC (when waiting for external event with GPS on)

• Sleep mode:45uA - (switching to sleep mode automatically when engine is off and/or when external power is disconnected)

Base Features:

- Digital Inputs two contact events, one ground sense and one 5VDC 32VDC positive sense
- Analog Inputs one 0-5VDC
- Internal analog temperature sensor

Installation:

Piccolo hybrid has an IP65 waterproof enclosure may be installed on the roof of a trailer or any other asset.

