

PICCOLO HYBRID IoT

OVERVIEW

Dual Mode operation for Trailer Tracking When the Piccolo Hybrid+ is wired to an external power source such as trailer connected to the cabin, the internal battery will be charged and the Hybrid+ will operate in real-time sending GPS say every minute. When the cabin disconnects from the trailer the external power is disconnected and the Hybrid+ will automatically switch to be powered by the internal battery and will switch to asset tracking mode.

- Asset tracking mode of operation –can be preprogrammed to send the GPS location every XX hours (usually once a day) when the asset is in stop position. When vibration is detected the unit wakes up automatically and sends an alarm and switches to motion mode sending GPS every XX minutes for as long as the asset is in motion mode (usually every 60 minutes)
- The Hybrid+ sends notifications to the server when and where the external power is connected/disconnected



KEY FEATURES

- Dual Mode For Trailer and Asset Tracking
- Powered by a large 7800mAh / 4000mAh or 2000mAh rechargeable lithium battery
- Ruggedized IP67 Waterproof Enclosure
- Internal temperature sensor
- Small size, installs in minutes.
- Optional Integrated BLE Reader for wireless Active BLE RFID Tags
- Optional Wired & Wireless temperature sensors for the cold chain
- Optional CANBus Support

THE INDUSTRY'S MOST ADVANCED DUAL MODE GPS UNIT OPTIONALLY INTEGRATED WITH IOT FOR TRAILER TRACKING



DIFFERENTIATE VIA INNOVATION

TECHNICAL SPECIFICATIONS

CONNECTIVITY

Network	4G CATM1/NB1 with 2G Fallback. Supported bands Cat. M1 & NB1, LTE-FDD:B1/B2/B3/B4/B5/B8/B12/ B13/B18/ B19/B20/B26/B28 LTE-TDD: B39 (for Cat.M1 only) GSM850/ GSM900/DCS1800/PCS1900
Storage	Store & Forward- Built-in flash storage for data logging when out of cellular connectivity (up to 5000 events)
Communication	Highly compressed OTA, UDP communication packaged with MidLink Middleware or Direct TCP/IP communication (TCP/IP packaged with 'Plug & Play' API or DLL for quick integration into any 3rd party software.
OTA Diagnostics	Via Wireless Links proprietary apps and communication software
Configuration	USB port for FW download and local configuration. USB port powers unit during configuration. Remote OTA configuration and FOTA available when unit is externally powered. SMS commands for configuration, available also when unit is in AT mode.
Wireless Sensors	Compatible with WLI Family of RF Beacons (Optional, details below)
GPS	MTK 66 channels

ENCLOSURE

Material	PLUSTEK PB5001J8BK11 Black, 40% Glass Fiber & Glass beads Reinforced, Halogen and Red Phosphorus Free, Flame Retardant, UV Stabilized Polyamide 6
IP Rating	IP67 waterproof enclosure
Dimensions	4.9" x 3.3" x 1.6" LWD (125mm x 87mm x 41mm) • Weight: 3.7 oz.(105gr) without batteries
Operating Temperature	-22° to 176° F (-30° to 80° C)
Storage Temperature	-40° to 221°F (-40° to 105°)
Shock / Vibration / Mechanical	Meets or exceeds EIA standard RS-316B 3G (operating), 20G (non operating) XYZ 3 directions. Meets SAE J1455

RF COMMUNICATION

Radio Frequency	2.4GHz
Range	Up to 150 ft / 50m line of sight. Actual range may vary depending on RF interference, building materials, and physical obstacles
RF Protocol	Bluetooth for IoT Tags – iBeacon or Eddystone (TLM) or custom. Or Proprietary RFLink Tags

EASY INSTALLATION

Magnets	Optional magnets for easy installation on metal surfaces
Two sided 3M Industrial Tape	For a strong, permanent attachment. (tape to be ordered separately)
Screws/Bolts	Mount the unit to any asset with screws.

POWER

Power Source	6DC-32VDC tethered to vehicle battery and battery powered by either 4000mAh or 7800mAh rechargeable lithium battery.
Transmit Mode	1.8A pulse at 3VD
Sleep Mode	10uA at 3V
Battery Life	Up to 5,000 GPS positions when powered by the 7800mAh battery pack. 7800mAh battery pack.
Charging	Integrated fast charger module. Batteries are charged via external off the shelf standard 12v wall charger. Charge time around 4-8 hours depending on battery capacity.

BASE FEATURES

IO's	2 Digital Inputs, 1 Digital Outputs and 1 Analog Input
Digital Outputs	1 open collector 500mA
3D Accelerometer	For tilt detection, automatic security theft alarm and motion detection.
Dual Mode	When externally powered, unit runs in real time. When external power is disconnected, unit switches to AT mode.
Internal Temperature Sensor	Integrated internal analog temperature sensor send unit temperature with every GPS data transmission
Tow Detection	the unit detects when the vehicle is moving. Extremely low power consumption achieved by innovative battery management to preserve battery life
Geofence mode of operation	the unit can change the frequency of transmitting GPS when entering a pre-configured geofence to be detected at first Hybrid+ wake up.
Battery Level reporting	Sends battery level with every GPS data.

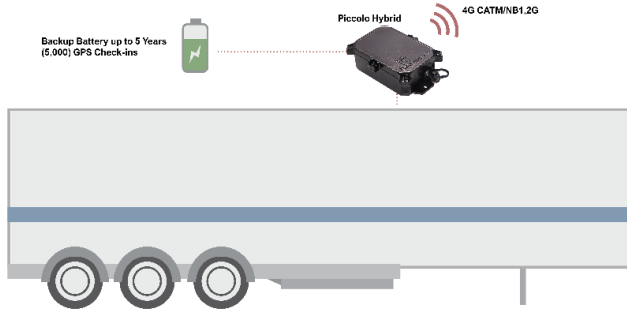
OPTIONAL FEATURES

CAN Bus Interface	Supports OBDII, J1939 and J1708, RS485, RS232
Temperature Sensors	Up to 6 external digital temperature sensors Wireless Temperature Sensor
Driver Behavior	Driver behaviour events and analysis
IoT Reader	For communicating with wireless BLE/RFTags for wireless temperature monitoring, asset tracking, etc.
Light Sensor	For detecting light status within trailer, container, etc.
Load Sensor	For detecting load status of trailer, container, etc
External Antennas	Optional external GPS and/ or cellular antenna

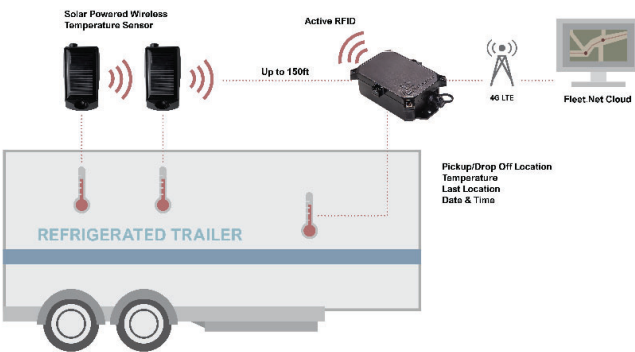
IOT APPLICATIONS

TRAILER TRACKING

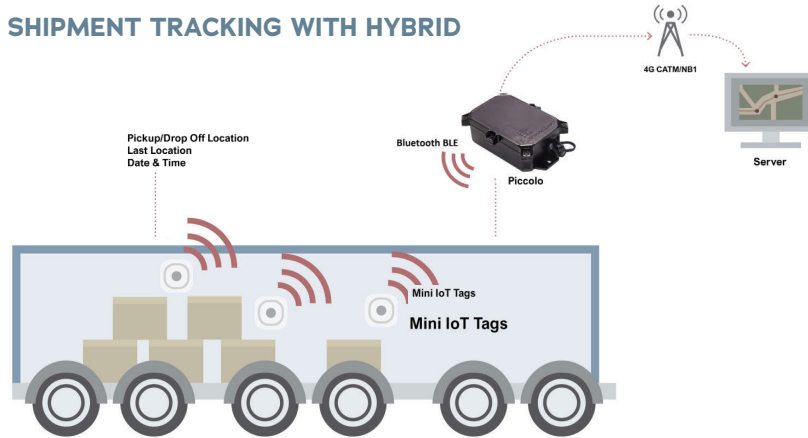
- Mount to trailer with magnets, 3M tape or Screws.
- Connect to power of trailer



REEFER TRACKING



SHIPMENT TRACKING WITH HYBRID



CHASSIS TRACKING

