

# Piccolo STX - The smallest and most innovative all-in-one package GPS unit for vehicle tracking.

GSM/GPRS modem, GPS, and cellular antennas all integrated in one enclosure



## Vehicle Tracking Made Simple & Affordable by Innovation

- Small 3.36" x 2" x 1" LWD (85mm x 52mm x 25.4mm), GPS & cellular antennas, all in one enclosure, easy to install and hide under the dashboard
- Flame retardant enclosure
- Power source 6VDC - 32VDC
- Extremely low power consumption
- Battery saving mode - auto switch to deep sleep mode when engine is turned off, auto wake up on vibration detection (perfect for motorcycles)
- Theft alert on tilt and/or vibration and/or motion
- Theft protection - Over The Air (OTA) starter kill
- Tow detection
- Accident detection
- Configuration by USB port or OTA using a simple user friendly interface
- OTA upgradable firmware and remote administration
- OTA diagnostics of all major functions
- Accelerometer to detect, report, and analyze extreme driver behavior
- Integrated 66 channel MTK GPS
- Driver identification via iButton
- Built in Geo-fence programmable OTA
- Highly compressed UDP or TCP/IP data communication
- USB port powers the unit during configuration
- Up to 4 discrete I/O's, 2 open collector outputs, 1 analog input
- Panic button
- Easily portable with a cigarette plug
- Built in temperature sensor
- Reads multiple external temperature sensors
- Battery level transmitted with every GPS data
- Low battery alarm
- Rechargeable battery backup; when fully charged can send up to 1000 GPS locations
- Accurate driven distance
- RFID reader via RS232 port
- External accessible SIM card holder with security lock
- Programable via SMS
- Sends cell based location in addition to GPS coordinates

**Integration into your application is as easy as "Plug & Play."**

Whether your platform is .NET, Unix, or Linux the Piccolo Plus is a complete mobile communication solution packaged with APIs and DLLs for fast and simple integration into your back office fleet management application.

***Our technology will make your business the most competitive in your market.***



**We Lead the Industry in  
Innovation and Customer Satisfaction**

# Piccolo **STX** - Product Specifications

## Technical Specifications:

- Network availability – GSM/GPRS
- Frequency bands - Quad-Band (European 900/1800, American 850/1900)
- Enclosure: Flame retardant ABS/PC
- Flame rating UL94V-0
- GPS Technology - MTK GPS Technologies - 66 channels
- Dimensions: 3.36" x 2" x 1" LWD (85mm x 52mm x 25.4mm)  
Additional 0.4" (10mm) on each side for mounting brackets
- Weight: 3.17 oz. (94gr) without batteries

## Environmental Specifications:

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

## Electrical Specifications:

- Power source: 6DC-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 back up 1800mA/3.7 VDC lithium rechargeable battery/fully charged can send up to 1000 GPS locations.
- Protection: internal resettable 1Amp 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: 5mA - (switching to sleep mode automatically when engine is off and/or when external power is disconnected)

## Base Features:

- Digital Inputs - Four contact events: two ground sense and two 5VDC – 32VDC positive sense
- Analog Inputs – one 0-5VDC
- Digital Outputs – two open collectors 500mA
- Internal analog temperature sensor

## Options:

- Vibration Sensor – sensitivity adjustable for automatic security theft alarm
- 3D Accelerometer – for tilt detection and extreme driving condition reporting, such as sudden acceleration, sudden lane crossing, sharp turns, and sudden brakes
- Driver identification via iButton (Dallas key)
- Multiple temperature sensors via iButton
- Internal lithium 1500mA rechargeable battery
- RFID reader via RS232 port

## Installation:

- In cabin installation (usually under plastic dashboard)

## LED Indicators:

- GPS: Off when service is disabled, solid green when operating normally, solid orange when GPS current reading is invalid, and solid red on GPS error
- Modem: Solid green when modem is registered, off when no signal is present or unit is off
- Data: Solid red when data is waiting to be transmitted, off when no data is in the buffer
- Power: Solid green when operating normally, off when unit is off, turning to orange when charging the internal battery

## Functional Specifications (partial):

- Sends GPS location every X seconds/minutes and/or every Y miles/km or any combination between time and distance based on speed
- Idle transmission – when the vehicle is idle (stopped) for a predetermined time period, the unit can switch to transmit in "idle mode," for example every 4 hours instead of every minute while moving
- Event logs – Events such as engine on/off, vibration alarm, door open/close are sent with a time stamp of the event and may be configured remotely and sent with or without the exact GPS location taken at the time of the event
- Driver identification - Authorized driver ID's for the specific vehicle are downloaded to the unit OTA and only the driver that has the matching Dallas key ID is authorized to start the vehicle, and the driver ID is sent to the control center database.
- Firmware download via USB or OTA (Over the Air)
- Configurable via USB or OTA
- Highly compressed OTA, UDP communication packaged with MidLink Middleware and "Plug & Play" API or DLL for quick integration into any third party software
- Or direct TCP/IP communication OTA, (no Middleware) packaged with "Plug & Play" API for quick integration into any third party software
- OTA diagnostic tools
- Vibration sensor sensitivity OTA configurable
- Tilt detection and driver behavior violations sensitivity configurable OTA
- Store and Forward – The unit can store up to 5000 events when out of cellular coverage then send them automatically when back in cellular coverage
- Geo-fence - auto alarm with GPS location when the unit moves in and out of a predetermined zone
- Tow detection – The unit detects when the vehicle is moving while the ignition is off
- Starter killer – when the vehicle is stolen, a command can be sent OTA to kill the starter so once the vehicle is stopped and the ignition is turned off it cannot be turned on again (for safety reasons in most countries it is illegal to OTA turn off the engine or gradually decelerate when the vehicle is moving)
- Battery power value is sent automatically OTA to the control center database with every GPS data
- Battery saving mode - auto switch to deep sleep mode when engine is turned off and auto wake up when engine is turned on or on vibration (this feature does not require back up battery)
- OTA programmable via SMS
- Sends cell based location in addition to GPS coordinates
- Accurate driven distance
- External accessible SIM card holder with security lock



1050 Wall Street West, Suite 202, Lyndhurst, NJ 07071-9910  
Tel: (201) 531-5906 Fax: (201) 531-9795  
E-mail: [marketing@wlius.com](mailto:marketing@wlius.com) Web site: [www.wlius.com](http://www.wlius.com)



*We Lead the Industry in Innovation and Customer Satisfaction.*