



## BT-16 High Sensitivity Bluetooth GPS Receiver





## Product Briefing

<b>GPS Characteristics</b>
Sensitivity at -157dBm (-187dBw)
Acquisition: 32 satellites parallel
Update rate: 1 second
<b>Acquisition time:</b>
Reacquisition 0.1 sec., averaged
Hot start 6 sec., averaged
Warm start 30 sec., averaged
Cold start 30 sec., averaged
<b>Position accuracy: Non DGPS (Differential GPS)</b>
Position < 5 meter (RMS)
Velocity 0.1 meter / second, with SA off
Time 1 microsecond synchronized GPS time
<b>Dynamic Conditions:</b>
Altitude 18,000 meters (60,000 feet) max
Velocity 515 meter / second (1000 knots) max
Acceleration 4 G, max
Jerk 20 meters/second, max
<b>Interfaces</b>
RS-232 compatible level, with auto adjusted baud rate
NMEA 0183 Version 2.2 ASCII output (GPGGA, GPGLL, GPGSA, GPGSV, GPRMC, GPVTG).
<b>Bluetooth Characteristics</b>
Transmits up to 10 meters.
SPP Profile, V1.2



### Battery

Capacity: 1000mA Li-ion rechargeable

Power Consumption: 80mA

### Environmental Characteristics

Operating temperature: -30°C to +85°C.

Storage temperature: -50°C to +100°C.

### Physical Dimension

Size: 83.0(W) x 44.5(L) x 23.5(H) (mm)

Weight: 72g (battery included)

## Introduction

**BT-16 Bluetooth GPS Receiver** is a total solution GPS receiver with Bluetooth wireless transmitting ability. Its design is based on next generation indoors GPS technology with super sensitivity at **-157dBm (-187dBw)**, plus low power (<80mA) consumption. This revolutionary device provides you unbelievable positioning sensitivity, which allows you to have easy and quick position fixed in urban canyon conditions. You could use this device for strict needs of positioning applications, such as car navigation, mapping, surveying, security, agriculture, and etc. BT-16 communicates with other electronic utilities with built in wireless Bluetooth technology. It requires 32 satellites parallel when cold start, and display the best 8 signals for power saving purpose.

## Features

1. **AUTO ON-OFF** function makes you **hands-free** once you place the device in place.
2. Wireless transmitting positioning status up to 10 meters.
3. High sensitivity receiver, 32 satellite signals parallel while providing first fast fix and low power consumption.
4. Initialization free.
5. Automatic baud rate setting, no need to do any selection.
6. LED display status: visible operating status for recharging, battery power level, bluetooth and GPS.
7. Rechargeable Li-ION battery.



## **Physical Dimension**

Size: 83.0(W) x 44.5(D) x 23.5(H) (mm)

3.27"(W) x 1.75"(D) x 0.93"(H).

Weight: 72g (battery included)

## **Environmental Characteristics**

Operating temperature: -30°C to +85°C.

Storage temperature: -50°C to +100°C.

## **Electrical Characteristics**

Input Power - external: +4.75 ~ 5.5 VDC, battery: +3.7V

## **GPS Functions**

Acquisition - 32 satellites parallel

Update rate -1 second.

## **Acquisition Time**

- ✓ Reacquisition - 0.1 sec., averaged
- ✓ Hot start - 6 sec., averaged
- ✓ Warm start - 30 sec., averaged
- ✓ Cold start - 30 sec., averaged

Position accuracy - Non DGPS (Differential GPS)

- ✓ Position - < 5 meter (RMS)
- ✓ Velocity - 0.1 meter / second, with SA off
- ✓ Time – 1 microsecond synchronized GPS time

Dynamic Conditions -

- ✓ Altitude - 18,000 meters (60,000 feet) max
- ✓ Velocity – 515 meter / second (1000 knots) max
- ✓ Acceleration - 4 G, max
- ✓ Jerk – 20 meters/second, max



## **Bluetooth Functions**

Transmits up to 10 meters.

Details specifications please refer to appendix D at page 19.

SPP Profile, V1.2

## **Battery**

Capacity - 1000mAh.

Type - Li-ion rechargeable

## **Interfaces**

RS-232 compatible level, with auto adjusted baud rate.

NMEA 0183 Version 2.2 ASCII output (GPGGA, GPGLL, GPGSA, GPGSV, GPRMC, GPVTG).

## **Connector**

Battery recharging connector - 4.0mm DC jack, with center "+" (positive).

Active antenna connector – MMCX

## **Accessories**

### Standard

- ✓ 80026: **Easy-Place**, 35mm round pad sticking on the dashboard or other place for hold GPS-6033
- ✓ A-6003-E: Travel adapter, with 120V, 230V adapter
- ✓ 9004: Lithium-ION, rechargeable battery, 1000mAh
- ✓ A-6024-40: Cigarette Adapter, DC Jack 4.0mm, 850mA, 5 meter

Optional - A-10302-M: Active Antenna, 2 meters



### Switch Function

Switch	Function
OFF	System power Off
ON	For pairing and operating of Bluetooth GPS.
AUTO	<ul style="list-style-type: none"> <li>✓ Works on Auto ON-OFF function (Patent pending)</li> <li>✓ Automatically starts when Car Engine Starts (Through Cigarette Adapter).</li> <li>✓ Automatically switch off the power when the car engine is off, or when the</li> <li>✓ Cigarette adaptor is un-pluged</li> </ul>

### LED Indicator

	System state	LED_Bluetooth (Blue)	LED_GPS (Green)	LED_Battery (Red)
1	STANDBY	Flash	Flash	On
2	PAIRING	Flash	Flash	On
3	CONNECTING	Flash	Flash	On
4	ACTIVE	On	On: GPS fix Flash: non-fix	On
5	BATTERY FULL	N/A	N/A	Off: System off On: system on
6	BATTERY LOW	N/A	N/A	Off: System off Flash: system on
7	BATTERY CHARGING	N/A	N/A	ON