

**Key Features:**

- Small Form Factor SMD Solution
- Ultra Low Power Consumption
- Optimized RF & Electrical Design
- RoHS Compliant
- Uses NAVSTAR GPS L1 Signal
- Can be used with either passive or active antennas
- Can operate directly from Battery
- Software accelerator for improved sensitivity, satellite acquisition and tracking
- Software Controlled LNA
- TCXO and LNA Power Control
- Format Selectable Output Data: Latitude, Longitude, Altitude, Speed, Heading and Time
- Dual UART Host Interface
- Supports E911 Mandate
- *Powered by SiRF*

**Part Number:**

- W2SG0006
- GPS SMD Module, Tape and Reel
- W2SG0006-SAM
- GPS SMD Module, Sample Pack
- W2SG0006-DEV
- GPS Development Kit

# W2SG0006

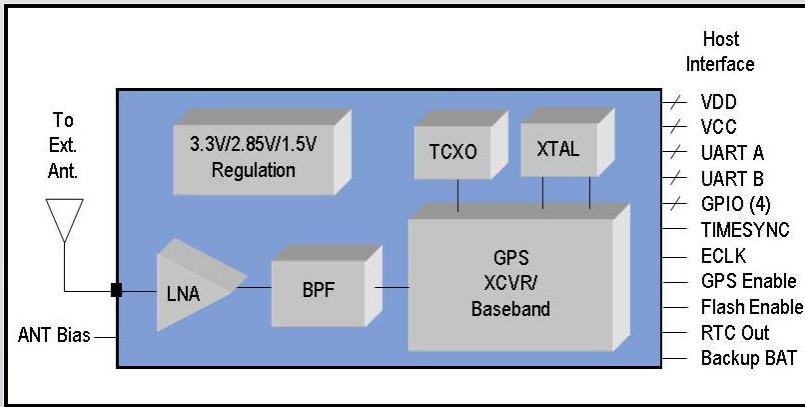
***A Complete Global Positioning System (GPS) Solution designed specifically for mobile and embedded applications such as Personal Navigation Devices, Smart Phones and other portable/handheld devices that feature GPS functionality.***

**General Description:**

The W2SG0006 is a high sensitivity, low power, SMD type 20-Channel L1 GPS receiver designed for portable applications. A complete radio receiver solution, the W2SG0006 is designed to allow quick and easy integration into standard or custom applications.

**Applications:**

- Smartphones
- Personal Navigation Devices (PNDs)
- Personal Digital Assistants (PDAs)
- Industrial Products
- Handheld Terminals
- Other Portable Devices that require location based data



**The W2SG0006 GPS Module delivers a complete, GPS Receiver solution. All functionality, including the GPS receiver, interface control, diagnostics, timing, and power regulation are included in a compact ready to integrate package.**

Package Dimensions:

- 15mm(L) x 15mm(W) x 2.5mm(H)

Package Type:

- Module, Solder Down

Input Power:

- Supply Voltage 3.3Vdc
- Current: 47mA

Power Consumption :

- RX 47 mA
- Sleep 74  $\mu$ A

Temperature Range:

- Operating Temperature: -30°C to +85°C
- Storage Temperature: -40°C to +85°C
- Humidity: 5% to 95%, Non-condensing

GPS Data Input:

- 20 channel, L1 code
- Frequency: 1.57542 GHz

Host Interface I/O:

- 2 UART
  - Configurable Data Rate: 192 Kbps Max
  - Optional Hardware Flow Control
- 4 GPIO Configurable

Acquisition Time (TTTF):

- Hot Start TTTF @ -136 dBm: 0.5 sec
- Hot Start TTTF @ -141 dBm: 0.8 sec
- Hot Start TTTF @ -146 dBm: 1.9 sec
- Cold Start TTTF @ -136 dBm: 32.6 sec
- Reacquisition @ -136 dBm: 100 msec

Receiver Sensitivity:

- Minimum Acquisition Signal : -142 dBm
- Minimum Tracking Signal: -157 dBm

Timing Accuracy:

- 1PPS 1 $\mu$ s

Position Accuracy (3-D NAV):

- Stationary:
  - Vertical (Avg) : -0.1m
  - Horizontal (Avg): 1.5m
  - Velocity:
    - Vertical: 0.379 m/s
    - Horizontal: 0.728 m/s
  - Time:
- Dynamic:
  - Velocity: 1000 kts max.
  - Altitude: 60,000 ft. max.

Diagnostics:

- Configurable via UART



Your Wi2Wi Representative:

About Wi2Wi, Inc.

Wi2Wi Inc., formerly the OEM Products Division of Actiontec™, is a premier supplier of Modem, NIC, 802.11, Bluetooth and combination solutions to the world's largest PC and Peripheral OEMs. Operating since 1997, the company has delivered a series of industry firsts to OEM Customers. With the introduction of Wi2Wi's new System in Package (SiP) Products, Wi2Wi continues its industry leadership providing cost effective, high quality solutions to emerging and established markets.

To request more information about Wi2Wi please contact us at: info@wi2wi.com or visit us on the web at www.Wi2Wi.com