

# NavTrac SLT

## WiFi Enabled GPS

### Description

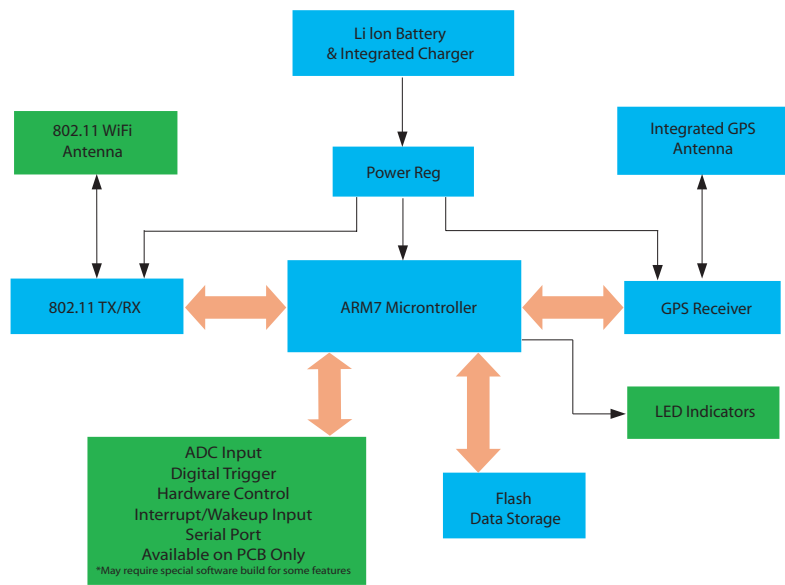
The NavTrac SLT combines GPS technology with WiFi transport. Incorporating NavSync's own ultra-sensitive CW20 GPS receiver, the NavTrac provides an 802.11b/g transmission containing NMEA streams giving device location (longitude and latitude) and UTC time. The 802.11b/g supports WPA2 encryption and is fully configurable to a specific network.

### Features

- Sensitive GPS Receiver with Tracking as Low as -150dBm
- 802.11b/g Compliant
- WPA2 Encryption
- Integrated Rechargeable Battery
- User Programmable Update Rates
- Internal Flash Memory for Saving GPS Data
- Indicators for Battery Charging Status, GPS Fix Status, and Network Status Operation



### Block Diagram



### Operation

The enhanced NavTrac SLT is intended for TCP or UDP transmissions of GPS data. The unit is capable of sending out a variety of NMEA GPS messages, selectable by the user, at a rate configurable by the user.

The NavTrac SLT series offers two models. The NT-110ST offers continuous operation and exceptional tracking accuracy. The NT-110LT offers power management with the ability to go into an ultra-low powered standby mode for long term operation and periodic reporting. Each model contains a rechargeable Lithium Ion battery.

Both models feature additional flash storage on-board to facilitate storing GPS tracking data when a WiFi signal is not detected. This data can be safely stored and sent out once the WiFi network is detected.

At the PCB level, the enhanced NavTrac is able to read a variety of inputs and send the data related to those signals over the WiFi network. These inputs include serial, digital signals, ADC and interrupt lines to enable the end user to integrate other functionality.

Please contact the factory for specifics as custom firmware may be required.

Bulletin	<b>NS24-PB</b>
Revision	<b>00</b>
Date	<b>19 Nov 2009</b>

## NavTrac SLT WiFi ENABLED GPS SPECIFICATIONS

### GPS RECEIVER SPECIFICATIONS

#### Physical

Module Dimensions	3.773" (W) x 3.149" (H) x 1.253" (D) 95.83mm (W) x 79.98mm (H) x 31.83mm (D)	Note
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#### GPS Performance

GPS Channels	16	
Frequency	1575.42 MHz – L1 C/A Code	
TTFF Cold Start @ -135 dBm	46 seconds	1, 4
Re-acquisition Time @ -147 dBm	<3 seconds	2
Tracking Sensitivity (dBm)	-150 dBm	3
Static Accuracy 50% Confidence (CEP)	2 m	4
95% Confidence	4 m	
Maximum Horizontal Speed	515 m/s	5
Maximum Vertical Speed	15 m/s	6
Maximum Altitude	18 Km	7
Maximum Acceleration (g)	2 g	

### WiFi SPECIFICATIONS

#### WiFi Performance

Maximum Transmit Power	15 dBm
Transmission Speed	1Mbps

#### General Specifications

Power (Avg.) Transmitting:	~1.1W	
Operation When Not Transmitting	<0.5W	
Standby Mode (NT-110LT only)	<50 uA	
Internal Li Ion Rechargeable Battery	900 mAH	
Battery Life (continuous operation)	> 12 Hours	8
Operating Temperature Range	-15°C to 60°C	
GPS Fix Rate Maximum	Once per second	
Wireless Transmission Period	Default is once per second, configurable via SNMP	

### ANTENNA REQUIREMENTS

802.11 Antenna	Stubby 802.11 included, reverse SMA connection provided
GPS Antenna	Internal Antenna Provided

*The specifications refer to the standard software builds of the CW85. The performance and specification of the CW85 can be modified with the use of customized software builds.*

#### Notes:

1. These are RMS values
2. Maximum Sensitivity -147 dBm
3. Simulator Test, continuous fix with all signals at specified power level.
4. Open sky, 24 hr field test. No sky-view obstructions.  
Accuracy relative to ACTUAL surveyed position, not self-relative survey.
5. Limited by International Traffic in Arms Regulation (ITAR)
6. Defined by navigation integrity check
7. Limited by International Traffic in Arms Regulation (ITAR)
8. Continuous transmission, 1 fix per second @ 27°C

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