JANUS REMOTE COMMUNICATIONS

Wi-Fi Terminus NT-220LT Ruggedized Wi-Fi Enabled GPS Module

Description

The rugged Wi-Fi Terminus NT-220LT combines state-of-the-art 16 channel GPS receiver technology with 802.11 Wi-Fi transport protocol. Incorporating NavSync's own ultra-sensitive navigational GPS receiver, the Wi-Fi Terminus provides Wi-Fi transportation of standard, user-configurable NMEA information (longitude, latitude, and UTC time). The 802.11 b/g compliant Wi-Fi supports WPA2 encryption and is fully configurable to virtually any Wi-Fi network.

Operation

The Wi-Fi Terminus NT-220LT is designed to communicate GPS (NMEA) data via TCP or UDP transmission. Users are able to configure appropriate NMEA messages and message rate, along with other features.

The Wi-Fi Terminus LT series offers continuous operation with exceptional tracking accuracy. The Wi-Fi Terminus power management capability allows the unit to enter an ultra-low power standby mode, enabling long term operation with periodic reporting.
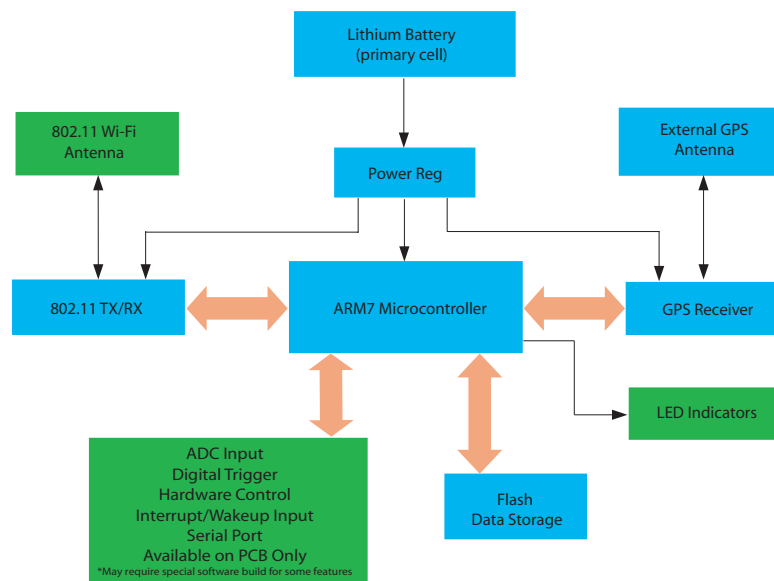
The NT-220LT features additional on-board flash memory to enable capture and storage of GPS location information when a Wi-Fi network is not available. The saved data is stored until another Wi-Fi network is detected and the information can be transmitted.

Features

- Sensitive GPS receiver with tracking as low as -150dBm
- 802.11b/g compliant
- WPA2 encryption
- Integrated primary cell battery
- User programmable update rates
- Internal flash memory for saving GPS data
- Indicators for GPS fix status, and network status operation
- The NT-220LT is designed for longer battery life than the NT-110 versions of the Wi-Fi Terminus
- Dimensions: 4.27" x 3.36" x 1.77" (108.50mm x 85.45mm x 45.00mm)

Block Diagram

Lithium Battery (primary cell) → Power Reg

802.11 Wi-Fi Antenna

External GPS Antenna

802.11 TX/RX ↔ ARM7 Microcontroller ↔ GPS Receiver

LED Indicators

ADC Input
Digital Trigger
Hardware Control
Interrupt/Wakeup Input
Serial Port
Available on PCB Only
*May require special software build for some features

Flash
Data Storage

Telit
is in it.

Making machines talk.

NT-220LT Wi-Fi Terminus Wi-Fi ENABLED GPS SPECIFICATIONS

GPS Performance

		Notes
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) 95% Confidence	2 m 4 m	4
Maximum Horizontal Speed	515 m/s	5
Maximum Vertical Speed	15 m/s	6
Maximum Altitude	18 Km	5
Maximum Acceleration (g)	2 g	

Wi-Fi Performance

Maximum RF Transmit Power	15 dBm
Transmission Speed	1Mbps
Wireless Transmission Period	Default is once per second, configurable via SNMP

General Specifications

Power (Avg.) When Transmitting:	~1.1W
Power When Not Transmitting	<0.5W
Standby Mode	<50 uA
Operating Temperature Range	-30°C to 60°C

Physical

Module Dimensions	4.27" x 3.36" x 1.77" (108.50mm x 85.45mm x 45.00mm)
GPS Fix Rate Maximum	Once per second

Battery Information

		Notes
Internal Lithium Battery	14 AH	
Battery Life (activation interval)	30 days (3 minutes) over 1 year (1 hour) over 2 years (1 day)	7

Antenna Requirements

802.11 Antenna	N-type, 6.0 dBi maximum
GPS Antenna	External antenna provided

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. *GPS fix within 60 seconds; configuration traps up to 1 hour; 27°C: preliminary estimates*