GNT GPS Position Solver is used to generate mm level accuracy, GPS position solutions for locations instrumented with GNT GPS Stations.

Features:
- Preloaded and preconfigured mmVu® software
- Low power consumption
- Additional external drive for data backup
- Field or desktop version

Options:
- Remote upgrades (requires internet connection)
- Dual redundancy, online data backup
- UPS
- LCD Monitor Interface

Other Necessary Components:
- Communications connection (LAN or WLAN)
- Power source
- Weather protection

Field version (top) and desktop version (bottom)

Actual model may differ from the one illustrated

http://www.gemini-navsoft.com
The **Field Version** of the **GNT GPS Position Solver** is typically used when power consumption is a concern.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>Intel Atom Z550 2GHz / Z530</td>
</tr>
<tr>
<td>Memory</td>
<td>1GB / 2GB DDR2-533 on-board</td>
</tr>
<tr>
<td>Storage</td>
<td>Internal 60 GB SSD, external USB HDD</td>
</tr>
<tr>
<td>Networking</td>
<td>2x 1000 BaseT Ethernet (based on Realtek RTL8111) 802.11g WLAN (based on RaLink RT3090)</td>
</tr>
<tr>
<td>USB</td>
<td>4 USB 2.0 High Speed ports</td>
</tr>
<tr>
<td>Serial</td>
<td>RS232 full UART</td>
</tr>
<tr>
<td>Operating System</td>
<td>Windows 7 Professional</td>
</tr>
<tr>
<td>Case</td>
<td>100% aluminum, die cast body</td>
</tr>
<tr>
<td>Dimensions</td>
<td>101 x 115 x 27 mm (4” x 4.5” x 1.05”)</td>
</tr>
<tr>
<td>Weight</td>
<td>370 grams / 13 ounces – including hard disk</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-20  –  70 deg C</td>
</tr>
<tr>
<td>Power</td>
<td>12V single supply 8-15V tolerant</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>6W at low CPU load 8W at full CPU load 1W at standby</td>
</tr>
</tbody>
</table>
The Desktop Version of the GNT GPS Position Solver is typically used when maximum computational power is required.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>Intel Core i5-650 (3.20GHz)</td>
</tr>
<tr>
<td>Memory</td>
<td>2GBx2 PC3-10600 DDR3 UDIMM on-board</td>
</tr>
<tr>
<td>Storage</td>
<td>Internal 500GB 7200rpm SATA, external USB HDD</td>
</tr>
<tr>
<td>Networking</td>
<td>2x 1000 BaseT Ethernet (separate, long range WiFi USB device used)</td>
</tr>
<tr>
<td>USB</td>
<td>6 USB 2.0 High Speed ports</td>
</tr>
<tr>
<td>Serial</td>
<td>Option</td>
</tr>
<tr>
<td>Operating System</td>
<td>Windows 7 Professional</td>
</tr>
<tr>
<td>Case</td>
<td>Small form factor (10 L), Chassis Intrusion Switch</td>
</tr>
<tr>
<td>Dimensions</td>
<td>101 x 115 x 27 mm (4” x 4.5” x 1.05”)</td>
</tr>
<tr>
<td>Weight</td>
<td>3 kg (7 lbs)</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0 – 40 deg C</td>
</tr>
<tr>
<td>Power</td>
<td>120 VAC, Energy Star 5.0 Rating</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>55W at full CPU load</td>
</tr>
</tbody>
</table>
**GNT GPS Stations** are used to monitor points of interest and serve as reference stations.

**Features:**
- Survey grade, GPS receiver with 1 Hz data rate rate (up to 100 Hz)
- Survey grade GPS Antenna with 3 m cable
- Lightning Arrestor
- Antenna mounting bracket (mounting rod separate)

**Options:**
- Onboard data storage
- Antenna mounting pole
- Extended length antenna cable

**Other Necessary Components:**
- Communications connection (LAN or WLAN)
- Power source
- Weather protection
- Antenna mounting hardware

GPS antenna (top) and receiver (bottom)

Actual model may differ from the one illustrated
Javad Delta G2T receiver with TriAnt Antenna specifications and recommended configuration.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage</td>
<td>64 MB</td>
</tr>
<tr>
<td>Signal tracking</td>
<td>GPS L1/L2</td>
</tr>
<tr>
<td>Communications</td>
<td>RS232 @115,200 bps (up to 460, 800 bps possible)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>109 x 35 x 169 mm (4.29 x 1.38 x 6.65 inches)</td>
</tr>
<tr>
<td>Casing</td>
<td>Aluminum</td>
</tr>
<tr>
<td>Weight</td>
<td>1 kg (2 lbs)</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40 to 80 deg C</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>2.7 W, +4.5 to +35 VDC</td>
</tr>
</tbody>
</table>
GNT’s [Wifi] option is used to bridge data communications from a GPS Station to a local wireless network.

Features:
- High gain 12 dB directional antenna
- IEEE 802.11a/b/g network compatible
- Secure data access with WEP, WPA, WPA2
- Lightning protection
- Adjustable antenna mounting pole
- Low-loss LMR-400 antenna cable
- Built-in WLAN site survey tool
- Up to 921.6 Kbps baudrate for RS232-232 transmissions
- TCP, UDP compatible

Other Necessary Components:
- Power source
- Weather protection

Serial-to-WiFi device, directional antenna, antenna mounting pole, low-loss antenna cable and lightning arrestor.

Actual models may differ from the ones illustrated
## WiFi specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>WLAN interface</td>
<td>802.11a/b/g</td>
</tr>
<tr>
<td>WLAN Tx Power</td>
<td>802.11a: 14 dBm (typical)</td>
</tr>
<tr>
<td></td>
<td>802.11b: 17 dBm (typical)</td>
</tr>
<tr>
<td></td>
<td>802.11g: 15 dBm (typical)</td>
</tr>
<tr>
<td>WLAN Transmission Distance</td>
<td>Up to 1500 m (in open areas)</td>
</tr>
<tr>
<td>WLAN Antenna Connector</td>
<td>N-Type Female</td>
</tr>
<tr>
<td>Dimensions</td>
<td>224 x 147.7 x 64.5 mm (8.82 x 5.82 x 2.54 in)</td>
</tr>
<tr>
<td>Casing</td>
<td>Metal, IP68 Protection</td>
</tr>
<tr>
<td>Weight</td>
<td>0.5 kg (1 lbs)</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40 to 75 deg C</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>560 mA @ 12 V, 12 to 48 VDC</td>
</tr>
</tbody>
</table>
**GNT’s AP Stations** are used to establish a local WiFi network Access Point for streaming data wirelessly between **GPS Stations** and the **GPS Position Solver**.

**Features:**
- IEEE 802.11a/b/g network compliant access point
- High gain 12 dB omni directional antenna
- PWR, FAULT, STATE, WLAN and LAN LED indicators
- Secure data access with WEP, WPA, WPA2
- Lightning protection
- Adjustable antenna mounting pole
- Low-loss LMR-400 antenna cable
- Supports long distance communications

Access point, omni-directional antenna, antenna mounting pole, low-loss antenna cable, lighting arrester and power cable

Actual model may differ from the ones illustrated

[http://www.gemini-navsoft.com](http://www.gemini-navsoft.com)
### [AP] specifications

<table>
<thead>
<tr>
<th><strong>WLAN interface</strong></th>
<th>802.11a/b/g</th>
</tr>
</thead>
</table>
| **Regulatory Approvals** | • Safety: EN60950-1, UL60950-1  
• EMC: EN301 489-1/-17, FCC Part 15, EN55022/55024, IEC61000-6-2/-4  
• Environmental: EN50155 (Environmental), EN50121-1/-4 (Environmental), Directive 72/245/EEC (for e/E-mark)  
• Hazardous Location: UL/cUL Class I, Div. 2; ATEX Class I, Zone 2  
• Radio: EN300 328, EN301 893, ARIB STD-33/T66/T71 (Japan) |
| **WLAN Transmission Distance** | Up to 10000 m (in open areas) |
| **WLAN Antenna Connector** | Reverse SMA |
| **Dimensions** | 100 x 111 x 26 mm (3.94 x 4.37 x 1.02 in) with ears, without antenna |
| **Casing** | Aluminium |
| **Weight** | 1.5 kg (3 lbs.) |
| **Operating Temperature** | -40 to 75 deg C |
| **Power Consumption** | 300 mA @ 24 V, 12 to 48 VDC |
Features:

- Wide temperature range (-20 to 70 C)
- Short circuit / Overload / Over voltage protection
- LED indicator for power on
- DIN rail mountable
- Cooling by free air convection
- No load power consumption < 0.75W

Power Supply

Actual model may differ from the ones illustrated
GNT’s [Enclosure] option is used to protect equipment from the weather.

Features:
- NEMA 4 rated weatherproof enclosure
- Customizable sizes
- Lockable
- Breather kit
- Mounting kit

Power Supply

Actual model may differ from the ones illustrated
GNT’s [Solar] power supply option is used when AC power is not available at the sensor location.

Features:
- Customized solar solutions to suit solar exposure of geographic location

Actual model may differ from the ones illustrated
Features:

- Customizable uninterruptible power supply solutions for indoor and outdoor site locations

Indoor use UPS, and outdoor use UPS configuration

Actual model may differ from the ones illustrated

GNT’s [UPS] options are used to provide power backup for critical monitoring applications.
Example GPS Station + WiFi + AC:

- AC Outlet
- DIN Rail
- WiFi Antenna Cable
- AC
- Ground Lug
- GPS Antenna Cable
- Lightning Arrestors
- Power Supply

16” x 12” x 8”
Example GPS Station + WiFi + AC:
Example GPS Station + AP + UPS (outdoor Version, Batteries not shown):
Example Solar Components for a 0.785 A system

- KD135GX-LFBS 135W 12V Module, Blue Cells
- UNI-SP/01XH SIDE-OF-POLE W/27.5" SUPPORT
- Solklamp Grounding bolt 6-8 AWG Solid
- Key for MC Solarline 2 Locking Connector
- 30' MC2 Connector Extension #10 AWG
- 1/2" Strain Relief with 2 Round Holes
- 1/2" Strain Relief with 1 Round Hole
- Steel Locknut for 1/2" Strain Reliefs
- MNPV3 Combiner Box
- 15 Amp Din Rail Mount Breaker
- LA302 DC LIGHTNING ARRESTOR
- SUNSAVER SS20L 20A,12V Charge Controller
- BabyBox 4 Slot AC or DC Breaker Panel
- 30 Amp Din Rail Breaker
- 8A31 AGM 105 Ah (20 Hr) AGM Battery
- BATTERY INTERCONNECT CABLE2/0 8" BLK AND RED
- E2-250 2 Battery Enclosure, Screw Cover
- Mounting Brackets (2 to 8" Pole)
Dimensions
NPortW2150

Dimensions

- Width: 26 mm (1.02 in)
- Depth: 14.5 mm (0.57 in)
- Height: 111 mm (4.37 in)
- Length: 109.79 mm (4.32 in)

- Front Dimensions:
  - Width: 77 mm (3.03 in)
  - Depth: 88 mm (3.46 in)
  - Height: 100 mm (3.93 in)

- Side Dimensions:
  - Width: 26 mm (1.02 in)
  - Depth: 12.5 mm (0.49 in)
  - Height: 43 mm (1.69 in)

- Top Dimensions:
  - Width: 6 mm (0.24 in)
  - Depth: 25 mm (0.98 in)
  - Height: 4 mm (0.16 in)

- Bottom Dimensions:
  - Width: 4 mm (0.16 in)
  - Depth: 34 mm (1.33 in)
  - Height: 4 mm (0.16 in)
MDR40-24

Mechanical Specification

Install DIN rail TS35/7.5 or TS35/15

Case No.962A  Unit:mm
DR-UPS40

**Mechanical Specification**

ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15

Case No. 923D Unit: mm
Universal AGM 12V 100Ah battery

<table>
<thead>
<tr>
<th>PHYSICAL SPECIFICATIONS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length (in.):</td>
<td>12.94” (329 mm)</td>
</tr>
<tr>
<td>Width (in.):</td>
<td>9.88” (171 mm)</td>
</tr>
<tr>
<td>Height (in.):</td>
<td>6.75” (151 mm)</td>
</tr>
<tr>
<td>Weight (lb.):</td>
<td>69 lbs</td>
</tr>
</tbody>
</table>

![Image of Universal AGM 12V 100Ah battery](image_url)
Universal AGM 12V 18Ah battery

<table>
<thead>
<tr>
<th>PHYSICAL SPECIFICATIONS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length (in.):</td>
<td>7.13 (181.1 mm)</td>
</tr>
<tr>
<td>Width (in.):</td>
<td>3.00 (76.2 mm)</td>
</tr>
<tr>
<td>Height (in.):</td>
<td>6.57 (166.9 mm)</td>
</tr>
<tr>
<td>Weight (lb.):</td>
<td>13.10</td>
</tr>
</tbody>
</table>
Battery Float Charger

5-1/2" L x 5 1/2" W x 2-1/4" H / 3 lbs.
140 mm x 140 mm x 63.5 mm
AWK-3121
(single RF)

53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in)
AWK-4121
AWK-5222
(dual RF)

62.05 x 135 x 105 mm (2.44 x 5.31 x 4.13 in)