Navigation Solutions

Pulse Navigation Solutions are for use in devices which provide location information by tracking satellites. This includes satellites using GPS L1 Band 1.575 GHz and Glonass 1.598-1.606 GHz. Pulse provides a variety of navigation solutions for these bands from passive ceramic antennas for integrated applications to multiband active solutions for mobile applications. Our GPS development competency leverages multiband technology enabling continuous GPS signal reception when the co-located communications antennas are transmitting.

Key applications: Include Automatic Vehicle Location and Fleet Management, Personal Navigation and Asset Tracking, Telematics and Telemetry.

Internal Solutions: Pulse offers several embedded and internal GPS & Glonass Solutions for your application.

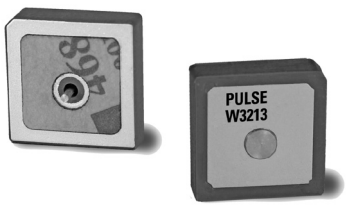
External Solutions: Pulse Vehicle mount products are provided in rugged, yet aesthetically pleasing packages, which are IP and UV rated for harsh environmental and external applications. Windscreen and dashboard mount products are provided in slim, compact easy to mount packages.

Custom Solutions: Addition to the standard product solutions presented in this Sales Sheet, Pulse Navigation Solutions can be customized to meet specific electrical or mechanical requirements. Contact the Pulse team with your specifications.

Internal Antennas for Navigation Solutions

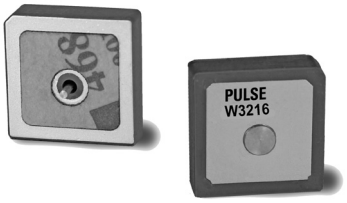
Internal navigation solutions from Pulse are both passive and active. Passive solutions are in the form of ceramic patch and chip solutions providing both circular and linearly polarized antennas. Circular polarized antennas are more traditional in receiving signals from the satellites, however they use a larger ground plane to achieve their performance and require a vertical orientation because of their narrow vertical pattern. Linear ceramic antennas have a much wider radiation pattern and do not have to face the sky in their orientation, but can give up about 0.5 dBi peak gain to the patch solution. Pulse offers many choices to find the best solution for your application. Solutions for GPS and Glonass are offered. For active antennas, Pulse offers a 25x25 patch with integrated LNA and filtering function in a shielded module with cable and U.FL for board connection.

Ceramic Patch



W3213

- GPS L1 Band - 1.575 GHz
- .51 x .51 x .16 in (13 x 13 x 4 mm) Ceramic Patch
- Pin Through Connection
- Adhesive Tape Mounting



W3216

- GPS L1 Band & GLONASS
- 1.575 & 1.598-1.605 GHz
- .51 x .51 x .2 in (13 x 13 x 5 mm) Ceramic Patch
- Pin Through Connection
- Adhesive Tape Mounting

Ceramic Solutions

Passive	Ceramic chip	W3009, W3010, W3011/W3011A, W3062
	Patch (passive)	W3213, W3216, W3099
	Helical	W3110
	Combo	W3064C (GPS+WiFi)
	Special (frequency needs to be tuned for target service)	W3000 (GPS, WiFi, or ISM868), W3043 (GPS or WiFi)
Active	Patch+LNA (internal)	W4031, W4204
	package (external)	GPSGMSMA (aka. W4000), W4022, see catalog
	combo package (external)	see catalog

Navigation Solutions

External & Outdoor Navigation Solutions

External and outdoor solutions are all active solutions including discrete LNA designs providing between 24 and 28 dB GPS gain. Solutions are available in GPS only functionality and also including WAN connections to the Cellular network, e,g, 3G, 4G, GSM etc. Additional connector type and cable length options are available including NMO. Full details are found in the product search on www.PulseElectronics.com or contact your local representative for more details.

Adhesive Mounts

GPSGM800/2170
- Active GPS Plus 3G& GSM Antenna
- 1575 Plus 824-960/ 1710-2170 MHz
- Dashboard or Glass Adhesive Mount
- Thin Elliptical Package

GPSSB800/2170
- Active GPS/Cellular Blade Antenna
- 806-960/1710-2170/ 1575 MHz
- Adhesive Mount
- Indoor or Outdoor Applications

GPSGMSMA
- Active GPS Antenna
- 1575 MHz
- Dashboard or Glass Adhesive Mount
- Ultra Thin Elliptical Package

NMO Mounts

Shadow Low Profile Transit Series
- Low profile
- Frequencies from 698 MHz to 5.9 GHz
- Ideal for use on the NMOHFGPS mount
- Single and dual band models
- Industrial form factor
- NMO mount, direct mount also available

GPSNMO
- Active GPS 1575 MHz Antenna
- NMO mount
- 2.9" Dia x 1.3" (74 mm Dia x 33 mm)

Direct Mounts

NMOHFGPS
- Direct mount with a GPS/LNA module combined with an NMOHF mount
- For use with most NMO mount antennas
- Easily converts from low to high frequency use
- Large center contact pin for better VSWR in low frequency applications
- IP-65 rated and UV protected

SLPT NMO mount antenna on an NMOHFGPS combines a high performance GPS antenna with durability of an SLPTNMO.

GPSDM700/5800
- Roof mounted GPS/LTE/GSM/WIFI Antenna
- Cable 1: 698-960/1710-2170/2300-2700 MHz
  Cable 2: 2400-2485/5150-5875 MHz
  Cable 3: 1575.42 MHz
- IP-65 rated and UV protected
- Outdoor application

GPSDM
- Active GPS 1575 MHz Antenna
- Direct Mount
- IP-65 Rated and UV Protected
- 1.97" Dia x 1.38" (50 mm Dia x 35 mm

GPSCP
- Direct Mount GPS Multi-band
- 824-960/1710-2170/1575.4 MHz
- Direct feed with coaxial cable
- White or black with connector options
- Outdoor application

GPSCWCP
- Antenna GPS Multi band direct mount
- 824-960/1710-2170/1574.4 MHz Mount
- IP-65 Rated and UV Protected
- 1.97" Dia x 1.38" (50 mm Dia x 35 mm)

Magnetic Mounts

GPSCPMM0X
- Magnetic Mount GPS Multi-band
- 824-960/1710-2170/1575.4 MHz
- Coaxial cable with connector options
- Outdoor application

GPS00XXX
- Active GPS 1575 MHz Antenna
- Magnetic Mount
- IP-65 Rated and UV Protected
- Coaxial cable with connector options

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