

# GPS/GLONASS Integrated Antenna & Receiver Module

The G1 Series is our highly sophisticated range of integrated GPS receiver & antenna modules. This level of integration directly attaches a quality GPS/GLONASS receiver directly to our high performance antenna, eliminating loss, gaining superior performance. This product is ideal for timing applications, mining, agriculture and the survey industries.

The Genius range has been designed with an integrated Switchmode power supply providing integrators the flexibility of an input voltage range of 8 to 30 Volts suitable for most vehicle installations.

As most applications are unique, the Genius range can be configured to your specific requirement by selecting the most appropriate interface (RS232, TTL or USB), standard or ruggedized environmental housing or cable and connector combination. Rojone is also able to offer affordable customization for both hardware and software. Please talk to us about your individual needs.

## G1 Series

GPS Receiver with internal antenna  
NMEA 4800 Baud Standard  
Interface RS232 or TTL  
A range of operating voltage choices  
Standard cable length 3 mtrs (9.8ft)  
Standard MINI housing or Environmental MAXI  
Screw, Magnetic or Pole Mounting Options



## G1 Series USB

GPS Receiver with internal antenna  
NMEA 4800 Baud Standard  
Interface USB  
Drivers Windows or Mac  
Operating voltage 5 Volts  
Connector type USB  
Standard cable length 3 Mtrs (9.8ft)  
Housing 75mm (2.95") x 75mm (2.95") x 18mm (0.75")  
Standard housing or Magnetic mounting available



## OEM GPS Modules

GPS OEM Receiver with antenna attached  
Or MCX Connector for external antenna connection  
NMEA 4800 Baud Standard  
Interface RS232 or TTL  
Operating voltage 3 Volts & 2.9-7 Volts



# GPS/GLONASS Receiver Specification

Chip	Ublox LEA-M8F
Frequency	L1, 1575.42 MHz GPS & 1602-1615 MHz GLONASS
C/A Code	1.023 MHz Chip
Receiver Type	GPS/QZSS, GLONASS
Augmentation & Assistance	SBAS, D-GPS, A-GNSS
Position Accuracy	Position 2.5m CEP, SBAS 2.0m CEP
Channels	72
Max update rate	Concurrent GNSS up to 5 Hz
Sensitivity	Cold Start -148dBm Reacquisition -160dBm Tracking & Acquisition -167dBm Hot Start -156dBm
Acquisition Rate	Hot Start 1.0 seconds average (Open Sky, Stationary) Aided Start 2.0 seconds average Cold Start 26 seconds average concurrent GNSS
Timing Accuracy	Clear Sky < 20ns
Timing Pulse	0.25 Hz to 5 MHz
Velocity	500 m/s (approx.1000 knots)
Power	5 volts USB 150mW Eco mode,160mW max
Serial Interface	RS232 or USB V2.0 Full Speed 12Mbit/s Connector USB-B
Protocols	NMEA 0183 version 4.0, UBX Binary, RTCM 2.3
Temperature range	-40 to + 85 Degrees C

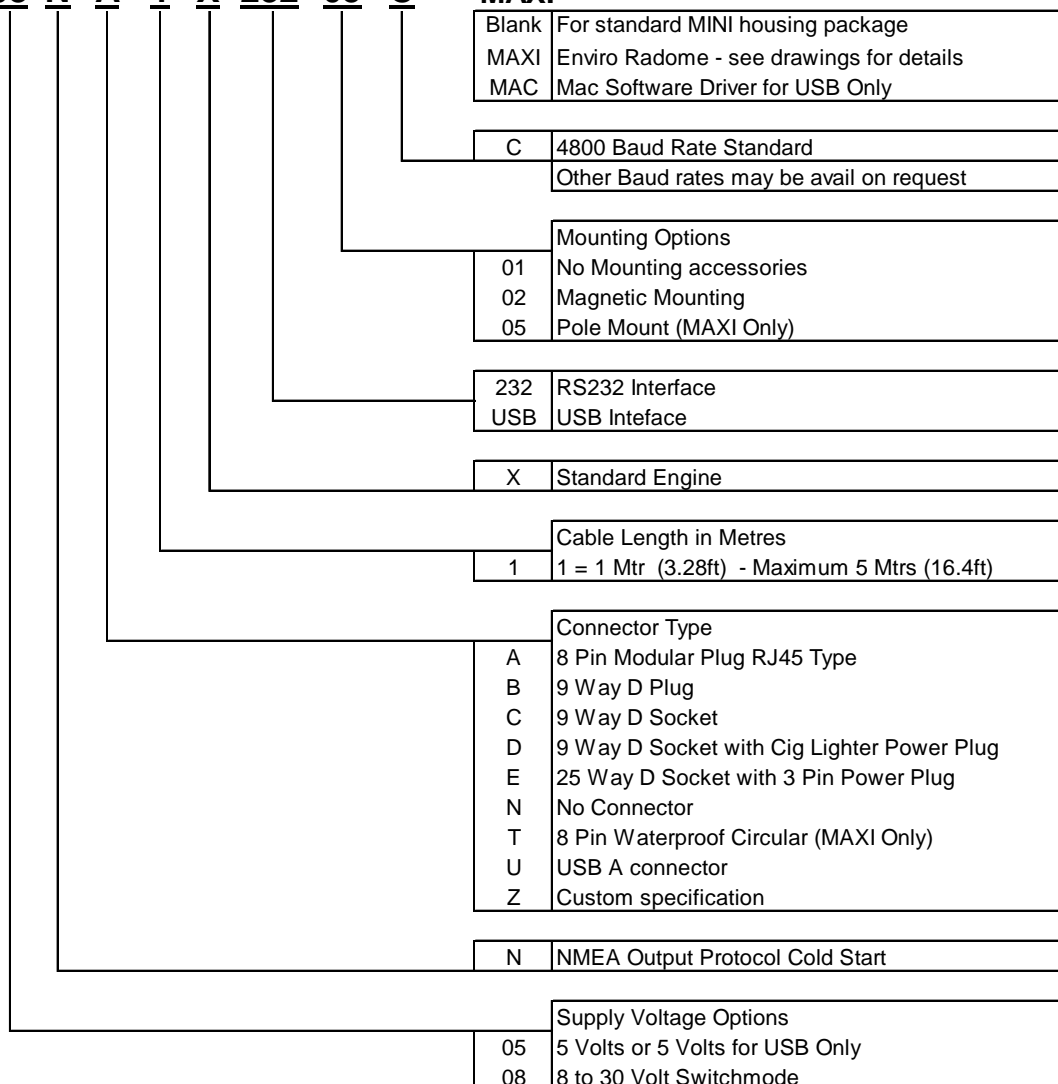
# G1 Series GPS/GLONASS Integrated Antenna & Receiver Module

The GPS G1 is a packaged, highly integrated GPS/GLONASS Receiver & Antenna module. The module is supplied with your choice of connectors, cable length & interface, requirements all definable by the Order Code.

If selected, the G1 product can be supplied with its own switchmode power supply providing a power input range of 8 to 30 Volts. This option is highly recommended for vehicle telematics.

## Configuration Code:

**G1 08 N A 1 X 232 05 C - MAXI**



# GPS/GLONASS Integrated Antenna & Receiver Module

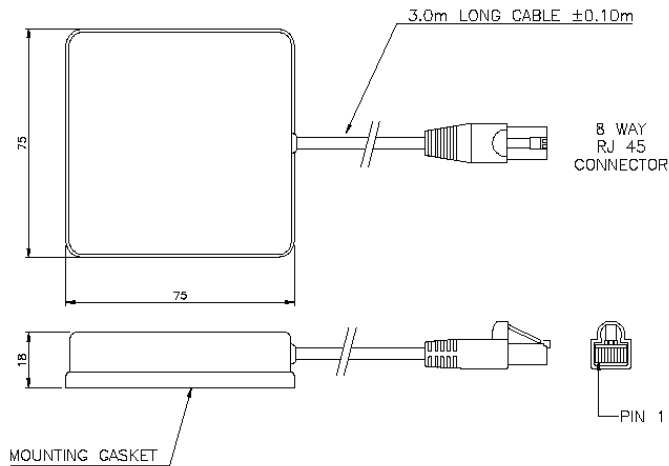
## MINI Package Configurations & Mechanicals

### Standard module package

UV stable, white injection module radome complete with scratch resistant rubber base.



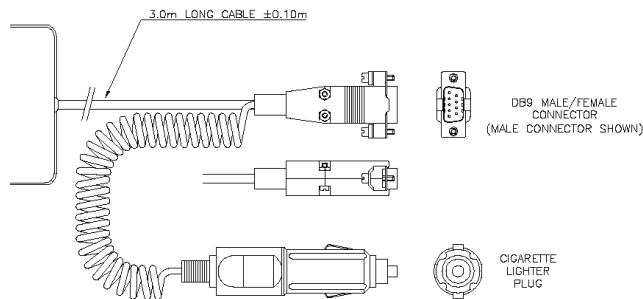
### Connector Option 'A' RJ45 Plug



#### RJ45 Connector Pin out

PIN	FUNCTION
1	Timemark, Inverted, Open Collector O/P
2	TXA
3	RXA
4	Not Connected
5	Ground
6	VCC
7	Not Connected RESET
8	Not Connected Battery

### Connector Option "D" 9 Way D Socket + Cig Lighter Power Connect

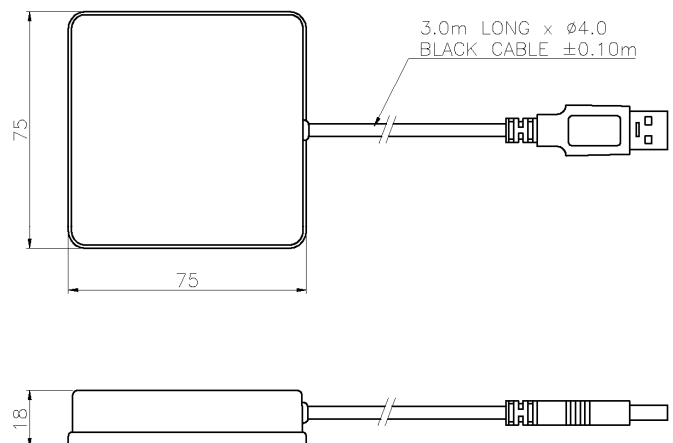


#### D9 Connector Pin out

PIN	FUNCTION
1	Not Connected Battery
2	TXA
3	RXA
4	Not Connected
5	Ground
6	Not Connected
7	Not Connected
8	Not Connected RESET
9	Timemark, Inverted, Open Collector O/P

02

### Connector Option "U" USB B



# GPS/GLONASS Integrated Antenna & Receiver Module



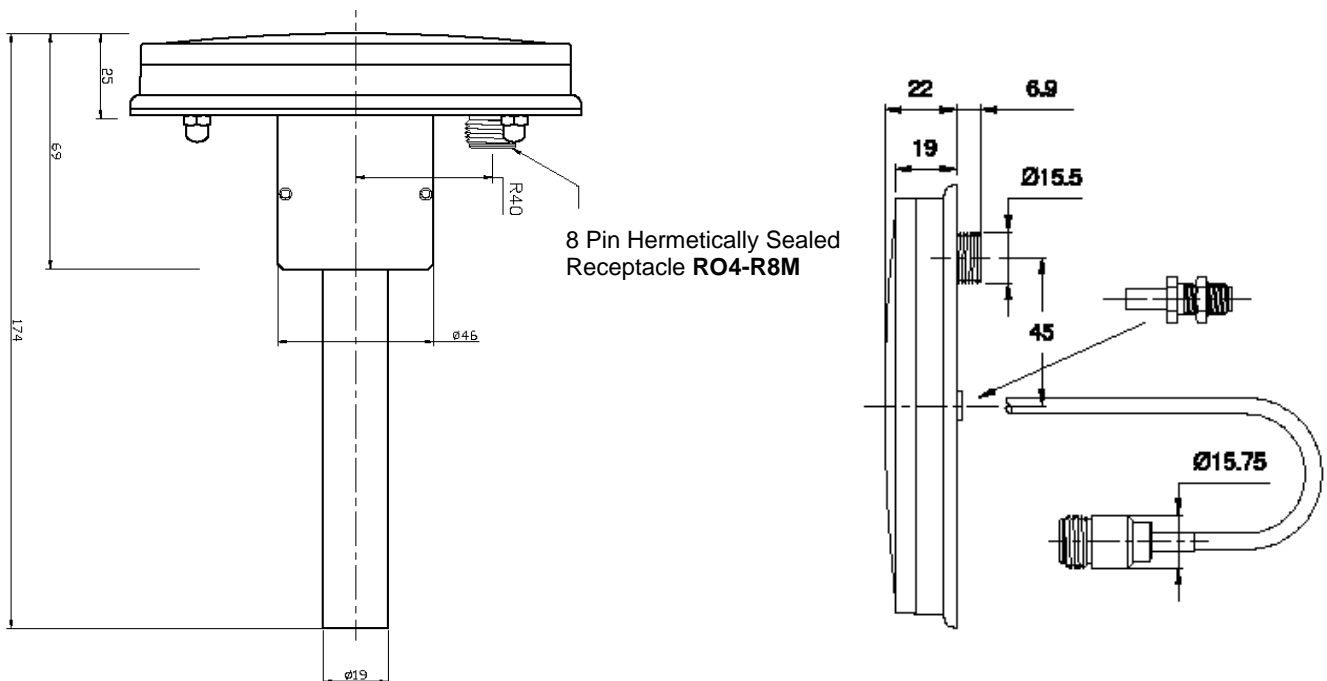
## MAXI Package Configurations & Mechanicals

The radome is manufactured from high impact UV stable plastics, ideal for salt, high humidity, chemicals, oils, fuels & dirt exposed environments.

This unit is completely sealed & has 4 external through mounting holes for secure mounting with a flexible neoprene base for scratch resistance.



## Connector Option "T" Mounting Option "03" Pole Mount configuration



Order Code: RO4-P8F6'3  
 Mating Straight Plug Cable Clamp Max Cable Size 6.3mm  
 Purchased separately.

8 Pin Circular Connector Pin out

PIN FUNCTION

- A Timemark, Inverted, Open Collector O/P
- B TXA
- C RXA
- D Not Connected
- E Ground
- F VCC
- G Not Connected RESET
- H Not Connected Battery

