

GPS RADIONOVA® M10300 RF Antenna Module

Antenova's GPS RADIONOVA® M10300 RF Antenna Module is the world's smallest single package solution that combines a full GPS engine and passive antenna on the same module. The GPS RADIONOVA® M10300 is a flash based highly integrated GPS RF Antenna Module suitable for L1-band GPS and A-GPS systems. The device is based on the highly sensitive MStar Poseidon IC combined with Antenova's high efficiency antenna technology.

M10300 is a small compact module comprising of a surface mount RF module and a passive antenna. All the front-end components are contained in the RF module, providing a complete GPS receiver with maximum design flexibility in multiple platforms. The M10300 also includes Antenova's patented external antenna matching which allows the antenna to be optimized for a specific product without having to change the antenna or the module.

M10300 supports stand alone autonomous and assisted (AGPS) operation through MStar's proprietary long-term ephemeris data network, and operates on a single 3.6V positive bias supply with low power consumption and available low power modes for further power savings.

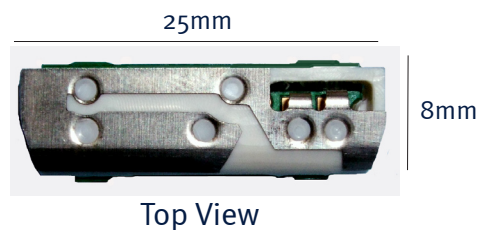
Applications:

- Ultra small Personal Trackers
- GPS Watch
- Bluetooth® GPS Receivers
- Miniature Asset Tracking Devices

Features:

- Low cost single package RF Antenna Module
- MStar MSB2122 Poseidon IC
- Compact module suitable for small ground plane devices
- Intended for SMD mounting
- Low 6mm height for thin devices
- Low current consumption
- Built-in filter allows co-existence with GSM/CDMA/WCDMA/WLAN/BT

Integrated Antenna and RF Solutions



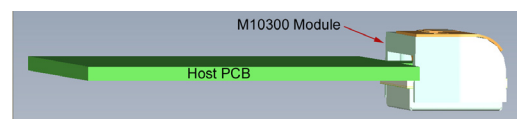
Top View



RF Module Bottom View
w/shield can)



Component view
(w/o shield can)



Typical Mount
(Side view)

GPS RADIONOVA® M10300 RF antenna module

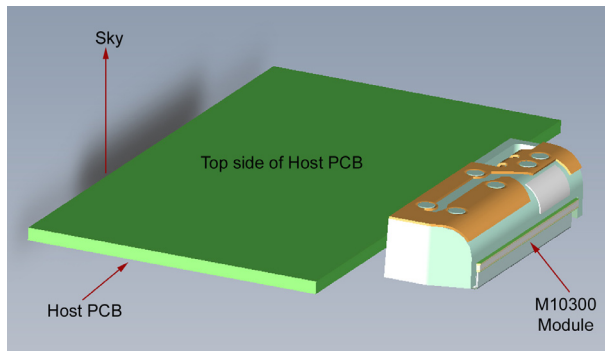
electrical

Frequency:	1575 MHz
Supply Voltage	3.6V
Supply Current:	40mA
Hibernate Current:	40 uA
COM Interface:	UART
Output Protocol:	NMEA 0183 Ver. 3 / Binary
Temperature:	-30°C to +85°C

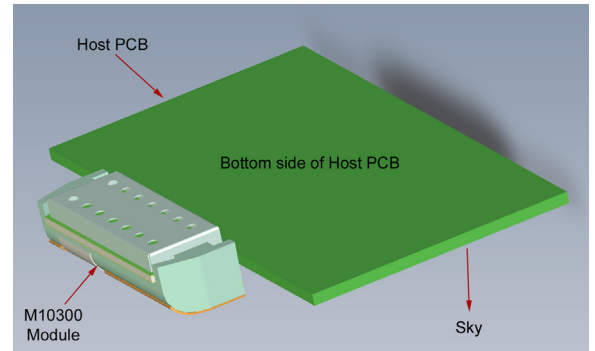
mechanical

Dimensions :	25 x 8 x 6mm
Mounting:	Low profile SMT
Groundplane:	25 x 40mm min

Typical RF Antenna Module Placement

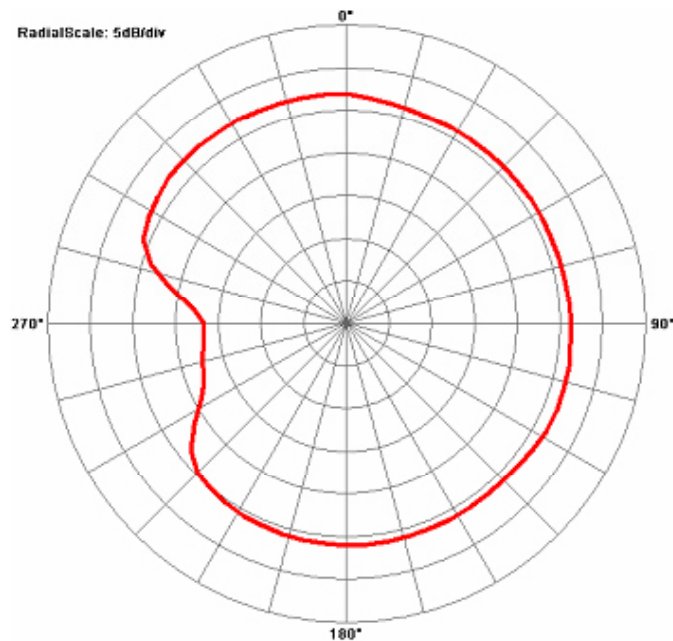


Top View



Bottom View

Typical Chamber Performance



Note: Radiation pattern measured on Antenova's standard test board. Tuning may be needed in product integration to adjust radiation pattern.



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The information provided in this document was correct at the time of going to print