

GPS RADIONOVA[®] M10478 RF Antenna Module (SMD)

Antenova M2M's GPS RADIONOVA[®] M10478 RF Antenna Module is an ultra compact single package solution to combine RF and antenna on the same module. The M10478 is a highly integrated GPS RF Antenna Module suitable for L1-band GPS and A-GPS systems. The device is based on the high performance CSR SiRFstarIV™ GPS architecture combined with Antenova's high efficiency antenna technology, and is designed to provide an optimal radiation pattern for GPS reception.

All front-end and receiver components are contained in a single package laminate base module, providing a complete GPS receiver for optimum performance. The M10478 operates on a single 1.8V positive supply with low power consumption and several low power modes for further power savings. And, an accurate 0.5ppm TCXO ensures a short TTFF. The M10478 is supported by SiRF stand alone software and is compatible with UART, SPI, I²C host processor interfaces.

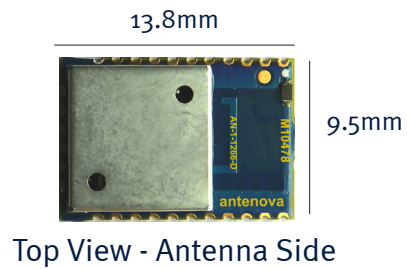
Providing a true drop in solution with the antenna and RF in a single SMT package, GPS RADIONOVA[®] M10478 offers ease of integration and shorter design cycles for faster time to market.

Applications:

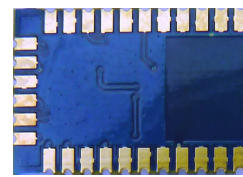
- Personal Navigation Devices (PNDs)
- Portable Media Players (PMPs)
- Asset Tracking / Personal Safety
- Tablet PCs, e-Readers, etc

Features:

- Low cost single package SMD RF Antenna Module
- CSR SiRFstarIV GSD4E 9333 GPS IC
- Ultra small, low 1.8mm height for thin devices
- Adaptive Micropower Controller - Only 50-500uA maintains hot start capability
- Novel external matching ensures easy tuning for each platform
- Anti-jamming technology - Tracks up to 8 CW jammers



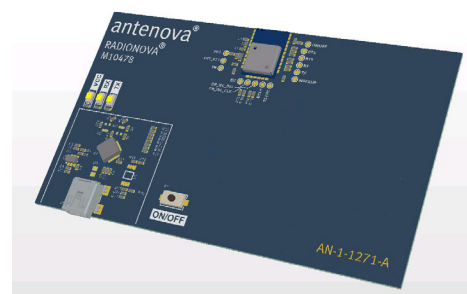
Top View - Antenna Side



Bottom View



Side View



Typical Placement on PCB

GPS RADIONOVA® M10478 RF antenna module

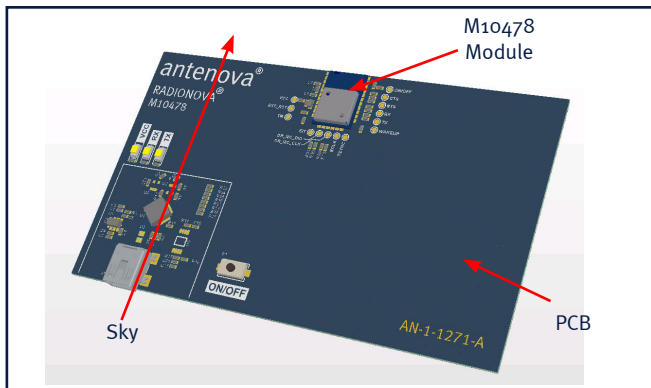
electrical

Frequency:	1575 MHz
GPS Engine:	CSR SiRFstarIV GSD4E 9333
Supply Voltage	1.8V
Operating Current:	31mA (Avg tracking current)
Hibernate Current:	20 µA
COM Interface:	UART/SPI/I ² C
Output Protocol:	NMEA 0183/SiRF Binary
Operating Temperature:	-40°C to +85°C

mechanical

Dimensions :	13.8 x 9.50x 1.8mm
Weight:	<1g
Mounting:	SMD
Groundplane:	40 x 30mm (min)

Typical RF Antenna Module Placement



Front View



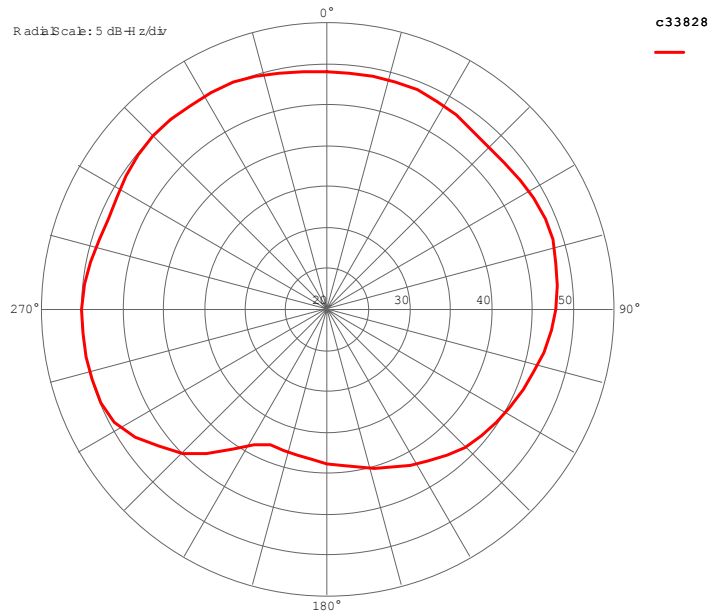
Back View



Side View



Typical Sensitivity Pattern



Note: Radiation pattern measured on Antenova M2M's standard test board. Tuning may be needed in product integration to adjust radiation pattern.



Certificate No: 4598

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