

## GPS RADIONOVA® M10382 RF Antenna Module (SMD)

Antenova's **GPS RADIONOVA® M10382 RF Antenna Module** is a single package solution that combines a full GPS engine and antenna on a small SMD module. The **M10382** is a highly integrated GPS RF Antenna Module suitable for L1-band GPS and A-GPS systems. The device combines the high performance u-blox 6 GPS position engine 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 **M10382** operates on 1.8V or 3.3V positive bias supply with low power consumption and several low power modes for further power savings. And, an accurate 0.5ppm TCXO and very low noise LNA ensures high sensitivity and short TTF. The **M10382** is supported by u-blox stand alone software and is compatible with UART, SPI, DDC, I<sup>2</sup>C and USB host processor interfaces.

Providing a true drop in solution with the antenna and RF in a single SMT package, **GPS RADIONOVA® M10382** offers ease of integration and shorter design cycles for faster time to market.

### Applications:

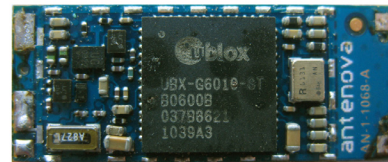
- Personal Navigation Devices (PNDs)
- Portable Media Players (PMPs)
- Asset Tracking / Personal Safety
- Tablet PCs, e-Readers, etc

### Features:

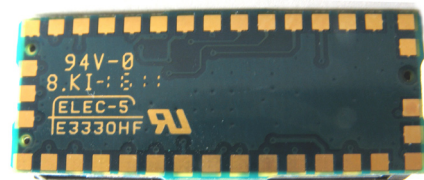
- Low cost single package SMD RF Antenna Module
- u-blox 6 GPS position engine
- Low 3.9mm height for thin devices
- Low current consumption
- Novel external matching ensures easy tuning for each platform
- Anti-jamming technology



Top View - Antenna Side



Component View w/o Shield Can



Bottom View



SMT Mount  
(Side view)



Typical Placement on PCB

# GPS RADIONOVA® M10382 RF antenna module

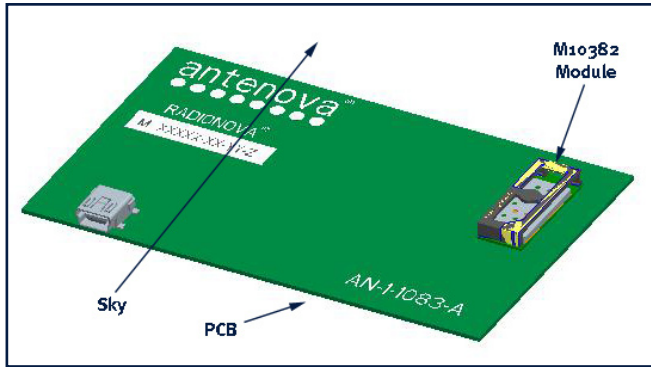
## electrical

Frequency:	1575 MHz
GPS Engine:	u-blox 6 (UBX-G6010-ST)
Supply Voltage	1.8V /3.3V
Operating Current:	40mA @ 1.8V (Several low power modes)
Hibernate Current:	25 µA
COM Interface:	UART/SPI/DDC/I <sup>2</sup> C/USB
Output Protocol:	NMEA 0183/UBX
Operating Temperature:	-40°C to +85°C

## mechanical

Dimensions :	24.2 x 9.9 x 3.9mm
Weight:	1.1g
Mounting:	SMT
Groundplane:	40 x 30mm min

Typical RF Antenna Module Placement



Front View



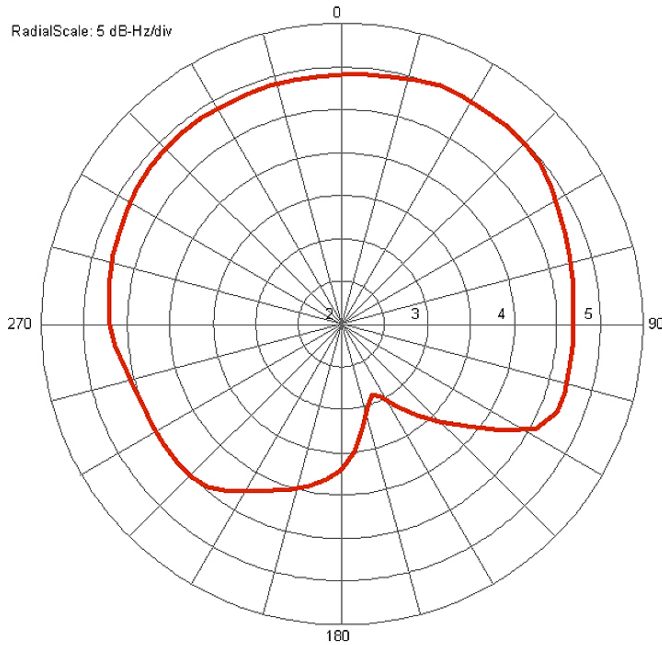
Back View



Side View



Typical Sensitivity Pattern



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



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