

## GPS RADIONOVA® M10295 RF Antenna Module

Antenova's **GPS RADIONOVA® M10295 RF Antenna Module** is a single package solution to combine RF, baseband and passive antenna on the same module. The **M10295** 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 high performance MStar Poseidon IC combined with Antenova's high efficiency antenna technology designed to provide an optimal radiation pattern for GPS reception.

All components are contained in a single package laminate base module, providing a complete GPS receiver for optimum performance. The **M10295** operates on a single 3.6V positive bias supply with low power consumption and available low power modes for further power savings. The **M10295** supports stand alone autonomous and assisted operation through MStar's proprietary long-term ephemeris data network. The **M10295** also incorporates an antenna switch with built-in current sensing for optional active antenna connection.

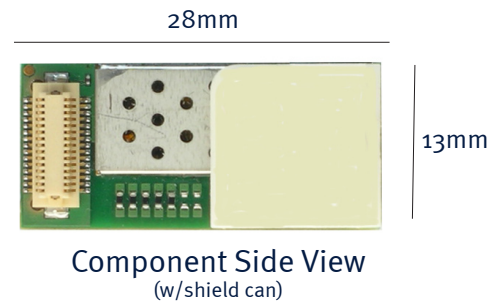
Providing a true drop in solution with the antenna and stand alone receiver in a single package, **GPS RADIONOVA® M10295** offers ease of integration and shorter design cycles for faster time to market.

### Applications:

- Portable Handheld Devices (PNDs, PMPs, PDAs)
- Feature Phones / Smart phones
- Asset Tracking / Personal Safety devices

### Features:

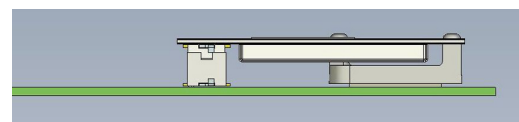
- Low cost single package RF Antenna Module
- MStar single-chip MSB2122 Poseidon IC
- Low 5mm height for thin devices
- Low current consumption
- External antenna support
- Resistant to de-tuning



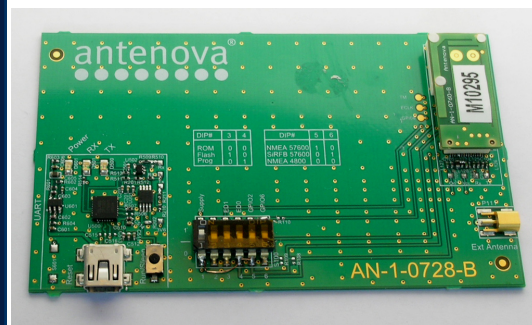
Component Side View  
(w/shield can)



Top View - Antenna Side



Typical Planar Mount  
(Side view)



Typical Placement on PCB

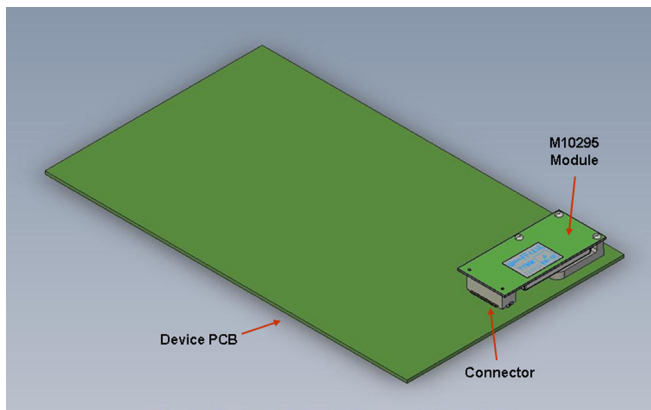
## electrical

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

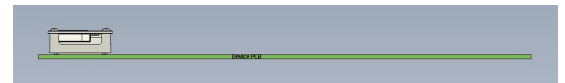
## mechanical

Dimensions :	28 x 13 x 5mm
Mounting:	Planar mount / low profile
Connector:	30pin board-to-board
Groundplane:	40 x 30mm min

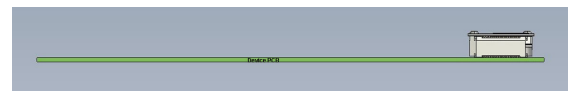
Typical RF Antenna Module Placement



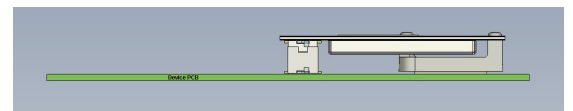
Front View



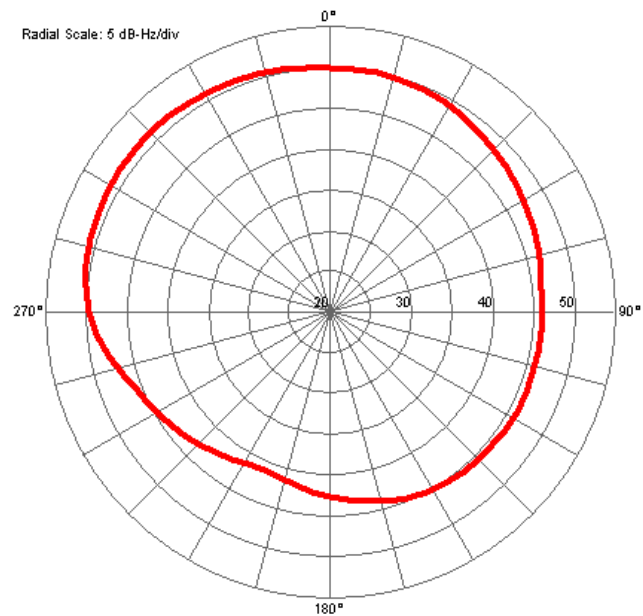
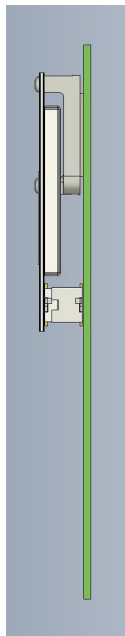
Back View



Side View



Typical Chamber Performance



Note: Radiation pattern measured on Antenova's standard test board.



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