

# GPS RADIONOVA® RF Antenna Module

Part No. M10264

Product Specification

## Applications

- Personal Navigation Devices (PNDs)
- Portable Media Players (PMPs)
- Personal Digital Assitants (PDAs)
- Feature phones / Smart phones
- Ultra Mobile Devices (UMDs)
- Asset Tracking / Personal Safety

## Features

- Low cost single package GPS RF antenna module
- SiRFstarIII GPS Chipset Architecture
- Low 5mm height for thin devices
- Low current consumption
- Easy to use 'drop-in solution'
- External antenna support
- Resistant to de-tuning

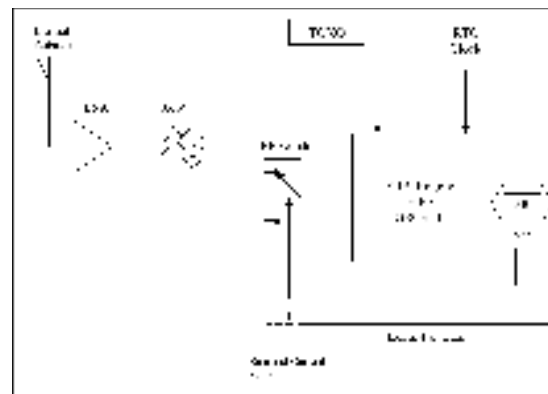
## Product Description

GPS RADIONOVA M10264 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 SiRFstarIII GPS architecture combined with Antenova's high efficiency antenna technology designed to provide an optimal radiation pattern for GPS reception.

All front-end components are contained in a single package laminate base module providing a complete GPS receiver for optimum performance. M10264 operates on a single 3.6V positive bias supply with low power consumption and available low power modes for further power savings.

M10264 is supported by SiRF stand alone software and uses a UART as the host processor interface. The M10264 also incorporates an antenna switch with built-in current sensing for optional active antenna connection.

## Functional Block Diagram



## Package Style

28 x 13mm RF Antenna Module

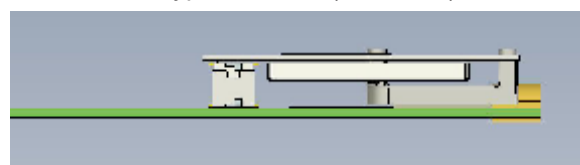
Top View



Component side view (w/o shielding can)



Typical Mount (side view)



## Absolute Maximum Ratings

| Symbol              | Parameter                                                  | Min  | Max  | Unit |
|---------------------|------------------------------------------------------------|------|------|------|
| Vbat                | Supply Voltage                                             | -0.2 | 5.5  | V    |
| RFin                | RF Input Power                                             |      | -10  | dBm  |
| ESD                 | Electrostatic Discharge Immunity (HBM)                     | -2   | +2   | kV   |
| T <sub>STG</sub>    | Storage Temperature                                        | -40  | +85  | °C   |
| I <sub>IO_REG</sub> | I/O voltage regulator output current                       |      | 10   | mA   |
| V <sub>IO</sub>     | I/O pin voltage (TXA, RXA, ED[0,1], GPIO [2,6,8], TM, CLK) |      | 1.98 | V    |
| V <sub>ON_OFF</sub> | ON_OFF line supply voltage                                 |      | 1.82 | V    |

\* Exposure to absolute ratings may adversely affect reliability and may cause permanent damage.

## Recommended Operating Conditions

| Symbol | Parameter           | Min | Typ | Max | Unit |
|--------|---------------------|-----|-----|-----|------|
| Ta     | Ambient Temperature | -20 | 25  | +70 | °C   |
| Vbat   | Main Supply Voltage | 3.3 | 3.6 | 4   | V    |

## DC Electrical Characteristics

Conditions: Vcc = 3.6V, Ta = 25 °C

| Symbol                                 | Parameter                               | Typ | Unit |
|----------------------------------------|-----------------------------------------|-----|------|
| I <sub>CC_ACQ</sub>                    | Total Supply Current (Acquisition Mode) | 50  | mA   |
| I <sub>CC_TRK</sub>                    | Track Mode                              | 30  | mA   |
| I <sub>CC</sub> <sub>(HIBERNATE)</sub> | Sleep (Hibernate) Mode                  | 30  | µA   |
| V <sub>IO_REG</sub>                    | I/O voltage regulator output voltage    | 1.8 | V    |

Note: Power Management modes above are automatically accessed and managed through SiRF software/Firmware.