



## PRODUCT SPECIFICATION RS232 GPS RECEIVER BR-304

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### **Product Feature**

- “SiRF Star 7 /LP” high performance and low power consumption chipset
- All-in-view 12-channel parallel processing
- Built-in active antenna
- High sensitivity to satellite signal
- Cold start under 45 seconds, average
- Superior urban canyon performance
- FoliageLock for weak signal tracking
- Build-in SuperCap to reserve system data for rapid satellite acquisition.
- Supported NMEA 0183 command: GGA, GSA, GSV, RMC, GLL, VTG
- Super-cohesive magnetic for mounting on the car
- LED indicator for GPS fix or not fix
  - LED OFF: Receiver switch off
  - LED ON: No fixed, Signal searching
  - LED Flashing: Position Fixed
- Non-slip on the bottom
- RS232 interface connection port

## **System Specification**

|  |   |
|--|---|
| <b>Electrical Characteristics (Receiver)</b> |   |
| Frequency                                    | L1, 1575.42 MHz   |
| C/A Code                                     | 1.023 MHz chip rate   |
| Channels                                     | 12  |
| Sensitivity                                  | -170 dBW  |
| <b>Accuracy</b>                              |   |
| Position Horizontal                          | 15m 2D RMS (SA off)   |
| Velocity                                     | 0.1m/sec 95% (SA off),  |
| Time   | 1 micro-second synchronized to GPS time   |
| WAAS enabled                                 | 10m 2D RMS  |
| <b>Datum</b>                                 |   |
| Datum  | WGS-84  |
| <b>Acquisition Rate</b>                      |   |
| Hot start                                    | 8 sec., average (with ephemeris and almanac valid)  |
| Warm start                                   | 38 sec., average (with almanac but not ephemeris)   |
| Cold start                                   | 45 sec., average (neither almanac nor ephemeris)  |
| Reacquisition                                | 0.1 sec. average (interruption recovery time)   |
| <b>Protocol</b>                              |   |
| GPS Protocol                                 | Default: NMEA 0183 (Secondary: SiRF binary)   |
| GPS Output Data                              | SiRF binary >> position, velocity, altitude, status and control ; NMEA 0183 protocol, and supports command: GGA, GSA, GSV, RMC, VTG, GLL (VTG and GLL are optional) |
| GPS transfer rate                            | Software command setting (Default : 4800,n,8,1 for NMEA )   |
| <b>Dynamic Condition</b>                     |   |
| Acceleration Limit                           | Less than 4g  |
| Altitude Limit                               | 18,000 meters (60,000 feet) max.  |
| Velocity Limit                               | 515 meters/sec. (1,000 knots) max.  |
| Jerk Limit                                   | 20 m/sec**3   |
| <b>Temperature</b>                           |   |
| Operating                                    | -30°~ 80°C  |
| Storage                                      | -40°~ 85°C  |
| Humidity                                     | Up to 95% non-condensing  |
| <b>Power</b>                                 |   |
| Voltage                                      | 5V ±5%  |
| Current                                      | 90mA typical (Continuous mode)  |
| <b>Physical Characteristics</b>              |   |
| Dimension                                    | 2.32" x 1.85" x 0.82" (59mm x 47mm x 21mm)  |
| Cable Length                                 | 65"   |
| <b>Low Noise Amp</b>                         |   |
| Amplifier Gain w/out cable                   | 27 dB Typical   |
| Filtering                                    | -25dB (+100 MHz)  |
| Output VSWR                                  | 2.0 Max.  |
| Voltage                                      | DC 3 ~ 5.0V   |
| Current                                      | 15mA max.@5VDC  |



### **RS232 GPS Receiver**

*Due to continuous product improvements, all specifications may be subject to change without notice*