antares
data on the move

# SA-9580
# MTK BLUETOOTH GPS RECEIVER

The Siraya SA-9580, based on the latest state of the art Media Tek Bluetooth and GPS chipset, I a high sensitivity Bluetooth receiver. The GPS receiver delivers an outstanding signal to noise (S/N) reception figure. The on-chip image-rejection mixer, plus SAW filter allows this 51-channel GPS Receiver to acquire and track satellites in the shortest time even at low signal levels, providing fast TTFF (time-to-first-fix) which meets the strictest industrial standards. The SA-9580 can perfectly pair up with your Smart phone, PDA or Laptop PC, to provide first class GPS navigation during your journey.


**FEATURES**

- ✓ Bluetooth, V1.2 compliance, class 2
- ✓ 51 channel GPS L1 (C/A code) receiver
- ✓ Cold/Warm/Hot Start Time: 38/36/1 second at open sky and stationary environments
- ✓ Reacquisition Time: 0.1 second
- ✓ Operation hours : 10 hours in continuous mode & 20 hours in tracking mode
- ✓ GGA/GSA/GSV/RMC/VTG/GLL/ZDA
- ✓ 3 LED indicators: Battery Power, Bluetooth, GPS
- ✓ RoHS compliance
- ✓ Sleep mode

**INTERFACE**

- ✓ TTL level serial Port/Bluetooth for GPS communications interface
- ✓ Protocol: NMEA-0183
- ✓ Baud Rate: 38400 bps

Tel: 1300 884 565
www.antares.com.au

# SPECIFICATIONS

| FEATURE | ITEM | DESCRIPTION |
|---|---|---|
| **TECHNICAL PERFORMANCE** | | |
| Chipset | MT 3318f +6601 | GPS single chip + Bluetooth chipset |
| General | Frequecy | L1, 1575.42 MHz |
| | C/A code | 1.023 MHz chip rate |
| | Channels | 51 |
| Accuracy | Position | 3 meters, 2-D RMS |
| | | 2.5 meters 2-D RMS, WAAS corrected |
| | | <2.5 meters, (50%) |
| | Velocity | 0.1 meters/second |
| | Time | 1 microsecond synchronized to GPS time |
| Datum | Default | WGS-84 |
| | Other | Selectable for other Datum |
| TTFF | Reacquisition | 0.1 sec, avg |
| | Hot Start | 1 sec, avg typical TTFF |
| (Open sky & stationary | Warm Start | 36 sec, avg typical TTFF |
| requirements) | Cold Start | 38 sec, avg typical TTFF |
| Dynamic Conditions | Altitude | 18,000 meters max. |
| | Velocity | 515 meters/second (1,000 knots) max. |
| | Acceleration | 4g, max |
| | Jerk | 20 meters/second 3 max |
| Power | Main power input | DC 5.0V |
| | Operation hours | 10 hours in continuous mode |
| | Battery | 670 mA (Built-in Li-Polymer battery) |
| Serial Port | Electrical interface | UARTS |
| | Protocol messages | NMEA-0183 V3.01@9600bps (default) |

| ITEM | DESCRIPTION |
|---|---|
| **ENVIRONMENTAL CHARACTERISTICS** | |
| Operating temperature range | $-10^{o}$ C to $+50^{0}$ C |
| Storage temperature range | $-20^{0}$C to $+65^{0}$C |
| **PHYSICAL CHARACTERISTICS** | |
| Length | 75.6mm ± 0.12mm |
| Width | 28.4mm ± 0.08mm |
| Height | 18.7mm ± 0.08mm |
| Weight | 38g (including battery) |
| **INTERFACE SPECIFICATIONS** | |
| Bluetooth | V1.2 compliance, class 2 |
| USB | Mini USB for charging only |

Tel: 1300 884 565
www.antares.com.au

# SPECIFICATIONS

| ITEM | DESCRIPTION |
|---|---|
| **SOFTWARE** | |
| Core of firmware | MTK |
| Baud rate | 38400 bps |
| Code type | NMEA-0183 SCII |
| Datum | WGS-84 |
| Protocol message | GGA(1sec), GSA(5 sec), GSV(5 sec), GMC(1 sec), VTG(1 sec) |
| Output frequency | 1 Hz (default), Max 5 Hz |
| **ELECTRICAL SPECIFICATIONS** | |
| Main power input | DC 3.3 ~ 5.0V |
| Power consumption | 185 mW (acquisition mode) |
| | 106 mW (tracking mode) |
| Supply current | 56 mA@ 3.3VDC (acquisition mode) |
| | 32 mA@ 3.3VDC (tracking mode) |
| **BATTERY** | |
| Model type | Lithium Ion Polymer |
| Nominal Capacity | Minimum : 650mAh (fully charged @ 1C to 4.2V for 2.5) |
| | Typical : 670Ah |
| | *(Fully charged @ 1C to 4.2V for 2.5 hrs, then discharge to 3.0V @ 0.2C)* |
| Nominal Voltage | 3.7V |

| LED DISPLAY | | | |
|---|---|---|---|
| **LED 1 (GPS) GREEN** | | | |
| State | Always on | Quick blinking | Slowly blinking |
| Description | Memory full to stop | 3D fixed | GPS signal acquisition |
| **LED 2 (BLUETOOTH) BLUE** | | | |
| State | Quick blinking | Slowly blinking | |
| Description | BT on, but not connected yet | BT connected | |
| **LED 3 (POWER) RED** | | | |
| State | Always on | Quick blinking | No |
| Description | Battery is charging | Low power | Battery is fully charged |

Tel: 1300 884 565
www.antares.com.au