TECHNICAL SPEC.

BLUETOOTH MODULE：

1. Interface：USB/UART/PCM
2. output power： +4dBm max(Class 2)
3. working distance：10meter
4. Frequency band：2.4GHz unlicensed ISM band
5. Modulation：GFSK (Gaussian Frequency Shift Keying)
6. Connection mode：Active, Hold, Sniff, Park
7. DC power：3.3 ~ 3.6V
8. Sensitivity：-80dBm @ 0.1BER
9. Data rate：723K bps(max.)
10. Link mode：ACL and SCO link

GPS MODULE
GPS RF FRONT END
GRF2i/LP
PRELIMINARY

GPS RF

Sirf StarII

- High speed signal acquisition using 1920 time/frequency search channels
- Wide Area Augmentation System (WAAS) and NDGPS/U.S. Coast Guard Beacon support
- Satellite signal-tracking engine for GPS acquisition and tracking functions without CPU intervention
- Cold start under 45 seconds

Maximizes GPS Position Availability

- SingleSat updates in reduced visibility
- Superior urban canyon performance
- FoliageLock for weak signal tracking

Cost Effective RFIC Integration

- Built-in IF Filter
- Integrated LNA
- On-Chip VCO and Reference Oscillator
- Single-stage L1 to IF Downconversion
- External +/-25 ppm Reference Crystal
- Power control eliminates the need for CPU crystal in TricklePower mode

Seamless Interface to GSP2e Family

- Standard 3.3V supply

- Compatible with Standard Active Antennas
- LQFP48 Package (7 * 7mm)
- Separate RF and Clock Power down mode
- Simplified interface connections

Maximum Performance

- On-Chip 2-Bit A/D
- Improved Jam Immunity
- Low Overall NF

GPS ENGINE PROCESSOR
GPS 2e/LP
PRELIMINARY

SiRFstarII Architecture

- Advanced TricklePower mode for power savings up to 98% with no extra parts
- Extreme low power in power-down mode, but capable of very fast starts

Maximizes GPS Position Availability

- SingleSat updates in reduced visibility
- Superior urban canyon performance
- FoliageLock for weak signal tracking

GPS2e Product Hightlights

Highly Integrated Digital IC

- Enhanced SiRFstarII GPS core
- Integrated ARM7TDMI™ up to 50 MHz
- Support 8-, 16-, and 32-bit data bus operation
- Separate internal and external buses
- On-chip 1 Mb EDO DRAM for GPS navigation
- Instruction cache to improve throughput
- Integrated high-precision Real-Time Clock
- Extensive GPS peripherals 2 UARTS, synchronous serial bus, battery-backed SRAM, and >40 GPIO
- QFP and BGA packaging options

High Quality

- 99% effective fault coverage
- End-to-end simulation
- ARM7TDMI with JTAG interface
- Memory with Built-In Self-Test(BIST)

Compute Power for User Applications

- Up to 90% CPU throughput available for user tasks
- Robust development environment

BATTERY

Li-Polymer Rechargeable Battery

LED

Power on:

(a) Battery low: Orange LED on

(b) Normal Battery voltage: Green LED on

Power off:

All LED off.

MAXIMUM ABSOLUTE VALUES：

ITEM	SYMBOL	MIN	Max	UNITS
Operating temperature	**Top**	**-20**	**+70**	**^{0}C**
Storage temperature	**Tst**	**-30**	**+80**	**^{0}C**
Supply voltage for logic	**VDD**	**-0.3**	**+5.0**	**V**
Supply voltage for battery	**V_0**	**-0.3**	**+5.0**	**V**