BLUETOOTH MODULE

1. Interface   USB/UART/PCM
2. output power   +0dBm max
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 Highlights

Highly Integrated Digital IC

- Enhanced SiRFstarII GPS core
- Integrated ARM7TDMI^{TM} 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

LED BACKLIGHT

Absolute Maximum Rating

Parameter	Rating	Unit	Remark
Forward Current	240	mA	
Reverse Voltage	5	V	I_R=10uA
Power Dissipation	0.55	W	
Operating Temperature	-20 ~ +70	^{0}C	
Storage Temperature	-30 ~ +80	^{0}C	
Soldering Temperature	260	^{0}C	5sec.

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	+7.0	V
Supply voltage for LCD driving	V_0	-0.3	+17	V