

RoyalTek

鼎天國際股份有限公司

1. Introduction

RoyalTek REB-3570LPX small form factor board is the newest generation of RoyalTek GPS module. The module is powered by latest SiRF Star III single chip and RoyalTek proprietary navigation technology that provides you with stable and accurate navigation data. The smallest form factor and miniature design is the best choice to be embedded in a device such as portable navigation device, personal locator, speed camera detector and vehicle locator.

Product Features

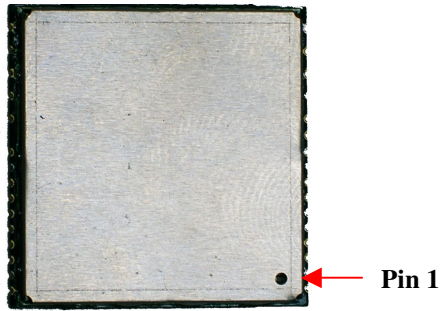
- ✧ 20 parallel channels
- ✧ SMT type with stamp holes
- ✧ High quality stereo audio output
- ✧ TCXO design
- ✧ 0.1 second reacquisition time
- ✧ Small form factor with embedded SiRF Star III single chip technology.
- ✧ NMEA-0183 compliant protocol/ customize protocol
- ✧ Enhanced algorithm for navigation stability
- ✧ Excellent sensitivity for urban canyon and foliage environments.
- ✧ DGPS (WAAS, EGNOS) support
- ✧ Auto recovery while RTC crashes

1.1 Product Applications

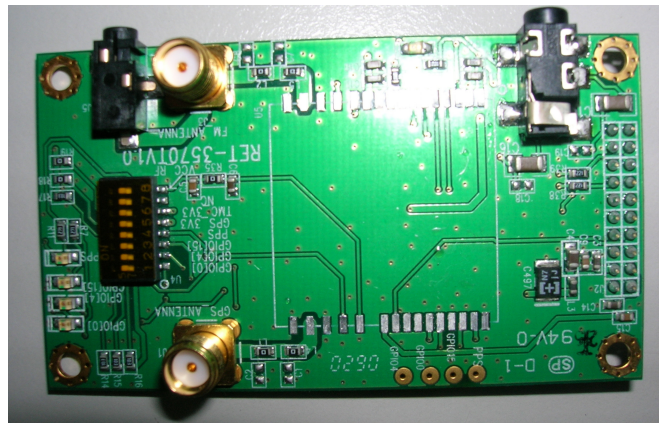
- ✧ Automotive navigation
- ✧ Personal positioning and navigation
- ✧ Marine navigation
- ✧ Timing application

Product Pictures

(1) REB-3570LPX



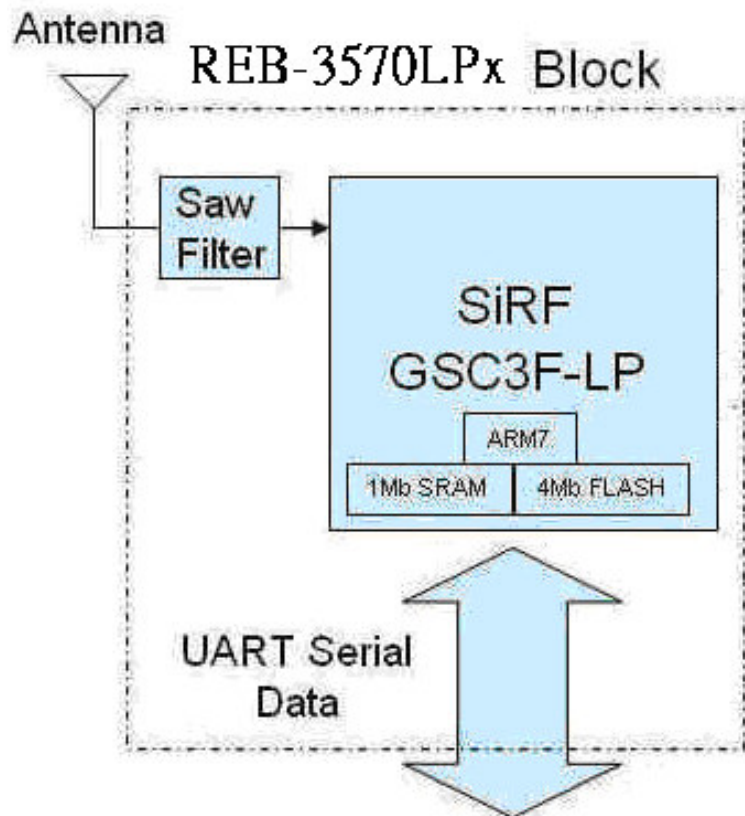
(2) REB-3570LPX Interface board



REB-3570LPX Series Block Diagram

System block diagram description:

- (1) External antenna.
- (2) 4 Mega bits flash memory
- (3) 31 pin I/O pin



RoyalTek

鼎天國際股份有限公司

REB-3570LPX Technical Specification

Impedance : 50Ω

No	Function	Specification
GPS receiver		
1	Chipset	SiRF Star III, GSC3f/LPx (Digital, RF in a single package)
2	Frequency	L1 1575.42MHz.
3	Code	C.A. Code.
4	Channels	20 parallel
5	Chipset Sensitivity	-159dBm.
6	Chipset Cold start	35 sec (open sky)
7	Chipset Warm start	35 sec (open sky)
8	Chipset Hot start	1 sec (open sky)
9	Reacquisition	0.1sec typical
10	Position accuracy	10meters at 2D RMS.
11	Maximum altitude	18000 m
12	Maximum velocity	514 m/s
13	Update rate	Continuous operation: 1Hz
14	Testability	It shall be able to be tested by SiRF test IV and single channel simulator.
15	Protocol setup	It shall store the protocol setup in the SRAM memory.
17	DGPS	WAAS, EGNOS
Interface		
18	LNA	No LNA
19	I/O Pin	31pin
Mechanical requirements		
20	Weight	≤ 3.5g
Power consumption		
21	Vcc	DC 3.3 ±5%
22	Current	Average ≤ 43mA
Environment		
23	Operating temperature	-40 ~ 85°C
24	Humidity	≤ 95%