QUECTEL

Wireless Module Expert

L70

Compact GPS Module
Ultra Low Consumption
Fast Positioning
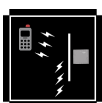
EASY™ Technology

Ultra Low Power Consumption

Tiny Size

Super Sensitivity -163dBm Tracking

Extended Temperature Range -40 °C to +85 °C

Anti-Jamming

RoHS Compliant

The GPS module L70 adopts MT3339 chipset. With the MTK positioning engine, L70 achieves the highest performance and fully meets the industrial standard. L70 has 66 acquisition channels, 22 simultaneous tracking channels, and advanced AGPS technology called EASY™(Embedded Assist System).

EASY™ technology ensures L70 can calculate and predict orbits automatically using the ephemeris data (up to 3 days) stored in internal flash memory, so L70 can fix position quickly even at indoor signal levels with low-power consumption.
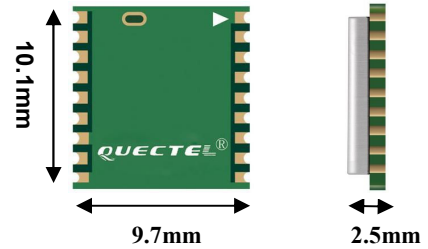
With AlwaysLocate™ technology, L70 can adaptively adjust the on/off time to achieve balance between positioning accuracy and power consumption according to the environmental and motion conditions. Featuring tiny design, low power consumption and high precision and sensitivity, L70 are suitable for portable device and automotive, personal tracking, industrial PDA and many other applications.

Advantages

- Extremely compact size: 10.1 x 9.7 x 2.5 mm
- EASY™, advanced AGPS technology without external memory
- Ultra low tracking power consumption, 22mA @ -130dBm
- AlwaysLocate™, an intelligent controller of periodic mode
- LOCUS, innate logger solution without host and external flash
- Highly sensitivity, -163dBm@Tracking, -148dBm@Cold Start
- 66 acquisition channels, 22 tracking channels
- Support DGPS, RTCM, SBAS(WAAS/EGNOS/MSAS/GAGAN)
- Anti-Jamming, Multi-tone Active Interference Canceller

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10.1mm

9.7mm

2.5mm

QUECTEL®

General Specifications

L1 Band Receiver (1575.42MHz)	Channel	22 (tracking) / 66 (acquisition)
	C/A code	
	SBAS	WAAS, EGNOS MSAS,GAGAN
Horizontal Position Accuracy	Autonomous	<2.5 m CEP
Velocity Accuracy	Without aid	<0.01m/s
Acceleration Accuracy	Without aid	0.1 m/s²
Timing Accuracy	1PPS out	10ns
Reacquisition Time		<1 s
TTFF@-130dBm with EASY™	Cold Start	<15s
	Warm Start	<5s
	Hot start	<1s
TTFF@-130dBm without EASY™	Cold Start	<35s
	Warm Start	<30s
	Hot Start	<1s
Sensitivity	Cold Start	-148dBm
	Tracking	-163dBm
	Re-acquisition	-160dBm
Environmental	Operating Temperature	-40℃ to 85℃
	Storage Temperature	-45℃ to 125℃
Dynamic Performance	Maximum Altitude	Max.18000m
	Maximum Velocity	Max.515m/s
	Maximum Acceleration	4 G
Dimensions	10.1 x 9.7 x 2.5 mm	
Weight	Approx. 0.6 g	

Serial Interfaces

Serial Interfaces	UART: Adjustable 4800~115200 bps Default: 9600bps
Update rate	1Hz (default), up to10Hz
I/O Voltage	2.7V ~ 2.9V
Protocols	NMEA 0183 PMTK

Power Management

Power supply	2.8V ~ 4.3V
Power Acquisition	25mA @ -130dBm *(Note1)*
Power Tracking	22mA @ -130dBm *(Note1)*
Power Saving	3mA@AlwaysLocate™ *(Note2)*
	7uA@Backup Mode
	500uA@Standby Mode
	Periodic Mode
Antenna Type	Active or Passive *(Note3)*
Antenna Power	External or Internal VCC_RF

Note1: Measured in conductive mode under a GPS signal generator.
Note2: AlwaysLocate™ is an intelligent controller of periodic mode.
Note3: An external LNA is recommended when using passive antenna.

Contact Us

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