Quectel L76
Compact GNSS Modules

EASY™ Technology

Ultra Low Power Consumption

Tiny Size

Super Tracking Sensitivity -165dBm

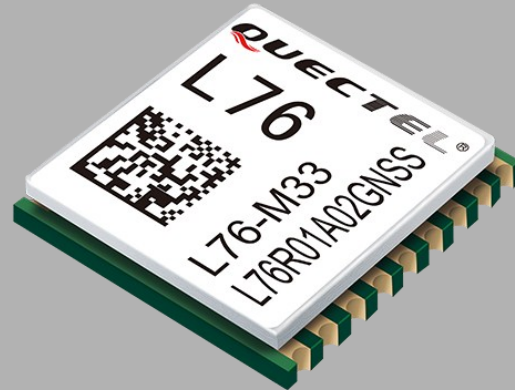**Extended Temperature Range -40°C to +85°C**

Anti-Jamming

RoHS Compliant

Multi-GNSS Systems

L76 series, the smallest GNSS module, is concurrent GNSS receivers and can receive and track multiple GNSS systems. With 33 tracking channels, 99 acquisition channels, and 210 PRN channels, L76 series can acquire and track any mix of GNSS signals. L76 series module contains 3 variants: L76(GPS+GLONASS), L76B(GPS+BeiDou) and L76G(GPS+GLONASS+Galileo)*, which provides enough combination of GNSS to meet the demands of different areas.

Compared with using GPS only, enabling multiple GNSS systems generally increases the number of visible satellites, reduces the time to first fix and increases positioning accuracy, especially when driving in rough urban environments.
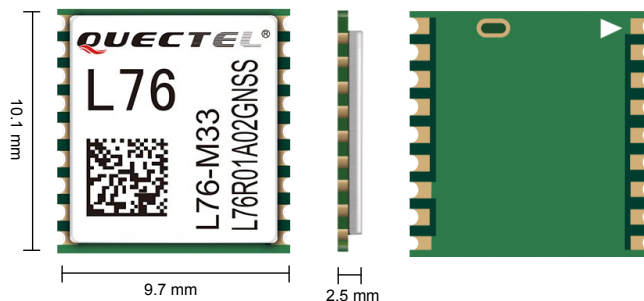
Combining advanced AGPS called EASY™ (Embedded Assist System) and proven AlwaysLocate™ technology, L76 series achieves the highest performance and fully meets the industrial standard. Additional feature of embedded logger function called LOCUS allows L76 series to log position information to internal flash memory at default intervals of 15 seconds and provide typically more than 16 hours log capacity without adding cost.

Its super performance makes L76 series ideal for automotive, industrial PDA, consumer and industry applications. Extremely low power consumption makes it easier to be applied to power sensitive devices, especially portable applications.

* L76G is under development.

Key benefits

- Extremely compact size, 10.1 × 9.7 ×2.5mm
- Multi-GNSS engine for GPS, GLONASS, BeiDou, Galileo and QZSS
- EASY™, advanced AGPS technology without external memory
- Ultra low tracking power consumption,18mA
- Always Locate™, an intelligent algorithm for power saving
- LOCUS, innate logger solution with no need for host and external flash
- High sensitivity, -165dBm@Tracking, -148dBm@Acquisition
- 99 acquisition/33 tracking channels, up to 210PRN channels
- Support DGPS, SBAS(WAAS/EGNOS/MSAS/GAGAN)
- Anti-Jamming, Multi-tone Active Interference Canceller
- Balloon mode, for high altitude up to 80km
- PPS VS. NMEA can be used in time service

QUECTEL®
Build a Smarter World

Quectel L76
Compact GNSS Module

General Specifications

L1 Band Receiver (1575.42MHz)	Channel	33 (Tracking) / 99 (Acquisition) Up to 210(PRN)
	C/A Code	
	SBAS	WAAS, EGNOS MSAS, GAGAN
Horizontal Position Accuracy	Autonomous	<2.5 m CEP
Velocity Accuracy	Without Aid	<0.1m/s
Acceleration Accuracy	Without Aid	0.1m/s²
Timing Accuracy	1PPS Out	10ns
Reacquisition Time		<1s
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	Acquisition	-148dBm
	Tracking	-165dBm
	Reacquisition	-160dBm
Environmental	Operating Temperature	-40 °C to 85 °C
	Storage Temperature	-45 °C to 125 °C
Dynamic Performance	Maximum Altitude	Max.18000m
	Maximum Velocity	Max.515m/s
	Maximum Acceleration	4G
Dimensions	10.1 x 9.7 x 2.5mm	
Weight	Approx. 0.6g	

Power Management

Power Supply	2.8V ~ 4.3V
Power Acquisition	21mA(GPS) 25mA(GPS+GLONASS) 23mA(GPS+BeiDou)
Power Tracking	15mA(GPS) 18mA(GPS+GLONASS) 18mA(GPS+BeiDou)
Power Saving	Typ.2.6mA @AlwaysLocate™(Note1)
	7uA@Backup Mode
	500uA@Standby Mode
	Periodic Mode
Antenna Type	Active or Passive
Antenna Power	External or Internal VCC_RF

Note1: Measured in GPS+GLONASS system under outdoor static mode.

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

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