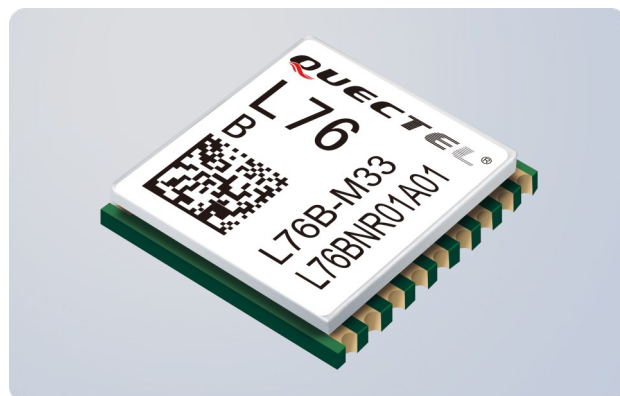


Quectel L76B

Compact GNSS Module Integrated GPS with BeiDou System



L76B, the extremely compact GNSS module, is a concurrent receiver module integrated GPS with BeiDou system. It is pin to pin compatible with Quectel GNSS module L76 and provides simultaneous GPS and BeiDou open service L1 reception capability. With 33 tracking channels, 99 acquisition channels, and 210 PRN channels, L76B can acquire and track any mix of GPS and BeiDou signals.

Compared with using GPS only, enabling both GPS and BeiDou generally doubles 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, L76B achieves the highest performance and fully meets the industrial standard. Additional feature of embedded logger function called LOCUS allows L76B to log position information to internal flash memory at default intervals of 15 seconds and provides typically more than 16 hours log capacity without adding cost.

Its super performance makes L76B 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.



Key Benefits

- ✓ Extremely compact size, 10.1mm × 9.7mm × 2.5mm
- ✓ Multi-GNSS engine for GPS, BeiDou and QZSS
- ✓ EASY™, self-generated orbit prediction for instant positioning fix
- ✓ AGPS supports for fast TTFF
- ✓ Ultra low tracking power consumption, 18mA
- ✓ AlwaysLocate™, an intelligent algorithm for power saving
- ✓ LOCUS, an embedded logger solution with no need for host and external flash
- ✓ High sensitivity, -163dBm @Tracking, -148dBm @Acquisition
- ✓ 99 acquisition/33 tracking channels and 210 PRN channels
- ✓ Support DGPS, SBAS (WAAS/ EGNOS/ MSAS/ GAGAN)
- ✓ Anti-Jamming, Multi-tone Active Interference Canceller



EASY™ Technology



Ultra Low Power Consumption



Extremely Compact Size



Super Tracking Sensitivity:
-163dBm



Extended Temperature Range: -40°C ~ +85°C



Anti-jamming



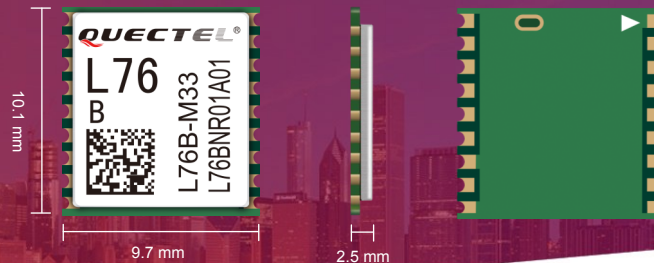
RoHS Compliant



GPS+BeiDou+QZSS

Quectel L76B

Compact GNSS Module
Integrated GPS with
BeiDou System



GNSS Features

GPS L1 Band Receiver (1575.42MHz)/
BD2 B1 Band Receiver (1561.098MHz):
Channel: 33 (Tracking)/ 99 (Acquisition)/
210 (PRN)
C/A Code
SBAS: WAAS, EGNOS, MSAS, GAGAN
Horizontal Position Accuracy:
Autonomous: <2.5m 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: -163dBm
Reacquisition: -160dBm
Dynamic Performance:
Maximum Altitude: Max. 18000m
Maximum Velocity: Max. 515m/s
Maximum Acceleration: 4G

Interfaces

Serial Interfaces:
UART: Adjustable 4800bps~115200bps
Default: 9600bps
Update Rate:
1Hz (Default), up to 10Hz
I/O Voltage:
2.7V~2.9V
Protocols:
NMEA 0183
PMTK

General Features

Extended Temperature:
-40°C ~ +85°C
Dimensions:
10.1mm × 9.7mm × 2.5mm
Weight:
Approx. 0.5g

Power Management

Power Supply:
2.8V~4.3V
Power Acquisition:
23mA (GPS+BeiDou)
21mA (GPS)
Power Tracking:
18mA (GPS+BeiDou)
15mA (GPS)

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+BeiDou System under
Outdoor Static Mode.