

Quectel L20

Compact GPS Module With Super Sensitivity



Super Tracking
Sensitivity -163dBm



CGEE Solution



Low Power
Consumption



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



High Accuracy



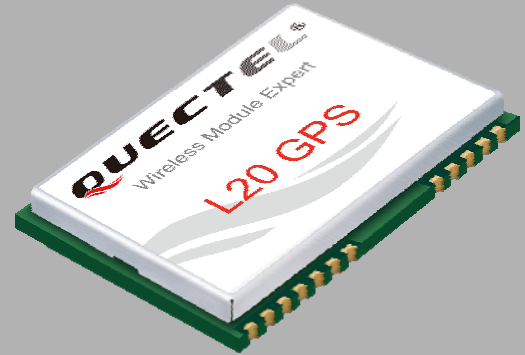
Anti-Jamming



LCC Type



RoHS Compliant



L20, a GPS receiver module, which is based on the latest SIRF-starIV ROM version 2.2, features extremely compact profile of 16.0 x 12.2 x 2.4mm and low current consumption of only 36 mA during tracking. Highest sensitivity down to -163dBm for tracking satellites along with lowest Time-To-First-Fix fulfill the toughest requirements.

L20 supports aided-GPS function without the necessity of downloading data from server since it automatically captures ephemeris data from satellites locally and predicts ephemeris over 3 days without server assistance.

With embedded active jammer remover, L20 can track and remove up to 8CW (Carrier Wave) type signals up to 80dB-HZ signal level. This feature ensures fast and accurate navigation in hostile signal or high noise environment.

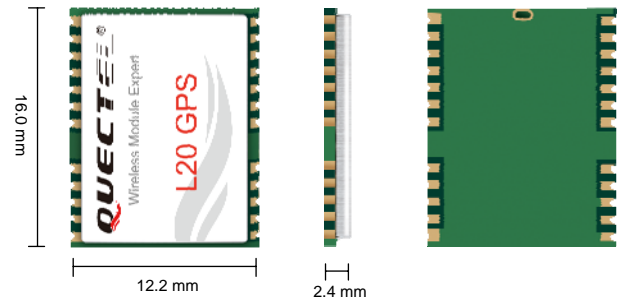
Its high sensitivity, lower power consumption and 48-PRN channels make L20 the best choice for portable device such as vehicle tracking, personal tracking, asset tracking, connected PND and security device.

Key benefits

- ☞ Hardware Baud Rate Configuration
- ☞ 5Hz Navigation Update Rate
- ☞ 1SV Fast Time Setting
- ☞ High Tracking Sensitivity, -163dBm
- ☞ High Acquisition Sensitivity, -148dBm
- ☞ Power Saving Mode
- ☞ Self-Assisted CGEE Function
- ☞ SBAS (WAAS, EGNOS and QZSS)
- ☞ Low Power Consumption
 - Acquisition: 39mA@ -130dBm
 - Tracking: 36mA@ -130dBm

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General Specifications

L1 Band Receiver (1575.42MHz)	Channel Number	48 Channels
	C/A Code	
	SBAS	WAAS, EGNOS, QZSS
Horizontal Position Accuracy	Autonomous	<2.5m CEP
	SBAS	<2.0m CEP
Velocity Accuracy	Without Aid	< 0.01m/s
Acceleration Accuracy	Without Aid	0.1m/s ²
Timing Accuracy		<500ns
Reacquisition Time		<1s
TTF (Time to First Fix)	Cold Start	<35s
	Warm Start	<35s
	Warm Start with CGEE	10s typ.
	Hot Start	<1s
Sensitivity	Autonomous Acquisition	-148dBm
	Tracking	-163dBm
	Reacquisition	-160dBm
Environmental	Operating Temperature	-40°C to 85°C
	Storage Temperature	-45°C to 125°C
Dynamic Performance	Maximum Altitude	18288m
	Maximum Velocity	514m/s
	Maximum Acceleration	4G
Dimensions	16.0 x 12.2 x 2.4mm	
Weight	Approx. 1.0g	
Active Jammer Remover	Removes in-band jammers up to 80dB-Hz Tracks up to 8CW jammers	

Electrical Data

Power Supply	2.0V ~ 3.6V
Power Acquisition	39mA (Passive Antenna)
Power Tracking	36mA (Passive Antenna)
Power Saving	ATP, PTF, (Note1)
Antenna Type	Passive and Active
Antenna Power	External or Internal VCC_RF

Note1: Both of ATP (Adaptive Trickle Power) and PTF (Push To Fix) are power saving modes of L20. For more details, please refer to L20 Hardware Design.

Serial Interfaces

One UART	Adjustable: Baud rate configured by Hardware Default: 4800bps
Update rate	1Hz (default), up to 5Hz
I/O Voltage	2.0V ~ 3.6V
Protocols	NMEA OSP