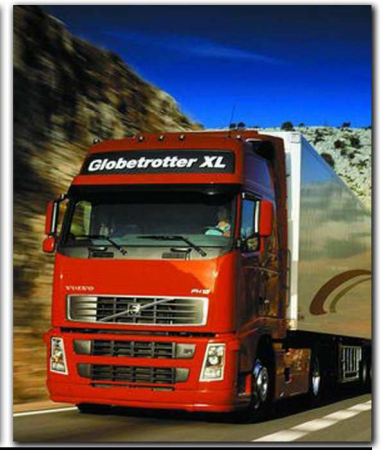




**EN:** This Datasheet is presented by the manufacturer.

Please visit our website for pricing and availability at [www.hestore.hu](http://www.hestore.hu).



# QUECTEL

Wireless Module Expert

## L50

### Slim GPS Module Integrated Patch Antenna



Embedded  
Patch Antenna



Self-Assisted CGEE



Low Power  
Consumption



Super Sensitivity



High Accuracy



Extended  
Temperature Range



Anti-Jamming



SMD Type



RoHS Compliant

L50 is an ultra slim module with embedded  $15 \times 15 \times 2.0\text{mm}$  patch antenna. It is built upon the SiRFstarIV™ chip solution which offers high performance GPS engine. Alongside highest reliability and quality of patch antenna, L50 also offers 48 PRN channels, which allows the module to acquire and track satellites in the shortest time, even at a very low signal level. L50 is also compatible with  $18 \times 18 \times 2.0\text{mm}$  patch antenna. Its highly compact design with minimal patch antenna perfectly suits portable devices, asset tracking, connected PND, security devices, vehicle management and other industry applications.

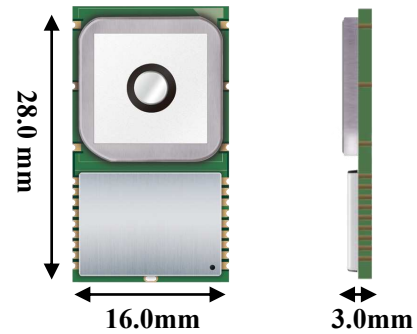
L50 supports A-GPS function without the necessity of data download from server since it captures ephemeris data from satellites locally and predicts ephemeris out to 3 days.

#### Advantages

- Embedded patch antenna
  - Default size  $15 \times 15 \times 2.0\text{mm}$
  - Alternative size  $18 \times 18 \times 2.0\text{mm}$
- Self-Assisted CGEE: Out to 3 days of prediction
- Extremely low power mode: Hibernate mode,  $36\mu\text{W}@1.8\text{V}$
- Low tracking power consumption:  $38\text{mA} @ -130\text{dBm}$
- Super sensitivity
  - Highest acquisition sensitivity:  $-148\text{dBm}$
  - Highest tracking sensitivity:  $-163\text{dBm}$
- 48 PRN channels
- Ultra slim form factor:  $28 \times 16 \times 3.0\text{mm}$ (with patch antenna)
- Active Jammer Remover
  - Removes in-band jammers up to  $80\text{ dB-Hz}$
  - Tracks up to 8 CW jammers

# L50

## Slim GPS Module Integrated Patch Antenna



### General Specifications

<b>L1 Band Receiver</b> (1575.42MHz)	Channel	48 channels
	C/A code	
	SBAS	WAAS, EGNOS
<b>Horizontal Position Accuracy</b>	Autonomous	<2.5 m CEP
	SBAS	<2.0 m CEP
<b>Velocity Accuracy</b>	Without aid	<0.01 m/s
<b>Acceleration Accuracy</b>	Without aid	0.1 m/s <sup>2</sup>
<b>Timing Accuracy</b>		<100 ns
<b>Reacquisition Time</b>		<1 s
<b>TTFF</b> (Time To First Fix)	Cold Start	<33s
	Warm Start	<33s
	Warm Start with CGEE	10s
	Hot Start	<1s
<b>Sensitivity *</b>	Acquisition	-148dBm
	Hot Start	-160dBm
	Tracking	-163dBm
	Navigation	-160dBm
<b>Patch Antenna Performance</b>	Range Of Receiving Frequency	1575.42MHz ±1.023MHz
	Band Width	10MHz min
	Gain at Zenith	1.0dBic typ.
	VSWR	1.5 max
	Axial Ratio	-3dB max
	Polarization	RHCP
	Impedence	50 Ohm
	Frequency Temperature Coefficient	0±20ppm/°C
	Operating Temperature	-40°C to 85°C
	Storage Temperature	-45°C to 125°C

\* Measured in conducted method by 8-star GPS simulator

<b>Dynamic Performance</b>	Maximum Altitude	18288 m
	Maximum Velocity	514m/s
	Maximum Acceleration	4 G
<b>Dimensions</b>	28 × 16 × 3.0mm	
<b>Weight</b>	Approx. 4.0g	

### Serial Interfaces

<b>One Multiplexed Interface</b>	UART: Adjustable 1200~115200 bps Default: 4800bps
	IIC (master/slave): Up to 400 Kbps
<b>I/O Voltage</b>	1.71V ~ 1.89V
<b>Protocols</b>	NMEA
	OSP

### Power Management

<b>Power supply</b>	1.71V ~ 1.89V
<b>Power Acquisition</b>	48mA @-130dBm
<b>Power Tracking</b>	38mA @-130dBm
<b>Power Saving</b>	ATP, PTF, Hibernate

### Contact Us

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