
QUECTEL

*Wireless Module Expert*

# *L16*

## *GNSS Module*
## *GLONASS/GPS/Galileo/QZSS*

GLONASS /GPS /Galileo /QZSS

ST-AGPS①

32+2

32 Tracking Channels
2 Fast Acquisition Channels

High Sensitivity

Highest Accuracy

Extended
Temperature Range

Anti-Jamming

RoHS Compliant

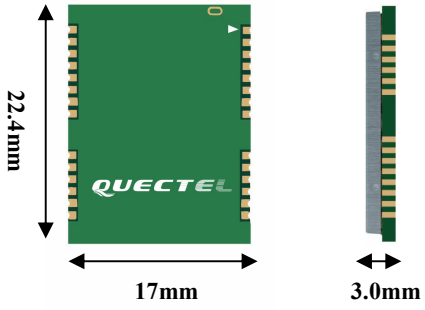
Based on the STMicroelectronics Teseo II positioning engine, L16 is a single GNSS receiver module integrated with GLONASS,GPS, Galileo and QZSS system. It accomplishes simultaneous GNSS open service L1 reception. With 32 tracking channels and 2 fast acquisition channels, L16 can acquire and track any mix of GNSS signals. Compared with using GPS only, enabling both GPS and GLONASS generally doubles the number of visible satellites, reduces the time to first fix and increases positioning accuracy, especially when driving in rough urban environments. Its super performance is perfectly suitable for automotive, consumer and other industrial applications.

## Advantages

- STMicroelectronics TeseoII single chip solution
- Simultaneously use GNSS system
- 32 tracking channels and 2 fast acquisition channels
- Highly dynamic indoor sensitivity of -162dBm in tracking mode ②
- Higher autonomous sensitivity of - 148dBm in acquisition mode
- Full ESD protection on all pins
- High performance ARM946 MCU (up to 208MHz)
- In-Package SQI 16Mbits Flash Memory
- Superior performance even in the toughest urban environments
- Up to 5Hz update rate
- Support self Trained Assisted-GPS up to 5 days
- Support DGPS: SBAS (WAAS, EGNOS,MSAS)
- Support Anti-jamming for GPS and GLONASS

# L16

## GNSS module
## GLONASS/GPS/Galileo/QZSS




## General Specifications

| | | |
|---|---|---|
| **L1 Band Receiver C/A Code** | Channel | 32 Track<br>2 Fast Acq. |
| | SBAS | WAAS, MSAS EGNOS |
| **Position Accuracy** | Autonomous | 1.5 m CEP |
| **Timing Accuracy** | 1PPS | 〈15ns |
| **Reacquisition Time** | | 〈2.5 s |
| **TTFF with AGPS @Open Sky** | Cold Start | 〈30s |
| | Warm Start | 〈5s |
| | Hot Start | 〈2.5s |
| **TTFF without AGPS @Open Sky** | Cold Start | 〈35s |
| | Warm Start | 〈24s |
| | Hot Start | 〈2.5s |
| **Sensitivity** | Cold start | -146dBm |
| | Hot start | -160dBm |
| | Tracking | -162dBm |
| | Reacquisition | -148dBm |
| **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** | 22.4 × 17.0 × 3.0 mm | |
| **Weight** | Approx. 2.2 g | |

## Serial Interfaces

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|---|---|
| **UART Interface** | Adjustable 4800~115200 bps<br>9600bps by default |
| **Update rate** | 1Hz by default, 5Hz Max |
| **I/O Voltage** | 3.3V |
| **Protocols** | NMEA 0183 Ver3.1 |

## Power Management

| | |
|---|---|
| **Power supply** | 3.0V ~ 3.6V |
| **Power Acquisition** ③ | 120mA @ Passive antenna |
| **Power Tracking** | 85mA @ Passive antenna |
| **Power Saving** | 75uA @ Backup mode |
| **Antenna Type** | Passive or Active |
| **Antenna Power** | External or Internal VCC_RF |

① ST-AGPS only supports GPS system now
② Measured at the lowest level which the GPS receiver can track at least one satellite
③ Measured in GPS+GLONASS mode under open sky

## Contact Us


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