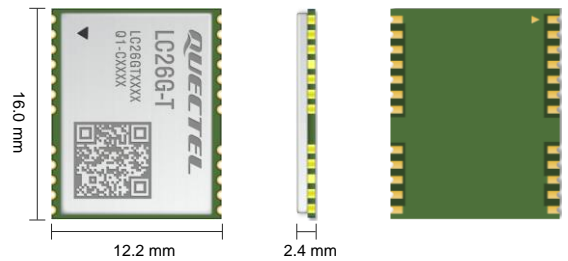


# Quectel LC26G-T (AA)

## Compact Multi-constellation GNSS Module



LC26G-T (AA) is a compact, single-band multi-constellation module featuring high precision timing and standard precision positioning. For high-precision timing applications, the module can synchronize with the Coordinated Universal Time (UTC) at a nanosecond resolution. This outstanding timing performance is crucial to a variety of applications demanding high accuracy and stability time.

LC26G-T (AA) integrated LNA provides high sensitivity, fast tracking, and signal acquisition, and ensures improved performance even in challenging environments. In contrast to single constellation GPS-only receivers, LC26G-T (AA) multi-constellation GNSS receiver can access a vast number of visible satellites and thus improve positioning and timing accuracy even in dense urban canyons.

LC26G-T (AA) includes timing integrity measures with Receiver Autonomous Integrity Monitoring (RAIM) and continuous phase uncertainty estimation, and features high dynamic range radios with both analog and digital interference mitigation.

It also leverages AGNSS data, resulting in a significantly reduced Time to First Fix (TTFF). The AGNSS feature enables high sensitivity acquisition even on the module's first start-up, when precise location, time, and frequency are still unknown.

The enhanced performance of the LC26G-T (AA) makes it ideal for base station timing applications including the new 5G ORAN demand and industrial applications like power monitoring. The module can also be used as reference clock in many time critical applications.



## Key Features

- ✓ Multi-GNSS engine for GPS, GLONASS, Galileo, BDS and QZSS, ensuring fast and accurate fix in any environment
- ✓ High precision timing function
- ✓ Industry-leading sensitivity: -165 dBm during tracking and -148 dBm during acquisition
- ✓ Improved sensitivity through integrated LNA
- ✓ Embedded multi-tone active interference canceller for anti-jamming
- ✓ UART and I2C Interfaces



AGNSS Technology



Ultra Low Power Consumption



Compact Size



Tracking Sensitivity: -165 dBm



Operating Temperature Range: -40 to +85 °C



Anti-jamming



RoHS Compliant



Multi-constellation System

# Quectel LC26G-T (AA)

GNSS Module	LC26G-T (AA)
Dimensions	12.2 mm × 16.0 mm × 2.4 mm
Weight	Approx. 0.85 g
Temperature Range	
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +90 °C
GNSS Features	
Supported Bands	GPS L1 C/A: 1575.42 MHz GLONASS L1: 1598.0625–1605.375 MHz Galileo E1: 1575.42 MHz BDS B1I: 1561.098 MHz; B1C: 1575.42 MHz QZSS L1 C/A: 1575.42 MHz
Default Constellations	GPS + GLONASS + Galileo + BDS + QZSS
Number of Tracking Channels	47
Number of Concurrent GNSS	4 + QZSS
SBAS	WAAS, EGNOS, MSAS and GAGAN
Horizontal Position Accuracy <sup>①</sup>	Autonomous: 1.5 m
Velocity Accuracy <sup>②</sup>	Without Aid: 0.1 m/s
Acceleration Accuracy <sup>②</sup>	Without Aid: 0.1 m/s <sup>2</sup>
Timing Accuracy <sup>②</sup>	1PPS: ≤ 16 (± 8) ns @ 1σ
1PPS Jitter <sup>②</sup>	± 5 ns
TTFF (with EASY) <sup>③</sup>	Cold Start: 15 s Warm Start: 2 s Hot Start: 1 s
TTFF (with EPO) <sup>③</sup>	Cold Start: 5 s
TTFF (without AGNSS) <sup>②</sup>	Cold Start: 28 s Warm Start: 25 s Hot Start: 1 s
Sensitivity (@ Default Constellations) <sup>④</sup>	Acquisition: -148 dBm Tracking: -165 dBm Reacquisition: -160 dBm
Dynamic Performance <sup>②</sup>	Maximum Altitude: 10000 m Maximum Velocity: 490 m/s Maximum Acceleration: 4g
Certifications	
Regulatory	Europe: CE*
Others	RoHS
Interfaces	
I2C	Up to 400 kbps
UART	Adjustable: 9600–921600 bps Default: 115200 bps Update Rate: 1 Hz
Protocol	NMEA 0183
External Antenna Interface	
Antenna Type	Active or Passive
Antenna Power Supply	External or Internal (through VDD_RF)
Electrical Characteristics	
Supply Voltage Range	1.75–1.98 V, typ. 1.8 V
I/O Voltage	Same as VCC
Power Consumption (@ 1.8 V, Default Constellations) <sup>②</sup>	<b>Normal Operation:</b> 36 mA (64.8 mW) @ Acquisition 36 mA (64.8 mW) @ Tracking <b>Power Saving Modes:</b> 3.8 mA (6.84 mW) @ Standby Mode 13 μA (23.4 μW) @ Backup Mode

## NOTE:

- <sup>①</sup>: CEP, 50 %, 24 hours static, -130 dBm, more than 6 SVs.
- <sup>②</sup>: Room temperature, all satellites at -130 dBm.
- <sup>③</sup>: Open-sky, active high-precision GNSS antenna.
- <sup>④</sup>: Tested with an external LNA with 17.0 dB gain and 0.55 dB noise figure.
- \*: In progress.