

Tersus MX206

High-precision GNSS module

17 × 22 × 2.7 mm



Product Description

The MX206 module redefines mass-market high-precision positioning standards with its exceptional performance and configuration. It features a compact, low-power design, supports all constellations and frequencies, and integrates algorithms like RTK and PPP for applications in precision agriculture, surveying, UAVs, and robotics. With 1040 channels, it can simultaneously process all signals and is compatible with Tersus' TAP service. In network-lacking environments (e.g., oceans, deserts), it achieves centimeter-level accuracy by receiving L-band satellite ephemerides and corrections, independent of RTK base stations or CORS.

Its advanced processor includes a dual-precision FPU and supports a 20Hz data rate for high-dynamic scenarios. The system allows parallel RTK/PPP operation for enhanced reliability and availability. The module uses a mainstream 17mm × 22mm LGA package, offers abundant interfaces, and supports various external differential data services, greatly simplifying integration and accelerating product time-to-market.

Key Features

- **All-Constellation All-Band**
 - GPS: L1C/A, L2C, L5
 - GLONASS: G1, G2
 - BeiDou: B1I, B2I, B3I, B1C, B2a, B2b
 - Galileo: E1, E5a, E5b, E6
 - QZSS: L1C/A, L1C, L2C, L5
 - SBAS: L1
 - IRNSS: L5
 - L-Band
- Supports the global TAP satellite-based augmentation service.
- Built-in NIC professional-grade narrow-band anti-interference unit, providing significant suppression against single-tone and narrow-band interference.
- Supports 20Hz RTK update rate and raw data output.
- Supports the simultaneous operation of RTK and PPP, with intelligent complementary switching.
- Mainstream size and packaging, easy to integrate and promote.

The GNSS Expert
Right to the Point

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Performance

Signal Type	
GPS: L1C/A, L1C, L2C, L5	
GLONASS: G1, G2	
BeiDou: B1I, B2I, B3I, B1C, B2a, B2b	
Galileo: E1, E5a, E5b, E6	
QZSS: L1C/A, L1C, L2C, L5	
SBAS: L1	
IRNSS: L5	
L-Band	
Channels	1040
Accuracy (Single)	
- Horizontal	1.5m
- Vertical	2.5m
Accuracy (DGPS)	
- Horizontal	0.4m
- Vertical	0.8m
Accuracy (RTK)	
- Horizontal	7mm+1ppm
- Vertical	15mm+1ppm
Accuracy (TAP)	
- Horizontal	15mm
- Vertical	30mm
TAP	
- Convergence Time	3 min
- Coverage Area	global
- Signal Stability	99.99%
Observation Accuracy	
- Pseudorange	10cm
- Carrier	1mm
TTFB	
- Cold Start	<30s
- Hot Start	<2s
Reacquisition	<1s
Timing Accuracy	10ns
Velocity Accuracy	0.03m/s
Initial Time (Typical)	4s
Initial Reliability	>99.99%
Sensitivity	
- Acquisition	-145dBm
- Tracking	-160dBm
INS	
- DR Accuracy	0.2%
- Calculation Delay	≤5ms

Data

Correction Data Format	RTCM3.3
Output Format	NMEA-0183, Tersus
Update Rate	20Hz

Interface

PPS Output	×2
Event Input	×1
CAN	×2
SPI Slave	×1
SPI Master	×1
I2C	×1
UART	×3

Physical Characteristics

Size (mm)	17×22×2.7
Package	LGA 54Pin
Grade	Industrial

Electrical Characteristics

Input Voltage	+3.3V DC
Power Consumption	350mW

Environmental Parameter

Operating Temperature	-40℃~+85℃
Storage Temperature	-55℃~+125℃

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Information is subject to change without notice.

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