

TAU1312

Multi-Band Multi-System RTK Positioning Module

Professional

PRODUCT DESCRIPTION

TAU1312 is a high-performance dual-band RTK positioning module, which is based on the state of art CYNOSURE III architecture. It supports BDS-3 (BeiDou Navigation Satellite System 3). Besides, it is capable of tracking BDS, GPS, GLONASS, Galileo, QZSS, and SBAS, etc.

TAU1312 integrates efficient power management architecture, while providing high precision, high sensitivity and low power GNSS solutions which make it suitable for navigation applications on smart driving, unmanned aerial vehicle(UAV) and precision agriculture.



12.2* 16.0* 2.4mm

HIGHLIGHTS

- Supports BDS, GPS, GLONASS, Galileo, QZSS, and SBAS
- Compact size for high precision industry
- Integrated Real Time Kinematics (RTK)
- State-of-art low power consumption
- Supports multi-band multi-system high-precision raw data output, easy for 3rd party integration
- Highly integrated module, the best cost-effective high precision GNSS solution

APPLICATIONS



Surveying and Mapping



UAV



Precision Agriculture



Smart Driving

Product Linecard:

Product	GNSS							Features							Interfaces				Accuracy			Grade		
	Multi-band	GPS	BDS	GLONASS	Galileo	QZSS	IRNSS	Build-in LNA	Data Logging	D-GNSS	Raw Data	RTK Base	RTK Rover	Heading	USB	UART	I ² C	SPI	Meter	Sub-Meter	Centi-Meter	Standard	Professional	Automotive
TAU1312	D	•	•	•	•	•			•	•	•	•	•		•	•	•	•			•		•	

GENERAL SPECIFICATIONS

GNSS Reception

Two types of RF mode are supported:
 Option A: L1+L5, GPS+BDS+Galileo
 Option B: L1+L2, GPS+BDS+GLONASS

GNSS Engine

Cynosure III GNSS Engine
 10Hz maximum update rate

Position Accuracy

GNSS	2.5m CEP
SBAS	2.0m CEP
D-GNSS	<1.0m CEP
RTK	0.015m+1ppm(H)
	0.065m+1ppm(V)

Time to First Fix(TTFF)

Hot start	1s
Cold start	24s
RTK convergence	<10s

Sensitivity

Cold Start	-148dBm
Hot Start	-158dBm
Reacquisition	-160dBm
Tracking& Navigation	-162dBm

Velocity & Time Accuracy

GNSS	0.1m/s CEP
1PPS	20ns

Interfaces

USB	1
UART	1
SPI	1
I ² C	1

Antenna

Active antenna

Operating Condition

Main voltage	1.8 ~ 3.6V
Digital I/O voltage	1.8 ~ 3.6V
Backup voltage	1.8 ~ 3.6V

Operation Limit

Velocity	515 m/s
Altitude	18,000 m

Safety Supervision

Antenna short circuit detection and protection
 Antenna open circuit detection
 Low voltage detection

Power Consumption

Operating	GPS+QZSS	L1: 22mA@3.3V
	GNSS	L1+L5: 34mA@3.3V
	GNSS	L1+L2: 34mA@3.3V
Standby	12uA	

ENVIRONMENT DATA

Operation temperature	-40°C ~ +85° C
Storage temperature	-40°C ~ +85° C
Certification	RoHS & REACH

PACKAGE

Packaging	24 PIN LCC
Dimensions	12.2*16.0*2.4mm

