

TAU1302

Multi-Band GNSS Raw Data Module

Industrial

PRODUCT DESCRIPTION

TAU1302 is a high-performance dual-band GNSS raw data module, which is based on the state of the art CYNOSURE III SoC architecture. It supports GPS, BeiDou, GLONASS, Galileo, and QZSS.

TAU1302 integrates efficient power management architecture, while providing high precision, high sensitivity and low power GNSS solutions which make it suitable for high precision industries, like precision agriculture, surveying and mapping, deformation monitoring, Unmanned Aerial Vehicle (UAV), etc.



16.0*12.2*2.4 mm

HIGHLIGHTS

- Compact size for high precision industry
- Concurrent reception of multi-band GNSS signals by two RF settings:
 - Option A: L1&L5;
 - Option B: L1&L2;
- 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

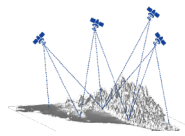
APPLICATIONS



Precision Agriculture



UAV



Deformation Monitoring



Surveying and Mapping

Product selector:

Product	GNSS							Feature					Interface				Accuracy			Grade		
	Band (S/D/T)	GPS	BDS	GLONASS	Galileo	NavIC	QZSS	Built-in LNA	Programmable(Flash)	Data Logging	D-GNSS	Oscillator	Raw Data	UART	I2C	USB	SPI	Meter	Sub-meter	Centimeter	Industrial	Automotive
TAU1302	D	•	•	•	•		•		•	•	•	T	•	•	○	○	○			•	•	

T = TCXO

○ = Supported upon request with special firmware

GENERAL SPECIFICATIONS

GNSS Reception

P/N	GNSS mode	GPS/QZSS					BDS					GLONASS		Galileo			NavIC
		L1C/A	L1C	L2C	L5	L6	B1I	B1C	B2I	B2a	B3I	G1	G2	E1	E5	E6	L5
TAU1302	A (L1+L5) ^[1]	•	-	-	•	-	•	-	-	•	-	•	-	•	• ^[2]	-	-
	B (L1+L2)	•	-	• ^[3]	-	-	•	-	•	-	-	•	•	•	-	-	-

* [1]: Default mode. Mode B is supported through upgrading new firmware.

* [2]: Supports E5a and pilot channel only

* [3]: Supports L2CM

GNSS Engine

Cynosure III GNSS Engine
40 GNSS tracking channels
5 Hz maximum update rate

Position Accuracy

GNSS 1m CEP

Time to First Fix (TTFF)

Hot start 1s
Cold start 24s

Sensitivity

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

Velocity & Time Accuracy

GNSS 0.1 m/s CEP
1PPS 20 ns

Interfaces

UART 1
USB^[4] 1
SPI^[4] 1
I2C^[4] 1

*[4]: Supported upon request with special firmware

Antenna

Active antenna

Operation Limit

Velocity 515 m/s
Altitude 18,000m

Operating Condition

Main voltage 2.0-3.6 V
Digital I/O voltage 1.8-3.6 V
Backup voltage 1.8-3.6 V

Antenna Supervision

Antenna short circuit protection and open circuit detection

Power Consumption

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

ENVIRONMENT DATA

Operation temperature -40°C to +85°C
Storage temperature -40°C to +85°C
Certification RoHS, REACH, FCC, CE-RED

PACKAGE

Package 24 PIN LCC
Dimensions 16.0*12.2*2.4 mm

