

TAU1302/TAU1303

Multi-Band GNSS Positioning Module

Professional

PRODUCT DESCRIPTION

TAU1302/TAU1303 is a high-performance dual-band GNSS positioning module, which is based on the state of art CYNOSURE III architecture. It supports GPS, BeiDou, GLONASS, Galileo, QZSS, and IRNSS.

TAU1302/TAU1303 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, UAV(Unmanned Aerial Vehicle), etc.



(TAU1302: 16.0 x12.2 x2.4mm)



(TAU1303: 7.6 x7.6 x1.8mm)

HIGHLIGHTS

- Compact size for high precision industry
- Concurrent reception of multi-band GNSS signals by three RF settings:
 - Option A: L1 & L5;
 - Option B: L1 & L2;
 - Option C: L1 & L6;
- 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

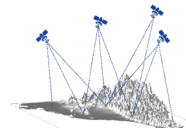
APPLICATIONS



Precision Agriculture



UAV



Deformation Monitoring



Surveying and Mapping

Product selector:

Model	GNSS						Features						Interfaces				Accuracy			Grade				
	Band (S/D/T)	GPS	BDS	GLONASS	Galileo	QZSS	IRNSS	Build-in LNA	Data Logging	D-GNSS	Programmable(Flash)	Raw Data	RTK Rover	Heading	USB	UART	I2C	SPI	Meter	Sub-Meter	Centi-Meter	Standard	Professional	Automotive
TAU1302	D	•	•	•	•	•	• [1]		•	•	•	•		•	•	•	•				•	•	•	
TAU1303	D	•	•	•	•	•	• [1]		•	•	•	•		•	•	•	•				•	•	•	

* [1] Supported by specific firmware upgrade

GENERAL SPECIFICATIONS

GNSS Reception

P/N	RF mode	GPS/QZSS					BDS					GLONASS		Galileo			IRNSS
		L1C/A	L1C	L2C	L5	L6	B1I	B1C	B2I	B2a	B3I	L1	L2	E1	E5	E6	L5
TAU1302/TAU1303	A (L1+L5)	•	• ^[4]	-	•	-	•	• ^[4]	-	•	-	•	-	•	• ^[2]	-	• ^[4]
	B (L1+L2)	•	• ^[4]	• ^[3]	-	-	•	• ^[4]	•	-	-	•	•	•	-	-	-
	C (L1+L6)	•	• ^[4]	-	-	•	•	• ^[4]	-	-	•	•	-	•	-	-	-

*[2] Supports E5a and pilot channel only

*[3] Supports L2CM

*[4] Supported by specific firmware upgrade

GNSS Engine

Cynosure III GNSS Engine
40 GNSS tracking channels
10Hz maximum update rate

Position Accuracy

GNSS <1m CEP @-130dBm

Time to First Fix(TTFF)

Hot start 1s
Cold start 24s

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
I2C 1

Antenna

Active antenna

Operation Limit

Velocity 515 m/s
Altitude 18,000 m

Operating Condition

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

Safety Supervision

Antenna short circuit detection and protection
Antenna open circuit detection

Power Consumption

Operating	GPS+QZSS	L1: 22mA@3.3V
	GNSS	L1+L5: 34mA@3.3V
	GNSS	L1+L2: 34mA@3.3V
	GNSS	L1+L6: 34mA@3.3V
Standby	12uA	

ENVIRONMENT DATA

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

PACKAGE

TAU1302	Packaging: 24 PIN LCC
	Dimensions: 16.0 x 12.2 x 2.4mm
TAU1303	Packaging: 22 PIN LCC
	Dimensions: 7.6 x 7.6 x 1.8mm



Website: www.allystar.com

Email: info.gnss@allystar.com

Headquarters: 5F, Building No. 4, Winlead Intelligent Park, No.3, FaDa road(middle), Bantian Subdistrict, LongGang District, Shenzhen City, Guangdong Province, China.
Calgary office: Unit 288, 3553 31 Street NW Calgary, Alberta, Canada T2L 2K7

This document contains proprietary technical information which is the property of ALLYSTAR Technology, copying of this document and giving it to others and using or communication of the contents thereof, are forbidden without express authority. Offenders are liable to the payment of damages. ALLYSTAR Technology reserves the right to make changes in its products, specifications and other information at any time without notice. For more documents, please visit www.allystar.com.