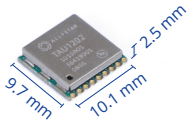
TAU1202

Multi-band Standard Precision GNSS Positioning Module

Industrial

PRODUCT DESCRIPTION

TAU1202 is a high-performance dual-frequency GNSS positioning module, which is based on the state of the art CYNOSURE III architecture. It supports GPS, BeiDou, GLONASS, Galileo, NavIC, QZSS and SBAS (WAAS, EGNOS, GAGAN and MSAS).



TAU1202 integrates efficient power management architecture, while providing high precision, high sensitivity and low power GNSS solutions which make it suitable for navigation applications on automotive and consumer electronics, as well as fleet management.

HIGHLIGHTS

- Supports all civil GNSS systems
- Supports BDS-3 signal: B2a
- Concurrent reception of L1 and L5 band signals
- Sub-meter position accuracy, superior in multipath mitigation and lower noise in city valley
- Smart jammer detection and suppression
- Highly integrated module, the best cost-effective high precision solution
- Supports single NavIC mode

APPLICATIONS


Automotive Navigation


Smart Rearview Mirror


Lane-level Navigation


Asset Tracking

Product Selector

Product Model	GNSS									Feature					Interface				Accuracy			Grade	
	GNSS system mode	Band (S/D/T)	GPS	BDS	GLONASS	Galileo	NavIC	QZSS	SBAS	Built-in LNA	Programmable (flash)	Data logging	D-GNSS	Oscillator	UART	I2C	USB	SPI	Meter	Sub-meter	Centimeter	Industrial	Automotive
TAU1202	01	D	•	•	•	•		•	•	•	•	•	•	T	•	○				•		•	
	02	D	•	•		•	•	•	•	•	•	•	•	T	•	○				•		•	

T = TCXO ○ = Supported upon request with special firmware

GENERAL SPECIFICATIONS

GNSS Reception

GNSS system mode	GPS/QZSS					BDS					GLONASS		Galileo			NavIC
	L1C/A	L1C	L2C	L5C	L6	B1I	B1C	B2I	B2a	B3I	G1	G2	E1	E5a	E6	L5
01	•	-	-	•	-	•	-	-	•	-	•	-	•	•	-	-
02	•	-	-	•	-	•	-	-	•	-	-	-	•	•	-	•

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	-155 dBm
Reacquisition	-158 dBm
Tracking & Navigation	-161 dBm

Velocity & Time Accuracy

GNSS	0.1 m/s CEP
1PPS	20 ns

Interfaces

UART	1
I2C*	1
CAN*	1

*: Supported upon request with special firmware

Antenna

Active antenna
Passive antenna

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

Operating Limit

Velocity	515 m/s
Altitude	18,000m

Antenna Supervision

Antenna short circuit protection and open circuit detection

Power Consumption

Operating	GPS/QZSS, L1:	22 mA @ 3.3V
	GNSS, L1+L5:	41 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	18 PIN LCC
Dimensions	10.1*9.7*2.5 mm

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