

# TAU1202/TAU1205

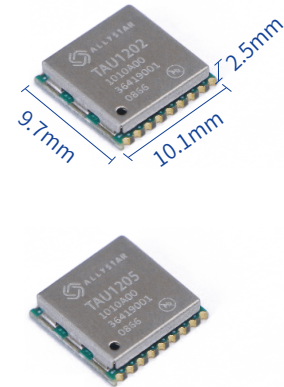
Multi-Band Multi-System GNSS Positioning Module

Standard

## PRODUCT DESCRIPTION

TAU1202/TAU1205 is a high-performance dual-band GNSS 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 all global civil navigation systems (BDS, GPS, GLONASS, Galileo, IRNSS, QZSS and SBAS).

TAU1202/TAU1205 integrates efficient power management architecture, while providing high precision, high sensitivity and low power GNSS solutions which make it suitable for automotive navigation applications on automotive and consumer electronics, as well as fleet management.



## HIGHLIGHTS

- Supports all civil GNSS systems
- Supports BDS-3 signal: B1C and B2a
- Concurrent reception of L1 and L5 band signals
- Sub-meter position accuracy, superior in multipath mitigation in L5/B2a/E5a signal by higher chip rate in code phase
- Smart Jammer detection and suppression
- Highly integrated module, the best cost-effective high precision solution
- Supports single IRNSS mode

## APPLICATIONS



Automotive Navigation



Smart Rearview Mirror



Lane-level Navigation



Asset Tracking

### Model:

Product	GNSS							Features			Interfaces				Accuracy			Grade		
	Multi-band	GPS	BDS	GLONASS	Galileo	QZSS	IRNSS	Build-in LNA	Data Logging	D-GNSS	USB	UART	I2C	SPI	Meter	Sub-Meter	Centi-Meter	Standard	Professional	Automotive
TAU1202	D	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
TAU1205	D	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

## GENERAL SPECIFICATIONS

### GNSS Engine

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

### GNSS Reception

TAU1202	GPS/QZSS	L1C/A, L1C <sup>[1]</sup> , L5C
	BDS	B1I, B1C <sup>[1]</sup> , B2a
	GLONASS	L1OF
	Galileo	E1, E5a
	SBAS	L1
TAU1205	GPS/QZSS	L1C/A, L1C <sup>[1]</sup> , L5C
	BDS	B1I, B1C <sup>[1]</sup> , B2a
	Galileo	E1, E5a
	IRNSS	L5
	SBAS	L1

<sup>[1]</sup> Supported by specific firmware upgrade

### Position Accuracy

GNSS <1m CEP@ -130dBm

### Time to First Fix(TTFF)

Hot start 1s  
Cold start 30s

### Sensitivity

Cold Start -148dBm  
Hot Start -155dBm  
Reacquisition -158dBm  
Tracking&Navigation -162dBm

### Velocity & Time Accuracy

GNSS 0.1m/s CEP  
1PPS 20ns

### Interfaces

UART 1  
I2C 1

### Antenna

Active antenna  
Passive antenna

### Operating Condition

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

### Operating Limit

Velocity 515 m/s  
Altitude 18,000 m

### Safety Supervision

Antenna short circuit detection and protection  
Antenna open circuit detection  
System clock stop detection  
Low voltage detection

### Power Consumption

Operating	GPS+QZSS	L1 band: 22mA@3.3V
	GNSS	L1+L5 band: 36mA@3.3V
Standby	12uA	

## ENVIRONMENT DATA

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

## PACKAGE

Format 18 PIN LCC  
Dimensions 10.1x 9.7 x 2.5mm



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