

# TAU1111

Multi-System GNSS Positioning Module

Standard

## PRODUCT DESCRIPTION

TAU1111 is a multi-system GNSS positioning module, which is based on the state of the art CYNOSURE III architecture. It supports BDS-3 (BeiDou Navigation Satellite System 3). Besides, it is capable of tracking all the global civil navigation systems (BDS, GPS, GLONASS, Galileo, QZSS and SBAS).

TAU1111 integrates efficient power management architecture, while providing high sensitivity and low power GNSS solutions which make it suitable for navigation applications on automotive and consumer electronics, as well as fleet management.



(TAU1111: 12.2\*16\*2.4mm)

## HIGHLIGHTS

- Concurrent reception of 5 systems (GPS, BDS, GLONASS, Galileo, QZSS and SBAS) to maximize satellites visibility in L1 band
- Provides greater accuracy with more available measurements
- High sensitivity design and low power management
- Smart jammer detection and suppression
- Highly integrated SMD module with cost-effective antenna (L1 only) design

## APPLICATIONS



Automotive Navigation



Asset Tracking Terminals



Fleet Management

### Product Selector:

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
TAU1111	S	•	•	•	•	•		•	•		•	•	•	•	•			•		

## GENERAL SPECIFICATIONS

### GNSS Engine

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

### GNSS Reception

GPS/QZSS: L1C/A, L1C<sup>[1]</sup>  
BDS: B1I, B1C<sup>[1]</sup>  
GLONASS: L1OF  
Galileo: E1  
SBAS: L1

*\*[1] Supported by specific firmware upgrade*

### Position Accuracy

GNSS 2.5m CEP

### Time to First Fix(TTFF)

Hot start 1s  
Cold start 28s

### 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  
USB 1  
SPI 1

### Antenna

Active antenna  
Passive antenna

### Safety Supervision

Antenna short circuit protection  
Low voltage detection

### 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

### Power Consumption

Operating	GPS+QZSS	18mA@3.3V
	GNSS	24mA@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\*2.4mm

