

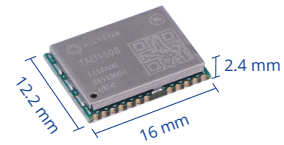
# TAU1308

GNSS RTK Module

Industrial

## PRODUCT DESCRIPTION

TAU1308 is developed on the base of CYNOSURE III SoC chip. It is a positioning system that combines GPS, BeiDou, GLONASS, Galileo, and QZSS to provide a high precision positioning and navigation solution. With built-in single-band RTK engine, TAU1308 can achieve centimeter-level position accuracy, which makes it suitable for the industrial and consumer applications.



## HIGHLIGHTS

- Supports GPS, BDS, GLONASS, Galileo, and QZSS
- Centimeter-level GNSS positioning
- Integrated Real Time Kinematics (RTK)
- Active antenna short circuit protection
- Configurable peripheral IO pins
- Low power consumption design
- Single supply with wide voltage range

## APPLICATIONS



Automotive Navigation



Smart Rearview Mirror



Lane-level Navigation



Asset Tracking Terminals

### Product Selector:

Product Model	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	RTK	UART	I <sup>2</sup> C	USB	SPI	Meter	Sub-meter	Centimeter	Industrial	Automotive
TAU1308	S	•	•	•	•	•	•	•	•	•	•	T	•	•	•	○	○	○	•	•	•	•	•

T = TCXO

○ = Supported upon request with special firmware

## GENERAL SPECIFICATIONS

### GNSS Engine

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

### GNSS Reception

GPS/QZSS: L1C/A  
BDS: B1I  
GLONASS: G1  
Galileo: E1

### Position Accuracy

GNSS	1m CEP
D-GNSS	<1m CEP
RTK	1.0 cm + 1 ppm (H) 3.5 cm + 1 ppm (V)

### Time to First Fix (TTFF)

Hot start	1s
Cold start	28s
RTK convergence	< 60s

### Sensitivity

Cold Start	-147 dBm
Hot Start	-153 dBm
Reacquisition	-156 dBm
Tracking & Navigation	-160 dBm

### Velocity & Time Accuracy

GNSS	0.1 m/s CEP
D-GNSS	0.05 m/s CEP
1PPS	20 ns

### Interfaces

UART	1
USB*	1
SPI*	1
I2C*	1

\*: Supported upon request with special firmware

### Antenna

Active 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

### Antenna Supervision

Antenna short circuit protection and open circuit detection

### Operation Limit

Velocity	515 m/s
Altitude	18,000m

### Power Consumption

Operating	32 mA @ 3.3V
Standby	13 uA

## ENVIRONMENT DATA

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

## PACKAGE

Dimensions	12.2*16.0*2.4 mm
Package	24 PIN LCC

