

TAU2202B

GNSS Module with Dead Reckoning

Industrial

PRODUCT DESCRIPTION

TAU2202B is a GNSS module with dead reckoning, which is based on Allystar CYNOSURE III SoC chip. It supports GPS, BDS, Galileo, and QZSS satellite signals. Combining GNSS positioning and inertial navigation technology makes TAU2202B output positioning data in the environments where GNSS signal quality is poor or even loss (such as tunnels, underground parking, etc.), and provide continuous and accurate positioning for navigation applications.



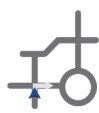
HIGHLIGHTS

- Support GNSS and INS navigation technology
- Support BDS-3 signals
- Output raw data with built-in BOSCH 6D IMU
- Support ADR/UDR adaptive switching
- Support A-GNSS
- Support free installation

APPLICATIONS



Automotive Navigation



Lane-level Navigation



Fleet Management



Asset Tracking Terminals

Product Selector:

Product	Type	GNSS							Feature					Interface		Accuracy		Grade				
	DR Module	Band (S/D/T)	GPS	BDS	GLONASS	Galileo	NavIC	QZSS	Built-in SAW	Built-in LNA	Data Logging	D-GNSS	Oscillator	Built-in inductor	IMU Raw data	UART	USB	Meter	Sub-meter	Centimeter	Industrial	Automotive
TAU2202B-1216A00	•	D	•	•		◦		•	•	•		T		•	•			•			•	

T = TCXO

◦ = Supported upon request with special firmware.

GENERAL SPECIFICATIONS

GNSS Reception

GPS/QZSS: L1C/A, L5

BDS: B1I, B1C, B2a

Galileo^[1]: E1, E5a

* [1] Supported upon request with special firmware.

Position Accuracy

GNSS 1.0m CEP

Update rate

Position update 1 Hz

Sensor output 50 Hz

Time to First Fix (TTFF)

Hot start 1s

Cold start 30s

Sensitivity^[2]

Cold start -147 dBm

Hot start -155 dBm

Reacquisition -155 dBm

Tracking & Navigation -160 dBm

* [2] Demonstrated with a good external LNA.

Velocity & Time Accuracy

GNSS 0.1 m/s CEP

1PPS 20 ns

Interface

UART 2

Position Error^[3]

UDR: 5% of distance travelled

ADR: 3% of distance travelled

* [3] Under the condition of 120s continuous GNSS signal loss.

Operation Limit

Velocity 515 m/s

Altitude 18,000m

Operating Condition

Main voltage 3.0-3.6 V

Digital I/O voltage 3.0-3.6 V

Backup voltage 1.8-3.6 V

Power Consumption

Acquisition 54 mA @ 3.3V

Tracking 50 mA @ 3.3V

Standby mode 12 uA

ENVIRONMENT DATA

Operation temperature -40°C to +85°C

Storage temperature -40°C to +90°C

Certification RoHS & REACH

PACKAGE

Packaging 24 PIN LCC

Dimensions 16.0*12.2*2.4 mm

