

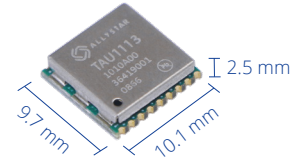
TAU1113

GNSS Positioning Module

Industrial

PRODUCT DESCRIPTION

TAU1113 is a cost-effective low-power GNSS positioning module based on CYNOSURE III Lite GNSS SoC chip. It supports GPS/QZSS, BDS, Galileo, GLONASS and SBAS. The module features SAW, LNA, flash memory as well as an antenna supervisor in a compact form factor.



TAU1113 is a versatile receiver that can be used with active and passive antennas, making it an excellent choice for a wide range of applications such as tracking, telematics and navigation. The fast start-up in combined with the low power consumption and the very low backup current make the TAU1113 particularly suitable for use in battery-powered devices, e.g., for asset tracking.

HIGHLIGHTS

- Versatile GNSS module supporting GPS/QZSS, BDS, Galileo, GLONASS and SBAS
- Low current consumption of only 16 mA for GPS/QZSS
- Backup current of only 15 μ A
- Active and passive antennas supported thanks to built-in SAW and LNA
- Supports Allystar's free-of-charge A-GNSS service for minimal startup times
- Pin-compatible with previous generation TAU1103, TAU1105 and many mainstream GNSS modules

APPLICATIONS



Bike Sharing



Asset Tracking



Fleet Management



Telematics

Product Selector:

Product Model	GNSS							Feature					Interface			Accuracy			Grade		
	GNSS system mode	Band(S/D/T)	GPS/QZSS	BDS	GLONASS	Galileo	NavIC	SBAS	Built-in LNA	Programmable (Flash)	Data Logging	D-GNSS	Oscillator	UART	I2C	USB	SPI	Meter	Sub-Meter	Centi-Meter	Industrial
TAU1113	01	S	•		•			•	•	•	•	T	•				•			•	
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T = TCXO

GENERAL SPECIFICATIONS

GNSS Engine

Cynosure III Lite GNSS Engine
Total 88 GNSS channels
5 Hz maximum update rate

GNSS Reception

GPS/QZSS: L1C/A
Galileo: E1
GLONASS: G1
BDS: B1I
SBAS: L1

Position Accuracy*

GNSS	1.5m CEP
GNSS (with SBAS)	< 1.0m CEP

* Open sky condition.

Sensitivity*

Cold Start	-148 dBm
Hot Start	-156 dBm
Reacquisition	-158 dBm
Tracking	-163 dBm

* Demonstrated with a good external LNA.

Velocity & Time Accuracy

GNSS	0.1 m/s CEP
1PPS	20 ns

Interfaces

UART	1
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Time to First Fix (TTFF)

Supporting system	Hot start	Cold start
GPS/QZSS+Galileo+GLONASS+SBAS	2s	26s
GPS/QZSS+GLONASS+SBAS	2s	28s
GPS/QZSS+Galileo+BDS+SBAS	2s	28s
GPS/QZSS	1s	28s

Operating Condition

Main voltage	2.0-3.63 V
Digital I/O voltage	2.0-3.63 V
Backup voltage	1.8-3.63 V

Operation Limit

Velocity	515 m/s
Altitude	18,000m

Antenna

Active antenna
Passive antenna

Antenna Supervision

Antenna short circuit protection and open circuit detection

Power Consumption

Tracking	GPS/QZSS+GLONASS+SBAS	20 mA @ 3.3V
	GPS/QZSS+Galileo+BDS+SBAS	17 mA @ 3.3V
	GPS/QZSS	16 mA @ 3.3V
Standby	15 uA @ 3.3V	

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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