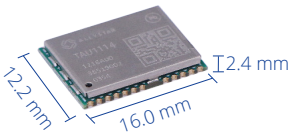
TAU1114

GNSS Positioning Module

Industrial

PRODUCT DESCRIPTION

TAU1114 is a cost-effective GNSS positioning module based on CYNOSURE III Lite GNSS SoC chip supporting GPS/QZSS, BDS, Galileo, GLONASS and SBAS at a low current consumption. It is a versatile module that features SAW, LNA, flash memory as well as an antenna supervisor and can be used with active and passive antennas.



TAU1114 is fit for a wide range of applications in tracking, telematics, and navigation. It is pin compatible with its predecessors TAU1102 and TAU1111 as well as many mainstream GNSS modules, making it the perfect choice to upgrade existing design, be it for a lower power consumption or to avoid excessive lead times.

HIGHLIGHTS

- Versatile GNSS module supporting GPS/QZSS, BDS, Galileo, GLONASS and SBAS
- Low current consumption of only 15 mA for GPS/QZSS
- 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 TAU1102, TAU1111 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	Automotive
TAU1114	01	S	•		•			•	•	•	•	•	T	•				•			•	
	02	S	•		•	•		•	•	•	•	•	T	•				•			•	
	03	S	•	•		•		•	•	•	•	•	T	•				•			•	

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

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	16 mA @ 3.3V
	GPS/QZSS	15 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	24 PIN LCC
Dimensions	12.2*16.0*2.4 mm

Website: www.allystar.com
Email: info.gnss@allystar.com
Headquarters: 201-2, 2F, Tower F, Xinghe World, No.1, Yabao Road, LongGang District, Shenzhen City, Guangdong Province, China.
Calgary office: Unit 288, 3553 31 Street NW Calgary, Alberta, Canada T2L 2K7