
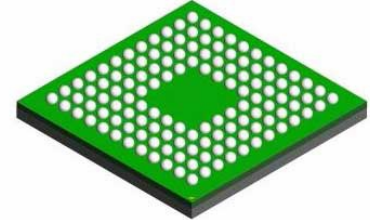


Multi Band GNSS Precise Measurement Engine Receiver

Manufacturer:	STMicroelectronics, Inc
Package/Case:	LFBGA
Product Type:	Discrete Semiconductor Modules
RoHS:	RoHS Compliant/Lead free 
Lifecycle:	Active



Images are for reference only

[Inquiry](#)

General Description

STA9100MGA is part of the TeseoAPP (Teseo ASIL Precise Positioning) family. STA9100MGA is a measurement engine positioning receiver IC able to manage all the GNSS constellations such as GPS, Galileo, Glonass, BeiDou, IRNSS and QZSS. STA9100MGA provides to the main host via serial interface the precise raw measurement data of all the visible GNSS satellites to let it run any possible precise position algorithm. Teseo APP also integrates a secure microcontroller for secure system boot and data-output authentication to keep sensitive data safe from attack. STA9100MGA provides standard precision positioning calculation to main host using all the satellites constellations. STA9100MGA is compliant with ST Automotive Grade qualification which includes in addition to AEC-Q100 requirements a set of production flow methodologies targeting zero defect per million part. STA9100MGA, fulfilling high quality and service level requirements of the Automotive market, is the ideal solution for in-dash navigation, smart antenna, car to car, V2X, OEM telematics, and Autonomous driving applications STA9100MGA is designed in line with the most stringent automotive safety standards (ISO 26262) in order to support the full autonomous driving type of applications. For that purpose a dedicated interface allows receiving GNSS data from the external RF front-end STA5635S in order to manage the other GNSS bands (L2, L5, E6 bands) simultaneously with the L1 band signals. The STA9100MGA receiver monitors the integrity of the satellite data to alert the system if accuracy is for any reason degraded. This permits Tier-1 manufacturers to certify safety-critical systems in accordance with the automotive industry functional-safety standard ISO 26262. The chip is manufactured in ST CMOS040nm Technology and housed in TFBGA package 81 balls 8x8mm body size 0.8mm pitch.

Key Features

STMicroelectronics 5th generation positioning receiver with 4 fast acquisition channels and 80 channels for tracking #6 constellations: GPS, Galileo, GLONASS, BeiDou, QZSS, IRNSS

Multiband L2, L5, E6 capability with external RF Front-end STA5635S

SBAS systems: WAAS, EGNOS, MSAS, GAGAN, BeiDou

Code Phase, Carrier Phase, Doppler Frequency measurements

Embedded Hardware Security Micro

Automotive Grade 105C

Comprehensive ISO26262 safety concept

Antenna Sensing

PPS output

Notch filter for anti-jamming

Recommended For You

STA5620

STMicroelectronics, Inc

QFN

ST25RU3993-BQFT

STMicroelectronics, Inc

QFN48

ST25R95-VMD5T

STMicroelectronics, Inc

QFN32

STA8090FG

STMicroelectronics, Inc

BGA

STA8088GA

STMicroelectronics, Inc

QFN

ST95HF-VMD5T

STMicroelectronics, Inc

QFN32

ST25DV16K-JFR6D3

STMicroelectronics, Inc

12UFDFPN

ST25R3920-AQWT

STMicroelectronics, Inc

VFQFPN32

ST25DV04K-IER6C3

STMicroelectronics, Inc

DNF8

STA8089GA

STMicroelectronics, Inc

QFN

STA8088FG

STMicroelectronics, Inc

VFQFPN56

ST25DV04K-IER6S3

STMicroelectronics, Inc

SOP8

SMA661ASTR

STMicroelectronics, Inc

SOT666

ST25R3916-AQWT

STMicroelectronics, Inc

QFN32

STMB2WB55CGU7

STMicroelectronics, Inc

UFQFN48