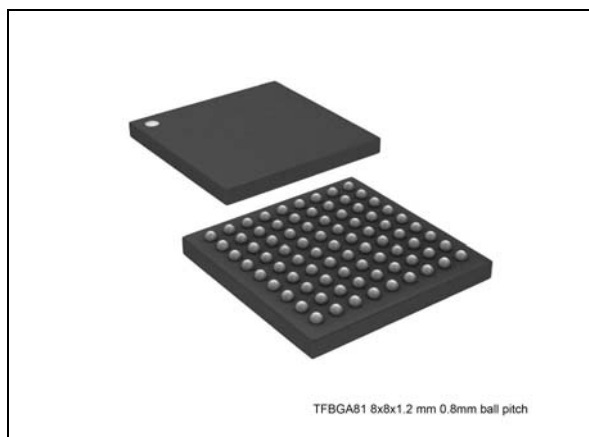


Automotive TeseoAPP (ASIL Precise Positioning) Family Multi Band GNSS Precise Measurement Engine receiver

Data brief



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

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.

1 Revision history

Table 1. Document revision history

Date	Revision	Changes
26-Feb-2018	1	Initial release.

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