Teseo-VIC3 GNSS modules

life.augmented

3D dead-reckoning GNSS solution for Automotive and Industrial applications

Certified Dead-Reckoning GNSS solution with built-in sensor fusion for accurate position, velocity and time (PVT) information even without satellites

Able to simultaneously support multiple global navigation systems including BeiDou, Galileo, GLONASS, GPS, and QZSS, Teseo-VIC3 devices guarantee accurate position, velocity and time (PVT) data in the absence of satellite signals thanks to its on-board 6-axis motion sensor and 3D dead-reckoning software. In addition to our powerful Teseo-Suite PC tool, we provide a full development ecosystem including a complete standalone GNSS module evaluation and prototyping platform.

KEY FEATURES & BENEFITS

- Simultaneous multi-constellation positioning
- ST GNSS and 6-axis inertial sensor
- Embedded Teseo III single-die standalone positioning receiver IC
- Superior accuracy thanks to its on-board Temperature Compensated Crystal Oscillator (TCXO)
- Reduced Time To First Fix (TTFF) with dedicated Real Time Clock (RTC) oscillator
- -163 dBm tracking sensitivity
- 1.5 m CEP positioning accuracy
- 17 µA standby current and 193.38 mW tracking power consumption
- 7-day Autonomous Assisted GNSS and Real-Time Assisted GNSS as well as firmware configurability and over-the-air (OTA) upgrades.
- 24-pin LCC package (16.0 x 12.2 x 2.42 mm)
- Programmed, tested, qualified and certified by ST

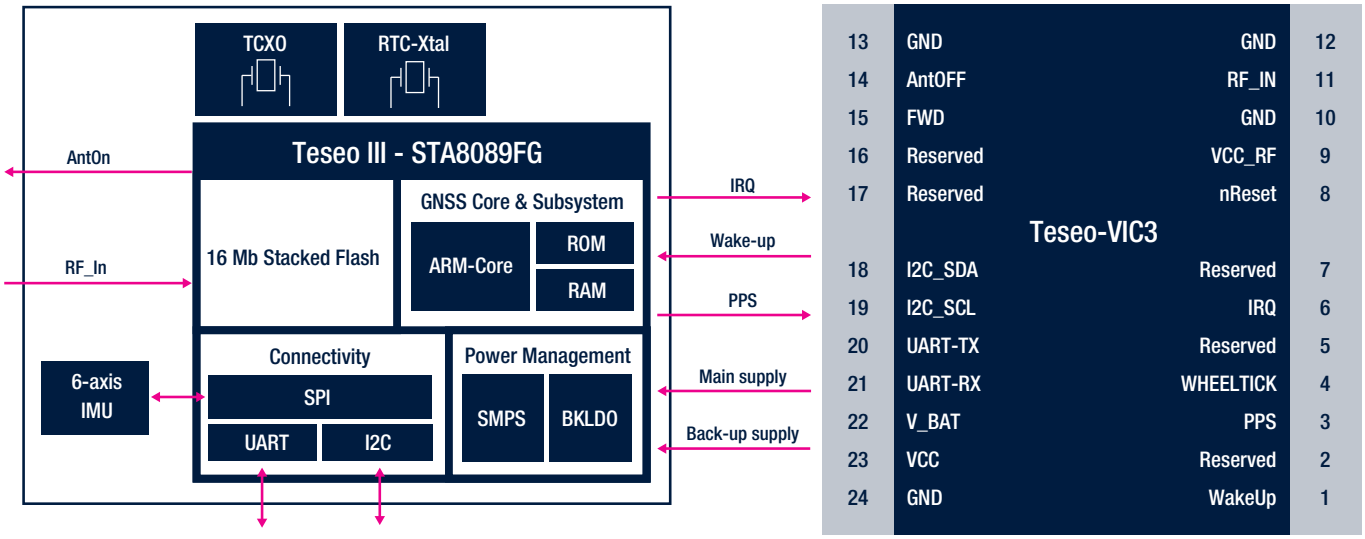
KEY APPLICATIONS

- In-car navigation
- Fleet management
- Insurance black boxes

DESCRIPTION

Within their 16 x 12 mm compact size, Teseo-VIC3 modules offer superior accuracy thanks to on-board temperature-compensated crystal oscillator (TCXO) and a reduced Time To First Fix (TTFF) relying to their dedicated real-time clock (RTC). Teseo-VIC3DA is AEC-Q100 qualified with on board ST Teseo III IC and ST MEMS IC AEC-Q100 qualified.

Pinout and block diagram



Device summary

	AEC-Q100	Odometer supported	Sensor Over UART	Voltage supply		Interface		Dead-reckoning Software
				VCC	VCC_IO	UART	I2C	
Teseo-VIC3DA	Yes	Yes	Yes	3.0 to 3.6 V	3.0 to 3.6 V	Yes	Yes	Teseo-DRAW
Teseo-VIC3D	-	Yes	Yes	3.0 to 3.6 V	3.0 to 3.6 V	Yes	Yes	Teseo-DRAW

Ordering information and developer resources

Order code	Description
Teseo-VIC3DA	Dead-reckoning GNSS module with embedded 6-axis inertial sensor (Automotive AEC-Q100 qualified)
Teseo-VIC3D	Dead-reckoning GNSS module with embedded 6-axis inertial sensor (Industrial only)
Teseo-DRAW	A multi-sensor data fusion hub and dead-reckoning firmware development tool for Teseo GNSS families
EVB-VIC3DA	Complete standalone evaluation platform for Teseo-VIC3 dead-reckoning GNSS modules
X-NUCLEO-GNSS2A1	GNSS expansion board based on Teseo-VIC3 module for STM32 Nucleo
X-CUBE-GNSS	GNSS expansion software package for STM32Cube with C-code device driver and STM32 prebuilt library/firmware
Teseo-Suite	PC software and GUI to control, configure and analyze the performance of Teseo GNSS devices