

TESEO-LIV3F/R/FL

Tiny GNSS Modules



The smallest GNSS modules with outstanding accuracy and free firmware configuration

Teseo-LIV3F (Flash-based), Teseo-LIV3FL (low power) and Teseo-LIV3R (ROM-based) are an easy-to-use standalone Global Navigation Satellite System (GNSS) module with an embedded Teseo III single-die positioning receiver IC able to work simultaneously on multiple constellations (GPS/Galileo/Glonass/BeiDou/QZSS). The Teseo-LIV3R does not support Galileo.

Teseo-LIV3F/FL module supports data logging for continuous storage of position, velocity and time data inside its embedded 16-Mbit Flash memory.

A flexible firmware solution for Teseo-LIV3F/FL that makes it easy to download new firmware and software updates is available.

Additional information including Teseo-LIV3FL provides also raw measurement data (carrier phase) to enable PPP/RTK client algorithm.

Teseo-LIV3F/FL/R hardware and software user manuals are available on www.st.com/gnssmodules

KEY FEATURES & BENEFITS

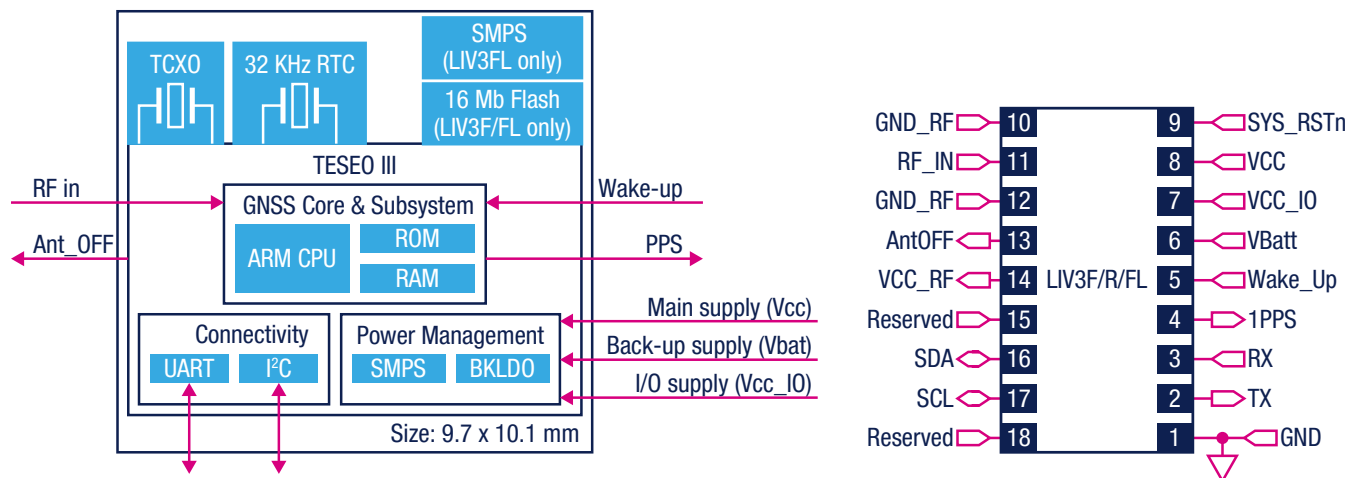
- Simultaneous multi-constellation positioning
- -163 dBm navigation sensitivity
- 1.5 m CEP accuracy positioning
- 16-Mbit embedded Flash memory for data logging and FW upgrades (F/FL only)
- Free FW configuration solution
- 1.8 V to 4.3 V supply voltage range (based on variant)
- Tiny LCC package (9.7 x 10.1 mm)
- Operating temperature: -40 to 85 °C

KEY APPLICATIONS

- Goods, asset, people, and vehicle tracking
- Fleet management
- Insurance
- After-market telematics
- Timing synchronization
- UAV and drones

Block diagram and pin configuration

Within their 9.7 x 10.1 mm compact size, Teseo-LIV3F/R/FL modules offer superior accuracy thanks to their on-board 26-MHz temperature-compensated crystal oscillator (TCXO) and a reduced Time To First Fix (TTFF) relying to their dedicated 32-kHz real-time clock (RTC).



Device summary

	Constellation					Raw meas.		Voltage supply		Interface				Additional HW/SW features					
	GPS	Glonass	Beidou	Galileo	QZSS	Code Phase	Carrier Phase	Main	IO	UART	SPI	I2C	USB	Data logging	Upgradability (Flash)	Timing	SAW Filter	Additional LNA	Embedded Sensor
Teseo-LIV3F	Y	Y	Y	Y	Y	Y		2.1 V to 4.3 V	3.0 V to 3.6 V	Y		Y		Y	Y	Y			
Teseo-LIV3R	Y	Y	Y		Y	Y		2.1 V to 4.3 V	3.0 V to 3.6 V	Y		Y							
Teseo-LIV3FL	Y	Y	Y	Y	Y		Y	1.8V to 4.3V	1.8V ro 3.3V	Y		Y		Y	Y	Y			

Ordering information

Order code	Description
Teseo-LIV3F	Tiny GNSS module
Teseo-LIV3R	Tiny GNSS ROM module
EVB-LIV3F	Teseo-LIV3F evaluation board
EVB-LIV3R	Teseo-LIV3R evaluation board
X-NUCLEO-GNSS1A1	X-NUCLEO-GNSS1A1 expansion board with TESEO-LIV3F Compatible with STM32 Nucleo boards and Arduino Uno R3
Teseo-LIV3FL	Tiny GNSS low power module
EVB-LIV3FL	Teseo-LIV3FL evaluation board



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