

KEY FEATURES

The **Swegeo GS-F9P** board delivers exceptional performance with its **multi-band GNSS** positioning capabilities, designed for high-precision industrial applications. The board features advanced multi-band RTK technology, providing centimeter-level accuracy for precise navigation and automation of moving machinery. Its compact, surface-mounted design ensures easy integration into various systems while maintaining high performance.

The **Swegeo GS-F9P** is tailored to meet the demands of high-volume applications, offering reliable and detailed positioning data in a small form factor.



CONCURRENT RECEPTION OF GPS, GLONASS, GALILEO, AND BEIDOU

The board is capable of receiving signals from multiple GNSS constellations simultaneously, including GPS, GLONASS, Galileo, and BeiDou. This feature enhances positioning accuracy and reliability by leveraging signals from various satellite systems to provide more comprehensive coverage.

MULTI-BAND L1/L5 RTK WITH FAST CONVERGENCE TIMES AND RELIABLE PERFORMANCE

The board utilizes multi-band RTK technology on L1 and L5 frequencies, which allows for high-precision positioning with fast convergence times. This means the system quickly achieves accurate positioning and maintains reliable performance even in dynamic environments.

CENTIMETER ACCURACY IN A COMPACT AND ENERGY-EFFICIENT MODULE

Despite its small size, the board delivers centimeter-level positioning accuracy. It is designed to be energy-efficient, ensuring low power consumption while providing precise positioning capabilities.

EASY INTEGRATION OF RTK FOR FAST TIME-TO-MARKET

The board simplifies the integration of RTK technology, enabling quicker deployment and reducing development time. This feature accelerates the process of bringing products to market by making it easier to incorporate high-precision positioning into new systems.

NATIVE SUPPORT FOR POINTPERFECT SIMPLIFIES INTEGRATION

The board includes native support for PointPerfect, which streamlines the integration process. PointPerfect is a service that enhances GNSS accuracy, and its native support means that the board can seamlessly incorporate this service, further improving positioning performance.

SMALL FORM FACTOR

The board is designed with a compact size, making it suitable for applications where space is limited. Its small form factor allows for easy integration into various systems without taking up excessive space.

GENERAL	
Channels	184 channels
Signal Supported	GPS L1C/A L5, GLO L10F,
	GAL E1B/C E5a, BDS B1I B2a,
	QZSS L1C/A L1S L5, SBAS L1C/A
	NavIC L5
Accuracy	For (GPS+GLO+GAL+BAS)
	Horizontal Poition Accuracy (CEP) PVT 1.5m
	SBAS 1.0m
	RTK 0.001m+1ppm
	Vertical Poition Accuracy (Median)
	PVT 2.0m
	SBAS 1.5m
	RTK 0.001m+1ppm
Data Update Rate	Accuracy of time pulse signal RMS 99%
	30 ns
	60 ns
	Frequency of time pulse signal
Initialization / Time to first fix	0.25 Hz to 10 MHz (configurable)
	Cold starts 27 s
	Aided starts 3 s
Sensitivity	Reacquisition 4 s
	Sensitivity Tracking & Nav. -167 dBm
	Cold starts -148 dBm
	Hot starts -157 dBm
RTK performance	Reacquisition -160 dBm
	RTK Initialization ≤ 5 s
	RTK Solution Delay ≤ 50 ms
Anti-spoofing	Re-acquisition Time ≤ 1 s DR Accuracy
Anti-jamming	Advanced anti-spoofing algorithms
	Active CW detection and removal
	Onboard band pass filter

PHYSICAL AND ELECTRICAL	
Dimensions	71.1 x 45.7 x 1.62 mm
Weight	645 g
Input voltage	3.3V DC
Connectors	RS232 x 2, USB x 1
	Bluetooth(Long Range SPP)

ENVIROMENTAL	
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
Humidity	5% - 95% Non-condensing
Vibration	High Vibration
Shock	Shock Resistance