

## FV-5H “GPS Receiver Module”

### Overview:

**FV-5H** module combines high sensitivity, exceptionally low power consumption and a USB port in a small module measuring just 17 x 22 mm.

The -160 dBm tracking sensitivity extends positioning coverage into places where GPS was not possible before, and enables solutions using smaller or covert antennas. Its small form factor and SMT pads allow for fully automatic assembly processes with standard pick-and-place equipment and reflow soldering, enabling cost-efficient, high-volume production.

The combination of these features makes this module suitable for a broad spectrum of GPS products whose key requirements include high sensitivity, low power consumption and small size.

The active antenna on board helps the system integrators to do the design-in easily.

FV-M8 is feature with high sensitive GPS receiver and GPS antenna.

The perfect match is most suitable for any GPS mobile devices, such as PND, GPS PDA, personal tracker and any portable devices, which need GPS features.

ANTARIS 4 positioning engine

4 Hz maximum position update rate

Assisted GPS ( MS-Assisted , MS -Based)

DGPS and full SBAS (WAAS, EGNOS) support

FixNOW power saving mode

Supports passive and active antennas

Antenna short and open circuit detection and protection

Firmware can be updated by flash

Operating temperature range: -40°C to 85°C



### Features:

40mA supply current at Vcc = 2.7 V  
(Power reduction by more than 35% compared to predecessor modules)

USB connectivity

Significantly lower battery backup current

Configurable I/O and UART voltage levels

RoHS compliant (lead-free)

50 channel

**Specification FV-5H**  
**GPS Receiver Module:**

<b>Parameter</b>	<b>Specification</b>
<b>Receiver Type</b>	50 channels GPS L1 Frequency, CA Code CALILEO Open Service L1 frequency
<b>Start up Time</b>	Cold Start 29s Warm Start 29s Hot Start <1 s Aided Start <1 (All satellites @ -130 dB)
<b>Sensitivity</b>	Tracking & Acquisition -160dBm Reacquisition -160dBm Cold Start -144dBm
<b>Horizontal Accuracy</b>	Autonomous <2.5m CEP (50%, 24 hours static, -130dBm) SBAS <2.0 m SEP < 3.5 m
<b>Accuracy of Timepulse Signals</b>	RMS 30ns 99% < 60ns Timepulse Configurable: 0.25.....1000Hz
<b>Max navigation Update Rate</b>	4 Hz
<b>Velocity Accuracy</b>	0.1 m/s ( 50% @30m/s )
<b>Heading Accuracy</b>	0.5 degrees ( 50% @30m/s )
<b>Dynamics</b>	<4G
<b>Operational Limits</b>	Velocity 600 m/s