FV-U8   GPS Receiver Module
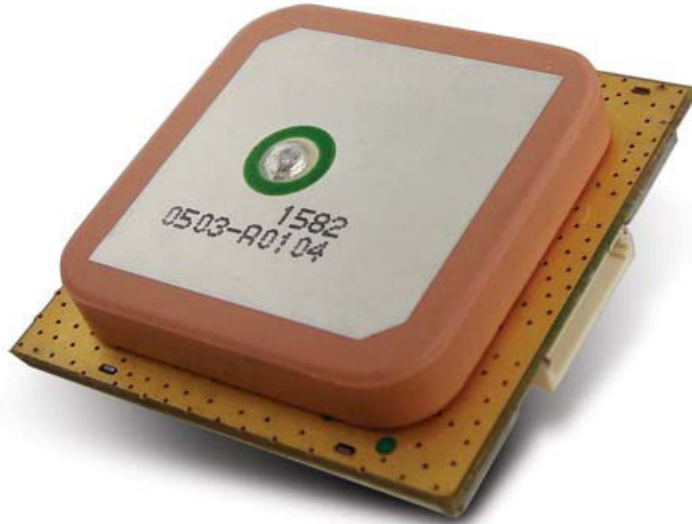

Overview

The main application of FV-U8 is to be used as a part of an integrated system, which can be a simple PVT (Position-Velocity-Time) system - for instance GPS-mouse or PND (Personal Navigation Device), or complex wireless systems, such as a system with GSM function, a system with Bluetooth function, or a system with GPRS function.

The module (FV-U8) is be the best candidate for users' systems when considering the performance,sensitivity, power consumption, and size of the module.
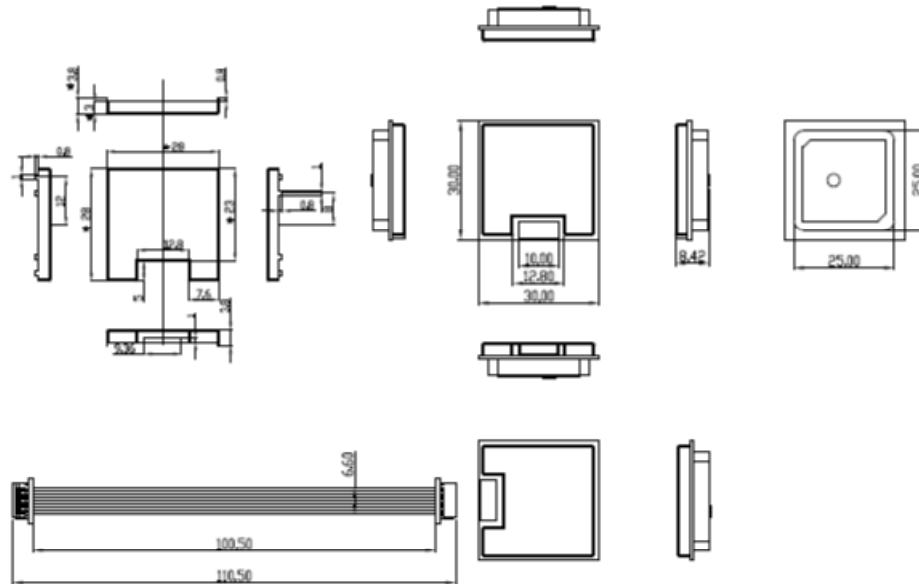
Features

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

- 50 parallel channels for fast acquisition

- 160dbm Sensitivity for reliable performance

- 1pps Time Pulse
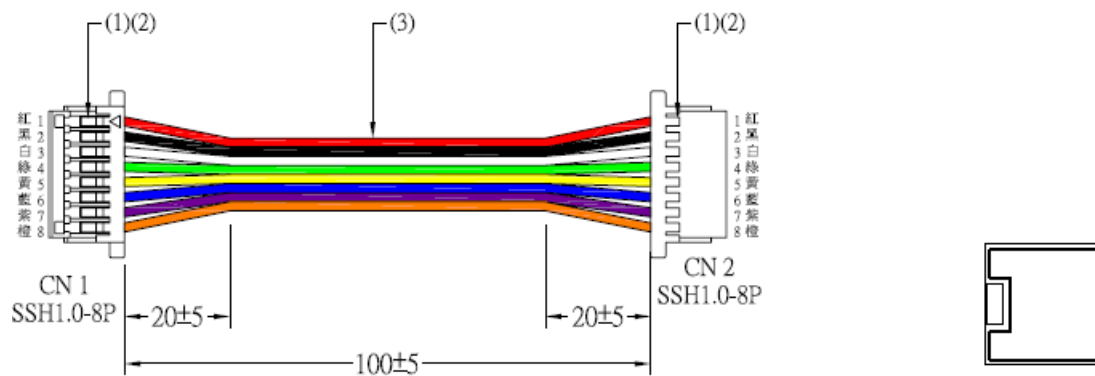
FV-U8 Specifications

PHYSICAL CONSTRUCTION	
GPS Board Dimension	L30mm*W30mm*H8.6mm
GPS Antenna Dimension	L25mm*W25mm*H4.0mm
Weight	214 gram with cable
Receiving frequency	1575.42MHZ; C/A code
Mounting	8-pin Connector with 1.0mm pitch
Construction	Full EMI shielding
ENVIRONMENTAL CONDITIONS	
Temperature	Operating: -30 ~ +85 ℃
	Storage: -40 ~ +85 ℃
COMMUNICATION	
Protocol	NMEA, UBX binary
Signal level	TTL UART (USB and RS232 also available)
INTERFACE CAPABILITY	
Standard Output Sentences	GGA, GLL,GSA,GSV,RMC,VTG Optional: ZDA

PERFORMANCE		
Built-in Antenna	Highly-reliable ceramic patch	
Sensitivity	-160dbm (Tracking)	
SBAS	1 channel (Support WAAS, EGNOS, MSAS,GAGAN)	
Receiver architecture	50 parallel channels u-blox6 engine	
Start-up time	1 sec. typical (hot start) 50 sec. typical (warm start) 50 sec. typical (cold start)	
Position accuracy(CEP 50)	Autonomous: 2.5 m	SBAS: 2.0m
Velocity	500 m/s	
Update Rate	1Hz, Optional: up to 5Hz	
Power Supply	3.3V~5.0V	
Power Consumption	Acquisition: 67mA, Tracking: 47mA	
Baud Rate	4800 bps (default) Optional:9600/19200/38400/115200 bps are adjustable	
CABLE		
Length	10cm 8-Pin bus cable	

Mechanical Diagram

Pin Assignment

Pin	Signal	Colour	Description	Type
1	Vcc	Red	3.3V ~ 5V DC Power input	Power
2	GND	Black	Ground	Ground
3	TX1	White	Serial Data Output	Output
4	RX1	Green	Serial Data Input (Command)	Input
5	D+	Yellow	USB+ (Optional)	Input/Output
6	D-	Blue	USB- (Optional)	Input/Output
7	1PPS	Purple	Time Pulse	Output
8	Vbat	Orange	Back-up battery Input (3 ~ 3.6V)	Power

FV-U8_EN_20120816_RH