GPS Engine Board

Model: FV-22

WI-RD-D-022   V1.0
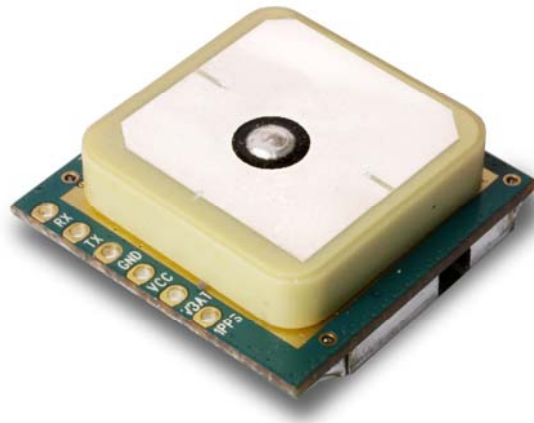
Overview:

The main goal of FV-22 is to be used as a part of integrated system, which can be a simple PVT (Position-Velocity-Time) system, for instance, G-mouse, PND (Personal Navigation Device), or complex wireless systems, such as a system with GSM function, a system with Bluetooth function, and a system with GPRS function. The module (FV-22) can be the best candidate for users' systems as the users' systems need the careful consideration on the performance, sensitivity, power consumption, and/or size of the module.

Features:

- Active antenna on board helps the system integrators to do the design-in easily.
- High sensitive GPS Locator and GPS antenna.
- The perfect match is most suitable for any mobile devices, such as PND, GPS PDA, personal tracker and any portable devices, which need GPS features.
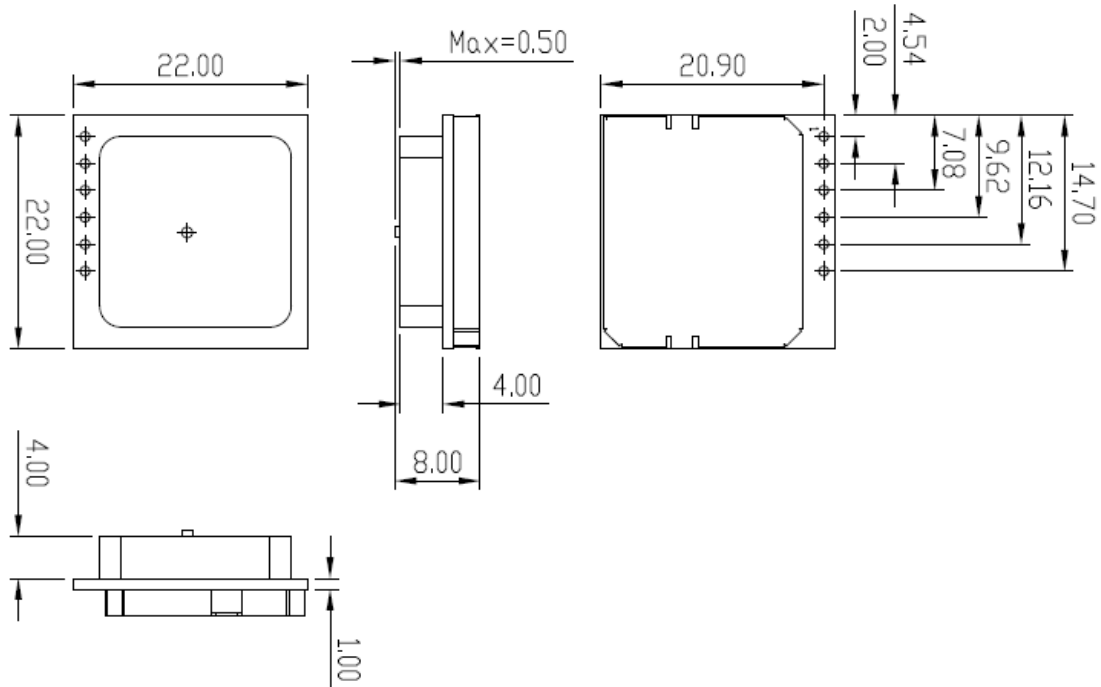
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Specification:

PHYSICAL CONSTRUCTION	
GPS Board Dimension	L22mm*W22mm*H8mm
GPS Antenna Dimension	L18mm*W18mm*H4.0mm
eight	<9.2 gram
Receiving frequency	1575.42MHZ; C/A code
Mounting	6-pin Pin-header pads with 2.54mm pitch
Construction	Full EMI shielding
ENVIRONMENTAL CONDITIONS	
Temperature	Operating: -30 ~ +85 ℃
	Storage: -40 ~ +85 ℃
COMMUNICATION	
Protocol	NMEA, UBX, binary
Interface	UART_TTL
INTERFACE CAPABILITY	
Standard Output Sentences	GGA,GLL,GSA,GSV,RMC,VTG. Optional: ZDA
PERFORMANCE	
Built-in Antenna	Highly-reliable ceramic patch
Sensitivity	-159dBm (Tracking)
SBAS	WAAS, EGNOS, MSAS, GAGAN
Receiver architecture	50 parallel channels
Start-up time	1 sec. typical (hot start)
	50 sec. typical (warm start)
	50 sec. typical (cold start)
Position accuracy*	Without aid: 2.5 m SBAS: 2.0 m
Velocity	500 m/s
Altitude	50,000m (Maximum)
Update Rate	1 Hz(Default)
Power Supply	3V~5V
Power Consumption	Acquisition: 67mA, Tracking: 47mA
Baud Rate	9600 bps (default)
	Optional:4800/19200/38400/115200 bps are adjustable

*CEP, 50%, 24 hours static, -130dBm, SEP <3.5m

**This specification is subject to change without prior notice

Mechanical Diagram:

Pin Assignment:
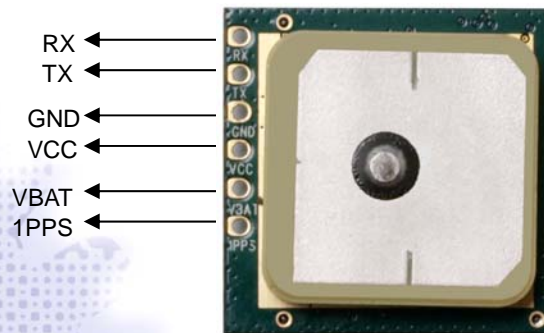
Pin	Signal Name	Description	Type
1	RX	Serial Data Input (Command)	Input
2	TX	Serial Data Output (Command)	Output
3	GND	Ground	Ground
4	VCC	Voltage input 3V~5V	Power
5	VBAT	Backup input voltage 2V ~ 5V	Power
6	1PPS	Time pulse	Output