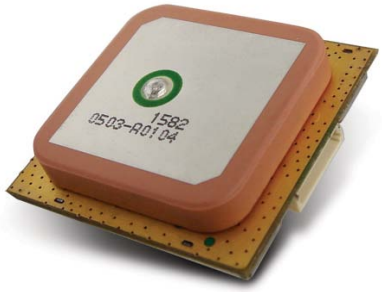
GPS Engine Board

Model: FV-Q8

WI-RD-D-056 V1.1

UBX-G8030 Single-Chip GPS Receiver Series



Overview:

The main goal of FV-Q8 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-Q8) 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	L30mm*W30mm*H8.6mm		
GPS Antenna Dimension	L25mm*W25mm*H4.0mm		
Weight	< 30gram(with cable)		
Receiving frequency	GPS:1575.42MHZ; GLONSS:1602 ~ 1615MHZ BeiDou:1561.098MHZ (Option)		
Mounting	8-pin Connector with 1.0mm pitch		
Construction	Full EMI shielding		
ENVIRONMENTAL CONDITIONS			
Temperature	Operating: -40 ~ +80 ℃		
	Storage: -40 ~ +80 ℃		
COMMUNICATION			
Protocol	NMEA, UBX, binary		
Interface	RS232 & USB (default), UART_TTL		
INTERFACE CAPABILITY			
Standard Output Sentences	RMC, GGA, GSV*5, VTG, GSA*5. Optional: GLL, ZDA (Setting the record to be Backup Battery)		
PERFORMANCE			
Built-in Antenna	Highly-reliable ceramic patch		
Sensitivity	Tracking & Navigation	GPS & GLONASS -164 dBm	GPS -163 dBm
SBAS	WAAS, EGNOS, MSAS		
Receiver architecture	72 parallel channels		
Start-up time	 hot start cold start Aided start	GPS & GLONASS 1 s 27 s 4 s	GPS 1 s 30 s 3 s
Position accuracy*	Without aid: 2.5 m	SBAS: 2.0 m	
Velocity	500 m/s		
Altitude	50,000m (Maximum)		
Update Rate	1 Hz(standard) GPS & GLONASS 5 Hz , GPS Only 10 Hz		
Power Supply	3V~5V (USB OUTPUT IN 5V)		
Power Consumption	Acquisition: 66mA, Tracking: 55 mA		
Baud Rate	4800 bps(default)Setting the record to be Backup Battery Optional:9600/19200/38400/115200 bps are adjustable		

*CEP, 50%, 24 hours static, -130dBm, >6SVs, SEP <3.5m

**This specification is subject to change without prior notice

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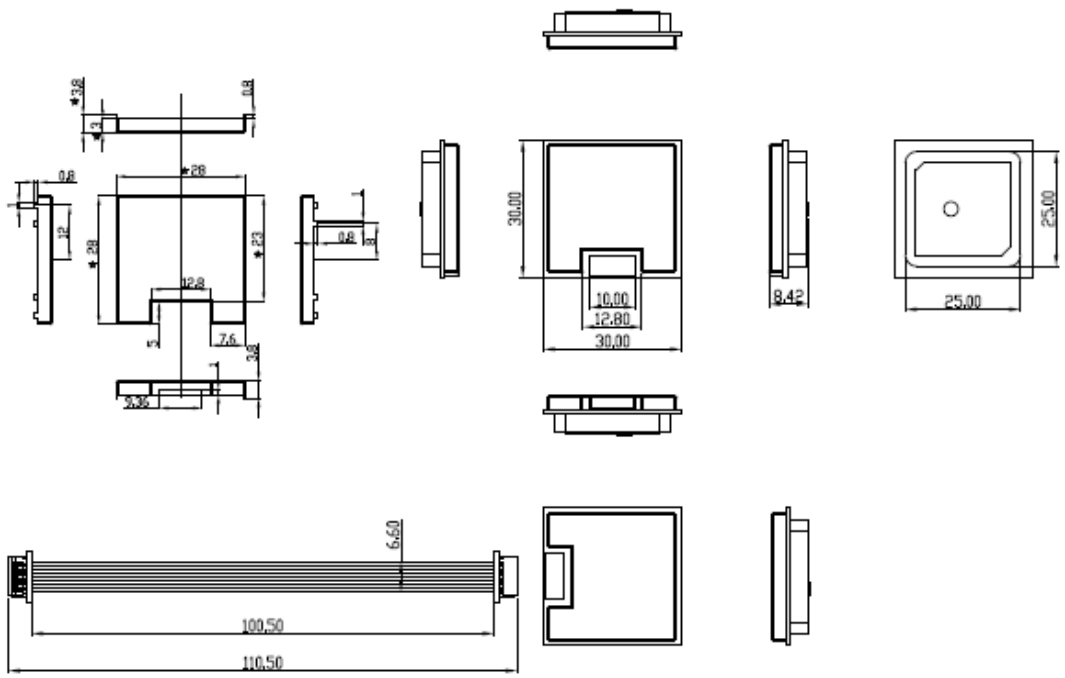
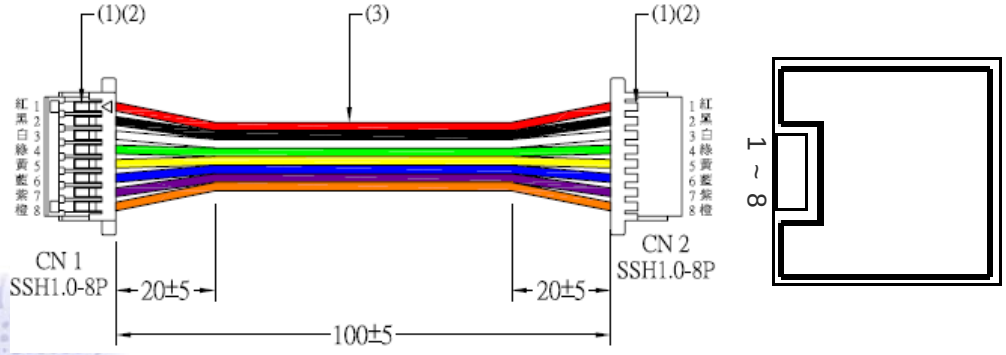
Mechanical Diagram:



Pin Assignment:



Pin	Signal Name	Coloar	Description	Type
1	Vcc	Red	3V~5V DC Power Input	Power
2	GND	Black	Ground	Ground
3	TX1	White	Serial Data Input (Command)	Output
4	RX1	Green	Serial Data Input (Command)	Input
5	D+	Yellow	USB+ (Optional)	Input/Out
6	D-	Blue	USB- (Optional)	Input/Out
7	1PPS	Purple	Time pulse	Output
8	Vbat	Orange	Backup Battery Input (2-5V)18uA	Power

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