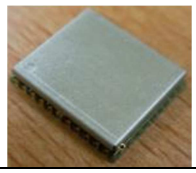
GE-710, Ultra-High Performance GPS/QZSS ODM Engine

RoHS Compliant



Overview

GE-710 is equipped with the u-blox7 high-sensitivity GPS/QZSS ODM engine. This SMT mountable GPS engine board measures just 10x12x2.4 (mm). The slim design allows it to be used in dimension demanding devices.

Our experienced design provides not only fast acquisitions and excellent tracking performance but also quality and delivery assurance.

Applications

- Camera detector

Features

- Tiny: 10 (W) x 12 (L) x 2.4 (H) (mm)
- High sensitivity+:-162dBm tracking/-148dBm acquisition
- Up to 10Hz update rate (default 1Hz)
- UART interfaces
- OMA SUPL compliant A-GPS support
- SBAS (WAAS, EGNOS, MSAS) support
- QZSS support to boost the GPS accuracy in Japan
- Excellent EMI protection

Technical Specifications

Receiver Performance Data+

Receiver Type	56-channel, GPS and QZSS L1 frequency, C/A code
Horizontal Position Accuracy	< 2.5m (Autonomous) < 2.0m (WAAS)
	(CEP, 50%, 24-hour static, -130dBm, 6+ SVs)
Velocity Accuracy	<0.1 m/s (speed) <0.5° (heading) (50% @ 30 m/s)
Time Pulse Signal Accuracy	30ns (RMS) <60ns (99%)
Time To First Fix Hot start Warm start Cold start	Autonomous (All at -130dBm) 1sec 28sec with TCXO & Crystal 29sec with TCXO; 30sec with Crystal
Sensitivity (Autonomous)	-148dBm (acquisition; TCXO) -147dBm (acquisition; Crystal) -162 dBm (tracking; TCXO) -161dBm (tracking; Crystal)
Max. Update Rate	10Hz
Max. Altitude	50,000 m
Max. Velocity	500 m/s
Protocol Support	NMEA 0183 v2.3(compatible to 3.0) UART: 9600 bps N,8,1; GGA, GLL, GSA, GSV, RMC, VTG, TXT
SBAS Support	WAAS, EGNOS, MSAS
Dynamics	< 4g

+ Note. According to IC Spec, GPS only

Electrical Data+

Power Supply	2.7 ~ 3.6 V (GE-710T) 1.7 ~ 3.6 V (GE-710C)
Power Consumption	TBS mA / average tracking (GE-710T) TBS mA / average tracking (GE-710C)

NaviSys Technology Corp.
Tel : +886-3-5632598
Sales contact: sales@navisys.com.tw
Address: 2F, No.56, Park Ave. II, Science-Based Industrial Park, Hsinchu 300, Taiwan (R.O.C.)
http://www.navisys.com.tw/
Fax: +886-3-5632597
Technical support: support@navisys.com.tw

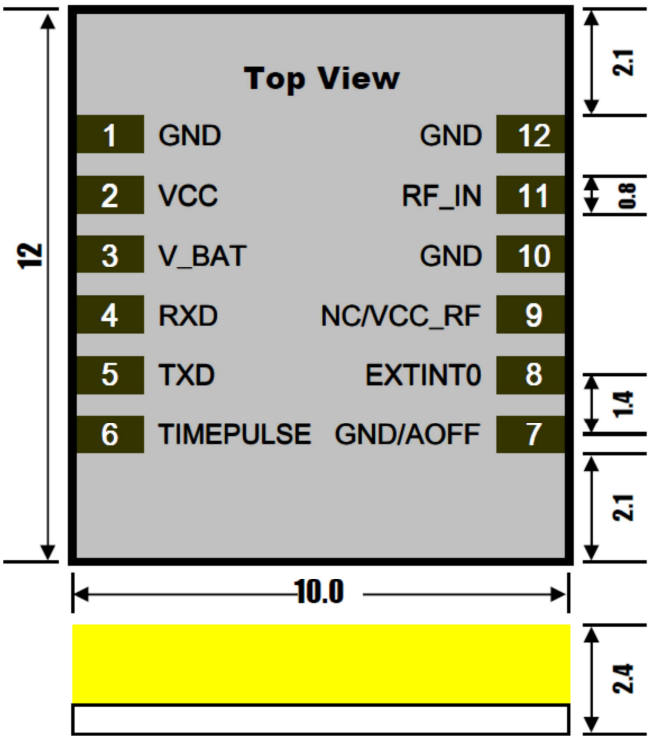
(To Be Supplied)	
Backup Power	1.4~3.6V, 22uA (Typ. 3V)
Digital I/O (V)	V_{IH}: 0.7*VCC ~ VCC+0.5 V_{IL}: 0 ~ 0.2*VCC V_{OH}: >= VCC-0.4, V_{OL}<= 0.4

Environmental Data

Operating temperature	-40 ~ 85℃
Storage temperature	-40 ~ 85℃

Mechanical Data – 10 x 12 x 2.4(mm)

unit: mm



12-pin LCC (Leadless Chip Carrier) Interface

Pin	Name	Function	I/O
1	GND	Ground	Input
2	VCC	Power supply 2.7 ~ 3.6 V (GE-710T) 1.7 ~ 3.6 V (GE-710C)	Input
3	V_BAT	Backup battery power supply	Input
4	RXD	TTL serial data input (to GPS)	Input
5	TXD	TTL serial data output (from GPS)	Output
6	TIMEPULSE	Default: 1 pulse per second (1Hz), synchronized with GPS or UTC time at rising edge, pulse length 100ms. Configurable: 0.1Hz ~ 10MHz	Output
7	GND AOFF	GE-710T, Ground GE-710C, antenna OFF 1: OFF, 0: ON	Input Output
8	EXTINT0	External interrupt pin to Force-ON or Force-OFF engine.	Input
9	NC VCC_RF	GE-710T, no connection for passive antenna GE-710C, RF power for active antenna	- Output
10	GND	Ground	Input
11	RF_IN	RF signal	Input
12	GND	Ground	Input

Ordering Information

GP-710X (Model number for Yupiteru)

X=T	UART, 9600bps, N-8-1, TCXO, LNA & SAW GGA, GLL, GSA, GSV, RMC, VTG, TXT @1Hz
X=C	UART, 9600bps, N-8-1, Crystal, no LNA, no SAW GGA, GLL, GSA, GSV, RMC, VTG, TXT @1Hz

*This document is subject to change without notice.

NaviSys Technology Corp.
Tel : +886-3-5632598
Sales contact: sales@navisys.com.tw
Address: 2F, No.56, Park Ave. II, Science-Based Industrial Park, Hsinchu 300, Taiwan (R.O.C.)
http://www.navisys.com.tw/
Fax: +886-3-5632597
Technical support: support@navisys.com.tw