

AscenKorea Inc.

RGS-2528U7

Module Datasheet

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AscenKorea Inc.

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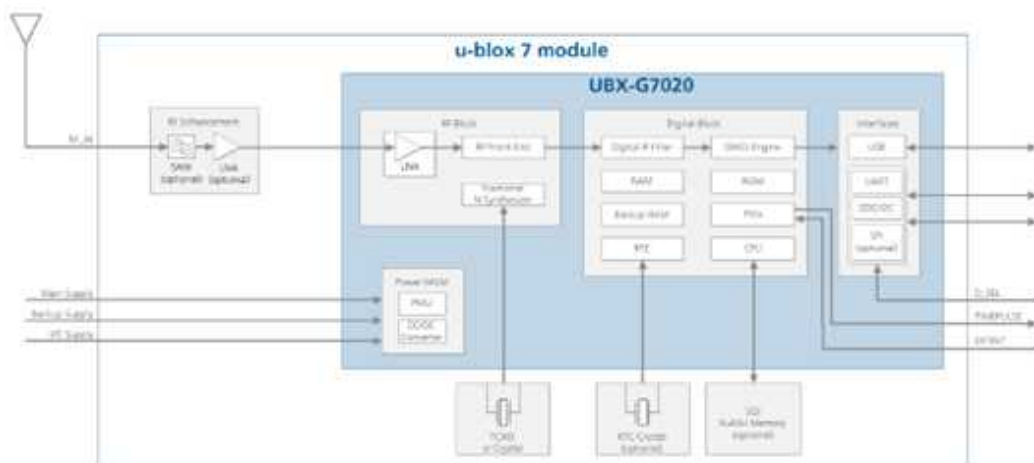
Features

- Over 2 million effective correlators
- Down to 1 s acquisition time
- Cold start acquisition sensitivity of -148 dBm and -162 dBm tracking sensitivity
- Up to 10 Hz navigation update rate
- Supports GPS, QZSS and SBAS (WAAS, EGNOS, MSAS) reception and is ready for Galileo
- Supports u-blox' AssistNow Online / AssistNow Offline A-GPS services and is OMA SUPL compliant
- Supports u-blox' AssistNow Autonomous (no connectivity required)
- Supports data logging
- Green (RoHS compliant and no antimony or halogenated flame retardants)

Applications

- Asset tracking
- Health and fitness
- Cellular handset
- Tablet computers
- Other location-aware consumer devices

Block diagram



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GNSS Performance

Parameter	Specification
Receiver type	56-channel u-blox 7 engine GPS L1C/A, SBAS L1C/A, QZSS L1C/A, Galileo E1B/C (Ready to support Galileo E1B/C when available) Maximum update rate 10 Hz Maximum altitude < 50,000 m velocity < 500 m/s dynamics < 4g NMEA protocol is supported via serial UART : (9600bps, 8 data bits, no parity, 1 stop bit)
Time-To-First-Fix (@-130 dBm)	Hot start < 1 s Warm start < 28 s Cold start < 29 s
Sensitivity	Tracking & Navigation -162 dBm Reacquisition -160 dBm Cold Start -148 dBm Warm Start -148 dBm Hot Start -156 dBm
Horizontal positioning accuracy (CEP, 50%, 24 hours static, -130 dBm, > 6 SVs)	Autonomous < 2.5 m SBAS < 2.0 m
Accuracy of time pulse signal	RMS 30 ns 99% 60 ns
Velocity accuracy (50% @ 30 m/s)	Speed < 0.1 m/s Heading < 0.5 °

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Electrical Characteristics

- Absolute maximum ratings

Parameter	Min	Max	Unit
DC Supply Voltage (VCC)	-0.5	6.0	V
I/O pin voltage	-0.5	3.6	V
RF input power	-	15	dBm
Storage Temperature	-40	85	°C

- Recommended Operating Conditions

Parameter	Min	Typ	Max	Unit
Main Supply Voltage (VCC)	3.0	3.3	5.5	V
Operating Temperature	-40	-	+85	°C

- Current Usage

Parameter	Min	Typ	Max	Unit
Peak acquisition current	-	104	-	mA
Average acquisition current	-	42	-	mA
Average tracking current	-	32	-	mA
Backup current	-	37	-	uA

- I/O Port

Parameter	Min	Typ	Max	Unit
Low level TX voltage	0	-	0.4	V
High level TX voltage	2.9	-	3.6	V
Low level RX voltage	0	-	0.65	V
High level RX voltage	2.3	-	3.8	V

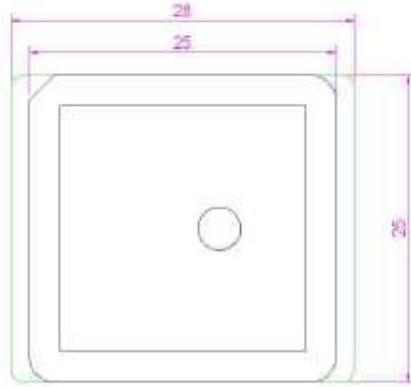
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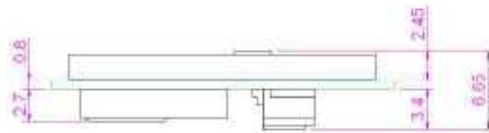
Dimensions

UNIT [mm]

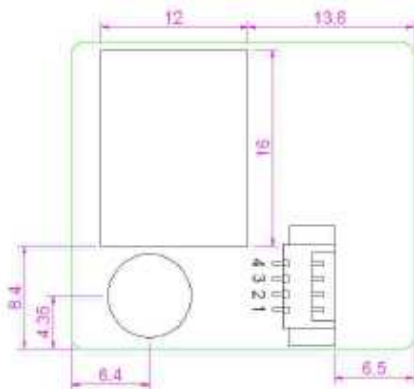
Top



Side



Bottom



연호 12505-04
1.25mm pitch
Connector



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Pin Functions

No.	Name	I/O	Funtions
1	VCC	I	Main Power Input
2	TXD	O	Serial data output 9600bps, 8 data bits, no parity, 1 stop bit
3	RXD	I	Serial data input 9600bps, 8 data bits, no parity, 1 stop bit
4	GND	I	Ground

Contact

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