

VDB-810DR

Embedded u-blox NEO-M8U GPS with Untethered Dead Reckoning UDR & G-Sensor Mini PCIe Card



Features

- u-blox 72-channel NEO-M8U UDR module including 3D inertial sensors engine
- GNSS data is available in NMEA, UBX & RTCM protocols
- Max. 20Hz Navigation update rate
- Position accuracy 2m CEP
- Temperature range: -40 to +85°C
- Mini PCIe Signal Type USB2.0
- Standard Full/Half-size Mini PCIe Card connect to computer easily

Receiver Type

Chipset	NEO-M8U
Receiver Type	GPS L1C/A, SBAS L1C/A, QZSS L1C/A, QZSS L1-SAIF, GLONASS L1OF, BeiDou B1I, Galileo E1B/C
Channels	Supports 72 Channels
GNSS Center	BeiDou : 1561.098 MHz, GPS : 1575.42 MHz,
Frequency	Glonass : 1602.5625

Sensitivity

	GPS&GLONASS	GPS	GLONASS	Beidou	Galileo
Tracking & Navigation	-160dBm	-160dBm	-160dBm	-160dBm	-154dBm
Reacquisition	-160dBm	-159dBm	-156dBm	-155dBm	-152dBm
Cold Start	-148dBm	-147dBm	-145dBm	-143dBm	-133dBm
Hot Start	-157dBm	-156dBm	-155dBm	-155dBm	-151dBm

Time to First Fix (TTFF)

	GPS&GLONASS	GPS	GLONASS	Beidou	Galileo
Cold Start	26 Sec.	30 Sec.	31 Sec.	39 Sec.	57 Sec.
Hot Start	1 Sec.	1 Sec.	1 Sec.	1 Sec.	1 Sec.
Aided Starts	3 Sec.	3 Sec.	3 Sec.	7 Sec.	7 Sec.

Accuracy

	GPS&GLONASS	GPS	GLONASS	Beidou	Galileo
Horizontal Position	2.5m	2.5m	4m	3m	TBC
Velocity Accuracy	0.5 m/s type				
Heading Accuracy	1 degrees type				
I/O Port	1 x Timepulse (connector type: 1 x 5pins pitch 1.27mm 90 degree) 1 x Battery Backup (connector type: 1 x 2pins pitch 1.27mm 180 degree)				
Max Navigation	99% <60ns				
Update Rate	Typical : 1Hz Max. : 20Hz (Configurable)				

Operational Limits

Dynamics	<= 4g
Altitude	50,000 m
Velocity	500 m/s

Output Message Format

GPS Protocol	NMEA, UBX Binary, GGA, GLL, GSA, GSV, RMC, VTG, TXT
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Multipath Suppression

Intelligent Multipath Detection and Suppression

G-Sensor

3-axis accelerometer

A-GPS

Supports AssistNow® Online and Offline, OMA SUPL Compliant

Environmental Characteristics

Operating Temp.	-40°C to +85°C
Storage Temp.	-40°C to +85°C
Peak Supply Current	Max = 150mA
Max Performance	Acquisition = 67mA
Eco Mode	Tracking = 29mA
Power Input	3.3V +/-10% VDC input
Dimensions	51 x 30 (mm)

Ordering Information

Part Number	VDB-810DR-000
Description	Embedded u-blox NEO-M8U GPS with Untethered Dead Reckoning UDR & G-Sensor Mini PCIe Card