

139.95 EUR

incl. 19% VAT, plus shipping



- **GPS/QZSS, GLONASS, BeiDou !**
- **72-channels !**
- **-167dBm SuperSense !**
- **10 Hz Update Rate !**

**Support:**  [Manual \[EN\]](#) |  [Specifications](#)

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

**Specifications**

**Receiver Type**

Chipset	NEO-M8U
Frequency	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 Frequency	BeiDou : 1561.098 MHz, GPS : 1575.42 MHz, Glonass : 1602.5625

**Sensitivity**

Tracking & Navigation	GPS&GL ONASS	GPS	GLONASS	Beidou	Galileo
Reacquisition	-160dBm	-160dBm	-160dBm	-160dBm	-154dBm
Cold Start	-160dBm	-159dBm	-156dBm	-155dBm	-152dBm
	-148dBm	-147dBm	-145dBm	-143dBm	-153dBm
	-157dBm	-156dBm	-155dBm	-155dBm	-151dBm

## Receiver Type

Hot Start

## Time to First Fix (TTFF)

Cold Start

Hot Start

Aided Starts

GPS&GL ONASS	GPS	GLONAS	Beidou	Galileo
		S		
26 Sec.	30 Sec.	31 Sec.	39 Sec.	57 Sec.
1 Sec.	1 Sec.	1 Sec.	1 Sec.	1 Sec.
3 Sec.	3 Sec.	3 Sec.	7 Sec.	7 Sec.

## Accuracy

Horizontal Position

Velocity Accuracy

Heading Accuracy

I/O Port

GPS&GL ONASS	GPS	GLONAS	Beidou	Galileo
		S		
2.5m	2.5m	4m	3m	TBC

0.5 m/s type

1 degrees type

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

Update Rate

## Operational Limits

Dynamics

Altitude

Velocity

99% <60ns

Typical : 1Hz Max. : 20Hz (Configurable)

<= 4g

50,000 m

500 m/s

## Output Message Format

GPS Protocol

NMEA, UBX Binary, GGA, GLL, GSA, GSV, RMC, VTG, TXT

## Multipath Suppression

Type

Intelligent multipath detection and suppression

## G-Sensor

Type

3-axis accelerometer

## A-GPS

Type

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

**Receiver Type**

Description

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