

VDB-812DR-M2/VDB-811DR-M2/VDB-810DR

u-blox M9V Dead Reckoning GNSS Receiver



VDB-811DR-M2



VDB-810DR

- Concurrent Reception of GPS + QZSS, GLONASS, Galileo, BeiDou
- 92-channel u-blox M9 Engine
- Ultra Low Power Digital Accelerometer
- -158 dBm Acquisition & -159 dBm Tracking Sensitivity
- Dead Reckoning Support
- Operating Temp.: -40°C to 85°C

Specifications



VDB-812DR-M2

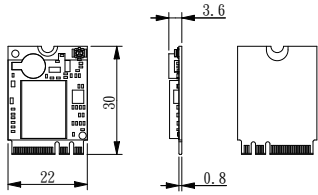
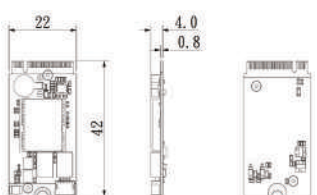
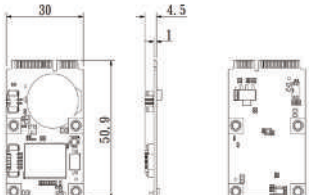


VDB-811DR-M2



VDB-810DR

Chipset			
	u-blox NEO-M9V-20B	u-blox NEO-M9V-20B	u-blox NEO-M9V-20B
Channels			
	92-channel	92-channel	92-channel
Receiver Type			
GPS	L1 C/A	L1 C/A	L1 C/A
QZSS	L1 C/A/S	L1 C/A/S	L1 C/A/S
GLONASS	L1OF	L1OF	L1OF
BeiDou	B1I (1561.098 MHz) only	B1I (1561.098 MHz) only	B1I (1561.098 MHz) only
Galileo	E1B/C	E1B/C	E1B/C
SBAS	L1 C/A: EGNOS, GAGAN, MSAS and WAAS	L1 C/A: EGNOS, GAGAN, MSAS and WAAS	L1 C/A: EGNOS, GAGAN, MSAS and WAAS
Nav. Update Rate			
	50 Hz (4 concurrent GNSS)	50 Hz (4 concurrent GNSS)	50 Hz (4 concurrent GNSS)
Accuracy			
	1.5 m CEP (with SBAS)	1.5 m CEP (with SBAS)	1.5 m CEP (with SBAS)
	2.0 m CEP (without SBAS)	2.0 m CEP (without SBAS)	2.0 m CEP (without SBAS)
Horizontal	1.5 m	1.5 m	1.5 m
Vertical	3 m	3 m	3 m
Acquisition			
Cold Start	24 s	24 s	24 s
Aided Start	3 s	3 s	3 s
Hot Start	2 s	2 s	2 s
Sensitivity			
Tracking & Nav.	-159 dBm	-159 dBm	-159 dBm
Reacquisition	-158 dBm	-158 dBm	-158 dBm
Cold start	-147 dBm	-147 dBm	-147 dBm
Hot start	-159 dBm	-159 dBm	-159 dBm
Dead Reckoning			
	UDR	UDR, ADR	UDR

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Interface			
GNSS Chipset	USB 2.0	USB 2.0	USB 2.0
2nd Accelerometer	-	I2C	I2C
External I/O	-	1 x 1.0 mm 1x4-PIN JST PIN 1: WHEELTICK+ PIN 2: WHEELTICK- PIN 3: FWD+ PIN 4: FWD-	-
Antenna Type	1 x MHF I Supports Active Antenna	1 x MHF I Supports Active Antenna	1 x MHF I Supports Active Antenna
Protocol			
	NMEA 4.11 (default), 4.10, 4.0, 2.3, and 2.1, UBX	NMEA 4.11 (default), 4.10, 4.0, 2.3, and 2.1, UBX	NMEA 4.11 (default), 4.10, 4.0, 2.3, and 2.1, UBX
Power Requirement			
Power Input	3.3 VDC ±10%	3.3 VDC ±10%	3.3 VDC ±10%
External I/O Input	-	30 VDC ±10% (Max.)	-
Power Consumption	>0.5 watts	>0.6 watts (w/o active antenna)	>0.5 watts (w/o active antenna)
Environmental			
Operating Temp.	-40 ~ 85°C, ambient w/ air flow 0.6m/s	-40 ~ 85°C, ambient w/ air flow 0.6m/s	-40 ~ 85°C, ambient w/ air flow 0.6m/s
Storage Temp.	-40 ~ 85°C	-40 ~ 85°C	-40 ~ 85°C
Relative Humidity	10% RH – 90% RH (non-condensing)	10% RH – 90% RH (non-condensing)	10% RH – 90% RH (non-condensing)
Compliance			
	CE, FCC Class A, UKCA	CE, FCC Class A, UKCA	CE, FCC Class A, UKCA
Mechanical			
Form-factor	M.2 2230 Key A-E	M.2 2242 Key B	PCIe Mini Card Full-Size
Dimensions (L x W x H)	22 (L) x 30 (W) x 8 (H) mm	22 x 42 x 8 mm	30 x 51 x 10 mm
			

Ordering Information

Model Number	VDB-812DR-M2
	VDB-811DR-M2
	VDB-810DR
Description	VDB-812DR-M2 u-blox NEO-M9V-20B M.2 2230 GNSS Module w/UDR
	VDB-811DR-M2 u-blox NEO-M9V-20B w/ ADI ADXL346 M.2 2242 GNSS Module w/UDR / ADR
	VDB-810DR u-blox NEO-M9V-20B w/ ADI ADXL346 mPCIe GNSS Module
State of Origin	Made in Taiwan

All specifications are subject to change without notice.