

V *map*



V-map AIR 20Hz GNSS Receiver

TECHNICAL SPECIFICATIONS

Physical & Environmental:

Weight (Including Antenna)	~ 98g / 3.5Oz
Size (L x W x H)	69mm x 68mm x 24mm (2.72" x 2.67" x 0.94")
Operating Temperature	-40°C to +85°C / -40°F to + 185°F
Humidity	95%, non-condensing

Accuracy:

DGPS	Horizontal 0.3m / 11.8" Vertical 0.5m / 19.6"
SBAS	Horizontal 0.8m / 31.5" Vertical 1.2m / 47.2"
Standalone	Horizontal 1.2m / 47.2" Vertical 1.8m / 70.8"
RTK (Static)	Horizontal 1mm + 0.5ppm x baseline Vertical 2mm + 1ppm x baseline
RTK (Kinematic)	Horizontal 10mm + 1ppm x baseline Vertical 15mm + 1ppm x baseline
RTK Initialization Time	< 10 Sec
RTK Initialization Reliability	>99%
Velocity	0.02m/sec
Time	30 nsec

Acquisition Time:

Hot Start	< 10 Sec
Warm Start	< 35 Sec
Cold Start	< 60 Sec
Reacquisition	< 1 Sec

Channel Tracking:

Number of Channels	226 Universal Channels
Signals Tracked	GPS L1 C/A, L2C, L2 P(Y), GLONASS L1/L2, Galileo E1
WAAS/EGNOS/MSAS	Yes

Communication Interfaces:

EVENT	5 ns resolution, LVTTTL, Programmable Active Edge
PPS	5 ns resolution, < 30 ns precision, LVTTTL, configurable polarity & period
UART	1 Port up to 460.8 kbps
USB 2.0 (Client)	1 port up to 480 mbps (High Speed)

Data & Memory:

SD/MMC Card Support	Physical interface, 20Hz Writing Rate, up to 2GByte Capacity
Data Update/Output Rate	1Hz – 100Hz
Real Time Data Output	TPS, RTCM SC104 2.x and 3.x, CMR, CMR+
ASCII Output	NMEA 0183 Version 2.x and 3.0
Geoid and Magnetic Variation Models	Yes
Grid Coordinates Output	Yes

Power:

Voltage	+5V to +16V
Power Consumption	< 0.5A at 12V

Antenna:

Frequency	1217 – 1250 MHz (L2) 1565 – 1610 MHz (L1)
Polarization	RHCP
Passive Peak Gain	2 dBic @ 1227 MHz (Typical) 2 dBic @ 1575 MHz (Typical)
Total Gain	30 dBic @ 1227 MHz (Typical) 28 dBic @ 1575 MHz (Typical) 28 dBic @ 1602 MHz (Typical)
Out-of-band rejection	> 50 dB
Current Drain	25 mA (Typical)
Voltage	3-12V
Noise Figure	1.5 dB (Typical)

RF Interference Rating	50 V/m out of band
Operating Temp	-40°C to +85°C / -40°F to +185°F
L1 Total Peak Gain	28 dBic
L1 Axial Ratio	0.5 dB (Typical) / 1 dB (Max)
L1 VSWR	< 1.5
L2 Total Peak Gain	30 dBic
L2 Axial Ratio	0.5 dB (Typical) / 1 dB (Max)
L2 VSWR	< 1.5
L1 Phase Center	31mm (from base)
L2 Phase Center	32mm (from base)
IP Rating	IP-67