



XD-R2009GU All-in-One GNSS Receiver

Integrated Antenna High Precise Positioning Terminal

Description



XD-R2009GU adapts UBlox F9P high performance GNSS receiver, that provides fast convergence times and reliable performance. It supports GPS-L1/L2; GLO-L1/L2; BDS-B1/B2 and GAL-E1/E5 all GNSS constellations system. With built-in quadrifilar helix antenna that optimizes the balance between weight and performance with a lightweight design, providing high gain and high precision output while greatly enhancing anti-interference capabilities. Industrial-grade low noise RF circuit design, strengthening the suppression of multipath interference to ensure clear and accurate signals in diverse environments. XD-R2009GU also incorporates an industrial-grade ISentek IST8310 geomagnetic compass, providing additional directional positioning support to enhance the precision and stability of the overall navigation system.

Highlights

- Adapts UBlox F9P high performance GNSS receiver
- Supports all GNSS systems and multi frequency bands
- Built-in high gain quadrifilar helix antenna
- Industrial-grade low noise RF circuit design
- Incorporates an industrial-grade ISentek IST8310 geomagnetic compass,



Technical Specification

System Type	Specification	
GNSS Chip Set	u-blox ZED-F9P-01 (184 Channels)	
GNSS System	GPS	L1, L2
	GLONASS	L1, L2
	BDS	B1I, B2I
	Galileo	E1, E5b
	QZSS	L1, L2
	SBAS	WAAS, EGNOS, MSAS
Antenna	Polarization	RHCP (Right-Hand Circular Polarization)
	LNA Gain	L1: 32 ± 2 dB; L2: 30 ± 2 dB
	Axial Ratio	≤ 3 dB
	Impedance	≤ 2.0
Accuracy	RTK (Positioning)	0.01 m + 1 ppm CEP
	Standard (Positioning)	1.5 m CEP
	Velocity	0.05 m/s
Acquisition	Cold start	24 s
	Aided start	2 s
	Reacquisition	2 s
Sensitivity	Tracking	-167 dBm
	Cold starts	-148 dBm
	Hot starts	-157 dBm
	Reacquisition	-160 dBm
Output Data	Baud Rate	4800 - 921600 bps, default 38400
	Output Level	TTL
	Update Rate	0.25 - 10 Hz, default 1 Hz
Environment	Operating	-40 - +85 °C
	Storage	-40 - +105 °C
Physical	Edge Connector	6 pin socket
	Dimension	$\Phi 42 \times 32.6$ mm
	Weight	14 g
	Input Voltage	+3.3 - 5 VDC
	Consumption	<100 mW @5V