



RS-3S

GNSS Smart Antenna



Key Features

- 874 Channels
- track and decode the QZSS L6
- In-Band Interference Rejection
- Spoofing detection
- Advanced Multipath Reduction
- Fast acquisition channels

RS-3S is a powerful and reliable receiver designed for telecom applications, high-precision GNSS systems, including high dynamics systems, machine and traffic control, geodynamics, and aerogeophysics applications. RS-3S can operate as a receiver for post-processing, as a Continuously Operating Reference Station (CORS), and as a scientific station collecting information for special studies, such as ionosphere monitoring and the like.

TECHNICAL SPECIFICATIONS

Number of Channels	874 All-In-View	
GNSS Constellations	GPS GLONASS Galileo BeiDou QZSS SBAS IRNSS L-band	C/A, L1C(P+D) including TMBOC(6,1,4/33) , P1, P2, L2C(L+M), L5(I+Q) C/A, P1, P2, L2C, L3(I+Q) E1(B+C) including CBOC(6,1,1/11), E5A(I+Q), E5B(I+Q), AltBoc, E6(B+C) BeiDou B1, B1C(P+D) incl. TMBOC(6,1,4/33), B2B(I+Q), B2, B2A(I+Q), AltBoc, B3 QZSS C/A, L1C(P+D) incl. TMBOC(6,1,4/33) , L2C(L+M), L5(I+Q), L6(L61/L62), L1S, L1Sb, L5S L1, L5(P+D) L5, S 1525-1560 MHz
Input/Output	USB RS422/RS485 Fiber-optic 1 PPS Wi-Fi GNSS Antenna RTCM SC104 NMEA 0183	2.0 device Serial port 1000 BASE-X/100BASE-TX 1Gb, SFP port Output split into four channels 5 GHz and 2.4GHz 802.11 a/b/g/n/ac TNC type connector Versions 2.x and 3.x Input/Output Versions 2.x and 3.0 Output
External Sensors	Humidity sensor Pressure sensor Temperature sensor	Tolerance - 3%RH (relative humidity) Nonlinearity - 1%RH Resolution - 0.008%RH Noise in humidity - 0.02%RH Long term stability - 0.5%RH/year Operating range - 300-1100hPa Resolution - 0.18Pa Absolute accuracy - max 1.7hPa Relative accuracy - 0.12hPa Long term stability - 1hPa/year Absolute accuracy - max 1.5°C Resolution - 0.01°C RMS noise - 0.005°C
Storage	Internal Memory Raw Data	64 GB of onboard non-removable memory for data storage Up to 100 Hz update rate for real time position and raw data (code and carrier)

ELECTRICAL SPECIFICATIONS

Input	Volts DC Central pin	-40 to -57 +5 VDC to power LNA. The sourced current is 0.12A max.
Power consumption	Watt (typ.)	4.8

POSITIONING SPECIFICATIONS

Position Accuracy	Autonomous DGPS RTK Static/Fast Static	< 2 m < 0.5 m Horizontal: 0.8 cm + 1 ppm Vertical: 1.5 cm + 1 ppm Horizontal: 0.3 cm + 0.1 ppm Vertical: 0.35 cm + 0.4 ppm
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PERFORMANCE SPECIFICATIONS

Time for First Fix	Cold Start Warm Start Reacquisition	< 35 s < 5 s <1 second
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PHYSICAL AND ELECTRICAL CHARACTERISTICS

Physical & Electrical	Size Weight	229 x 43 x 275 mm (9.02 x1.69 x10.83 in) 1968 g (2.204 lbs)
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ENVIRONMENTAL CHARACTERISTICS

Environmental	Operating t° Storage t° Vibration Waterproof	-50° C to +80° C -55° C to +85° C High shock and vibration resistance IP67
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