

STONEX RSNET4

Utilising advanced GNSS technology and traditional survey technology, Continuously Operation Reference Station (RSNET SERIES), an integrated surveying system, solutions for data acquisition, data processing, data distribution, and data management.

CATEGORIES OF RSNET4

Available to work as Single-base RSNET4,Multi-base RSNET4 and Network RSNET4.

Specification of Single-base RSNET4 and Multi-base RSNET4

Item	Content		Technology index	
Accuracy of system	Implementation way		Horizontal accuracy	Vertical accuracy
	RTK location real time	Within 20KM	10mm + 1ppm	20mm + 1ppm
		20KM ~ 40KM	20mm+ 1ppm	40mm + 1ppm
		40KM~ 50KM	50mm + 1ppm	80mm + 1ppm
		50KM ~100KM	< 1m	< 1m
	Static post-differential positioning		≤5mm	≤10mm
	Deformation Monitoring		3 ~ 5mm	6 ~ 10mm
Service areas	Navigation		High precision navigation and positioning information	
	Survey		Static, post-differential and RTK data	
Compatibility	Navigation		RTCM-SC104V2.X	
	Differential		RTCA, RTCM 2.X, RTCM3.0, CMR etc.	

Note: When using multiple STONEX RSNET4 receivers in a network with EAGLE software it becomes an NRS

APPLICATION OF RSNET4

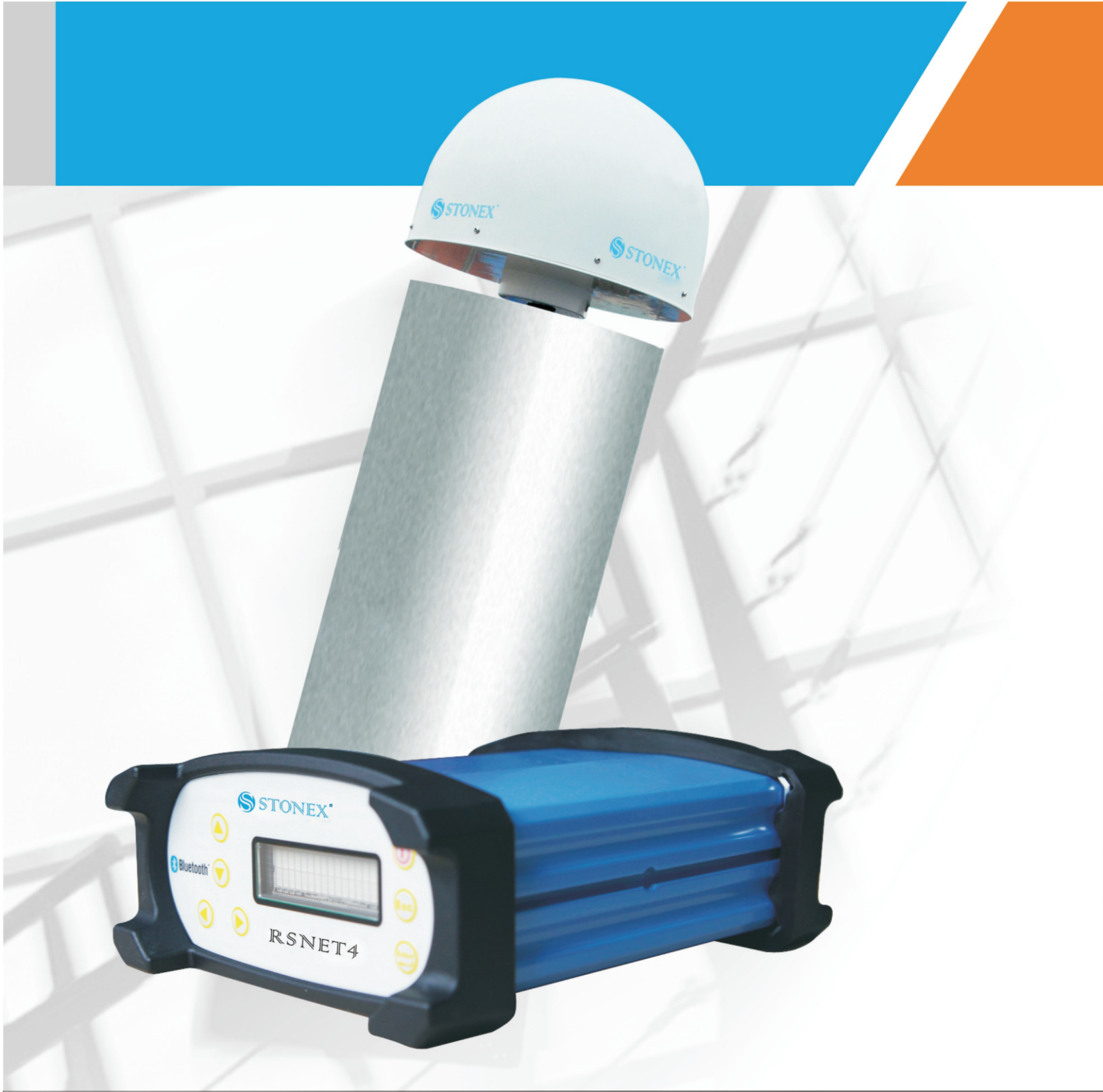
- Survey control
- GIS data collection
- Deformation monitoring
- Vehicle monitoring and scheduling
- Navigation
- Environmental monitoring
- Civil engineering construction
- High-precision agriculture
- GPS metrology
- Public security supervision
- Urban planning
- Property management



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STONEX RSNET4  
Continuously Operational Reference System





Continuously Operational Reference System

Specification

- GNSS module specifications:
  - Channels: 220
- Satellite signals tracked:
  - GPS: Simultaneous L1 C/A, L2E, L2C, L5
  - GLONASS: Simultaneous L1 C/A, L1 P, L2 C/A(GLONASS M only), L2 P
  - SBAS: Simultaneous L1 C/A, L5
- Reserved Satellite signals tracked:
  - COMPASS: B1 (QPSK), B1-MBOC (6, 1, 1/11, B1-2(QPSK), B2 (QPSK), B2-BOC (10,5), B3 (QPSK), B3BOC (15, 2.5), B3 (QPSK), B3BOC (15, 2.5), L5 (QPSK)
  - GALILEO
    - GIOVE-A: Simultaneous L1 BOC, E5A, E5AltBOC1
    - GIOVE-B: Simultaneous L1 CBOC, E5A, E5AltBOC1
- Advanced Trimble Maxwell 6 Custom Survey GNSS Technology
- High precision multiple correlator for GNSS pseudorange measurements
- Unfiltered, unsmoothed pseudorange measurements data for lownoise, low multipath error, low time domain correlation and hight dynamic response
- Very low noise GNSS carrier phase measurements with <1 mm precision in a 1 Hz bandwidth
- Signal-to-Noise ratios reported in dB-Hz
- Trimble low elevation tracking technology
- Initialization time: 10 Seconds.
- Initialization reliability: > 99.9%

Vertical accuracy

- Static horizontal accuracy: 3mm ± 1ppm (RMS)
- Static vertical accuracy: 5mm ± 1ppm(RMS)

Data store and output

- Storage capability: 4GB, record raw data (5s interval) for over 12 months.
- 1 Hz, 2 Hz, 4 Hz, 10 Hz, 20 & 50 Hz positioning outputs(depends on installed option ) up to 50 Hz raw measurement & position outputs
- Reference outputs CMR, CMR+, RTCM 2.1, 2.2, 2.3, 3.0, and 3.1
- Navigation outputs ASCII: NMEA-0183 GSV, AVR, RMC, HDT, VGK, VHD, ROT, GSK, GGA, GSA, ZDA, VTG, GST, PJT, PJK, BPQ, GLL, GBS and binary (Trimble GSOF).

Electrical specifications

- Voltage: 10 ~ 14DC power
- Power: 3.0W

Interface

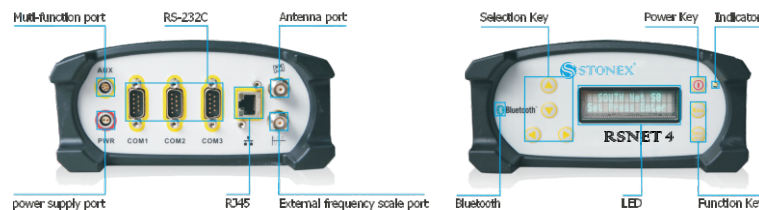
- 1 RJ45 port (10m/100m), support TCP/IP, HTTP, NTRIP protocol
- 3 RS232 ports, can transmit local RTCM/CMR correction, support meteorological instrument, barograph, clinometers etc. sensors
- 1 multi-function port, support to debug serial port and USB
- 1 external frequency scale not support high-precision atomic clock

Structure:

- Dimension: L202 x W163 x H75 mm
- Weight: 1.4KG
- Waterproof
- Dustproof

Work Environment and Size

- Work temperature: -40℃ ~ + 75℃
- Work Humidity: 10% ~ 95%



CHOKE RING ANTENNA

Designed to geodetic survey standard, STONEX choke ring antenna supports millimeter accuracy, capacity to choke back the multipath effect and stable phase center.

Specification

- Frequency: 1217MHz ~ 1257MHz, 1565MHz ~ 1615MHz
- Impedance: 50 Ω
- Standing-wave ratio: ≤ 15.: 1
- Gain: 50dB ± 2dB
- Noise: ≤ 1.5dB
- Polarization: right-hand circular polarization
- Voltage: 3 ~ 18VDC
- Working temperature: -40℃ ~ +85℃
- Storage temperature: -55℃ ~ +85℃
- Current: ≤ 40mA
- Weight: 5.2Kg
- Connector: TNC



CHOKE RING ANTENNA

RSNET4 CONFIGURATIONS

RSNET4	RSNET4 receiver	1
RSNTCRA	Choke ring antenna	1
RSNTC35	35m Cable for antenna with RSNET3 and RSNET4	1
RSNTCEC	External cable com port	1
RSNTARPS	Adapter for RSNET3/RSNET4 power supply	1
RSNTMEP	Middle enforced plate	1
RSNTACP	Antenna connector	1
RSNTAS	Arrester set for antenna calbe, signal and power	1
RSNT4UMP	operation manual and certificationwarranty card	1
RSNTBS	Software of RSNET series base	1
RSNTSR	Software of RSNET series server	1
OPTIONAL		
RSNTnet	Software of RSNET series network	1

EAGLE SOFTWARE PACKAGE

- An integrated package operating in the Windows XP environment
- Includes datum transformation (WGS-84 to local datum and vice versa) and coordinate conversion
- RINEX data conversion and RINEX data processing
- Modeling, processing and network generation of differential data
- Includes user application management
- Communicates with rover by NTRIP, sending and receiving data of various formats of international standard, eg. CMR, RTCM3.0, RTCM2.3, RTCA, RTD, etc.
- Virtual reference station for network RTK correction, uses Deep-NRS concepts to enhance the extent of the network.
- Operates with most GNSS receiver reference systems.

