

S20 GNSS RECEIVER



SATELLITES TRACKING

Channels	1408
GPS	L1C/A, L2P (Y), L2C, L5
GLONASS	L1, L2
BDS	B1I, B2I, B3I, B1C, B2a
Galileo	E1, E5a, E5b, E6
QZSS	L1, L2, L5
SBAS	WAAS, EGNOS, MSAS, GAGAN, SDCM
PPP	Galileo HAS
Cold start	< 20 s
Hot start	< 10 s
RTK initialization time	<5 s (typical)
RTK initialization reliability	>99.9%
Signal reacquisition	< 1 s

ACCURACY

Single-point pass-to-pass	15 cm
Single baseline RTK	8 mm + 1 ppm Horizontal 15 mm + 1 ppm Vertical
SBAS	0.6 m Horizontal 0.8 m Vertical
HAS-PPP	0.2 m Horizontal 0.4 m Vertical
Standalone	1.5m Horizontally 2.5m Vertically
Velocity accuracy	0.03 m/s

DATA FORMAT

Differential Data Format	RTCM2.X, RTCM3.X
Data Output	NMEA-0183
Data Update Rate	1HZ, 2HZ, 5HZ, 10HZ, 20HZ

COMMUNICATION

Bluetooth	BT4.2 BR/EDR
Interface	- DC2.1 female for power supply - DB9 female for data transmission

ELECTRICAL

Power supply	5 ~ 28V DC
Power consumption	≤ 1.0 W

ENVIRONMENTAL

Operating Temperature	-40 C to +65 C
Storage Temperature	-45 C to +85 C
Waterproof & Dustproof	IP67
Shock	Survive from a 2m-drop

PHYSICAL

Size	Φ150 mm × 58.4 mm
Weight	424g

DTU (Data Transfer Unit)



COMMUNICATION

WiFi	802.11b/g/n
WiFi working modes	- STA Mode: Connects to other WiFi hotspots for network access - AP Mode: Acts as a hotspot for other devices to access the network
Ethernet	Support
Interfaces	- 2 RJ45 interfaces, one for LAN, one for WAN/LAN - 1 SMA connector for GNSS antenna - 1 12-pin wiring terminal for RS232, RS485 and UART2 with TTL level
LED indicator	5 LEDs indicating data, server, 4G (optional), WiFi and network

ELECTRICAL

Power supply	DC 6–26V, 2A
Typical input	DC 9V / 12V, 2A (peak 1–2A)
Power Connector	Terminal block & DC jack (5.5×2.1 mm)
Power current	- Transmitting: Average 200mA~300mA - Standby: Average 100-200mA

PHYSICAL & ENVIRONMENTAL

Size	105.4mm × 98mm × 25mm
Weight	0.3 kg
Working temperature	-40 C to + 85 C
Humidity	95% non-condensing

All specifications are subject to change without notice.

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S20

COST-EFFECTIVE BASE SOLUTION

Entry-Level Solution For CORS Network Construction



As precision farming continues to transform agriculture, more farmers are adopting high-accuracy systems such as auto-steering, GNSS land leveling, and guidance solutions. This growing adoption is driving the demand for high-precision CORS networks to deliver RTK corrections across large farmland areas.

To meet this need, the S20 CORS Solution is specially designed to deliver an easy-to-operate, cost-effective, and high precision CORS network—tailored to the practical requirements of modern farmers.



User-Friendly



High-Precision



Cost-Effective

Full-Constellation Tracking
Supports GPS, BDS, GLONASS, Galileo, and QZSS for stable GNSS correction and positioning.

Simple Setup
Combines the S20 smart antenna with a DTU module, quick to deploy and easy to use.

Standard Protocols
Compatible with NMEA-0183, RTCM v3.3/3.2/3.1/3.0 and other industry-standard formats.

IP67 Rugged Design
IP67-rated housing ensures durability in harsh field environments.

CORS MANAGEMENT PLATFORM

SINGULARCASTER
NTRIP CASTER/CORS PLATFORM



Full-Constellation Support
Supports GPS, BDS, GLONASS, Galileo, and QZSS for stable and reliable correction data.

CORS Station Monitoring
Enables real-time status monitoring and management of CORS stations for optimal performance.

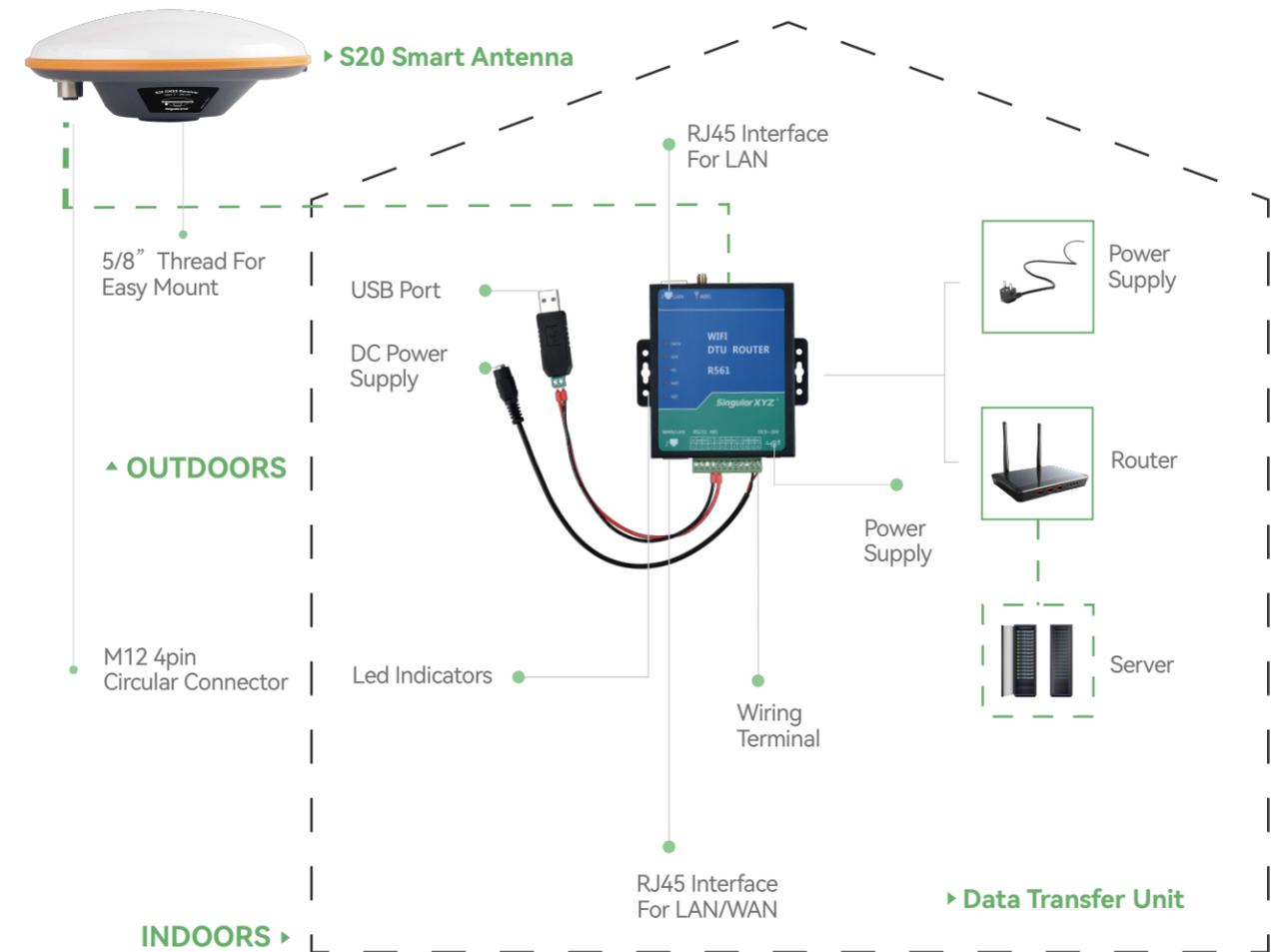
Standard RTK Corrections
Supports RTCM 3.X, RTCM 2.X formats, compatible with mainstream GNSS rover models globally.

Real-Time Rover Management
Provides real-time monitoring and management of connected users for streamlined operations.

Smart User Accounts
Efficiently manages user subscriptions and licenses, enhancing account management.

Easy to Get Started
User-friendly interface and free license for up to 3 reference stations, minimizing startup costs.

PRODUCT PARTS DIAGRAM



DEVICE CONFIGURATION TOOL



SINGULARCONFIG
DEVICE CONFIGURATION TOOL

- Easy configuration via serial and network ports.
- Fast serial port parameter matching for efficient setup.
- Simplified device management, reset, and upgrade.
- One-click execution of shortcut commands.