spire™

SP1 GNSS Receiver



LOCATION, SIMPLIFIED.

REAL-TIME READY RECEIVER

Our newest GNSS receiver simplifies location data collection. Achieve high-accuracy results with a light, compact design, one-button operation and the corrections services you need right out of the box. Built for rugged environments and long workdays, it offers seamless integration with mobile devices and data collection apps, making it a reliable companion for all GIS and asset mapping applications. It just works.

Whether you're working in remote areas or urban settings, this receiver adapts to your accuracy needs with support for SBAS, Network RTK, and future correction services. Gather meter to centimeter-level data with our dynamic helical antenna. With fast satellite acquisition, multi-constellation tracking, and extended battery life, it delivers consistent performance across a wide range of applications—from environmental monitoring to utility inspections.

ACCURACY
Data down to the 2-cm range.

WORLDWIDE CORRECTIONS
SBAS, Network RTK and future compatibilities.

COMPACT SIZE
Carry with ease our lightest receiver yet.

OPEN INTERFACE
Works with any platform.

SIMPLE TO USE
One-button operation, no external antennas or cables.

ALL-DAY BATTERY LIFE
From sunup to sundown, the battery will keep up with you and your workday.

JUNIPER® SYSTEMS

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spire™



JUNIPER RUGGED™
- Operating Temp: -20° C to +60° C (-4 F to +140° F)
- Storage Temp: -30° C to +60° C (-22 F to +140° F)
- IP68 rating (1 m for 45 min)
- Water resistant and dust proof
- Meets or exceeds MIL-STD-810H

INCLUDED ACCESSORIES
- AC power supply
- Adapter kit (EU/UK)
- USB-C cable
- 5/8-11 to 1/4-20 adapter
- User manual: available in English, French, German, and Spanish

DIMENSIONS
- External measurements in metric/imperial: 143mm X 78mm X 60mm (5.65in X 3.05in X 2.36in)
- Weight: 330 g (11.6 oz)
- Mount: 5/8-11 UNJC

COMMUNICATIONS
- Bluetooth® version 4.2 BR/EDR Class 1
- USB-C used data transfer and charging
- USB-C data transfer supported at 115200 Baud

STORAGE
- Device storage: 512 MB Flash memory

SOFTWARE
- Juniper Connect™ software provides configuration, communications setup, and receiver settings
- Available for:
- iPhone and iPad
- Android 8 or later
- Windows 10/11

WARRANTIES
- 24 months for Spire GNSS Receiver
- 90 days for accessories
- Extended service and maintenance plans

COMPATIBILITY
- Juniper Connect™ software provides configuration, communications setup, and receiver settings.
- Windows® 10 and later
- Android™ 8 and later
- iPad and iPhone. See our website for a full list of compatible Apple™ devices.

RECEIVER
- Receiver Type: GNSS multi-frequency
- Signals:
  - GPS: L1CA, L2C, L5
  - GLONASS: G1, G2I
  - GALILEO: E1BC, E5a, E6
  - Beidou: B1I, B1C, B2a, B3
  - QZSS: L1CA, L1CB, L2C, L5, L6
  - NavIC: SPS-L5
- Can track all major constellations and SBAS concurrently
- SBAS: WAAS, EGNOS, MSAS, GAGAN, BDSBAS, SouthPAN
- Update rate: 1 Hz standard (up to 20Hz[1])

ACCURACY[2]
- SBAS/SLAS: 0.7m (horizontal RMS)
- RTK (Fixed): 1.5cm + 1ppm (horizontal RMS)
- Autonomous: 1.2m (horizontal RMS)
- Cold Start: 27 sec typical (no almanac)
- Reacquisition: 2 sec

ANTENNA
- Internal precision quadrifilar helical antenna

RECEIVER PROTOCOLS
- Data I/O Protocol: NMEA-0183 4.11, UBX Binary (proprietary)
- Correction I/O Protocol: RTCM v3.x

POWER
- Rechargeable Li-Ion battery: 5500 mAh
- Run-time: 20 hours[3]
- Charging time: 6 hours
- Input Voltage: 5 V DC @ 3 A USB
- Power Consumption: 1 W nominal
- Overtime II Technology™ Battery: 3.6 V 5500 mAh Li-ion



1. Some NMEA messages reduced at higher data rates, consult Spire documentation.
2. GNSS accuracy subject to observation conditions, multipath environment, number of satellites in view, satellite geometry, and ionospheric activity.
3. Battery run time dependent on correction signals and temperature.

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