

CHCNAV

P5U

GNSS BASE STATION



PRECISION
AGRICULTURE

ADVANCED GNSS RTK CORRECTIONS SOLUTIONS

The P5U GNSS Base Station is a state-of-the-art GNSS RTK corrections package, featuring the P5U GNSS receiver and the DL8 external transmitter data modem. The advanced GNSS reference station offers multi-constellation tracking, substantial storage, and robust battery capacity, ensuring exceptional reliability and ease of use. Designed to withstand harsh environments, the P5U is equipped with shock resistance, voltage stabilization, lightning protection, real-time self-diagnosis, and status monitoring for uninterrupted operation. The DL8 UHF radio modem provides reliable base-to-rover GNSS RTK corrections broadcast over long distances, ensuring seamless operation in areas with poor or no cellular connectivity. The P5U GNSS station kit delivers precise positioning services across various demanding precision farming applications.

SUPERIOR GNSS TRACKING

The P5U 624-channel GNSS receiver tracks signals from GPS, GLONASS, Galileo, BeiDou, and SBAS satellites. Superior tracking with exceptional GNSS raw data quality forms the backbone of GNSS single-stations and networks, optimizing the broadcast of GNSS RTK corrections. Using the P5U GNSS leads to superior positioning accuracy for GNSS auto-steering systems and other GNSS RTK devices used in precision agriculture.

FLAWLESS GNSS DATA

The P5 GNSS receiver is designed for industrial applications, boasting an IP67 rating for water and dust resistance. Its rugged design ensures continuous operation even in challenging environmental conditions, reducing downtime due to moisture or dust. Its advanced power supply guarantees uninterrupted operation 24/7, always providing reliable GNSS RTK corrections integrity.

POWERFUL GNSS RTK BROADCAST PERFORMANCE

The DL8 UHF radio modem offers outstanding performance and reliability for long-range GNSS RTK applications in harsh environments. With a maximum transmission power of 28W and selectable channel spacing of 12.5 kHz or 25 kHz, the DL8 ensures robust signal transmission. Its all-weather, IP67-rated rugged design withstands water and dust, ensuring dependable operation under any condition.

VERSATILE PROTOCOL AND DATA FORMAT SUPPORT

The P5U system supports industry-standard GNSS RTK correction formats, including CMR, RTCM2.x, and RTCM 3.x. Additionally, the DL8 supports most common UHF data transmission protocols, including CHCNAV, Transparent, and TT450S. Its versatility maximizes compatibility with a wide range of GNSS receivers, allowing seamless integration and operation in most applications.

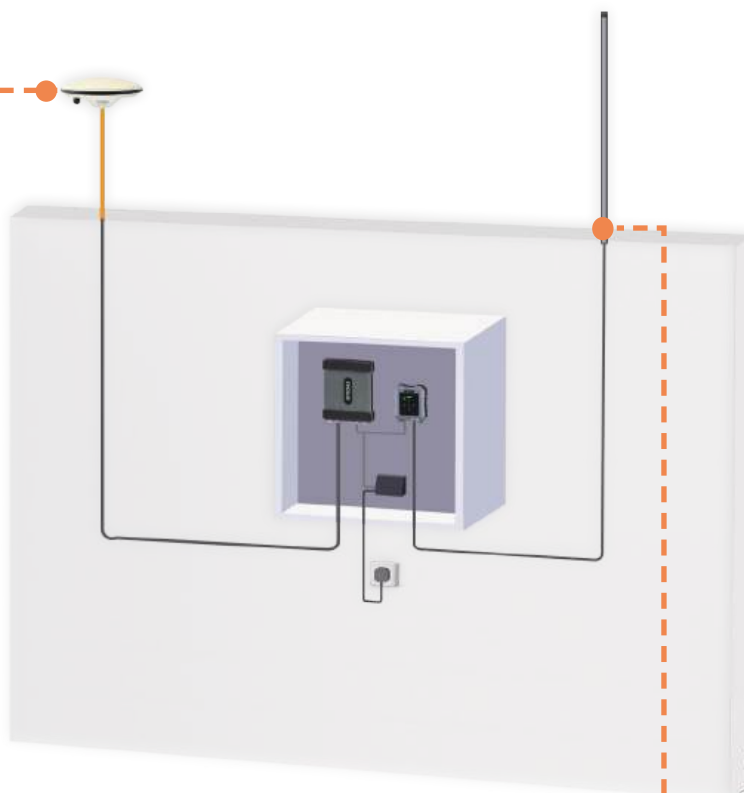


PROFESSIONAL GNSS

- GPS, GLONASS, Galileo, BDS, QZSS, SBAS
- Superior GNSS Tracking

P5U BASE STATION & DL8 MODEM

- 624-channel GNSS receiver
- Radio with 28 W maximum output
- Mains power available



BROAD COMPATIBILITY

- GNSS Correction Protocol: CMR, RTCM2.X and RTCM3.x
- Radio Protocol: CHC, Transparent, TT450S, SATEL 3AS
- Compatible with NX510 SE, NX510 Steer Ready, ER-2

SPECIFICATIONS

GNSS characteristics	
GPS	L1C/A, L2C, L5
GLONASS	L1C/A, L2/A
Galileo	E1, E5A, E5B
BeiDou	B1, B2, B3, B1c, B2a
QZSS	L1C/A, L2C, L5
SBAS ⁽¹⁾	L1
GNSS accuracies ⁽²⁾	
Real time kinematic (RTK)	Horizontal: 8 mm + 1 ppm RMS Vertical: 15 mm + 1 ppm RMS Initialization time: <8 s Initialization reliability: >99.9%
Post-processing static	Horizontal: 2.5 mm + 0.5 ppm RMS Vertical: 5 mm + 0.5 ppm RMS
Post-processing static (long observation)	Horizontal: 3 mm + 0.1 ppm RMS Vertical: 3.5 mm + 0.4 ppm RMS
Hardware	
Environment	Operating: -40°C to +65 °C (-40°F to +149°F) Storage: -45°C to +80°C (-49°F to +176°F)
Humidity	100%
Ingress protection	IP67 waterproof and dustproof, protected from temporary immersion to depth of 1 m
Shock	IEC68-2-27
Electrical	
Power consumption	5 W (depending on user settings)
Internal battery capacity	17,000 mAh, 7.4 V
Operating time on internal battery ⁽³⁾	Up to 20 h (depending on receiver configuration)
External power	9 V DC to 36 V DC

Communications and data storage	
Protocols	Correction formats: CMR, RTCM2.x, RTCM 3.x Observables: HCN, HRC, RINEX2.x, RINEX3.x Position/Status I/O: NMEA 0183 output Met sensor
Radio specifications	
Frequency bands	410 MHz to 470 MHz
Transmit power	Low: 5 W / 10 W / 15 W High: 20 W / 25 W / 28 W
Protocol	CHC, Transparent, TT450S, SATEL 3AS
Physical	
Size (L x W x H)	175 mm x 140 mm x 65 mm (6.9 in x 5.5 in x 2.6 in)
Weight	2 kg (70.5 oz)
Environment	Operating: -40°C to + 65°C (-40°F to + 149°F) Storage: -50°C to + 85°C (-58°F to + 185°F)
Ingress protection	IP67 waterproof and dustproof, protected from temporary immersion to depth of 1 m
Mount	Tripod bracket
Power	
External power	9 V DC to 16 V DC

*Specifications are subject to change without notice.
(1) SBAS will be provided through future firmware upgrade. (2) Accuracy and reliability are determined under open sky, free of multipaths, optimal GNSS geometry and atmospheric condition. Performances assume minimum of 5 satellites, follow up of recommended general GPS practices. (3) Battery life is subject to operating temperature.