



Building the intelligent world with precise time and space.



F4

GNSS SMART ANTENNA



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VERSATILE RUGGED ACCURATE

F4 is a versatile GNSS RTK receiver, perfect for various surveying and construction jobs, even in challenging environments.

GNSS CONSTELLATION TRACKING, ALL-AROUND AND FAST.

- GPS, GLONASS, Galileo, BeiDou and QZSS, 824 signal channels to track them all.
- Fast GNSS signal tracking for instant and accurate positioning even in challenging environments.

HIGH AND RELIABLE ACCURACY.

- Advanced multipath mitigation technology and low elevation tracking technology.
- Adaptive anti-interference capability to effectively suppress narrowband and single-tone radio interference.
- Users achieve accurate positioning even in complex electromagnetic environments.

FULL OF FUNCTIONS.

- As Base or as rover, RTK, PPK and Static.
- Via internal or external UHF, 4G network with SIM card either in receiver or in controller.
- Through various radio protocols, NTRIP or APIS.
- Built-in Wi-Fi modem, can even serve as a hotspot.

RUGGED AND RESISTANT.

- Magnesium alloy housing makes the F4 lighter and stronger.
- IP67 dust and waterproof.
- Resistant to 2 m drop.

LARGE-CAPACITY BATTERY.

- Built-in 9,600 mAh battery, up to 12 hours RTK operation (as a network Rover).



FL3

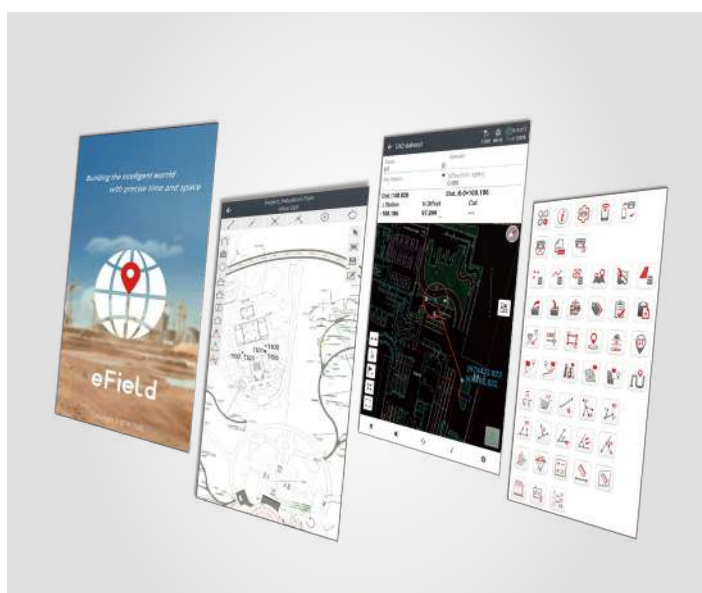
LONG-DISTANCE AND RUGGED DATALINK

- Long-distance transmission of RTK corrections.
- Easily adjustable transmission power rate to suit different environments and conditions.
- Optimized user interface for easy configuration and control of the data link.
- Rugged industrial design suitable for various challenging working environments.

FC1

DESIGNED FOR RELIABILITY AND PRODUCTIVITY IN FIELD WORKS

- High visibility screen.
- Fast and powerful processor.
- Robust industrial design.
- Integrated versatile features.
- Extended productivity.



eField

PRODUCTIVITY IS THE PRIORITY

- Comprehensive and intuitive for surveying and engineering.
- Strong graphic engine enables rich GIS and mapping features.
- Intuitive user interface makes the professional software easy to learn and easy to use.

TECHNICAL SPECIFICATIONS

GNSS Characteristics ⁽¹⁾	
Channels	824 ⁽²⁾
GPS	L1, L2, L5
GLONASS	L1, L2
Galileo	E1, E5a, E5b
BeiDou	B1, B2, B3
SBAS	L1
QZSS	L1, L2, L5

GNSS Accuracies ⁽³⁾	
Real time kinematics (RTK)	Horizontal: 8 mm + 1 ppm RMS Vertical: 15 mm + 1 ppm RMS Initialization time: < 10 s Initialization reliability: > 99.9%
Post-processing kinematics (PPK)	Horizontal: 3 mm + 1 ppm RMS Vertical: 5 mm + 1 ppm RMS
Post-processing static	Horizontal: 2.5 mm + 0.5 ppm RMS Vertical: 5 mm + 0.5 ppm RMS
Code differential	Horizontal: 0.4 m RMS Vertical: 0.8 m RMS
Autonomous	Horizontal: 1.5 m RMS Vertical: 3.0 m RMS
Positioning rate	Up to 10 Hz
Time to first fix ⁽³⁾	Cold start: < 45 s Hot start: < 10 s Signal re-acquisition: < 1 s

Hardware	
Size (L x W x H)	160 mm x 158 mm x 96 mm (6.3 in x 6.2 in x 3.8 in)
Weight	1.48 kg (3.26 lb)
Environment	Operating: -40°C to +65°C (-40°F to +149°F) Storage: -40°C to +75°C (-40°F to +167°F)
Humidity	95%
Ingress protection	IP67 waterproof and dustproof, protected from temporary immersion to depth 1m
Shock	Survive a 2-meter pole drop
Tilt sensor	EBubble leveling
Front panel	4 status LED 2 Buttons

Communication and Data Recording	
Network modem	Integrated 2G/3G/4G modem
Wi-Fi	802.11 b/g/n, access point mode
Bluetooth [®]	V4.1
Others	NFC
Ports	1 x 7-pin LEMO port (external power, RS-232) 1 x UHF antenna port (TNC female)

UHF radio	Standard Internal Tx & Rx: 410 - 470 MHz Transmit Power: 0.5 W to 2 W Protocol: CHC, Transparent, TT450 Range: Typical 3 km to 5 km
Data formats	CMR input and output RTCM 2.x, RTCM 3.x input and output NMEA 0183 output HCN, HRC and RINEX static formats NTRIP Client, NTRIP Caster

Data storage	8 GB high-speed memory
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Electrical	
Power consumption	3.8 W (depending on user settings)
Li-ion battery capacity	Built-in non-removable battery 9600 mAh
Operating time on internal battery ⁽⁴⁾	UHF receive/transmit (0.5 W) : Up to 7 h Cellular receive only: Up to 12 h Static: Up to 12 h
External power	9 V DC to 28 V DC

*All specifications are subject to change without notice.

(1) Compliant, but subject to availability of BDS ICD and Galileo commercial service definition. BDS B3 and Galileo E6 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) Typical observed values.

(4) Battery life is subject to operating temperature. Battery life may vary depending on operating temperature.

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