



# F7+ PALM-SIZE GNSS+IMU RECEIVER



# PALM-SIZE IMU-RTK WITH HIGH ACCURACY

Reduced weight, but performance is never compromised.

#### PALM-SIZE, FITS ALL IN YOUR HAND

- Good fit in the hand.
- Only 0.77 kg.
- Designed for productivity.

# FULLY INTEGRATED GNSS+IMU FOR GREATER EFFICIENCY

- Remain good accuracy even when F7+ is not held plumb.
- Reach to where it is difficult or dangerous to do centering or just when you want to be spared from it.
- Improve the efficiency by 30%.

#### RUGGED AND RESISTANT.

- Magnesium alloy housing makes the F7+ lighter and stronger.
- IP67 dust and waterproof.
- Resistant to 2 m drop.

#### SMART BATTERY MANAGEMENT, UP TO 12H RTK OPERATION

- Optimized power consumption allows to work 12 hours in RTK mode or 15 hours in static mode.
- F7+ supports charging from a mobile power bank, allowing it to be recharged anytime and anywhere.

#### FULL CONSTELLATION SUPPORT AND ADVANCED RTK ENGINE: FAST, ACCURATE, AND RELIABLE.

- GPS, GLONASS, Galileo, BeiDou and OZSS, 824 signal channels to track them all.
- Millimeter to centimeter accuracy thanks to advanced RTK algorithm.
- Adaptive anti-interference and multipath mitigation capabilities make precision reliable and stable.



#### 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	Performances (1)	
Channels	824 channels <sup>(2)</sup>	
GPS	L1, L2C, L2P(Y), L5	
GLONASS	L1, L2	
Galileo	E1, E5a, E5b	
BeiDou	B1I, B2I, B3I, B1C, B2a, B2b (3)	
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	1 Hz, 5 Hz and 10 Hz	
Time to first fix <sup>(4)</sup>	Cold start: < 45 s Hot start: < 10 s Signal re-acquisition: < 1 s	
RTK tilt - compensation	Additional horizontal pole-tilt uncertainty typically less than 10 mm + 0.7mm/° tilt	
Hardware		
Size (L x W x H)	119 mm x 119 mm x 85 mm (4.7 in × 4.7 in × 3.3 in)	
Weight	0.77 kg (1.60 lb)	
Environment	Operating: -40 °C to +65 °C (-40 °F to +149 °F) Storage: -40 °C to +85 °C (-40 °F to +185 °C)	
Humidity	100% condensation	
Ingress protection	IP67 dust and waterproof, protected from temporary immersion to depth 1 m	
Shock	Survive a 2-meter pole drop	
Tilt sensor	Calibration-free IMU for pole-tilt compensation. Immune to magnetic disturbance	
Front panel	4 status LED 2 Buttons	

Communication and Data Recording	
Wi-Fi	802.11 b/g/n, access point mode
Bluetooth <sup>®</sup>	v 4.1
Ports	1 x USB Type-C port (data download, charging, firmware update) 1 x UHF antenna port (TNC female)
UHF radio	Standard Internal Rx/Tx: 410 - 470 MHz Transmit Power: 0.5 W and 1 W Protocol: EFIX, Transparent, South TT450, Satel3AS Range: Typical 3 km to 5 km. Link rate: 4,800 bps/9,600 bps/19,200 bps
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 (on PDA network)
Data storage	8 GB high-speed memory
	Electrical
Power consumption	4 W (depending on user settings)
Li-ion battery capacity	Built-in non-removable battery 6,800 mAh
Operating time on internal battery (5)	RTK Rover: 12 h Static: up to 15 h
External power	5 V / 2 A

- (1) Compliant, but subject to availability of Galileo commercial service definition. 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) B2b can be supported by upgrading the firmware.
- (4) Typical observed values.
- (5) Battery life may vary depending on operating temperature and receiver working configurations.

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<sup>\*</sup>All specifications are subject to change without notice.