DATRONIX
LET'S MEASURE THE WORLD

D1 GNSS

Survey & Engineering

Leveraging the latest GNSS technologies, the D1 GNSS is a **smart receiver of the next generation**.

The **proven and outstanding performance** and **reliability** make it the preferred choice of surveyors and construction professionals.

The D1 GNSS benefits from a compact **ergonomic** and **rugged** design with integrated sensors (**4G** network **modem**, **UHF Radio**, **Wi-Fi**, **Bluetooth** and **Ebubble**).

Applications


D1 GNSS Specifications

DATRONIX

GNSS CHARACTERISTICS[1]	
Channels	624 channels
GPS	L1, L2, L2C, L5
GLONASS	L1, L2
Galileo	E1, E5a, E5b
BeiDou	B1, B2, B3
SBAS	L1
QZSS	L1, L2, L5

GNSS ACCURACIES[2]	
Real time kinematics (RTK)	Horizonal: 8 mm + 1 ppm RMS Vertical: 15 mm + 1 ppm RMS Initialization time: < 10 s Initialization reliability: > 99.9%
Post-processing kinematics (PPK)	Horizonal: 3 mm + 1 ppm RMS Vertical: 5 mm + 1 ppm RMS
Post-processing statico	Horizonal: 3 mm + 0.5 ppm RMS Vertical: 5 mm + 0.5 ppm RMS
Code differential	Horizonal: 0.4 m RMS Vertical: 0.8 m RMS
Autonomous	Horizonal: 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:< 1s

HARDWARE	
Size (L × W × H)	140 mm x 130 mm x 106 mm (5.5 in × 5.1 in × 4.2 in)
Weight	1.29 kg (2.8 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 of 1 m
Shock	Survive a 2-meter pole drop
Tilt sensor	EBubble leveling
Front panel	6 status LED

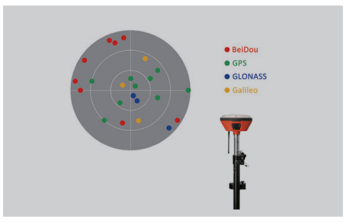
CERTIFICATIONS
CE Mark

COMMUNICATIONS AND DATA RECORDING	
Network modem	Integrated 4G modem
Wi-Fi	b/g/n, access point mode
Bluetooth®	V4.1
Ports	1 x 7-pin LEMO port (external power, RS-232) 1 x UHF antenna port (TNC female)
UHF radio	Standard Internal Rx/Tx: 410 MHz to 470 MHz Transmit Power: 0.5 W to 2 W Protocol: Transparent, TT450, CHC Range: 5 km optimal conditions
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

ELECTRICAL	
Power consumption Li-ion	3.8 W (depending on receiver configuration)
battery capacity	6800 mAh, 7.4 V
Operating time on internal battery [4]	UHF receive/transmit (0.5 W): Up to 7 h Cellular receive only: Up to 10 h Static: Up to 10 h
External power	9 V DC to 36 V DC

* Specifications are subject to change without notice.

[1] Compliant, but subject to availability of BDS ICD and Galileo commercial service definition. GLONASS L3, 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.




624 CHANNELS - FULL GNSS
High-precision tracking of GPS, GLONASS, Galileo, BeiDou and SBAS.

INTERNAL 4G NETWORK MODEM
Embedded 4G modem for stable network RTK connections. The E91 can also be set as Wi-Fi hotspot for the controller to access the Internet.

RUGGED DESIGN
The rugged and durable design meets the IP67 environmental standard for water and dust. The E91 can survive a 2 m drop onto concrete.

INTEGRATED UHF MODEM
D1 GNSS integrated UHF modem can be set at frequencies between 410 MHz - 470 MHz with up to 5 km working range.

INTERNAL 6800 mAh BATTERY
Internal 6800 mAh battery, D1 GNSS can work up to 12 h as RTK rover station under ideal conditions.