Technical Specification

Channels and Motherboard
220 channels BD970 Motherboard Equipped

GINTEC

GNSS

G9
Integrated RTK GNSS Surveying System

Satellite Tracking

GPS	L1C/A, L2C, L2E, L5
GLONASS	L1C/A, L1P, L2C/A, L2P
BEIDOU	B1, B2
GLOVE-A/GLOVE-B	Simultaneous L1 BOC, E5A, E5B, E5AltBOC1
SBAS	WASS, EGNOS, MSAS
Channel	220

Positioning Accuracy

Code difference position	Horizontal: ±0.25m+1ppm RMS Vertical: ±0.4m+1ppm RMS
SBAS(Typically)	Horizontal: ±0.5m RMS Vertical: ±0.85m RMS
Fast Static	Horizontal: ±3mm+0.5ppm RMS Vertical: ±5mm+0.5ppm RMS
High Precision Static (Long time observation)	Horizontal: ±2.5mm+0.1ppm RMS Vertical: ±3.5mm+0.4ppm RMS
Real Time Kinematic(<25km) Network Surveying	Horizontal: ±8mm+1ppm RMS Vertical: ±15mm+1ppm RMS
RTK initialization time < 10s	Initialization reliability>99.9%

Wireless Communication

Radio Modem	0.5W/2W optional internal transmit/ receive radio module, 410-470MHz

Network

Band: GSM/GPRS/EDGE 850/900/1800/1900 MHZ WCDMA/HSDPA 2100/1900/850 MHz
Output power: GSM850, EGSM900—33dBm(2W) GSM1800, PCS1900—30dBm(1W)，WCDMA-- 23dBm

Bluetooth	Bluetooth 2.0, Class 2
Differential Link	Support internal network, radio, external input, Bluetooth
Data format	CMR, CMR+, RTCM2.X, RTCM 3.X

Interface and Data

Interface	5Pin: Power+RS232 4Pin: RS232+USB, 2 TNC antenna interface
Key	Two (Power/Function key)
ASCII output	NMEA 0183
Output rate	The highest is 50HZ

Physical and Storage

Dimensions	Φ 18.8cm×9.4cm
Weight	1.32kg with battery
Operation temperature	-40℃ to +75℃
Storage temperature	-45℃ to +85℃
Waterproof	Ip67
Humidity	Non-condensation
Shock	Withstand 2 meters pole drop onto the cement ground naturally
Memory	Internal 256MB, up to 32GB Micro SD card expansion

Electrical

External power	DC 9V-18V (With overvoltage protection)
Battery capacity	Two 3400mAH rechargeable and removable Li-ion battery
Work Time	Static mode: 16h UHF base model:10h UHF rover model:12h Network model: 10h

CE RoHS

GINTEC

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GINTEC

Introduction

GINTEC G9 GPS is a complete GNSS survey system consisting of a receiver, collect, data collector software and office software. The combination provides excellent RTK and static survey experience. The GINTEC embeds the world's top class measurement engine (BD970 for G9) which ensures high precision, stable performance and fast tracking. The receiver can be used in stand-alone raw data recording setup or base / rover RTK setup.

Light-weight and high quality
1.32kg with battery, easy to carry. Ip67 protection level ensures the receiver can withstand most hazardous weather

Control panel
ON/OFF button, Function button and 14 indicator lights indicates the basic instruments status to improve efficiency

Battery compartment
3400mAh high capacity lithium battery CE/LVD/FCC/UN38.3/Battery Directive/UL certificate

SIM Card Slot
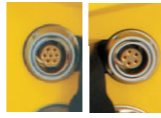Build in WCDMA modem supports low latency network RTK operation

Rubber Ring Sealling
Well protects the receiver from water, dust and drops

Bluetooth
Controller connect to receiver via bluetooth for data transmit. The operation range could reach up to 50m

Ports
Two LEMO ports in the bottom of receiver, 5 pins LEMO used for external power supply and external radio, 4 pins LEMO used for data transmit between receiver and PC.

Internal UHF radio and WCDMA Module
Build in data link to support flexible RTK setup

Wide Applications

RTK Survey
Static Survey
Rail/Road Survey
Electrical Wire Survey
Access to CORS
Stake-out
Hydrographic Survey
Data Collection

★ Support BEIDOU, GPS, GLONASS and Galileo

★ World class motherboard, BD970 for G9

★ 3G high-speed mode

★ Great capacity for searching satellite

★ Large memory 256MB+4G (extensible 32G) for massive data storage

★ IP 67 ROHS CE

★ Data collection up to 50Hz raw measurement & positioning outputs

★ High stability ensure the repair rate lower than 1%

Key features

Signal tracking
Designed for all current operating GNSS system including Beidou、GPS、GLONASS and Galileo

Top level measurement engine
The world class measurement engine BD970 provides high position accuracy, stable performance and fast satellites tracking

WCDMA modem
The WCDMA module greatly improves the quality of communication and data speed. Moreover, taking advantage of the fast-growing CORS network survey operation cost can be saved up to 30%

4 system GNSS antenna
The embedded GNSS antenna is capable of tracking GPS, GLONASS, BEIDOU and Galileo signals

Large memory
256MB+4G for massively data storage

Rugged and Durable
GINTEC receiver is rugged and durable, making it become a perfect survey tool to undertake heavy work in most hazardous outdoor conditions

Up to 50 Hz update rate
Data collecting can reach50HZ update rate

★ Post processing software support our original data file format and the RINEX format, and can calculate GPS\GLONASS\BEIDOU soon

Base Station

Built-in Transceiver
0.5W/2W,small-scale radio module operation is allowed without external radio; in addition, the optional external power ports is able to ensure the consistent operation.
XDL internal radio is compatible with Trimble\Leica\Topcon\South and other brands

Harxon DU860T External radio
An advanced, high-speed, wireless data link built to survive the rigors of precise positioning and environment monitoring applications GINTEC is able to compatible with the major popular RTK receiver products with DU860T Frequency spot can be set directly
Frequency : 410-470MHz

UHF Transmitting Antenna
The ALL-direction Antenna guarantees reliable signals in long distance
The antenna supports GPS\GLONASS\BEIDOU\GALILEO\QZSS

Rover Station

P7 controller is an industrial-grade RTK controller, it includes P7-C (without GSM module) and P7-H (with GSM module). P7 adopts Windows Mobile system, supports wireless communication and voice call. P7 also configure with high quality hardware, it's strong and durable. With industrial grade waterproof and dustproof protection, you can use it in the bad environment easily.

Specification

Harxom DU860T External Radio

TRANSCEIVER

Frequency Range	410MHz-470MHz
Tuning Range	60MHz
Channel Spacing	12.5kHz/25kHz(Selectable)
Frequency Stability	<1kHz
Type Of Emission	F1D
Communication Mode	Half-duplex

TRANSMITTER

Carrier Power	5W/35W@50 ohm
Carrier Power Stability	±1.5dB
TX Duty	100%@25 ℃/@35℃ 40%
25W	30min/20min no limit
5W	no limit/1 hour no limit

DATA MODEM

Electric interface	RS232
Interface Connector	IP67,5PIN LEMO
Data Speed of Serial Interface	38400bps
Data Speed of Radio Interface	19200bps@25kHz
	9600bps@25kHz
DATA Format	Asynchronous data

GENERAL

Operating Voltage	+9v~+16v
Power Consumption	Receiver MODE:1.0W
	Transmitter Mode:90W@100%Duty
Operation Temperature	-40℃~+65℃
Store Temperature	-40℃~+85℃
Antenna Connector	TNC,50ohm,female
Construction	Aluminum Enclosure
Size H×W×D(mm)	180*140*75
Weight(kg)	1.4
IP Classification	IP67