# GALAXY G3

— Supercharged Pocket RTK —

# SPECIFICATIONS

## GNSS Features

Channels………………………………………………….……1598
GPS………………………………………………… L1, L1C, L2C, L2P, L5
GLONASS……………………………………….L1C/A,L1P,L2C/A,L2P,L3*
BDS…………………………………………….. BDS-2: B1I, B2I, B3I
BDS-3: B1I, B3I, B1C, B2a, B2b*
GALILEOS……………………………….…..…… E1, E5A, E5B, E6C, AltBOC*
SBAS(WAAS/MSAS/EGNOS/GAGAN)……………………………….……L1*
IRNSS……………………………………………….……... L5*
QZSS…………………………………………………....L1, L2C, L5*
MSS L-Band……………………………………………….….... BDS-PPP
Positioning output rate………………………………………1Hz~20Hz
Initialization time……………………………………………………… < 10s
Initialization reliability……………………………………….……….. > 99.99%

## Positioning Precision

Code differential GNSS……………… Horizontal: 0.25 m + 1 ppm RMS
Vertical: 0.50 m + 1 ppm RMS
Static(long observations)……………Horizontal: 2.5 mm + 0.1 ppm RMS
Vertical: 3 mm + 0.4 ppm RMS
Static…………………………….………Horizontal: 2.5 mm + 0.5 ppm RMS
Vertical: 3.5 mm + 0.5 ppm RMS
Rapid static…………………………... Horizontal: 2.5 mm + 0.5 ppm RMS
Vertical: 5 mm + 0.5 ppm RMS
PPK…………………………………………Horizontal: 3 mm + 1 ppm RMS
Vertical: 5 mm + 1 ppm RMS
RTK(UHF)………………………………………Horizontal: 8 mm + 1 ppm RMS
Vertical: 15 mm + 1 ppm RMS
RTK(NTRIP)…………………………… Horizontal: 8 mm + 0.5 ppm RMS
Vertical: 15 mm + 0.5 ppm RMS
RTK initialization time……………………………………………………2 ~ 8s
SBAS positioning…………………………………… Typically < 5m 3DRMS
BANDA-L………………………………… Horizontal: 5-10cm (5-30min)
Vertical: 10-30cm (5-30min)
IMU………………………………………Less than 10mm + 0.7 mm/° tilt to 30°
IMU tilt angle……………………………………………………….………0° ~ 60°

## Hardware Performance

Dimension…………………………………130mm(W) ×130mm(L) × 80mm(H)
Weight……………………………………………...……..790g (battery included)
Material……………………………………… Magnesium aluminum alloy shell
Operating temperature………………………………………… -45℃ ~ +75℃
Storage temperature……………………………………………… -55℃ ~ +85℃
Humidity……………………………………………… 100% Non-condensing
Waterproof/Dustproof……………………….. IP68 standard, protected from long
time immersion to depth of 1m
IP68 standard, fully protected against
blowing dust
Shock/Vibration……………………………… Withstand 2 meters pole drop onto
the cement ground naturally
MIL-STD 810G
Power supply……………………………….. 6-28V DC, overvoltage protection
Battery…………………………………… Inbuilt 7.2V 6800mAh rechargeable,
Li-ion battery
Battery life………………………………………..15h(Rover Bluetooth mode)

## WIFI

Modem…………………………………………………………… 802.11 b/g standard
WIFI hotspot…………AP mode, Receiver broadcasts its hotspot form web UI
accessing with any mobile terminals
WIFI datalink……..Client mode, Receiver can transmit and receive correction
data stream via WiFi datalink

## Communications

I/O Port…………………………....…… 5-PIN LEMO external power port + RS232
Type-C(charge, OTG to USB disk,
data transfer with PC or phone, Ethernet)
1 UHF antenna TNC interface
Internal UHF……………………………..…………2W radio, receive and transmit,
radio router and radio repeater
Frequency range……………………………………………...…….410 - 470MHz
Communication protocol………………..……… Farlink, Trimtalk450s, SOUTH,
HUACE, Hi-target, Satel
Communication range………………...……… Typically 8km with Farlink protocol
Bluetooth………………...……..Bluetooth 3.0/4.1 standard, Bluetooth 2.1 + EDR
NFC Communication………………Realizing close range (shorter than 10cm)
automatic pair between receiver and
controller (controller requires NFC
wireless communication module else)

## Data Storage/Transmission

Storage…………………………………………………………………….. 4GB SSD
Automatic cycle storage (The earliest data
files will be removed automatically while the
memory is not enough)
Support external USB storage
Data transmission……....………Plug and play mode of USB data transmission
Supports FTP/HTTP data download
Data format…..…………Static data format: STH, Rinex2.01, Rinex3.02 and etc.
Differential format: RTCM 2.3, RTCM 3.0,
RTCM 3.1, RTCM 3.2
GPS output data format: NMEA 0183, PJK plane
coordinate, SOUTH Binary code
Network model support: VRS, FKP, MAC,
fully support NTRIP protocol

## Sensors

Electronic bubble……………..……… Controller software can display electronic
bubble, checking leveling status of the
carbon pole in real-time
IMU……………………………………………….Built-in IMU module, calibration-free
and immue to magnetic interference
Thermometer………..………. Built-in thermometer sensor, adopting intelligent
temperature control technology, monitoring
and adjusting the receiver temperature

## User Interaction

Operating system……………………………………………………...………..Linux
Buttons……………………………………………………………………......One button
Indicators…………………………..……………5 LED indicators(Satellite, Charging,
Power, Datalink, Bluetooth)
Web interaction…………..……… With the access of the internal web interface
management via WiFi or USB connection, users
are able to monitor the receiver status and
change the configurations freely
Voice guidance………………It provides status and operation voice guidance,
and supports Chinese/English/
Korean/Spanish/Portuguese/Russian/Turkish
Secondary development……………...………Provides secondary development
kit, and opens the OpenSIC observation
data format and interaction interface definition
Cloud service………………...………The powerful cloud platform provides online
services like remote manage, firmware update,
online register and etc.