

G30 Gnss Receiver

User Manual

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Chapter I: Overview

In this chapter, you will learn about Gintec Team and G30 Gnss Receiver.

§1.1 Introduction

Welcome to use GNSS products of GINTEC team (Guangzhou <u>G</u>eosurv <u>In</u>formation <u>Tec</u>hnology Co.,Ltd). Our team has been committed to popularize the advanced GPS surveying and mapping technology and products to the hands of measurement users. If you want to know more about us, please visit the official website: http://www.gintec.cn/.

This manual is G30 measurement system as an example, for how to install, set up, upgrade, daily maintenance, the use of accessories and how to use RTK system operation to explain. Even if you have used other models of RTK products of our company, it is recommended that you read this instruction carefully before using the instrument for better use.

§1.2 Highlights of G30

Faster Fixed solution

BeiDou SOC chip with ROS new system, fixed faster, more stable accuracy.

Smaller in size, lighter in weight

Diameter 135mm× height 84mm, 910g; Small size and light weight, more suitable for field work.

➢ SOC chip

Nanometer-level manufacturing process, super integrated design, smaller volume, lower power consumption.

Ultra-long endurance

Built-in 6800mAh high-performance lithium battery, 18 hours of super long battery life, one charge, meet the whole day of operation.

Support the power supply scheme of charging bank, power supply anytime and anywhere, to meet the needs of higher intensity operations.

> Type-c +PD, convenient and efficient

Type-c interface design and PD fast charging scheme make charging and transmission more convenient and efficient

➢ All constellation all frequency point

Full constellation full frequency point reception, fully support Beidou third generation satellites, support ups to 16 frequency signal calculation.

Built-in radio with high performance

Built-in transceiver integrated radio, working frequency 410-470MHZ, Trim talk 450s, TrimMarkIII, SOUTH, CHC, SATEL, HI-TARGET are all compatible. The "Farlink" protocol perfectly solves the problem of large data volume of multiple constellations transmission. And the power consumption can reduce about 60% in the same amount of data transmission compare to the traditional RTK, increase the sensitivity and efficiency of radio signal, achieve the typical working range as 5km operation, and meet the needs of customers for small and medium scale.

Smart locking to base station

Based on Farlink "instant" protocol, one-to-one signal tracking and locking technology can realize the continuous tracking and locking of the target base station signal, and effectively eliminate crosstalk and interference.

Inertial tilt measurement

Built-in IMU inertial measurement sensor, with $0^{\circ} \sim 60^{\circ}$ super-large angle, 200HZ ultra-high update rate, can automatically correct the coordinates according to the tilt direction and Angle of the centering bar, the user does not need to strictly be centering, lifting the bar to measure.

Base station movement alert

Built-in IMU sensor can always read the attitude information, when the base station movement, tipping can accurately judge and remind.

b Double backup of data:

Field measurement data can be stored in the book and the host at the same time to realize double backup and effectively avoid data loss.

PPP function optional

Optional PPP differential function can provide centimeter-level differential positioning services in

the Asia-pacific region.

Chapter II: Product Introduction

By reading this chapter, you can master the composition, installation, and functions of the G30 measurement system in detail.

§2.1 Introduction

G30 measurement system is mainly composed of host, manual and accessories, as shown in the figure:



Schematic diagram of G30 measurement system

§2.2 Introduction of G30

§2.2.1 Structure and Interface





Structure and Interface	APPLICATION	
Five-pin power interface	As a power interface, can be connected to power bank and other power supply equipment. As a serial port output interface, you can view the output data and debug G30 through the serial port software	
UHF antenna interface	Connecting build-in radio antenna	
Type-C interface	Charging and data transmission	
Connecting screw hole	Used to fix the G30 on the base or pole	
Serial number	To identify each device and register code	
Sticker and NFC	To show some information about G30, or connect to Bluetooth by pressing the controller close here	

§2.2.2 Buttons and Indicators

G30 has four indicators and one button .:

-	Contraction of the	
	<u>+t</u>	* 0
Buttons and indicators	Function	Condition
	Switch on/off,	Power on, power off, confirm the
	confirm, modify	modification item, and select the modification content
*	Bluetooth indicator	Always on when Bluetooth is connected
		Radio mode: Blink by receiving interval
		or transmitting interval.
		1) Blink fast during network dial-up and
1t	Data indicator	WIFI connection (10Hz)
		2) After successful dialing, blink by
		receiving interval or transmitting interval.
		Static mode: When recording data, blink
		at the set collection interval
		It starts flash every five seconds, and the
L::n	Satellite indicator	number of flashes represents the number of
		locked satellites
0	Power light	Always on when the battery is full; Flicker
		when power is low(<10%)

§2.2.3 Function of Button

I Mode checking

When G30 is working normally, click the power button, then a voice will broadcast the current working mode.

I Power on

In shutdown state, long press the power button, when G30 tick and all the lights on, release the button and G30 will power on.

II Power off

In boot on state, long press the power button, when the voice broadcast "power off", release to shut down $\ _{\circ}$

IV Mode setting

In boot on state, press the power button for more than 6 seconds and release, G30 will say "Start to set work mode", then take turns playing the various work modes. Click to select the mode you want to set when broadcasting

V Self-check

In power-on state, long press power key about 10 seconds until the it read "Start to self-check", release the key and start self-test.

No matter the self-check passes or fails, it will announcement the result. After a few seconds, the instrument will restart automatically if it passes.

If the self-check fails, G30 will remain in the state of self-test result and will not be restarted to identify the problem

VI Restore factory setting

Long press the power button for more than 20 seconds and it will say "start to restore manufactory default", release to restore factory settings.

§2.3 P9III Controller

§2.3.1 Appearance



§2.3.2 Keyboard



No.	Key	Description
Number	Number keys	0-9, input number keys (also can be used to make phone call in
/alphabet		special model.)
keys		The second function keys (Press "Shift" key at the same time) :
-		1- ! ,2- @,3- #,4- \$,5- %,6- ^,7- &,8-*,9- (,0-)
	Alphabet keys	A-Z, input alphabet.
	~	Move up and down or left and right in the screen menu.
	$\triangleleft \Leftrightarrow \triangleright$	Under function key state, use up and down keys to adjust
		volume.
		Under function key state, use right key to lock the upper caps.
1	Power	Turn on/off the device.
2	Tab	Tabulation
3	Shift	Short press shift key to switch Chinese / English input method,
		long press Shift key to switch Fn function key in number area or
		to switch English input upper / lower case.
4	Menu	System settings
5	Home	Back to Home screen.
6	Return	Return to previous interface
$\overline{\mathcal{O}}$	Measure	Press it to open or switch to the controller software interface. If
		in the controller software interface, press it to collect data.
1	OK	Confirm information
9	Delete	Delete a character forward
(10)	Dot	Input decimal point
(11)	Space	Input space
(12)	+-	Input +/-

§2.3.3 Connector



Connector of P9III controller

Function description of connector

No.	Port	Description
1	USB Type-C	To charge device and transmit data. Support USB OTG.
2	TF card slot	To install TF card.

§2.3.4 Bluetooth Connection

Start the G30 first, and then use P9III controller to perform the following operations:

20191113	No data Age0	• ℃ 8 ° 88	← Comm	unication	← Commu	
			Device manufacturer	GINTEC >	Device manufacturer	GINTEC
Communication	Rover	Base	Device Type	rtk(g30) $>$	Device Type	
			Communication Mode	Bluetooth >	Communication Mode	
	10	Y	Bluetooth Device List		Bluetooth Device List	````
Static	Device Information	Inspection Accuracy	G912BB148603128	64:C4:03:F7:09:2F	G912BB148603128	64:C4:03:F7:09:2F
	-		M00677	98:D3:51:FE:06:1A		
To			TRU3011030006	BF:18:18:62:63:73	Connection prog	ress
Device Settings	Device Activation		G912BB148603120	64:C4:03:F7:0C:CF		
			G912BB148603126	64:C4:03:F7:0F:27	Get Device Info	
			Honor xSport AM61	E0:9D:FA:93:33:3C		CANCEL
			1121080019	34:81:F4:22:98:DC	1121080019	34:81:F4:22:98:DC
			G912BB148603124	64:C4:03:F7:09:65	G912BB148603124	64:C4:03:F7:09:65
			Z31206567018704	64:69:4E:7C:5E:5A	Z31206567018704	64:69:4E:7C:5E:5A
			N910B9148510393	00:25:CA:59:AF:34	N910B9148510393	00:25:CA:59:AF:34
			HONOR Band 5-02D	E0:24:81:20:00:2D	HONOR Band 5-02D	E0:24:81:20:00:2D
			N910B9148510395	00:25:CA:59:AC:66	N910B9148510395	00:25:CA:59:AC:66
		3.4	G912BB148603119	64:C4:03:F7:06:DC	G912BB148603119	64:C4:03:F7:06:DC
	<u>₹</u>	×	Search	Connect	Debug	

1. Open SurPad/Create Yours software and click "Communication" to enter the connection

interface.

2. Select the manufacturer as "Gintec", the device as "G30", and the communication mode as "Bluetooth".

3. Select the corresponding SN and click "Connect". The connection succeeds after the progress bar ends.

§2.4 Introduction of Accessories



§2.4.1 Instrument Container



§2.4.2 Charger

Standard configuration includes charger and charging cable:

While charging, when the power indicator is red, it means charging; when the indicator is green, it means full.

Power adapter and charging cable:



§2.4.3 UHF Radio Antenna



UHF radio antennas are required for the built-in radio Base mode and the built-in radio Rover mode.

§2.4.4 TYPE - C Cable

TYPE - C cable is to connect the G30 with computer, used for transmission of static data or receiver firmware upgrading.



Chapter III: Mode Setting

§3.1 Static Mode

1) Set up a tripod at the control point, connect the tribrach, strictly center and level the measuring point.



- 2) Measure instrument height for three times, and the difference between the three times shall not exceed 3 mm and take the average value.
- 3) Record SN, point name, instrument height and start time.

20211221	SINGLE Age0	* ** 45 ##	← Static mode setti	ngs
			Options Settings	
		T.	Point name	31:
Communication	Rover	Base	PDOP limit	3.0
	78	9	Cut-off angle	10
Static	Device Information	Inspection Accuracy	Collection Interval	1HZ
0	-		Auto Record Static Data	
To			Antenna Parameters	
Device Settings E	Device Activation		Antenna Measured Height	1
			Antenna Height fro Measurement Type	om Phase Center
			Antenna Height	1
	<u>ହ</u> ତୁ	×		

4) Switch on the G30 and connect with controller software, set the receiver to static mode, and set the parameters as the picture shows. (The memory capacity of G30 must be sufficient.

Generally, 8 MB storage capacity is required in an hour.)

- 5) G30 starts to search for satellite and the satellite lights start flashing. When the recording condition is reached, the status light will flash at the set sampling interval, and the flash indicates that an epoch is collected.
- 6) After the surveying finished, shut down G30, and then transport the data and process data.

§ 3.2 RTK Mode (External Radio)



§3.2.1 Base Setup

Base station must be set up in the open field, the surrounding environment should be open, the terrain should be higher. Do not set it up near high-voltage power transmission, transformation equipment, near radio communication equipment antenna, or under trees and near water.

Setting steps:

- 1) Set up the tripod as shown in the figure above, hang up the radio, fix the G30, and connect the extension rod and the large radio transmitting antenna.
- Connect G30 by 5-pin data transmission cable with external radio. Connect the battery with Radio by Y-type power cable.



(G30)

(External Radio)

(Battery)

§3.2.2 Starting Base

Used TRU35 external radio as an example to show the process, and if has another radio, please consult the technicist.

1) Open SurPad in the controller, Click "Device"→ "Base" to set Base station.

20200103 SINGLE 35 35 35 35 35 35 35	← Base mode settings	\leftarrow Base mode settings
	Configurations > Base ID 11 (2)	Configurations > Base ID 11 ③
	Start Up Mode Single Point > Diff Mode RTCM3.2 >	Start Up Mode Single Point > Diff Mode RTCM3.2 >
Static Work Mode ^{2.} Configurations Status	Base Data Link	Base startup
🚯 🚱 🐻	Recol Device Internet	Record raw data
Device Calibrate Device Settings	Connec External Radio	Baud Rate 38400 >
Default radio Restart Device settings Positioning Activation	Auto connect to network	
1.	Operator >	
A P X	User	Advanced Save Apply Apply

- 2) Under "Base Mode Settings", Choose "Data link" to be "External Radio" and apply.
- Disconnect G30 receiver and Open "External Radio Configuration" under "Tools" in SurPad.

← Comm	unication	20200103	No data 0 Age0 0	• > =
Device manufacturer	geo >	42		
Device Type	RTK >	Localization	Coordinates	Angle Converter
Communication Mode	Bluetooth >		Converter	
Bluetooth Device List	8		X	
G1003619000064	C8:DF:84:66:A0:F8	Perimeter and	COGO	Calculator
F90029910043	AA:AA:AA:AA:AA:AA	Area	Calculation	
F90023910009	88:3F:4A:CA:28:BF			100
F90023910047	F0:B5:D1:70:9C:63			
F90013811011	2C:6B:7D:18:87:2D	External Radio	Volume	Add offsets
F90023910010	88:3F:4A:CA:18:5D	configuration	Calculation	to points at specified period
F90023910035	F0:B5:D1:6F:EF:7B		-	
F90013811001	2C:6B:7D:19:F8:51	TTP		
F90023910057	F0:B5:D1:7A:35:33	FTP Shared	Share	
F90029910043	D4:53:83:5F:87:F9	Data		
F90029910025	D4:53:83:60:A5:28			
F90029910046	D4:53:83:5B:F7:73			
F90023910001	F0:B5:D1:70:3E:39			
Debug	Stop	ff Project D		

4) In "External Radio configuration", choose "Radio type" to be "Geoelectron" and

"Connection mode" to be "Bluetooth", then search TRU35 radio and connect it.(Pairing code is "1234").

← Radio Mode	e	\leftarrow Functional selection		← Paramete	er setting
Radio type	Geoelectron >	Parameter setting	>	Parameter setting	
Connection mode	Bluetooth >	Channel detection	>	Receiving channel frequency	Custom $>$
Search bluetooth device list				1: 441.000000	2: 442.000000
		Equipment information	>	3: 443.000000	4: 444.000000
		Temperature control	>	5: 445.000000	6: 446.000000
		Radio control	>	7: 447.000000	8: 448.000000
		Firmware undate		Transmitting channel frequency	Custom $>$
		rinnware update	~	1: 441.000000	2: 442.000000
				3: 443.000000	4: 444.000000
				5: 445.000000	6: 446.00000
				7: 447.000000	8: 448.000000
				Current channel	7 >
,				Radio Protocol	TrimTalk 450S >
				Transmistting baud rate	9600 >
				Emissive powe. Read co	mpletion LOW >
Search	Connect			Get	Settings

5) After connected, you will come to "Functional selection" interface, click "Parameter settings", click "Get" to receive TRU35 parameters and there to change the "Receiving channel frequency", "Transmitting channel frequency" and other settings, then press "Settings" to finish settings.

§3.2.3 Rover Setup

After successful set up of the base station, now we can start the rover setting.

Install the G30 on the centering lever, install the radio antenna, bracket, clamp the controller.



The steps are as follows:

- 1) Turn on the G30 and controller, open SurPad software and connect Bluetooth.
- 2) Clip "Device" "Rover", choose "Data link" as "Internal Radio", and choose the same channel and protocol as Base. Clip "Apply" to start rover.

20211221	No data	** ***	•	Rover mod	de settings
			0	Cut-off angle	5 >
Communication	Rover	Base	F	Record raw data	0
		-	E.	Data link	Internal Radio $>$
墨	10	9	0	Channel	1 >
Static	Device Information	Inspection Accuracy	F	Frequency	441
			F	Protocol	FarLink >
Device Settings	Device Activation		E	Base Coordinates Chang	ge Alert
<u>^</u>		**			
Project		Tools		Advanced	Apply

3) When it shows "Fixed", it is correctly setting, now you can start the surveying work.

§ 3.3 RTK Mode (Internal Radio)

§3.3.1 Base setup

Base station must be set up in the open field, the surrounding environment should be open, the terrain should be higher. Do not set it up near high-voltage power transmission, transformation equipment, near radio communication equipment antenna, or under trees and near water.



Set up the tripod as shown in the figure above, fix the G30, and connect the radio antenna.

§3.3.2 Starting Base

1) Open SurPad in the controller, Click "Device" \rightarrow "Base" to set Base station.

20200103	SINGLE 35 🤠	× ==	← Base m	node settings
			Base ID	11 😒
Communication	Pover B		Start up mode	Use Current Coordinates 🗦
		use	Diff mode	RTCM3 >
	<i>C</i> o / (8	Base startup	
Static	Work Mode ^{2.} Config Status	urations	Record raw data	$\bigcirc \circ$
			Data link	Internal Radio 🗦
Device	Calibrata Davias	Cattions	Channel	2 >
Information	Sensor	settings	Frequency	442
63	78	#	Protocol	TRIMTALK >
Default radio settings	Restart De Positioning Activ	evice vation		
1				
A Project		× Tools	Advanced	Apply

2) Under "Base Mode Settings", Choose "Data link" to be "Internal Radio", set the channel, frequency and protocol, then apply to finish setting.

§3.3.3 Rover Setup

This step is the same as §3.2.3 Rover Set up, please check this section.

§3.4 RTK Mode (Network mode)

§3.4.1 Base Setup

Base station must be set up in the open field, the surrounding environment should be open, the terrain should be higher. Do not set it up near high-voltage power transmission, transformation equipment, near radio communication equipment antenna, or under trees and near water.

Set up the tripod as shown in the figure above, fix the G30, and connect the radio antenna.

§3.4.2 Starting Base

 After setting, please make sure there is a workable Sim card inside G30 base. Then open SurPad in the controller, Click "Device"→ "Base" to set Base station.

0 20200103	SINGLE 35	🥃 🔆 🌐	← Base mo	ode settings	~	со	RS server mai	nager
			Base ID	11	No.	Name	IP	Port
	Ţ	釆	Start up mode	Use Current Coordinates 🗦		-		-
Communication	Rover	Base	Diff mode	rtcm3 >		-		-
	Co		Base startup			20	1000	o
Static	Work Mode Status	² . Configurations	Record raw data			10.1	_	-
			Data link	Device Internet >			-	
Device	Calibrata	Device Settings	APN Settings					-
Information	Sensor	Device Settings	Operator	>				
63	7		Name	CMNET				
Default radio	Restart	Device	User	CARD				
settings	Positioning	Activation	Password	🕲				
1.			CORS Settings	-				
			Name	G >				
		16	Base access point	galaxy				
Project De	avice Surv	ey Tools	Advanced	Apply	,	ıdd	Edit Del	lete OK

- Under "Base Mode Settings", Choose "Data link" to be "Device Internet", then go to set Cors parameter. (When use "Device Internet", please input the correct the APN setting as your mobile network service provider ask for)
- 3) Clip "Add" in the Cors setting page, then import your Cors "IP" and "Port", then choose the Cors information you set, clip "OK".
- 4) Input the name you want in "Bae access point", and you can also input "password", then apply. (Remember what you have input, it will be useful when you set up rover).

← Server Address ← CORS server manager
Name Test No. Name IP Port
IP 192.168.10.1
Port 1234 🕲
Contraction and the second second
a de la constante de
8 Test 192,168,10,1 1234

§3.4.3 Rover Setup

After successful set up of the base station, now we can start the rover setting. Install the G30 on the centering lever, install the radio antenna, bracket, clamp the controller.

The steps are as follows:

1) Turn on the G30 and controller, open SurPad software and connect Bluetooth.

- 2) Clip "Device" "Rover", choose "Data link" as "Phone/Device Internet"(When use "Device Internet", please input the correct the APN setting as your mobile network service provider ask for).
- 3) Clip "Cors Setting" and choose the same item as what your base used.
- 4) "Get Access Point" and choose the access point as your base setting. Clip "Apply" to start rover.



4) When it shows "Fixed", it is correctly setting, now you can start the surveying work.

Chapter IV: WEB UI

§4.1 WebUI Login

Start the G30 properly, use a mobile terminal such as a laptop or mobile phone, open wifi, and find the G30's hotspot. The hotspot name format is "GINTEC_XXXX"(GINTEC_3260). After connecting successfully, enter 192.168.10.1 in the browser and go to the WebUI background page.

A rwkj	admin 3302 G912BC148613302 [logout]	> Position Information	
≜ ∉rwkj3	U Status ↔	Lat: 23'9'54 253857'N Lon: 113'25'49 285079'E RTK Status:	Alt: 59/644132m Ellipsoid: WGS-84
a.	K Satellite Information Data Record	Solution: Single CorrectionDelay: 0	HRMS: 0.454 VRMS: 1.091
₩ yjy2.4	📮 DataTransfer 🔒	Difformat: NONE	base 2: 0.000000 base t0: 0
GINTEC_3260	Network Config Radio Config	SLink: SN: None	TrackingTime: 0
	Firmware Update	Azimuth: 0.00 SNR: 0.00	Elevation: 0.00 Solution: 0
M1G23B2100021	Coordinate System	Tracked Satelite(38):	
A ChinaNet-7byl	Online Service User Management	GPS(4): 16,26,27,31 BDS(27): 1,2,3,4,5,6,7,9,10,11,12,14,16,24,25,26,3 3,34,39,40,41,42,44,56,57,59,60	GLONASS(2): 7,9 GALILEO(4): 1,4,21,31
A ChinaNet-p2pP	💼 System Log 🕂	SBA5(0): None IRNSS(0): None	QZSS(1): 2
		Used Satelite(36):	

§4.2 Common Function from WEB UI

§4.2.1 Code Registering

admin 3302 G912BC148613302 [logout]	➤ General Config			
Ctatur 1	Register:			
Configuration	Serial Number:	G912BC148613302		
General Config 📃	Code:	10FE8FE160254A79CADFC5176E27A6C4497E	Register	
Base Setup	ExpiredDate:	20220317		
Antenna Setup 📃	OnlineRegistration:	OnlineRegi		
Satellite Tracking 📃		5		
Receiver Operation 📃	OEMRegisterCode:	0	Register	
System Setup 🗖				
Receiver Security	Mode Setting:			

Clip "Configuration-General Config", you can paster the register code here to active the G30. Function codes such as PPP activation codes are also registered here.

§4.2.2 Language/Time Zone Setting



Clip "Configuration-System Setup", where you can modify language and time zone. You can also modify other parameters here.

§4.2.3 Data Download

Methods I: WebUI

Clip "Data-Download", choose the right data format and date to get the data list. Download the data you want in the coming list.

G9128C148613302 [logent]	> Data Download		Data Downlo	ad		
Status Status Configuration Satellite Information Data Record Data	Data Searce:	resurfanea în riton	Data Sou Select Da	rce: • SD Card USB File Type: •	STH RINEX Compres	SRINEX RTCM
Recording Config 🔳	Men 1 2 3 4 5 See	Data				
Data Download	1 6 7 8 9 10 11 12	👱 (Download)	DownbLo	ad Tips: Right click "Download" to choose "5	ave target as"!	
	2 13 14 15 16 17 18 19	👱 (Dewrisad)				
🖂 DataTransfer 🖸	3 20 21 22 23 24 25 29	👱 (Download)	tem	File Name	Size	Data
Network Config 🖸	4 22 29 29 29 29	👱 (Dewrisad)	1	33023629M eth	663.069.KB	- Download
🗓 Radio Config 🚺	6	👱 (Download)		000000000000	000.000 110	
🏦 Firmware Update 🚺	6	👱 (Dewrisad)	2	33023629N.sth	1711.492 KB	🚽 [Download]
Track Manage C	7	👱 (Downlowd)	3	33023629Q.sth	1224.908 KB	+ [Download]
Coordinate Sectors		👱 (Dewnisad)				
		🛨 (Dewriteat)	4	33023629T.sth	25144.528 KB	👱 Luowinioadi
G Online Service 🖸	10	👱 (Dewnisad)	5	3302362ED.sth	31876.296 KB	[Download]
🕸 User Management 🖸		👱 (Dewritaad)		53000000H	470 700 1/0	. Developed
🔅 System Log 🖸	12	👱 (Dewnisad)	0	33023020N.Sth	473.796 KB	
System Log 🛛 📼	13	👱 (Download)	7	3302362GO.sth	655.36 KB	🛨 (Download)
dətə Log 🛛 📼	14	👱 (Dewnisad)				

Methods II: USB cable

Connect G30 with your PC by USB to Type-C cable, your computer will automatically read a G30 storage folder. Open it and choose the "Date – Format" to the folder you want and download the file you need.

[,] U 盘 (E:) 〉 20211228 〉 STH		v Ü ,	♀ 搜索"STH"
~ 名称	修改日期	类型	大小
3302362ED.sth	2021/12/28 16:47	STH 文件	31,130 KB
3302362GN.sth	2021/12/28 16:49	STH 文件	463 KB
3302362GO.sth	2021/12/28 16:51	STH 文件	256 KB
33023629M.sth	2021/12/28 9:46	STH 文件	648 KB
33023629N.sth	2021/12/28 9:53	STH 文件	1,672 KB
33023629Q.sth	2021/12/28 9:59	STH 文件	1,197 KB
33023629T.sth	2021/12/28 11:49	STH 文件	24,556 KB

§4.2.4 Device Firmware Update

Ask the newest firmware from the technicist where you buy G30 from, follow the next steps to update the firmware. There are 2 kinds of methods, you can choose as you wish.

Methods I: WebUI

Clip "Firmware Update-Firmware Update", better to use "Local Update" function. Choose the firmware file you got and upload. G30 will automatically restart after the firmware is installed successfully.

	idmin 5912BC148613302	logout]	> Firmware Update	
•	Status		Firmware Information:	
*	Configuration		Firmware Version:	1.09.211222.R912PY
56	Satellite Information		Core Engine Version:	PurpleCowY1.09
~m.	Data Record		Release Date:	20211222
泉	DataTransfer		Online Lindster	
۲	Network Config		Latest Version:	Unidentification
ī.	Radio Config		Update Status:	Checking new firmware
£	Firmware Update		Download Status:	0
1	Firmware Update		Last Update Time:	0
	Module Update		Online Update:	Online Upda
Ltt	Track Manage		Tips:	Please make sure the network works properly before launching the online Update!
۲	Coordinate System			
ŵ	Online Service			
ð:	User Management		Local Update:	
	System Log		FirmwareFilePath:	制造
				Instell
			Status:	

Methods II: USB cable

Connect G30 with your PC by USB to Type-C cable, your computer will automatically read a G30 storage folder. Copy the firmware to this folder and restart the G30 to automatically upgrade the firmware.

U 盘 (E:)		ب ن	搜索"U 盘 (E:)"
名称	修改日期	类型	大小
🔬 Config.ini	2021/12/16 14:36	配置设置	1 KB
📜 log	2021/12/16 13:47	文件夹	
📙 backup	2021/12/16 15:52	文件夹	
20211228	2021/12/28 9:44	文件夹	
1.09.211222.RG60PY.img	2021/12/27 15:45	光盘映像文件	9,942 KB

Appendix A: G30 Technical Specifications

Configuration		Detailed Indicators	
		1598 Channels	
		GPS: L1/L1C/L2C/L5 /L2P/	
		GLONASS: G1/G2/G3	
		BDS-2: B1I/B2I/B3I	
	Signal Tracking	BDS-3: B1I/B3I/B1C/B2a/B2b	
		Galileo: E1/E5a/ E5b/ E6C	
Measurement		SBAS: L1	
Performance		QZSS: L1 /L2C/ L5	
		IRNSS: L5	
		Positioning output rate: 1Hz ~ 20Hz	
	GNSS Features	Initialization time: <10 秒	
		Initialization reliability: > 99.99%	
	Static GNSS	Horizontal: ± (2.5mm+0.5ppm)	
	Surveying	Vertical: ± (5mm+0.5ppm)	
Positioning	Burveying		
precision	Real-Time Kinematic	Horizontal: ± (8mm+1ppm)	
	Surveying	Vertical: \pm (15mm+1ppm)	
	IMU	Support	
	Tilt Angle	0° ~ 60°	
Inertial	Tilt compensation	10 mm + 0.7 mm/°tilt(1.8m pole)	
sensing	accuracy		
system	Electronic bubble	Support	
	Thermometer	Support	
	Operating system	Linux	
	Buttons	One button operation	
	Indicators	Five indicate lights	
User	Web UI	Support to access Web UI via Wi-Fi and USB	
interaction		Support for multiple languages:	
	Voice guide	Chinese, English, Korean, Russian, Portuguese,	
		Spanish, Turkish and user define	
Hardwara	Dimension	135mm (Diameter)x84mm (Height)	
Performance	Weight	910g	
I CHOIMance	Material	Magnesium aluminum alloy shell	

	The second se	Operating: -25 °C~+65 °C		
	Temperature	Storage: -35 °C~+80 °C		
	Humidity	100% Non-condensing		
	Protection	IP68		
	Shock	Withstand 2 meters pole drop		
Power and	Power Supply	6-28V DC, overvoltage protection		
Battery	Battery	Internal Li-on, 6800mAh, 7.2V		
		5PIN LEMO (External power port + RS232)		
		Type-C port (Charging and data transmission)		
	I/O port	1 radio antenna interface		
		Micro SIM card slot		
		Built-in radio, 1W, typically work range: 8KM		
	XX 7' 1 1	Frequency Range: 410-470MHz		
	wireless modem	Communication Protocol: SOUTH, Farlink,		
		TrimTalk, Hi-target, HUACE, Satel		
Communicati		LTE FDD: B1/B3/B5/B7/B8/B20		
ons	40	LTE TDD: B38/B40/B41		
	40	WCDMA: B1/B5/B8		
		GSM: 850/900/1800/1900MHz		
	Double Module	Bluetooth 3.0/4.1		
	Bluetooth	Bluetooth 2.1 + EDR standard		
	NFC	Support		
	WiFi	802.11 b/g standard		
	WIEL data link	To work as the datalink that receiver can broadcast		
	WIFI data IIIK	and receive differential data via WIFI		
		4GB internal storage,		
	Data Storage	Changeable record interval, up to 20Hz raw data		
		collection		
	Data Transmission	USB data transmission, supporting FTP/HTTP data		
Data storage/	Data Hanshinssion	download		
Transmission		Differential data format: CMR, sCMRx, RTCM		
Tunshinssion		2.1, RTCM 2.3, RTCM 3.0, RTCM 3.1, RTCM 3.2		
	Data Format	GPS output data format: NMEA 0183, PJK plane		
	Dum I Offinit	coordinates, Binary code		
		Network model support: VRS, FKP, MAC, fully		
		support NTRIP protocol		

Appendix B: Packing List

