

Guangzhou Geosurv Infomation Technology Co.,Ltd

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GINTEC

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Chapter I: Overview

In this chapter, you will learn about GINTEC Team and G40 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 G40 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 G40

New-Generation Soc

Powerful GNSS SoC chip with 1408 channels.

Supports the new B1C, B2a, B2b, and BeiDou-3.

L-band support.

New Antenna Combination

Highly integrated GNSS,4G, WIFI, and Bluetooth antennas

Powerful Performance, Smaller Size

Calibration-Free Tilt Compensation

Calibration and initialization FREE IMU

Ready for tilt survey straight out of the box

Anti-Interference Technology

Advanced multi-frequency interference suppression and multi-step adaptive filtering technology

Strong and stable signal in challenging conditions

G-FIXED Correction Outage Technology

Extend RTK positioning up to 10mins

Reducing downtime waiting to re-establish RTK corrections

Augmented Reality (AR)

Overlay digital information onto the real world

Assist to view the stakeout location and seeing planned features in real time

Built-in Battery, PD Quick Charge

Support USB PD3.0/45W quick charge

Charging time \leq 3.5 Hours

Battery life $\geq 1,000$ cycles

Professional Camera

High-resolution Night vision camera

Brood perspective, sophisticated algorithms guarantee the precision of up to 1cm

Seamlessly combines 360-degree AR layout and image layout

Chapter II: Product Introduction

By reading this chapter, you can master the composition, installation, and functions of the G40 measurement system in detail.

§2.1 Introduction

G40 measurement system is mainly composed of host, manual and accessories, as shown in the figure:



§2.2 Introduction of G40

§2.2.1 Structure and Interface



Structure and Interface	APPLICATION
UHF antenna interface	Connecting build-in radio antenna
Type-C interface	Charging and data transmission
Connecting screw hole	Used to fix the G40 on the base or pole
Serial number	To identify each device and register code
Sticker	To show some information about G40
Camera	Support AR stakeout
SIM card interface	Insert SIM card to enable device access the internet

§2.2.2 Buttons and Indicators

G40 has two indicators and one button .:



Buttons and indicators	Function	Condition
9	Switch on/off, confirm	Power on, power off, confirm the modification item



~	Satellite indicator	Red light flashing indicates that no satellite signal Green light flashing indicates receipt of satellite signal but not fixed A constant green light indicates that device is fixed
IT	Data indicator	A constant blue light indicates that Bluetooth has been connected Blue light flashing indicates the data is transmitting

§2.2.3 Function of Button

I Mode checking

When G40 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 G40 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", click the power button again.

§2.3 P9IV Controller

§2.3.1 Appearance



§2.3.2 Keyboard





No.	Key	Definition			
	Keys with numbers	To enter numbers			
	Keys with functions (Related function	Orange voice icon on key "1"	Voice input to make Surpad perform some voice commands (under development)		
1	refers to orange icons when	Orange camera icon on key "2"	Can call up the Camera button		
	activating)	Orange screenshot icon on key "3"	Take a quick screenshot		
		F1-F5	User can define		
2	Key for measuremet	When Surpad interface isn't displaye Surpad interface.	ed, press to open or switch to		

		When Surpad interface is on display, press to collect data.			
3	Keys for direction	Move up, down, left, and right on the screen or menu in function state, the up and down keys are for volume control; in the function state, the left and right keys are for screen brightness control			
4	Recent Key	Call the list of recent apps			
5	Home Key	Back to Home Page			
6	Return Key	Back to last interface			
7	Enter key	Confirm/line feed In Surpad interface, this key is used to collect data in the non-input state			
8	Delete Key	Delete one character before enter other characters.			
9	Tab Key	Make table			
10	Shift Key	When using the physical keyboard as input method, this key can switch between numbers, lowercase and uppercase letters.			
11	Fn Key	Fn mark will prompt in the upper notification bar when pressing this key, meaning the functions marked by orange icons on keys can be			
		In standby mode	Solid red: power is <15%.		
12	Power LED	In charging	Flashing green: in charging Solid green: full of charge		
13	Power button	Turn on/off device			
14	WiFi/Bluetooth LED	Blue: handheld is connected with receiver B/T. Green: handheld is connected with receiver WIFI. Off: handheld isn't connected through B/T or WIFI.			

§2.3.3 Bluetooth Connection

10:48		- 7 al + 72 84% e	10:48 🖻	∞ % ∡ ∞ % 84% e	10:49 🖻	⇔ ‼⊿ ⇔ % 83% ∎
≡ 20230525	5 No data	\$ * \$ °, 4	← Commu	nication	← Commu	
			Device manufacturer	GINTEC >	Device manufacturer	
Communication	Rower	Base	Device Type	RTK(G40) >	Device Type	
	(F)	Date	Communication Mode	Bluetooth >	Communication Mode	
R.		4	Bluetooth Device List	٠	Rivetooth Device List	€ ⊟
Static	Configurations	Calibrate Sensor	Paired Devices	Search Devices	Paired Devices	Search Devices
76	678	70	G4001515100002		04001515100007	
Device Settings	Default Radio Settings	Restart Positioning	G4001515110004		Gac Connection prog	ress
-			Victor #) Buds2		Get Device Info	
-	-		G4001515100001		Gec	CANCEL
Device Activation	More				1	
Project D		ey Tools	Search Fast co	nnection Connect	Debug	Stop

Start the G40 first, and then use P9IV controller to perform the following operations:

1. Open SurPad software and click "Communication" to enter the connection interface.

2. Select the manufacturer as "GINTEC", the device as "G40", 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

in the second seco

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 G40 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	8 ⁴⁵ Ⅲ	← St	atic mode sett	ings
	0	0			
	U.	尿	Point name		3128
Communication	Rover	Base	PDOP limit		3.0 >
	8	(?)	Cut-off angle		10 >
Static	Device	Inspection Accuracy	Collection Inte	erval	tHZ >
0	-		Auto Record 5	Static Data	•
10			Antonio Páramat		
Device Settings	Device Activation		Antenna Mear	sured Height	1.8
			Antenna Measurement	Type Height fr	om Phase Center 🗦
			Antenna Heig	ht	1.6
Project	2. Sera		Stop Record	Advanced	Apply

4) Switch on the G40 and connect with controller software, set the receiver to static mode, and set the parameters as the picture shows. (The memory capacity of G40 must be sufficient.

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

- 5) G40 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 G40, 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 G40, and connect the extension rod and the large radio transmitting antenna.
- 2) Connect the battery with Radio by Y-type power cable.



(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) Turn on the device. Connect the device WIFI by your computer or controller, WIFI name is device SN number. Then login device webui, website is 192.168.10.1



GINTEC	G4001515110	004	
 Into 	Working mode	Static Rover O Tane O Bluetooth Network Radio Dual	
Position Satellites Modules	Auto start base Site ID		
© Settings	Difference type PDOP threshold	RTCM02	[1 - 99]
Working Mode Satellites	Coordinate	Single Specified coordinate	
System Para Output	Record raw data	30	
🗅 File	Bluetooth name	TRU3032040031	
🛱 Management	MAC addr	BF:18:18:92:75:BA	

2) Under "Settings", Choose "Working Mode" to be "Base" and Data link choose "Bluetooth"

GINITEC	G4001515110	0004	A
	Auto start base		
() Info	Site ID	***	
	Difference type	RTCM32	
Position	PDOP threshold	3.5	[1 - 99]
Satellites	Coordinate	Single Specified coordinate	
Modules			
© Settings ∽	Record raw data	(B)	
Working Mode			
Satellites	Bluetooth name	TRU3032040031	
System Para	MAC addr	BF:18:18:92:75:BA	
Output	List	TRU3032040031 Get bluetooth	
	Auto reconnect		
🗅 File 🗸			
🛱 Management	Submit	Save and start	

- 3) Choose "Get bluetooth", connect external radio type from the List
- Click "External Radio Configuration" under "Tools" in SurPad.

← Commu	inication	20200103	No data 0 Age0 0	, ⇒ ⇒	
Device manufacturer	geo >	42			
Device Type	RTK >	Localization	Coordinates	Angle Converter	
Communication Mode	Bluetooth >	Localization	Converter	Angle Converter	
Bluetooth Device List	음		×		
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				
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	specified period	
F90023910035	F0:B5:D1:6F:EF:7B				
F90013811001	2C:6B:7D:19:F8:51				
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			

5) 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 Moo	de	\leftarrow Functional selection		← Paramete	r 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
		Eirmuara undata		Transmitting channel frequency	Custom >
		Finnware 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 >
				Read con Emissive powe.	LOW >
Search	Connect			Get	Settings

6) 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 G40 on the centering lever, install the radio antenna, bracket, clamp the controller.

The steps are as follows:

- 1) Turn on the G40 and controller, open SurPad software and connect Bluetooth.
- 2) Click "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	le settings
0		0	Cut-off angle	5.)
Communication	Bover	Base	Record raw data	۱
0	0	0	Data link	Internal Radio
9	10		Channel	1.7
Static	Information	Accuracy	Frequency	441
8			Protocol	FatLink)
Device Settings	Device Activation		Base Coordinates Chang	e Alert 🔍 🔍
Project D		X 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.

§3.3.2 Starting Base

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



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, fix the G40, and connect the radio antenna.

§3.4.2 Starting Base

 After setting, please make sure there is a workable Sim card inside G40 base. Then open SurPad in the controller, Click "Device"→ "Base" to set Base station.



0	0		Base ID	11(Pác.	Name	P	Port
		<u></u>	Start up mode	Use Current Coordinates		-	-	-
communication	Rover	Base	Diff mode	RTCH3		1	identical de	-
	8	/(3)	Base startup	0		100	10.00	÷.
Static	Work Mode Status	² Configurations	Record raw data			100.0	-	-
0		0	Data link	Device Internet		-	-	-
10	T	10	APRi Instanga			100	-	100
Device Information	Calibrate Sensor	Device Settings	Operator	>				
6	8	(3)	Name	CMNET				
Default radio	Restart	Device	User	CARD				
settings	Positioning	Activation	Password	🛞				
1			CORS Settings					
-			Name	6 >			/	
_	-		Rate arrest point	nalaw				

- 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).



§3.4.3 Rover Setup

After successful set up of the base station, now we can start the rover setting. Install the G40 on the centering lever, install the radio antenna, bracket, clamp the controller.

The steps are as follows:

1) Turn on the G40 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.

§ 3.5 AR Stakeout

1) Turn on SurPad software, Click "Device"- "Communication", Communication Mode choose "WIFI"



2) Click "Device Settings"- "Frequency", choose "5G"



Tilt Survey		D	sable
Positioning data output frequency			SHZ.
Enable Voice			α
Base station alarm			Œ
Enable WIFI			α
Frequency			50
Satell 2.4G		0	
5G		0	Te
WFi share network			M
Base Coordinates C	hange Alert		α

3) Click "Survey" - "Point Stakeout", choose the point what you want to stakeout and click "AR"



Chapter IV: WEB UI

§4.1 WebUI Login

Start the G40 properly, use a mobile terminal such as a laptop or mobile phone, open wifi,

- 18 -

and find the G40 hotspot. The hotspot name format is the device SN number. After connecting successfully, enter 192.168.10.1 in the browser and go to the WebUI background page.

G4001515	110004		
GINTEC	G400151511	0004	S and the second se
info -	Working mode Data link	Static Rover Olisse Olissetsch Network Radio Dual	
sition	Auto start base	O	
solules Settings	Site ID Difference type	111 RTCM02 -	
srking Mode tellites	PDOP threshold Coordinate	Specified coordinate Specified coordinate	12 199
stem Para Aput	Record raw data		
File -	Bluetooth name	TRU0002040001	
	MAC addr	8F 18:18:92:75 BA	

§4.2 Common Function from WEB UI

§4.2.1 Code Registering

GINTEC	G4001515100002		di men
	System upgrade		
ida -	Centra registration		
Settings -	Expiration time	2023090	
fie -	Function	362	
	Registration code		Register
Management -			
and a	GNS1 registration.		
	System security		
	System operations		

Click "Management-Manage", you can paster the register code here to active the G40.



§4.2.2 Time Zone Setting

GINTEC	G4001515110004		
	Tone parts	Garbeine -	
	Teres	•	
a bitania	Base station starm		
	Debug masis	08	
Para	Bada Re canong way	Hereing an	
	Transfer kase skaller alle tofe	08	
	Tangent serves	G Crosset paramet	
	Traction	C20-	
	Babie		

Click "Settings-System Para", where you can modify time zone. You can also modify other parameters here.

§4.2.3 Data Download

Methods I: WebUI

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

	and the second se						
GINTEC	G400151510	002					
	Apr .						
	Hime						
enqi -	Eta .	Size(Ma) 1	Artestoa baigist (m)	Start 0	Red 3	Operatives	
	setter.log			2023-06-09		Constant. Const	
	60521571.aut	2.574	8.200	2023-06-06 17:02 108	2023-06-06 17:41: 42		
	00521572 dat	1015	0.200	2023-06-06 17:42 10	2023-06-06 17:42 20		
	0002+571.dar	0.812	1.250	2023-06-06 17.42 58	2023-06-08 17.46 30		
	00021581.004	1.234	4.200	2023-06-07 14.44 26	2023-06-07 1447 19	Contraction Contraction	
	00011581.844	0.444	1.800	3523-08-07 14:57 42	2023-06-87 1458 31	Contract Contract	
	00111162.66	8.143	1625	2023-06-07 H458 42	2023-06-87 1458 15		
	0001161.04	6.08	1825	2023-06-07 14.58 30	2023-66-07 1458 43	Contract Contract	
	den striket, ave	4.32	1248	2523-06-07-1500 18	2023-06-07 1509 34		
	00131582.444	0.436	168	2023-00-07 15.09. 49	2023-06-07 (5.10) 34	Connect Connect	
	scheck.log			2018-01-05		Descent Control	
	Description () for the	Dente (henne)					

Methods II: USB cable

Connect G40 with your PC by USB to Type-C cable, your computer will automatically read a G40 storage folder. Open it and choose the "record" to the folder you want and download the

file you need.

📒 record				
⊕新建 - 从		↑↓ 排序 ~ □ 查看 ~		
\leftrightarrow \rightarrow \sim \uparrow	■ > 此电脑 > U 盘 (E:) > record	~ (う 。 Æ reco	rd 中搜索
> 📁 H6 system too	名称 ^	修改日期	类型	大小
> 📁 图片	00021571	2023/6/6 17:41	DAT 文件	2,641 KB
> 📁 文档	00021572	2023/6/6 17:42	DAT 文件	67 KB
	00021573	2023/6/6 17:46	DAT 文件	853 KB
	00021581	2023/6/7 14:47	DAT 文件	1,367 KB
	00031581	2023/6/7 14:58	DAT 文件	683 KB
	00031582	2023/6/7 14:59	DAT 文件	147 KB
	00031583	2023/6/7 14:59	DAT 文件	83 KB
> ⊻ 下载	00131581	2023/6/7 15:09	DAT 文件	4,424 KB
> 🕑 音乐	00131582	2023/6/7 15:10	DAT 文件	447 KB
> 🧰 桌面	📄 scheck	2018/1/5 20:50	文本文档	1 KB
> 📛 Windows (C:)	i selftest	2023/6/9 18:01	文本文档	1 KB

§4.2.4 Device Firmware Update

Ask the newest firmware from the technicist where you buy G40 from, follow the next steps to update the firmware.

WebUI

Click "Management-Manage", better to use "Choose file" function. Choose the firmware file you got and upload. G40 will automatically restart after the firmware is installed successfully.

Appendix A: G40 Technical Specifications

Cor	nfiguration	Detailed Indicators
Measurement Performance	Signal Tracking	1408 Channels GPS: L1C/A, L2P(Y), L2C,L5 GLONASS: L1,L2 BDS: B1L,B2L,B3L,B1C,B2a,B2b* GALILEO: E1,E5a,E5b,E6* QZSS: L1,L2C,L5,L6*
	GNSS Features	Positioning output rate: 1Hz ~ 20Hz Initialization time: < 5s Initialization reliability: > 99.99%

G40 GNSS Receiver User Manual



Positioning	Static GNSS Surveying	Horizontal: ± (2.5mm+0.5ppm) Vertical: ± (5mm+0.5ppm)
precision	Real-Time Kinematic Surveying	Horizontal: ± (8mm+1ppm) Vertical: ± (15mm+1ppm)
In anti-1	IMU	Support
Inertial	Tilt Angle	0° ~ 60°
system	Tilt compensation accuracy	10 mm + 0.7 mm/°tilt(1.8m pole)
	Operating system	Linux
	Buttons	One button operation
	Indicators	Two indicate lights
User	Web UI	Support to access Web UI via Wi-Fi and USB
interaction		Support for multiple languages:
	Voice guide	Chinese, English
	Dimension	152mm*152mm*92mm
	Weight	900g
	Material	Magnesium aluminum alloy shell
Hardware	Temperature	Operating: -30 °C~+35 °C
Performance		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
		Type-C port (Charging and data transmission)
	I/O port	1 radio antenna interface
		Micro SIM card slot
Communicati ons	Wireless modem	Built-in radio, 1W, typically work range: 6KM Frequency Range: 410-470MHz Communication Protocol: SOUTH, TrimTalk, Hi-target, TrimMark III, Satel, Geotalk
	4G	LTE FDD: B1/B3/B5/B7/B8/B20 LTE TDD: B38/B40/B41 WCDMA: B1/B5/B8 GSM: 850/900/1800/1900MHz
	Bluetooth	V4.1, BLE



	WiFi	802.11 b/g standard
	WIEL data light	To work as the datalink that receiver can broadcast
	wiri data ink	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 staraga/	Data Mansinission	download
Transmission		Differential data format: CMR, sCMRx, RTCM
		2.1, RTCM 2.3, RTCM 3.0, RTCM 3.1, RTCM 3.2
		GPS output data format: NMEA 0183, PJK plane
	Data Format	coordinates, Binary code
		Network model support: VRS, FKP, MAC, fully
		support NTRIP protocol

FCC Warning

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Caution:

Intended for sale and application in a business environment.

Use the Product in the environment with the temperature Between -30° C and 35° C; Otherwise, it may damage your product. Products can only be used below 2000m altitude.

For the following equipment: Product Name: GNSS RECEIVER Brand Name: GINTEC Model No.: G40, G20Plus, G30Plus, G40Plus, G40Pro, MG1, F300, G50 Guangzhou Geosurv Infomation Technology Co.,Ltd

hereby declares that this [Name: GNSS RECEIVER, Model: G40, G20Plus, G30Plus, G40Plus, G40Pro, MG1, F300, G50] is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.

CE

The full text of the EU declaration of conformity is available at the internet address: <u>http://www.gintec.cn/downloads</u>.

The product shall only be connected to a USB interface of version USB2.0 and that the connection to a power USB is allowed.

CAUTION RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS

Adapter shall be installed near the equipment and shall be easily accessible.

Only can use adapter as below:

Power Adapter Model: DSA-45PDH

Input: AC100-240V~ 50/60Hz 1.5A

Output: DC5V3A/9V3A/12V/3A/15V3A/20V2.25A

Dee Van Enterprise Co.,Ltd.

The plug considered as disconnect device of adapter.

This product is intended for sale and application in a business environment.

RED Article 102

-This product can be used across EU member states

RED Article 10 10

-The product is class 1 product, No restrictions

The RF distance between body and product is 20cm.

Technical Characteristics of EUT



2G	
Frequency Range:	GPRS900: Tx: 880-915MHz, Rx: 925-960MHz
	GPRS1800: Tx: 1710-1785MHz, Rx: 1805-1880MHz
RF Output Power:	GPRS900: 34.19dBm, GPRS1800: 29.55dBm
	EDGE900: 27.02dBm, EDGE1800: 25.99dBm
3G	
Frequency Range:	WCDMA Band 1: Tx: 1920-1980MHz, Rx: 2110-2170MHz
	WCDMA Band 8: Tx: 880-915MHz, Rx: 925-960MHz
RF Output Power:	WCDMA Band 1: 23.03dBm, WCDMA Band 8: 23.16dBm
4G	
Frequency Range:	FDD-LTE Band 1: Tx: 1920-1980MHz, Rx: 2110-2170MHz
	FDD-LTE Band 3: Tx: 1710-1785MHz, Rx: 1805-1880MHz
	FDD-LTE Band 7: Tx: 2500-2570MHz, Rx: 2620-2690MHz
	FDD-LTE Band 8: Tx: 880-915MHz, Rx: 925-960MHz
	FDD-LTE Band 20: Tx: 832-862MHz, Rx: 791-821MHz
	TDD-LTE Band 38: Tx: 2570-2620MHz, Rx: 2570-2620MHz
	TDD-LTE Band 40: Tx: 2300-2400MHz, Rx: 2300-2400MHz
Max.RF Output Power:	FDD-LTE Band 1: 23.34dBm, FDD-LTE Band 3: 23.93dBm,
	FDD-LTE Band 7: 23.01dBm, FDD-LTE Band 8: 23.59dBm,
	FDD-LTE Band 20: 23.47dBm, TDD-LTE Band 38: 23.03dBm,
	TDD-LTE Band 40: 22.85dBm
Bluetooth	
Bluetooth Version:	Bluetooth V4.1
Frequency Range:	2402-2480MHz
Max.RF Output Power:	4.57dBm (EIRP)
Wi-Fi(2.4GHz)	
Frequency Range:	2412-2472MHz for 802.11b/g/n(HT20)
	2422-2462MHz for 802.11n(HT40)
Max.RF Output Power:	17.46dBm (EIRP)
UHF	
Frequency Range:	410-470MHz
Rated Output Power:	30.15dBm
GPS	
Frequency Range:	GPS: 1575.42MHz Receiving
	GLONASS :1602MHz Receiving
	BDS:1561.098 MHz Receiving
	Galileo:1589.74 MHz Receiving