

Updating the GNSS Engine in a iG3s

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This application note describes the method for updating the **unicorcomm** GNSS firmware in the iG3s receiver.

WARNING: There will be a few screens in Chinese, please follow these instructions carefully.

 Download the .ZIP package that contains the updated GNSS firmware. Typically it will be located in a subfolder of this web location: <u>https://ig3s.com/out/firmware/GNSS/index.html</u>

The folder with the highest firmware revision is probably the best option.

Contact iGage if you have questions.

- 2. Decompress the ZIP file into a 'clean empty folder.'
- Connect your PC to the iG3s receiver with the supplied serial cable. Use the 9pin serial connector to a serial port on your PC. If you don't have a serial port, you will need a USB-to-Serial adapter. We recommend this one: <u>https://www.amazon.com/Tera-Grand-Premium-Serial-</u><u>Adapter/dp/B00QG83YVC/ref=sr 1 1?ie=UTF8&qid=1503944828&sr=8-1-</u> <u>spons&keywords=usb+to+serial+adapter+windows+10&psc=1</u> from Amazon.
- 4. Use the Windows **Device Manager** to determine the COM Port number of your serial port. (Best to double-check and make sure.)



- 5. Load a fully charged battery. If your power supply is handy, plug external power into the cable too. Don't turn on the iG3s yet.
- Run the UARTERM2.EXE program: Set the Baud Rate to 9600 Set the COM port to match the port you are using



Click the 'Open' button

UarTerm —	
	COM1 -
	9600 -
	<u>O</u> pen
	<u>C</u> lose
	<u>B</u> reak
	<u>C</u> lear
	<u>A</u> scll/Hex
	<u>S</u> ave
	<u>F</u> ont
	Command

7. Turn on the iG3s receiver:

UarTerm —	
VarTerm - Receiver Type: 1915 Receiver Id: 953783 Product Date: 2017-05-22 Radio Type: 2 FirmWare Version: 8.37 FirmWare Date: 2016-11-28 Expired date: 2034-08-31 ====================================	Comi Comi Second Close Break Clear Ascli/Hex Save Eont
Set gps ok ===================================	<u>C</u> ommand

Wait for the 'Get oem version' message to be displayed, about 30 seconds.

8. Click the 'Command' button

Command		×
□ Hex	10051	<u>S</u> end
🗆 On Time		
1000		Test
<u>I</u> mport		
		<u>E</u> xit

Enter 10051 in the Command box, then click 'Send'



NAT THE OF	-	
Get opp vari		
administrator direct enable		
	*	Command
		Foundation

The head will respond with 'administrator direct enable as shown above.

9. Change the baud rate to 115,200:



10.Enter 'log version' <u>followed by a Enter</u> (New Line) in the Command box, then click Send:

Command		×
□ Hex	LOG VERSION	Send
1000		Test
<u>I</u> mport		Evit
Send 13 bytes.		<u>-</u> _xit

11.Note the current GNSS firmware in the terminal window:

Get oem version	
administrator direct enable	
Input: LOG VERSION	<u>E</u> ont
KOK	
VERSION COM1 0 94.000 UNKNOWN 0 0 0000000 1	00 0
<1	
K"ENCLOSURE" "B123G12 pkizeus-hmkdduuii- 50-P50-L:2117-1	-23″″0
01171100534″ ″UB380″ ″R4. 15Build15565″ [1. 4-8722″ ″0x00	00605b″ 🗸 👘 👘
	Command

The current device version should be less than the version you are going to upload:



In other words, the build number that you are loading should be higher than the build number that is currently installed.

12.Close UARTERM.

13.Run UC_Winconfig4.1.5.exe:

✓ WinConfig4.1.5.exe	8/28/2017 12:24 PM	Application	373 KB
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It will display a splash screen:



Unicore HPL WinConfig Tools		×
	欢迎使用WinConfig-4.1.5	
K	WinConfg 是用来升级接收机 Firmware的PC端工具,在点击"下一步"之前,请确保接收机跟PC之间通 讯连接正确,并且合适的升级包文 件已经存在本地PC上.	
	< Back Next > Cance	I

Click Next

14. The browse for file dialog will be shown:

UC_Wir	Config			×
				R
选	择升级包文件:	B	srowse for	
×	件名:	F		
			浏览	
		< <u>B</u> ack	Next >	Cancel
lick o	n the `File E	Browse'	button	

	> z (\\ IU.U.U.	113) (Z:) >lestBench	> IG3s > V1/542M	✓ Q	Search v1/542M	٩
 New folder 					== -	
wnloads	* ^	Name	^	Date modified	Туре	Size
ogle Drive	*	RS Sector(em2.exe		8/28/2017 12:25 PN	Application	162 k
sktop	*	UB380-HARD-mf	g-v17542M-pn4.uc_fw_pkg	6/12/2017 2:22 PM	UC_FW_PKG File	13,364 k
cuments	*	UC_winConfig_L	og20170828131412.5d	8/28/2017 1:14 PM	Text Document	1 k
tures rror	A A	🛞 UC_WinConfig4.	1.5.exe	8/28/2017 12:24 PM Type: Text Document Size: 96 bytes Date modified: 8/28/2017 1:14 F	Application	373 k
tennaCalibration	~	<			_	
File <u>n</u> ame	UB380-HARD-	-mfg-v17542M-pn4.uc_fv	v_pkg	~	unicore update file(*.*) ~
					Onen	Cancel

Select the .uf_fw_pkg file and click **Open**



15.The selected file will be listed:

_WinConfig	>
	F
选择升级包文件:	
文件名: Z:\TestBench\\G3s\v17542M\UB380-HARD-mf 浏览	

5

Press Next to continue

16.Select 'COM'

UC_WinConfig			×
			F
通讯类型:			
N			
	< <u>B</u> ack	<u>N</u> ext >	Cancel

Then click **Next** to continue

17.Both baud rate boxes should be set to 115,200:

UC_WinConfig ×
串口配置:
通信串口: COM1 ~ <1
通信波特率: 115200 🗸 default
下载波特率: 115200 ~ Default
升级需板卡重具,默认需手动重昌。 如需自动重昌,请选中右侧自动重昌
< Back Next > Cancel



- (1) Select the correct COM port.
- (2) Check the 'Automatically Reboot after Upgrade' checkbox
- (3) then click **Next**
- 18.The 'Configuration Summary' dialog is shown:

UC_WinConfig		×
配置信息汇总:		
产线名称: 产品名称: 升级包文件: 升级方式:	ORION UB370-RTK Z:_TestBench\/G3s\v17542M\/UB380- ≠L□	
本地串口: 波特率:	COM1 default	
	< <u>B</u> ack Finish	Cancel

Click Finish

19.Click the 'Start Upgrade' box

×
出程序

on the left side of the dialog to begin reflashing the GNSS engine.

6



20.It will take about 28 minutes:

C_WinConfig 4.1.5	1
信息:	
2017-08-28 13:28:07:826 => 文件读取正确 2017-08-28 13:28:08:829 => 正在自动重启板卡 2017-08-28 13:28:14:613 => 板 + 确认为产品模式,准备传输升级包 2017-08-28 13:28:15:69 => 下载升级包扰行中,诸耐心等待 2017-08-28 13:28:15:653 => 下载升级包进行中,诸耐心等待	
□件下载进度:	
□ 固件下载进度: 	
开始升级	退出程序

7

for the process to complete. A blue bar will move from left to right.



OLC_WinConfig 4.1.5	×
/- 4	
1言思:	
2017-08-28 13:28:07:826 => 文件读取正确!	
2017-08-28 13:28:06:829 => 正社自幼星眉版卡! 2017-08-28 13:28:14:613 => 板卡确认为产品模式,准备传输升级包!	
2017-08-28 13:28:15:649 => 下载升级包大约需要 28 分钟!	
2017-08-28 13:28:15:653 => 下载开级卫进行中, 值时心等待 2017-08-28 13:49:48:420 => 下载升级包完成!	
2017-08-28 13:49:48:642 => 版本内部回注电新中,大概需要1-3分钟,请	不要断电!
2017-08-28 13:52:14:200 => 板卡升级成功!	
	Evit Brogram
回任下報进度: Success	EXIL Program
100%	
开始开级	退出程序

Make sure the 'board update success' line is shown:



Then click Exit Program (on the right)

- 22.Turn the head off.
- 23.Turn the head on and use normally.