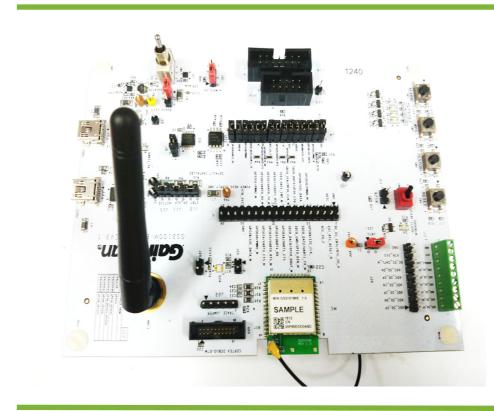


## **GS2101M Evaluation Board Quick Start Guide**

### Supports GS2101M Module

This Quick Start Guide will walk you through the easy steps to setup and run the GS2101M EVB Board for Serial to WiFi and/or IP to WiFi APP.



You will need the following items:

- Quick Start Guide (this document)
- GS2100M Evaluation Board
- Serial Cable (USB to Mini-USB)

### Build the Package

Step 1 Open the SDK Builder www.gainspan.com/ secure/login

If you do not have a login, sign up and register for a Portal account at:

https://www.gainspan.com/secure/register

Step 2 Select Build Type, Module, Firmware Version, Build Output and Application to build as shown in the below snapshot. Click the Build button to generate the binaries. The build configuration will be submitted and a confirmation email will be sent notifying that the package is complete and ready to download the zip file containing the firmware and binaries used to program the board.

The following figures shows the SDK Builder screen for building Serial to WiFi or IP to WiFi custom binaries.

ABOUT Y APPLICATIONS Y TE	ECHNOLOGY y PRODUCTS y E	ECOSYSTEM Y NEWS AND EVENTS Y	CONTACT y
Support Portal	MY PROFIL	E RESOURCES SDK BUILDE	CR Q&A SIGN OUT
		Location India	+ CONTACT
SDK Builder Build History	About Tool Release Notes		
	Select yo	our SDK-Builder Cont	figuration
101,000	Build Type:	New Build	• ?
ALL	Gain Span Module:	GS2101 MIP/MIE v1.0 or later	•
INTERNAL PROPERTY AND INCOME	Firmware Version:	GEPS v5.3.0 Beta	•
	Internal Flash:	4MB	(Internal to Module)
HIT IS BELL	External Flash:	None	<ul> <li>(External to Module)</li> </ul>
	Build Output:	Custom Package	• ?
SDK Builder Version 5.3.0	Application:	Serial to Wi-Fi (Hosted)	• ?
	Include Documents & Utilities:	R 5	
		Back Next	
Note:	tool and Super Block provided with the pa	ickage from the builder.	



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### GS2101M\_QSG\_EVB\_001267, Version1.1

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story About Tool Release Notes	
Build Type:	New Build
and the second s	GS2101 MIP/MIE v1.0 or later   GEPS v5.3.0 Beta
Internal Flash:	
External Flash:	None
Build Output:	Custom Package • ?
Application:	IP to Wi-Fi (Hosted)
Include Documents & Utilities:	₹ ?
	Back Next
programming tool and Super Block provided with the pa	okage from the builder.

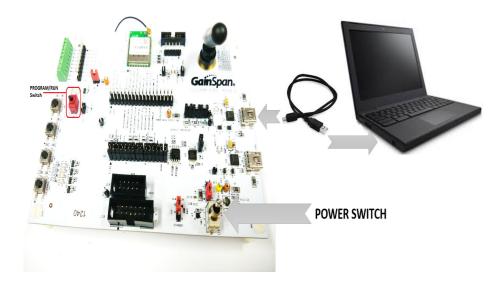
Memory Settings	Miscellaneous	Summary		
Provisioning				
Wireless Prov	visioning			
Firmware Update				
OTAFU Push	OTAFU Push Method			
Backup Copy	(3 versions)			
No Signing				
GainSpan We	b pages			
Miscellaneous				
2101_5_3_0	BETA_STA_LAP_HTTPS			
New Method				
Enable				
Enable				
	Provisioning           Wireless Provisional           GainSpan We           Professional           Professional           OTAFU Push           Backup Copy           No Signing           GainSpan We           Miscellaneous           2101_5_3_0_           New Method           Enable	Provisioning           Wireless Provisioning           GainSpan Web pages           Professional(AP and Client)           Firmware Update           OTAFU Push Method           Backup Copy (3 versions)           No Signing           GainSpan Web pages           Miscellaneous           2101_5_3_0_BETA_STA_LAP_HTTPS           New Method           Enable		

**Important:** Newer version of the firmware maybe available on the GainSpan Portal. Login to the GainSpan Portal (www.gainspan.com/secure/login) and check the latest version available for your board on the SDK Builder. If the SDK Builder has a newer version, follow the steps in the SDK Builder User Guide to build the latest binary and update your evaluation board using the *gs2k\_module\_programming* utility.

### Program the GS Module

Step 1 Plug the mini-USB cable, one end of the USB port to GS2101M board USB0 and the other end of the USB port to the computer or laptop.

Step 2 Turn the PROGRAM/RUN switch to **PROGRAM** mode on the EVB and perform a power cycle.



Step 3 Open the GainSpan Serial Flash Programmer GUI application and select Serial-to-WiFi firmware using the UART interface from location <EVK PACKAGE>\Tools\GS programming tool\gs2k\_flashprogram.exe Program the EVB.

🦇 Serial Rosh Pr	10g/lemmer for 052000 ver. 12.7
Program GS	2000 Device Program Mode
Check Conn	ection Program Board
1. Select Inte	erface UART • Super Block D:\2101\Embedded\superblock_4
2. Select UA	RT Part CON31 Current FW Version D:\2101\Embedded\gs2101_s2w
3. Select Bas	ad Rate 📧 115200 🗇 921600 🛞 Single Image 🔿 Multiple Images
4. Check Cor	nnection Check Connection Previous FW Version
Nodule Spec	ifications
Module Type	Retain Dynamic File System
Mac Address	
Timestamp	Status
13:02:33	
13:02:33	Communicating with the Nodule Connection OKI
13:02:42	A Valid Three-Copy SuperBlock File was Selected!!
13:02:46	A Valid Current Version Firmware Image was Selected!
×	17
Help	Clear Status Copy Status Close
UART	COM31 GS2101MIP 20F85EDD07EA ver. 1.0

Step 4 Put the PROGRAM/RUN switch to RUN mode and perform a power cycle.

# Configure the Serial Port



Note: To verify you have the correct Serial COM port, open the Windows Control Panel and select Device Manager.

Open a Serial Terminal Emulation Software of your choice. Select the serial COM port associated with the board. In this example we are using Tera Term VT. You can download a copy of Tera Term VT at: http://ttssh2.sourceforge.jp/

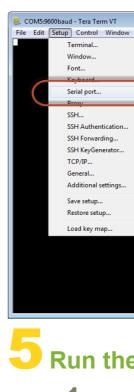
	[disconnected] VT					
File Edit Set	up Control Windo	w Help				
	Tera Term: New	connection			×	
	© TCP/IP	Host:	myhost.exam	nple.com	*	
			History	TCP por	#: 22	
		Service:	Telnet			
			SSH	SSH version:	SSH2 -	
			Other	Protocol:	UNSPEC -	
	Cana					
	Serial	Port:	COM2: USB	Serial Port (CON	45j <b>-</b>	
		ОК	Cancel	Help		
			·			

Setup the Serial port:

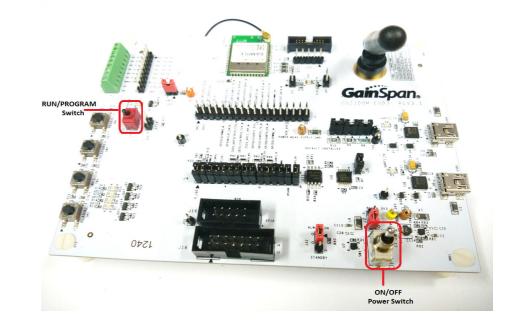
- Port: **COM***x* (*x* is the number of the COM port)
- Baud Rate: **9600**
- Data: 8 bit
- Parity: **none**
- Stop: 1 bit

٠

Flow Control: none



# Tera Term VT window.



Help		
Tera Term: Serial port setu	qu	^ ~
Port: Baud rate: Data: Parity: Stop: Flow control: Transmit delay O msec		OK Cancel Help

## Run the GS Module

Step **1** Ensure that the RUN/PROGRAM switch is in RUN mode. Turn the ON/OFF switch to the ON position. The Serial to WiFi or IP to WiFi APP will display in the

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Step 2Enter AT comand, *at+ver=??*, to verify that the board is communicating and the firmware version on the board is displayed.

The Tera Term VT logs of the command for Serial to WiFi and IP to WiFi is as shown below:

🖳 COM18 - Tera Term ¥T
File Edit Setup Control Window Help
Serial2WiFi APP
at+ver=??
S2W APP VERSION=5.3.0
S2W GEPS VERSION=5.3.0 S2W WLAN VERSION=5.3.0
S2W BIN TYPE=GS2K_BUILDER_9243
S2W RELEASE TYPE=BETA
BUILD TIME=00:00:04
BUILD DATE=Jun 17 2016 WLAN EXT VERSION=35
S2W APP EXT UERSION=18
WLAN FEAT BMAP=0000000000000207
GEPS EXT VERSION=17 Flash ID=0x000020c2:MICRONIX-4MB
OK

#### 👢 COM8 - Tera Term ¥T

<u>File Edit Setup Control Window Help</u> Ip2WiFi APP t+ver= P2WIFI APP VERSION=5.3. GEPS UERSION=5.3.0 WLAN UERSION=5.3.0 BIN TYPE=GS2K\_BUILDER\_9231 RELEASE TYPE=BETA TIME=08:04:57 DATE=Jun 16 2016 EXT VERSION=35 FI APP EXT VERSION=18 'EAT BMAP=00000000000000207 XT UERSION=17 ID=0x000020c2:MICRONIX-4MB 00000207



**Note:** The Evaluation Package includes documentation, EVB schematics, EVB firmware, software utilities such as Tera Term, and gs2k flashprogram utility. Use the gs2k flashprogram utility provided with the EVB package to re-flash the EVB if needed.

# Information

For general questions, visit: http://www.gainspan.com/contactform

For sales, visit: http://www.gainspan.com/contact/sales\_distributors

For technical and product support, visit: https://www.gainspan.com/secure/question

For additional information, refer to the following documents for:

- Configuring and generating custom firmware binary images: GS2K SDK Builder User Guide
- Programming module: GS2K Module Programming User Guide
- Serial-to-WiFi AT command description:
  - S2W Adapter Command Reference Guide
- IP-to-WiFi AT command description:
  - IP2WiFi Adapter Command Reference Guide
- AT command examples for setting UDP/TCP client/server configurations HTTP/HTTPS, and EAP secure connection:
  - GS2K S2W Use Case Reference Guide
- For evaluation board description and hardware setup, jumper settings, component description, board specifications, and pin outs:
  - GS2K Module Evaluation Board Hardware User Guide
- If SDK is purchased: Setting up, compiling, and debugging firmware using IAR IDE:
  - GS2K SDK Application Programming Guide

### **Congratulations!**

You have successfully setup your GS2101M Evaluation Board.



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