

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 Login at https://wifi.telit.com/secure/login.

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

https://wifi.telit.com/secure/register

Step 2 Under SDK Builder tab, 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.

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SDK Builder Build History About Tool	Release Notes
480.	Select your SDK-Builder Configuration
APPLICATION	Bulld Type: New Build • ?
	Gain Span Module: GS2101 MIP/MIE v1.0 or later •
INTERIO DI ANTALE	Firmware Version: GEPS v5.3.0 Beta •
	Internal Flash: 4MB (Internal to Module)
TEST AND TESTS	External Flash: None * (External to Module)
	Bulld Output: Custom Package
SDK Builder Version 5.3.0	Application: Serial to W-Fi (Hosted) • ?
Include Do	cuments & Utilities: 📝 ?
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Note: 1. Use GS flash programming tool and Super Bio	nir nnvilriari with the nankane finm the hvilriar

GainSpan. Support Por Iote: 1. Use GS Firmware Update Provisioning Method Provisioning Pages Firmware Update Meth Firmware Update Opti **Digital Signature** Firmware Update Interfac Firmware Binary Nam Auto Connection Mode Backward Compatibility with Secure Provisioning Back **Important:** Newer version of the firmware maybe available on the Telit Wi-Fi Portal. Login to the Telit Wi-Fi Portal (https://wifi.telit.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.

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Select yo	our SDK-Builder Configuration
Build Type:	New Build • ?
Gain Span Module:	GS2101 MIP/MIE v1.0 or later +
Firmware Version:	GEPS v5.3.0 Beta +
Internal Flash:	4MB (Internal to Module)
External Flash:	None * (External to Module)
Build Output:	Custom Package · ?
Application:	IP to Wi-Fi (Hosted)
Include Documents & Utilities:	R ?
	Back Next
programming tool and Super Block provided with the pa	ickage from the builder.

Clock/Power Settings	Memory Settings		Miscellaneous	Summary		
	Provisionin	g				
	Wire	Wireless Provisioning				
	Gain Profe	GainSpan Web pages Professional(AP and Client)				
	Firmware Up	<u>late</u>				
	OTA	FU Push	Method			
	Back	Backup Copy (3 versions)				
	No S	No Signing				
	Gain	GainSpan Web pages				
	Miscellaneo	us				
	2101	2101_5_3_0_BETA_STA_LAP_HTTPS				
	New	New Method				
SS1011	Enab	Enable				
	Enab	Enable				
	ок					

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 3Open 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.

www. Serial Rish Programmer for 652000 ver. 1.2.7	
Program GS2000 Device	Program Node
Check Connection Prog 1. Select Interface UART V Super	rem Board r Block D:\2101\Embedded\superblock_4
2. Select UART Port CON31 Curre 3. Select Baud Rate 115200 921600	Bingle Image Multiple Images
A. Check Connection Check Connection Factor	ry FW Version
Module Type: GS2101MIP 1.0 Mac Address: 20F85EDD07EA	Erase Only Erase and Program
Timestamp Status	
13:02:33 Communicating with the Module 13:02:33 Connection OKI	
13:02:42 A Valid Three-Copy SuperBlock File was Se 13:02:46 A Valid Current Version Firmware Image wa	lected!! as Selected!!
Help Clear Status Copy	Status Close
UART COM31 G52101MIP	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/*

Tera Term - [dis	sconnected] VT	Help				
The Eule Secup	Control Window	пер				
-						
	Tera Term: New o	onnection			×	
	○ TCP/IP	Host:	myhost.exam	ple.com	-	
			✓ History			
		Service:	O Telnet	TCP port	#: 22	
			SSH	SSH version:	SSH2 -	
			O Other	Desta as la		
				Protocol.	UNSPEC -	
((D)	
(Serial 	Port:	COM2: 028 2	Serial Port (CUN	15j 🔻	
		OK	Cancel	Help	1	
		UK		Пер		

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
- Flow Control: none





/ Help		
Tera Term: Serial por	t setup	^
Port: Baud rate: Data: Parity: Stop: Flow control: Transmit o 0 n	COM5 • 9600 • 8 bit • none • 1 bit • none • delay nsec/char 0 m	OK Cancel Help sec/line

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 Tera Term VT window.

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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:

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 VERSION=18 WLAN FEAT BMAP=0000000000000207 CEPS EXT VERSION=12	
FLASH ID=0×000020c2:MICRONIX-4MB OK	

👢 COM8 - Tera Term ¥T

<u>File Edit Setup Control Window Help</u> Ip2WiFi APP t+ver=?? P2WIFI A APP VERSION=5.3.0 GEPS VERSION=5.3.0 WLAN VERSION=5.3.0 BIN TYPE=GS2K_BUILDER_9231 RELEASE TYPE=BETA ME=8-04-52 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



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.

Technical and Product Support

For any clarification, technical and product support, please email to Telit Technical Support at: TS-SRD@telit.com

We recommend adding "Wi-fi" in subject of the email. For example, the subject of email can be "Wi-Fi: Association failing", "Wi-Fi: SPI Driver Issue".

Also, in description of your email, please provide details about the issue, product, module and use case including software firmware version, module version and type, application being used, customizations done to application, use case and issue frequency and ability to recreate it.

Information

For information, please refer to the following documents:

- GS2K SDK Builder User Guide
- Configuring and generating custom S2W firmware binary images from web portal based on features required
- GS2K Module Programming User Guide
 - How to Program the module
- GS2K SDK Application Programming Guide
 - If SDK is purchased, for setting up, compiling, and debugging firmware using IAR IDE. This also has reference codes for various use cases, debugging mechanisms, detailed description of various modules and features and much more
- GS2K S2W Use Case Reference Guide
 - For sequence of AT commands to be used for any particular use case
- GS2K Module Evaluation Board Hardware User Guide
 - For evaluation board description and hardware setup, jumper settings, component description, board specifications, and pin outs
- IP2WiFi Adapter Command Reference Guide
 - For IP-to-WiFi AT command description
- S2W Adapter Command Reference Guide
 - For detailed description of every AT command

For further information, please visit the website link: https://www.telit.com/products/wifi-and-bluetooth/#wifi

GS2K Live Calibration Application Note

- For calibrating the module for optimum reception, which needs to be done once in the lifetime of the product unless the flash is erased completely for some reason

GS2K Memory Map and File System Application Note

- Provides the memory architecture of the Wi-Fi modules and provide details about types of memory, location, and content of various items in these memory locations