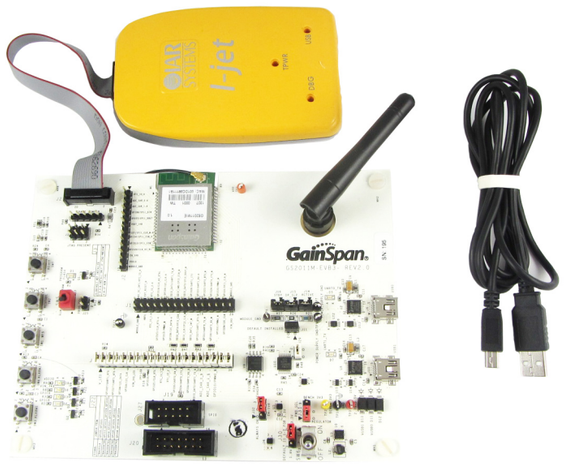
Software Development Kit Quick Start Guide

Supports GS2011M and GS2100M Modules

This Quick Start Guide will walk you through the easy steps to setup, evaluate, develop, and debug the full capabilities and features of the GS2011M and GS2100M embedded platform software.



You will need the following items from your GainSpan Software Development and Debugging Kit:

- Quick Start Guide (this document)
- GS2011M/GS2100M Evaluation Board
- Serial Cable (USB to Mini-USB)
- IAR I-JET JTAG Debugging Probe
- 20-pin JTAG Ribbon Cable
- Micro USB Cable
- IAR Embedded Workbench for ARM version 6.50.5 with software license to register via email or the IAR Install CD with license to activate (if ordered)

***Note:** The GS2011M or GS2100M evaluation boards come preloaded with Serial-to-WiFi (UART) firmware.*

1 Setup the Evaluation Board Kit

Step 1 Remove the **Evaluation Board**, **mini-USB cable**, **I-Jet Debug Probe**, **micro-USB cable**, and **20-pin ribbon cable** from your SDK kit.

Step 2 Plug the **micro-USB** cable into the **I-Jet probe**, and plug the other end of the **micro-USB** cable into a **USB port** on a computer.

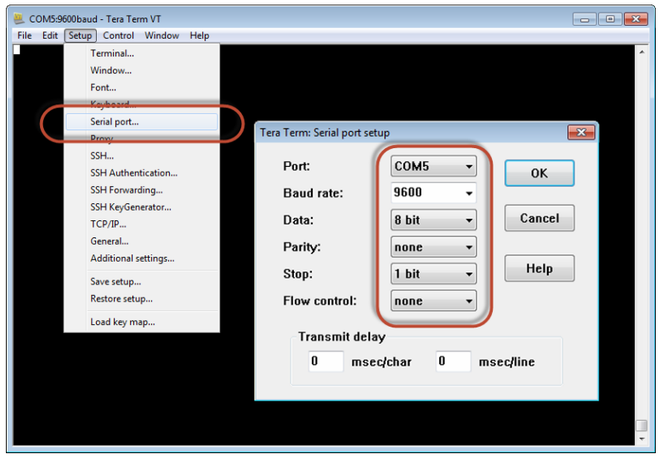
Step 3 Plug the **20-pin JTAG ribbon** cable into the **JTAG connector** on the **I-Jet probe**, and plug the other end of the ribbon cable into the **JTAG connector** on the GS2011M/GS2100M evaluation board.

Step 4 Plug the **mini-USB** cable into the **USB0** port on the evaluation board, and plug the other end of the **mini-USB** cable into a **USB port** on your computer.

2 Configure the Serial COM Port

Step 1 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: *http://ttssh2.sourceforge.jp/*

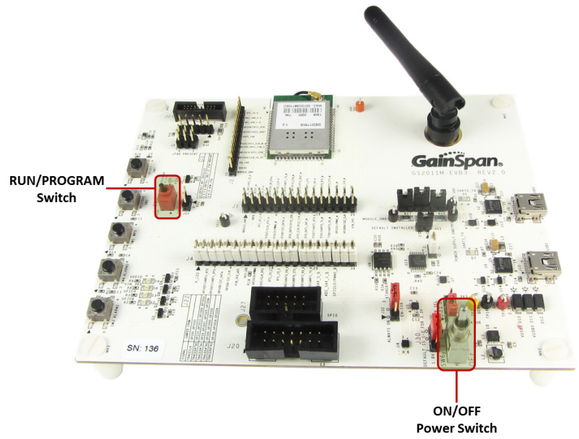
Step 2 Setup the Serial COM port, Baud Rate, Data bit, Parity, Stop bit, and Flow control.



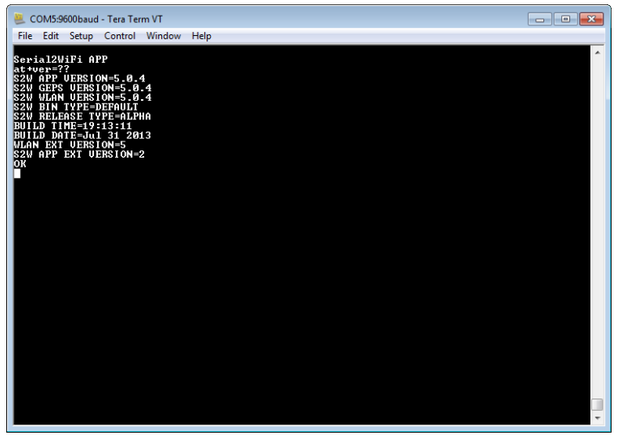
3 Starting the Serial-to-WiFi Application

Step 1 Ensure that the RUN/PROGRAM switch is in the **RUN** position.

Step 2 Turn the ON/OFF switch to the **ON** position. The Tera Term VT prompt will display **Serial2WiFi APP**.



Step 3 Enter a basic **AT** command (**at+ver=??**) to verify that the evaluation board is working. The Serial2WiFi firmware version information will display.



4 Setup a Wireless Network

Step 1 Enable DHCP by issuing the **at+ndhcp=1** command.

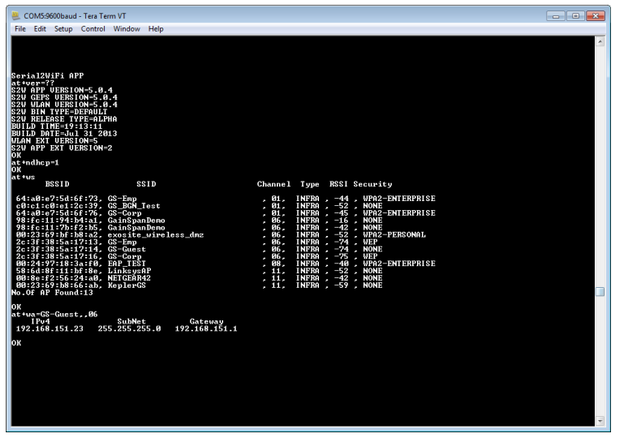
Step 2 Scan for available WiFi access points (AP) within your network by issuing the **at+ws** command.

Step 3 Enter the SSID that is associated with the access point (AP). If using a secure AP with WPA2-Personal (WPA2-PSK) issued the following command to setup the security and associate.

at+wwpa=SSID, passphrase
at+wa=SSID

For additional security types, refer to the *Serial-to-WiFi Adapter Application Programmer Reference Guide* for AT commands.

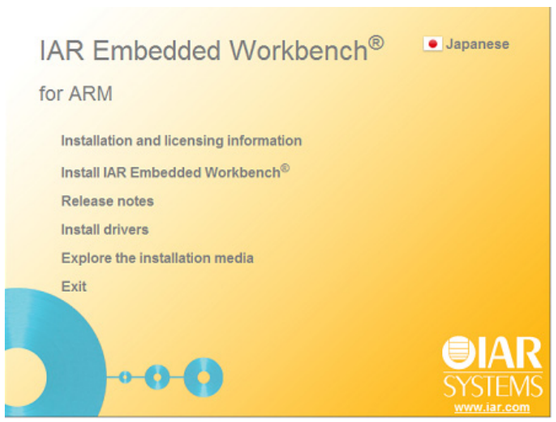
Step 4 Once associated, the evaluation board will receive an IP address from the access point (AP) DHCP server. An IP address, subnet, and gateway address will be displayed.



Note: *Additional module firmware versions can be created and downloaded using the SDK Package or SDK Builder on the GainSpan Support Portal: www.gainspan.com/secure/login*

5 Install IAR Embedded Workbench

Step 1 Install the IAR Embedded Workbench for ARM version 6.50.5 and follow the on screen instructions.

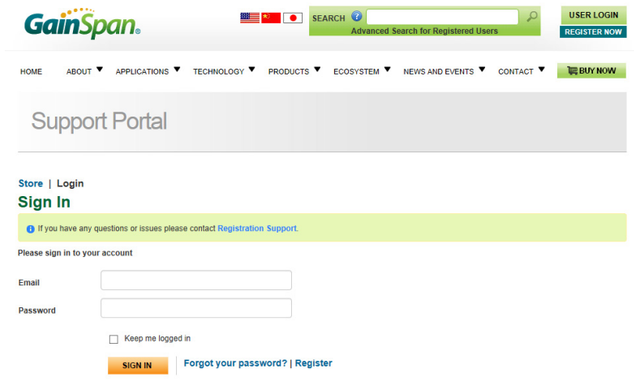


Step 2 Enter the license number that is provided in your email, CD package, or from the IAR website: *www.iar.com*.

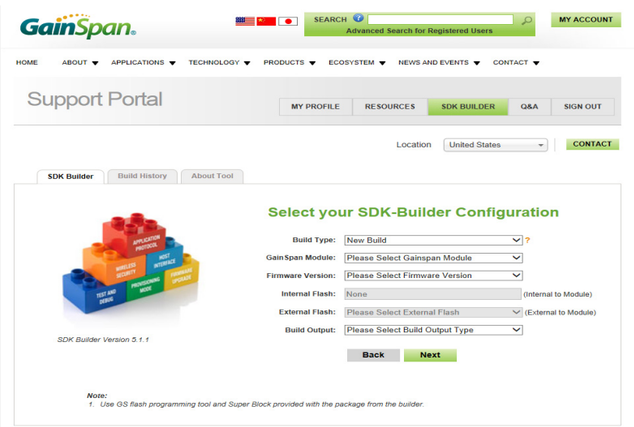
6 Download SDK Package

Step 1 Login to the GainSpan Portal:
www.gainspan.com/secure/login

If you do not have a login, sign up and register for a Portal account:
https://www.gainspan.com/secure/register



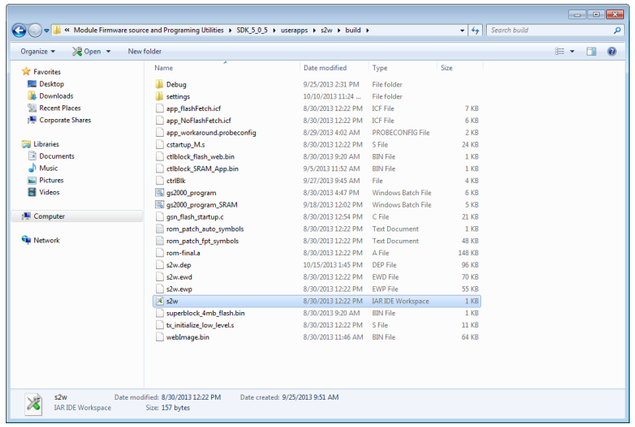
Step 2 You can create an SDK Package and download from the SDK Builder. The Firmware Version drop-down selection will indicate the latest version available.



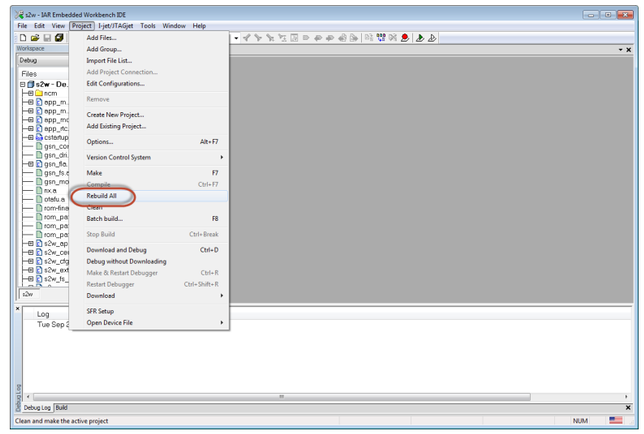
Note: *Download the SDK Package to your computer or laptop.*

7 Verifying and Building S2W Applications

Step 1 Open the project file under **SDK\userapps\s2w\build** folder and double-click on the **s2w** file to launch the IAR IDE Workspace application.



Step 2 Compile the code by selecting **Project > Rebuild All**. Once complete, this will generate the executable file **app.bin**.



Step 3 You are now ready to debug Serial-to-WiFi and Temperature and Light Sensor applications.

Documents: *For additional information and instructions on how to build custom SDK package, program modules, and debug software, refer to the following documents:*

- Setting up, compiling, and debugging firmware using IAR IDE:
  - *Software Development Kit Debugging User Guide GS2K-SW-DEV-DB-UG-001209*
- Programming module:
  - *GS2000 Based Module Programming User Guide GS2K-EVB-FP-UG-001206*
- Configuring and generating custom firmware binary images:
  - *Software Developer Kit (SDK) Builder User Guide GS2K-SDK-BLDR-UG-001223*