

# WL1271 SDK Setup Guide



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 TEXAS  
INSTRUMENTS  

## Revision History

Version	Date	Description
1.0	May 2010	Release

## Reference Documents

The documents listed below provide complementary specifications and information for the device:

- None

## About This Document

This document describes how to start working with the OMAP37x EVM and the WL1271 connectivity module.

The document contains the following chapters:

- **Chapter 1, Overview**, page 7
- **Chapter 2, Release Content**, page 9
- **Chapter 3, Setting Up the System**, page 10
- **Chapter 4, Loading the Images**, page 15
- **Chapter 5, Connecting**, page 21
- **Chapter 6, Running Demo Applications**, page 29



## Overview

This document describes how to get started working with the WL1271 on OMAP37x EVM. The WL1271 SDKs contains ti-bluetooth.tar.bz2, ti-wlan-modules.tar.bz2, & ti-wireless.tar.bz2 (for the Linux operating system (OS)) in combination with the WL1271, provides system solution for WLAN and Bluetooth® (BT) connectivity solutions. This document describes how to install an SDK release on the target and how to start running a basic WLAN application.

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## 1.1 Accessing Information

### 1.1.1 WiKi Page

Please refer to the WiKi page at [www.ti.com/connectivitywiki](http://www.ti.com/connectivitywiki) for more information about the connectivity solution.

### 1.1.2 Getting Started Guide

Please refer to the WiKi page at [www.ti.com/connectivitywiki](http://www.ti.com/connectivitywiki) under the **Getting Started** section for more information about the build environment and about loading the images on the EVM.

### 1.1.3 Demo Application


Please refer to the WiKi page at [www.ti.com/connectivitywiki](http://www.ti.com/connectivitywiki) under the **Demo** section for more information about Bluetooth and WLAN demo applications.

### 1.1.4 Download Files

Please refer to the WiKi page at [www.ti.com/connectivitywiki](http://www.ti.com/connectivitywiki) under **Downloads** to download the most update software release.

### 1.1.5 Videos

Please refer to the WiKi page at [www.ti.com/connectivitywiki](http://www.ti.com/connectivitywiki) under **Videos** to view video tutorials.



## Welcome to OMAP35x/AM37x Wireless Connectivity Portal

The home of wireless connectivity extensions for OMAP35xx & AM37x

- Product description
- WL1271 device
- Platform
- Hardware specifications
- Software specifications
- Tools
- Application notes
- Support
- Partners

[Getting Started](#) • [Demos](#) • [Downloads](#) • [Videos](#)

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## ***Release Content***

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### **Topic**

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## 2.1 Prerequisites

### 2.1.1 Hardware

- OMAP3EVM Rev-G/Rev-D Board
- With a Rev C processor module
- WL1271 Daughter card

### 2.1.2 Software

Include the below binary tar ball files:

- **ti-bluetooth.tar.bz2** : BT binaries and script for execution
- **ti-wlan-modules.tar.bz2**: WLAN stripped kernel modules and script for execution.
- **ti-wireless.tar.bz2** : WLAN application and scripts for execution

**Note:** This release can be downloaded from the WiKi page at [www.ti.com/connectivitywiki](http://www.ti.com/connectivitywiki) under **Downloads** or from the MMC/SD that is included in the box.

The ti-bluetooth.tar.bz2 tarball file contains the following folders/binaries:

**Table 1: Tarball File Folders/Binaries**

Content	Description
bluetooth_scripts	Contains the Bluetooth demo scripts
BT_FTP_storage	Contains the FTP pull files
BT_firmware	Contains Bluetooth firmware
Gallery	Contains gallery files (wav format file)
install.sh	One time installation script of BT packages
sbin	Contains the Bluetooth power enable binary file
Readme.txt	Readme file for BT execution

The ti-wlan-modules.tar.bz2 tarball file contains the following folders/binaries:

**Table 2: Tarball File Folders/Binaries**

Content	Description
sdio.ko	SDIO kernel object
bmtrace.ko	BMTARCE kernel object
testsdio.ko	TESTSDIO kernel object for SDIO interface test
tiwlan_drv.ko	TIWLAN driver kernel object



The ti-wireless.tar.bz2 tarball file contains the following folders/binaries:

**Table 3: Tarball File Folders/Binaries**

Content	Description
firmware.bin	WL1271 wireless firmware binary
tiwlan.ini	WL1271 wireless INI file for configuration.
tiwlan_loader	Application for loading the firmware.
wlan_cu	CLI application.
wlan_logger	WLAN logger application.
wpa_supplicant.txt	Wpa Supplicant text file.
Install.sh	Script file to install bring up the WLAN on the target.

## 2.2 Tools

The following tools must be downloaded from the web:

- **Tera Term:** A serial port terminal program should be used to communicate with the OMAP37x EVM board's serial port console. This tool is required for running the WLAN and BT demos. TeraTerm is the recommended terminal emulator for Windows.
  - It can be downloaded from the <http://www.ayera.com/teraterm/>
- **PumpKIN:** PumpKIN is an open source free TFTP server and client. It is required for downloading the WLAN/BT image into the EVM.
  - It can be found at the following URL: <http://kin.klever.net/pumpkin/>

## ***Setting Up the System***

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### 3.1 Setting Up the Host Computer

The Host computer must be a PC running Linux or Windows that supports one of the following serial terminal emulation programs: Minicom on Linux or Hyperterminal on Windows.

The parameters set for the serial terminal application are as follows:

**Table 4: Serial Terminal Application Parameter**

Parameter	Value
Baud rate/Bits per second	115200
Data bits	8
Parity	None
Stop bit	1
Flow Control	None

### 3.2 Setting Up the Target System

The OMAP3EVM development has a number of possible combinations for a number of hardware interfaces. These combinations are determined by the definitions of the jumper settings and a dip switch.

#### 3.2.1 DIP Switch Settings

The OMAP3730 processor supports various boot modes. On the OMAP3730 development boards, the boot modes are selected by setting various dip-switch combinations. On the OMAP3EVM development board, this switch is labeled SW4. The dip switch settings for the various boot modes are as follows:

**Table 5: MMC/SD Boot**

	1	2	3	4	5	6	7	8
OMAP3EVM With Micron NAND	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
OMAP3EVM with Samsung OneNAND	ON	OFF	OFF	ON	ON	OFF	OFF	OFF

**Table 6: Flash Boot**

	1	2	3	4	5	6	7	8
OMAP3EVM With Micron NAND	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF

To instructions that follow in this guide use the dip-switch setting for the Flash Boot with OMAP3EVM with Micron NAND.

#### 3.2.2 Boot from MMC/SD

The EVM that is provided out of the box is comes ready for use and has the PSP PSP-03.00.00.05 already installed in MMC/SD. However, if required, the procedure defined in the below link can be used to re-flash the image in MMC/SD card

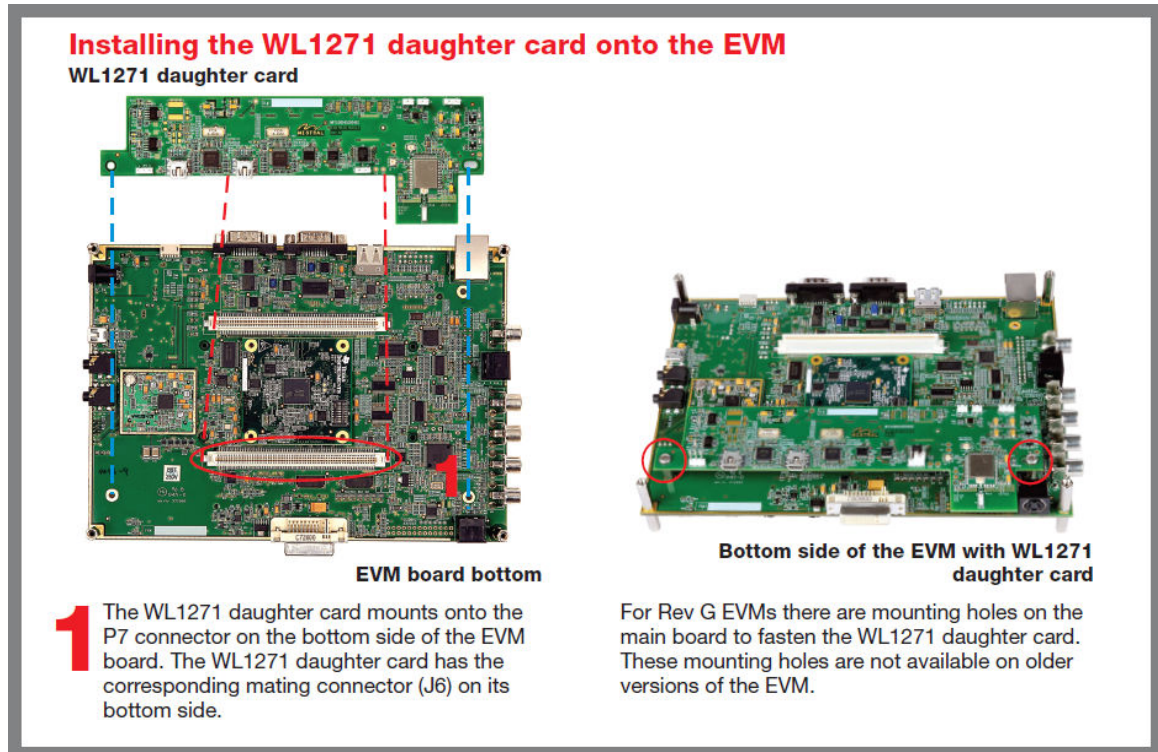
[http://processors.wiki.ti.com/index.php/AM37x\\_EVM\\_Software\\_Developer%27s\\_Guide#8..C2.A0\\_Flashing\\_a\\_SD\\_Card](http://processors.wiki.ti.com/index.php/AM37x_EVM_Software_Developer%27s_Guide#8..C2.A0_Flashing_a_SD_Card)

Insert the MMC/SD card on MMC1 port of the OMAP3EVM and configure the DIP switch setting for MMC/SD (given in [section 3.2.1](#)) and boot the EVM.

### 3.3 Setting Up the WLAN DC Hardware

#### To setup the WLAN DC hardware:

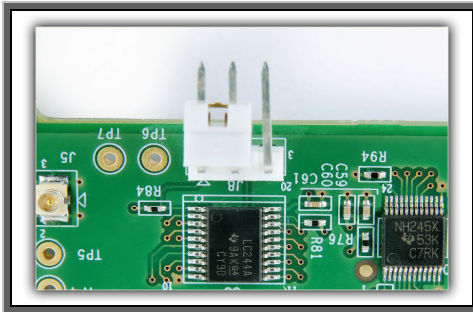
- 1 Mount the daughter card as shown below:



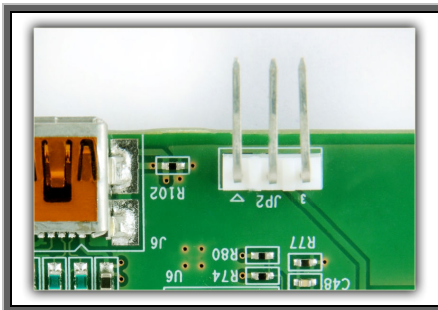
The following shows the picture of the daughter board on its own.



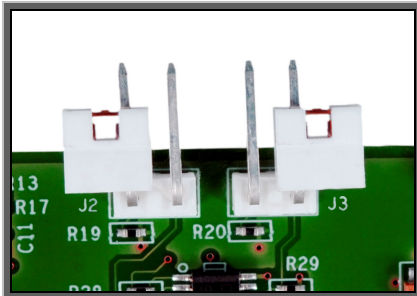
- 2 Check that jumper J8 is connected between terminal 1 and 2 in order to enable normal use, as shown below:



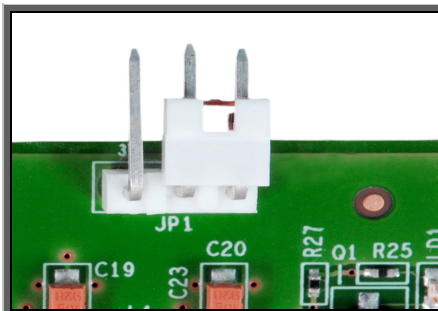
- 3 Check that jumper JP2 is connected. This jumper is only used if the board is modified to power up from the USB connectors, as shown below:



- 4 Verify that jumpers J2 and J3 are not connected, as shown below:



- 5 Check that jumper JP1 is either not connected or connected between 1 & 2 for normal use as shown below:





## Loading the Images

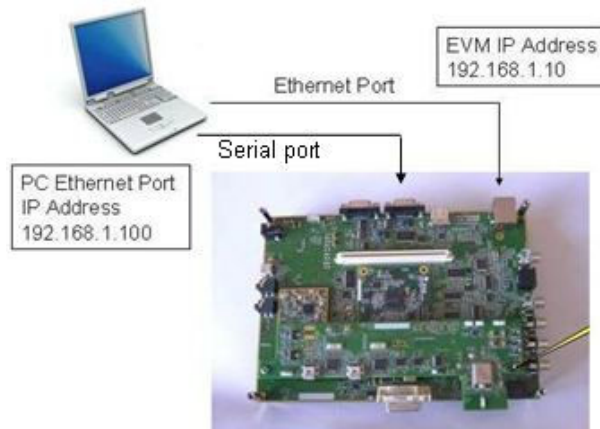
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## 4.1 Setting Up the Hardware for Loading

### To load the images to the EVM

- 1 Connect the EVM with a serial cable and an Ethernet cable, as shown below:



- 2 Connect the EVM to a PC via an Ethernet cable
- 3 Set the IP address of the PC and the EVM in the same subnet. For example, set the PC address to 192.168.1.100 and the EVM Ethernet IP address to 192.168.1.10.

## 4.2 Starting to Load

The following procedure describes how to start loading the Kernel WLAN and BT images, when there is no WLAN and BT packages available in the file system under “/opt” directory.

### To load the WLAN and Bluetooth images:

- 1 Verify whether the EVM Ethernet port is configured to the correct IP address. Use the `ifconfig` command to verify the Ethernet port configuration, as shown below:

```
root@dm3730-am3715-evm:~/demo# ifconfig
eth0      Link encap:Ethernet  HWaddr 00:50:C2:7E:8D:D9
          inet addr:10.1.101.199  Bcast:10.1.101.255  Mask:255.255.255.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:14 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:1581 (1.5 KiB)  TX bytes:0 (0.0 B)
          Interrupt:80

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
```

```
RX bytes:0 (0.0 B) TX bytes:0 (0.0 B)
```

- 2 If the Ethernet port is not configured to the correct IP address, then use the **ifconfig** command to configure it as follows:

```
root@dm3730-am3715-evm:~/demo# ifconfig eth0 192.168.1.10
```

- 3 Create a folder that to be used for the loading the images and then open the TFTP utility in the PC and download the WLAN and BT images to the EVM.

The following example change directory to /opt and downloads the images to it.

```
root@dm3730-am3715-evm:~# cd /opt
root@dm3730-am3715-evm:~/opt# tftp -g -r ti-bluetooth.tar.bz2 192.168.1.100
root@dm3730-am3715-evm:~/opt# tftp -g -r ti-wireless.tar.bz2 192.168.1.100
root@dm3730-am3715-evm:~/opt# tftp -g -r ti-wlan-modules.tar.bz2 192.168.1.100
```

- 4 After loading the image, verify that they are in the folder by using the **ls** command and then untarring the tar file, as shown below:

```
root@dm3730-am3715-evm:~/opt# ls
ti-bluetooth.tar.bz2  ti-wireless.tar.bz2  ti-wlan-modules.tar.bz2
root@dm3730-am3715-evm:~/opt# tar -jxvf ti-bluetooth.tar.bz2
root@dm3730-am3715-evm:~/opt# tar -jxvf ti-wireless.tar.bz2
root@dm3730-am3715-evm:~/opt# tar -jxvf ti-wlan-modules.tar.bz2
```

- 5 After extracting the tar file, the folder contains all the images and appears as follows. Use the **ls** command to display the folder's content.

```
root@dm3730-am3715-evm:~/opt# ls
ti-bluetooth      ti-wireless      ti-wlan-modules
ti-bluetooth.tar.bz2  ti-wireless.tar.bz2  ti-wlan-modules.tar.bz2
root@dm3730-am3715-evm:~/opt#
```

## 4.3 Installing the Drivers

### To install Bluetooth drivers:

- Go to Bluetooth main folder (in our example it is called ti-bluetooth) and run the install.sh script, as shown below:

```
root@dm3730-am3715-evm:~/opt/ti-bluetooth/gallery# cd ..
root@omap3evm:~/opt/ti-bluetooth# ls
bluetooth_scripts  BT_FTP_storage  firmware  gallery
install.sh         Readme.txt      sbin
root@dm3730-am3715-evm:~/opt/ti-bluetooth # ./install.sh
This script installs TI-MISTRAL's WL1271 Bluetooth package
.
..
...
....
/opt/ti-bluetooth/bluetooth_scripts --> Bluetooth Scripts
/opt/ti-bluetooth/BT_FTP_storage    --> BT FTP Storage files
```



```
/opt/ti-bluetooth/gallery      --> Gallery files
/opt/ti-bluetooth/sbin        --> Binary files
WL1271-Bluetooth Package installation completed
```

## Connecting

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This chapter describes how to connect.

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## 5.1 Starting the WLAN and Connecting to an Access Point

### To start the WLAN and connect to an access point:

- 1 The Wireless LAN folder is located in **root@omap3evm:~ /opt/ti-wireless**. Change the directory to **ti-wireless** and type **ls -l** to view all the files in the **ti-wireless** folder, as shown below:

```
root@dm3730-am3715-evm:~/opt/ti-wireless# ls -l
-r--r--r-- 1 root root      271808 2010-05-11 19:00 firmware.bin
-rwxr-xr-x 1 root root       1029 2010-05-11 19:00 install.sh
-r--r--r-- 1 root root       11282 2010-05-11 19:00 tiwlan.ini
-rwxr-xr-x 1 root root     477244 2010-05-11 19:00 tiwlan_loader
-rwxr-xr-x 1 root root     616848 2010-05-11 19:00 wlan_cu
-rwxr-xr-x 1 root root     491112 2010-05-11 19:00 wlan_logger
-r--r--r-- 1 root root        51 2010-05-11 19:00 wpa_supplicant.txt
root@dm3730-am3715-evm:~/opt/ti-wireless#
```

- 2 To start the wlan driver, run the **install.sh** script, as shown below:

```
root@dm3730-am3715-evm:/opt/ti-wireless# ./install.sh
Installing WL1271-WLAN kernel modules...
- sdio.ko
  Success
- bmtrace.ko
  Success
- tiwlan_drv.ko
TIWLAN: driver init
  Success
Loading firmware...
Success
Bringing-up the WLAN interface...
TIWLAN:
...init_config: invalid int value for <RxFemInsertionLoss_2_4G> : 0E #
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##### FEM0 parameters #####

# (for Single bend 2.4G parameters FEM0 (RFMD 3.0) HDK20)

#RxTraceInsertionLoss_2_4G = 0
#TXTraceLoss_2_4G = 0
#RxRssiAndProcessCompensation_2_4G =
ec,f6,00,0c,18,f8,fc,00,08,10,f0,f8,00,0a,14
#TXBiPReferencePDvoltage_2_4G = 0x0164
#TxBiPReferencePower_2_4G = 0x80
#TxBiPOffsetdB_2_4G = 00
```

```
#TxPerRatePowerLimits_2_4G_Normal = 1c,1f,22,24,28,29
#TxPerRatePowerLimits_2_4G_Degraded = 19,1f,22,23,27,28
#TxPerChannelPowerLimits_2_4G_11b =
50,50,50,50,50,50,50,50,50,50,50,50,50,50,50
#TxPerChannelPowerLimits_2_4G_OFDM =
50,50,50,50,50,50,50,50,50,50,50,50,50,50,50
#TxPDVsRateOffsets_2_4G = 01,02,02,02,02,00
#TxIbiasTable_2_4G = 1a,1a,1a,1a,1a,21
#RxFemInsertionLoss_2_4G = 0x10

#####
#####
##### Radio
TIWLAN:
...init_config: invalid int value for <RxTraceInsertionLoss_2_4G> : 0E
TXTraceLoss_2_4G = 0E
RxRssiAndProcessCompensation_2_4G =
ec,f6,00,0c,18,f8,fc,00,08,10,f0,f8,00,0a,14
TXBiPReferencePDvoltage_2_4G = 177 #375 mV
TxBiPReferencePower_2_4G = 80 #128 mV
TxBiPOffsetdB_2_4G = 0
TxPerRatePowerLimits_2_4G_Normal = 1c,1f,22,24,28,29
TxPerRatePowerLimits_2_4G_Degraded =19,1f,22,23,27,28
TxPerChannelPowerLimits_2_4G_11b =
50,50,50,50,50,50,50,50,50,50,50,50,50,50,50
TxPerChannelPowerLimits_2_4G_OFDM =
50,50,50,50,50,50,50,50,50,50,50,50,50,50,50
TxPDVsRateOffsets_2_4G = 01,02,02,02,02,00
TxIbiasTable_2_4G = 11,11,15,11,15,0f
RxFemInsertionLoss_2_4G = 0E # 14

##### FEM0 parameters #####

# (for Single bend 2.4G parameters FEM0 (RFMD 3.0) HDK20)

#RxTraceInsertionLoss_2_4G = 0
#TXTraceLoss_2_4G = 0
#RxRssiAndProcessCompensation_2_4G =
ec,f6,00,0c,18,f8,fc,00,08,10,f0,f8,00,0a,14
#TXBiPReferencePDvoltage_2_4G = 0x0164
#TxBiPReferencePower_2_4G = 0x
TIWLAN:
...init_config: invalid int value for <TXTraceLoss_2_4G> : 0E
```

```

RxRssiAndProcessCompensation_2_4G =
ec,f6,00,0c,18,f8,fc,00,08,10,f0,f8,00,0a,14
TXBiPReferencePDvoltage_2_4G = 177 #375 mV
TxBiPReferencePower_2_4G = 80 #128 mV
TxBiPOffsetdB_2_4G = 0
TxPerRatePowerLimits_2_4G_Normal = 1c,1f,22,24,28,29
TxPerRatePowerLimits_2_4G_Degraded =19,1f,22,23,27,28
TxPerChannelPowerLimits_2_4G_11b =
50,50,50,50,50,50,50,50,50,50,50,50,50,50,50,50
TxPerChannelPowerLimits_2_4G_OFDM =
50,50,50,50,50,50,50,50,50,50,50,50,50,50,50,50
TxPDVsRateOffsets_2_4G = 01,02,02,02,02,00
TxIbiasTable_2_4G = 11,11,15,11,15,0f
RxFemInsertionLoss_2_4G = 0E # 14

##### FEM0 parameters #####

# (for Single bend 2.4G parameters FEM0 (RFMD 3.0) HDK20)

#RxTraceInsertionLoss_2_4G = 0
#TXTraceLoss_2_4G = 0
#RxRssiAndProcessCompensation_2_4G =
ec,f6,00,0c,18,f8,fc,00,08,10,f0,f8,00,0a,14
#TXBiPReferencePDvoltage_2_4G = 0x0164
#TxBiPReferencePower_2_4G = 0x80
#TxBiPOffsetdB_2_4G = 00
#Tx
TIWLAN: 178.934413: pInitParams->RoamingScanning_2_4G_enable 0
SDIO clock Configuration is now set to 24Mhz
After sdioDrv_ConnectBus, iStatus=0
After SD_IO_GO_IDLE_STATE, iStatus=0
After VDD_VOLTAGE_WINDOW, iStatus=0
After SD_IO_SEND_RELATIVE_ADDR, iStatus=0
After SD_IO_SELECT_CARD, iStatus=0
After w 0x82, iStatus=0
After r 0x82, iStatus=0
After w 0xC8, iStatus=0
After CCCR_BUS_INTERFACE_CONTROL, uCount=1
After CCCR_IO_ENABLE, uCount=1
TIWLAN: 179.178371: CHIP VERSION... set 1273 chip top registers
TIWLAN: 179.184901: Working on a 1273 PG 2.0 board.
TIWLAN: 179.189631: Starting to process NVS...
TIWLAN: 179.193904: No Nvs, Setting default MAC address

```

```

TIWLAN: 179.198939: pHwInit->uEEPROMCurLen: 1c
TIWLAN: 179.203151: ERROR: If you are not calibrating the device, you
will soon get errors !!!
TIWLAN: 179.211635: Chip ID is 0x4030111.
TIWLAN: 179.215785: FEM Type 1
TIWLAN: 179.218959: Starting to download firmware...
TIWLAN: 179.286861: Starting to download firmware...
TIWLAN: 179.309932: Starting to download firmware...
TIWLAN: 179.317164: Starting to download firmware...
TIWLAN: 179.325862: Starting to download firmware...
TIWLAN: 179.333247: Starting to download firmware...
TIWLAN: 179.339320: Finished downloading firmware.
TIWLAN: 179.343928: Firmware running.
TIWLAN: 179.376399:
TIWLAN: 179.378383:

-----

TIWLAN: 179.386348: Driver Version   : WiLink_Driver_6.1.0.0.130
TIWLAN: 179.392085: Firmware Version: Rev 6.1.0.0.313
TIWLAN: 179.396907: Station ID      : 08-00-28-12-34-56
TIWLAN: 179.401942:

-----

TIWLAN: 179.409846:
Success
Starting wpa_supplicant...
Success

Now you may run the application "./wlan_cu"
Interrogate TX/RX parameters
root@dm3730-am3715-evm:~/opt/ti-wireless# ./wlan_cu
Connection established with supplicant
user_main, start
\> Driver/, Connection/, Management/, Show/, Privacy/, scAn/, roaminG/, qOs/,
poWer/, eVents/, Bt coexsistance/, Report/
, dEbug/, biT/, aboUt, Quit

```

The 1271 drivers are loaded and started. The wlan command line interface application (CLI) appears and the WL1271 is ready for user commands.

## 5.2 Connecting to a Unsecured WLAN Network

The following shows the main CLI menu that appears after the **wlan\_cu** application is run:

```

\> Driver/, Connection/, Management/, Show/, Privacy/, scAn/, roaminG/, qOs/,
poWer/, eVents/, Bt coexsistance/, Report/
, dEbug/, biT/, aboUt, Quit

```

**To connect to an unsecured WLAN network:**

- 1 In the CLI, press “a” to access the **scan** menu, as shown below:

```
a
.../scAn> Start, sTop, Wextstart, configApp/, configpEriodic/, configPolicy/
```

- 2 In the **Scan** menu, press “s” to start the scan, as shown below:

```
s
Application scan started
```

Start scanning for access points. The scan is completed after a few seconds and no further indication is provided when the scan is completed.

- 3 Press / to return to the CLI main menu.

```
/
\> Driver/, Connection/, Management/, Show/, Privacy/, scAn/, roaminG/, qOs/,
poWer/, eVents/, Bt coexsistance/, Report/
, dEbug/, biT/, aboUt, Quit
```

- 4 Press “c” to access the Connection menu.

```
c
.../Connection> Bssid_list, Connect, Disassociate, Status, Full_bssid_list, wPs/
```

- 5 Press b to display the full Bssid\_list. The full Bssid\_list shows the list of access points discovered during the scan process, as shown below:

```
b
BssId List: Num=8
      MAC          Privacy Rssi  Mode    Channel  SSID
00.1c.f9.2f.c6.32    0    -83  Infra     1        B
00.16.47.93.66.20    1    -74  Infra     1       ****
00.16.47.93.66.21    0    -75  Infra     1       ****
00.50.f1.12.03.38    1    -81  Infra     1      yaelb
00.16.46.c6.2b.90    1    -74  Infra     6       ****
00.15.c6.5f.62.50    0    -72  Infra     6       123
*00.14.a8.a0.ec.10    0    -51  Infra    11     theseus
00.12.01.4d.da.70    1    -82  Infra    11        Cat

.../Connection> Bssid_list, Connect, Disassociate, Status, Full_bssid_list, wPs
```

- 6 Connect to one of the 6ccess points listed in the Bssid\_list. The following example connects to an access point named “**theseus**”. This access point has 0 in the **Privacy** field, indicating that this access point is not secured.

```
c theseus
Trying to associate with SSID 'theseus'
Associated with 00:14:a8:a0:ec:10
CTRL-EVENT-CONNECTED - Connection to 00:14:a8:a0:ec:10 completed (auth) [id=5
id_str=]
***** NEW CONNECTION *****
-- SSID = theseus
```

```
-- BSSID = 0-14-a8-a0-ec-10
*****
.../Connection> Bssid_list, Connect, Disassociate, Status, Full_bssid_list, wPs/
```

The EVM is now connected to the AP.

- 7 From any submenu, press / q to exit the CLI menu and return to the linux prompt, as shown below:

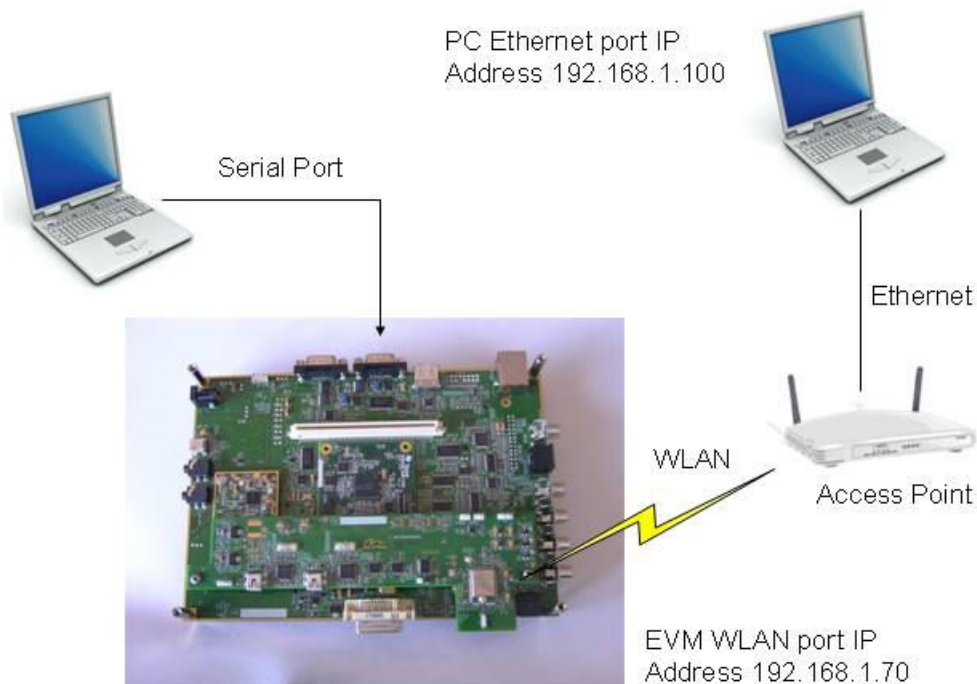
```
/ q
\> Driver/, Connection/, Management/, Show/, Privacy/, scAn/, roaminG/, qOs/,
poWer/, eVents/, Bt coexistence/, Report/
, dEbug/, biT/, aboUt, Quit
root@dm3730-am3715-evm:~/opt/ti-wireless#
```

### 5.3 Verifying the Connection to the Access Point

A simple ping test can be used to verify the connection to the access point.

#### To verify connection with the access point:

- 1 Use the hardware setup to run the ping test:



- 2 In the CLI menu, **type /q** to exit the CLI and return to the linux prompt, as shown below:

```
\> Driver/, Connection/, Management/, Show/, Privacy/, scAn/, roaminG/, qOs/,
poWer/, eVents/, Bt coexistence/, Report/
, dEbug/, biT/, aboUt, Quit
root@dm3730-am3715-evm:~/opt/ti-wireless#
```

- 3 Configure the EVM WLAN IP address and make sure that the EVM Ethernet port and WLAN port do not share the same IP subnet address, as shown below:

```
ifconfig tiwlan0 192.168.1.70 netmask 255.255.255.0 up
```



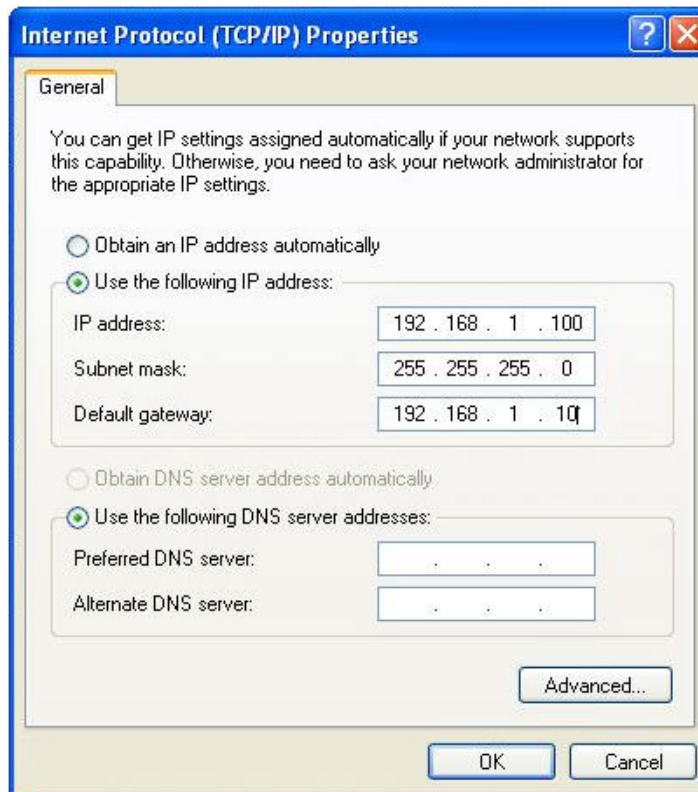
**4 Verify that the WLAN port (tiwlan0) IP address is configured correctly, as shown below:**

```

root@dm3730-am3715-evm:~/opt/ti-wireless# ifconfig
eth0      Link encap:Ethernet  HWaddr 00:50:C2:7E:8D:D9
          inet addr:10.1.101.199  Bcast:10.1.101.255  Mask:255.255.255.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:18 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:1080 (1.0 KiB)  TX bytes:0 (0.0 B)
          Interrupt:80
lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)
tiwlan0   Link encap:Ethernet  HWaddr 08:00:28:55:44:56
          inet addr:192.168.1.70  Bcast:192.168.1.255  Mask:255.255.255.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:6 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:100
          RX bytes:494 (494.0 B)  TX bytes:0 (0.0 B)

```

- 5 Configure the IP address of the laptop that is connected to the access point via the Ethernet cable to be in the same subnet as the EVM WLAN port. In this example, it is configured to **192.168.1.100**. The gateway IP address is not important for this test.



- 6 Use the Ping command to ping the PC that is connected to the access point. In the EVM menu, type the following:


```
root@dm3730-am3715-evm:~/opt/ti-wireless# ping 192.168.1.100 -c4
PING 192.168.1.100 (192.168.1.100): 56 data bytes
64 bytes from 192.168.1.100: seq=0 ttl=128 time=264.526 ms
64 bytes from 192.168.1.100: seq=1 ttl=128 time=82.764 ms
```

## Running Demo Applications

Please refer to the Wiki page at [www.ti.com/connectivitywiki](http://www.ti.com/connectivitywiki) under the **Demos** section for more information about Bluetooth and WLAN demo applications.

This Wiki page provides step-by-step guidance through the Bluetooth and WLAN demo applications.

The following shows an example of the Wiki page in which you can click the **Demos** link at bottom right of the page.



### Welcome to OMAP35x/AM37x Wireless Connectivity Portal

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