

## User Guide for UNA Module & Socket EVB

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## 1. FCC Regulations

- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
  
- This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiated radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
  - Reorient or relocate the receiving antenna.
  - Increase the separation between the equipment and receiver.
  - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  - Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## **2. RF Exposure Information**

This Modular Approval is limited to OEM installation for mobile and fixed applications only. The antenna installation and operating configurations of this transmitter, including any applicable source-based time-averaging duty factor, antenna gain and cable loss must satisfy MPE categorical Exclusion Requirements of §2.1091.

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons, must not be collocated or operating in conjunction with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures.

The end user has no manual instructions to remove or install the device and a separate approval is required for all other operating configurations, including portable configurations with respect to 2.1093 and different antenna configurations.

Maximum antenna gain allowed for use with this device is 2 dBi.

When the module is installed in the host device, the FCC ID label must be visible through a window on the final device or it must be visible when an access panel, door or cover is easily re-moved. If not, a second label must be placed on the outside of the final device that contains the following text:

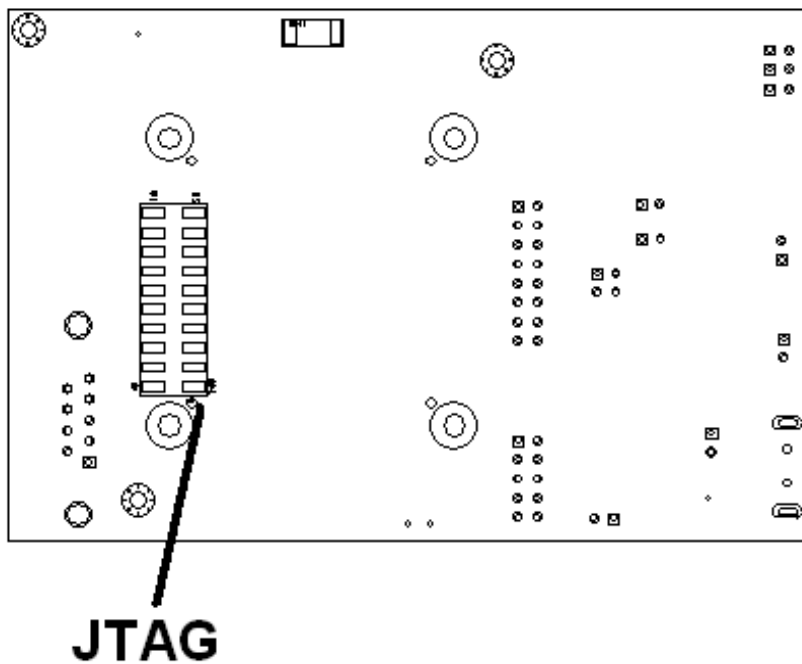
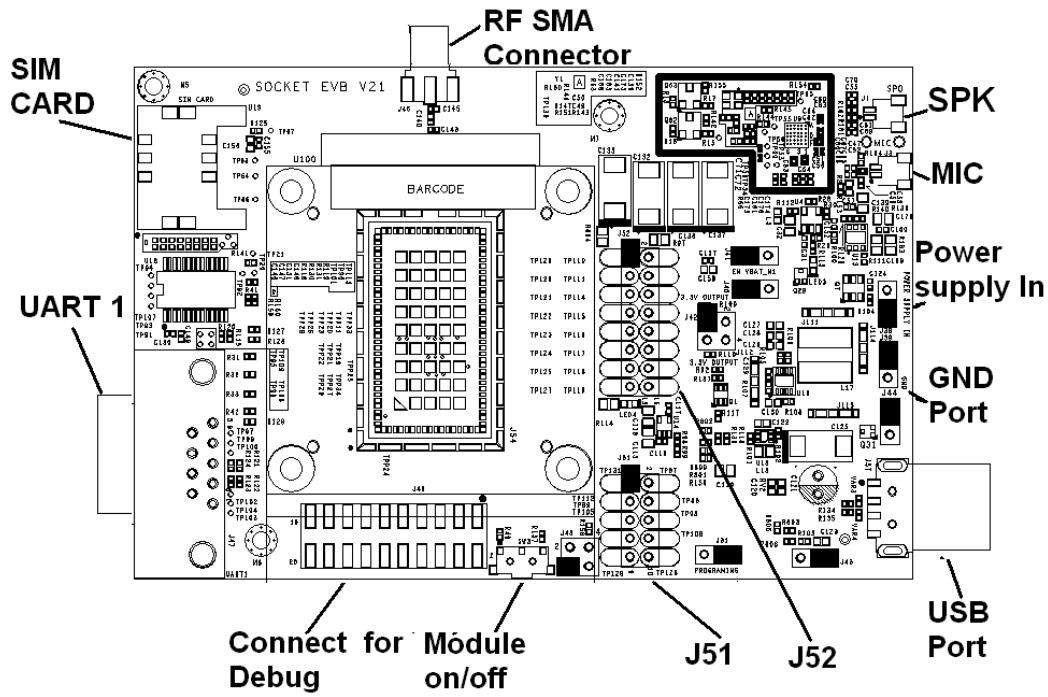
“Contains FCC ID: IXM-UNA900”.

### 3. Information of Installed Module

<b>Module Name</b>	UNA_900
<b>FCC ID</b>	IXM-UNA900
<b>HW Version</b>	V2.1
<b>SW Version</b>	MAUI.11A.W11.12.MP.V67.F1
<b>GSM Band</b>	GSM 850, E-GSM 900, DCS 1800, PCS 1900
<b>UMTS Band</b>	FDD I, FDD VIII
<b>GSM Feature</b>	Release 99
<b>GPRS</b>	Release 6, Multi-slot class 12
<b>EDGE</b>	Release 6, Multi-slot class 12
<b>UMTS Feature</b>	HSDPA, HSUPA (UMTS Release 6)
<b>AT Command</b>	3GPP TS 27.007, 27.005
<b>SIM/USIM</b>	Support 3V and 1.8V
<b>Interface</b>	USB 2.0 high speed
<b>Operating Temperature</b>	Frequency Stability covers operating temperature range of -20° to +50°C
<b>Operating Voltage</b>	3.5 ~ 4.2V

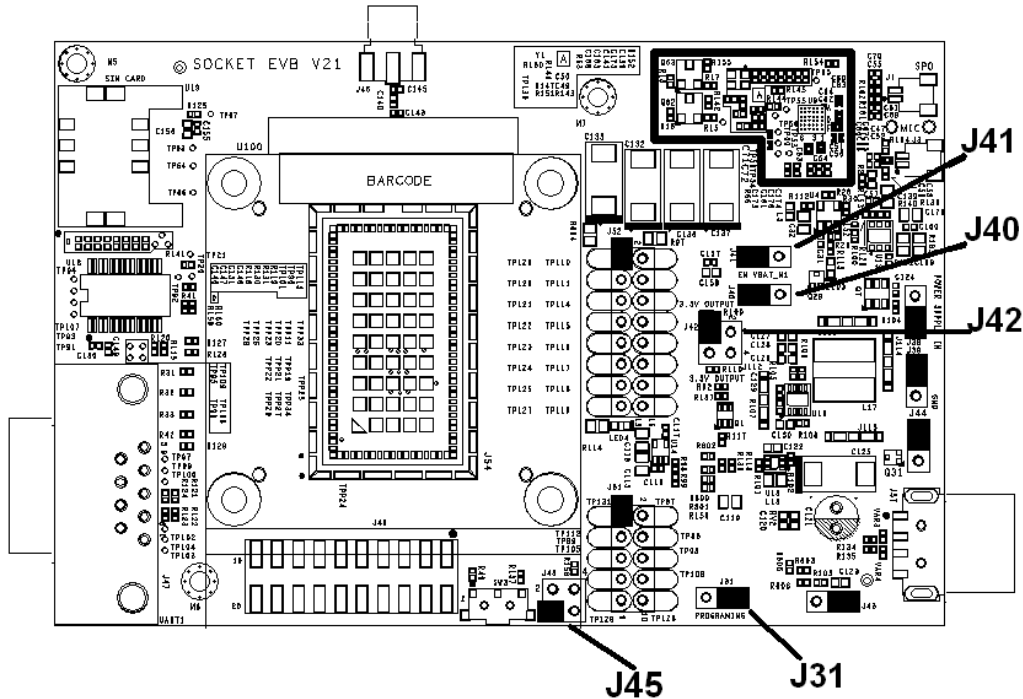
## 4. Guide to Use

### 1) Function of Socket EVB V21



Function	Description	Available	Unavailable
USB PORT	Connect to Host PC	V	
Power supply IN	Optional Connect to external Power supply input	V	
UART1	Download Firmware	V	
RF SMA connector	Connect to external Antenna	V	
Connector for Debug	Connector for Debug	V	
Module on/off	Switch for module on/off	V	
SIM card	Connect to SIM card	V	
JTAG	Connect to JTAG Debug tool	V	
MICK IN	Connect to MIC	V	
SPK OUT	Connect to Line out	V	
J51	MP test connector	V	
J52	MP test connector	V	

## 2) Configure the Socket EVB



### Default JUMP Setting :

Component reference	Function	Jump 1-2
J40	(Default) Enable VBAT_M1	Yes
J41	(Default) Enable POSCAP in Circuit on VBAT_M1	Yes

Component reference	Function	Jump 1-2	Jump 3-4
J42	(Default) Output +3.3V for module		Yes
	Output +4.2V for module		

a. Required : Select either J42 Jump1-2 or Jump 3-4

Component reference	Function	Jump 4-3
J45	PWRKEY low level input to turn on Module	Yes

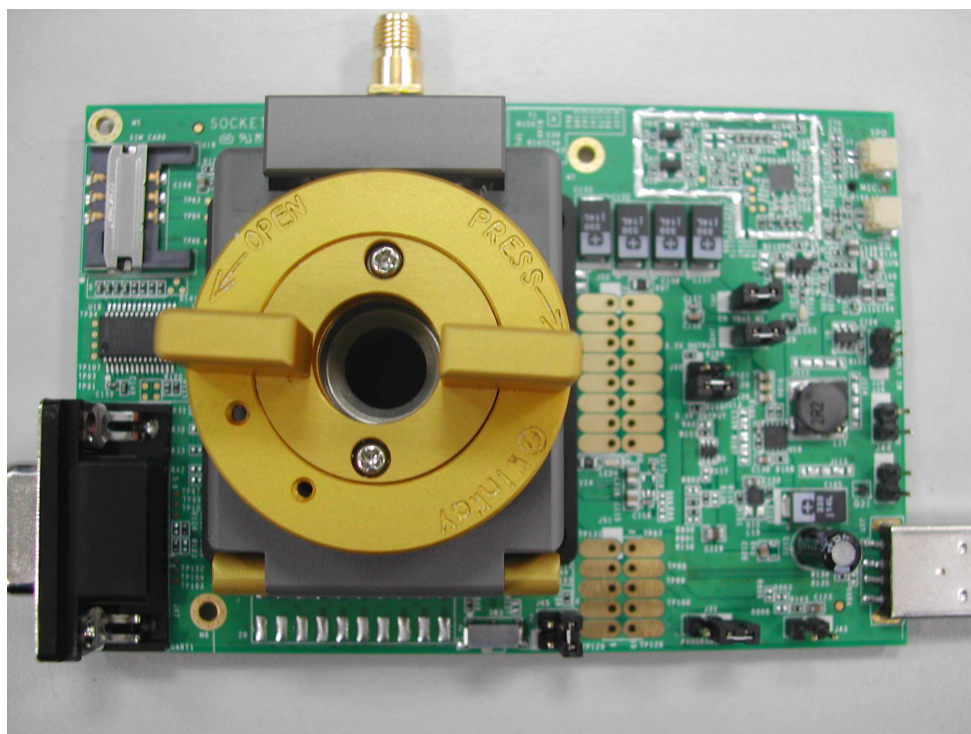
### Download Key :

Component reference	Function	Jump 1-2
J31	Enable Download through USB	Yes

a. Follow software download user guide



Jump setting reference:



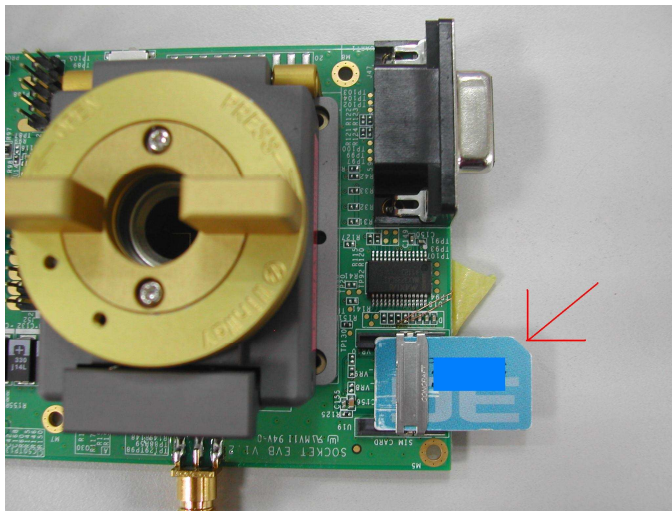
### 3) Insert the SIM card

To use a UNA module, you need to install:

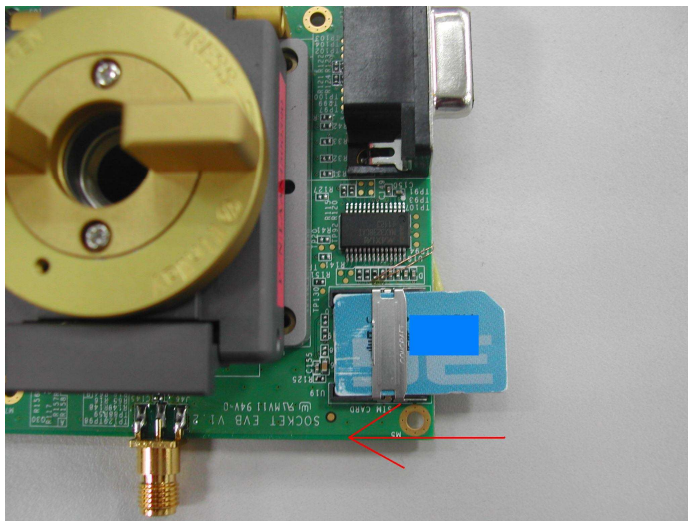
- a. A live SIM card (with an active account), or
- b. A test SIM card for use with call box (for example ,an Agilent 8960 ..)

To install the SIM card:

- a. Place the Socket EVB face-up(as shown) – the SIM slot is on right side.
- b. Note the location of the notched corner of the card in the following image.



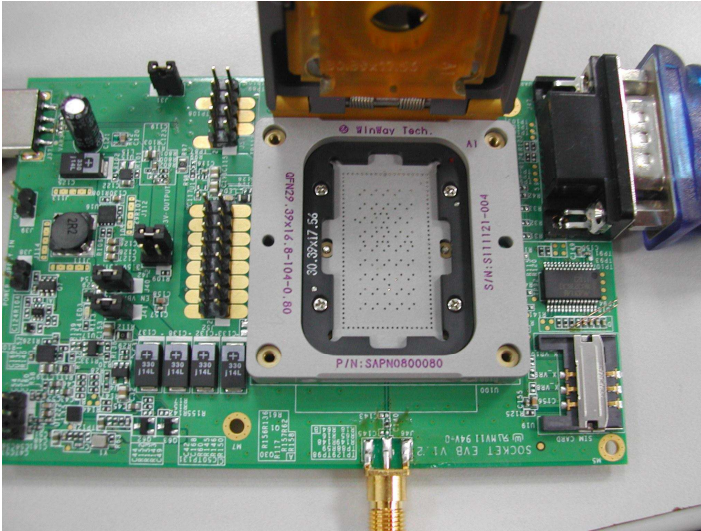
b. Inset the SIM card into the slot.



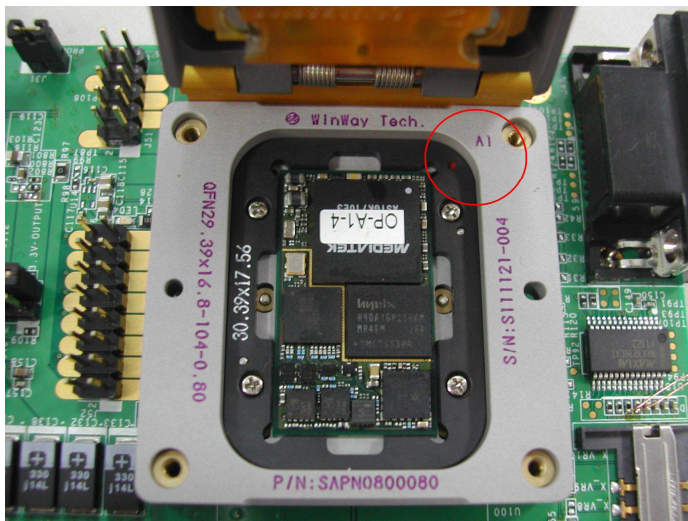
#### 4) Place the Module

After inserting the SIM card, insert the module:

- a. Place the Socket EVB face-up(as shown) – the socket is in the center.



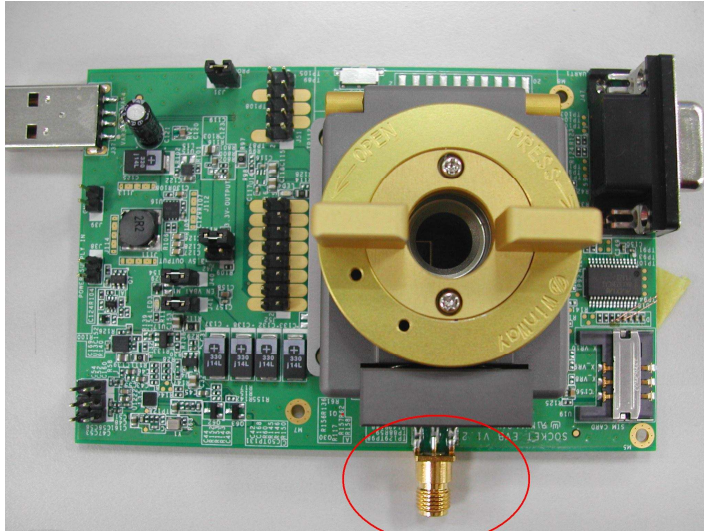
- b. Notice the pin 1 location on the socket.



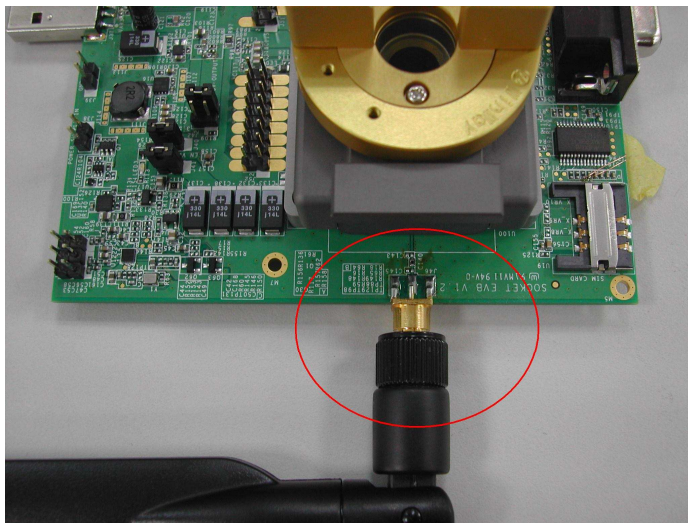
## 5) Connect the antenna

After installing the Module ,connect the supplied antenna to the EVB

- a. Place the Socket EVB face-up. The antenna connector on the bottom side.

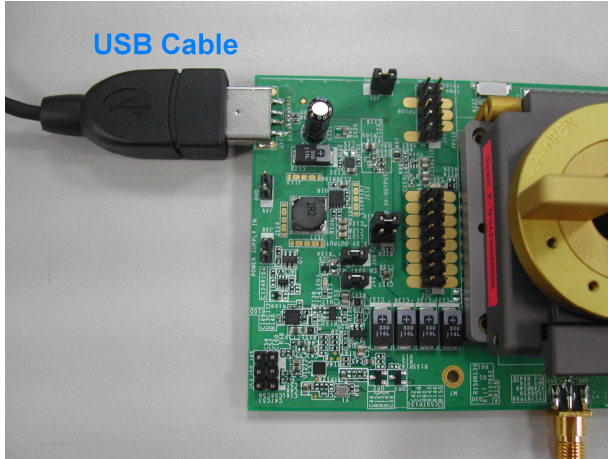


- b. Connect the antenna to the adapter.

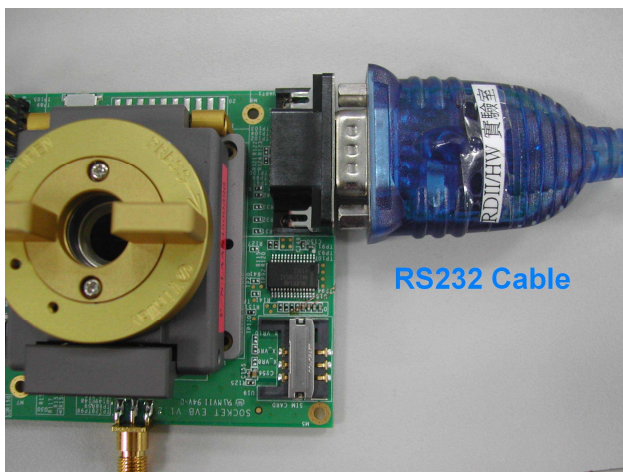


## 6) Download setting

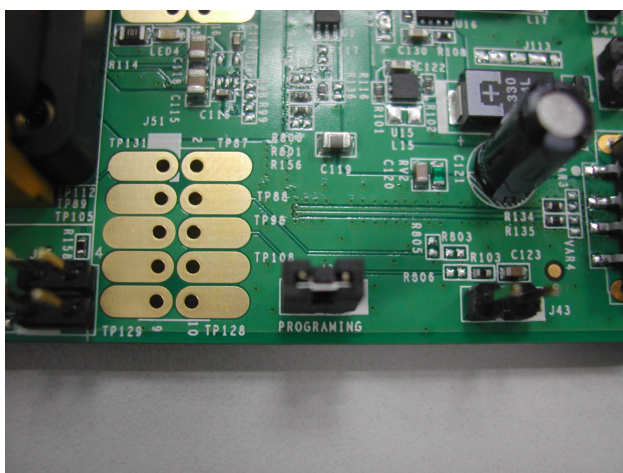
- a. Connect the USB cable between EVB & PC.



- b. Connect the RS232 cable between EVB UART & PC.



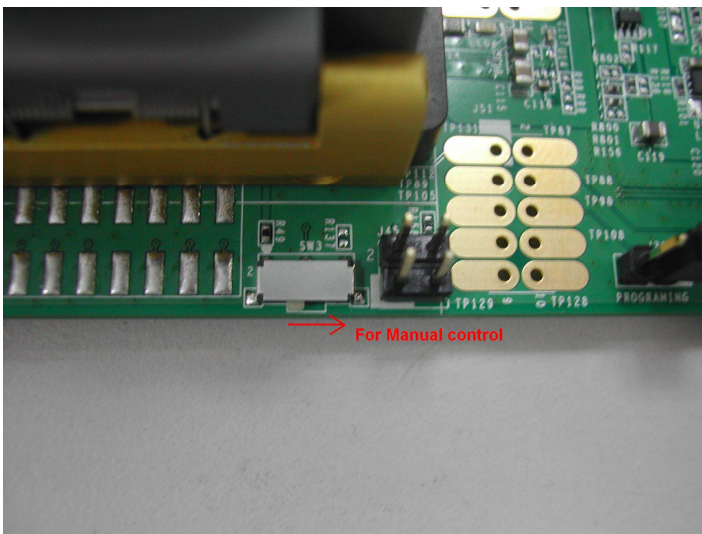
- c. Plug in the Jump.



## 7) Manual control module model

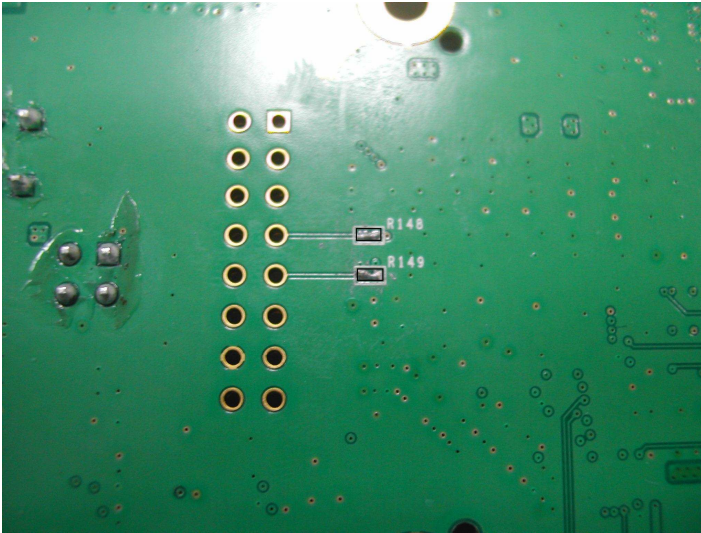
Component reference	Function	Jump 4-3
J45-4	PWRKEY input to turn on Module	
J45-2	USB_EN control pin to turn on Module	

- a. Follow UNA IO application design notes
- b. Switch Module on/off (SW3) from left side to right side to off auto control before use manual control.



## 8) Rework list for PCM Codec

a. Place 0R on R148 & R149 on bottom side.



b. Take off R18,R16 ,Q63,Q62 as red block . Place 0R on R155,R142 as black block.

