AMPAK

AP6181

Evaluation Kits

User manual

Version 1.0

Revision History

Date	Revision Content	Revised By	Version
2012/10/24	Initial released	Joe	1.0

1. AP6181 Evaluation Board Introduction

AP6181 Evaluation board (EVB) likes as figure1. That is designed for IEEE802.11b/g/n WLAN application. It is subject to provide a convenient environment for customer's verification on WiFi function. There are many controller pins and reserved GPIO on Evaluation board which describes as below.

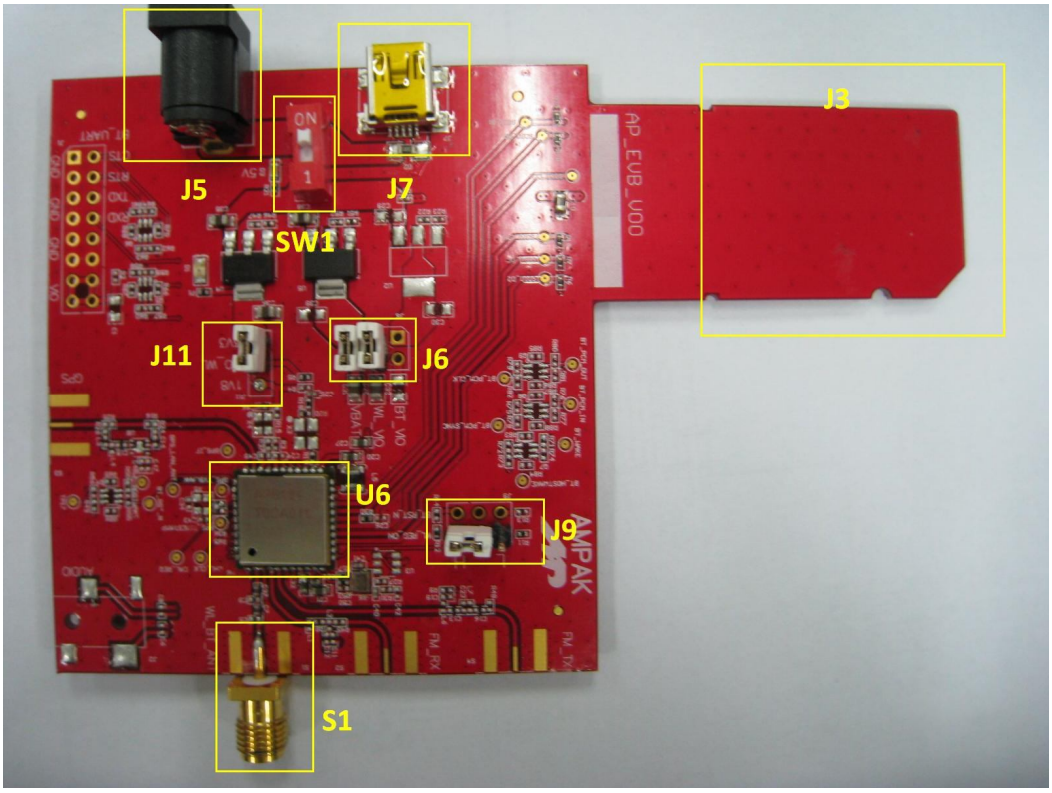

Figure1. Top view of AP6181 EVB

Interface highlights:

1. U6: AP6181 SIP module.
2. J3: SDIO standard interface for WiFi measuring.

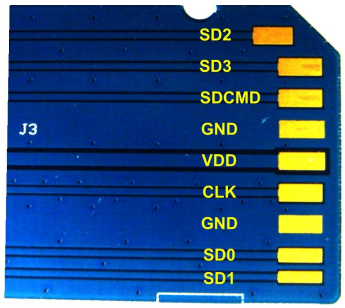

Figure2. WiFi SDIO card interface

3. J9: Enable WiFi function.
4. J5: 5V DC adaptor input connector.
5. J6: VBAT / WL_VIO for main system / I/O power path.
6. J7: 5V DC mini usb input connector.
7. J11: WL_VIO power path for 3V3 selection.
8. S1: SMA connector let RF signal in/out path, you can connect with RF cable or dipole antenna.
9. SW1: Power on/off switch.

2. WiFi function verification step

WIFI SDIO: Using external pull up resistors depends on the SDIO supply voltage. For 1.8V, the resistance range is 30KΩ~82KΩ. For 3.3V, its range from 21 KΩ~41 KΩ on the four data lines and the CMD line as the following circuitry.

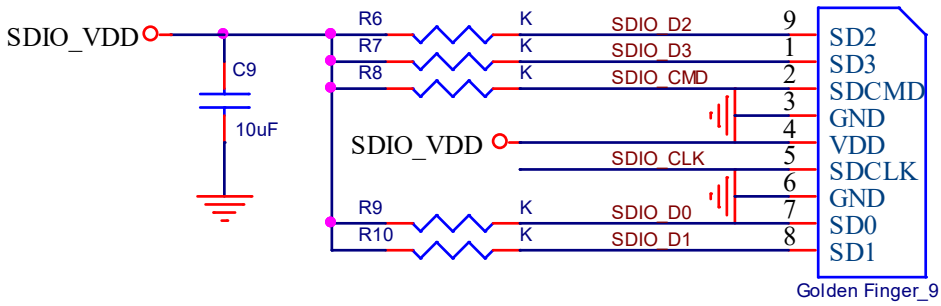

Figure3. WiFi verification connection interface to Host SDIO

Hardware Setup:

- ❖ Refer to Figure3 SDIO pin definition connects the J3 interface of AP6181 evaluation board to Host SDIO control interface.
- ❖ Using pull high resistors R6~R10 that resistance is 30Kohm for 1.8V or 3.3V VDDIO pull up voltage. (Pull high resistors are un-necessary if at verification phase.)
- ❖ Connects an external antenna at SMA connector on the evaluation board.
- ❖ Note to the VDDIO voltage level should be the same with GPIO voltage level of Host CPU. (VDDIO 3.3V or 1.8V selection by jump J11)

WiFi software setup:

Please follow up Gemtek/Ampak official release software user guide.