



正基科技股份有限公司



AP6781P ro AP6281P

Evaluation Board User Manual

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Revision

Revision	Date	Description	Revised By
0.1	2024/10/09	Initial released	Wade

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1. EVB Introduction

AP6281P Evaluation board (EVB) likes as figure1. That is designed for IEEE802.11 a/b/g/n/ac/ax WLAN with integrated Bluetooth application. It is subject to provide a convenient environment for customer's verification on WiFi or Bluetooth function. There are many controller pins and reserved GPIO on Evaluation board which describes as below.

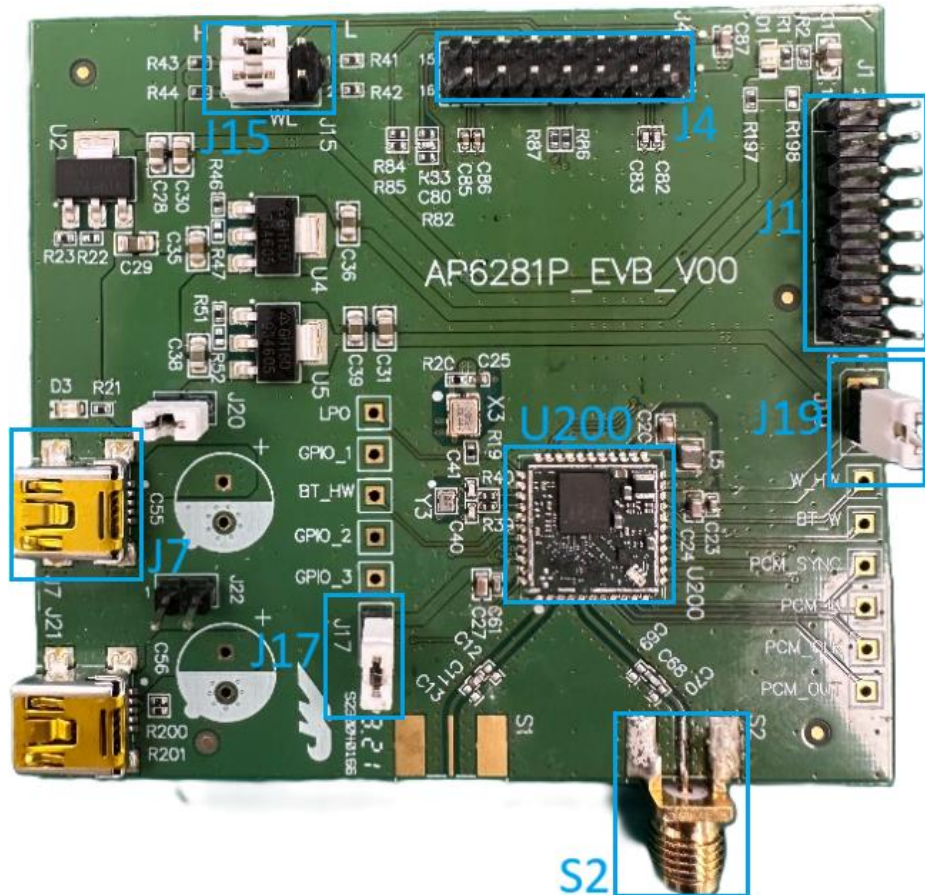


Figure1. Top view of AP6281S EVB

Interface highlights:

1. U200: AP6781P or AP6281P SIP module.
2. J1: UART interface connects with UART transport board for BT measuring
3. J15: Enable(H) or disable(L) Bluetooth, WiFi function
4. J19: VBAT power source.
5. J17: VDDIO power source.
6. J7: 5V DC mini USB input connector.
7. J4: PCIe interface pin header connect half mini PCIe (daughter board of gold finger) for WIFI.
8. S2: SMA connector let RF ANT1 signal in/out path(WiFi and Bluetooth share antenna for AP6781P), you could connect with RF cable or Dipole antenna.

2. WiFi Function Verification Step

2.1 WiFi PCIe

PCIe interface definition as below J4 pin header

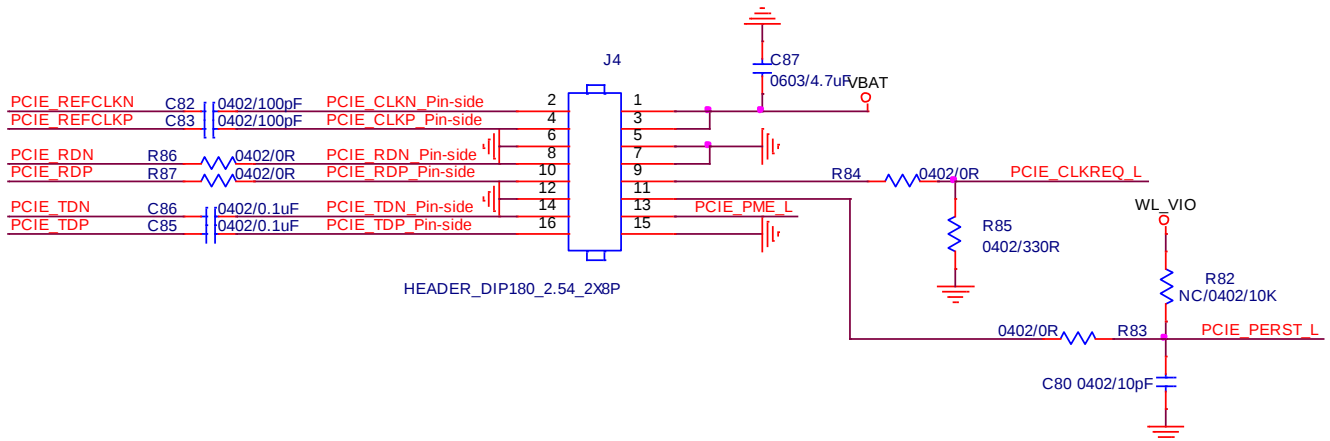


Figure2. WiFi verification connection interface to Host PCIe

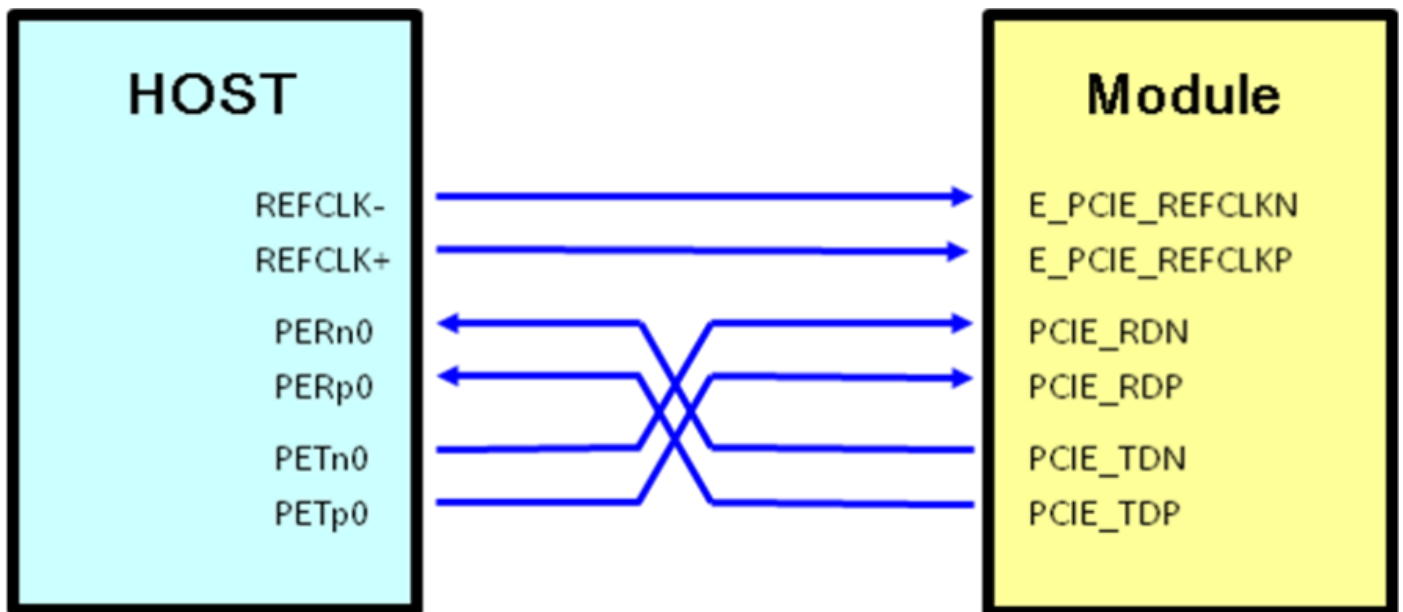


Figure3. EVB PCIe interface to HOST PCIe.

2.2 Hardware Setup

- ❖ Refer to Figure2 PCIe pin definition connects the J4 interface of AP6281P evaluation board to Host PCIe control interface.
- ❖ 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.

2.3 WiFi Software Setup

- ❖ Please follow up software guideline of Ampak official released.

3. Bluetooth Function Verification Step

3.1 Bluetooth UART

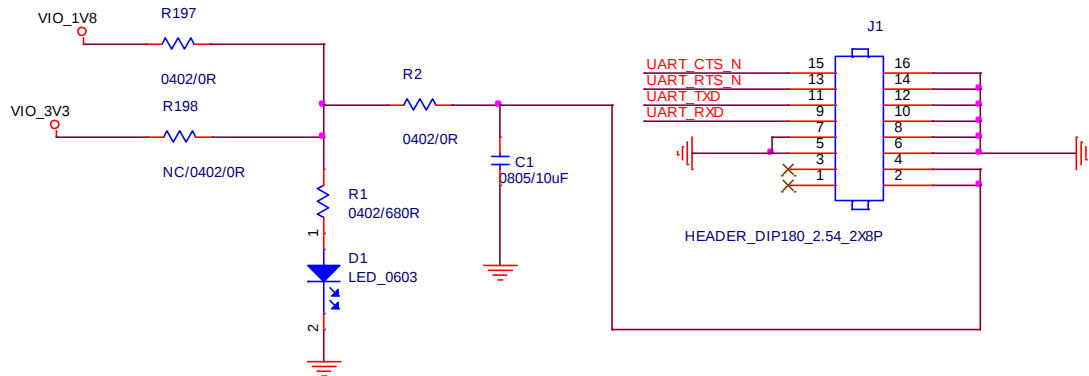


Figure4. Bluetooth verification connection interface to Host UART

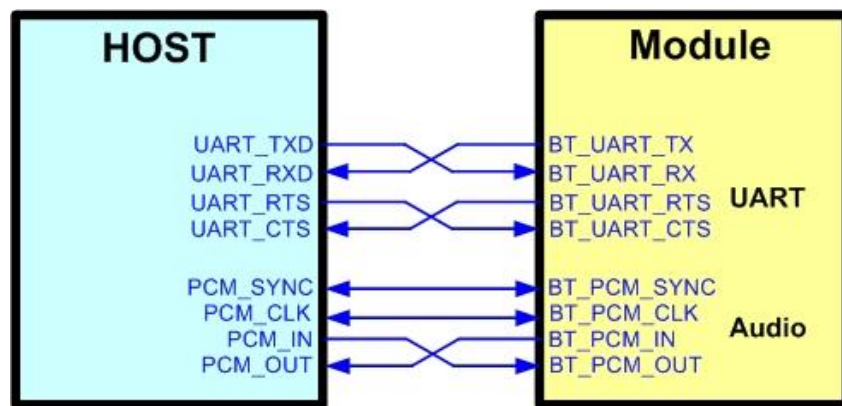


Figure5. EVB UART interface to HOST UART

3.2 Hardware Setup

- ❖ Refer to Figure4 UART pin definition connects the J1 interface of AP6281P evaluation
- ❖ Connects an external antenna at SMA connector on the evaluation board.
- ❖ Note to the VDDIO voltage level should be the same as GPIO voltage level of Host CPU. (AP6281P only be used in 1.8V)

3.3 Bluetooth Software Setup

- ❖ Please follow up software guideline of Ampak official released.



3.4 UART to USB Daughter Board

