Hardware Documentation

ADP-mPCIe-WLAN

Version 1.10
(2020-08-09)
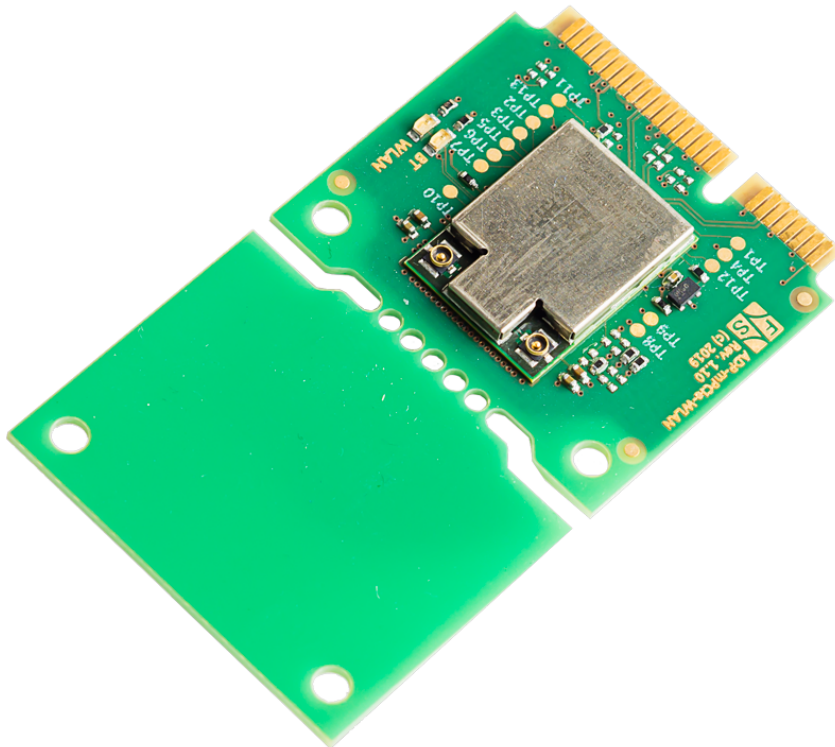
About This Document

This document describes how to use the ADP-mPCIe-WLAN module with mechanical and electrical information. The latest version of this document can be found at:

http://www.fs-net.de.

History

Date	V	Platform	A,M,R	Chapter	Description	Au
13.05.2020	1.0	All	A	-	Build the document	TM
08.09.2020	1.1	All	M	1	Additional driver information added	TM

V	Version
A,M,R	Added, Modified, Removed
Au	Author

Table of Contents

1   Introduction

The ADP-mPCIe-WLAN can be used with mPCIe Type F1 or mPCIe Type H1 connectors.
This module is only supported under Linux. There is no available driver for windows.
Frequency range is 2.4GHz and 5GHz.
The antenna sockets are available to connect extern antennas like Taoglas XP70.07.0053A.
With the pre-certification, it is easy to use this module in many countries worldwide.

2   Characteristics

- mPCIe module F1 or H1 with
- WLAN: IEEE 802.11 2X2 MU-MIMO ac/a/b/g/n
- BT: 5.0 LE
- Antenna sockets
- 3.3V Low Power Design
- -30°C - +85°C
- RED 2014/53/EU
- 47 CFR FCC Part 15, Subpart B, Class B
  ICES-003 2016 Issue 6, Class B
  ANSI C63.4.2014

3   Mechanical dimension
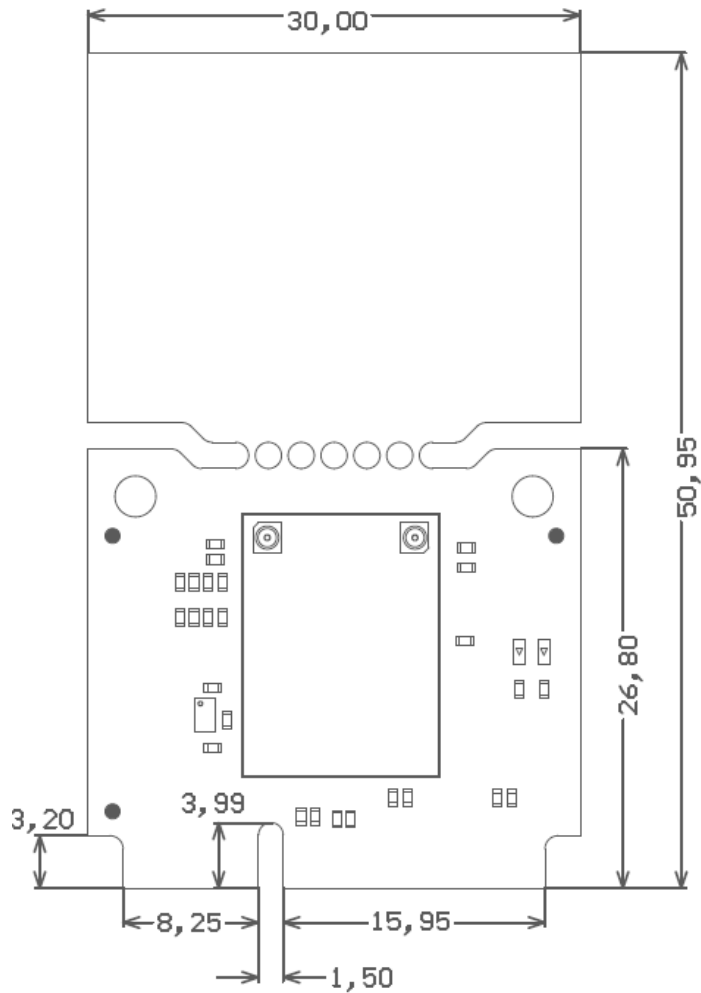

Figure 1: Mechanical dimension

PCB size: 30mm x 50.95mm

PCB thickness: 1.0 ± 0.1mm

High of parts on the top side: 2.0mm

Weight: ~10g

4   Connect the Adapter

In this example the ADP-mPCIe-WLAN adapter is connected to the PicoCoreBBDSI. The PicoCoreBBDSi has the mPCIe Type F1 connector. For Boards with a mPCIe Type H1 connector you can simply break down the ADP-mPCIe-WLAN adapter to H1 size.

Figure 2: Connect the Adapter on PicoCoreBBDSI

Figure 3: Connect the Adapter on PicoCoreBBDSI

5 Connector description
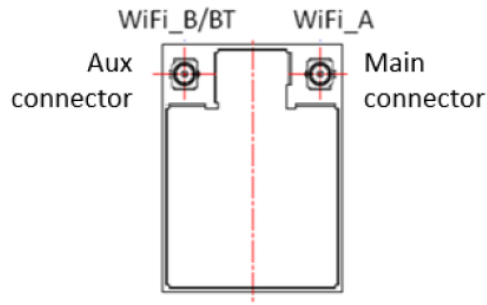
5.1 WiFi_A and WiFi_B / BT
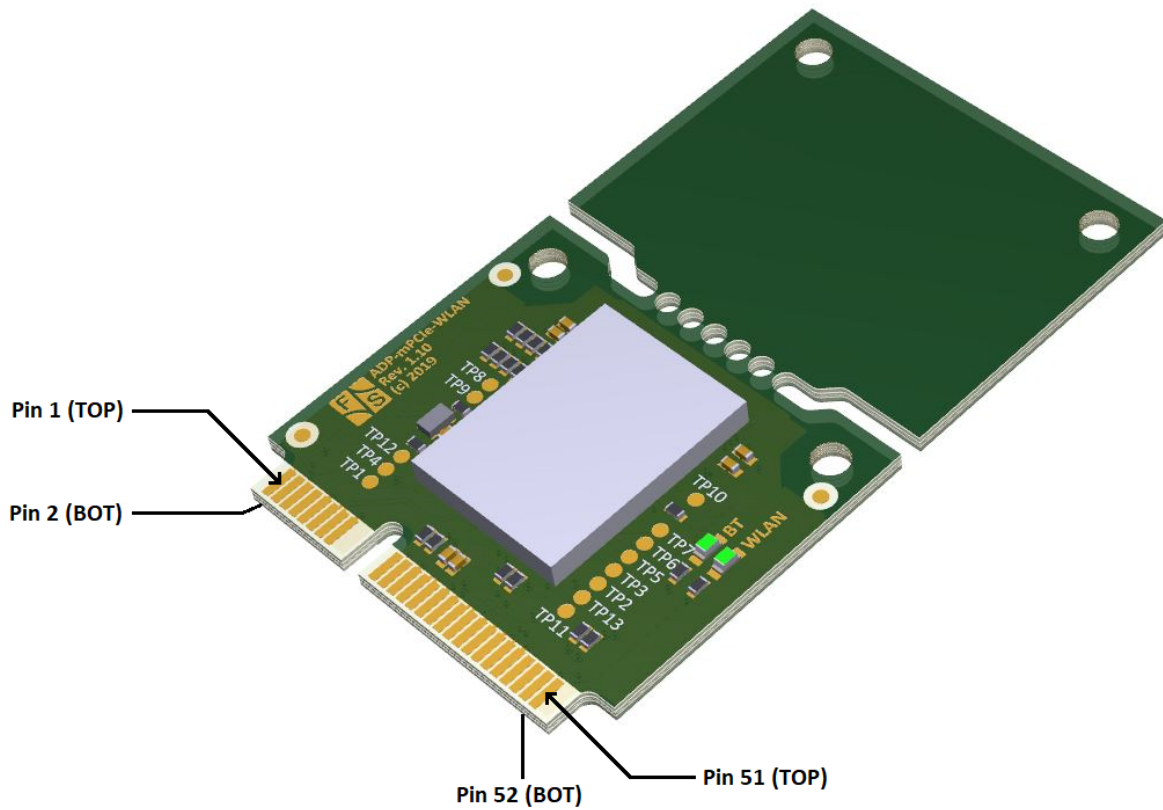

Figure 4: antenna connector

5.2 mPCIe Connector

Figure 5: mPCIe connector layout

Pin	Signal Name	I/O Type	Remarks
1	WAKE#	O	
2	3.3Vaux	PWR	
3	NC		
4	GND	PWR	
5	NC		
6	NC		
7	NC		
8	NC		
9	GND	PWR	
10	NC		
11	PCIE_CLK_N	I/Odiff	
12	NC		
13	PCI_CLK_P	I/Odiff	
14	NC		
15	GND	PWR	
16	NC		
17	NC		
18	GND	PWR	
19	NC		
20	PCIE_DISABLE#		
21	GND	PWR	
22	PCIE_RST		
23	PCIE_RX_N	I/Odiff	
24	+3.3V	PWR	
25	PCIE_RX_P	I/Odiff	
26	GND	PWR	
27	GND	PWR	
28	NC		
29	GND	PWR	
30	NC		
31	PCIE_TX_N	I/Odiff	
32	NC		
33	PCIE_TX_P	I/Odiff	
34	GND	PWR	
35	GND	PWR	
36	USB_D_N	I/Odiff	
37	GND	PWR	
38	USB_D_P	I/Odiff	
39	+3.3V	PWR	
40	GND	PWR	
41	+3.3V	PWR	
42	NC		
43	GND	PWR	
44	WL_LED	O	This is a mounting option and is by default not available
45	NC		

46	BT_LED	O	This is a mounting option and is by default not available
47	NC		
48	NC		
49	NC		
50	GND	PWR	
51	NC		
52	+3.3V	PWR	

6   Electrical characteristic

VIN: +3.3 VDC / ±5%

Power consumption: tbd

7   Matrix Code Sticker

All F&S hardware will ship with a matrix code sticker including the serial number.
Enter your serial number here https://www.fs-net.de/en/support/serial-number-info-and-rma/ to get information on shipping date and type of board.

Figure 6: Matrix Code Sticker

8 Appendix

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