AzureWave Technologies, Inc.

# AW-HM482

## 802.11ah Module EVK

## User Guide

**Rev. 0.2**

**(For Standard)**

# Revision History

Document NO:

| Version | Revision Date | DCN NO. | Description | Initials | Approved |
|---|---|---|---|---|---|
| 0.1 | 2021/01/28 | | Initial Version | Daniel Lee | NC Chen |
| 0.2 | 2023/06/16 | | Change to the new demo board Ver.I4 | Daniel Lee | NC Chen |

# Table of Contents

# 1 Overview

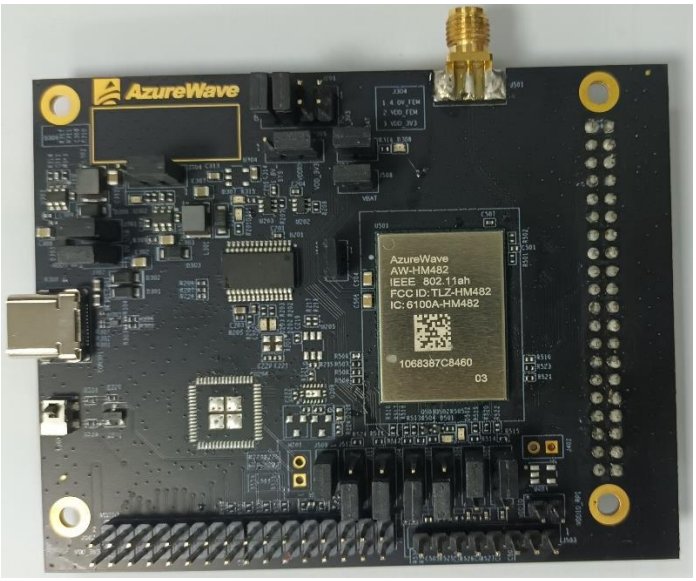
## 1.1 Device supported

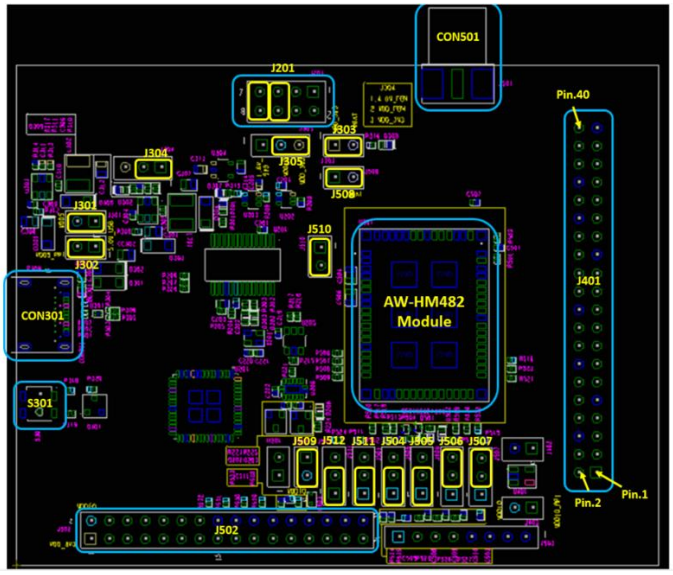
This document supports the AW-HM482 (18 x 24 mm LGA Module). The AW-HM482 demo board can be operated in MFG mode or Host Mode. If you want to perform AW-HM482 RF performance test, please contact the relevant personnel of Newracom to obtain NRC7292 Manufacturing Test Tool GUI (MFT GUI) and related user guide.

# 2. Basic Setup and Requirements for MFG Mode

This section provides the detailed information about the setting for AW-HM482 demo board. 錯誤! 找不到參照來源。 shows the overview of the AW-HM482 demo board physical photo and PCB placement (TOP). The description of jumpers' functions and settings on demo board is as follows:

**Azurewave AW-HM482 demo board physical photo and PCB placement**




## 2.1 Operation Mode Configurations

AW-HM428 can be operated in MFG mode or Host Mode through the setting of jumpers (J504, J505, J506, J507, J511).

J504, J505, J506, J507, J511 = H, L, L, L, H (Host Mode)

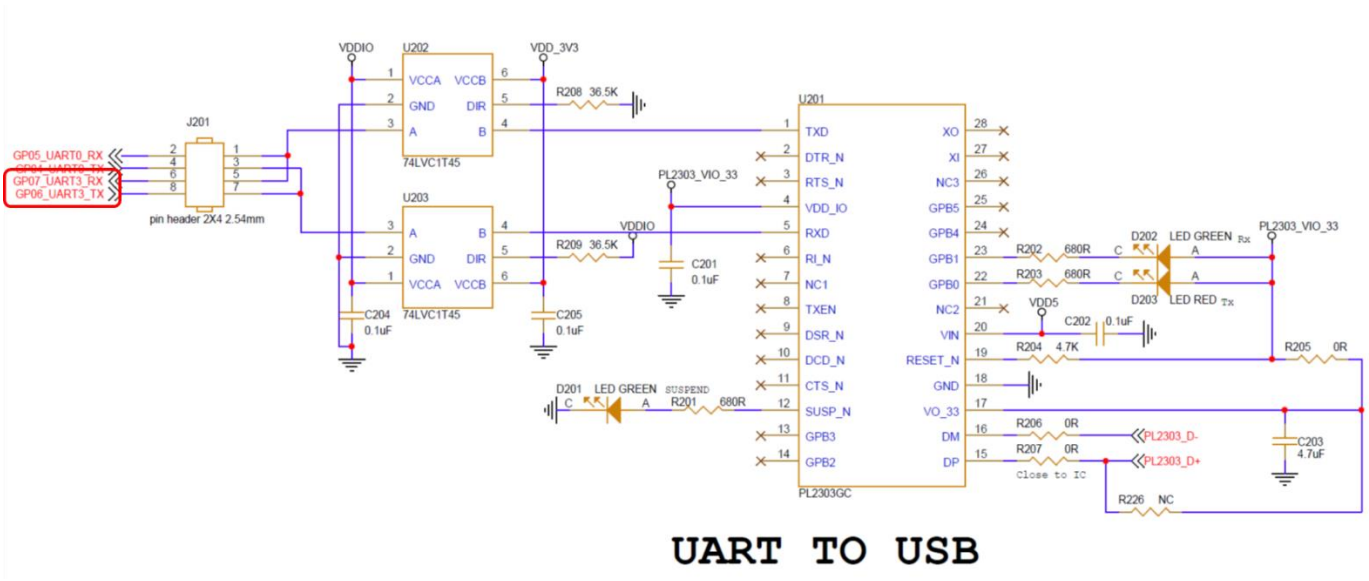

J504, J505, J506, J507, J511 = H, H, L, L, H (MFG Mode)

## 2.2 Power Supply

a. The 5.0V power supply can be provided by USB connector (CON301) and short J301
b. The 4.0V power supply (J304) for AW-HM482 pin.5 VDD_FEM is converted from the 5.0V power supply through the LDO on the demo board. You can measure the current of VDD_FEM by connecting an ammeter in series with J510.
c. The 3.3V power supply (J508) for AW-HM482 pin.6 VBAT is converted from the 5V power supply through the LDO on the demo board. You can measure the current of VBAT by connecting an ammeter in series with J508.
d. The 1.8V power supply is converted from the 3.3V power supply through the LDO on the demo board. You can measure the current of VDDIO by connecting an ammeter in series with J509.
e. VDDIO for AW-HM482 can be set to 1.8V or 3.3V through J305
   Short J305 pin.2 and pin.3 to set VDDIO to 3.3V (default)
   Short J305 pin.2 and pin.1 to set VDDIO to 1.8V

## 2.3 USB to UART (J201)

Set the UART port (UART3) of AW-HM482 by short-circuiting pin5 to pin6 and pin7 to pin8 of J201. The USB bridge IC used by AW-HM482 demo board is Prolific's PL2303GC. You can download its driver from Prolific's official website.

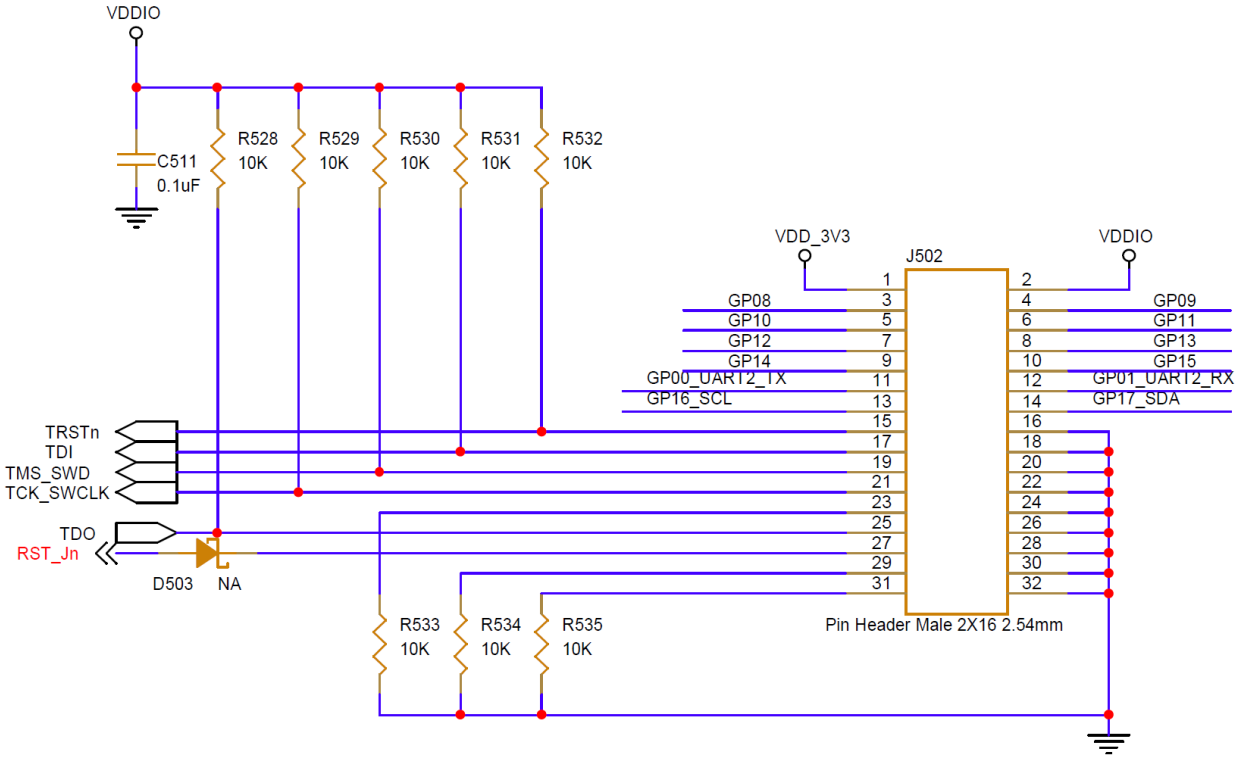


## 2.4 Module Reset (J512)

Pin.2 of J512 is the reset control pin of AW-HM482. By shorting pin1 and pin2, the reset function can be controlled by S301.

## 2.5 GPIOs and JTAG (J502)

The GPIO pins of AW-HM482 are connected to J502, the definition of each pin is as follows



# 3. Basic Setup and Requirements for Host Mode

AW-HM482 can be connected to the Host side via SPI interface. The picture below is a photo of AW-HM482 demo board connected to Raspberry Pi3 via J401. Please note that the mode of J504, J505, J506, J507, J511 must be set correctly when operating in Host Mode.

J504, J505, J506, J507, J511 = H, L, L, L, H (Host Mode)