Application Note

Ayla Pin Mapping for USI WM-N-BM30HA Wi-Fi Module

For use with USI WM-N-BM-30_HA Datasheet

Version: 2.0

Date Released: May 3, 2018

Document Number: AY006ABM2-2

Ayla Networks

Referenced Documents

Ayla Networks does not supply all documents that are referenced in this document with the equipment. Ayla Networks reserves the right to decide which documents are supplied with products and services.

Contact Information

Ayla Networks TECHNICAL SUPPORT and SALES

Contact Technical Support: https://support.aylanetworks.com
or via email at support@aylanetworks.com

Contact Sales: https://www.aylanetworks.com/company/contact-us

Ayla Networks REGIONAL OFFICES

GREATER CHINA
Shenzhen
Room 310-311
City University of Hong Kong
Research Institute Building
No. 8 Yuexing 1st Road
High-Tech Industrial Park
Nanshan District
Shenzhen, China
Phone: 0755-86581520

HEADQUARTERS
Silicon Valley
4250 Burton Drive, Suite 100
Santa Clara, CA 95054
United States
Phone: +1 408 830 9844
Fax: +1 408 716 2621

JAPAN
Room #701
No. 2 Ueno Building 3-7-18
Shin-Yokohama, Kohoku Ward
Yokohama City, 222-0033 Japan
Phone: 045-594-8406

EUROPE
London
30 Great Guildford St
London SE1 0HS
United Kingdom

TAIWAN
Taipei
5F No. 250 Sec. 1
Neihu Road, Neihu District
Taipei 11493, Taiwan

For a Complete Contact List of Our Offices in the US, China, Europe, Taiwan, and Japan:
https://www.aylanetworks.com/company/contact-us

Table of Contents

1 Introduction

This document describes the pin mapping for the Ayla features of the USI WM-N-BM-30HA module.

1.1 Audience

This document is intended for programmers and hardware engineers who need to connect the USI BM-30HA module to other hardware components. The document contains descriptions of the Ayla signals present on each of the USI BM-30HA pins.

1.2 Related Documentation

For use with USI WM-N-BM30-HA datasheet distributed by the module manufacturer.

1.3 Revision History

Following describes the revisions to this document:

Revision	Date	Author	Change Description
1.0	16 Feb 2016	PHunt/LBoling	Initial version
2.0	17 Apr 2018	J Eykholt/SSotnick	Added GPIO pin names and Boot0 note.

2 Signal Pin-Outs

Ayla Signal Name	GPIO Pin Name	Module Pin Name	Module Pin	I/O	Description
SPI_SSN	PB12	MICRO_GPIO_4	1	I	SPI Slave Select
SPI_SCK	PB13	MICRO_GPIO_3	24	I	SPI Clock
SPI_MOSI	PA1	MICRO_GPIO_5	2	I	SPI Master Out Slave In
SPI_MISO	PA11	MICRO_GPIO_6	3	O	SPI Master In Slave Out
UART_TX	PA2	UART2_TX	15	O	UART Transmit
UART_RX	PA3	UART2_RX	16	I	UART Receive
UART_CTS	PA0	MICRO_WKUP	36	I	UART CTS/Wake Up
UART_RTS	PA1	MICRO_GPIO_5	2	O	UART RTS
READY_N	PA4	MICRO_GPIO_1	26	O	Module Initialized
INTR_N	PB14	MICRO_GPIO_2	25	O	Interrupt Output
RESET_N		MICRO_RST_N	13	I	Module Reset
LINK_N		MICRO_GPIO_9	20	O	ADS Link Status*
PB2	PB2	I2C_AUTH_RST	20	O	I2C reset
PB9	PB9	I2C_AUTH_SDA	22	I/O	I2C data
PB10	PB10	I2C_AUTH_SCL	21	O	I2C clock

NOTE * LINK_N is not enabled by default; it may be configured at OEM setup time. We suggest PB2.

2.1 Additional Pins

Module Pin Name	Module Pin	I/O	Description
WIFI_VDD3V3	8	I	Power supply for Wi-Fi Module
OSC32_IN	5	I	32KHz Crystal input
VDD	17	VDD_3V3	3.3 V DC supply for module
GND	9, 10, 14, 18, 23, 27 - 31	GND	Ground
BOOT0	4	BOOT0	Must be grounded.

3 Programming Pins

The pins required to program, configure, and update the firmware are listed below.

Module Pin Name	Module Pin
UART1_TX	6
UART1_RX	7
MICRO_JTAG_TMS	33
MICRO_JTAG_TDI	34
MICRO_JTAG_TCK	35
MICRO_JTAG_TRSTN	37
MICRO_JTAG_TDO	38

4 Programming Pins

The pins required to flash and update the module along with the recommended header configuration are shown below.

Figure 1. Programming header

MICRO_RST_N	1	2	VDD
MICRO_JTAG_TMS	3	4	UART1_RX
GND	5	6	UART1_TX
MICRO_JTAG_TCK	7	8	GND

4250 Burton Drive, Santa Clara, CA 95054
Phone: +1 408 830 9844
Fax: +1 408 716 2621