WizFi360-EVB-Shield Datasheet
(Version 1.12)

http://www.wiznet.io
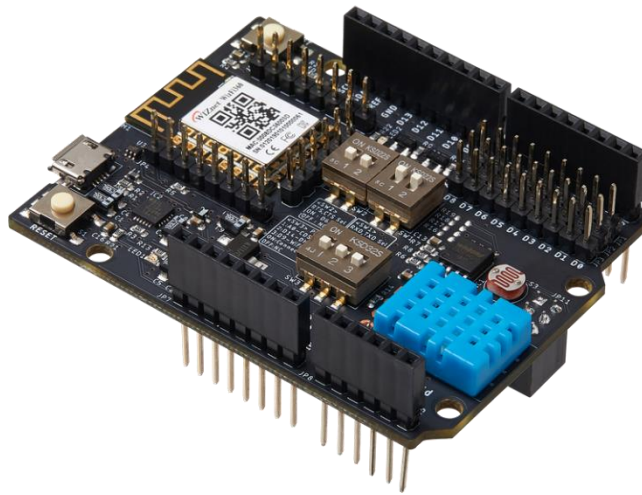
Document Revision History

Date	Revision	Changes
2019-07-25	V1.0	Official Release
2019-09-20	V1.1	Added "Figure 3", "Figure 4" – DIP SW On/Off State Added "Figure 5", "Figure 6" – DIP SW On/Off signal wiring Added "Figure 8" - UART Selector Pin Header Example
2019-10-10	1.11	Added "3. Electrical Specifications" Edited "6.1 DIP Switch Configurations"
2019-10-18	1.12	Changed Board name Edited "6.1 DIP Switch Configurations" – "SW2" – "OFF"

Table of Contents

1. Overview

This document describes WizFi360-EVB-Shield. WizFi360-EVB-Shield is a development boa rd for experiment, test and verification of WizFi360. WizFi360-EVB-Shield can also be use d as an Arduino shield.

WizFi360 is a low cost and low-power consumption industrial-grade Wi-Fi module. It is compatible with IEEE802.11 b/g/n standard and supports Soft-AP, Station and Soft-AP + Station modes. The serial port baud rate can be up to 2Mbps, which can meet the requ irement of various applications.

2. Features

2.1. WizFi360

- Wi-Fi 2.4GHz 802.11 b/g/n

- Support Station / Soft-AP / Soft-AP + Station operation modes

- Support "Data pass-through" and "AT command data transfer" mode

- Support serial AT command configuration

- Support TCP Server / TCP Client / UDP operating mode

- Support configuration of operating channel 0 ~ 13

- Support auto 20MHz / 40MHz bandwidth

- Support WPA_PSK / WPA2_PSK encryption

- Serial port baud rate up from 600bps to 2Mbps with 16 common values

- Support up to 5 TCP / UDP links

- Obtaining IP address automatically from the DHCP server (Station mode)

- DHCP service for Wireless LAN clients (AP mode)

- Support DNS for communication with servers by domain name

- Support "Keep-Alive" to monitor TCP connection

- Support "Ping" for monitoring network status

- Built-in SNTP client for receiving the network time

- Support built-in unique MAC address and user configurable

- Support firmware upgrade by UART Download / OTA (via WLAN)

- Industrial grade (operating temperature range: -40 ° C ~ 85 ° C)

- CE, FCC, KC certification

2.2. ETC

- Built-in UART to USB chip

  - CP2104-GM

  - Micro USB B Type Connector

- UART Selector

  - JP1, JP2, JP3

  - 2.54mm Pin Header

- Built-in Sensors

  - Temperature/Humidity Sensor: DHT11

  - CDS Sensor: GL5537

- Built-in Tact Switches

  - System Reset Switch: S1

  - Wi-Fi Reset Switch: S2

- Built-in LED Indicators

  - D13 LED

- Built-in Level Shifters

  - The voltage of the RXD/TXD signal changes according to the main board

    platform voltage.

- Built-in DIP Switches

  - UART RXD/TXD Selector: SW1

  - UART RTS/CTS Selector: SW2

  - Sensor/RESET Pins Selector: SW3

3. Electrical Specifications

Parameters	Min	Typ	Max	Unit
Operation Voltage	4.5	5	5.5	V
Send IEEE802.11b, CCK 11Mbps, POUT = +19 dBm	-	230	290	mA
Send IEEE802.11g, OFDM 54Mbps, POUT = +13.5 dBm	-	210	-	mA
Send IEEE802.11n, OFDM MCS7, POUT = +12 dBm	-	210	-	mA
Receive IEEE802.11 b/g/n	-	100	110	mA
Standby Mode	-	135	-	mA
Modem Sleep Mode	-	20	-	mA
Light Sleep Mode	-	13	-	mA

4. Block Diagram
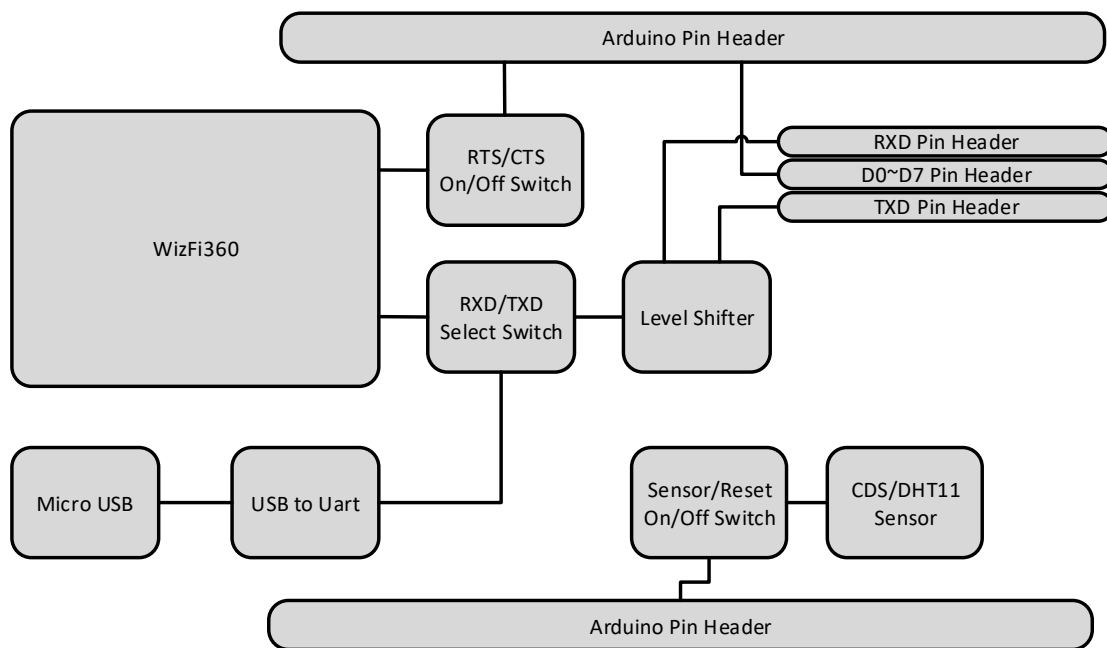
Figure 1. WizFi360-EVB-Shield Block Diagram

5. Callout

Main Reset SW

Micro USB

WizFi360

WizFi360 Reset SW

RTS/CTS DIP SW

RXD/TXD DIP SW

Sensor Pins DIP SW

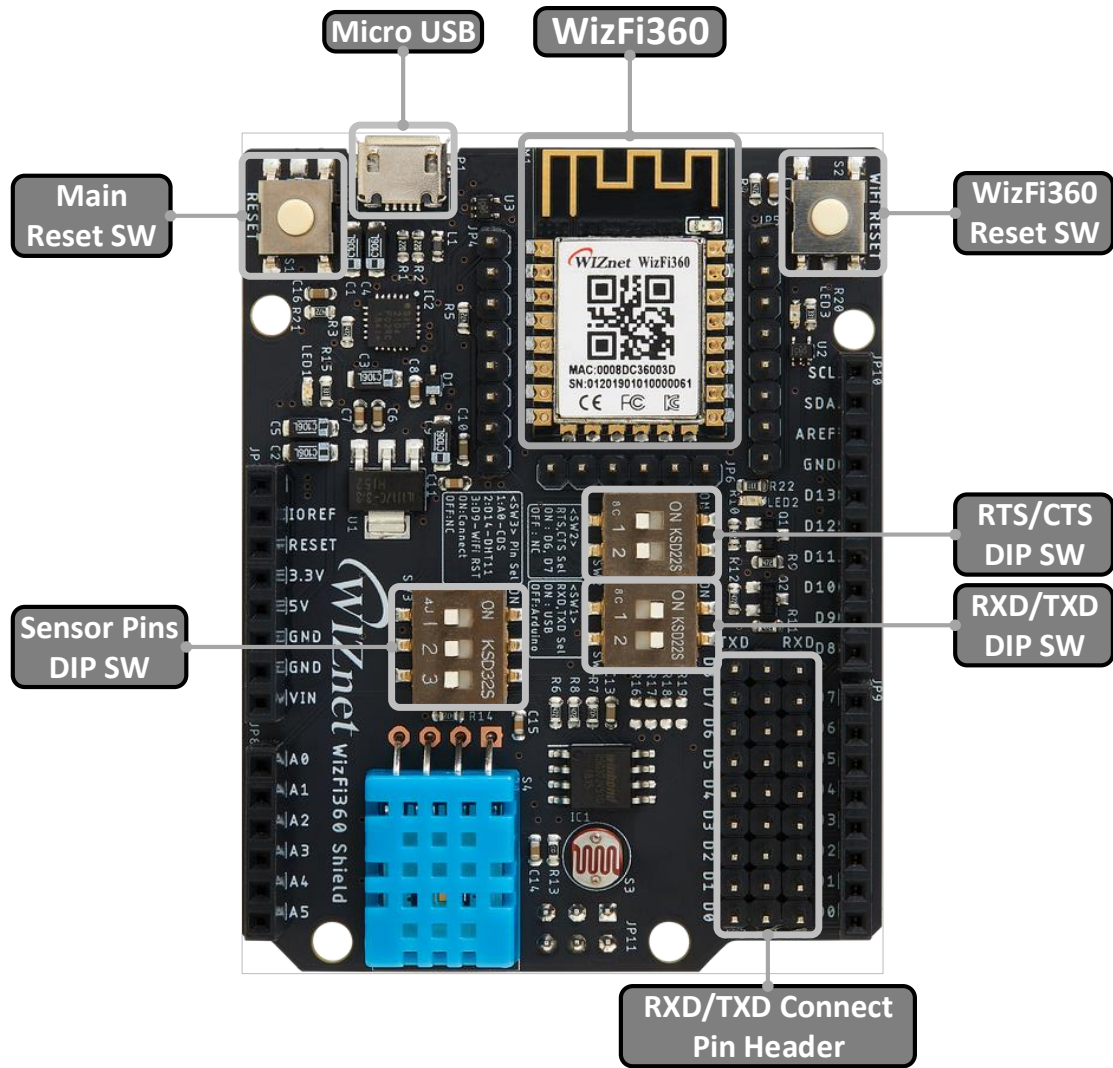RXD/TXD Connect Pin Header

Figure 2. Callout

6. Board Configurations

6.1. DIP Switch Configurations

Figure 3. Off State

Figure 4. On State

- **SW1** – RXD/TXD Selector DIP Switch

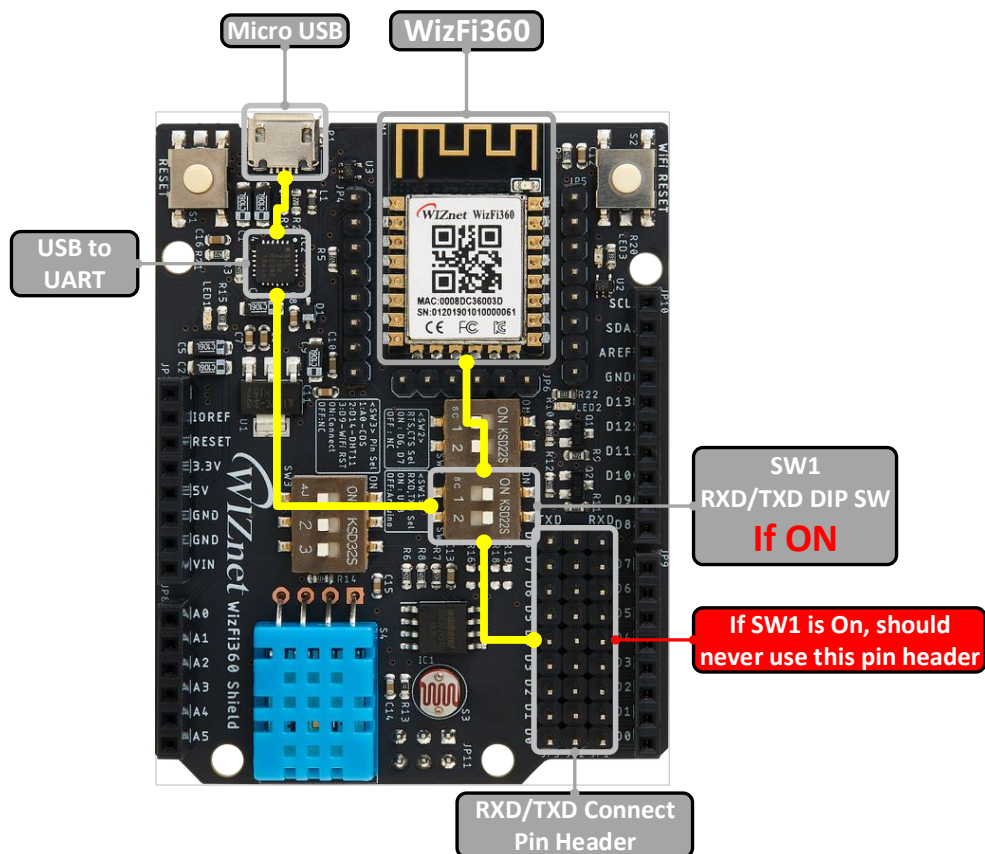   - **ON**: RXD/TXD of WizFi360 connect to USB

Figure 5. If SW1 ON, signal wiring

◆ It is only possible to communicate with WizFi360 using USB.

◆ **If this DIP SW On, should never use RXD/TXD Pin Header**

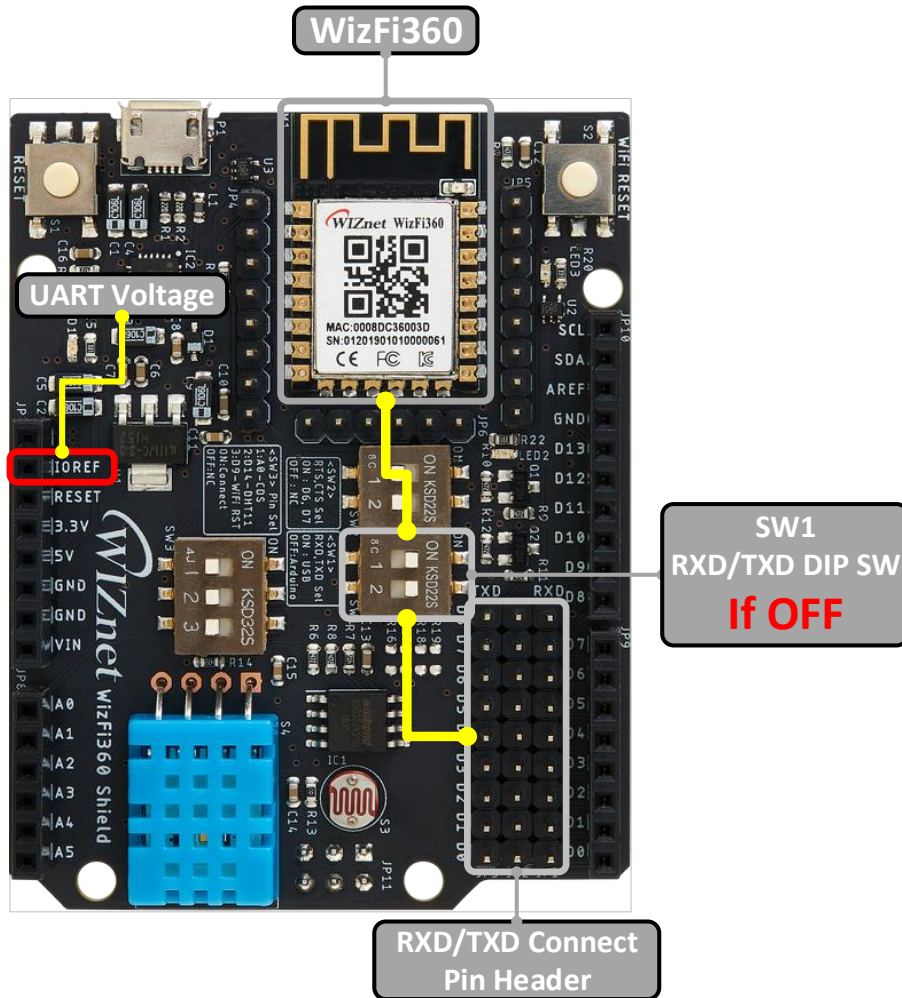■ **OFF**: RXD/TXD of WizFi360 connect to JP1 and JP3

Figure 6. If SW1 OFF, signal wiring

◆ UART Pin Header, Arduino PIN

◆ If the jumper cap is not attached to the UART pin header, it will not be connected to the Arduino pin.

◆ **UART output voltage is IOREF voltage.**

● IO voltage of MCU you use must be connected as IOREF.

■ Pin 1: RXD

■ Pin 2: TXD

● **SW2** – RTS/CTS Selector DIP Switch

- **ON**: RTS/CTS of WizFi360 connect to D7 and D6

  - ◆ **If the state of SW2 is ON, D7 and D6 of UART jumper cannot be used.**

- **OFF**: RTS/CTS of WizFi360 not connect to anywhere

  - ◆ Pin 1: RTS – D7

  - ◆ Pin 2: CTS – D6

- **SW3** – Sensor/RESET Pins Selector DIP Switch

  - **ON**: Connect to Arduino Pin

- **OFF**: Not connect to anywhere

  - Pin 1: A0 – CDS

  - Pin 2: D14 – DHT11

  - Pin 3: RESET
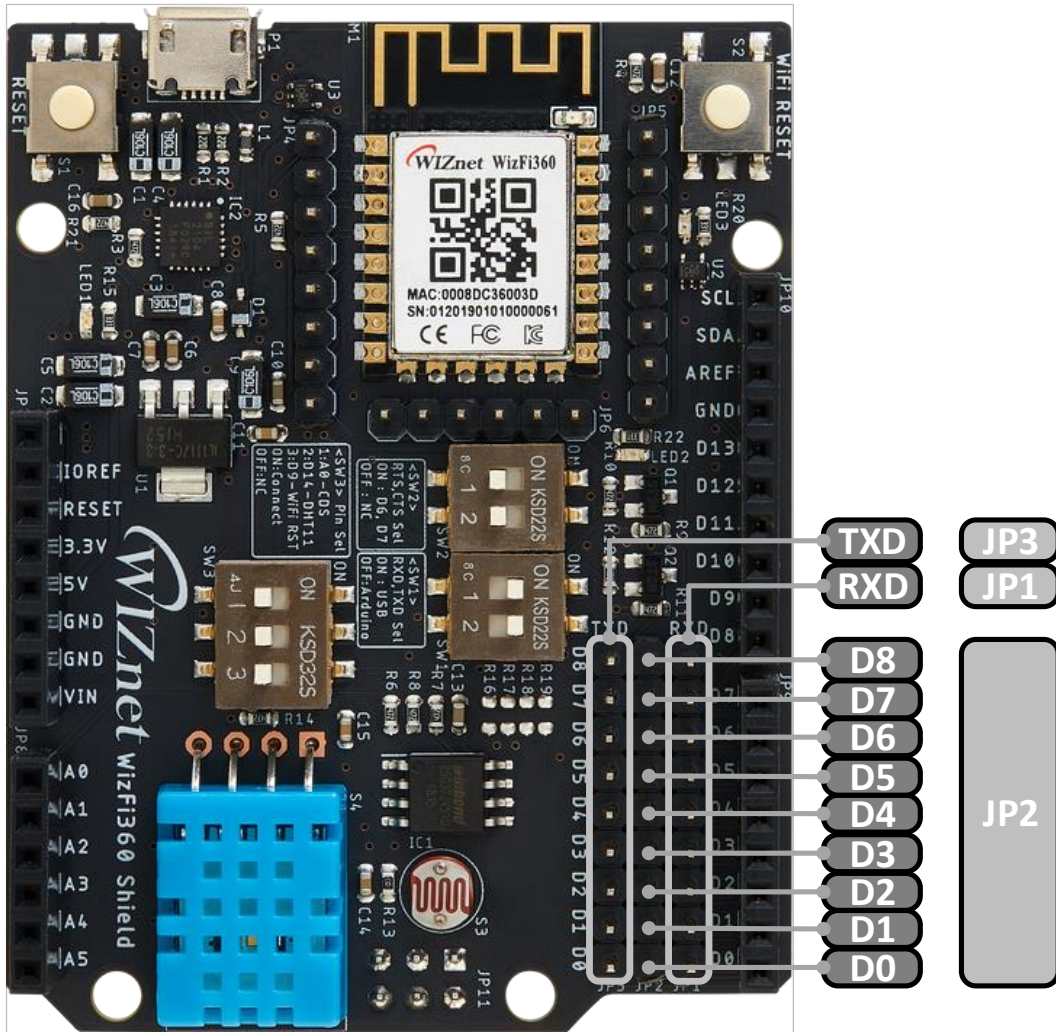
6.2. UART Selector Pin Header

Figure 7. UART Selector Pin Header

If state of SW1 is OFF, you can use this Pin Header. You can use the jumper cap to connect the pin header to select the RXD / TXD pin for the Arduino.

- JP1 – WizFi360 RXD (Connected to all pins of JP1)

- JP2 – Arduino D0~D8 Pins

  - Ex) JP2-1pin connected D0, JP2-2pin connected D1... JP2-9pin connected D8

- JP3 – WizFi360 TXD (Connected to all pins of JP3)

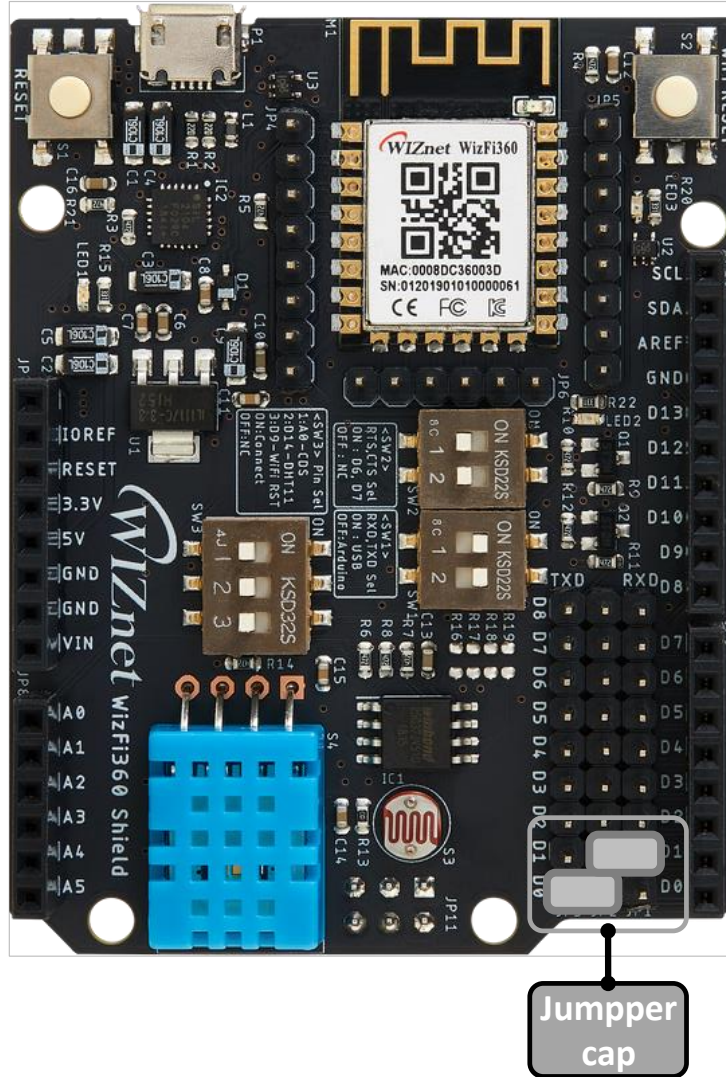**EX) If you connect the jumper cap as shown in the Figure. 6, RXD is connected to D0, TXD is connected to the D1.**

Figure 8. UART Selector Pin Header Example

7. Schematic & Partlist

https://github.com/Wiznet/Hardware-Files-of-WIZnet/tree/master/07_WizFi_Module/WizFi360-EVB-Shield

8. Dimension
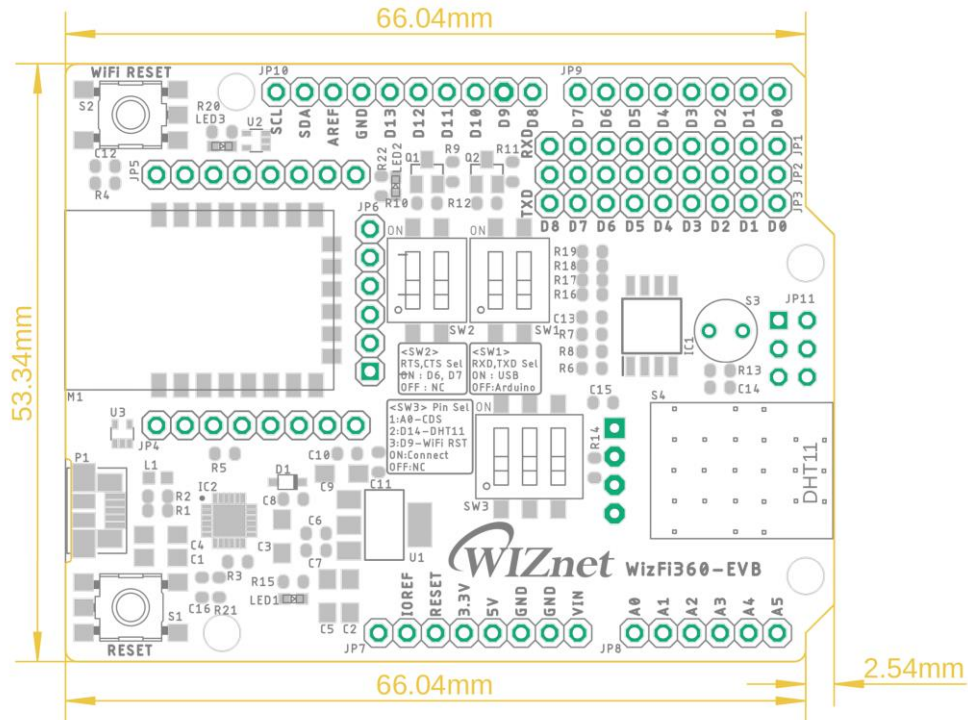
The dimension of WizFi360-EVB is the same as Arduino UNO.

Figure 9. Dimension

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