RFIDB1 Arduino Library

Document version 1.0.

1. Introduction

This library allows you to easily execute all command provided by RFID B1 modules created by Eccel Technology Ltd. In this description we will use the UART-B1 version, but this library should work on any product from the B1 family with an appropriate UART header.

2. Installation.

Unpack the downloaded RFIDB1 library and put it into the Arduino library folder. By default this is:
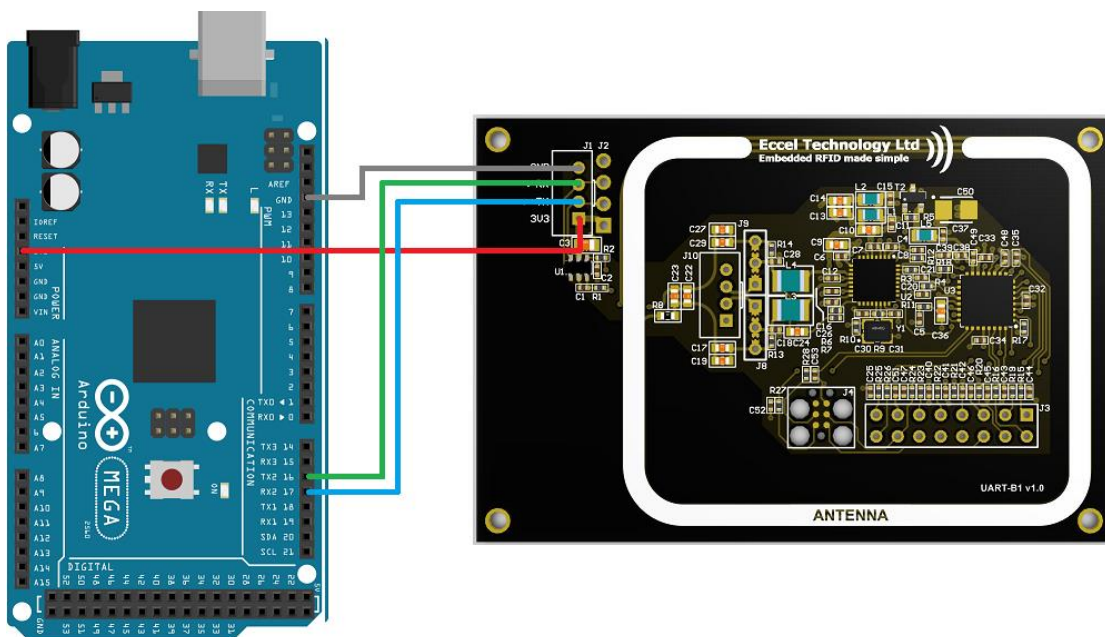
C:\Users\<USERNAME>\Documents\Arduino\libraries

Now restart the Arduino IDE if needed and open one of the RFIDB1 examples located in the menu (sometimes you need to scroll down to the end of list):

Menu->File->Examples->RFIDB1

3. Examples and wiring.

To run the first example called "Interface_example" and test the communication protocol you can use the Arduino Mega 2560. See the connection diagram below.

After uploading this example you should see the output below:

```
=> WriteToRFIDMemory(GetUIDAndType)
<= ACK
=> ReadFromRFIDMemory(TagUID)
<= ACK: 0xAB 0xC1 0x40 0x25 0x00 0x00 0x00 0x00 0x00 0x00 0x06 0x04
<= TagType: Classic1K
<= Tag UID size:4
<= UID: 0xAB 0xC1 0x40 0x25
=> WriteToRFIDMemory(Halt)
<= ACK
```

```
☑ Autoscroll          No line ending ▼   115200 baud ▼   Clear output
```

The second example "RFIDB1_ESPxxxx_MQTT" shows how easily you can build a wireless RFID reader for your home automation and use it as another IoT element. You only need an Arduino compatible board with WiFi like either the ESP8266 or the ESP32 and our UART-B1 board.

For example just read an RFID tag UID and send this information via a very popular protocol in the IoT world – MQTT.

Here is a wiring example for the NodeMCU:
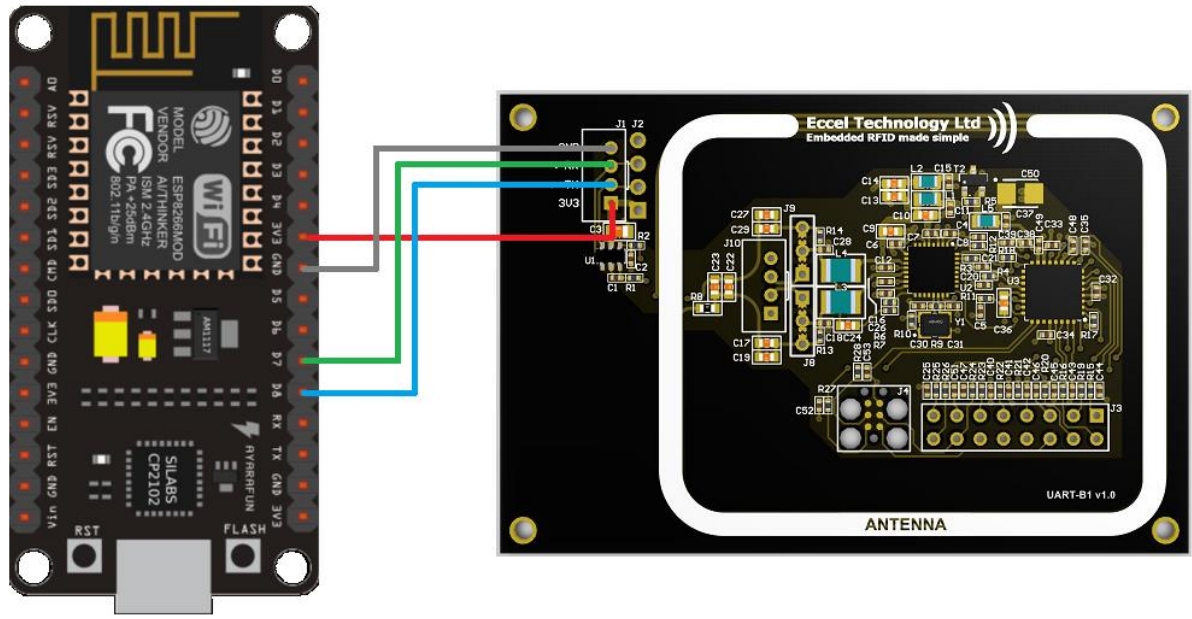
External links:

- <u>User manual for B1 products</u> – full specification for the UART protocol
- <u>PubSubClient</u> – MQTT library needed for the second example