

## **P-WF88M Application Note**

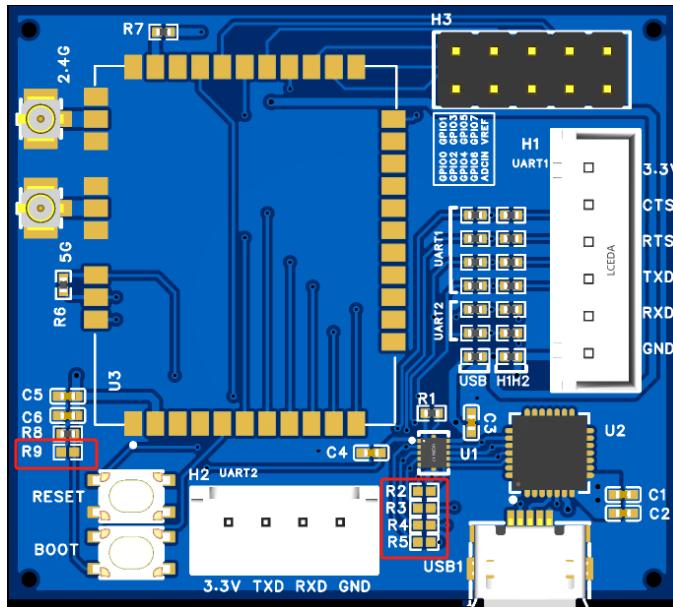
Amp'ed RF Technology, Inc.

## P-WF88M MQTT Application Note

### 1. Hardware Setup

P-WF88M supports the WF88-MA/MX modules for quick evaluation and prototyping. The table below details the necessary jumper settings for the WF88-MA/MX module types:

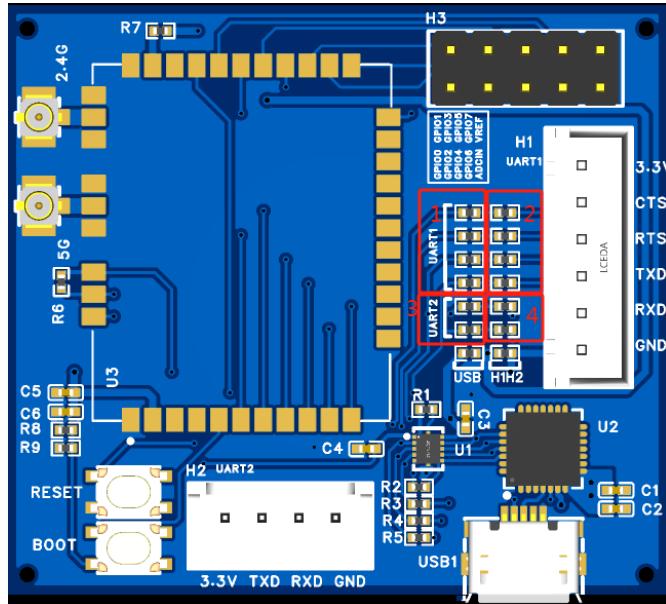
U1	R2,R3,R4,R5	R8	R9
NTS0104	NC	0R	NC



P-WF88-MA/MX select the serial port mode by the 0R resistance. According to the position marked in the picture , the table describes the selected method.

The power supply is 3.3V 500mA on the H1 connector.

***It cannot be powered using the USB.***



Serial port mode	1	2	3	4
UART1 connect to USB	0R	NC	-	-
UART1 connect to H1	NC	0R	-	-

## 2. MQTT Configuration Example

### 2.1. Usage

#### 2.1.1. Set/update

To set a configuration variable enter:

```
at+wf config xxxx = yyyy
```

Where "xxxx" is the variable name and "yyyy" is the value to set. A variable name may also be specified as "varzz". Where zz is the sequence number of the variable.

#### 2.1.2. Inquiry

An inquiry may be made using:

```
at+wf config xxxx
```

Where "xxxx" is the variable name. The reply will be the current setting.

#### 2.1.3. Listing

All non-hidden variables may be listed using:

```
at+wf config
```

Using the WF88M, configure the parameters for MQTT in STA mode next. For a full list of configurations, see the [\*WF88M\\_ConfigGuide\*](#).

LINKTYPE	0	0:TCP/1:MQTT	Link mode of current device
MQTTServerIP	192.168.1.76	IP address	MQTT Server IP address
MQTTServerPort	1883	Port Number	MQTT Server Port Number
MQTTServerUsrName	admin		User name for authentication
MQTTServerPasswd	password		Password for authentication
MQTTSubscribeTopic	testtopic	Topic name, 20 char	Current subscribe topic
MQTTPublishTopic	testtopic	Topic name, 20 char	Current publish topic
MQTTQoS	0	0: maximum delivery once. 1: delivered at least once. 2: delivered only once.	Value of QoS
MQTTAuthType	1	0: Username/password, 1: Single, 2: HandShake, 4: None	Type of Authentication

The following configurations must be entered:

## 2.2. Configurations

**at+wf config LinkType = 1**

Set for MQTT

**at+wf config MQTTServerIP = broker.emqx.io**

Select the broker here

**at+wf reset**

Necessary to take effect

**at+wf join [SSID] [password]**

reply: AT-WF DHCP OK.

Get ip XXXX

**at+wf mqttstart**

reply: AT-WF MqttConnectedOK

MQTT OK;

### 2.3. Optional configurations:

#### MQTTServerPort

The port number of MQTT Broker corresponds to Protocol (tcp/ssl), which means that when using "tcp" protocol, there is a corresponding port number; when using "ssl" protocol, it will correspond to another port number.

#### MQTTServerUserName and MQTTServerPasswd

"UserName" and "PassWord" indicate that MQTT Broker requires a username and password to establish a connection.

#### MQTTSubscribeTopic and MQTTPublishTopic

"SubTopic" represents topic the client subscriptions to. "PubTopic" represents topic the client publishes to.

### 2.4. Topics

The WF88M has 2 pre-defined topics:

SToC: Messages sent from the broker will be present to the WF88M TX UART.

CToS: Activated from data on the WF88M RX UART pin. Messages will be sent to the broker.