WF88 MQTT Application Note

Amp'ed RF Technology, Inc.

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1. Configuration

To configure the WF88 mesh parameters, edit the mesh configuration file /system/etc/config/meshconfig.ini
Modify the following vital configuration variables to the suggested settings:

Variable	Suggested Setting	Description
ntype	0	0 is mesh station, 1 is mesh gate.
meshname	mymesh	Name of the mesh network.
channel	1	Mesh communication channel over WiFi.
v4ipaddr	192.168.137.88	IPv4 address for the mesh terminal.
v4gateway	192.168.137.1	IPv4 address of the AP or router or server.
v6ipaddr	2001:250.1800:1::88/64	IPv6 address for the mesh terminal.
v6gateway	2001:250.1800:1::1	IPv6 address of the AP or router or server.

Edit the MQTT configuration file **/system/etc/config/mqtt.ini.** Modify the following vital configuration
variables to the suggested settings:

Variable	Suggested Setting	Description
Baudrate	9600	Baudrates are 9600, 19200, 38400, 57600, 115200, 230400.
ServerIP	91.121.93.94	IPv4 address of your MQTT server.
RemotePortNum	1883	This is the standard port for MQTT
UserName	""	Username.
Password	""	Password.
Pattern	SToC	Topic the client subscribes to.
PubTopic	CToS	Topic the client publishes to.
QoS	0	Quality of service.

```
UART0 defaults to 9600bps, with 8 data bits, 1 stop bit, no parity, and no flow control
[uart]
;Set the communication rate of UART0.
;BaudRate = 9600,19200,38400,57600,115200,230400
BaudRate = 9600          set baudrate

[netsetting]
;Set the protocol used to MQTT.
;Protocol = tcp,using TCP connection
Protocol = tcp

;Set the IP address of the MQTT server.
;For IPV6, the settings are similar to:ServerIP = 2001:250:1800:1::188
;For IPV4, the settings are similar to:ServerIP = 192.168.137.188
ServerIP = 91.121.93.94      set the IP of your MQTT server

;Set the port number for listening to the IP address(ServerIP parameters above) of the MQTT server.
RemotePortNum = 1883
                  set the port number of your MQTT server
;Set authorized username, if authorization is not required, the parameter value remains empty.
;UserName = ""
;UserName = myusername
UserName = ""           user name

;Set authorized password, if authorization is not required, the parameter value remains empty.
;PassWord = ""
;PassWord = mypassword
PassWord = ""

[mqttsetting]          password
;Set topic that the client subscribe to.
Pattern = SToC     topic

;Set topic that the client publish to.
PubTopic = CToS      topic

;Keep alive in seconds for this client.
KeepAliveInterval = 20

;Quality of service level to this client for the publishing and subscription.
QoS = 0        0,1,2
~
```
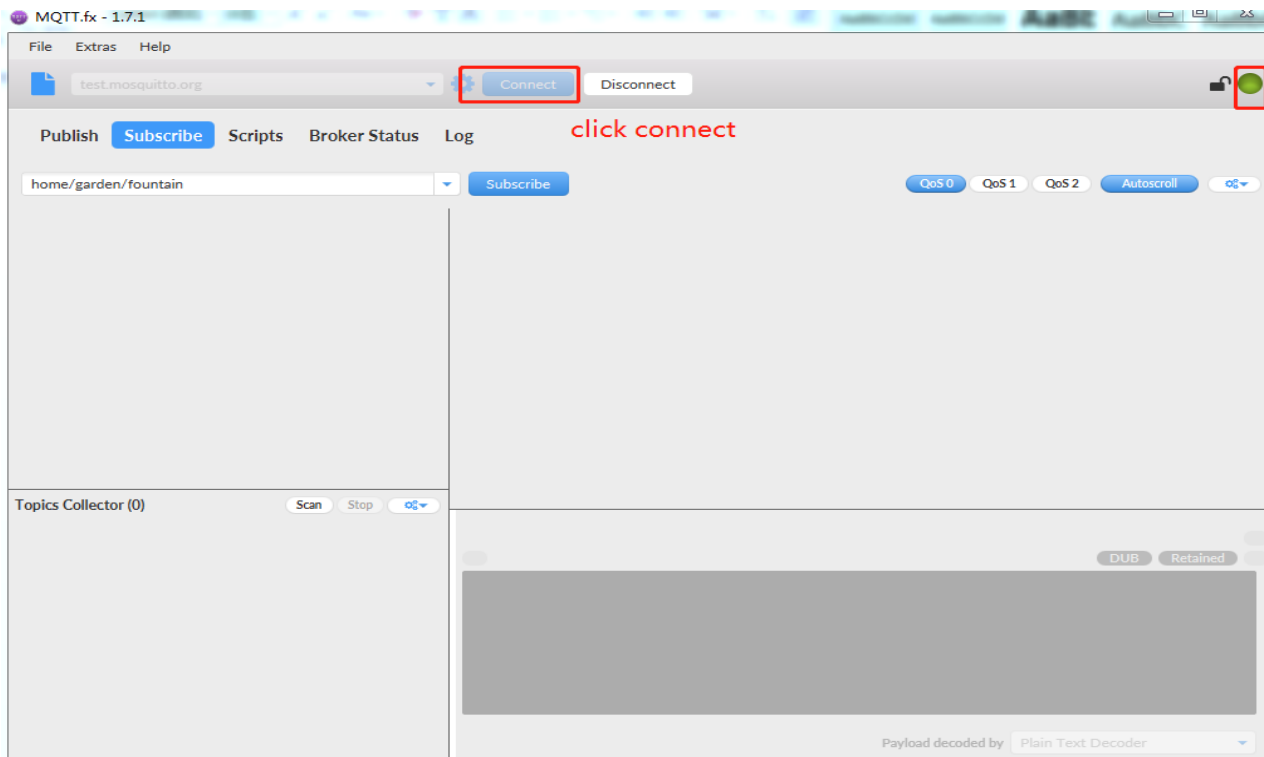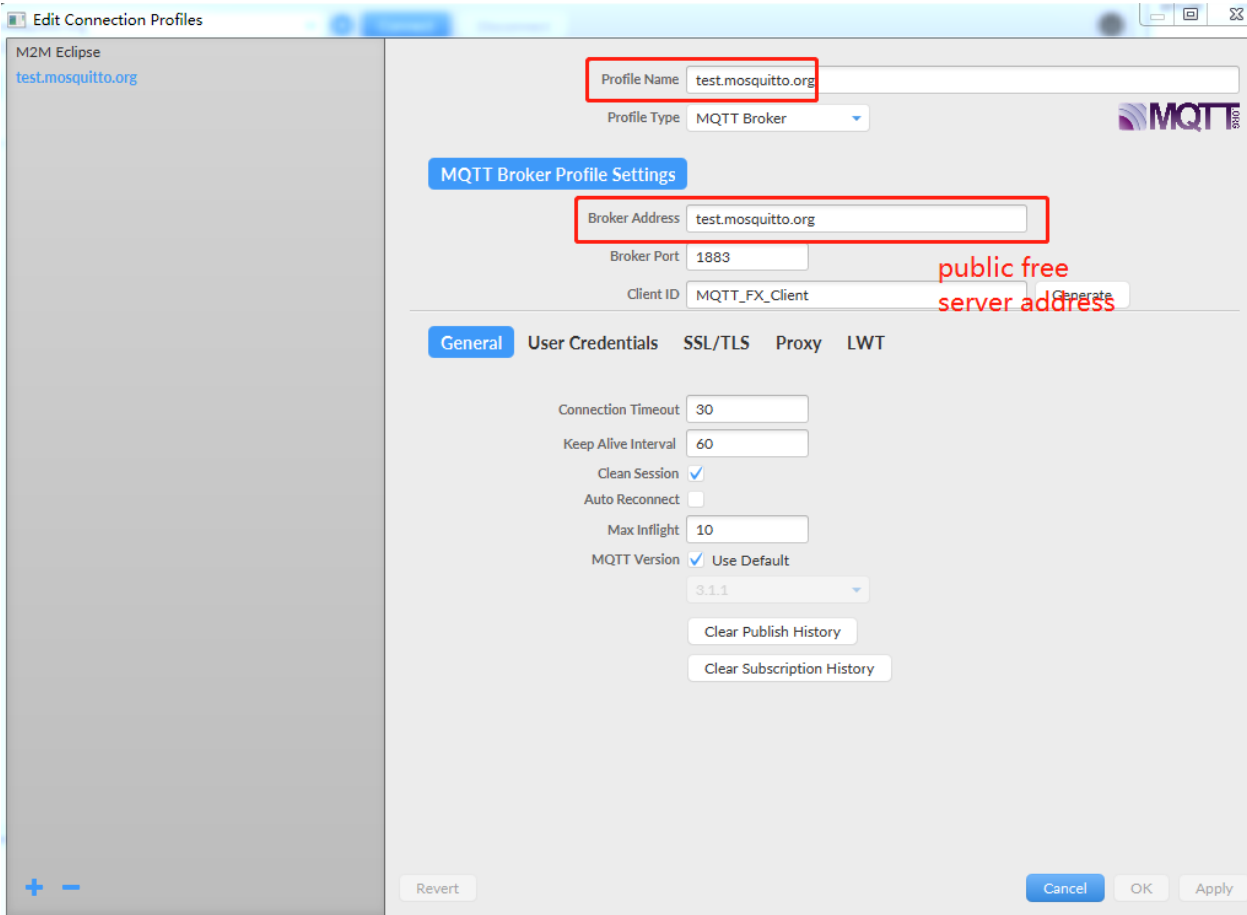
2. Save settings

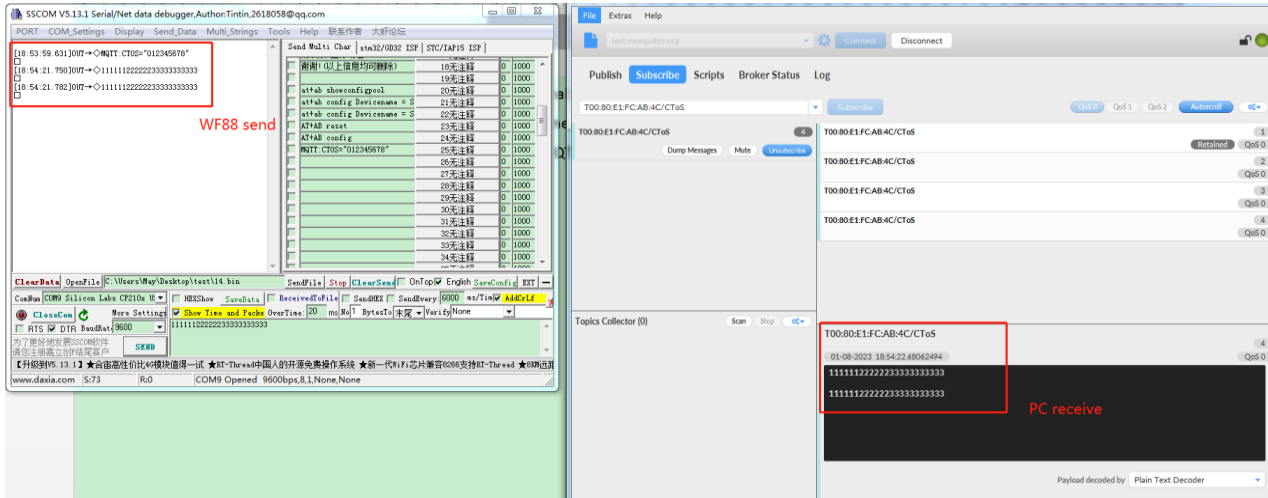Enter"a"to edit mode,when the modification is complete, press"Esc" to exit,"Shift+zz" save file.

3. MQTT Example

- Example using the **mqttfx-1.7.1-windows-x64.exe** as the client.
- This example uses the **test.mosquitto.org** website. This is a convenient test site. Note that this test site does not support Username & Password for login authorization.
- Run **MQTT.fx** to edit connection parameters.

This is an example of data sent by the WF88 terminal (E.g. T00:80:E1:FC:AB:4C/CToS).

Format for: T + MAC address/child, for which T is fixed to character, the MAC address is WF88.

This is an example of publishing data to the WF88 terminal

Publish data to WF88 terminal (E.g. T00:80:E1:FC:AB:4C/SToC).

Format for: T + MAC address/child, for which T is fixed to character, the MAC address is WF88.