

Release Notes for MPLAB® Code Configurator

MQTT Library v1.0.0

1 What is MCC MQTT Library

The MQTT Library available in Microchip's MPLABX Code Configurator (MCC) allows for quick and easy C code generation of the latest stack according to the user's requirements. The library module uses a Graphic User Interface (GUI) presented by MCC within MPLABX which allows for selection of desired configuration, and custom configurations of the protocol. Based upon device supported within MCC, customized C code is generated within the MPLABX project, in a folder named "MCC Generated Files".

2 What's New

New Configurable MQTT Library v1.0.0

3 System Requirements

- MPLAB® X IDE v5.20 or later
- MCC Plugin v3.85.1 or later <https://www.microchip.com/mcc>
- Libraries: <https://www.microchip.com/mcc> → **Current Download** →
 - Foundation Services v0.1.34 or later
 - WINC Library v1.0.0
 - TCP/IP Lite Stack v2.2.12
 - AVR MCUs v2.0.1 or later
 - PIC24 / dsPIC33 / PIC32MM MCUs v1.125
- Compilers:
 - AVR GCC Compiler v5.4.0 or later
 - XC8 compiler 2.05 or later
 - XC16 compiler v1.35 or later

4 Hardware

MQTT Library is a software stack, which uses underlying layers (TCP/IP, WINC and Foundation Services). The stack itself doesn't have any specific hardware dependency. The stack is tested against following hardware's:

- AVR-IOT WG Development Board (ATmega4808) + WINC Stack:
<https://www.microchip.com/DevelopmentTools/ProductDetails/AC164160>
- PIC-IoT WG Development Board (PIC24FJ128GA705) + WINC Stack:
<https://www.microchip.com/developmenttools/ProductDetails/AC164164>
- PIC18F47K40 with TCP/IP Lite Stack

5 Documentation Support

- Standard: <http://mqtt.org/>
- Further stack specific documentation is provide when the source code is generated under 'mcc_generated_files\docs\mqtt_documentation'

6 Installing MPLAB® Code Configurator and the MQTT Library


To install the MPLAB® Code Configurator Plugin:

1. In the MPLAB® X IDE click on **Tools** → **Plugin**
2. Click on **Available Plugins** tab
3. Check the box for the **MPLAB® Code Configurator**, and click on **Install**
4. Close and re-launch MPLABX after installation.

To install the MQTT Library application library:

1. Open the MPLAB Code Configurator page: <https://www.microchip.com/mcc>
2. Scroll to the bottom of the page and select the **Current Downloads** tabs
3. Download the MQTT library (**mqttLibrary-1.0.0.mc3lib**)
4. In the MPLAB® X IDE click on **Tools** → **Options**
5. Click on **Plugins** tab
6. Click on **Install Library**
7. Browse to the location where you saved the **mqttLibrary-1.0.0.mc3lib**, select and click **Open**

7 Running the Example

1. Create a new project in MPLAB® X IDE (for ex: ATmega4808)
2. Open MCC by clicking **Tools**→ **Embedded**→ **MPLAB® Code Configurator** or click on the MCC icon_ 
3. In the **Device Resources** panel under **Libraries** dropdown select MQTT
4. Check below for the **Notifications [MCC]** tab
5. Resolve the notifications one by one. For example, in GUI select:
 - a. Scheduler Service: **Foundation Services Timeout Driver**
 - b. Transport Service: **Wireless [WINC15XX]**
 - c. Generate Example: **Tick**
6. Configure dependent Libraries. For example
 - a. If Wireless is selected configure: **WINC Library** ->**SSID, Authentication, Password**
 - b. If Wired is selected configure **TCP/IP Lite Library**
7. Configure MQTT Library GUI. For example:
 - a. Host Address: **<mqtt broker address>**
 - b. Publish Topic: **<publish topic>**
8. Click **Generate** button
9. Build and program the board.
10. Connect another MQTT Client on the same broker and subscribe for <publish topic> to receive the messages.

8 Known Issues

[FSERVICES-166](#): When TCPIPLITE library gets unloaded, throws an exception in MPLABX IDE.

9 Frequently Asked Questions

For frequently asked questions, please refer to the FAQ post on the MCC Forum

<http://www.microchip.com/forums/f293.aspx>

10 Supported Families

MQTT Library is a software stack, which uses underlying layers (TCP/IP, WINC and Foundation Services). The stack supports 8/16/32 bit devices. User might get out of memory warnings thrown by compiler if executed for low memory devices.

11 Customer Support

11.1 The Microchip Web Site

Microchip provides online support via our web site at <http://www.microchip.com>. This web site is used as a means to make files and information easily available to customers. Accessible by using your favorite Internet browser, the web site contains the following information:

- Product Support – Data sheets and errata, application notes and sample programs, design resources, user's guides and hardware support documents, latest software releases and archived software
- General Technical Support – Frequently Asked Questions (FAQs), technical support requests, online discussion groups/forums (<http://forum.microchip.com>), Microchip consultant program member listing
- Business of Microchip – Product selector and ordering guides, latest Microchip press releases, listing of seminars and events, listings of Microchip sales offices, distributors and factory representatives

11.2 Additional Support

Users of Microchip products can receive assistance through several channels:

- Distributor or Representative
- Local Sales Office
- Field Application Engineering (FAE)
- Technical Support

Customers should contact their distributor, representative or field application engineer (FAE) for support. Local sales offices are also available to help customers. A listing of sales offices and locations is available on our web site.

Technical support is available through the web site at: <http://support.microchip.com>