MQTT Client WEG Connector

WEG devices compatible with the MQTT protocol

- Name: **MQTTWEG**
- Version 1.0.0.12
- Protocol: MQTT
- Interface: TCP/IP
- Runtime: Multiplatform
- Configuration:
  - Devices / Protocols

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Module Configuration

This document has only information about the device connection settings and its address syntax.

For further Information, see:

- Devices Module
- Devices Module Reference

Channels Configuration

Protocol Options

Not used in this driver.

Nodes Configuration

Station Configuration

Station syntax: **<BrokerURL>; <Port>; <ClientID>; [Username]; [Password]; [NetworkSecurity]; [X509Certificate]; <Qos>; <KeepAlive>**

Where:

<BrokerURL>: MQTT Broker (Server) name. It must be the same name is configured in the **bind_address** parameter in the Broker.

<Port>: MQTT Broker port. It must be the same port is configured in the Broker to be listening. Default value is **8883**.

<ClientID>: Indicates the client identification used for connecting to the MQTT Broker.

[Username]: Optional. Username defined on MQTT Broker. This will be requested if the Broker has the allow_anonymous parameter as false. Whether this parameter is set as true on Broker, keep this field empty. Default value is empty.

[Password]: Optional. Password defined on MTQQ Broker. This will be requested if the Broker has the allow_anonymous parameter as false. Whether this parameter is set as true on Broker, keep this field empty. Default value is empty.

[NetworkSecurity]: Optional. If the Broker works using certificates, this field is mandatory and must match the same option defined in the Broker. Options are TLSv1.2 and TLSv1.3.

[X509Certificate]: Optional. Path of X509 Certificate using TLS v1.0. This must be the complete path of X509 certificate in the client computer. The certificate must be installed in the computer.

<QoS>: Quality of Service (QoS) is an agreement between sender and receiver of a message regarding the guarantees of delivering a message. There are three QoS levels:

AtMostOnce: This service level guarantees a best-effort delivery. However, there is no guarantee of delivery, due to the recipient not acknowledging the receipt of the message.

AtLeastOnce: This service guarantees that a message is delivered at least one time to the receiver. *Default Value*.

ExactlyOnce: Highest level of service. It is safer, but slower when compared to the others. When the message flow is complete, all parties involved in the communication are sure the message was sent and delivered with success.

Choosing the Right QoS Level

Use QoS 0 when:

- The connection between sender and receiver is stable (e.g., a test client or front-end application connected via a wired connection).
- Occasional message loss is acceptable (e.g., when sending non-critical data at short intervals).
- Message queuing is **not** required.

Use QoS 1 when:

- Every message must be received, but duplicates are acceptable.
- The application **does not require** the overhead of QoS 2 but still needs message delivery guarantees.
- Faster delivery is preferred compared to QoS 2.

Use QoS 2 when:

- Receiving **every message exactly once** is critical (e.g., when duplicate messages could cause issues).
- Applications need the highest level of reliability, despite the additional overhead and latency.

<KeepAlive>: Ensures that the connection between the Broker and Client is open and both parties are aware of the connection. Default value is **60 seconds**.

NOTE

One of the easiest ways to install the certificate on client computer is to use the wizard to import the certificates is through the "Internet Options" to import the certificate in the "Trusted Root Certification Authorities". You need to import the certificate in DER format.

Station Examples

Broker configuration with no Username and Password and no SSL/TLS

Station Configuration

BrokerURL: test.mosquitto.org

Port: 8883

ClientID: MyClient1

Username: <empty>

Password: <empty>

NetworkSecurity: None

QoS: AtLeastOnce

KeepAlive: 60

Broker configuration with Username and Password and no SSL/TLS

Station Configuration

BrokerURL: MSI

Port: 8883

ClientID: MyClient1

Username: Guest

Password: 1234

NetworkSecurity: None

QoS: AtLeastOnce

KeepAlive: 60

Broker configuration with SSL/TLS and no Username and Password

Station Configuration

BrokerURL: MSI

Port: 8883

ClientID: MyClient1

Username: <empty>

Password: <empty>

NetworkSecurity: TLSv1.2

QoS: AtLeastOnce

KeepAlive: 60

Broker configuration with SSL/TLS and Username and Password

Station Configuration

BrokerURL: MSI

Port: 8883

ClientID: MyClient1

Username: Guest

Password: 1234

NetworkSecurity: TLSv1.3

QoS: AtLeastOnce

KeepAlive: 1

Points Configuration

Address

The syntax for the MQTT communication points is called **Topic**:

- **Topic** is a string, which is used by the broker to filter messages for each connected client. A topic consists of one or more topic levels. Each topic level is separated by a forward slash (topic level separator). Wildcards are **not** supported.

E.g.: **USA/Houston/Station1/Level**

Driver Revision History

MQTT Revision History	
Version	**Notes**
1.0.0.12	The initial release was published by following the new documentation standards.

In this section...
