



Enhanced Smart Metering Systems

QTao
Version 2.0





READ THIS FIRST

Before installing or using the **QTao**, read this user manual. A complete understanding of how this device operates is necessary in order to take full advantage of its features, and to help troubleshoot any installation problems.

Please read this user manual carefully

Please save this document



SAFETY CONSIDERATIONS

For information about installation, refer to the following sections of this manual:
SPECIFICATIONS, INSTALLATION AND STARTUP

Table of Contents

Device Overview	1
Specifications.....	1
Powering Up the Device	1
System Diagram	2
Wiring Setup.....	3
Menu Navigation	4
Network Connection Status	6
Web Navigation / Device Setup.....	7
Accessing the Webpage through a local network connection	7
Link Setup	7
Meter Setup	8
Downloading the Data	10
On-Board Wi-Fi.....	11
Enabling WiFi Hotspot	11
Troubleshooting.....	13
Technical Service	15

1. Device Overview

The QTao is a data aggregation device which will collect readings from connected meters, then push them to a remote database through the cloud. Any collected data will be saved for 60 days, which can be accessed via QView. The QView interface is a data visualization tool to effectively display meter data.

Specifications

Input Voltage: 100~240 VAC

Operating Environment: -20 °C to +60°C

Enclosure Dimensions: (10.00 x 8.00 x 4.00 in)

QTao Dimensions: (4.00 x 5.50 x 1.38 in)

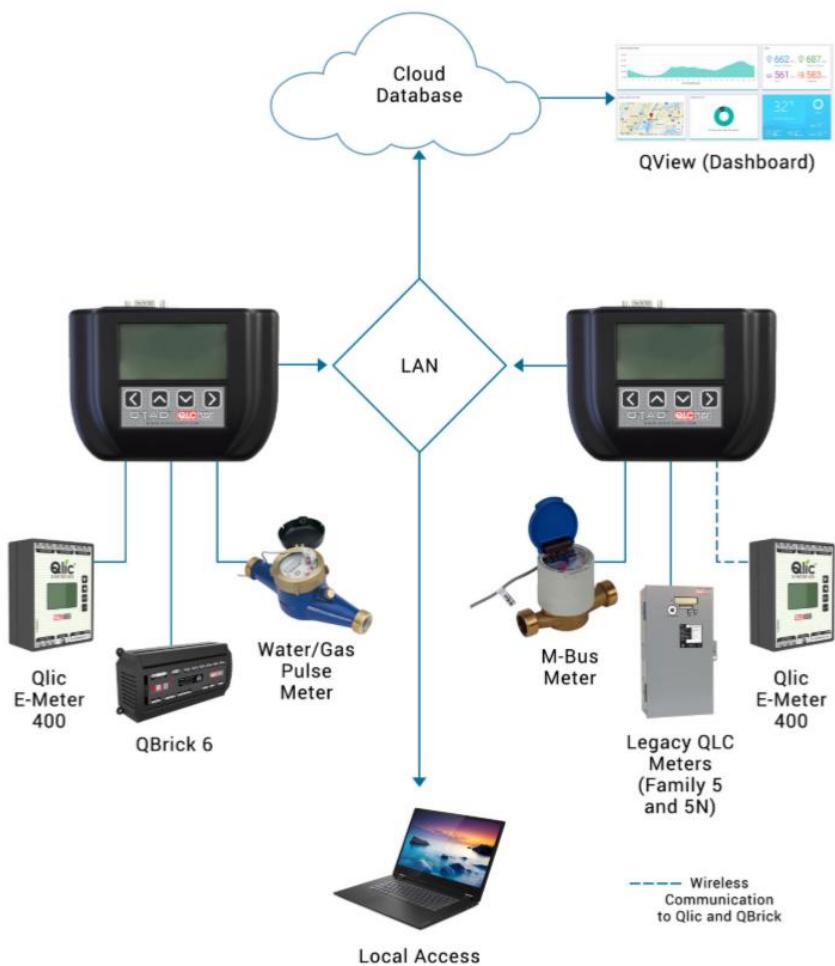
Powering Up the Device

To supply power to the QTao, insert the external power plug into an outlet supplying 100~240 VAC. After supplying power to the device, the red LED will momentarily light up, followed by a solid green LED. Allow **5 mins for the screen to turn on**, and for the device to completely boot up.



Quadlogic Control Corporation
techsupport@quadlogic.com
www.quadlogic.com
+1-212-930-9300

System Diagram



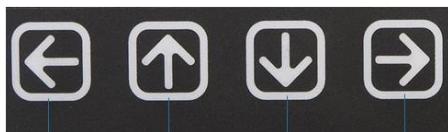
Quadlogic Control Corporation
techsupport@quadlogic.com
www.quadlogic.com
+1-212-930-9300

Wiring Setup



1. QTao
2. 24 V Power supply
3. Isolated data repeater
4. RS485 connection insert
5. Ethernet jack insert

2. Menu Navigation



Scroll through menu tabs/ Go to previous screen Scroll up Scroll down Scroll through menu tabs/ Move into a menu option

The figure consists of three vertically stacked screenshots of a device's control interface. The top screenshot shows the 'MAIN' tab selected, displaying network status: 'Ethernet: Connected' and 'Active Devices: 0 / 0'. Below this, under the heading 'Active meters that are already connected', there is a list of device details. The middle screenshot shows the 'INFO' tab selected, displaying device information: 'Serial #: 00D06950FE86', 'Version : 0.10', 'QBRAIN : 8888888888', 'Address: 21 Jump Street'. The bottom screenshot shows the 'NWK' tab selected, displaying network connection details: 'Ethernet: Connected', 'Eth0: 192.168.1.147 (Static)', 'Eth1: Disconnected', and 'WiFi: Disabled'. Arrows from the text labels point to the corresponding UI elements in each screenshot.

Menu Tabs (can be scrolled with left and right buttons)

Ethernet: Connected → Quick preview of Network status

Active Devices: 0 / 0 →

Active meters that are already connected

Serial #: 00D06950FE86 → Device's S/N

Version : 0.10 → Current version of device

QBRAIN : 8888888888 → Unique ID assigned by QLC

Address: 21 Jump Street → Building address

Ethernet: Connected → Status of ethernet connection

Eth0: 192.168.1.147 (Static) → Main ethernet port connection IP address

Eth1: Disconnected → An optional, ethernet connection via USB A port

WiFi: Disabled → WiFi status



Quadlogic Control Corporation
techsupport@quadlogic.com
www.quadlogic.com
+1-212-930-9300

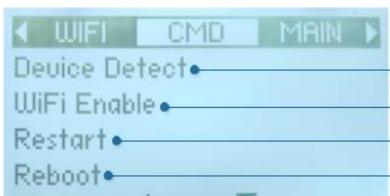


→ Status

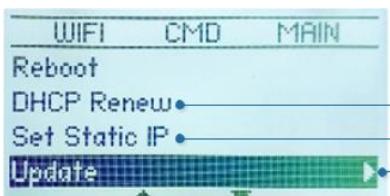
→ Links created



Shows the devices that
are connected with the
Tao, after setup
procedure the devices
should populate this
screen.



- Device Detect → Detect and register meters on to the Tao
- WiFi Enable → Turn on WiFi connection
- Restart → Restarts the Software
- Reboot → Reboots the hardware



- Reboot
- DHCP Renew → Sets DHCP
- Set Static IP → Sets a static IP

Update → Update device to latest software



Quadlogic Control Corporation
techsupport@quadlogic.com
www.quadlogic.com
+1-212-930-9300

3. Network Connection Status

The following table shows a list of connection status messages that may appear, along with a short description and the corrective action (if any). The connection status can be accessed on either the main screen or the network menu tab.

Connection Error	Details	Action
Database Connected	A successful connection to the database has been established.	None required.
API Error: Message	There has been an issue connecting to the database.	Call Technical Support and report the API Error message indicated.
No Internet Access	There is no internet connection	Contact IT to make sure the data port has internet access, or if there are firewall issues.
Ethernet Disconnected	The device is not connected to the local network	Make sure the Ethernet cable is properly plugged in to the device and data port.



Quadlogic Control Corporation
techsupport@quadlogic.com
www.quadlogic.com
+1-212-930-9300

4. Web Navigation/Device Setup

The QTao configuration webpage provides a local interface to set up links, add devices and access data currently stored on the device.

Accessing the Webpage through a local network connection

Scroll to the Network menu tab on the LCD screen and identify the IP address displayed next to "Eth0". Enter this address into a web browser (chrome is preferred) on a computer connected to the same network as the QTao. This will direct you to the QTao webpage. If a network connection is unavailable, follow the steps from the On-Board WiFi section.

Link Setup

From the webpage, click  to access the troubleshooting menu. Then click show links and add a link. To add serial link:

Choose the port and protocol you would like to create a link for. Then select save link to complete link set up. The rest of the selections are optional.



Quadlogic Control Corporation
techsupport@quadlogic.com
www.quadlogic.com
+1-212-930-9300

Meter Setup

After the link has been established, devices must be added to the link. From the troubleshooting menu, click on show devices. Then to add devices, click on Add device.

QLC QUAD LOGIC QTao

Show Devices on All Links

Device Name	Status	Actions
QBrick 6 10000011: Connected		Details Edit
	<p>Serial Number: 10000011 Meter Type: Elec Link Quality: 100% Link Address: 1 Last Reading: 2/25/2020, 11:00:00 PM</p>	
Qlic E-Meter 400 01000063: Connected		Edit
	<p>Serial Number: 01000063 Meter Type: Elec Link Quality: 100% Link Address: 2 Last Reading: 3/6/2020, 11:15:00 AM</p>	
Qlic E-Meter 400 0100002C: Connected		Edit
	<p>Serial Number: 0100002C Meter Type: Elec Link Quality: 100% Link Address: 3 Last Reading: 3/6/2020, 11:15:00 AM</p>	
GWF 19476557: Connected		Edit
	<p>Serial Number: 19476557 Meter Type: Water Link Quality: 100% Link Address: 19476557 Last Reading: 3/6/2020, 11:00:00 AM</p>	

Add Device 

Detect Devices

Back



Quadlogic Control Corporation
techsupport@quadlogic.com
www.quadlogic.com
+1-212-930-9300

QLC QUAD LOGIC QTao

Select the link to which you want to add the device

Add New Device

Enter the serial number

Enter the device address if necessary (typically 0 for Mbus)

Link: Link 0: mbus on USB0, mixed-use

Serial Number: 00000000

Address: 0

Verify/Save Device Delete Device

Back

QUADLOGIC CONTROLS CORPORATION
33-00 Northern Blvd. Long Island City, NY 11101 T 212.930.6300 F 212.930.6394
www.quadlogic.com

Choose the drop-down options and click verify/save device.
Once completed, the added devices can be verified from the show serial links tab.

QLC QUAD LOGIC QTao

Show Serial Links

Link 0: modbusRTU on RS485 via DIGI, mixed-use Edit

Quality: 100%
Protocol: modbusRTU
Port: RS485, connected
Module: Digi
Operation: mixed-use
Devices: 3 - Click to view

Link 1: mbus on USB0, mixed-use Edit

Quality: 100%
Protocol: mbus
Port: USB0, connected
Module: None
Operation: mixed-use
Devices: 1 - Click to view

Add Serial Link

Back

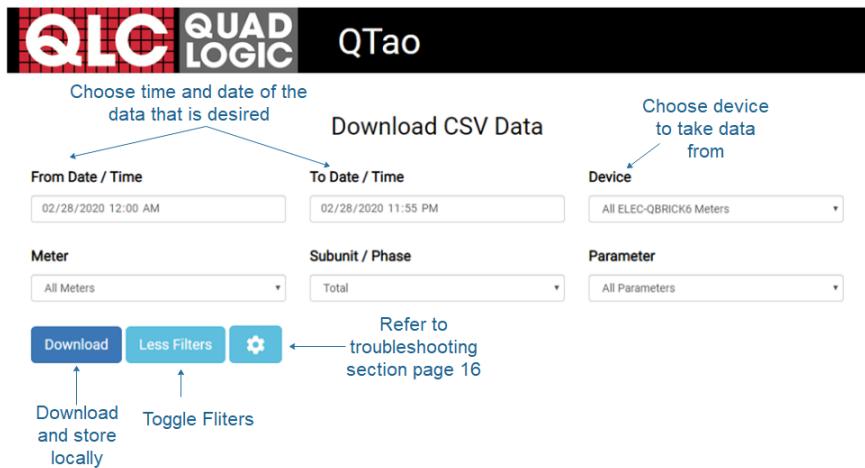
Clicking on devices for a specific serial link will show all the devices that are now added to that link. If devices are still not displayed under their respective links, follow troubleshooting procedures, page [x](#)



Quadlogic Control Corporation
techsupport@quadlogic.com
www.quadlogic.com
+1-212-930-9300

Downloading the Data

Fill out the dates and device you would like to retrieve information for. The “More Filters” option gives access to choosing a specific time, channel, phase and parameter. After selecting your options, use the download button to save the file locally.



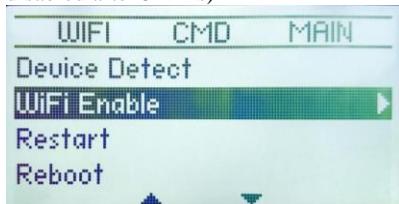
Quadlogic Control Corporation
techsupport@quadlogic.com
www.quadlogic.com
+1-212-930-9300

5. On-Board Wi-Fi

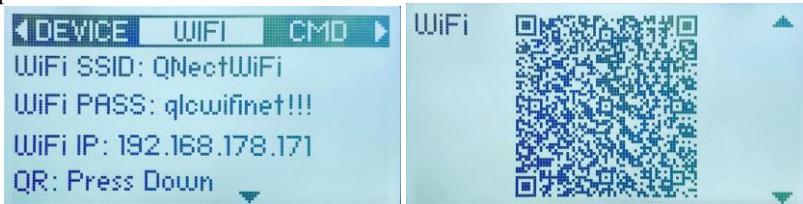
The WiFi option will allow connection to the QTao web interface without having a local area connection available.

Enabling WiFi Hotspot

Navigate to the CMD tab and select the WiFi enable option. (WiFi will automatically be disabled after 5 mins)



Under the WIFI tab, notice the WiFi information is now available. Connect to the WiFi by, either manually entering the credentials or press down and scan the QR code provided.



After connection is established, scroll down and scan the URL QR code or manually enter <http://qnect.lan/> or enter the WiFi IP address in a web browser.



This will direct you to the QTao configuration webpage and will give you access to various features and settings. Please refer to the Web Navigation section for more info.



Quadlogic Control Corporation
techsupport@quadlogic.com
www.quadlogic.com
+1-212-930-9300



QTao

Get Data

From Date

07/08/2019

To Date

07/08/2019

Device

Choose a device...

[Download](#)

[More Filters](#)



QUADLOGIC CONTROLS CORPORATION

33-00 Northern Blvd, Long Island City, NY 11101 T 212.930.9300 F 212.930.9394
www.quadlogic.com

If there are issues connecting to the configuration webpage, ensure that the device has properly connected to the WiFi hotspot. If it is, try refreshing the webpage in your browser a few times. If the problem persists, contact QLC technical support.



Quadlogic Control Corporation
techsupport@quadlogic.com
www.quadlogic.com
+1-212-930-9300

6. Troubleshooting

1. LCD does not turn on
 - Verify the power supply is plugged into a working outlet. Then check for green status light on the top of the QTao. Allow 5 mins for the LCD to turn on. Call technical service if issue persists.
2. LCD frozen/ Buttons not responding
 - Cycle power to the device.
3. Unlisted Devices
 - If any of your wired devices are not showing under connected devices, follow the procedure within the Web Navigation section to access the configurations page.

The screenshot shows the Quadlogic Control Corporation website. At the top, there is a logo for "QLC QUAD LOGIC" and the word "QTao". Below the logo, the heading "Get Data" is displayed. Under "Get Data", there are three input fields: "From Date" (08/27/2019), "To Date" (08/27/2019), and "Device" (Choose a device...). Below these fields are three buttons: "Download", "More Filters", and a gear icon. An arrow points from the gear icon to the text "Click this to enter the troubleshooting options". At the bottom of the "Get Data" section, there is a footer with the text "QUADLOGIC CONTROLS CORPORATION", "33-00 Northern Blvd. Long Island City, NY 11101 T 212.930.9300 F 212.930.9394", and the website "www.quadlogic.com".

The screenshot shows the QTao mobile application. At the top, there is a logo for "QLC QUAD LOGIC" and the word "QTao". Below the logo, the heading "Troubleshooting" is displayed. There are five blue rectangular buttons stacked vertically, each containing a white text label: "Show Devices", "Show Links", "View Logs", "Send Commands", and "Back". An arrow points from the text "Click Show Devices to check your registered devices" to the "Show Devices" button.



Quadlogic Control Corporation
techsupport@quadlogic.com
www.quadlogic.com
+1-212-930-9300



QTao

Show Devices on All Links

QBrick 6 10000011: Connected

[Details](#) [Edit](#)

Serial Number: 10000011
Meter Type: Elec
Link Quality: 100%
Link Address: 1
Last Reading: 2/25/2020, 11:00:00 PM

Qlic E-Meter 400 01000063: Connected

[Edit](#)

Serial Number: 01000063
Meter Type: Elec
Link Quality: 100%
Link Address: 2
Last Reading: 3/6/2020, 11:15:00 AM

Qlic E-Meter 400 0100002C: Connected

[Edit](#)

Serial Number: 0100002C
Meter Type: Elec
Link Quality: 100%
Link Address: 3
Last Reading: 3/6/2020, 11:15:00 AM

GWF 19476557: Connected

[Edit](#)

Serial Number: 19476557
Meter Type: Water
Link Quality: 100%
Link Address: 19476557
Last Reading: 3/6/2020, 11:00:00 AM

Using this page will allow you to easily scroll through all your devices and show their status. From this page, locate your missing device and then verify that the device is given a unique slave id. Then check the installation of the missing device for proper wiring.



Quadlogic Control Corporation
techsupport@quadlogic.com
www.quadlogic.com
+1-212-930-9300

7. Technical Service

For any inquiries about the device performance or to report any failures, please contact:

Quadlogic's technical service department.

Quadlogic Controls – After-sales service

Email: techsupport@quadlogic.com



Quadlogic Control Corporation

techsupport@quadlogic.com

www.quadlogic.com

+1-212-930-9300