Please read the entire document. It covers the installation of the Modbus adapter, setting up the device's software for RTU over TCP remote communication, and instructions for updating the purger's firmware.

Modbus RTU Over TCP Adapter Assembly

Bill of Materials:

1. Modbus Adapter: TASE-LAN-461
2. Modbus Adapter Bracket
3. RS-485 Cable with 6-pin Connector
4. 24V Modbus Adapter cable
5. 2 M4 Screws and washers (in plastic bag)
6. 4 M3 Screws, Lock washers, and Nuts

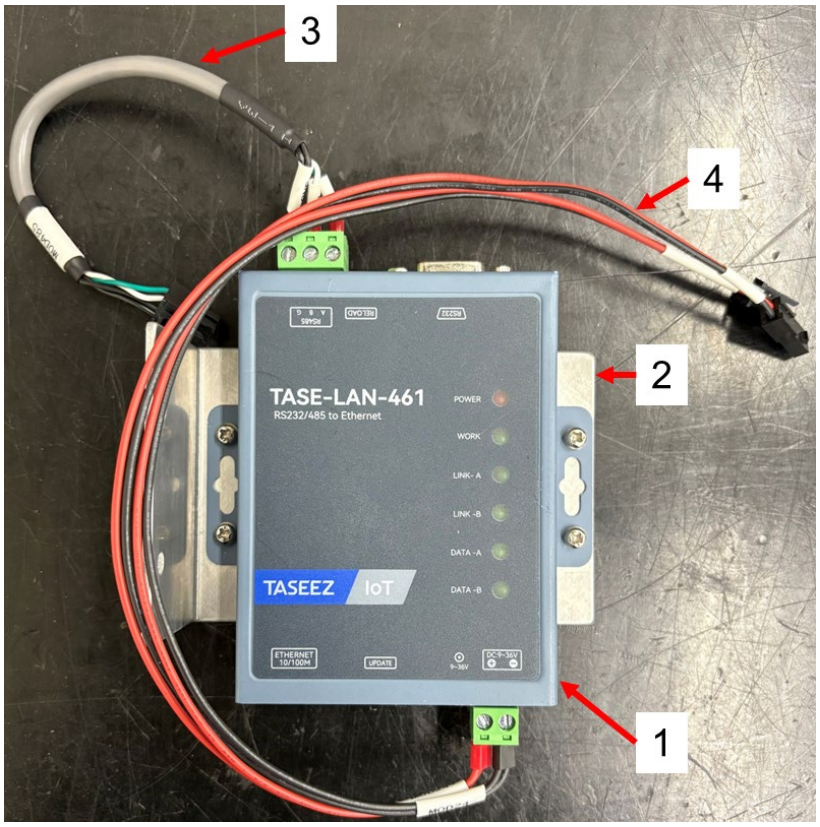


Figure 1. Kit Items

Assembly: Complete assembly steps with the purger powered off

1. Locate the 24V connector on the main board. Figure 2.
    a. Disconnect the connector from the board
2. Connect the female two-pin connector on the 24V Modbus adapter cable to the male 24V cable from the main board. Figure 2.

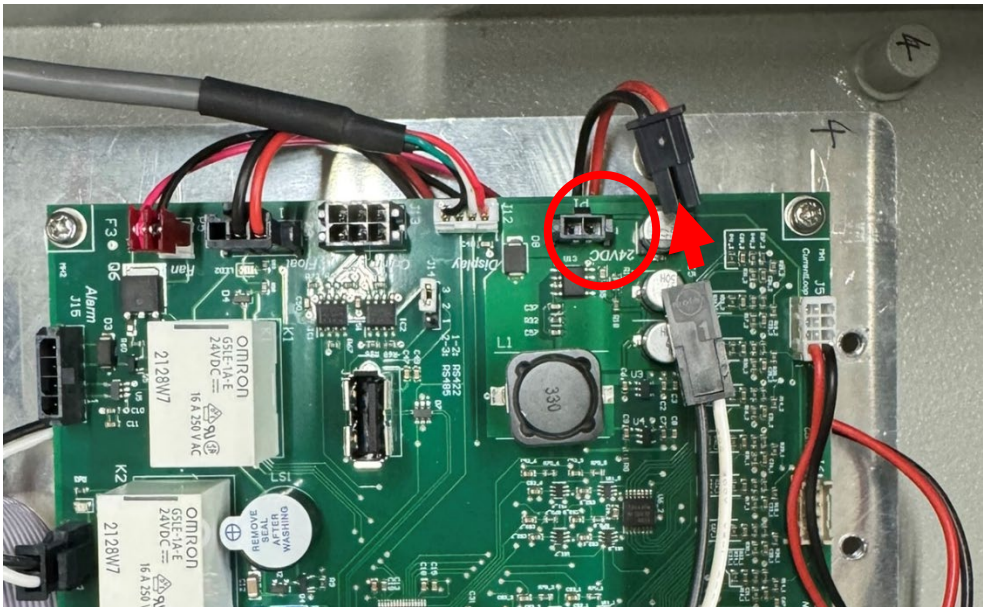


Figure 2.

3. Now connect the male two-pin connector to the main board's 24V connector. Figure 3.

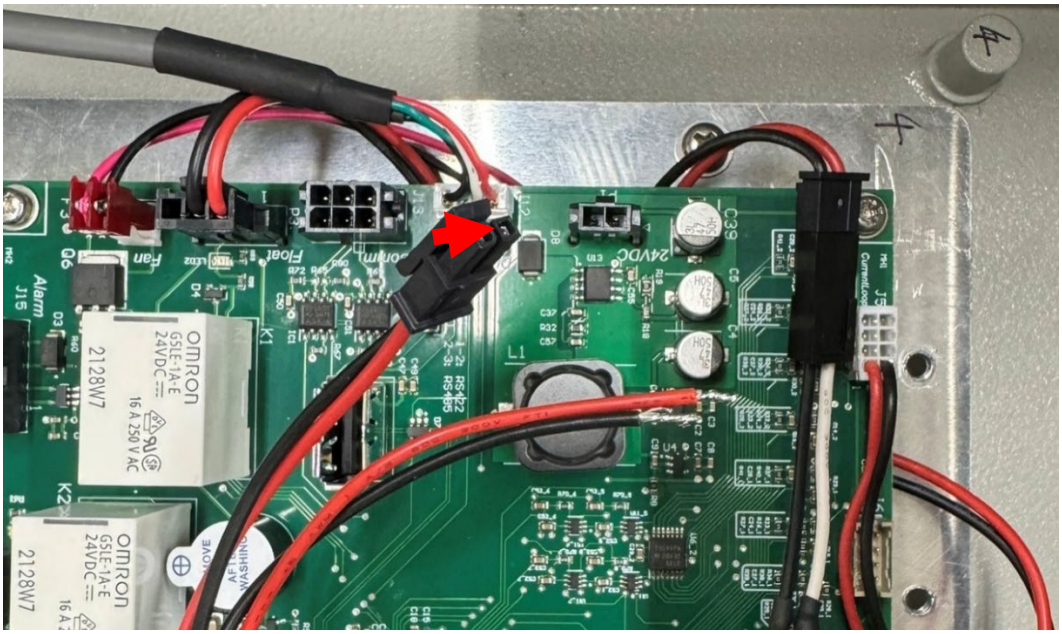


Figure 3.

4. Locate the mounting holes for the Modbus adapter.

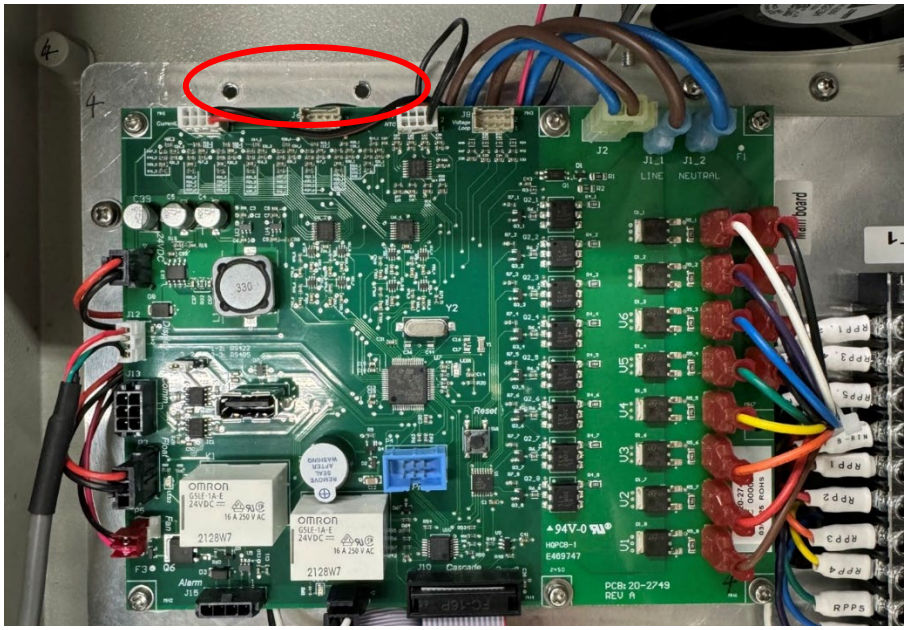


Figure 4. Mounting Holes for Bracket

5. Secure the bracket using the M4 screws and lock washers.

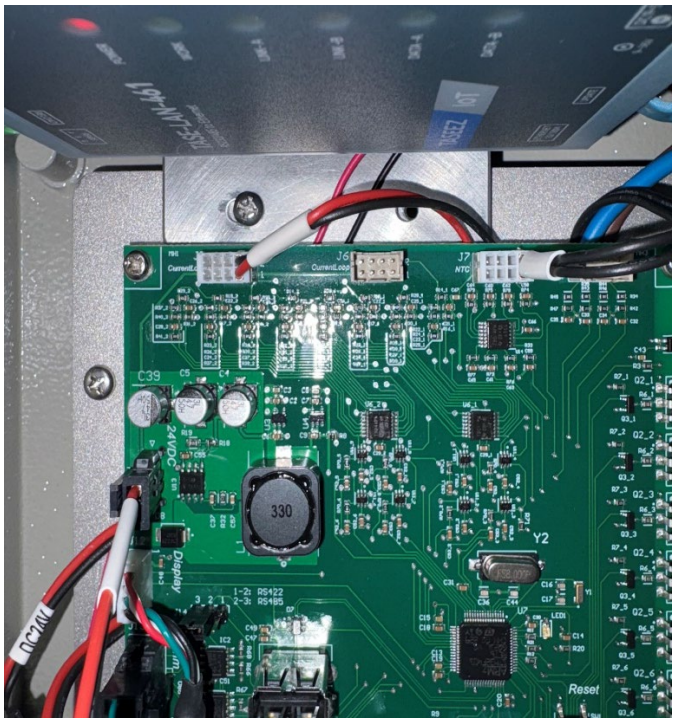


Figure 5.

6. Connect the 6-pin RS-485 connector to the main board. Double-check that the RS-485 jumper is installed on the main board. Figure 6.

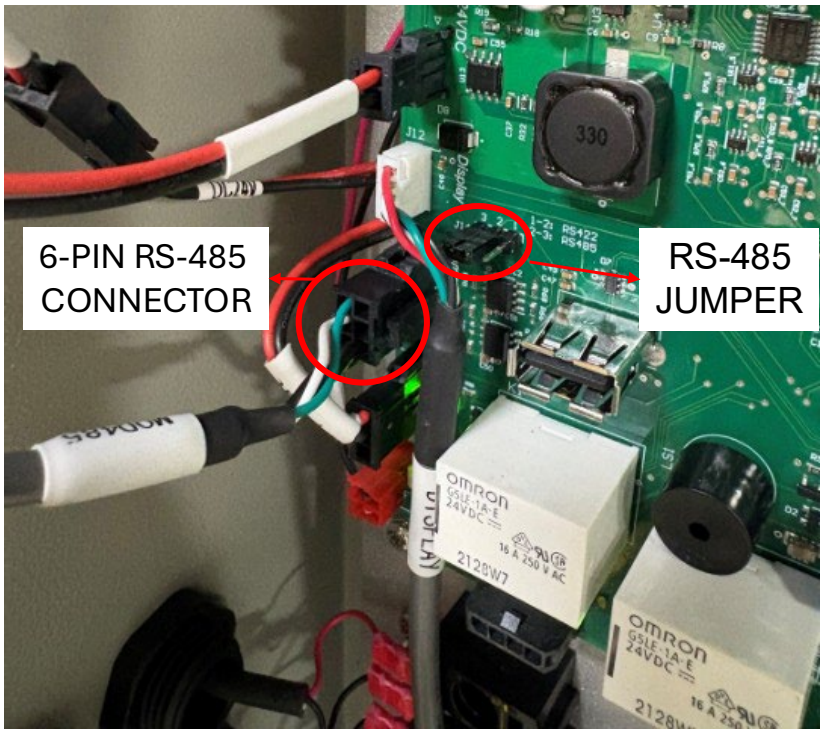


Figure 6.

7. Power on the control box.
8. Verify that the adapter's POWER LED is illuminated and the WORK LED is blinking. Figure 7.

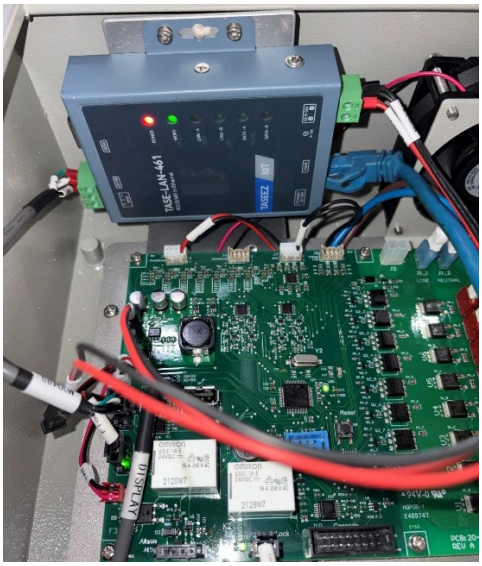


Figure 7.

Modbus RTU Over TCP Adapter Ethernet Setup

These are the setup instructions for the TASE-LAN-461. These instructions are an excerpt from the TASE-LAN-460 user manual.

English Language version of TAS-LAN-461

1. Plug an Ethernet cable into the TAS-LAN-461 and your PC. Disable all network adapters except the one that the TAS-LAN-461 is connected to. In Figure 8, I have two Ethernet adapters: the laptop's and the USB-C hub port. I disabled the USB-C hub's port as well as the Wi-Fi adapter.

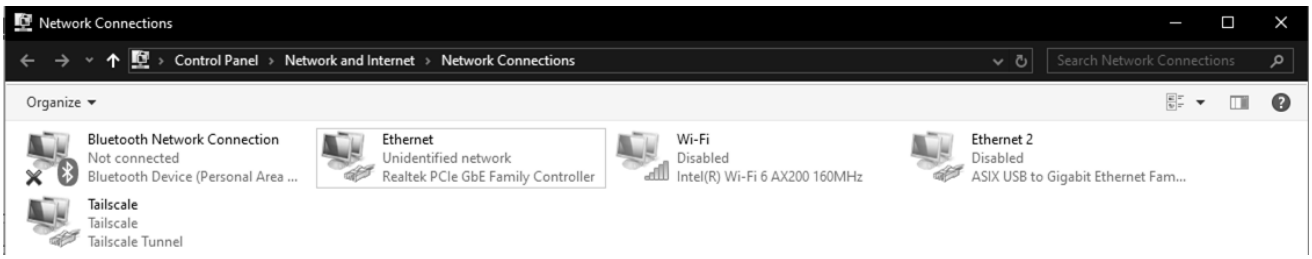


Figure 8.

2. Open the properties of the Ethernet adapter by right-clicking on the adapter and selecting properties. Scroll down in the available settings and double-click "*Internet Protocol Version 4*

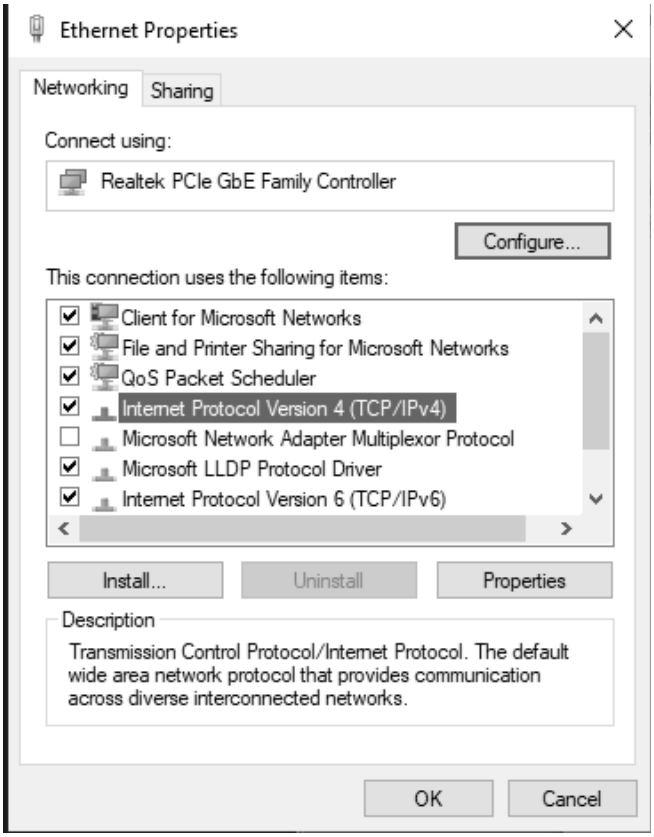


Figure 9.

3. Select “Use the following IP Address” and copy the settings below.

   IP address: 192.168.0.50

   Subnet Mask 255.255.255.0

   Default Gateway: 192.168.0.1

Select “Use the Following DNS Server Address” and enter the following settings.

Preferred DNS Server: 192.168.0.1

Click “OK.”

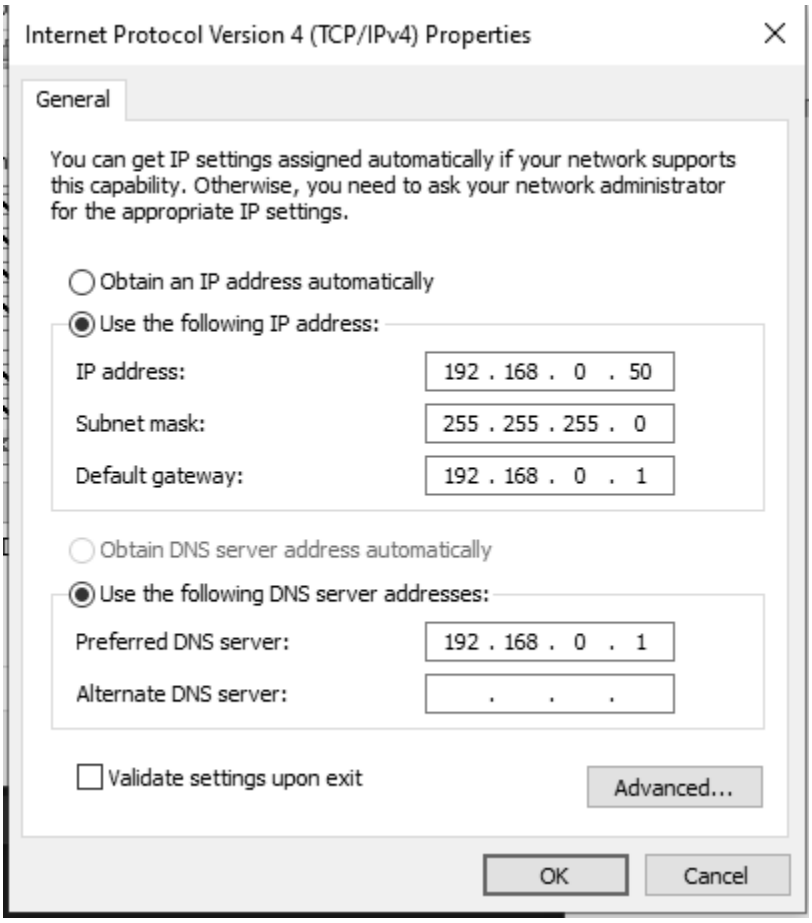


Figure 10.

4. The firewall on your PC may block the configuration tool. After launching it the first time, and not finding any device when searching, search “Allow an App through Windows Firewall” in the Windows Explorer and allow the app tasez_lan_.....exe through the firewall.

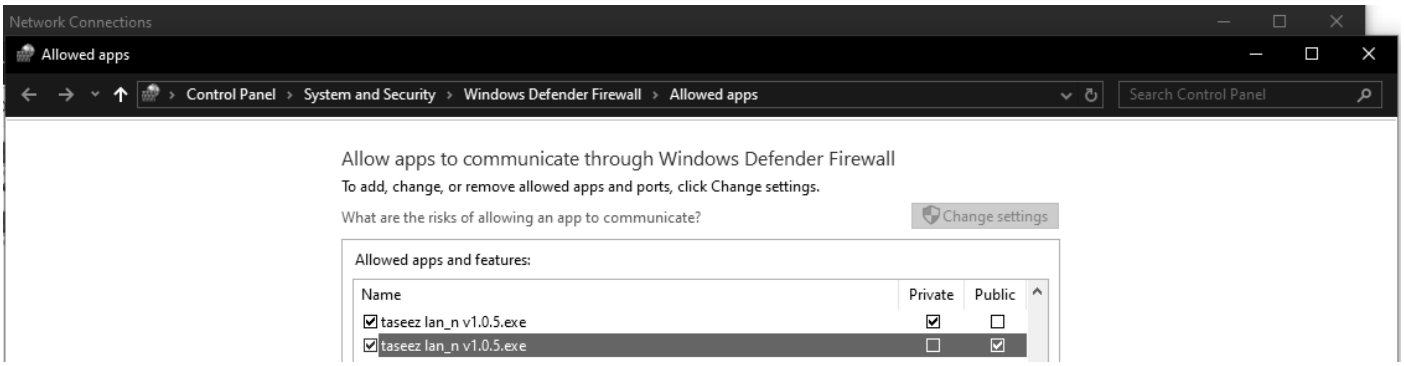


Figure 11.

5. If your company’s IT department will not approve the taseez lan application, type the adapter’s IP address in an internet browser to pull up the TASE-LAN Adapter settings: “192.168.0.89.” The following screen will display. Enter “admin” for both the username and password. Figure 12.

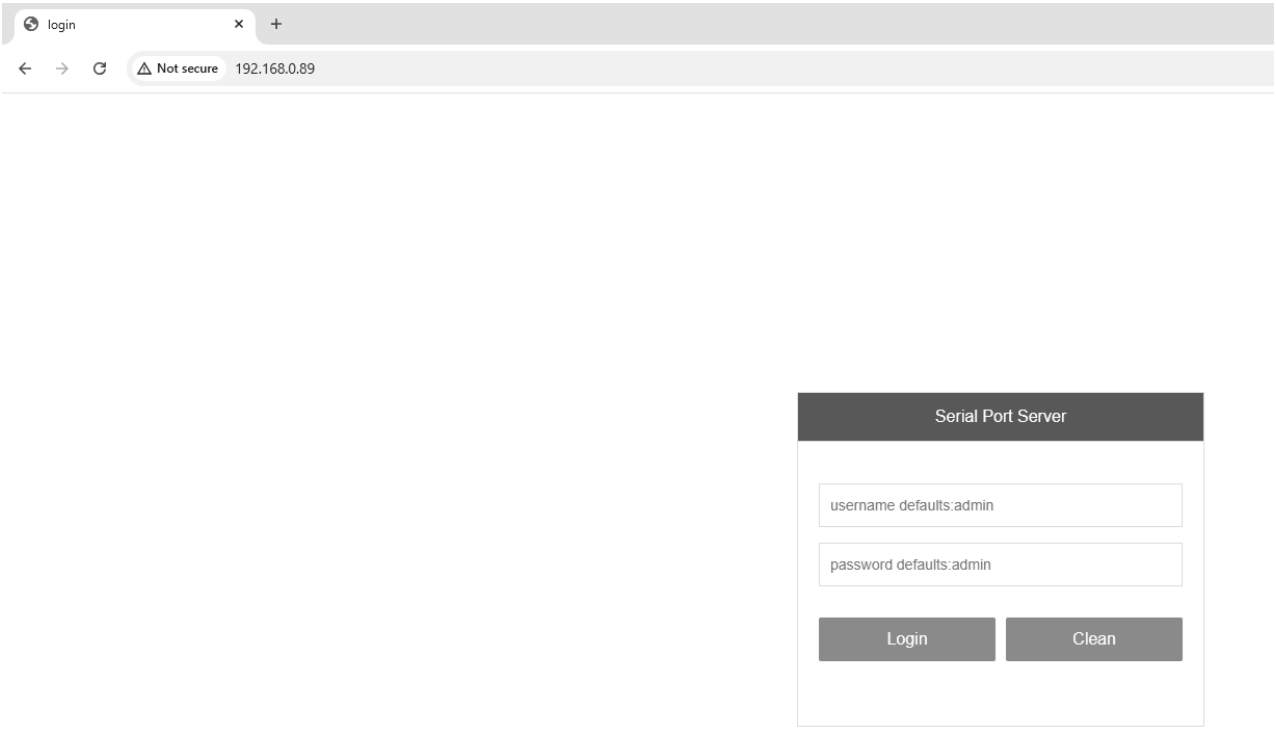


Figure 12.

6. Enter the information as described below. The information entered on the application and on the webpage will be the same.

7. Launch the configuration app and press the search button on the top left. Double-click on the device after it is found. On the right side under “Network,” Select Static IP or DHCP (preferred option) and enter the required info (IP address, gateway….). DHCP does not require you to enter these settings.

    a. Enter this information on the “Basic” tab if setting up the device on the webpage.

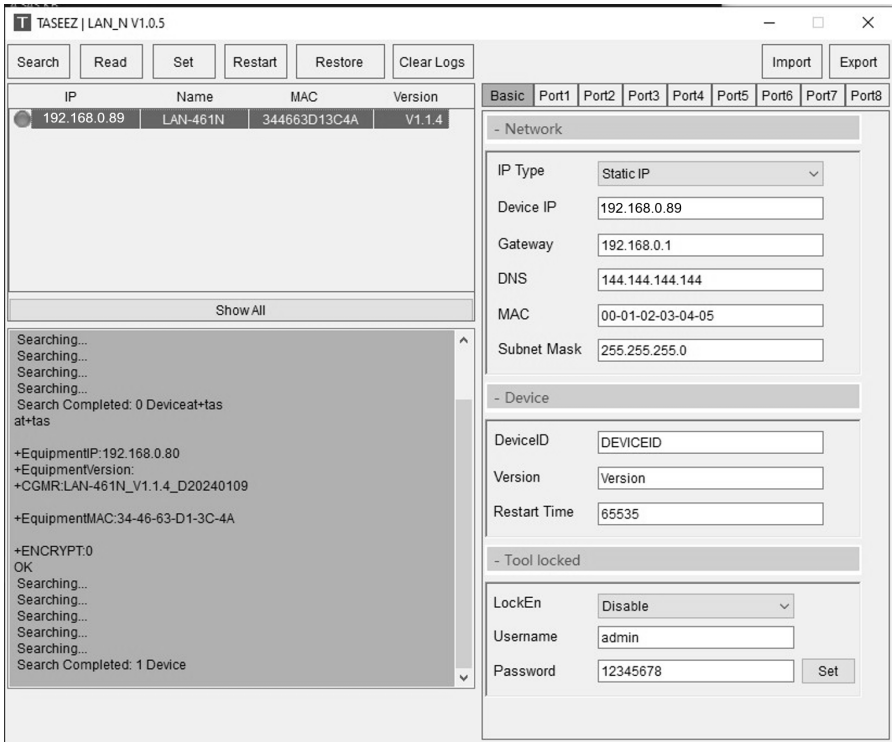


Figure 13.

8. Select the RS232 tab and set its mode to disabled. This output is not used.
    a. If setting up the device using the webpage, navigate to the “Port1” tab to disable the RS232 port. Figure 15.

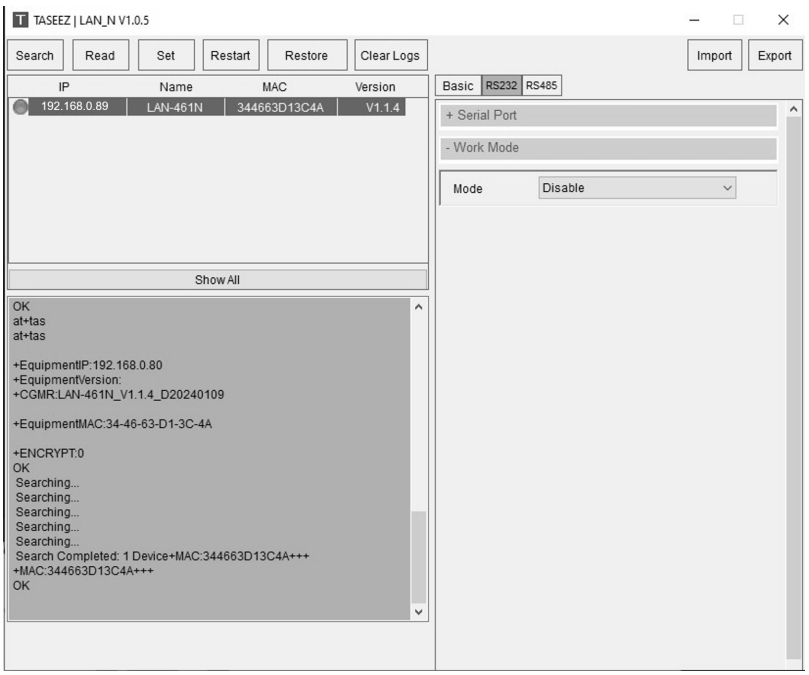


Figure 14.

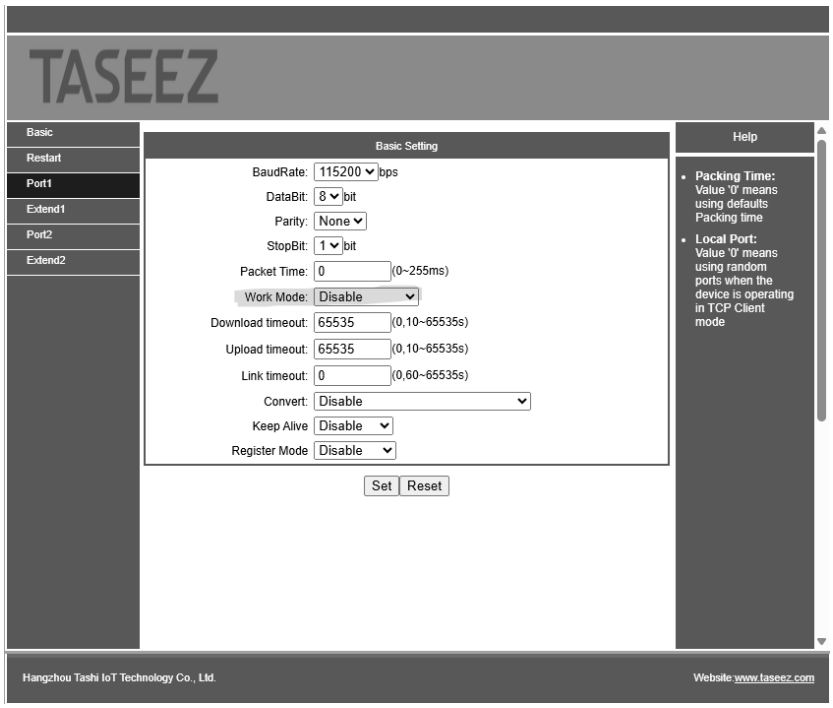


Figure 15

9. Select the RS485 tab and copy the following settings

<u>Serial Port</u>

Baud Rate: 115200

Data/Stop/Parity 8/1/None

Convert: Modbus RTU -> Modbus TCP

Offline Cache: Disable

<u>Work Mode</u>

Mode TCP Server

Local Port: Your Choice

Webpage image:

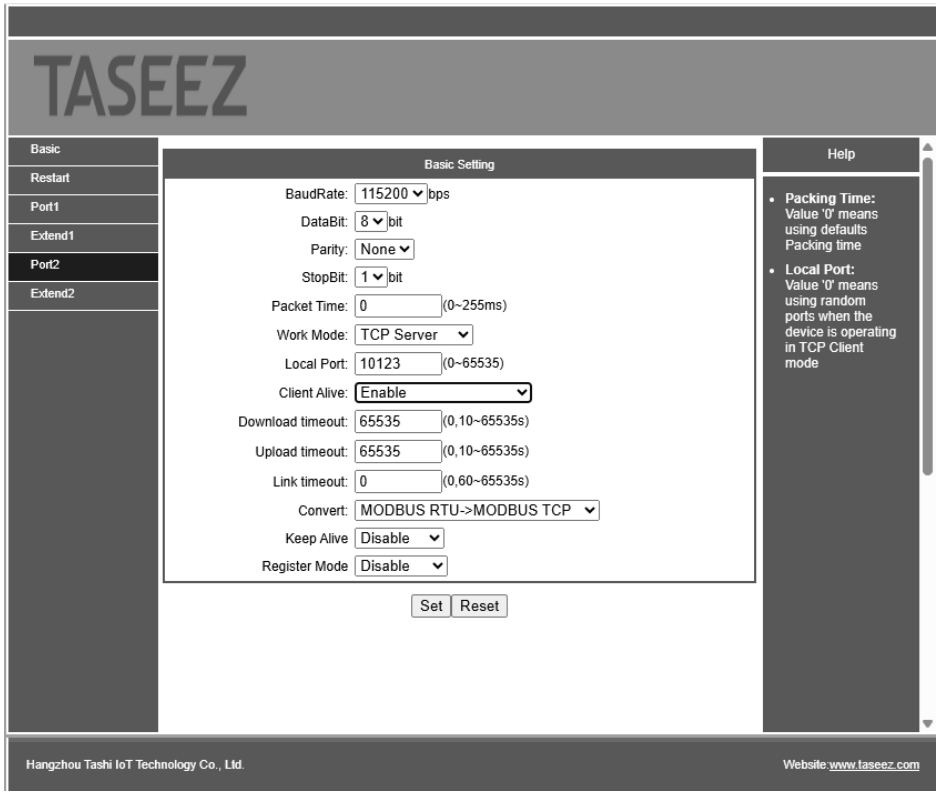


Figure 16.

All other settings can be left at their default value. They are shown below.

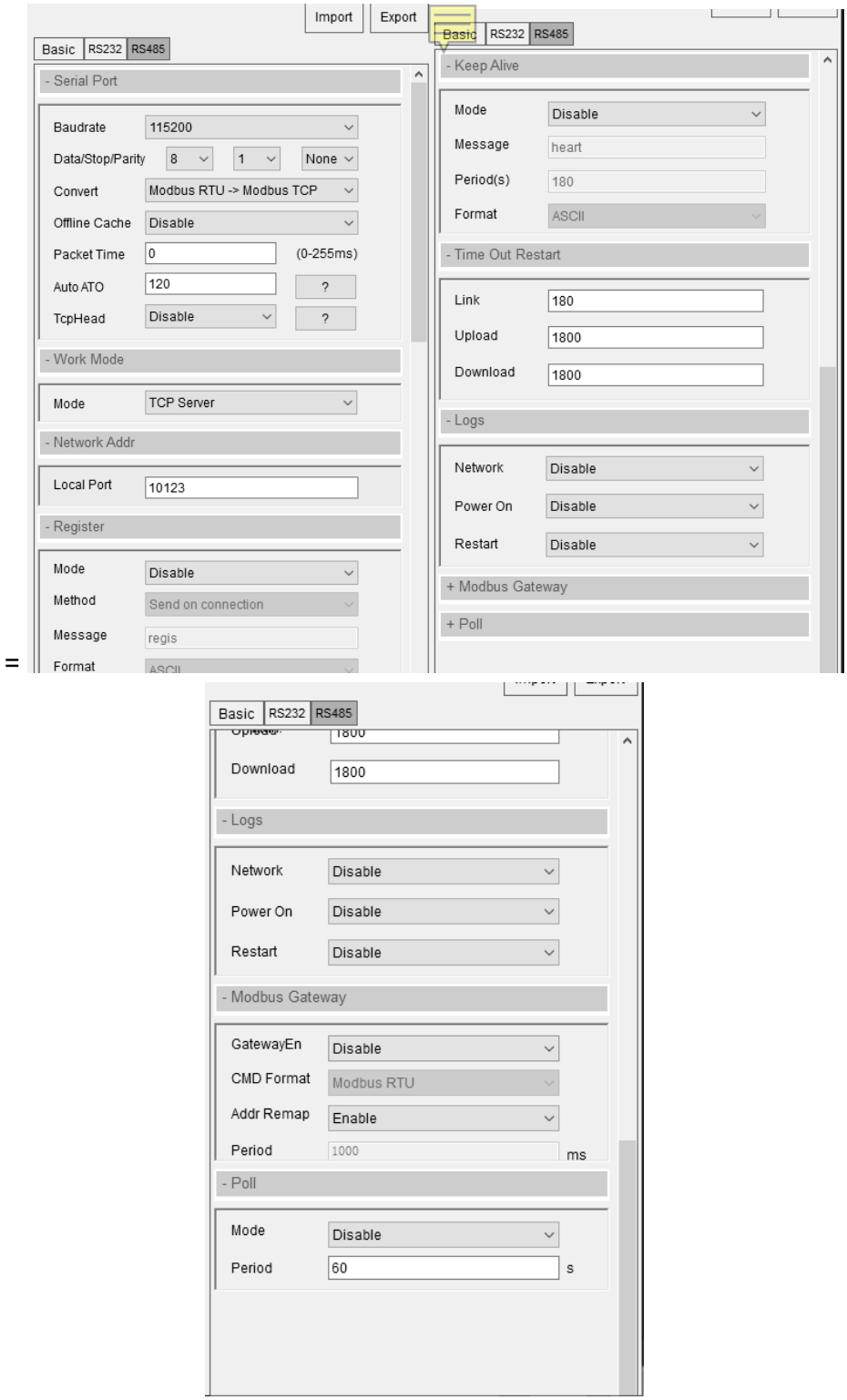


Figure 17.

10. Once all device settings have been confirmed, connect the adapter to a Modbus TCP client. The adapter's LINK-B LED will illuminate when the adapter is successfully connected to a Modbus TCP Client. Whenever data is sent to the Client device, the DATA-B LED will flash.

Figure 18. Device Connected to Modbus TCP Client

Updating the Purge Unit Firmware

Purgers shipped before 1/5/2026 have firmware version v56 and will not work with the Modbus RTU-to-TCP adapter. Follow these steps to update the main board's firmware. Contact the factory for the firmware file.

Equipment:

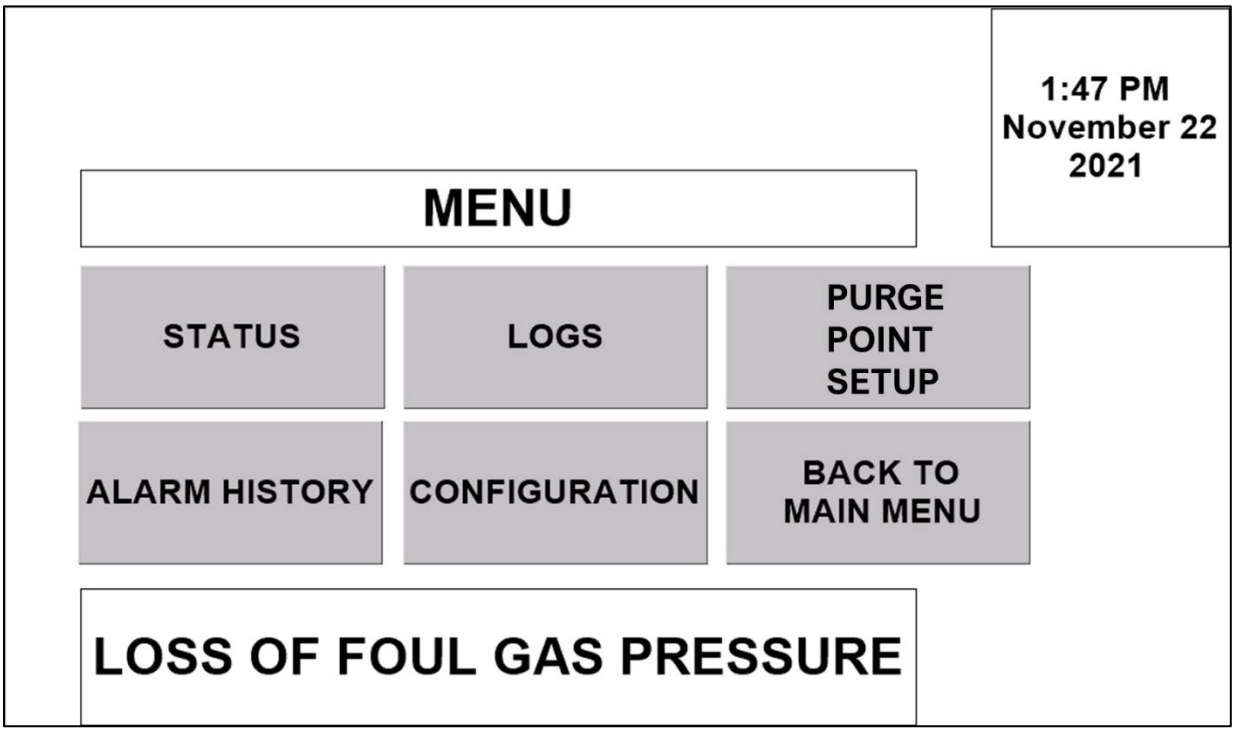
8 GB or smaller USB drive

- **Note: The USB must be 8GB or less to prevent the risk of the unit becoming unresponsive!**

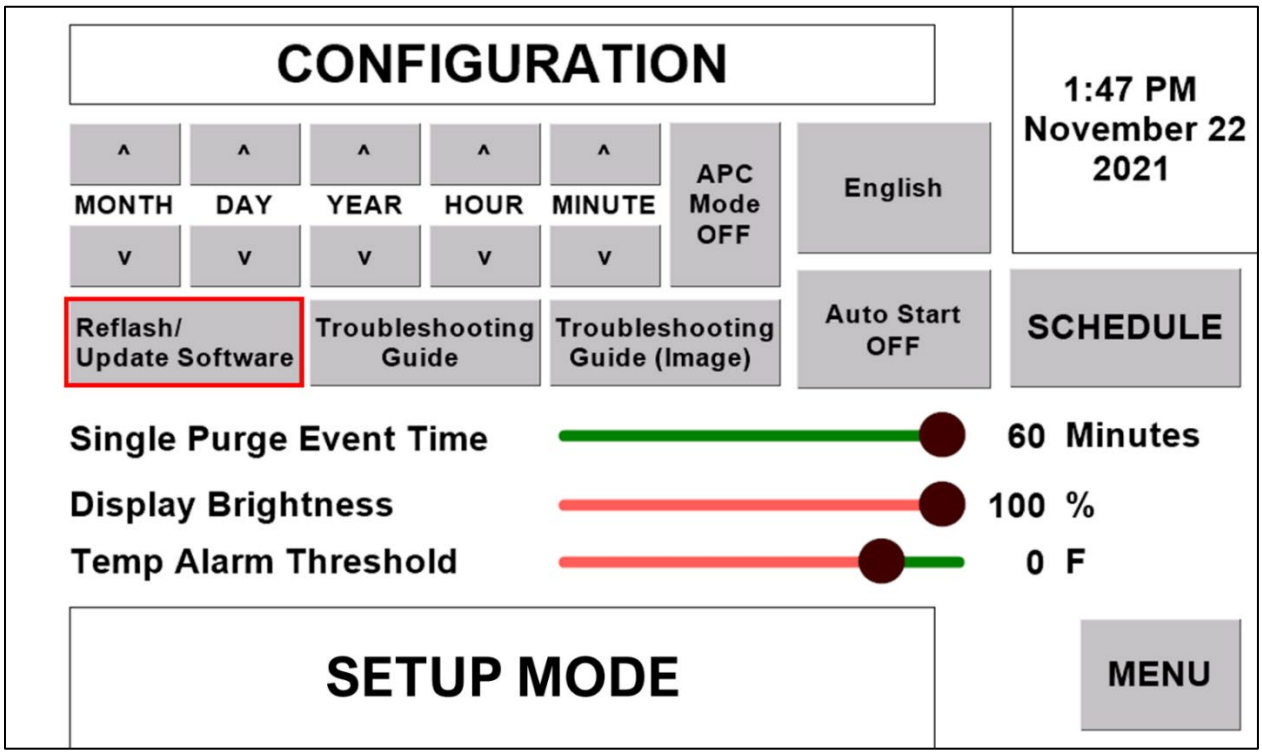
Firmware Update Procedure:

1. Load the image.bin file to the USB drive.
    a. The image.bin file should be the ONLY file on the USB.

2. Power on the purger and navigate to the Configuration Page



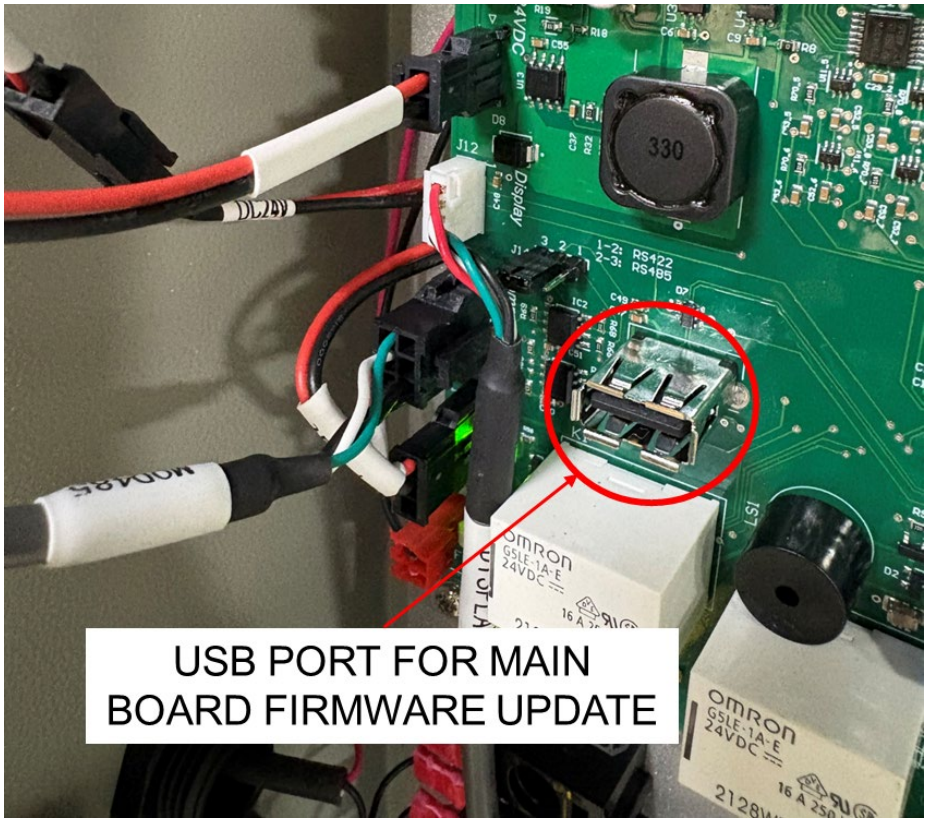
3. Press the Reflash/Update Software button



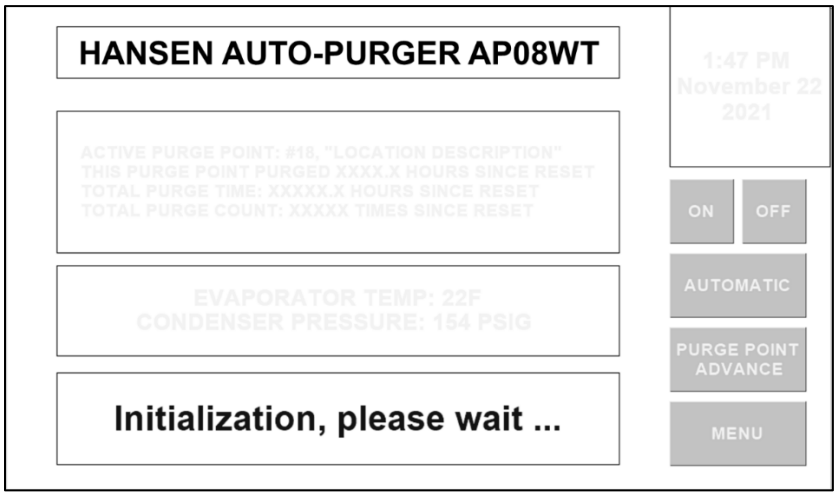
4. Insert the USB drive and press “Confirm.”

PLEASE ENSURE THAT THE USB DRIVE IS INSERTED BEFORE PRESSING 'CONFIRM'. FAILURE TO DO SO MAY RESULT IN IN THE PURGE UNIT BEING RENDERED INOPERABLE.

CONFIRM **CONFIGURATION**



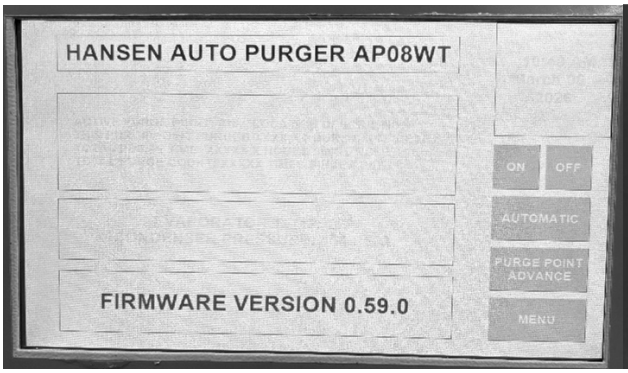
5. Power the purger off
6. Ensure the USB is inserted, and then power on the unit
7. The unit will show “Initialization, please wait…” while loading the new firmware. It could take up to 30 seconds to load the firmware.
    a. The green LED in the center of the main board will start flashing once per second when the firmware has been loaded successfully
    b. If the “Initialization, please wait…” screen displays for longer than 1 minute, but the green LED in the center of the main board is flashing once per second, leave the USB inserted and cycle power to the purger.
    c. If “Initialization, please wait…” takes longer than 1 minute to go away and the green LED in the center of the main board is **off** or **flashing rapidly (about 4 times per second)**, contact the factory.

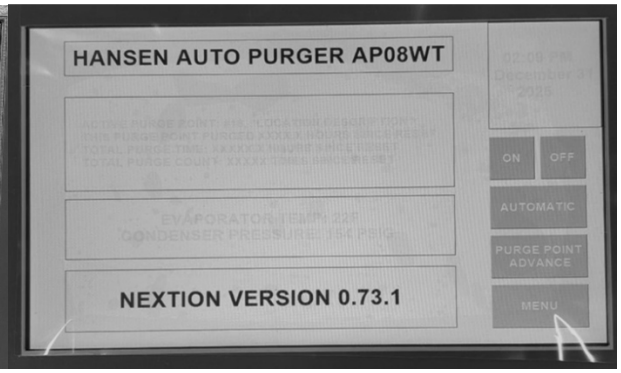


8. Once completed, the screen will load the HMI display micro-SD files.
    a. The main board firmware version, followed by the HMI version, will be displayed. They should match the following:

(Main Board) Firmware Version: **0.59.0**

Nextion Firmware Version: **0.73.1**





Troubleshooting Tips

Problem:

The adapter's link-B LED is illuminated but the Modbus Client failed to send messages to the Purger.

Action:

- Power cycle the purger.
- When power cycling double check that the main board firmware version is correct
- Verify the Purger Slave ID matches

Problem:

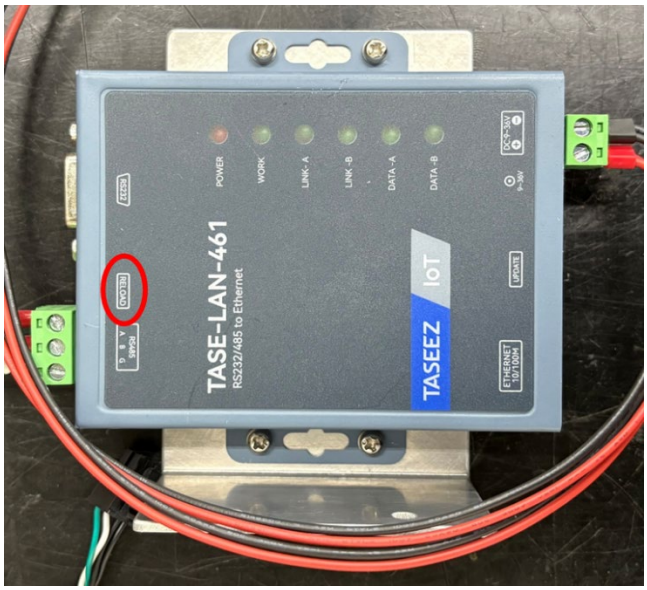
The main board firmware is the wrong version after following the firmware update instructions.

Action:

- Update the purger again. Instead of inserting the USB before pressing "Confirm" on the "Reflash/Update Software" page, do the following:
    - Press "Confirm"
    - Power off purger
    - Insert USB
    - Power on purger

Problem:

Unable to connect to the Tase Modbus adapter

Action:

- Check the following adapter parameters:
    - Baud Rate: 115200
    - Data/Stop/Parity 8/1/None
    - Convert: Modbus RTU -> Modbus TCP
    - Work Mode: TCP Server
- Check Modbus Client parameters:
    - *IP Address*: Should match what is specified in the adapter settings. By default, the address is "**192.168.0.89**"
    - *Port*: should match what is specified in the adapter settings. By default, the port is **10123**
    - *Slave ID:* By default, the purger slave ID is **254**
- If needed, press and hold the "Reload" button on the Tase adapter for 10 seconds to restore the default settings.