Usage of the Mobile Diagnostics Unit (MDU)

CAUTION	Do NOT attempt while raining or snowing!

The *MDU* (STS #: 191F0250-10) (Figure 1) is a tool used as a communication troubleshooting aid, particularly used to determine cell network strength at a given location.

Figure 1 The MDU with antennas adhered to the right side of the FuelMaster Unit (FMU)

MDU Setup

1. Remove the MDU from the case, and screw the two flat-panel antennas into the top of the unit (Figure 2).

Figure 2 Antennas on Mounts

2. Slide the MDU onto the right side of the FMU such that the notch on top of the backplate slides between the head and the sunshade, looping around one of the standoffs, resulting in the MDU hanging to the side of the FMU (Figure 3).
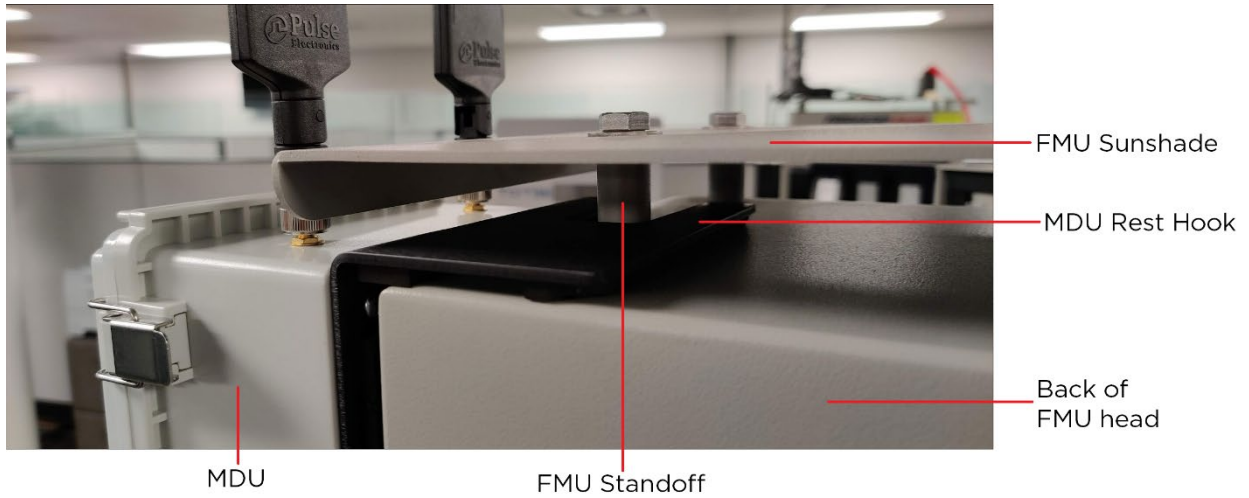

Figure 3 Attaching the MDU

3. Attach the included power cable into the power outlet at the bottom of the MDU (Figure 4).
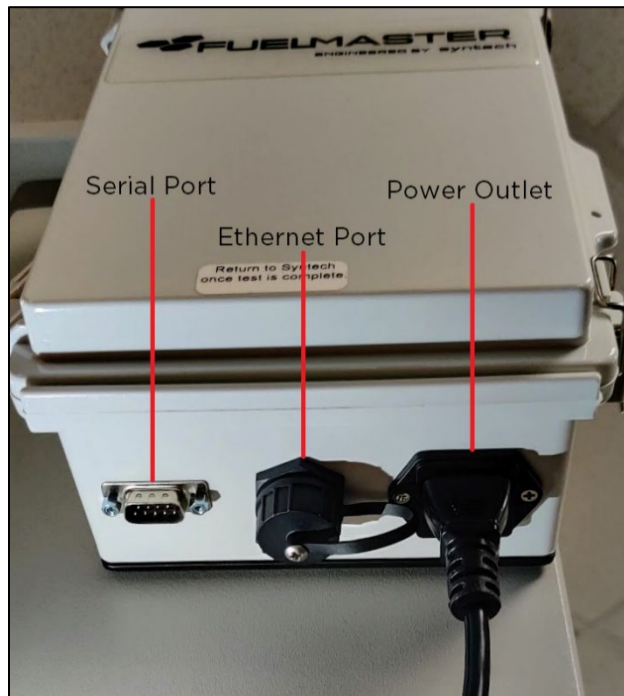

Figure 4 MDU Ports

Use Cases

Site Survey

In some cases, customers may be unaware of which cell carrier (Verizon or AT&T) provides more consistent communication, particularly in rural areas or those where geography interferes with cell signal. In these cases, an MDU may be sent out for cell network testing. Anticipate that the test will take a whole business day to complete.

4. Open the head of the FMU and attach the other end of the power cable to the 120v outlet if included. Otherwise, plug the power cable into the nearest power outlet.

5. When complete, email our Support team at support@myfuelmaster.com with the foll owing details:

    a. Facility Location

    b. MDU Cell Survey (Status is Ready)

    c. Customer name

    d. PM name/Syntech Representative

    e. Pictures collected that can be used to troubleshoot MDU

6. CSC support should email the details above to Operations.

Wired Network (LAN) Testing

In cases where issues with wired FM*Live* connections exist, the MDU may be used as a troubleshooting tool to determine if the issue lies within the customer's network or with the connection to the cloud.

1. Open the head of the FMU and attach the other end of the power cable to the 120v outlet if included. Otherwise, plug the power cable into the nearest power outlet.

2. Unscrew the weatherproof cap from the middle connector to reveal the Ethernet port.

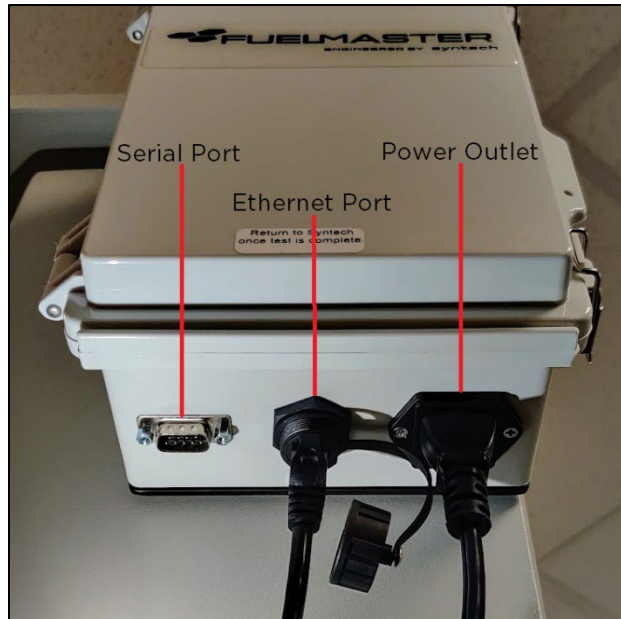3. Connect the provided Ethernet cable into the port on the MDU (Figure 5).

Figure 5 Connecting the Ethernet Cable

4. Run the Ethernet cable up through the cabinet of the FMU and into the head such that you can close the door to keep a weathertight seal (Figure 6).
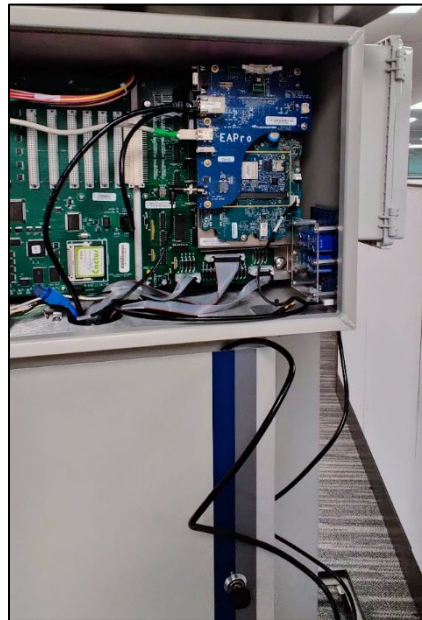

Figure 6 Running the MDU Ethernet Cable

5. Connect the other end of the Ethernet cable into the top Ethernet port on the EAPro (Figure 7).
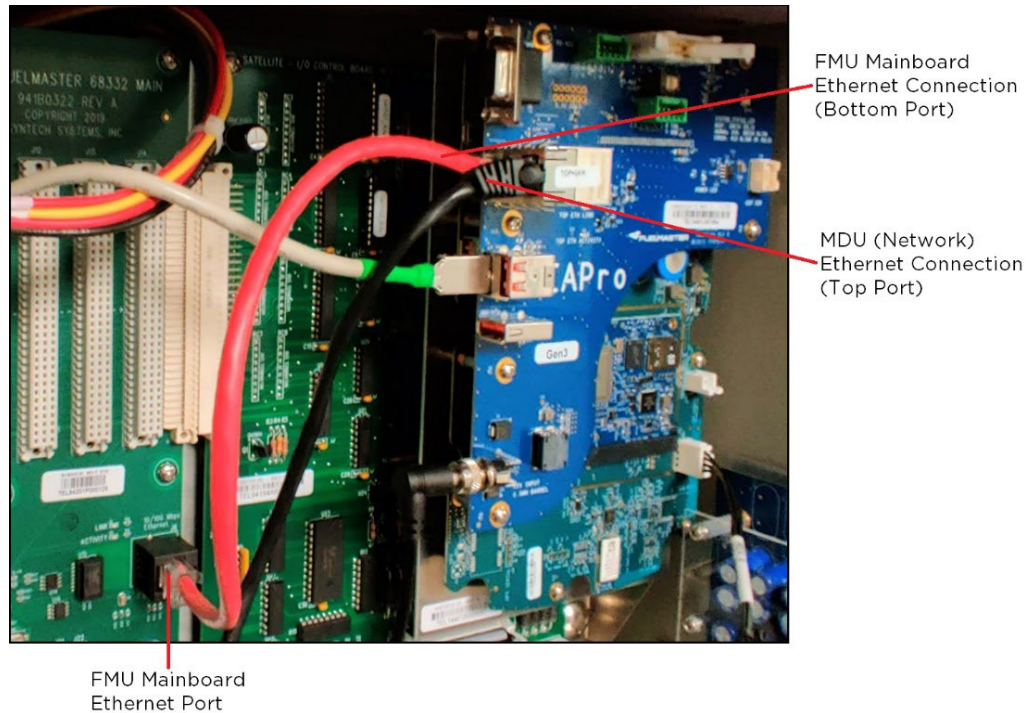
Figure 7 Connection to the FMU

6. Contact Syntech's Customer Satisfaction Center to determine if the unit is now able to communicate with the cloud.

Serial/Ethernet Diagnostics

In rare cases, the MDU may be used as a gateway to access the FMU when no other communication option is available. Our support team will walk you through utilizing the included Ethernet or Serial connector to allow access to the FMU firmware.

1. Connect to power as above.

2. Run the Serial or Ethernet cable up through the FMU cabinet and into the head such that you can close the door to keep a weathertight seal (Figure 8).
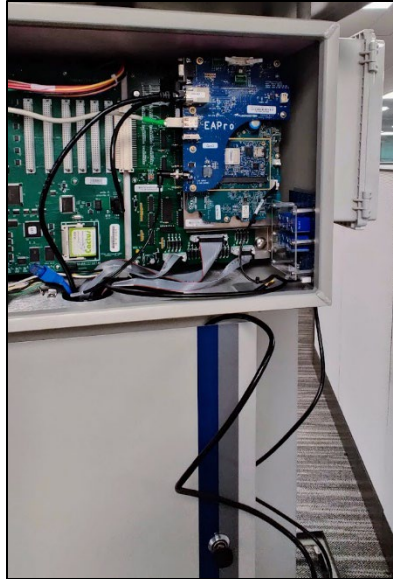
Figure 8 Running the MDU Serial or Ethernet Cable

3. Plug the Serial Cable into the EAPro Serial port as shown in Figure 9.

Figure 9 The EAPro Serial Port

4. Contact our Customer Satisfaction Center for further instructions.

Returning the MDU

MDUs are loaned out from Syntech Systems for 30 days. If any parts are missing or damaged, you will be invoiced for the full MSRP of those parts. If the MDU kit is not returned by the end of the 30-day period, you will be invoiced for the full amount.

To return, pack the parts into the case, apply the return shipping label directly to the outside of the case, and schedule a pickup from the carrier listed on the shipping label.

NOTE	If questions arise, please contact Syntech Systems, Inc.'s Customer Satisfaction Center at 1-800-888-9136, ext. 2, or email support@myfuelmaster.com.

Change History

Date	Description
11/21/2022	Originally published.
05/17/2024	Edited to make germane information easier to find, added Alt Text
03/10/2025	Updated Site Survey section to include details on what to send to CSC/Operations once site survey is complete.