VEEDER-ROOT

Technical Support Notification
TLS-450PLUS – EDIM Programming & Troubleshooting

▶ Overview

TLS-450PLUS consoles with Business Inventory Reconciliation (**BIR**) require the use of an Electronic Dispenser Interface Module (**EDIM**). The EDIM allows the console to receive transaction data from a Point-of-Sale (POS) system.

On the TLS-450PLUS console, the built in RS-232 ports can be converted into an EDIM. The TCP/IP DIM (**TDIM**) goes through the ethernet port, and the Current Loop Dispenser Interface Module (**CDIM**) requires an extra module.
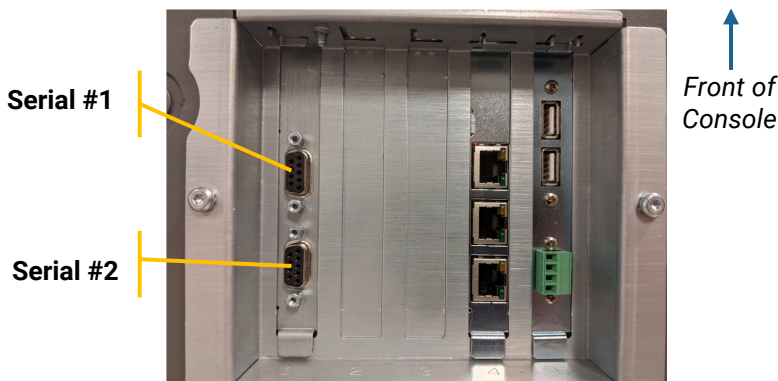
▶ Programming

Serial Port
Menu → Setup → Communication → Serial Port

- ❑ **Configured:** Enabled
- ❑ **Label:** Example: EDIM or POS
- ❑ **Usage:** EDIM

Note: When the usage is changed from RS-232 to EDIM, additional options will appear.

- ❑ **Protocol:** See following page.
- ❑ **Baud Rate, Data Bits, Parity, Stop Bits, Use Handshaking:** These settings will automatically be setup when the protocol is selected. Change settings as needed.
- ❑ **Units Reported:** Default is set to US
- ❑ **Serial Command Security:** Disabled
- ❑ **RS-232 End of Message:** Disabled

Serial #1

Serial #2

Front of Console

Setup › Communication › **Serial Port**

ID	1
Configured	◉ Enabled ◯ Disabled
Label	POS
Usage	EDIM ▾
Protocol	GilbarcoEDIM ▾
Baud Rate	1200 ▾
Data Bits	7 ▾
Parity	EVEN PARITY ▾
Stop Bits	1 ▾
Use Handshaking	NO HANDSHAKING ▾
Units Reported	US ▾
Serial Command Security	◯ Enabled ◉ Disabled
Security Code	
RS232 End of Message	◯ Enabled ◉ Disabled

▶ Installation Hardware

Note: There may be other configurations possible. The following examples are recommended by Veeder-Root. See the POS installation manuals for additional examples and information.

Controller/POS	DIM Protocol	Installation Hardware
Passport/EDH	Gilbarco EDIM	Gilbarco M11247B064 connector Veeder-Root 331063-XXX cable
Commander	VR Protocol DIM	Verifone 13652-01 connector Verifone 13836-xxx cable
Allied/NexGen	VR Protocol DIM	Allied N9445-ADP connector Veeder-Root 331134-xxx cable
NCR/Radiant	VR Protocol DIM	Verifone 13652-01 connector Verifone 13836-xxx cable

▶ EDIM Settings

Controller/POS	Protocol	Baud Rate	Parity	Length	Bits
Passport/EDH	Gilbarco EDIM	1200	Even	7	1
Commander, Allied/NexGen, NCR/Radiant*	VR Protocol DIM	9600	Odd	7	1

   * *Default units for this EDIM is Metric/Liters.*

▶ Troubleshooting

The console will display an E1 Comm Alarm, if there is no communication between the EDIM and POS. This can be caused by a bad or disconnected cable/connector, incorrect programming, a bad EDIM or a POS issue.

❑ Confirm the correct EDIM port is being used. Port 1 is closest to the front, port 2 is closest to the back (wall).
❑ Confirm the cables and connectors between the console and POS are firmly connected. A loose or disconnected cable will cause communication issues.
❑ Check for correct part numbers on all cables and connectors.
❑ Confirm the EDIM is programmed correctly on the console.
❑ Confirm POS is configured for BIR and correct communication board settings.
❑ Verify there is communication in the EDIM diagnostics:
Menu → Diagnostics → Module → Comm
   ❑ Monitor bytes and confirm both the bytes received (Rx) and transmitted (Tx) are similar in numbers as shown below.
   ❑ Monitor bytes received and transmitted, confirm the numbers increase over several minutes.
   ❑ Confirm there are no errors.

Diagnostics ▶ Module ▶ Comm

#	Slot	Communication Type	Bytes Rx	Bytes Tx	Parity Errors	Overrun Errors	Framing Errors	Break Interrupts	Reset Date and Time
Co 1	S1 - P1	RS232	0	0	0	0	0	0	3/11/21 9:39 AM
Co 2	S1 - P2	EDIM	470935	522196	0	0	0	0	3/11/21 9:39 AM

▶ Testing the EDIM Port

Requirements:
❑ Laptop
❑ Software – PuTTY
PuTTY is a free terminal emulator software. It can be downloaded here.
❑ Null Modem RS-232 Cable
Note: A straight through connection will not work.

Cable Examples:
• USB to RS-232 DB9, Null Modem
• USB to RS-232 DB9 (Straight through) and DB9 Null Model Male to Female Adapter

Steps:
1. Using the null modem RS-232 cable, connect a laptop to the EDIM port in question.
2. On the console, change the port usage from EDIM to RS-232.

Note: Changing the port usage may also change the Baud Rate, Data Bits, Parity and Stop Bits back to default settings.
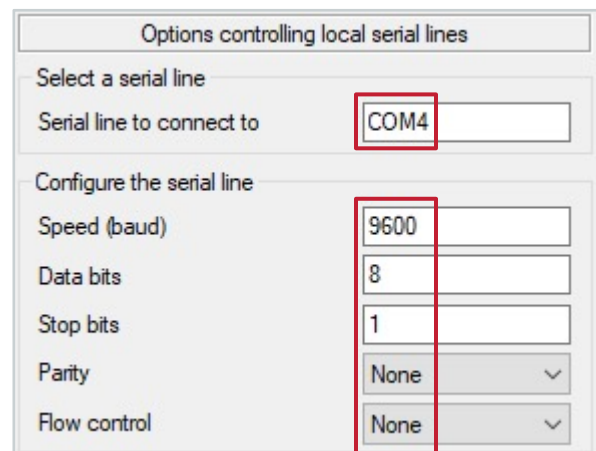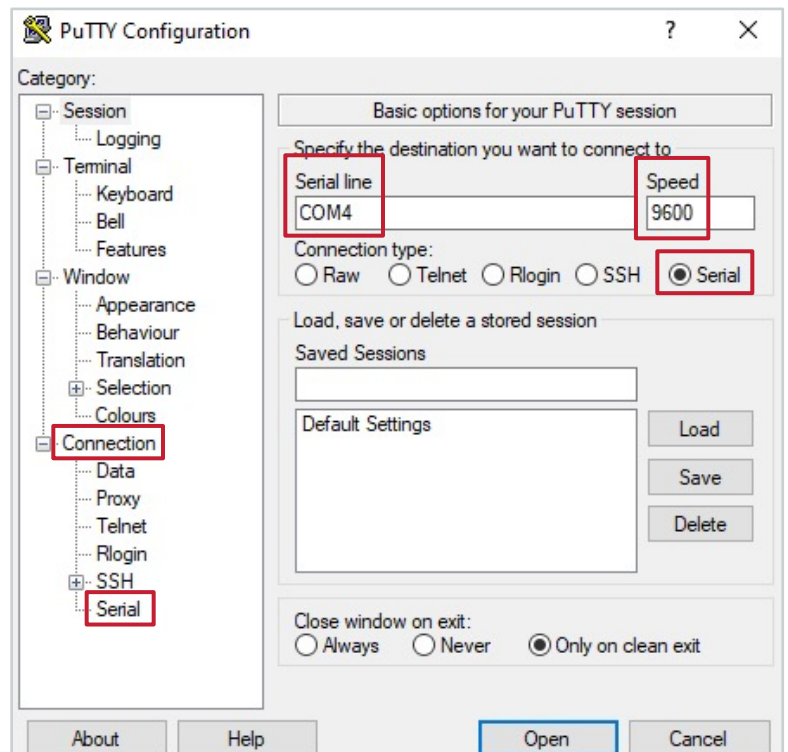
Note: When the port is programmed as an EDIM, it will not communicate with a laptop. The port must be set to RS-232 for laptop communication.

3. Open PuTTY
4. Basic Options for your PuTTY session
    A. **Connection type:** Serial
    B. **Serial line:** Type in the laptop's comm port. For example: COM4
    C. **Speed:** 9600

5. On the left side of the screen, under **Category** select **Connection → Serial** A new screen will appear.
6. **Serial line to connect to:** Confirm laptop's comm port
7. **Configure the serial line:** Confirm settings in PuTTY match the console
8. **Flow Control:** None
9. Press **Open**

Steps continued on the next page.

▶ Testing the EDIM Port (continued)
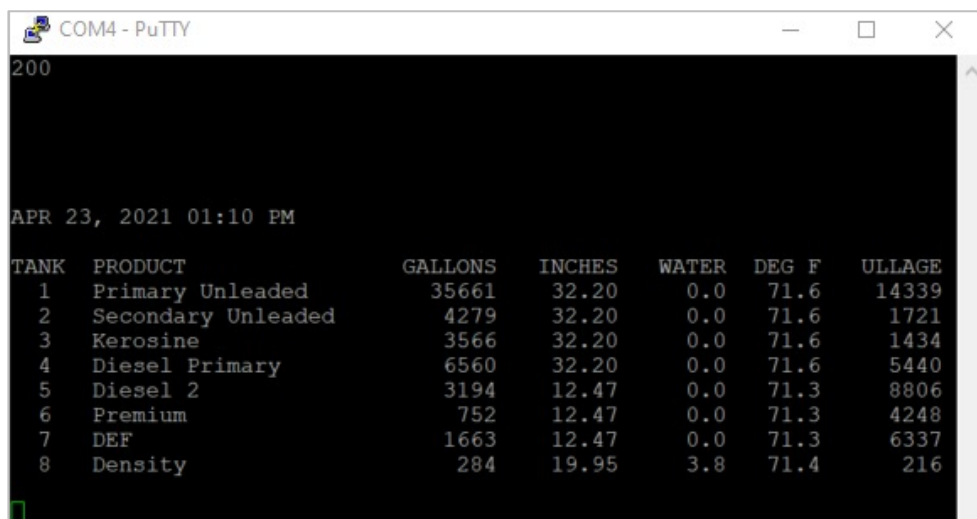
Steps:
11. A blank screen will appear.
12. **For the inventory report, type:** <CTRL-A>200

Inventory Report Appears
If the Inventory Report appears, as shown on the right, then this confirms the EDIM/RS-232 port is working fine.
If the E1 comm alarm remains active, then this indicates an issue external to the console.

No Inventory Report
If there is no response to the serial command, then this can indicate a bad RS-232 port.


```
COM4 - PuTTY                                        —    □    ×
200

APR 23, 2021 01:10 PM

TANK  PRODUCT              GALLONS  INCHES  WATER  DEG F   ULLAGE
  1   Primary Unleaded       35661   32.20    0.0   71.6    14339
  2   Secondary Unleaded      4279   32.20    0.0   71.6     1721
  3   Kerosine                3566   32.20    0.0   71.6     1434
  4   Diesel Primary          6560   32.20    0.0   71.6     5440
  5   Diesel 2                3194   12.47    0.0   71.3     8806
  6   Premium                  752   12.47    0.0   71.3     4248
  7   DEF                     1663   12.47    0.0   71.3     6337
  8   Density                  284   19.95    3.8   71.4      216
```

▶ Further Information

- Contact Veeder-Root Technical Support at 1-800-323-1799 for additional help or questions.
- Learn more about BIR on our webpage.

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📞 1-800-323-1799

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