



Water Quality Monitors

MetriNet M-Node PC Software Utility



ATI-UM-04437-EN-05 (January 2026)

User Manual

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M-NODE PC UTILITY

General

Badger Meter supplies a free PC software utility for use with the M-Node sensors to enable a quick and easy user interface for calibrating or configuring sensors away from the Q52/MetriNet monitor. Operation is very similar to that of the Q52, but the software utility does require the use of a PC and a special USB cable (cable available from Badger Meter).

USB-M8 M-Node Sensor Cable

A special USB-to-M8 cable, available from Badger Meter, communicates with the M-Node sensor and supplies power to the sensor. You can use the cable in conjunction with the free software utility to set up new sensors. The cable plugs into the USB port of a PC and requires a driver from FTDI, which installs automatically when the USB connector is inserted. If not, download and install the FTDI driver from here: <http://www.ftdichip.com/FTDrivers.htm>

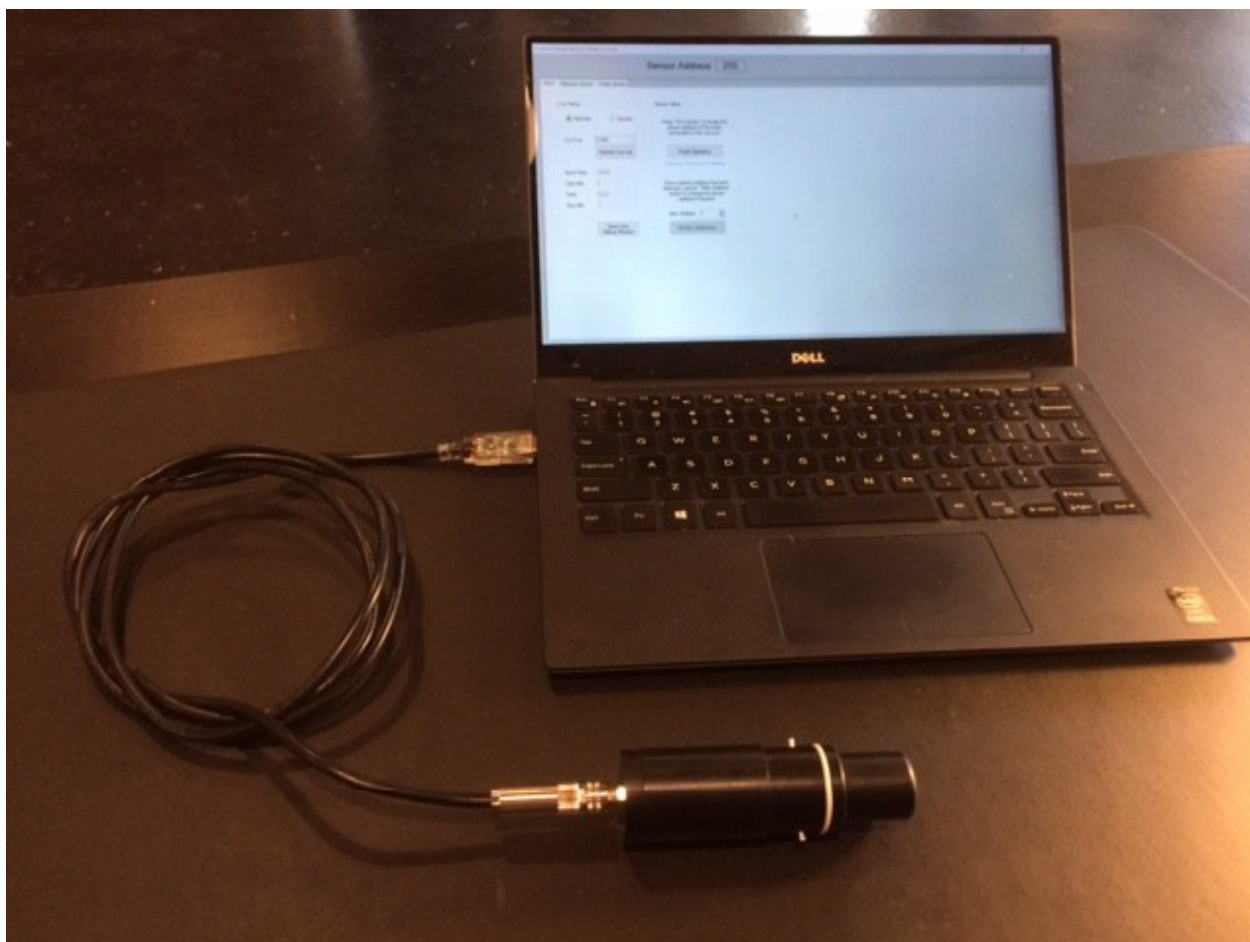


Figure 1: M-Node sensor connected to PC via USB-M8 cable

To aid in diagnosing port problems on the PC, the M-Node USB-M8 cable flashes a red LED on every transmission to the M-Nodes sensor, and flashes a green LED on every accepted message from the sensor.



Figure 2: USB-M8 sensor cable showing sensor responses

Sensor Utility Operation

When the utility program is installed and launched, the first screen presented is the sensor address connection screen.

Mode Selection

If selected for *MetriNet Mode*, the communication parameters are fixed to a certain configuration, which makes the sensor slave address easy to find. Click on **Find Sensor** and the tool scans slave addresses in an attempt to hook up to the sensor. When the address is found, the top of the screen shows the connection address. A green light flashes on and off on the USB end of the sensor cable as the PC sends out and receives information.

Use *Generic Mode* to set non-standard communication settings. Only *Parity* and *Stop Changes* are supported at this time. If you change those, you must remember to continue to connect at those settings in *Generic Mode* as the tool does not scan at all options of the generic settings.

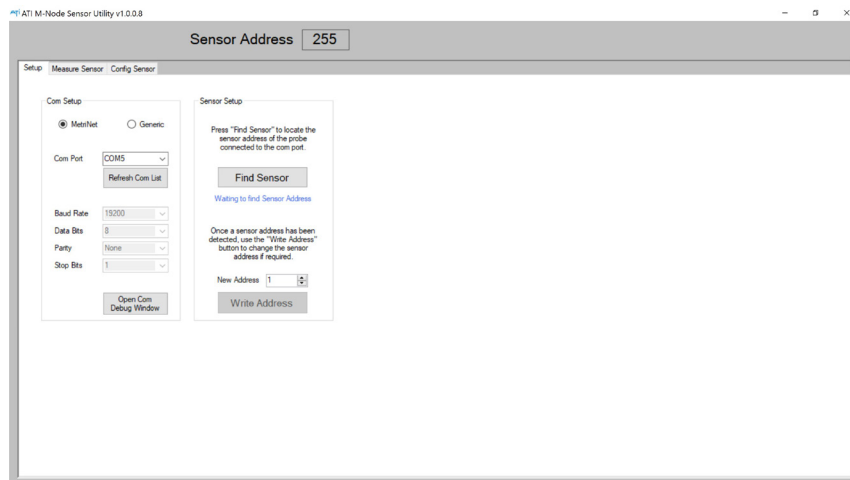


Figure 3: Sensor utility setup tab; connecting to the sensor

Set Sensor Address

To change the sensor slave address once it is connected, enter the address in the *New Address* window and click on **Write Address**.

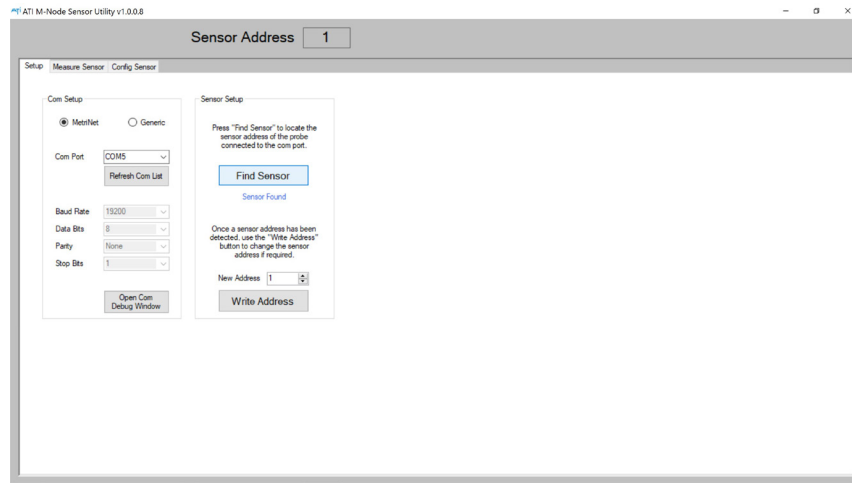


Figure 4: Sensor utility setup tab; sensor address found

Comm Debug Tab

Click on **Open Com Debug Window** to open an additional window that shows the actual exchanges between the PC (master) and sensor (slave.) This debug window stays open on all the other tabs also. To close that debug window, click the **Close Com Debug Window** button.

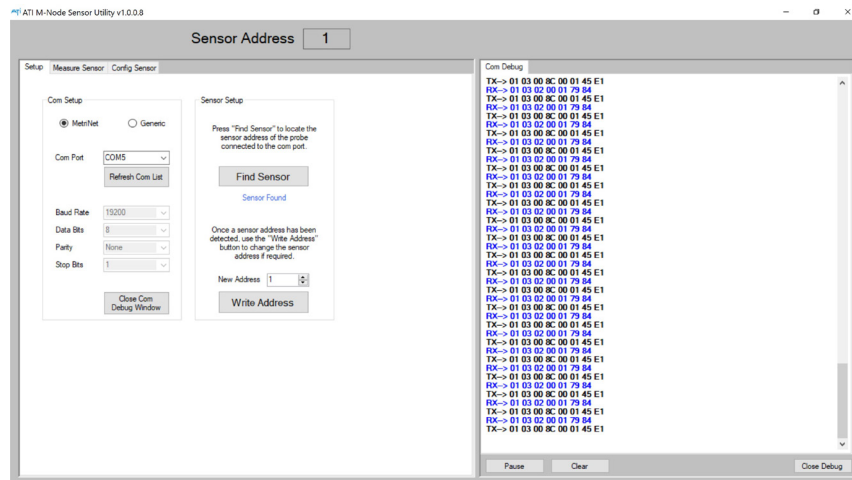


Figure 5: Sensor utility setup tab; communications debug window

Measure Sensor Tab

When the sensor is connected at the proper slave address, click the **Measure Sensor** tab to view all the data that would show on the lower screen of the Q52 transmitter for a particular sensor slave. Unlike the Q52, however, all this lower data is shown at once on a single screen.

The screens shown here can vary a bit by sensor parameter, but most are common to every sensor. The “S1” is the current sensor slave number. See ["Lower Display Screens"](#) for a description of the various types of data that can display at this point. Use the **Stop Scan** button to temporarily stop polling for sensor data.

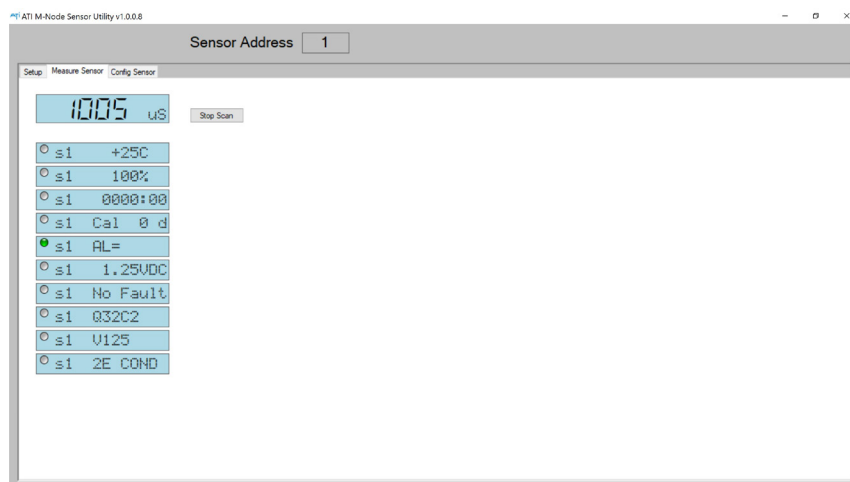


Figure 6: Sensor utility measure sensor tab

Lower Display Screens

These are the data screens that show up in the Q52, Sensor Utility or portable calibrator. Some data lines only show up with specific parameters.

Top	1005 uS	Sensor main measurement value and units
S1	+25C	Sensor temperature reading
S1	220% Sig	Sensor signal reading (nom 100%) (Q32T)
S1	0% Fol	Sensor fouling reading (nom 0%) (Q32T)
S1	0% Dry	Sensor dry reading (nom 0%) (Q32T)
S1	–16 nA	Sensor raw current (Q32H, Q32D)
S1	55 mV	Sensor raw millivolts (Q32P/R/F/K)
S1	0%sat	%Saturation reading (Q32D)
S1	100%	Sensor calibration slope
S1	0.0nAz	Sensor offset current (Q32H/D)
S1	0.0ntuz	Sensor offset turbidity (Q32T)
S1	0 mVz	Sensor mV offset (Q32P/R/F/K)
S1	0000:00	Time powered, days:hours
S1	Cal 0d	Time since last calibration
S1	AL =	Alarm setpoints triggered (A, B, C and so on)
S1	1.25V DC	Voltage output of sensor
S1	No Fault	Existing sensor faults (or none)
S1	Q32C2	Sensor model number
S1	V125	Sensor firmware version
S1	2E COND 0–2000 uS	Sensor text field (default type)

Config Sensor Tab

Use the *Config Sensor* tab to change all the settings inside the sensor and calibrate the sensor when required. This operates exactly like the Q52 interface, and the various methods of calibrations and configuration changes are discussed earlier in this manual. The moving green dot on the screen scrolls to each screen to show that it has just been updated from a recent query.

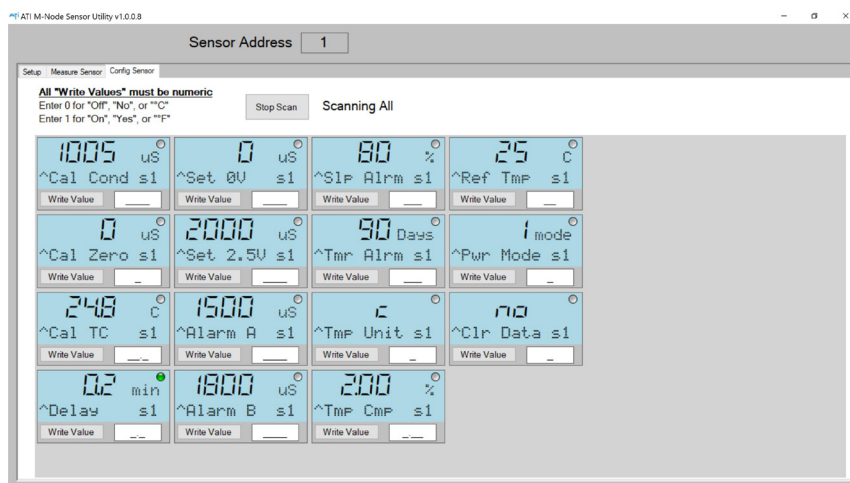


Figure 7: Sensor utility config sensor tab; M-node menus

When changing a value, enter the new value next to *Write Value* below the actual menu screen. Click the **Write Value** button and the green dot stops on that screen while the request is processed by the sensor. While this is happening, wait for the green dot to begin moving again before attempting to enter any new data or leave the tab. Any messages from the sensor (like Accepted!, or Fail!) are shown during the processing of the value.

Enter the number fields the same way you see it on the display, noting the decimal point position in the entry field. All entries must be numbers, so for entries requiring fields like YES or NO, use numbers as shown in the small key at the upper right of the window.

A simple example is shown in [Figure 8](#). A new *Delay* value is entered, and the sensor responds in the lower screen of the menu with the message "Accepted!" After a few seconds, the green dot begins scrolling menus again.

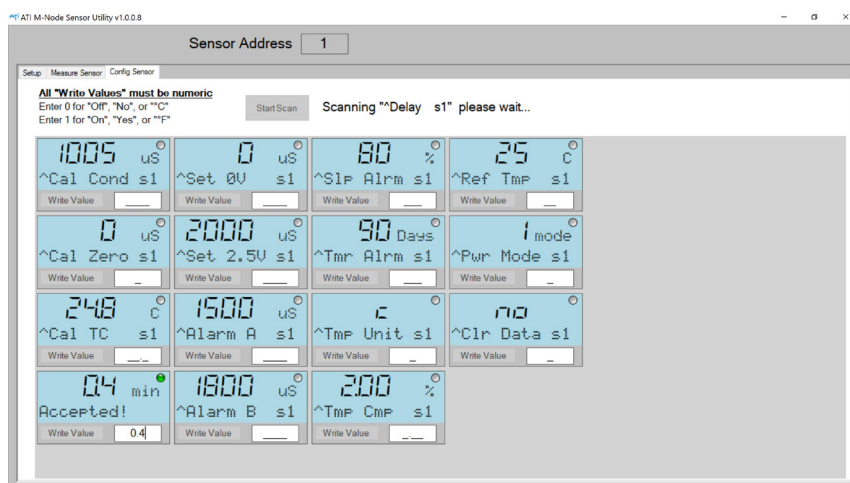


Figure 8: Sensor utility config sensor tab; new delay value entered

SPARE PARTS

Spare Sensors

Part No.	Description
00-1733	Free chlorine M-node, 0–5.00 ppm
00-1734	Conductivity M-node, 0–2000 uS
00-1735	pH M-node, 2–12 pH
00-1736	ORP M-node, 0–1000 mV
00-1737	Dissolved oxygen M-node, 0–20.00 ppm
00-1738	Dissolved ozone M-node, 0–5.00 ppm
00-1739	Turbidity M-node, 0–40.00
00-1758	Combined chlorine M-node, 0–5.00 ppm
00-1780	Total chlorine M-node, 0–5.00 ppm
00-1781	Fluoride M-node, 0.1–10.00 ppm
00-1782	Chlorine dioxide M-node, 0–5.00 ppm
00-1783	Peracetic acid M-node, 0–200 ppm
00-1784	Hydrogen peroxide M-node, 0–20.00 ppm
00-1786	Nitrite M-Node, 0–2.000 ppm
00-1806	Pressure M-node, 0–300 psi

Cable Assemblies

Part No.	Description
00-1865	Cable assembly, USB to Q32 (direct)