



ZDU Tx Tester v1.0.05

User Guide

DN: G031.2.0

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1.0 Introduction

ZDU Tx Tester v1.0.05 provides a convenient means for a user to validate transmitter functionality via a PC or laptop. The application also provides the user with the means to retrieve current information about the transmitter:

- transmitter serial number
- transmitter product ID
- association state
- display text
- analog and digital outputs
- status bits
- led state
- RSSI (Tx/Rx values)

Requirement

A computer with .NET 4.0 Framework.

See Appendix A for information on checking compatibility of ZDU Tx Tester v1.0.05 with the computer being used.

2.0 Installation

1. Double-click CervisZDU.exe to run the installer.
2. You must accept the EULA to proceed.
3. The FTDI CDM drivers will be installed first, followed by the ZDU Tx Tester v1.0.05 itself.
4. When complete the program will be accessible from the start menu as Cervis ZDU. The executable itself is located in C:\Program Files (x86)\Cervis ZDU TxTester\ZduHmi.exe.
5. Plug the ZDU into any available USB port.

3.0 COM Port Selection

✓ **Note:** You may want to check which COM ports are currently in use before connecting your ZDU. You can then insert the ZDU click the refresh button  and check to see which COM port is added to determine which should be used with the application in case multiple port options are presented to you in the Port selection dropdown box (Figure 1).

Port selection

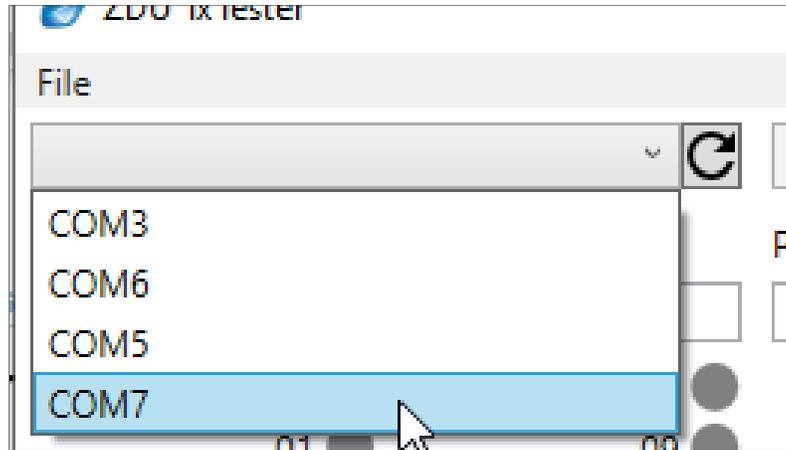


Figure 1. COM port selection

1. From the **Start Menu**, type “computer management” Figure 2 displays.

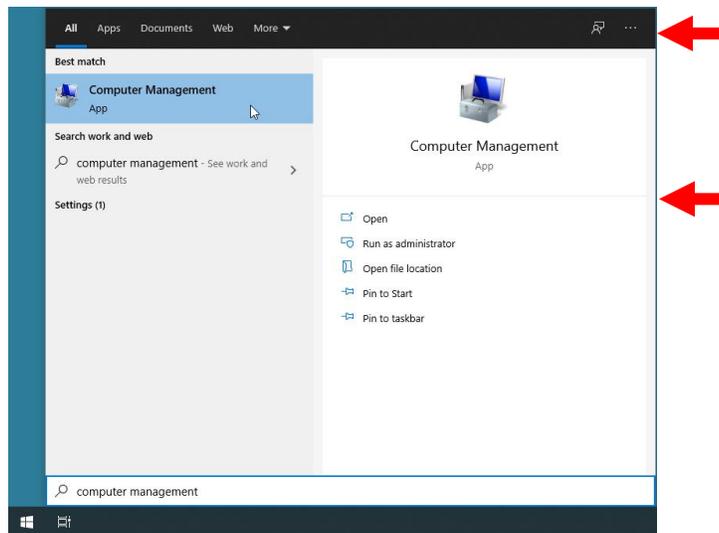


Figure 2. Working from the Start Menu

- The **Computer Management** screen shown in Figure 3 displays.

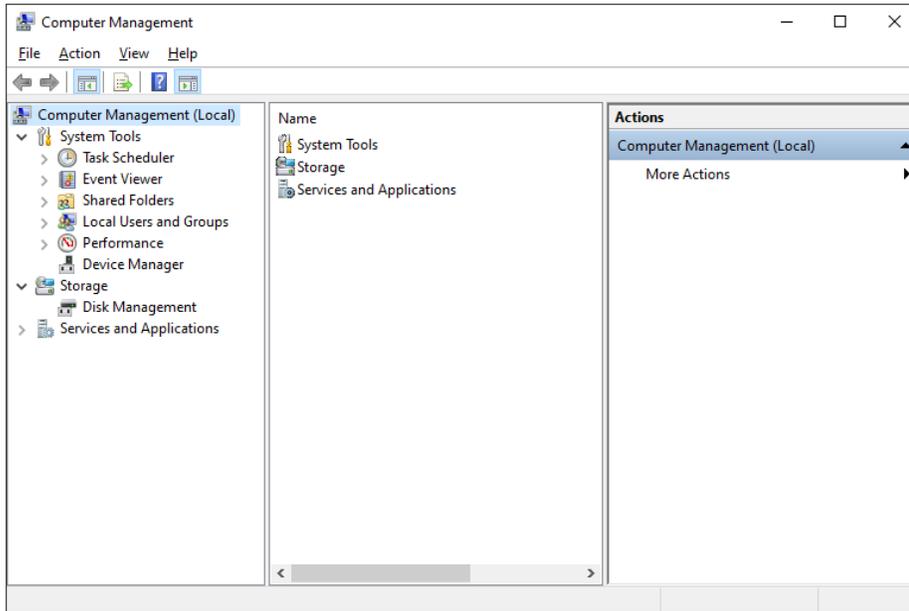


Figure 3. Computer Management Screen

- Click **Device Manager**. A Computer Management screen like that in Figure 4 displays. Click the plus sign in front of Ports. In this case, COM7 is the only USB Serial Port shown.

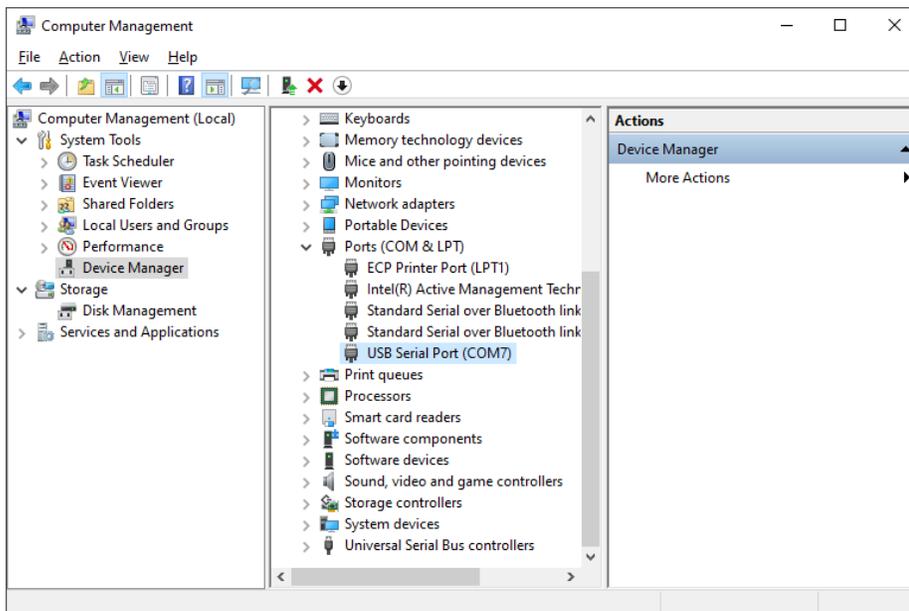


Figure 4. Click Device Manager

- Double-click the Cervis ZDU shortcut. The **ZDU HMI Window** displays as shown in Figure 5.

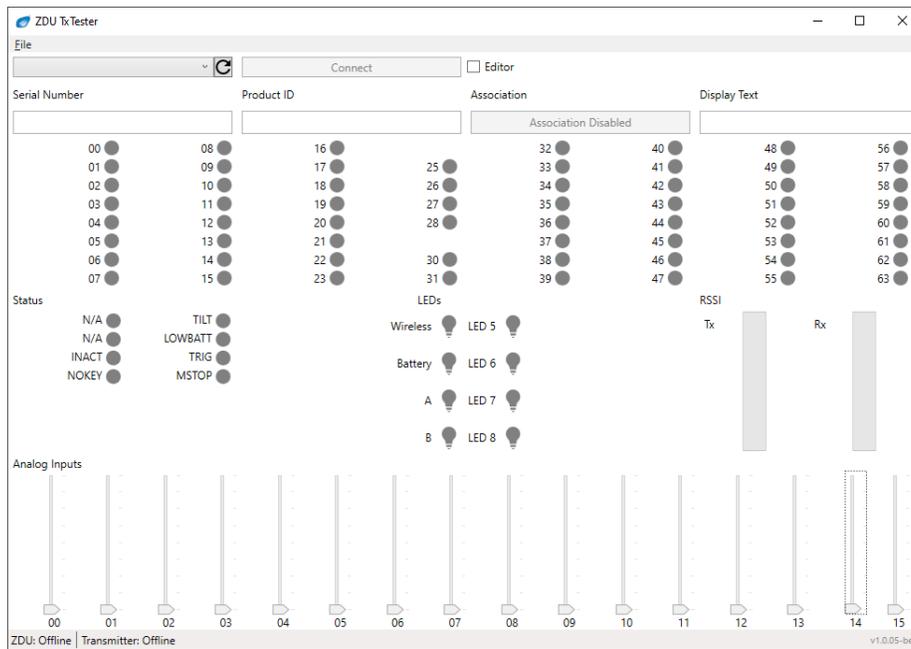


Figure 5. Main Window

5. Click on the drop-down box at the top left. Select the COM port for the ZDU (COM7 in this example). See Figure 6.

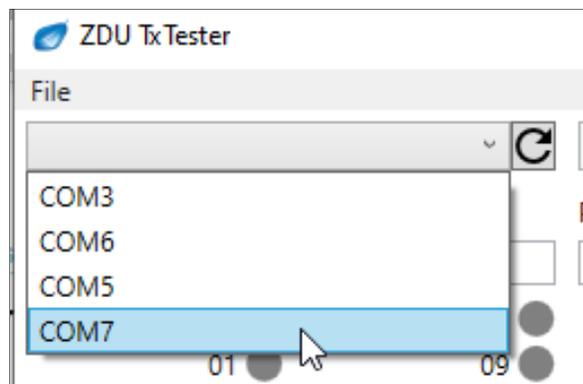


Figure 6. Port Selection Example

6. Click Connect. The status bar should now show **Status: Online** as in Figure 7. The ZDU is now ready for transmitter link and testing.

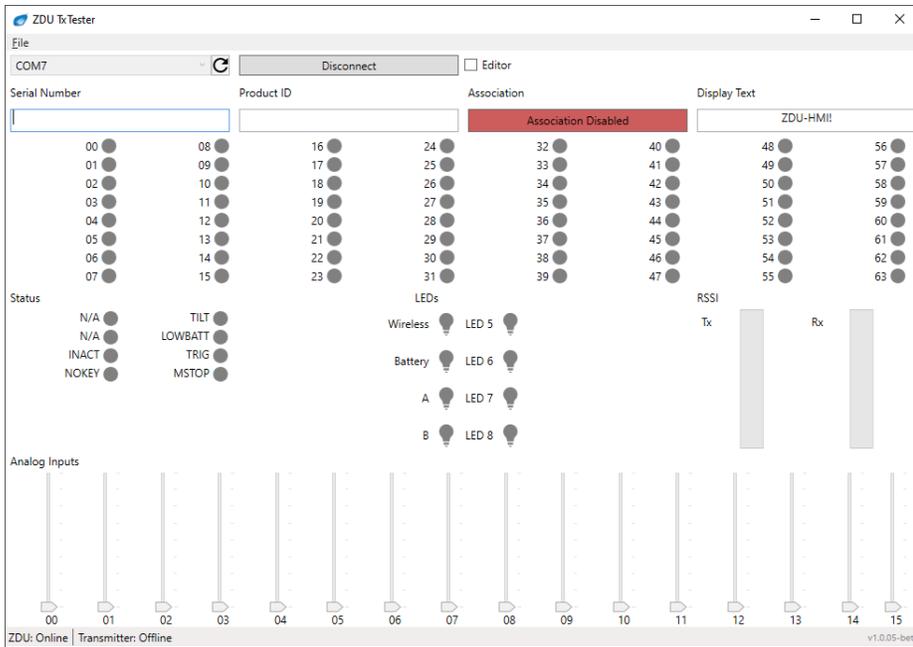


Figure 7. ZDU online

4.0 Transmitter Association

To allow the ZDU to associate to a handheld:

1. Click the “Enable Association” button. When association is enabled, the button will turn green and show “Disable Association”.
2. The association procedure can now begin.

✓ **Note:** Association on the ZDU has a 5 minute timeout. If a handheld is not associated to the ZDU within 5 minutes of enabling association, association will be disabled. Association can be immediately re-enabled by clicking the “ENABLE Association” button if timeout is encountered.

3. When the transmitter enters association and the ZDU is nominated, a “NOMINATED” indicator will flash above the Association button. See Figure 8. Use the select switch on the transmitter to select the ZDU when nominated.

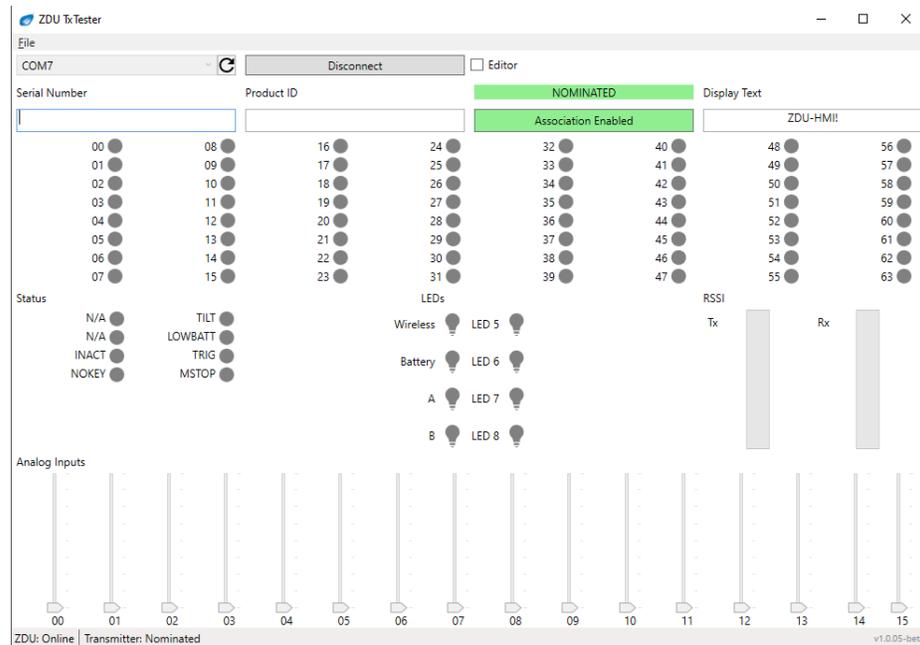


Figure 8. ZDU nomination

5.0 Editor mode

While all controls are displayed by default, it is possible to hide those that may not be needed for a particular system. By checking the Editor checkbox (see below), you may right-click on any control to hide it for the current session.

✓ **Note:** *Input 24 has already been hidden and is disabled in the image below, editor mode shows those controls that have been previously hidden.*

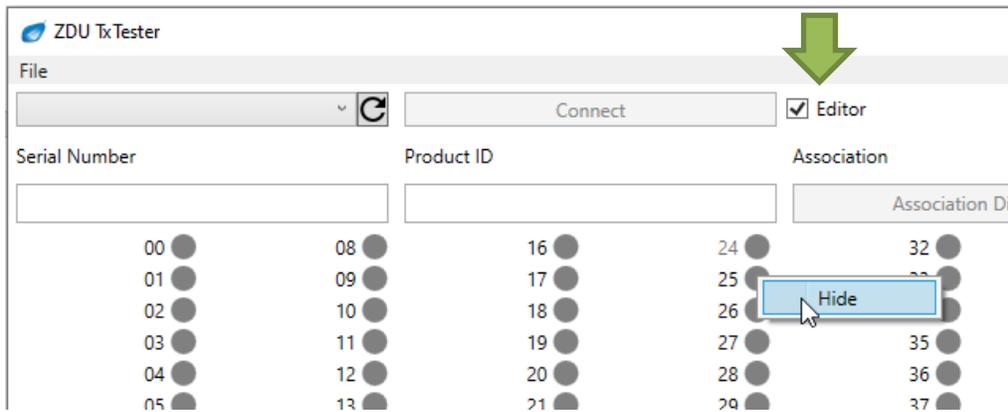


Figure 9. Editor mode

6.0 Input labels

The labels for individual controls are editable and can be saved to file for sharing and future use. These values are exported via the File -> Save option and imported via the File -> Open option. The default values are loaded each time the program is launched. These la

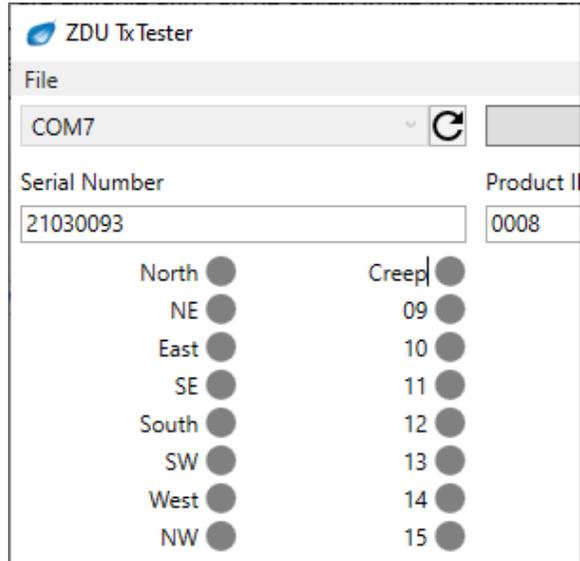


Figure 10. Editing labels

7.0 Templates

There are a series of templates available upon install. By default, these can be accessed via the File -> Open menu. These files will show only those controls relevant to the selected system as well as the appropriate labels.

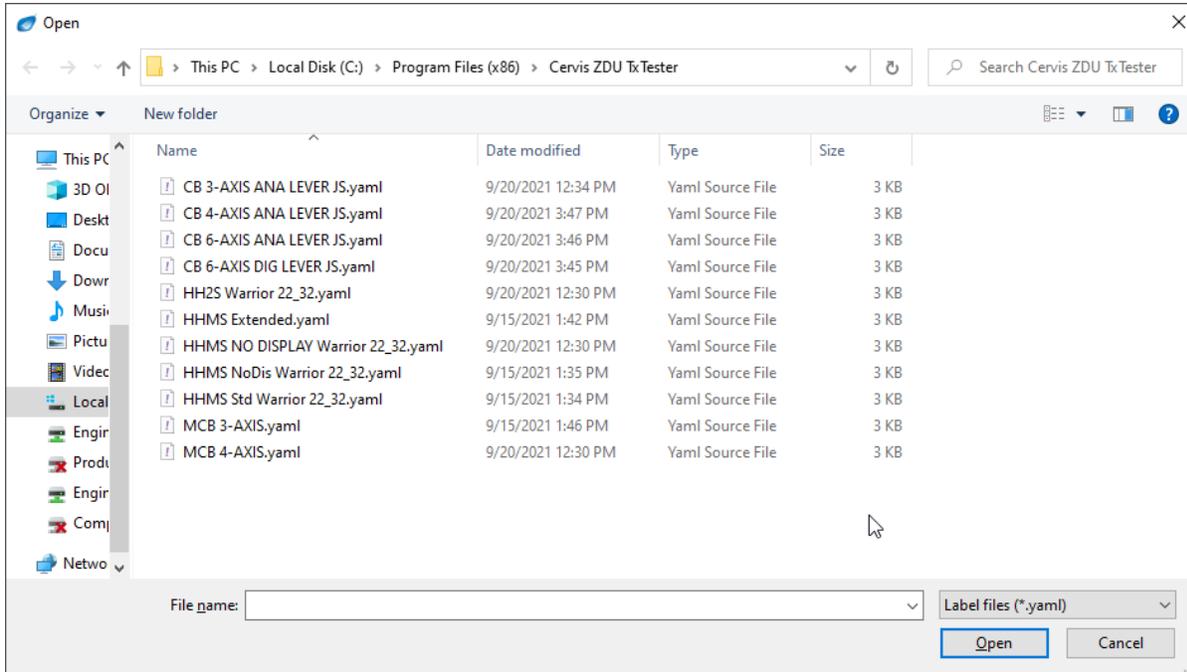


Figure 11. Template files

8.0 General Use

Once association is complete, the program can now be used. The program has 7 areas for data: Serial Number, Product ID, Display Text, Switch Inputs, Status Bits, ZDU and Handheld RSSI, and Analog Inputs. The Serial Number, Product ID and Display text boxes show the Serial Number, Product ID, and Text shown on the display (if one is installed) of the handheld that is currently communicating with the ZDU. Switch Inputs shows the status of the switches. This section includes all the possible digital inputs, even if the handheld that is currently communicating does not physically have 64 digital inputs. The Status Bits section shows the state of each status bit: INACT is the inactivity timeout bit, NOKEY is the key switch error bit, TILT is the tilt switch bit, LOWBA is the low battery indicator, and MSTOP is the MSTOP bit. The two sliders to the right of the Status Bits show the ZDU and Handheld RSSI values. The higher the value, the stronger the RSSI. The Analog Inputs section shows the values reported by the analog inputs. The sliders move proportional to the analog input values. These sliders should sit at about 50% when at neutral.

9.0 Other Operations

Other operations are added functionality for beneficial use of ZDU Tx Tester. These operations include manipulating the transmitter display and LED states.

9.1 Updating Display Text

1. Place focus in the Display Text box by clicking within its bounds.
2. Enter the desired text to display on the transmitter.
3. Hit Enter and check that the new text appears on the transmitters display. See Figure 12.

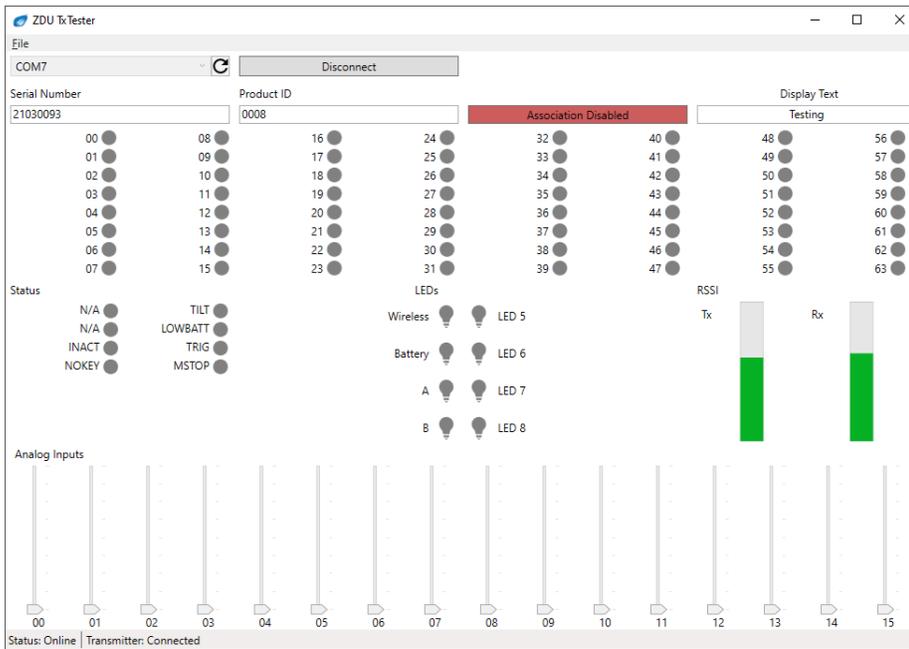


Figure 12. Updating Display Text and LED states

9.2 Updating LED states

To test individual LEDs:

1. Click those LEDs that you wish to test. A check indicates that the associated LED will be illuminated. In Figure 13 the transmitter will have LEDs 2 and 7 illuminated.

Testing Tool for Transmitters

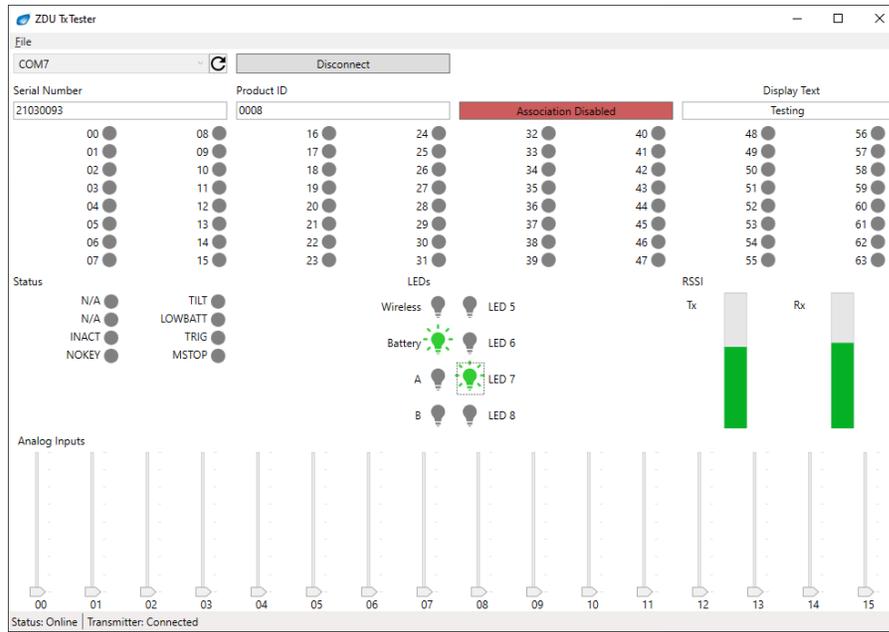


Figure 13. LED states

Appendix A: .NET Framework Compatibility

ZDU Tx Tester v1.0.05 uses the .NET Framework to execute its program. To check the compatibility with the computer in use you must find out whether or not the correct .NET Framework is installed. To do so, click on the following link or copy it in a browser to go to the Microsoft Developer Network Website and follow the instructions on the Webpage.

<http://msdn.microsoft.com/en-us/library/hh925568%28v=vs.110%29.aspx>

If the proper .NET Framework is not installed on the computer, you can use the following link to download the installer and necessary software from the Microsoft Download Center. Before downloading the .NET Framework, be sure to check computer compatibility by clicking the System Requirements information section of the Website.

<http://www.microsoft.com/en-us/download/details.aspx?id=17851>

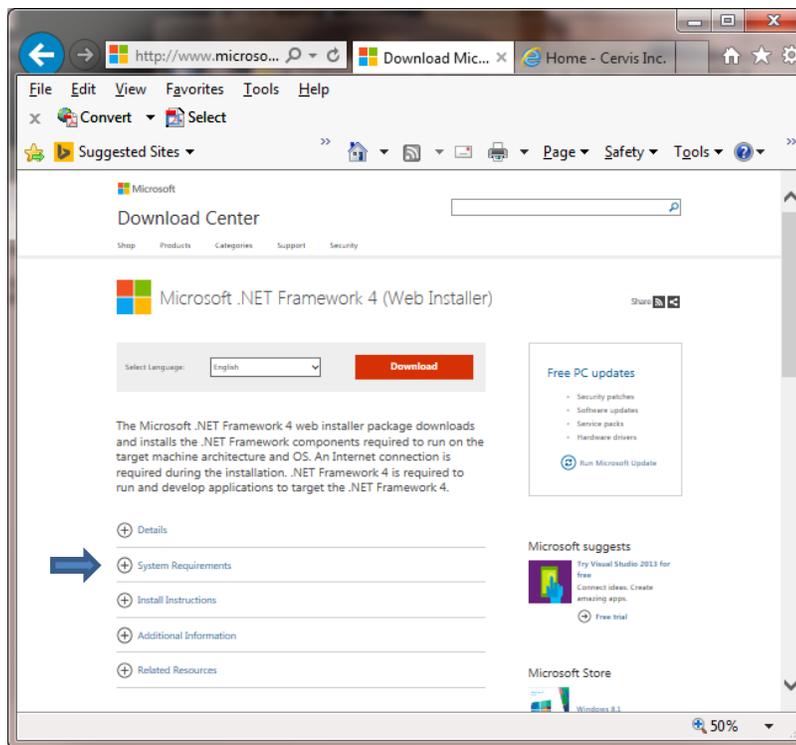


Figure 14. Microsoft Download Center Screen

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