Diagnostic Tests for AY1000/AY1020 Products

Objective

This document is a troubleshooting guide for the AY1000/AY1020 IO-Link Master products. It provides instructions on ways to verify operation and status of a unit that's new or a unit that has been returned from a customer. It has instructions on ways to discover a unit by Comtrol Software Application PortVision DX even if the unit's IP Address and other configurations have been changed. Additionally, it shows multiple ways to reset a unit to factory default and verify the unit's current status.

Steps to troubleshoot AY1000 & AY1020 Units

- Step 1 – Apply power to the unit. Plug ethernet cables into the unit from the PC.
    i. The green PWR LED will be ON. It will remain on.

    ii. Approximately 30-seconds after the unit is powered up, the green Port 1 – Port 8 LEDs will turn on and start flashing. This is default behavior of AY1000/AY1020 unit. Verify these LEDs are on and are flashing.

iii. The green LED on the Ethernet port will turn on and remain on (on the port the ethernet cable is connected to. The yellow LED on the ethernet port will flash occasionally. Verify the behavior of the LEDs on the ethernet ports.

If all LEDs are functioning properly, follow the next steps as described below.
If the Ethernet LEDs are working OK but the Port LEDs are not, discover the unit under test (UUT) with Comtrol PortVision DX Application and follow the steps described below.

- Step 2 – Make sure the UUT and the PC it's connected to are on the same network
- Step 3 – Launch Portvision DX Application and scan the network for "IO-Link Master" units. The UUT should be discovered and displayed on the Portvision Application as shown below.
    - o Verify the UUT was discovered
    - o Verify the Product Model. It should be AY1000 or AY1020
    - o Verify the MAC Address
    - o Verify the Status shows ON-LINE
    - o Check the IP Address of the discovered UUT

If the UUT wasn't discovered by Portvision, go to Step 5 below.
Note: Instructions on how to scan the network for "IO-Link Master" unit can be found in the *Comtrol_Portvision_Scan.pdf* document which will be provided to see you as a separate document

- Step 4 – If the UUT was discovered, ping the UUT at its IP Address displayed on PVDX. To ping the UUT, the Subnet Mask of the PC and the UUT have to be compatible. If the subnet masks are

compatible, you can also open the webpage on the UUT by typing in the IP Address found in Step 3 on a Browser web address field.

If the UUT can't be pinged and/or the webpage on the UUT doesn't open, go to Step 5 below.

- Step 5 –
  Use a paper clip or a similar tool to press the reset/restore push button for more than 5-seconds. The UUT will go through the restore process and reboot. Approximately after 30-seconds, the LEDs will start flashing as described in Step 1 which indicates the UUT's restore to factory default was successful.
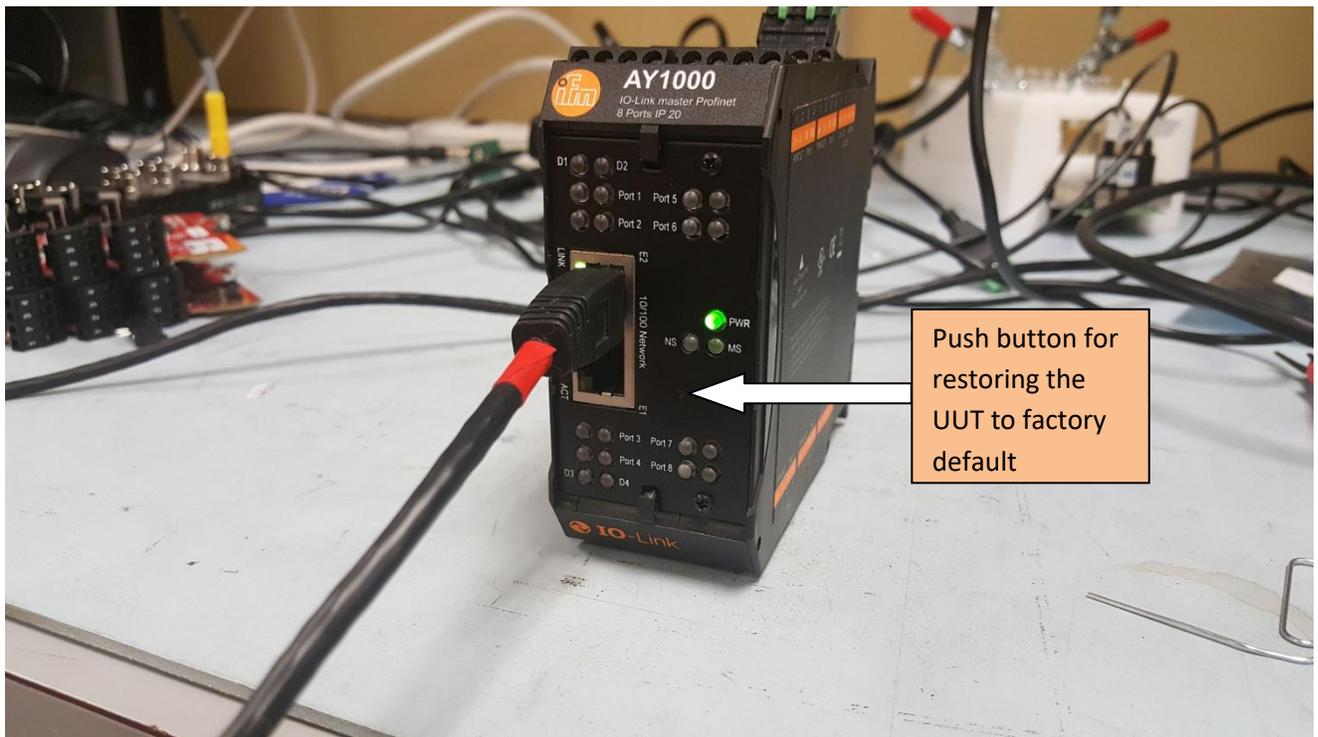

- Step 6 – On the PVDX Application select "New Session" from the "File" menu. Click "NO" button on the prompt window if there's any. Scan the network for "IO-Link Master" units. The UUT will be discovered and displayed.
  - i. Verify the UUT was discovered. Verify the Product Model. It should be AY1000 or AY1020
  - ii. Verify the Status shows ON-LINE
  - iii. Check the IP Address of the discovered UUT. It should be *192.168.1.250*
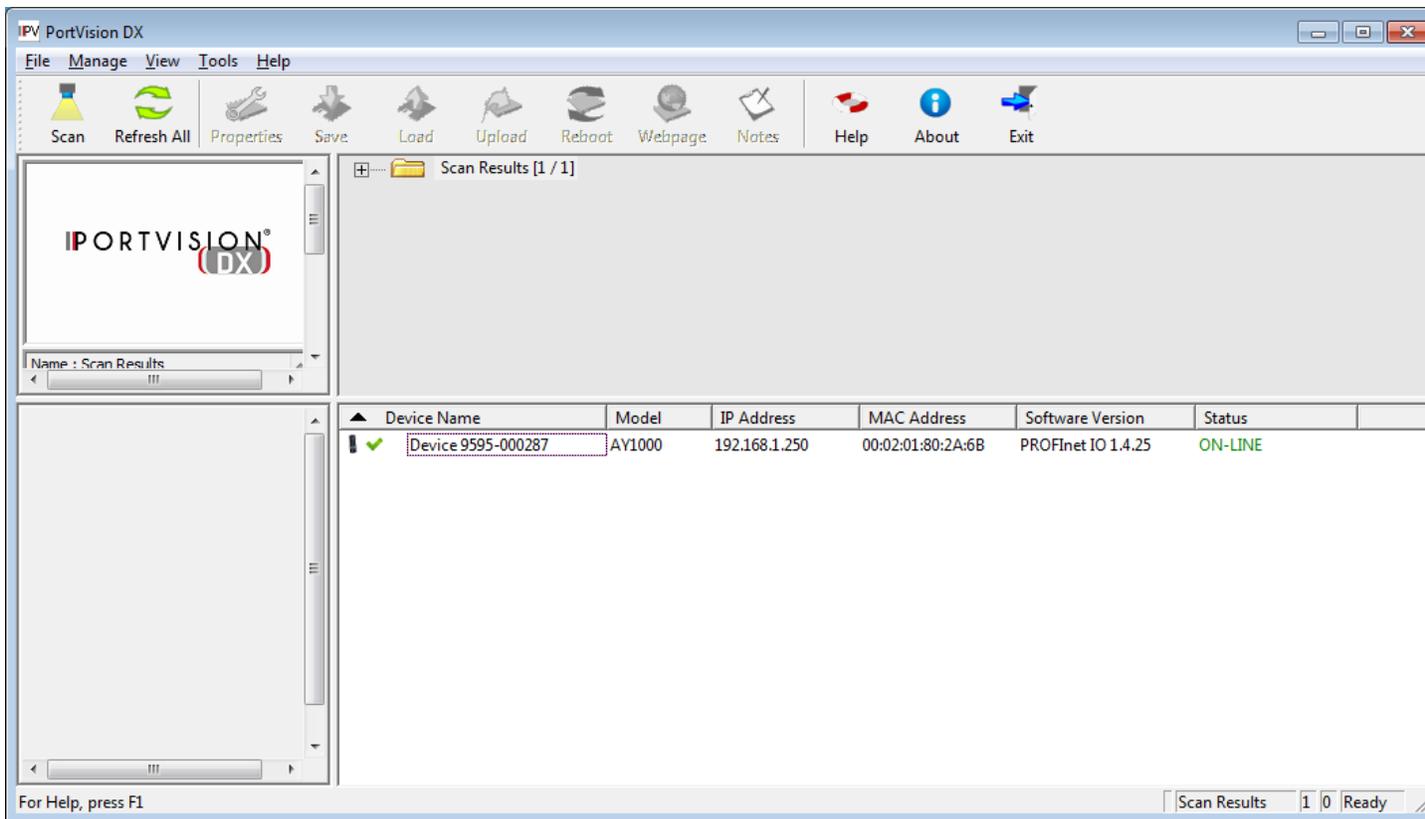
Note: Instructions on creating new session and scanning the network for "IO-Link Master" units can be found in the *Comtrol_Portvision_scan.pdf* document

- Step 7 – On Portvision, click on the discovered UUT once to select it. Right Click on it and click on "ON" from the "Tracker" selection as shown. Verify the Port LEDs on the UUT are flashing Red and Yellow. Right click on the UUT again and select "OFF" from "Tracker" selection.
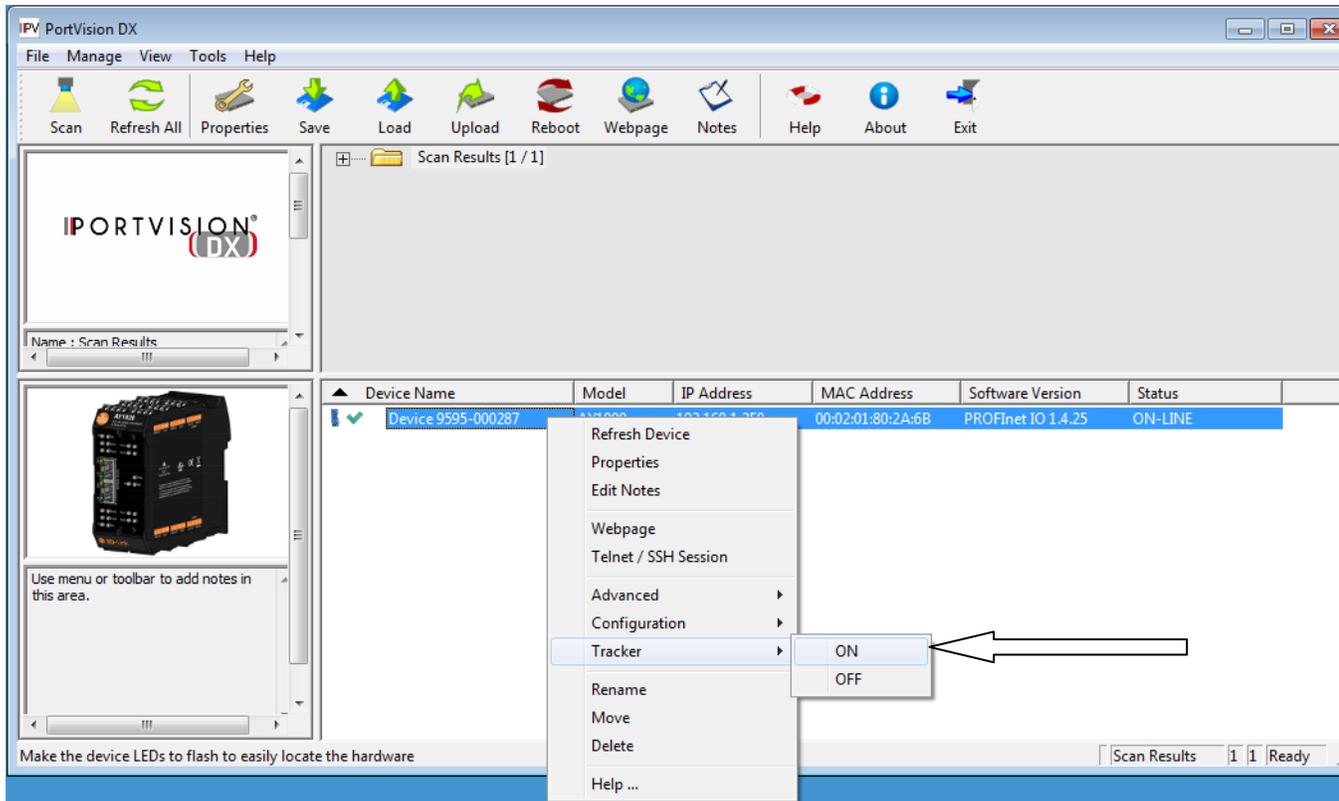
- **Step 8** – Click on the discovered UUT once to select it. Right Click on it and click on "Webpage" option shown above. The web browser will launch automatically and open up the webpage of the UUT. Verify the webpage of the UUT opened properly.

  Note: For the webpage of the UUT to open correctly, the subnet mask of the UUT has to be compatible with the subnet mask of the PC