COGNEX 8072V TROUBLESHOOTING TIPS

Hardware Connectivity issues

Verifier does not show up as a connected device in the setup tool

- In some cases, the verifier may simply need a factory reset:
  - Power the verifier down
  - Repower the unit while holding the trigger depressed
  - Wait until the unit beeps three times then release the trigger
  - Note that the verifier specific settings will need to be re-established
- Some computer hardware may need the BIOS upgraded to support the USB interface
  - Know issues are with some Lenovo and Dell Laptops
  - https://download.lenovo.com/pccbbs/thinkvantage_en/systemupdate5.07.0070.exe
  - http://www.dell.com/support/home/us/en/04/Drivers/DriversDetails?driverId=6CC2C
- Install motherboard chipset drivers and other required and optional drivers from the list. PLEASE MAKE SURE LAPTOP AC POWER ADAPTER IS PLUGGED IF YOU ARE GOING TO UPDATE BIOS. Otherwise it will brick the laptop. (We have experienced this issue several times in the past).
- Additionally, in the Device Manager the Lan Driver 7500 may need to have the drivers updated or reinstalled
  - Step 1: Go to Start- > Devices and Printers -> LAN7500 [right-click] -> Troubleshoot and see if that fixes the problem
  - Step 2: Go to the internet and search for 'LAN 7500 USB to Ethernet Adaptor for windows X [X = 7 or 10 or latest edition being used] and download it. Reboot reader and try again.

Verifier shows up in setup tool but can't be connected to / IP address cannot be changed

- Change the computer's ethernet adapter IP and subnet to that of the verifier. The verifier should be able to be connected to now. To change verifier IP to that of the local network, continue below:
- Change the verifier IP and subnet to be compatible with desired network (usually LAN i.e. IP: 192.168.0.xxx subnet: 255.255.255.0)
- Change computer's ethernet adapter back to desired network.

Verifier disconnects from the user interface

- Generally, this is caused by the USB port going to sleep (suspending) to save power.
  - Right click on the Start Menu
  - Choose Settings
  - Choose System Settings
  - Choose Power and Sleep Settings
  - Choose Additional Power Settings
  - Choose Change Plan Settings
  - Choose Advanced Power settings
  - In the Advanced settings window scroll down to USB Settings
  - Disable Selective Suspend for both battery and plugged in modes

Live image and processing very slow

- The USB Slide in for the 8072V is specific to the verifier units. A regular Dataman USB slide in is different and will operate at a much-reduced bandwidth causing slow live image processing and possible lock up situations.

Software or user interface tips

Barcode not decoding

- Is the code a data matrix or QR code? If not, the 8072V is not compatible.
- Center the barcode in the live image as best as possible, the Cognex decode algorithm starts in the middle of the image and works outward. It is especially critical on barcodes with larger x-dimensions
- Is data shown in the user interface? If so, the Cognex decode algorithm has decoded the barcode, but the ISO reference decode algorithm used by verification has failed to decode the symbol. Examine the finder pattern for poor clock track or L-Pattern marking. Is the data region well defined? If not, there may not be enough error correction available for the reference decode algorithm to complete.
- Are there areas around the barcode that are reflecting light into the sensor and affecting the decode? If so draw region of interest to mitigate the effect. Region of interest is drawn by using the mouse to place a cursor at a start location, holding the left mouse button and dragging a box around the barcode, this defines a region of interest in the image where bright spots are ignored.
- Is the correct grading standard being used? Direct Part Marks or other low contrast symbols are best graded with the ISO/IEC-TR29158 standard.
- If using the ISO/IEC-TR29158 grading standard have other light angles been tried? Lighting can make a big difference in the way an image is rendered.
- If grading Dot Peen or laser etched symbols where the L-Pattern is not connected use the “Dot Peen” selection in the Settings Menu under Application Settings.
- If using the ISO/IEC-15415 grading standard is the x-dimension setting adequate? Experimenting with different size x-dimensions may help get the barcode to decode.

What grading standard should be used

- ISO/IEC-15415 is generally used for printed barcodes on labels, documents, packaging and so forth. Used where the industry application demands it.
- ISO/IEC-TR29158 (AIM DPM) is generally used for low contrast and directly marked codes on parts or name plates.
- The application standard (industry guidelines or label specification) should define what ISO standard to use and how it is implemented. The formal grade format will tell you what standard and what aperture or lighting should be used.
    - A specification designating a grade like 2.0/08/660 would require using ISO-15415 meeting a minimum grade of 2.0 (C) or better, using an 8 mil test aperture and 660 nm light at 45 degrees (when the light angle is not specified it is assumed to be 45-degrees from four sides.)
    - A specification designating a grade like DPM 2.0/10-25/660/30Q, 30T, 30S, 90, D would require the ISO/IEC-TR29158 grading standard meeting a minimum grade of C or 2.0 where the code size or x-dimension is between 10 and 25 mil, 660 nm light from 30-degrees four sides, two sides, 90 degree or Dome light.

What size test aperture should be used

- When grading according to ISO/IEC-15415 the aperture size can be selected, ISO/IEC-15415 states the aperture should be 80 percent of the barcode x-dimension or whatever the application specification dictates. The settings menu has a drop down where the aperture can be selected; Auto 80%, Auto or User defined are the options.
    - Use “Auto 80” in cases where there is no application is designating the aperture
    - Use “Auto” where you want the pre-programed application specifications (GS1, HIBC, MIL-STD-130) to choose the appropriate aperture
    - Use “User Defined” when the aperture is known and can be fixed at a specific value
- When Grading using the ISO-TR29158 standard the aperture is always 50 or 80 percent of the x-dimension and the better of the two is what is reported

Report Warns “X-Dim Out of Range”

- In the Settings Menu under Application Settings are two fields “Min X-Dimension” (mils) and “Max X-Dimension (mils). These values need to be in a range that encompasses the size barcodes that are being verified

Barcode gets a passing grade but fails GS1, HIBC or MIL-STD-130

- If the barcode is not a GS1, HIBC, or MIL-STD-130 code, in the settings menu under Application Settings, in the Select Standard drop down, select Generic
- If the barcode is being graded according to GS1, HIBC or MIL-STD-130 review the Data Details for a message about why the Data Format does not meet the Application Specification

The Settings configured for the verifier are not retained after restarting the verifier

- When exiting the setup tool choose the option to write Non-Volatile memory to retain the current settings

There are dark areas in the field of view when 45-degree is selected

- There were a few units that were shipped with a strip of testing tape still on them.
- Double check to make sure your unit doesn’t have a black piece of tape covering the second row of LED lights on the top like this.