

RIC10 – 10 GigE Vision Camera



quick start guide

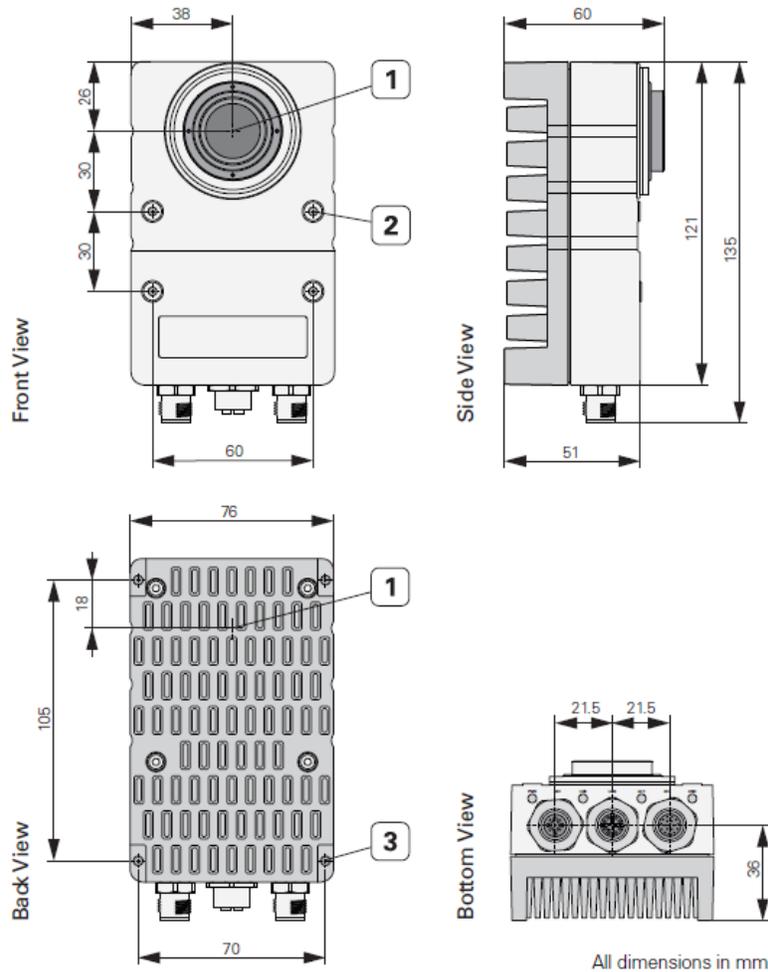
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Document Revision

DATE	REVISION	TITLE	COMMENTS	AUTHOR	APPROVAL
10/08/2017	A	COMPLETION OF DOC	READY TO BE REVIEWED	AL	RL
12/14/2017	B	COMPLETION OF DOC	ADDED DETAILED INSTRUCTIONS ON POWERING	AL	RL

Mechanical Installation

1. Mount the camera to a suitable mounting plate using the M4 mounting holes on the front or on the back of the camera (Refer to Fig 1 below).



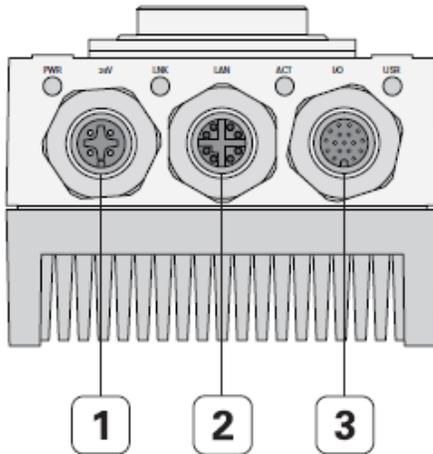
Number	Description
1	Optical center of image sensor
2	4 mounting holes on front side (M4 threads)
3	4 mounting holes on front side (M4 threads)

Figure 1: Technical drawing of RIC10 camera.

- The camera is equipped with a standard C-mount lens mount. To achieve the IP65/67 rating, a protective IP tube must be used. You may use any C-mount lens that fits into the IP tube. A 10 mm IP tube extension for longer lenses also is available as an accessory. Nonetheless, IP tubes are optional.

Electrical Installation

3. Connect the power, 10GigEthernet and I/O cables to the camera as shown in Figure 2.



Number	Description
1	Power in (12VDC -24 VDC)
2	10 G Ethernet
3	I/O connector (trigger/strobe, digital inputs and outputs)

Figure 2: Labeled connectors along with their respective purpose.

4. To connect the opposite end of cable 1 (i.e. Power Cable), make sure to wire it as stated on Figure 3 and 4.

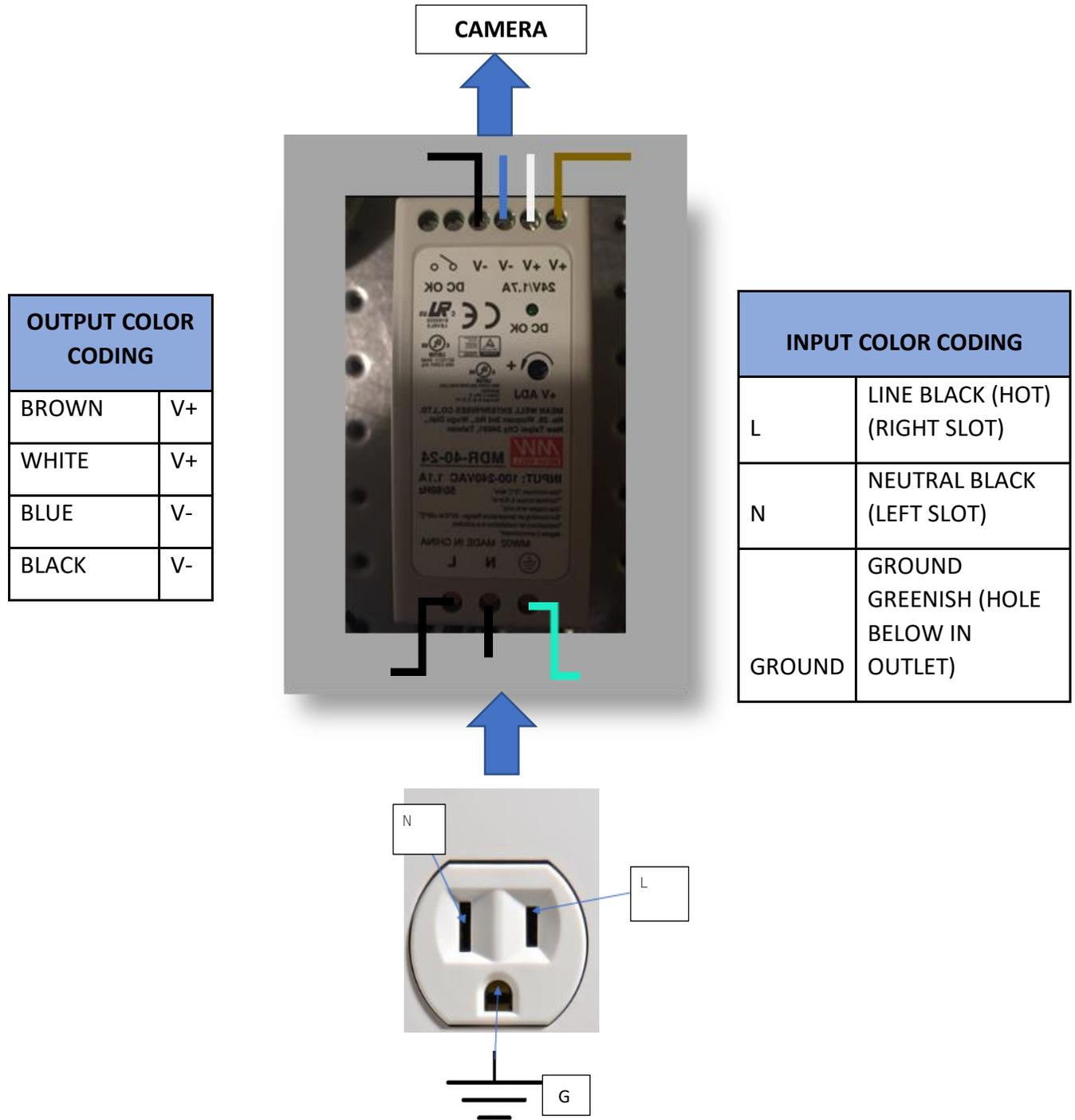


Figure 3: Electrical connection for the power line. Wire code for connection between power supply and power cable.

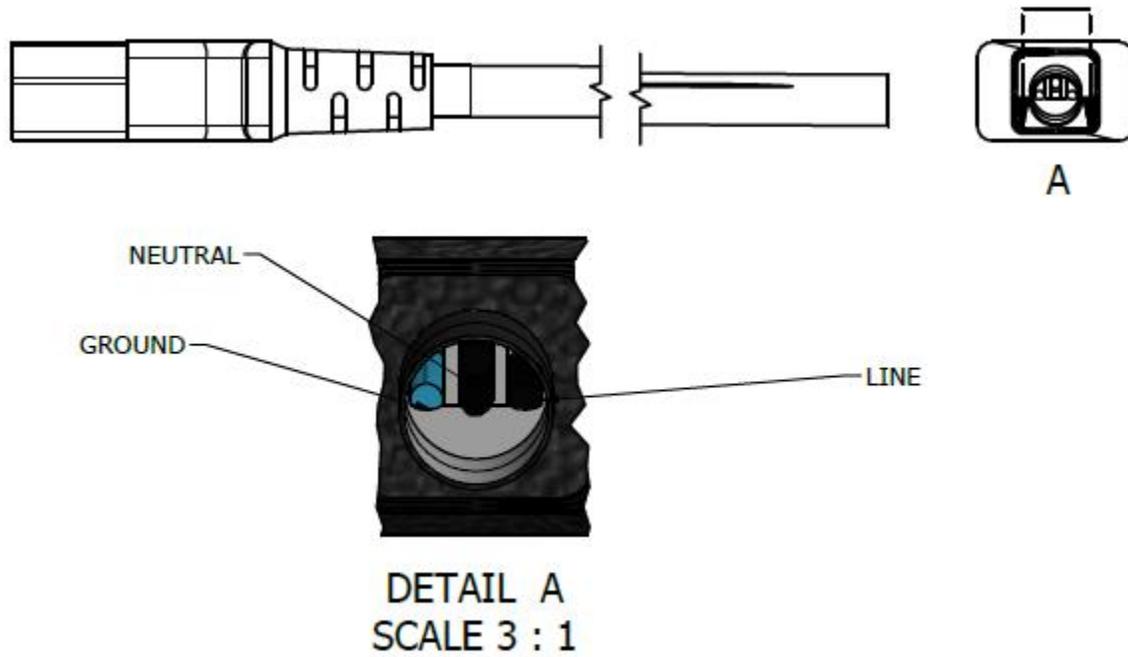


Figure 4: Power cord layout.

Notes

- Cap screws are not part of the camera package.
- Please refer to [Industrial 10 GigE Vision Camera User Guide](#) link to download the User Guide which will provide more insights on how to wire the I/O cable.

PC Configuration

Hardware: 10GigE Network Interface Card (NIC)

WARNING!



Disconnect power cord from CPU housing. Do not work on the CPU while it is running.

5. Look for a package for the 10GigE NIC. The package looks as in Figure 4. Have this on a side.



Figure 5:- 1-port PCIe 10GBase – T/NBase-T Ethernet Netork Card.

6. Disassemble one of the covers that houses your CPU. For this you will need a screw driver. Refer to Figure 5 below.



Figure 6: Disassembling CPU housing.

7. Connect 10GigE NIC as shown in Figure 6.

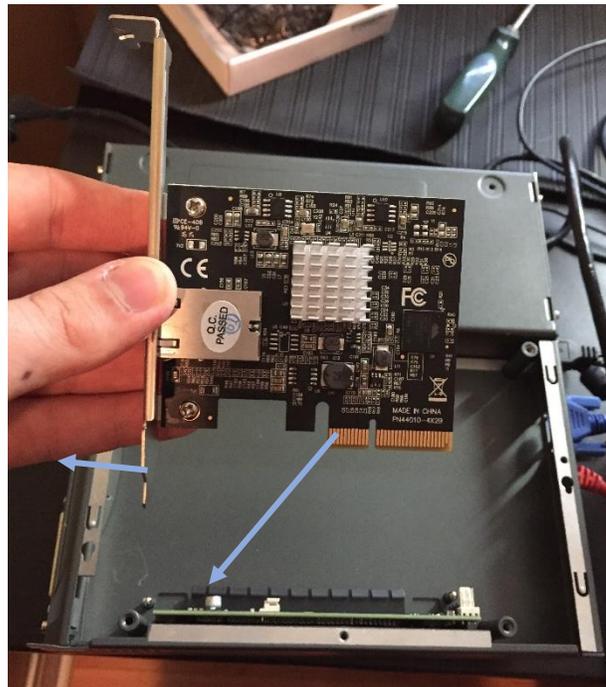


Figure 7: Connection of NIC shown.

8. Put back the cover on the CPU housing and now your CPU should look as in Figure 7.



Figure 8: NIC installed in CPU housing.

Driver

9. To install the driver, please insert the disc shown in Figure 8. If for some reason the disc installation is not a viable option, be sure to refer to this link's website [installation](#) to install the driver.

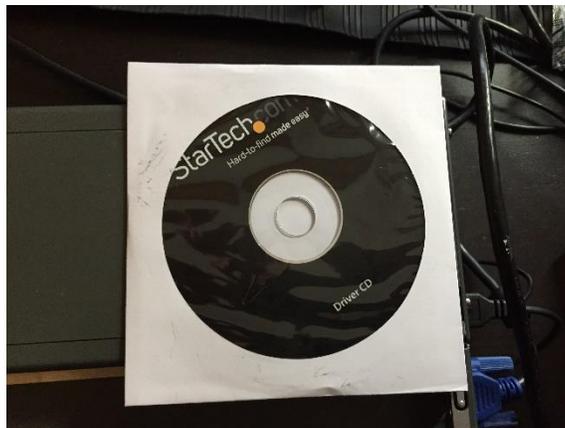


Figure 9: Driver that comes with the package.

10. Once driver in, accept terms and click next through windows. When prompted, restart your computer.
11. Now you are ready.

OS – Configuration

12. Open the Network and Sharing Center following this directory: **Control Panel\Network and Internet\Network and Sharing Center**
13. Click Change adapter settings.
14. Right-click the NIC for which you want to enable jumbo frames and select Properties.
15. Under the Networking tab, click the Configure button for the network adapter.
16. Select the Advanced tab.
17. Select Jumbo Frame and change the value from disabled to the desired value, such as 9kB MTU or 9,014 Bytes, depending on the NIC.

18. Click OK to all dialogs.

Notes

These steps are crucial for the system to work properly. Failure to follow these will cause the camera to not communicate with the CPU. This can cost a lot of downtime.

Software Installation

19. To install the software please click this link, [Industrial 10 GigE Vision Camera](#), to download the drivers.

Tutorial – ROI Manipulation

Objective:

In this tutorial we will show how to manipulate the Region of Interest within the software. Doing so can enhance frames per second consistency when camera is live.

1. Once software installed (refer to previous section on this manual for software installation), you will find an icon of the software on your desktop. Refer to Figure 9. Click on it.

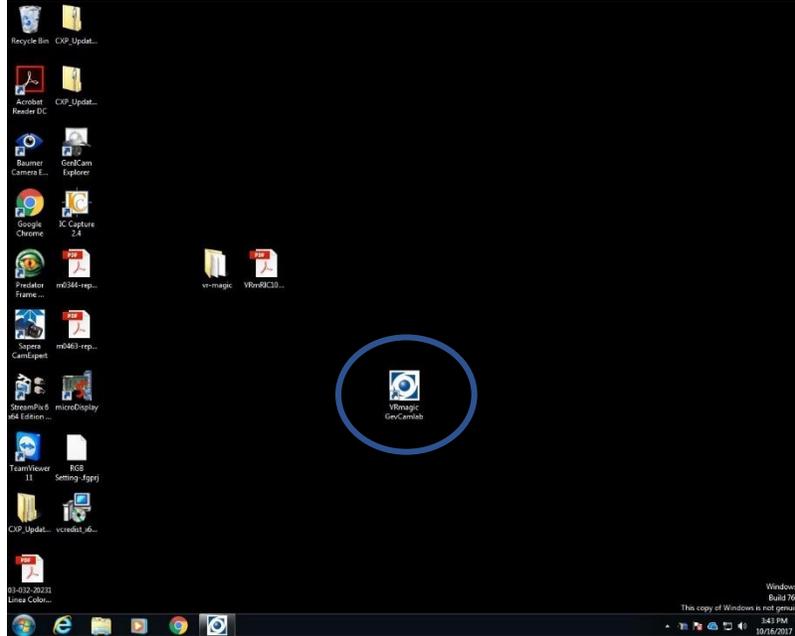


Figure 10: New software icon.

2. Then you will see the software interface window pop up. There focus in the Discovery and Device panes; shown in Figure 10. In the Discovery pane click refresh until you see your camera show up as it shows in Figure 10. Then double click the camera of interest.

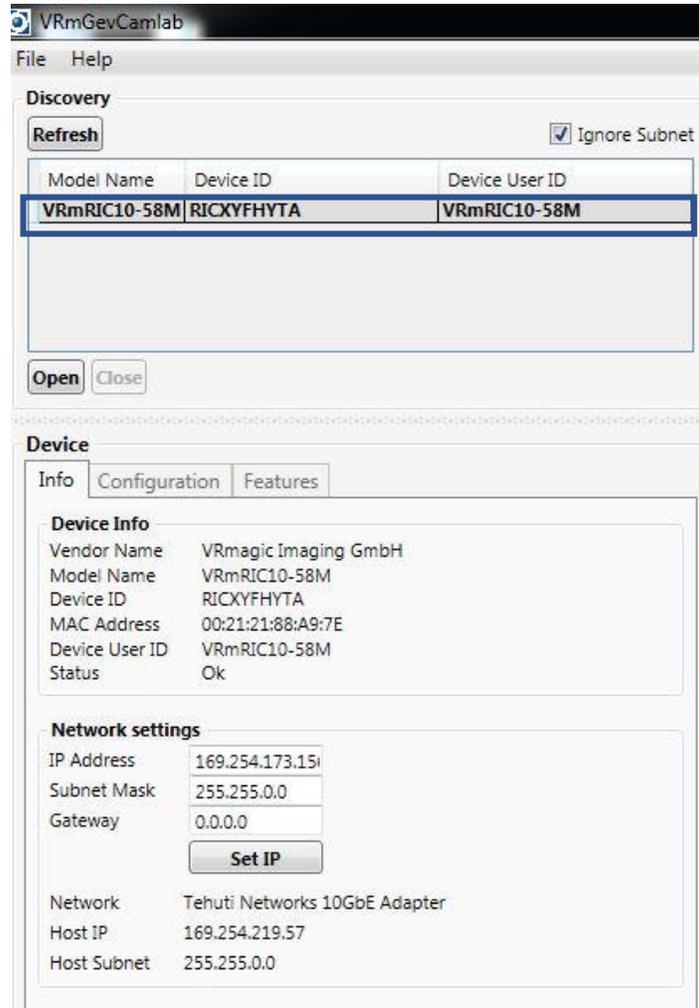


Figure 11: Selecting device to work with.

3. Now you will notice that within the Device pane, both Configuration and Features will get enabled.
4. Then on the right window hit the Start button to start capturing live images. For this example, I am looking at base piece in our lab. Refer to Figure 11 for more detail.

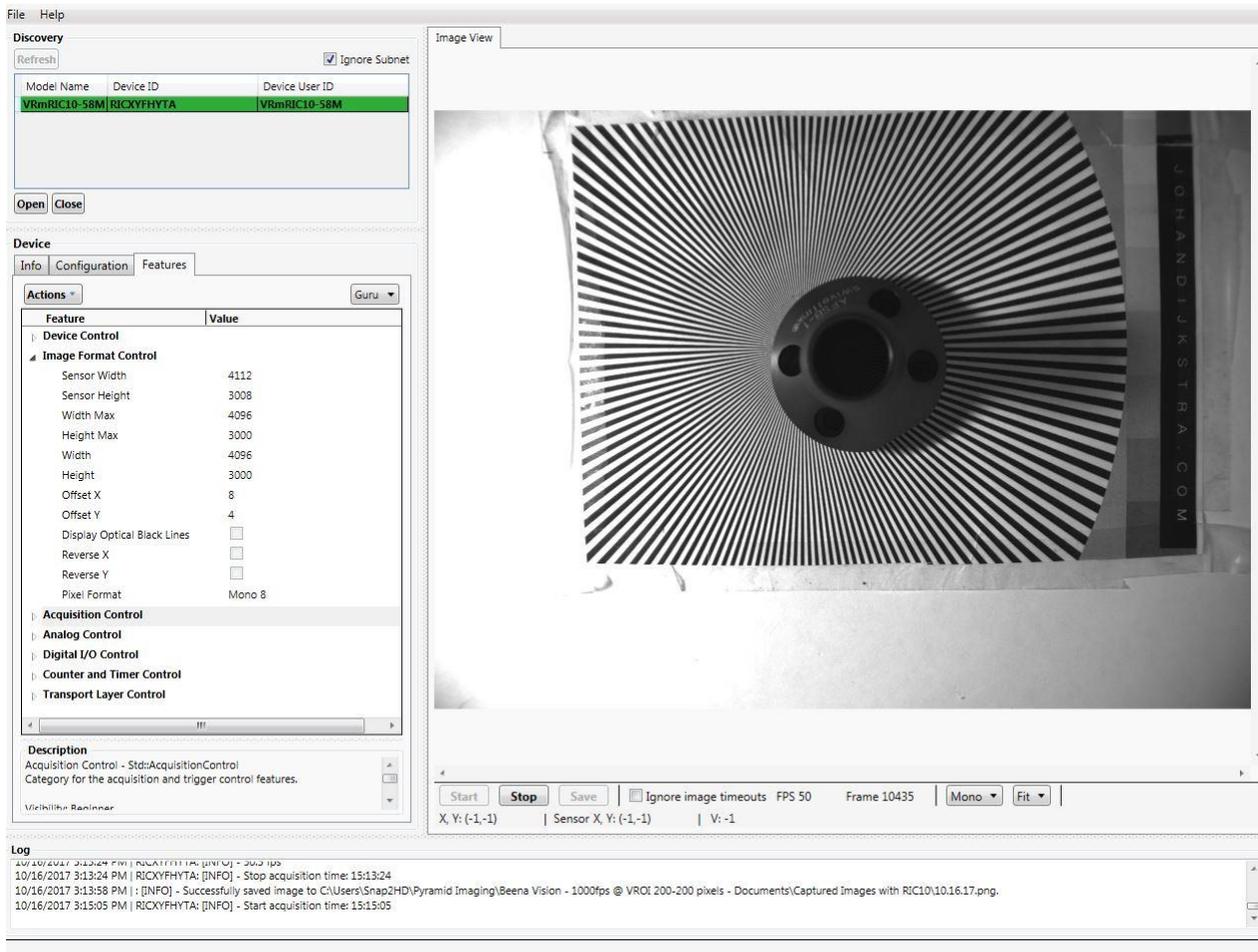


Figure 12: Live image, full resolution.

- Once there, hit the Stop button so that you can modify parameters. Then follow this sequence of actions: Within Device>in the Features tab>Expand Image Format Control>Change Height to 2000. Refer to Figure 12 for more detail.

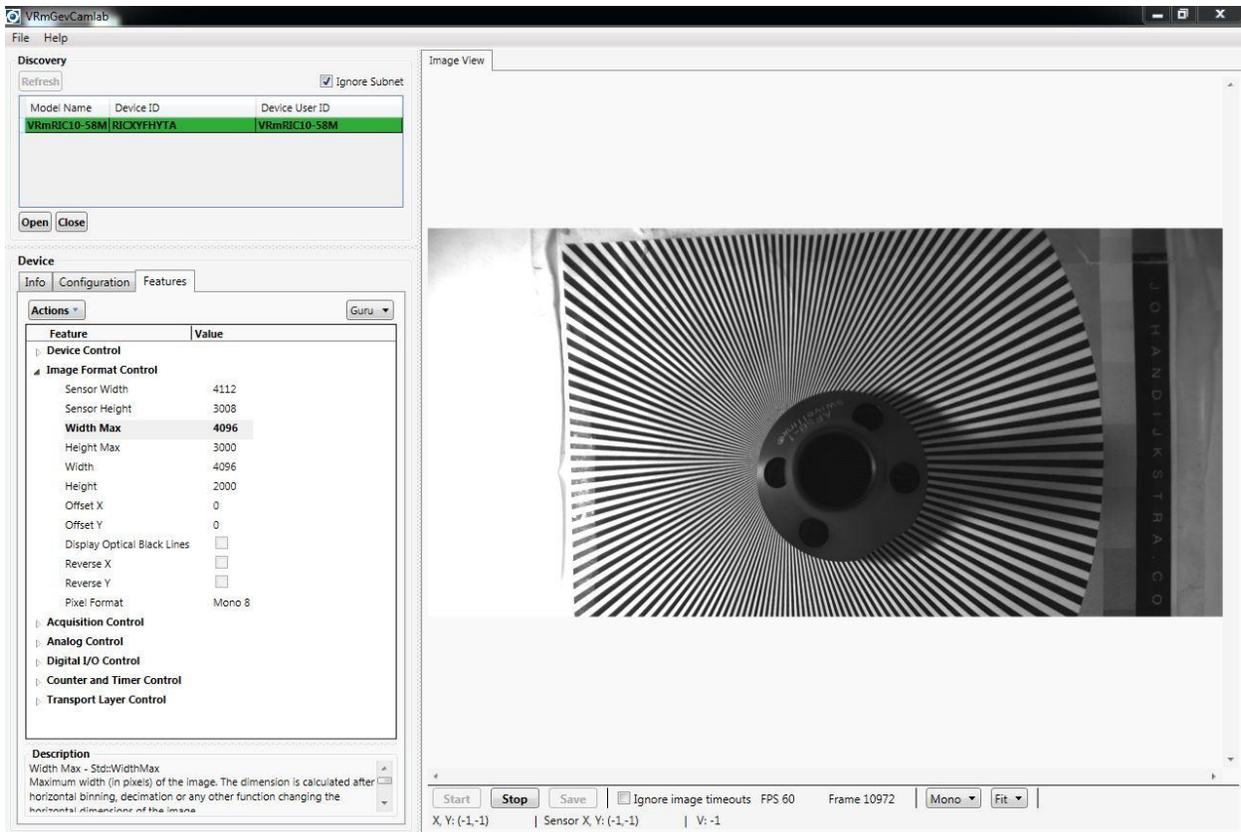


Figure 13: Reduced ROI.

6. Now your ROI has reduced; you are done.