



KONICA MINOLTA

ViZion DR+
1417V2
Wireless
Panel

Dealer
Installation
Manual

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Revision History

REV DATE DOCUMENT NAME [REASON FOR CHANGE]

1.0	6/27/2018	ViZion DR+ 1417V2 Wireless Panel Installation Manual <i>[New Manual – iRay SDK Version 2 and Ultra version 4.2.9.0]</i>
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Introduction

This documentation is provided to you, the service technician, with all information necessary to install, configure and calibrate the ViZion DR+ 1417V2 Wireless Panel. For more detailed information on the operation and specifications of your wireless detector, please review the following documentation:

Manual References:

- *059-201-04 Mars1417V2 User Manual A0.pdf*



Only qualified service personnel should attempt to install, modify, service or operate the ViZion DR+ Wireless Panel detector.

Hardware Overview and Installation

1 ViZion DR+ 1417V2 Wireless Panel Hardware

The following equipment is required to properly install and implement your ViZion DR+ system.

1.1 Passive Installation

- ViZion DR+ 1417V2 Wireless Panel Detector



- ASUS Dual-Band Wi-Fi Gigabit AP



- 75 ft. Cat5 Ethernet Cable



- Acquisition PC Desktop or Laptop (Windows 10)



1.2 Integrated Installation

The following additional equipment is required for integration with a generator.

- G.I.P.S. Box



- Power Supply Synchronization Cable



- 50 ft. Female-to-Female Serial Cable

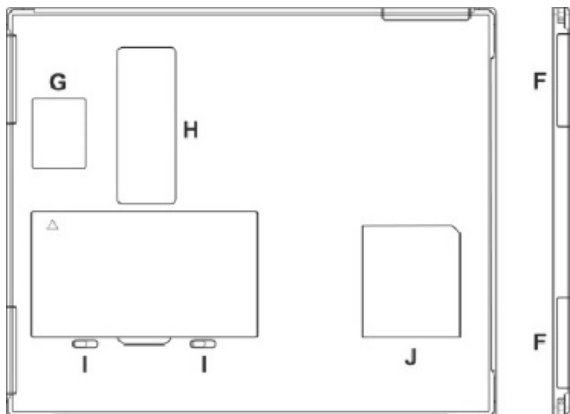
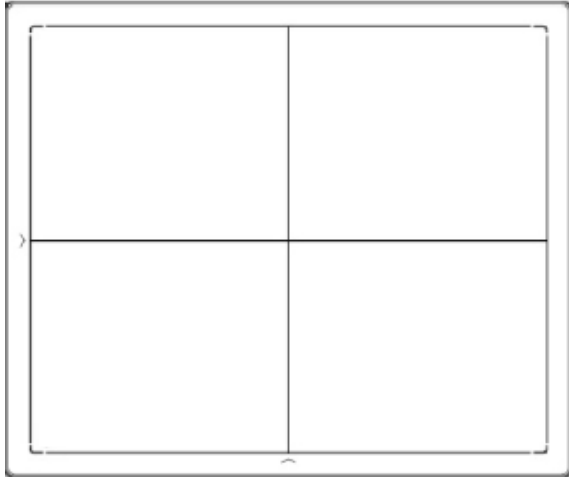


- Tripp Lite USB-to-Serial Adapter

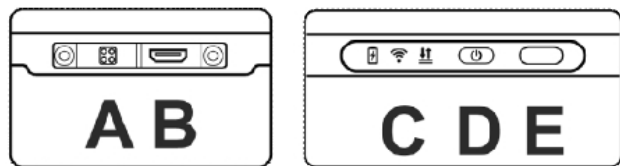


1.3 ViZion DR+ 1417V2 Wireless Panel Detector (Mars1417V2)

The following equipment is required for integration with a generator.



1.3.1 Connector Ports and Control Panel



- A. **DC Jack:** 24V DC input
- B. **Ethernet interface:** Link cable jack
- C. **LED indicators:** Indicates the state of the detector

- D. **Power button:** Detector power ON/OFF button
- E. **Infrared window:** Infrared device sensor
- F. **Antenna:** Wi-Fi antennas (three)
- G. *Reserved*
- H. **Maintenance cover:** For service engineer to maintenance
- I. **Battery lock:** The lock button for detaching battery
- J. **Detector label:** Serial number and product information

1.3.2 LED Indicators



1. **Battery Indicator:**
 - Green: battery charge is < 10%
 - Orange: battery charge is ≥ 10%
2. **Link Indicator:**
 - Blue (solid): wireless connection is connected
 - Blue (blinking): wireless connection is ready, but not connected
 - Green (solid): wired connection is connected
 - Green (blinking): panel initialization
3. **Status Indicator:**
 - Green (solid): data transmission
 - Orange (solid): panel initialization
 - Orange (blinking): fatal error

1.4 G.I.P.S. Box (Generator Integration Power Supply)



1. **X-Ray Interface** (connect only one)
 - 12-24 VDC Digital
 - 120 VAC Bucky
2. **AC Power port** (Three-Prong)
3. **LED Lights** (Power / System / Status)
4. **Computer Serial port** (male)
5. **Panel Power** (Panel 1 and Panel 2)

1.5 Synchronization, Ethernet and Power Cables

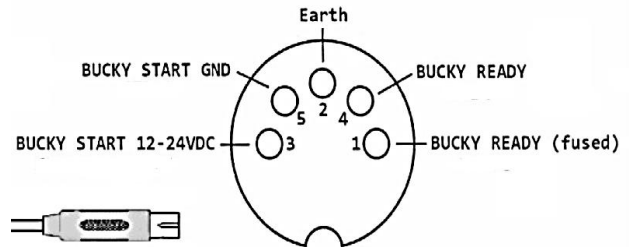
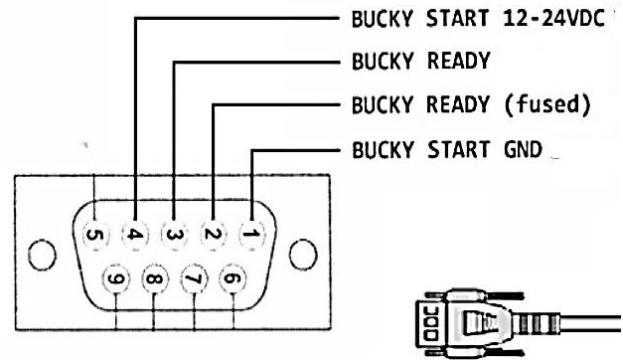
Your ViZion DR+ wireless detector includes the following accessories:

- 75 ft. Cat5 Ethernet Cable
- 50 ft. Female-to-Female Serial Cable
- Tripp Lite USB-to-Serial Adapter
- Power Supply Synchronization Cable

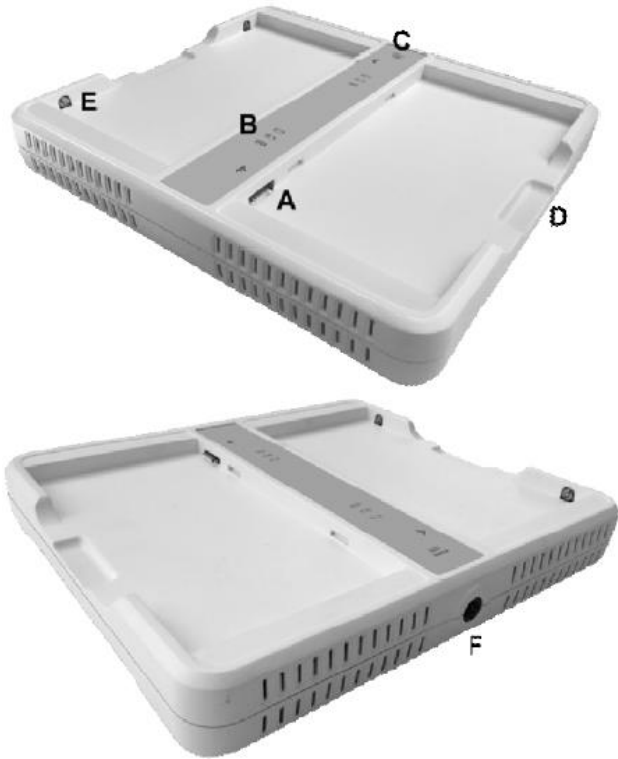
1.5.1 Synchronization Cable

Review the available signal wires in the following figures prior to connecting the generator synchronization cable.

Note: depending on generator setup, you may need to cut off the DB9 end and wire directly.



1.6 ViZion DR+ Wireless Panel Battery Charger



- A. **Battery interface:** 8-pin battery connector
- B. **Capacity indicator:** Charged capacity percentage of inserted battery from $\leq 30\%$ up to 100% (Figure 9)
- C. **Power indicator:** Green light displays when power is on
- D. **Hand pull position**
- E. **Limit ball plug**
- F. **DC Jack** (24V DC input)

1.6.1 Battery Charger Capacity Indicators

	No battery Insert
	Battery Insert with capacity $\leq 30\%$, charging
	Battery Insert with capacity $>30\%$ and $\leq 60\%$, charging
	Battery Insert with capacity $>60\%$ and $\leq 95\%$, charging
	Battery Insert with capacity $>95\%$ and charging, when capacity = 100%, charging can stop automatically

1.6.2 Connector Ports

It is alternatively possible to trickle charge the battery inside the panel, by connecting the DC power cable from the DC medical adapter power supply to the DC input of the detector.

To preconfigure the panel for alternate wireless connection modes and panel calibration, connect the Link cable to the mini-HDMI ethernet interface of the detector for a wired network connection.



1.7 Additional Components

- Battery Pack (2)



- DC Medical Adapter for Detector and Battery Charger



- AC Power Cable



- DC Power Cable



- Link Cable



- ASUS Dual-Band Wireless USB Adapter (option for mobile)



- TP-Link AC750 Wireless Travel Router Access Point (option for mobile)



2 Hardware Installation

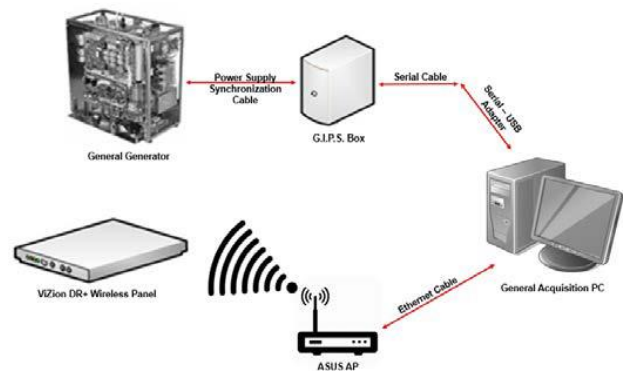
Now that you have verified the hardware, the next step is to connect all of the devices together. If you are uncertain whether or not you have all required hardware, please consult the equipment list, which can be located at the beginning of **Section 1**.

The following sections provide step-by-step instructions to complete the hardware installation. The connections between the various devices are more or less straightforward; however, only a qualified service technician should attempt to connect the synchronization cable to the generator and bucky interface.

The following diagrams illustrate the completed hardware installation. Note that this diagram does not take into account any connection to a corporate LAN.

2.1 Fixed Room Hardware Installation

The following diagram is an example of an **Integrated** hardware installation:



The following diagram is an example of a **Passive** hardware installation:



2.1.1 Connecting the Synchronization Cable

The power supply generator synchronization cable enables communication between the ViZion DR+ wireless detector and the X-ray generator to take place. One end of this cable connects directly to the G.I.P.S. box. The other end of the cable connects to the X-ray generator. Depending on the manufacturer and model of your X-ray generator, your synchronization cable may need to be retro-fitted with the appropriate adapter.

Connect the power supply synchronization cable.

1. Connect power supply synchronization cable to **Port 1** (either A or B depending on the expected voltage signal) on the G.I.P.S. box.
2. Connect the other end of the synchronization cable to your **Generator** (remote triggering device or bucky interface).

Note: You can find detailed information on connecting your cable to a specific generator in the appropriate appendix in the Engineering folder located on the desktop of the Ultra workstation.

2.1.2 Connecting the G.I.P.S Box to the Acquisition PC

To connect the G.I.P.S. box to the acquisition PC for integration:

1. Connect the 50' F-to-F serial cable to **Port 4** on the G.I.P.S. box.
2. Connect the other end of the 50' serial cable to the **serial-to-USB adapter**.
3. Plug the USB adapter end into one of the **USB ports** on the back of the acquisition PC.

2.1.3 Connecting the Acquisition PC to the Wireless Access Point

To connect the ASUS AP to the acquisition PC:

1. Connect the 75' Cat5 ethernet cable to one of the **Yellow Ports** on the back of the ASUS AP.
2. Connect the other end of the ethernet cable to the **Intel Gigabit CT Network Adapter** on the acquisition PC.

2.2 Mobile Hardware Installation

Begin by taking an inventory of the additional required equipment, which can be found at the end of **Section 1**.

2.2.1 SourceRay SR-130 Mobile X-Ray Unit

- Side view



- Console view



2.2.2 SourceRay SR-130 Accessory Cables

1. Connect the hand switch cable to the Generator Console (or directly to the tube head, depending on model X-ray unit being used).



2. The power cable connects the X-ray unit to a grounded wall outlet.



3 Network Installation

3.1 Fixed Room Network Configuration

After installing the hardware, configure the network address on the **Intel Gigabit CT PCI-e network adapter** (the add-on network card on the acquisition PC).

Note: the ViZion DR+ Wireless panel, acquisition PC, and ASUS access point, all come preconfigured. These instructions show how to configure the devices, as needed.

The goal is to ensure that each device can communicate with one another, which requires that they are configured on the same network segment.

The following network equipment is required for fixed room environments:

- ASUS Dual-Band Wi-Fi Gigabit AP



- 75' Cat5 Ethernet Cable



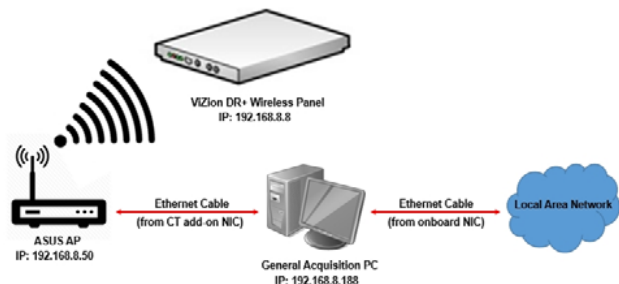
- Link Cable (to preconfigure the ViZion DR+ 1417V2 wireless panel)



You must first configure the IP address on the acquisition PC.

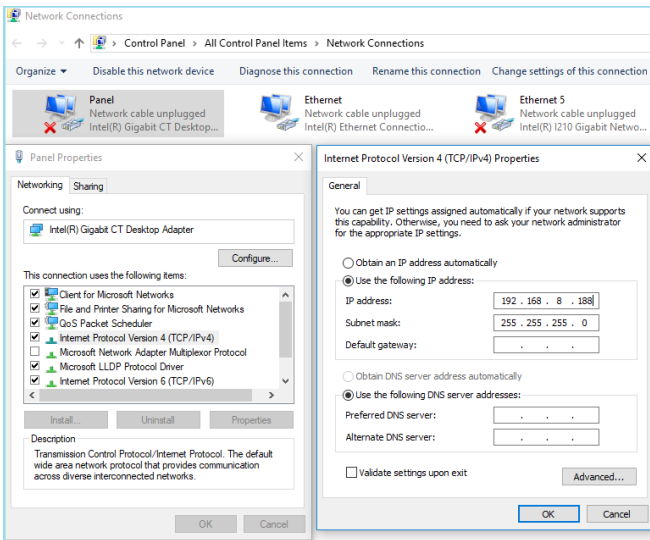
By default, the ViZion DR+ 1417V2 wireless panel will have an IP address hardcoded to **192.168.8.8**. The ASUS AP should be configured with an IP address of **192.168.8.50**. The CT network adapter on the PC should be configured with an IP address of **192.168.8.188**.

The following diagram illustrates a fixed room network environment.



3.1.1 Configure IP Address on the PC

1. From Control Panel, select Network Connections, and right-click on the CT network adapter and select **Properties**.
2. Select **Internet Protocol Version 4 (TCP/IPv4)** and click **Properties**.
3. Select **Use the following IP address** radio button.
4. Enter the following settings:
 - IP address **192.168.8.188**
 - Subnet mask **255.255.255.0**
5. Click **OK** to save the changes.



6. Connect the ethernet RJ-45 end of the **Link cable** to one of the **Yellow ports** on the ASUS Access Point.
7. Connect the mini-HDMI end of the **Link cable** to the **Link port** on the side of the panel.



8. Proceed to **Section 4**.

3.2 Mobile Network Configuration

For mobile environments, the panel can be put into **Client mode** (to connect the laptop to an external access point device, that the panel will connect to [recommended method]), or put in **AP mode** (to allow the panel to broadcast a wireless network, for the laptop to connect to [alternative method]).

3.2.1 ViZion DR+ 1417V2 Wireless Panel in Client Mode (Recommended method)

When the panel is in **Client mode**, the panel will connect automatically to the external TP-Link Access Point, using the laptop's LAN Ethernet adapter. For your internet connection, you will connect to any available Wi-Fi network using the laptop's internal wireless adapter.

Equipment required for Client mode:

- TP-Link AC750 Wireless Travel Router Access Point



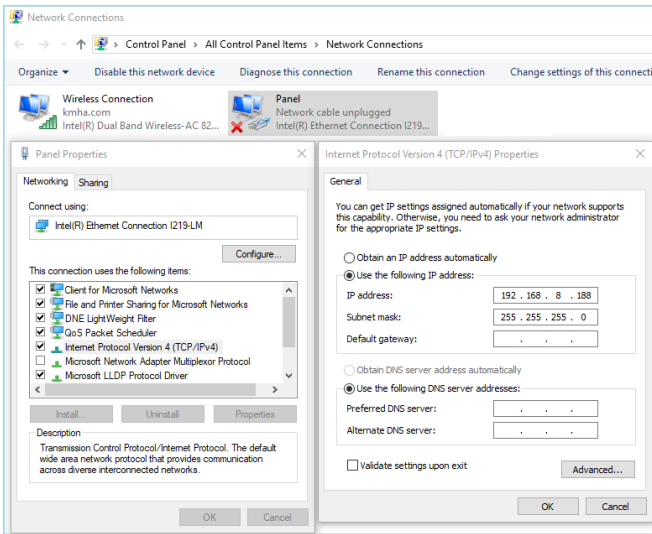
- Link Cable (to preconfigure the panel's wireless settings)



Note: you will configure the panel into Client mode later in **Section 4.7.2**, once you get to that part of the installation.

For now, we will configure the **LAN Ethernet network adapter** (without the TP-link AP connected), so the panel communicates wired via the **Link cable** during the installation.

1. From Control Panel, select Network Connections, and right-click on the **Intel Local Area Network Ethernet adapter** and select **Properties**.
2. Select **Internet Protocol Version 4 (TCP/IPv4)** and click **Properties**.
3. Select **Use the following IP address** radio button.
4. Enter the following settings:
 - IP address **192.168.8.188**
 - Subnet mask **255.255.255.0**
5. Click **OK** to save the changes.



6. Connect the ethernet RJ-45 end of the **Link cable** to the **LAN Ethernet port** on the laptop computer.
7. Connect the mini-HDMI end of the **Link cable** to the **Link port** on the side of the panel.



Note: follow the instructions below **AFTER COMPLETING ALL STEPS** in this installation manual. For now, leave the Link cable connected until installation is complete.

- Unpack the TP-Link AC750 AP.



- Make sure the mode switch on the side of the access point is set to **AP/Rng Ext/Client**.



- Connect the supplied **USB cable** from the laptop to the access point (supplies power to the device when plugged in).
- Connect the supplied **Cat5 Ethernet cable** from the laptop network adapter to the access point.



8. Proceed to **Section 4**.

3.2.2 ViZion DR+ 1417V2 Wireless Panel in AP Mode (Alternative method)

When the panel is in **AP mode** you will connect to the panel's broadcasted Wi-Fi network, (which will be named the same as the serial number of the panel), using the laptop's internal wireless adapter. For your internet connection, you will connect to any available Wi-Fi network using the external USB Wi-Fi adapter.

Equipment required for AP mode:

- ASUS Dual-Band Wi-Fi USB Adapter (used for the Wi-Fi Internet connection)



- Link Cable (to preconfigure the panel's wireless settings)

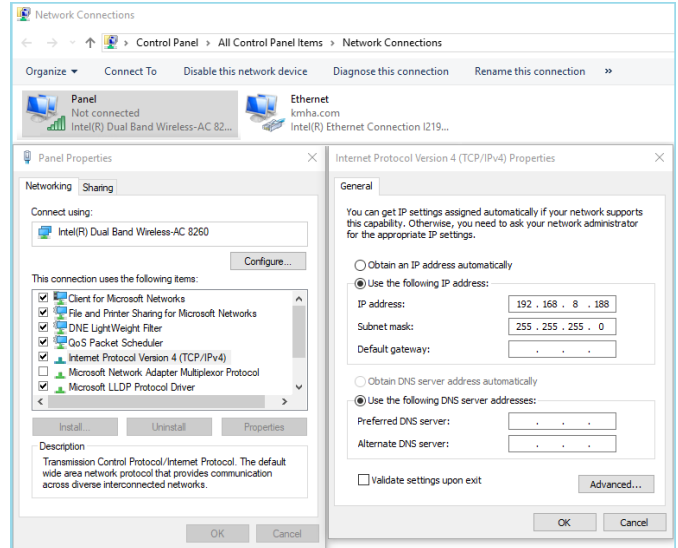


Note: you will configure the panel into AP mode later in **Section 4.7.3**, once you get to that part of the installation.

For now, during the installation, we need the Link cable connected to the LAN Ethernet port the same as in **Section 3.2.1**. Once the installation is complete, follow the steps below to configure the **Wireless network adapter** for use in wireless AP mode.

- From Control Panel, select Network Connections, and right-click on the **Intel Wireless adapter** and select **Properties**.
- Select **Internet Protocol Version 4 (TCP/IPv4)** and click **Properties**.
- Select **Use the following IP address** radio button.

- Enter the following settings:
 - IP address **192.168.8.188**
 - Subnet mask **255.255.255.0**
- Click **OK** to save the changes.



- But during the installation, we need to have the Link cable connected, so follow the steps in **Section 3.2.1** for now.
- Connect the ethernet RJ-45 end of the **Link cable** to the **LAN Ethernet port** on the laptop computer.
- Connect the mini-HDMI end of the **Link cable** to the **Link port** on the side of the panel.



- Plug in the **ASUS Dual-Band Wi-Fi USB Adapter** and wait for the drivers to install. This adapter will be used to connect to Wi-Fi networks for your internet connection. Driver software should install automatically or from CD.
- Proceed to **Section 4**.

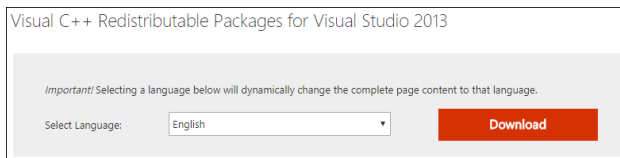
Software Installation and Configuration

4 Software Installation

4.1 Install Microsoft Visual C++ Redistributable

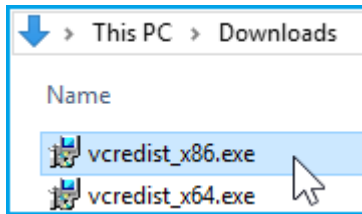
The ViZion DR+ 1417V2 panels require a prerequisite installation of **Microsoft Visual C++ Redistributable for Visual Studio 2013**, before installation of the Ultra software and latest venu driver packs.

1. Download the 32-bit and the 64-bit versions of the redistributable files. You will need to install both versions.

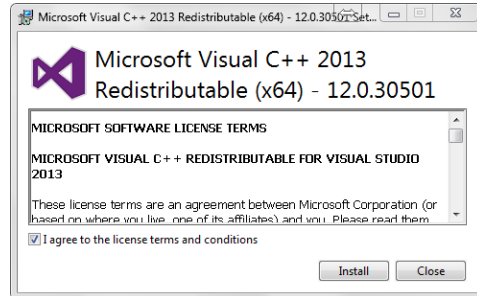


Choose the download you want	
File Name	Size
<input type="checkbox"/> vcredist_arm.exe	1.4 MB
<input checked="" type="checkbox"/> vcredist_x64.exe	6.9 MB
<input checked="" type="checkbox"/> vcredist_x86.exe	6.2 MB

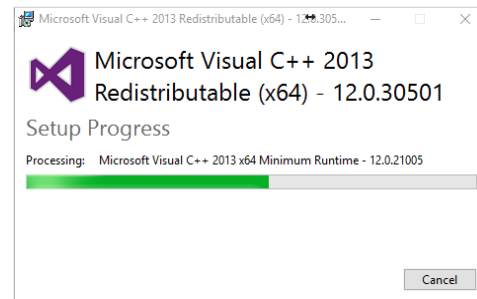
2. Start with installing the 32-bit executable file (x86):



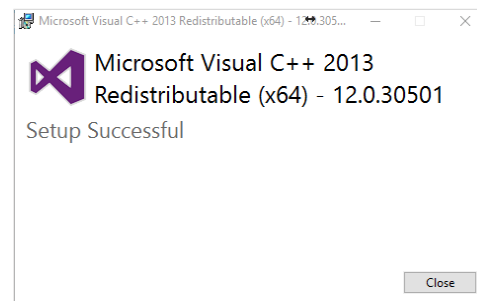
3. Check the box "I agree to the license terms and conditions" and click **Install**.



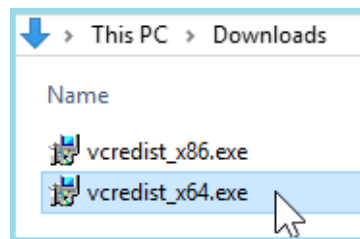
4. The installation usually takes less than 30 seconds.



5. When the installation has completed click **Close**.



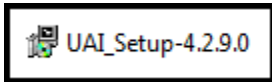
6. Now install the 64-bit executable file (x64) in the same manner.



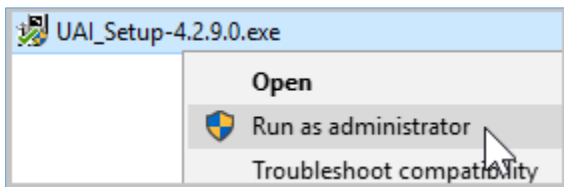
4.2 Installation of Ultra Software

All released versions of the Ultra installer files can be downloaded from the Konica Minolta FTP site.

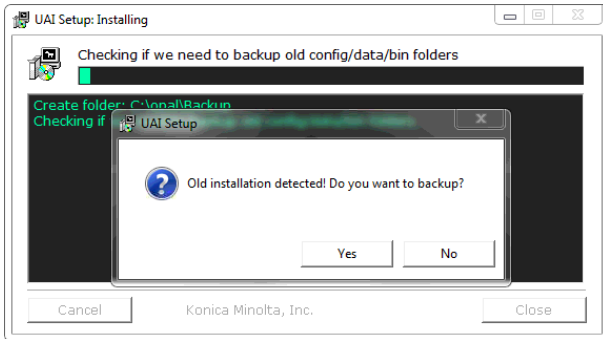
1. Download UAI_Setup version 4.2.9.0 installer file to the desktop of the acquisition PC.



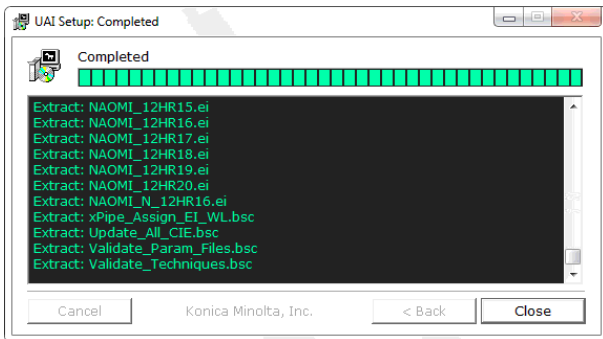
2. Right-click the file and select **Run as Administrator**.



3. Click **Yes** when prompted for “Do you want to backup?”.



4. When the installation has completed, click **Close**.



4.3 Configuration of Ultra Software

1. Double-click on the **Ultra** icon to launch the software.



2. If this is a new installation, you will be presented with a prompt informing you that this is the first time you have run Ultra. Click **OK** to proceed.

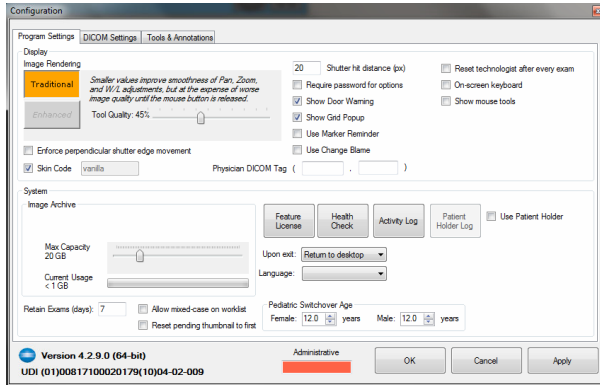


3. Click the **Options** icon in the top corner of the Ultra Worklist screen.

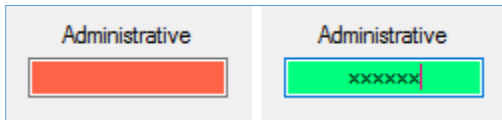


4.3.1 Activate Administrative Options

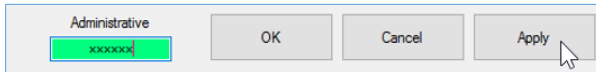
1. If this is a brand new install, the Configuration screen will have limited options, until you enter a valid **Administrative** password.



2. Enter the password **adc4me** in the orange colored “Administrative” box. The box will change to green when a valid password has been entered.



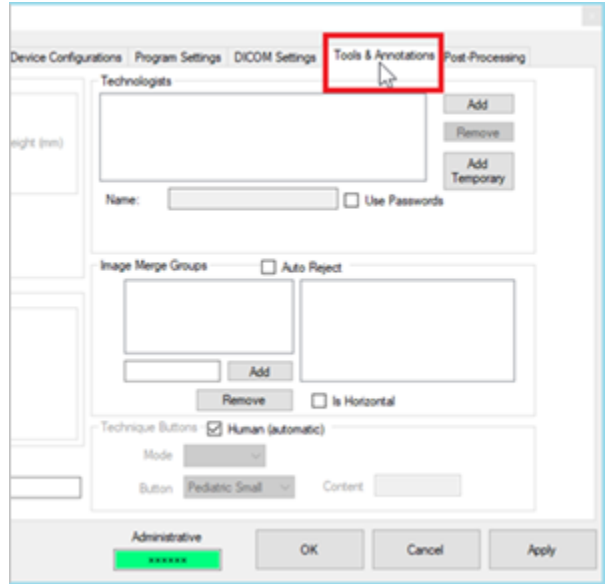
3. After entering the password, click **Apply** to activate all the all administrative configuration options.



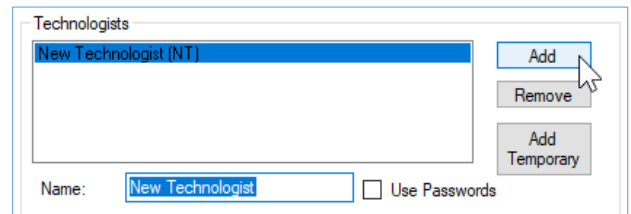
4.3.2 Create Technologists (Ultra Only)

For DR technician support purposes, add a new technologist for “Konica Minolta (KM)”. If you know the site technologist’s names, you can also add those at this time.

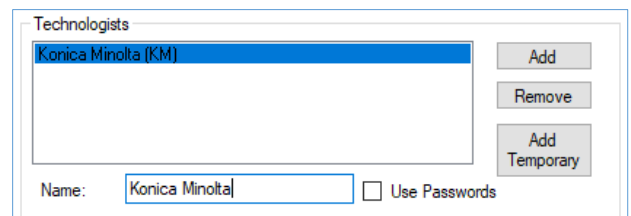
1. Click on the **Tools & Annotations** tab.



2. Click on the **Add** button under the “Technologists” section.



3. Change the default name in the “Name” field to **Konica Minolta** and click the **Apply** button.



4.4 Device Licensing

For panel, generator or positioner device licensing, contact Konica Minolta DR Support.

4.5 Device Driver Installation

The ViZion DR+ 1417V2 wireless panel uses a different SDK version than 1417V panels, and it is only compatible with **Ultra UAI versions 4.2.9.0 or higher**, which introduces a selection for Third Generation Venu drivers.

Note: the Venu Drivers Generation selection setting is located in the Developer tab under Options menu.

ViZion DR+ 1417P, 1417P1, 1717M and 1717M2 panels should be configured to use First Generation Venu drivers.

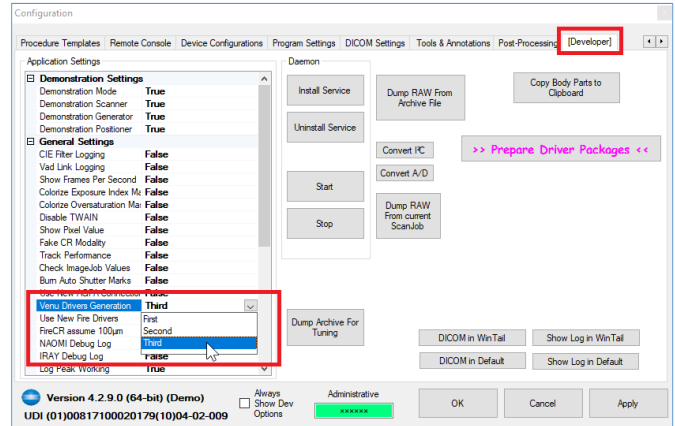
ViZion DR+ 1417V and 1717M2.5 panels should be configured to use Second Generation Venu drivers.

ViZion DR+ 1417V2 and 1012V2 panels should be configured to use Third Generation Venu drivers.

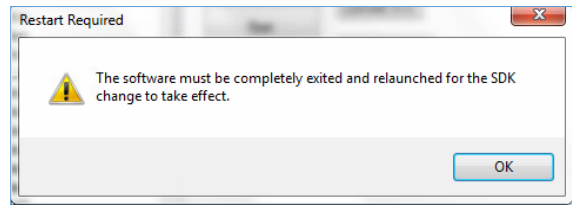
1. Before installing the new venu driver pack, double-click on the **Konica Minolta logo**, located in the bottom left corner of the **Options** menu. This action will display the Developer tab in the upper right corner.



2. Select the **Developer** tab and select the drop down next to **Venu Drivers Generation** and select **Third**.



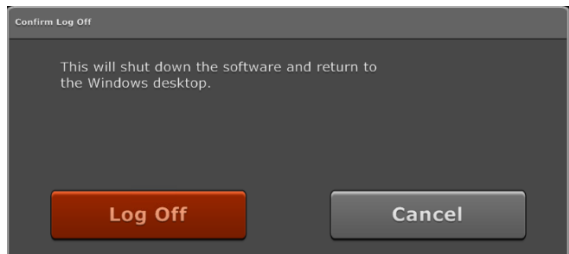
3. Click **Apply**, and then click **OK** to the message that pops up.



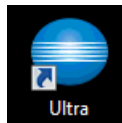
4. Click **OK** to exit Option menu, and then click the **Log Off** icon in the top right corner to exit Ultra.



5. Confirm by clicking the **Log Off** button.



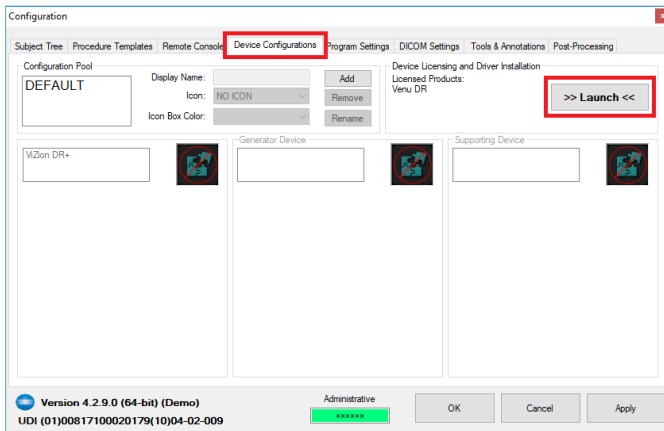
4. Double-click on the **Ultra** icon to relaunch the software.



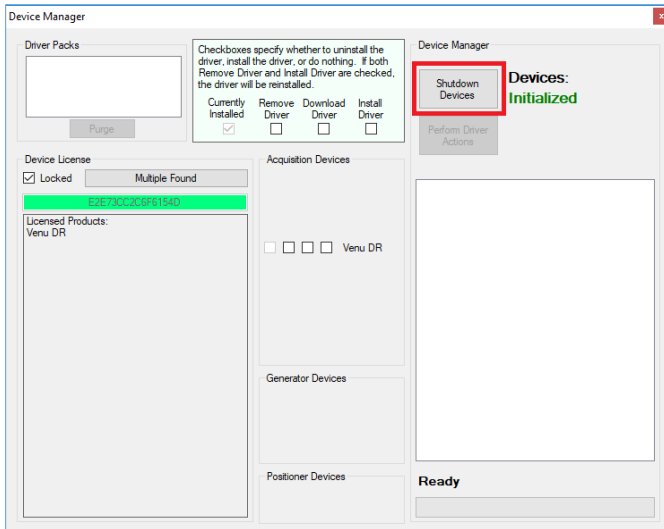
- Click the **Options** icon in the top corner of the Ultra Worklist screen.



- Select the **Device Configurations** tab and select the **Launch** button.

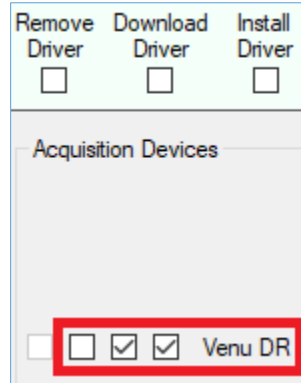


- This will launch the Device Manager window. Click the **Shutdown Devices** button.



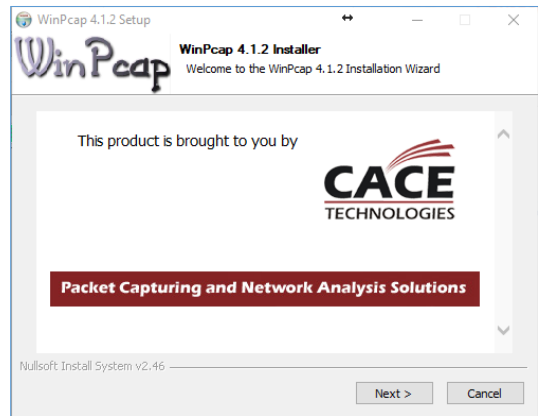
- Wait until the **Devices** status changes from **Initialized** to **Shutdown**.

- After shutting down devices, check the boxes for **Download Driver** and **Install Driver** next to Venu DR (in the middle of the Device Manager window).

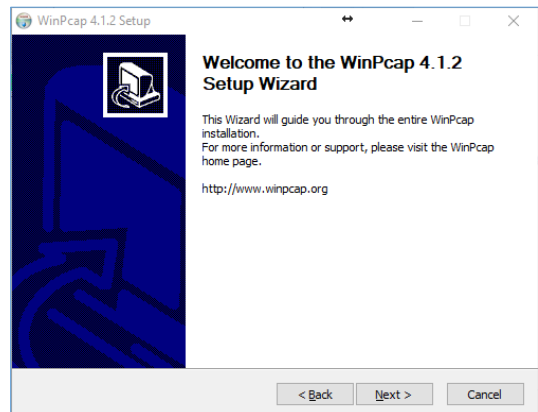


- Click the **Perform Driver Actions** button and it will proceed to download the venu driver pack.

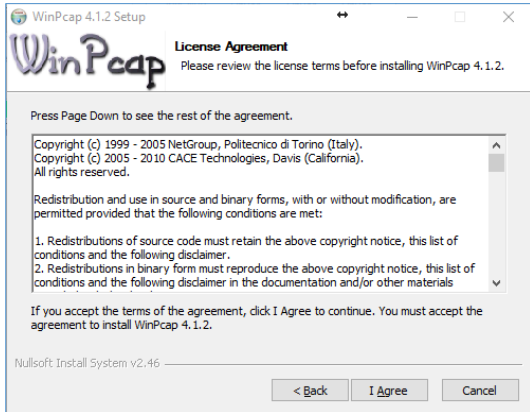
- Click **Next** for the WinPcap installation wizard.



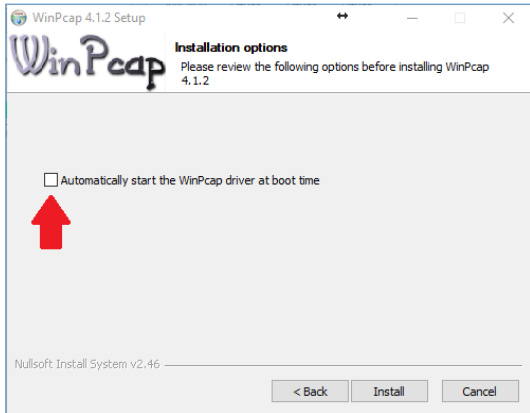
- Click **Next**.



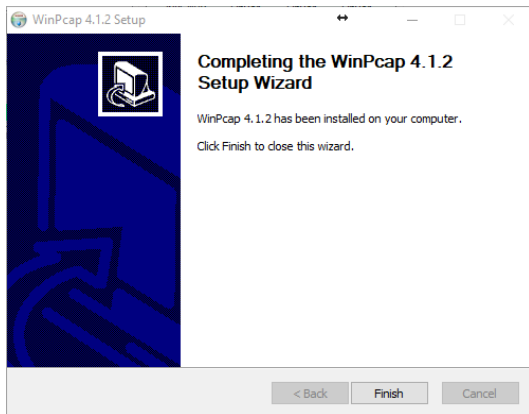
13. Click on **I Agree**.



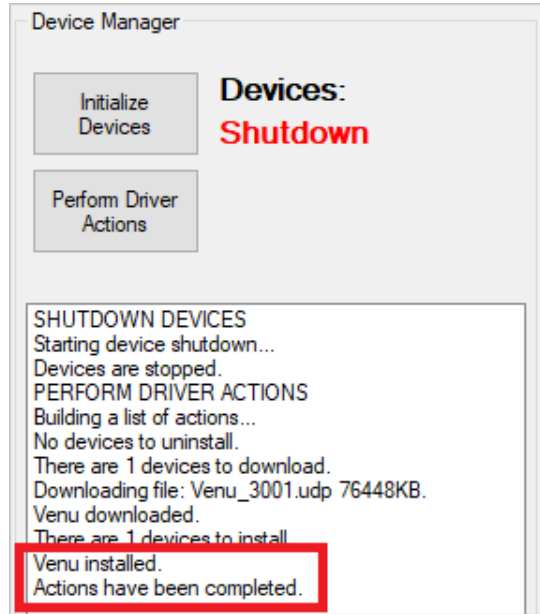
14. **Uncheck** the box for “Automatically start the WinPcap driver at boot time” and then click **Install**.



15. Click **Finish** and wait for the driver installation to complete.

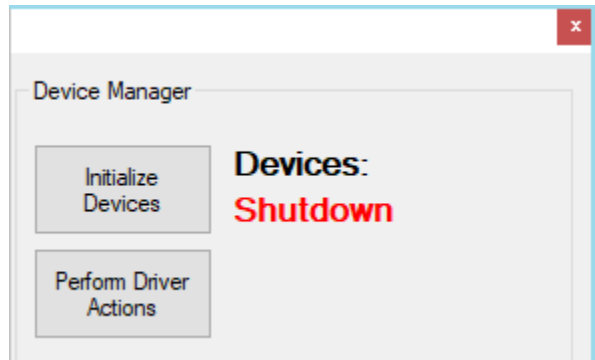


16. Once completed you should verify that **Venu** installed.



Note: if it shows “Venu failed”, instead of “Venu Installed”, the download did not fully transfer or got corrupted during download. Check to make sure Windows Firewall is disabled and AV is excluding the C:\opal folder. Then rerun the driver download and install again.

17. Click **Initialize Devices** and exit the Device Manager window by clicking the red **X** in the top corner.



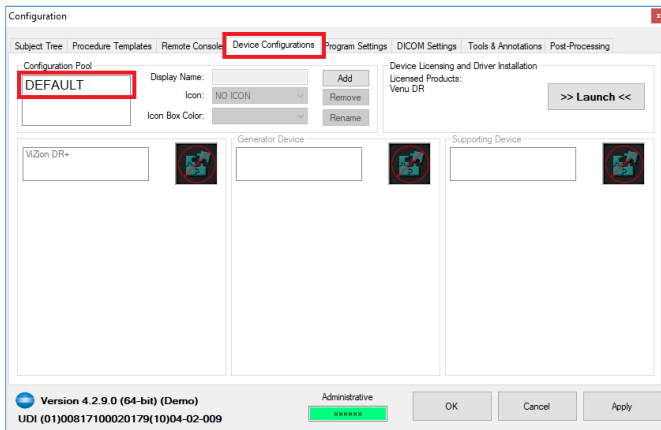
18. The **Devices** status will change from **Shutdown** to **Initialized** when completed.

4.6 Device Pool Configuration

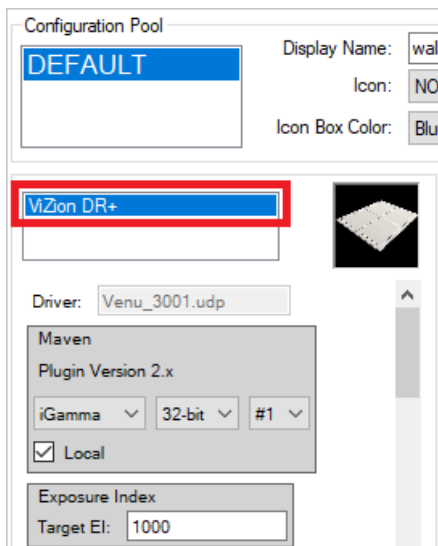
After successful driver pack installation, it is time to configure the device settings for the ViZion DR+ 1417V2 wireless panel.

Before performing the following steps, make sure the wireless panel is powered on, with a fully charged battery, and connected with the Link cable.

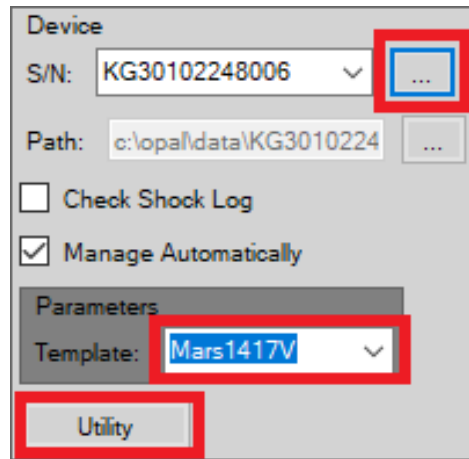
1. After closing the Device Manager window you should be back at the Options menu with the **Device Configurations** tab selected.
2. Click to highlight **DEFAULT** under the "Configuration Pool" section.



3. Click on **ViZion DR+** and the panel device configuration section will appear below it.



4. Scroll down to the **Device** section and click the button with **3 dots**, to the right of "S/N" field. This will perform a scan and automatically populate the S/N and Path fields.
5. By default "Check Shock Log" is unchecked and "Manage Automatically" is checked.
6. Select the drop down next to "Parameters Template" and choose **Mars1417V**.
7. Finally, click on the **Utility** button to open the iDetector interface.



Note: after clicking on Utility, the Maven software will shutdown communication between the panel and the Ultra UAI software and close, and then iDetector software will launch automatically as a popup window and begin communication with the panel. Settings inside the panel can then be changed or panel calibrated.

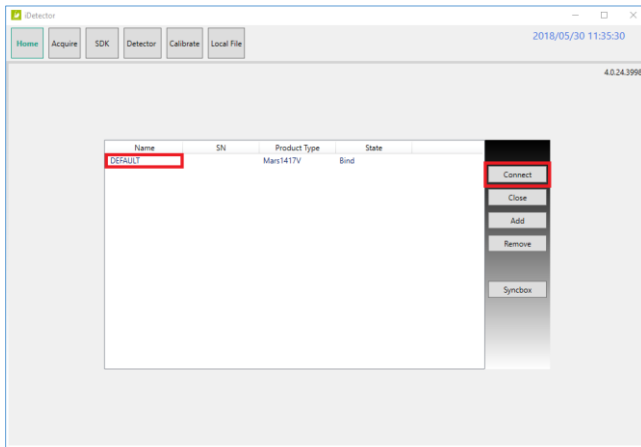
4.7 iDetector Interface

After clicking the **Utility** button under the panel's Device settings, the iDetector interface window will open.

4.7.1 Trigger Mode Configuration

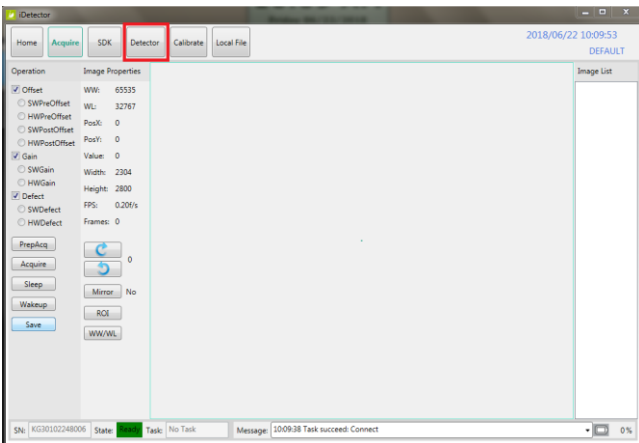
The ViZion DR+ 1417V2 wireless panel should **always** be set to FreeSync trigger mode.

1. Click to highlight **DEFAULT** under the name column and then click the **Connect** button.

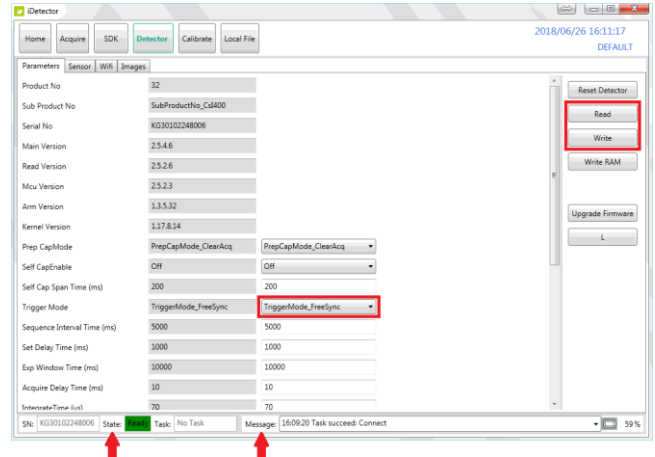


Warning: before exiting iDetector, **DO NOT CLICK THE RED X** in the top right corner, without first going to the **Home** tab, to click **Close**, and to select the **Override** option.

2. The Acquire tab is selected by default when you first connect to the panel in iDetector. Click on the **Detector** tab.



3. On the Detector tab, confirm that Trigger mode is set to **TriggerMode_FreeSync**. If it is already set, skip to the next section for Wi-Fi configuration of the panel.
4. If the panel was in a different mode, change it to **TriggerMode_FreeSync**.
5. Click **Write** and wait for the "State" at the bottom to change back to **Ready** highlighted in green.
6. Click **Write ROM** and wait for the "State" at the bottom to change back to **Ready** highlighted in green and verify that the "Message" at the bottom of the screen shows success for the action.

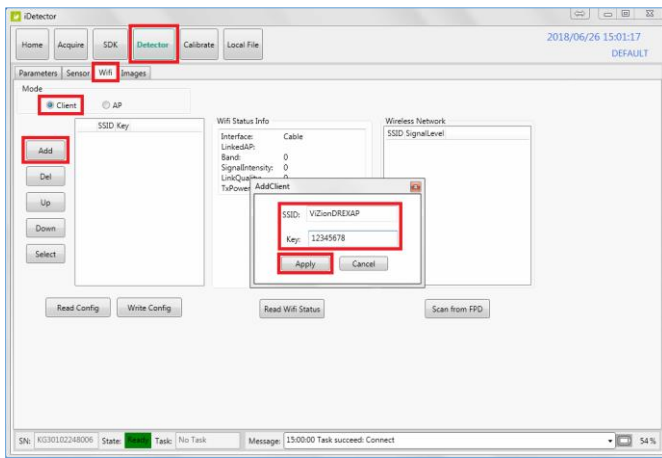


Note: the ViZionDREXAP 1417V2 wireless panel needs to **always be configured in FreeSync trigger mode** in order to function properly in the Ultra UAI software. The panel exposure is achieved when dose is sensed by the AED sensor in the panel. FreeSync opens an exposure window for an infinite time period, when the panel is activated (when clicking the Acquire button in Ultra UAI or when using the generator hand switch with an interfaced generator).

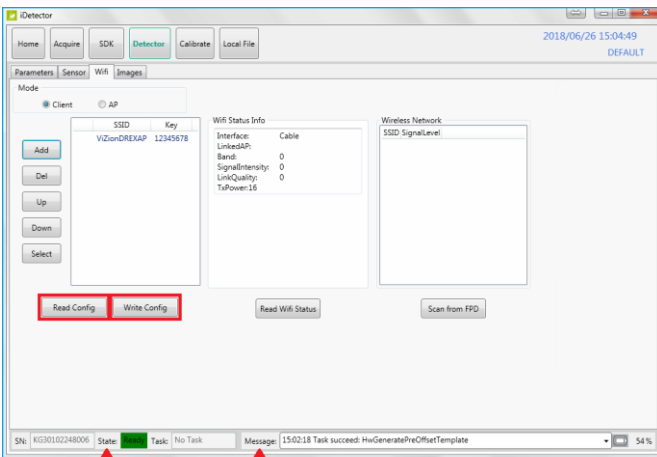
Select 1 of the 2 following wireless methods:

4.7.2 Wi-Fi Configuration in Client Mode (Recommended connection method)

1. Within the **Detector** tab, click on the **Wifi** tab and select **Client** mode.
2. Click **Add** button and enter the following info in the popup dialog box fields:
 - SSID = **ViZionDREXAP**
 - Key = **12345678**
3. Then click **Apply** button.



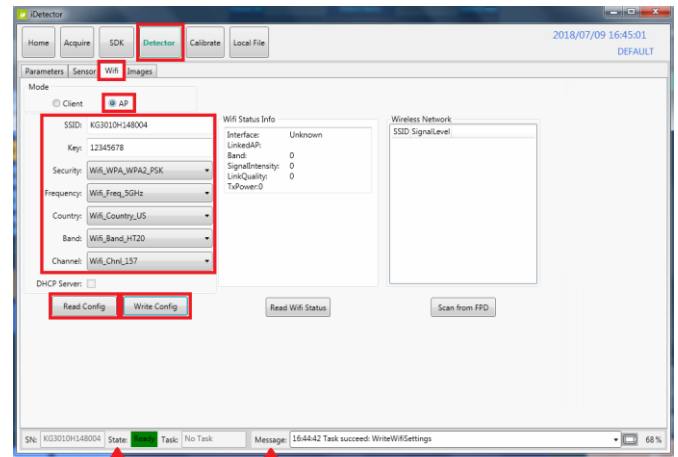
4. Click **Read Config** button, and then click **Write Config** button to save the wifi setting into panel's ROM memory.



5. Wait for the "State" at the bottom to change back to **Ready** highlighted in green and verify "Message" at the bottom of the screen shows success.

4.7.3 Wi-Fi Configuration in AP Mode (Alternative connection method)

1. Within the **Detector** tab, click on the **Wifi** tab and select **AP** mode.
2. Click **Add** button and configure the fields with the following info:
 - **SSID** = enter the serial number for the panel. (It is printed on the bar code label on the back of the panel)
 - **Key** = 12345678
 - **Security** = Wifi_WPA_WPA2_PSK
 - **Frequency** = Wifi_Freq_5GHz
 - **Country** = Wifi_Country_US
 - **Band** = Wifi_Band_HT20
 - **Channel** = Wifi_Chnl_157
3. Click **Read Config** button, and then click **Write Config** button to save the wifi settings into panel's ROM memory.

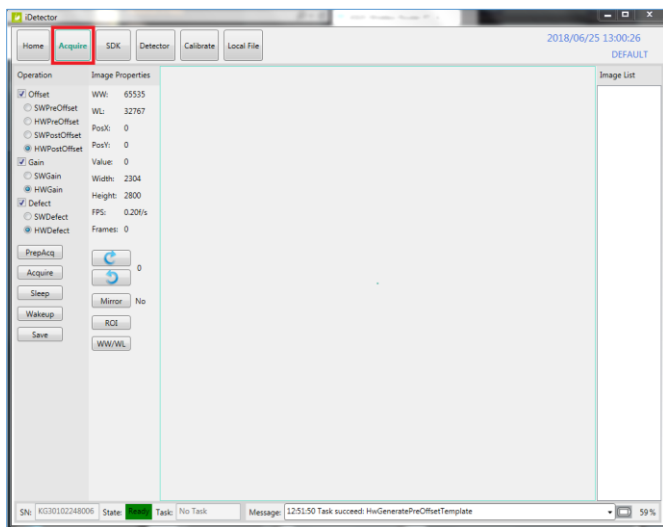


4. Wait for the "State" at the bottom to change back to **Ready** highlighted in green and verify "Message" at the bottom of the screen shows success.

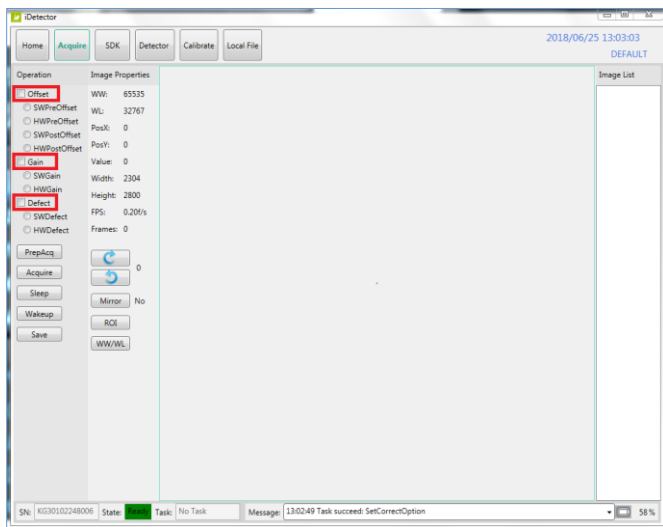
Note: continue to next section for **Panel Calibration**, if needed. Or if you are ready to exit at this time, skip to **Section 4.7.9** for instructions on **Exiting iDetector** software, in order to properly sync the new changes with Ultra UAI.

4.7.4 Panel Calibration Setup

1. Select the **Acquire** tab in iDetector.

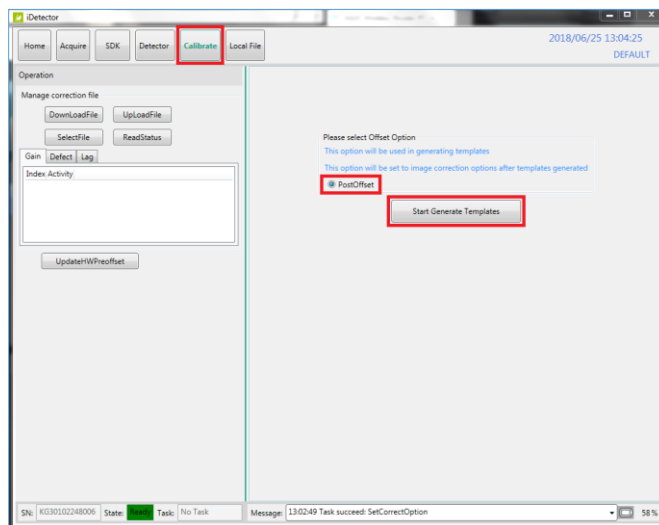


2. Uncheck the **Defect**, **Gain**, and **Offset** checkboxes **in that order**.



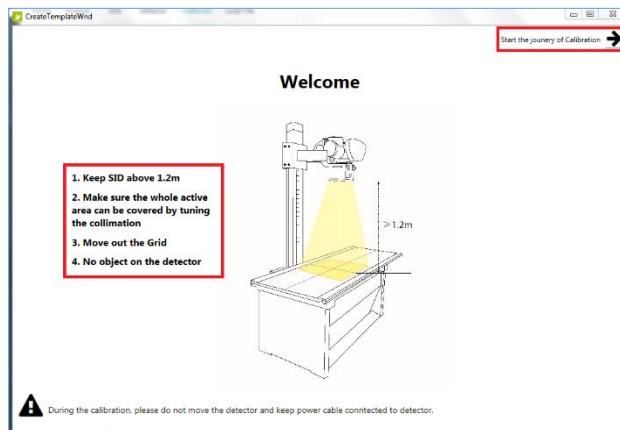
Note: during the calibration, please do not move the detector once calibration has been started and keep Link cable connected to the detector.

3. Select the **Calibrate** tab, check the radio button for **PostOffset**, and click the **Start Generate Templates** button.

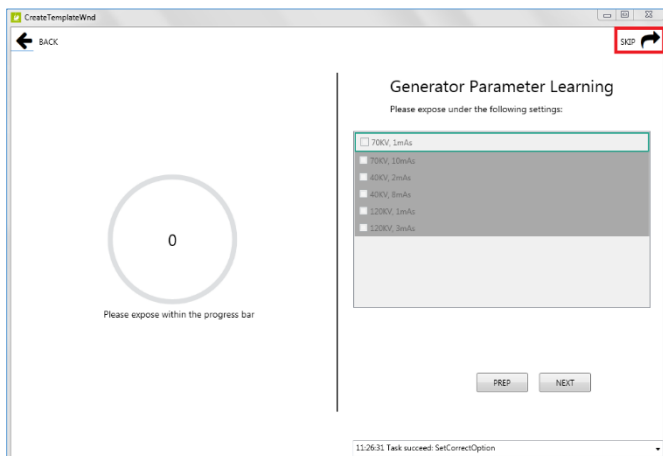


The Calibration wizard will open into a new window, presenting the **Welcome** screen.

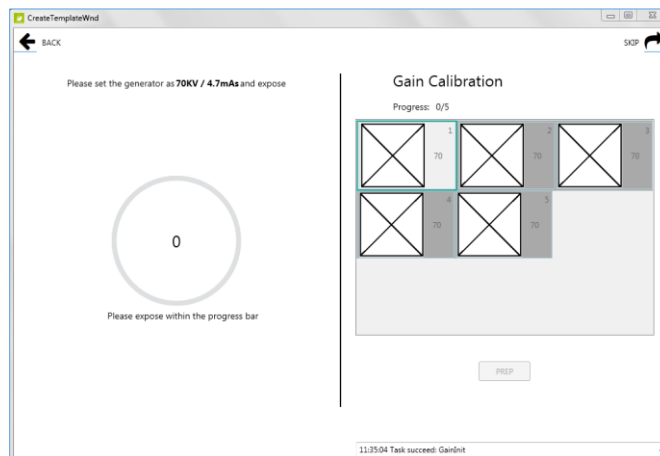
4. Set X-ray environment:
 - **Tube SID = 50"** or higher (at least greater than 47").
 - **No Collimation** = open collimator blades at least 1" past the edges of the panel on all sides.
 - **No Grid** = remove any grid or pressure grid cover.
 - **No Objects** = remove any objects from the surface of the panel.
5. Click the arrow in the top right corner labeled **Start the journey of Calibration**.



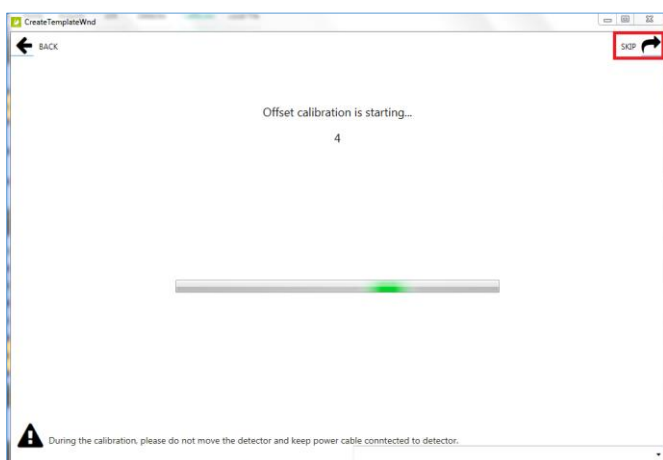
- Click **Skip**, in the top right corner, at the **Generator Parameter Learning** screen



- Set your techniques to **70kV / 4.7 mAs** and take your **first** exposure.



- Click **Skip**, in the top right corner, at the **Offset Calibration** screen.

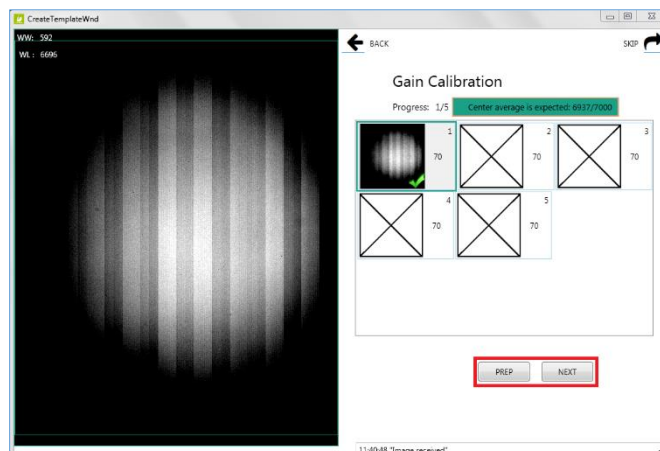


Note: after taking an exposure, the current gain exposure frame will still be surrounded in green. It will either have a green checkmark, if it was successful, or a yellow exclamation point, if it was not within 100 +/- of the expected center average of 7000.

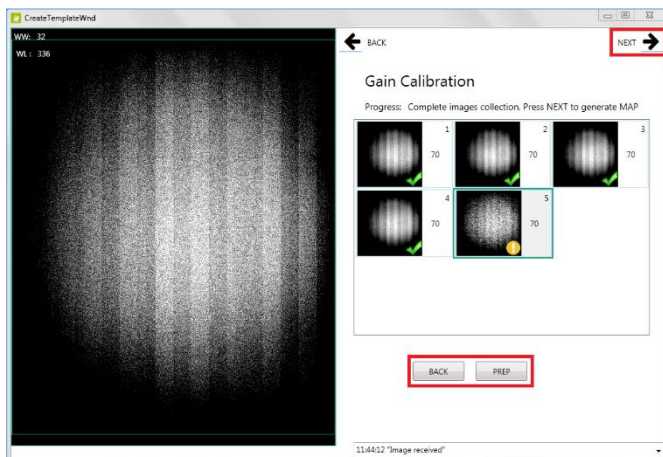
- If the exposure was NOT acceptable (message in yellow), adjust your mAs up or down, click the **Prep** button, and take another exposure.
- If the exposure was acceptable (message in green), click the **Next** button to move to the next frame.

4.7.5 Panel Gain Calibration

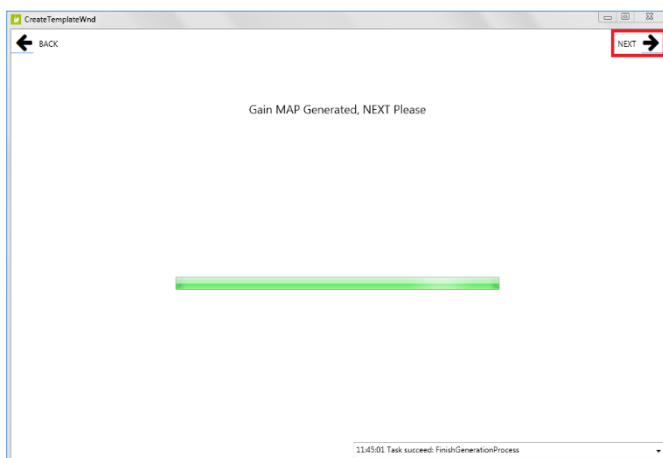
Note: the Gain Calibration screen requires 5 exposures. The left-hand side of the screen tells you the suggested kV and mAs to use for the current exposure. The right-hand side of the screen is divided into 5 blank gain exposure frame icons. Each exposure frame is numbered sequentially, with the kV to use noted next to each one. A green box surrounds the current exposure frame.



- After taking all 5 gain exposures, click the **Back** button if you want to retake any previous exposures, then click **Prep** and retake the exposure. Otherwise, if you are satisfied with all exposures, click the **Next** button in the top right corner.



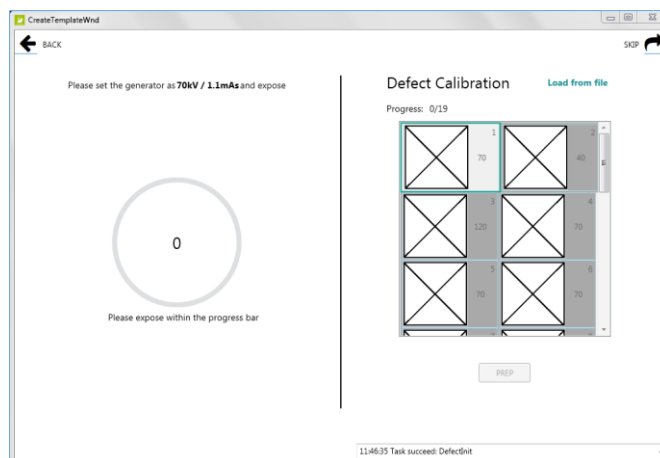
- Wait for the **Gain Map Generation** to complete and then click **Next**.



4.7.6 Panel Defect Calibration

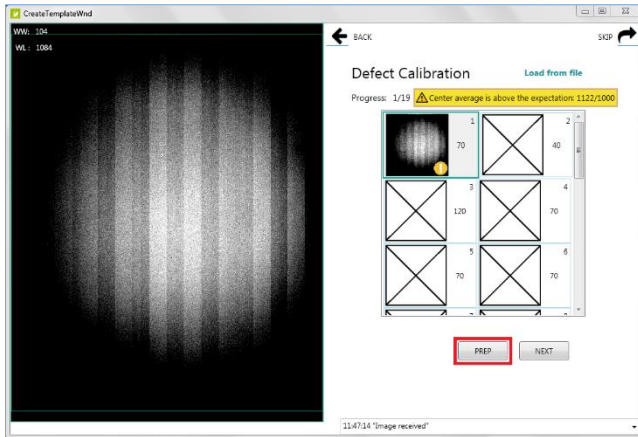
Note: the Defect Calibration screen requires 19 exposures. The left-hand side of the screen tells you the suggested kV and mAs to use for the current exposure. The right-hand side of the screen is divided into 19 blank defect exposure frame icons. Each exposure frame is numbered sequentially, with the kV to use noted next to each one. A green box surrounds the current exposure frame.

- Set your techniques to **70kV / 1.1 mAs** and take your **first** exposure.

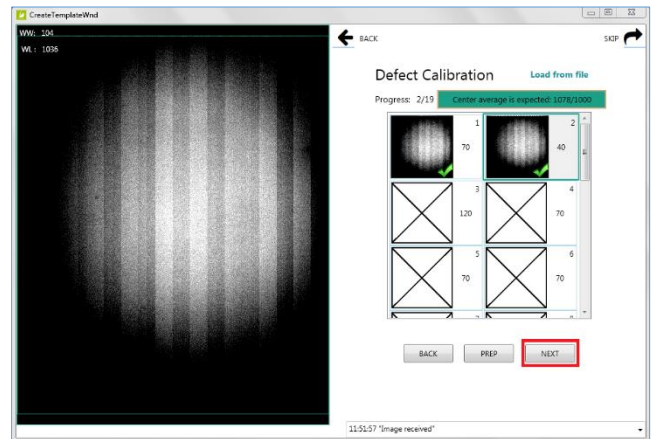


Note: after taking the first exposure, the current defect exposure frame will still be surrounded in green. It will either have a green checkmark, if it was successful, or a yellow exclamation point, if it was not within 100 +/- of the expected center average of 1000.

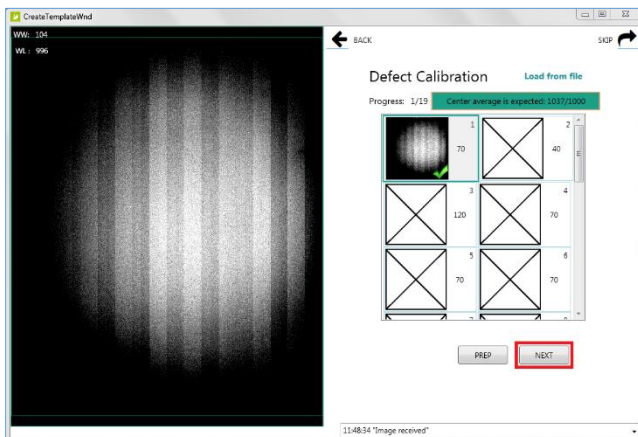
14. If the exposure was NOT acceptable (message in yellow), adjust mAs up or down, click the **Prep** button, and take another exposure.



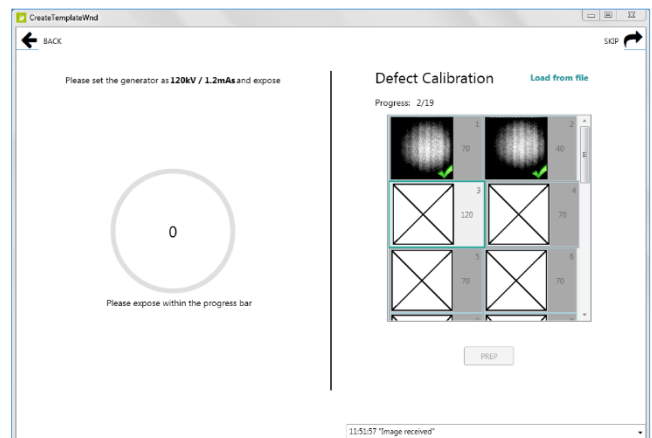
17. If the exposure was acceptable, click **Next** to move to the next frame.



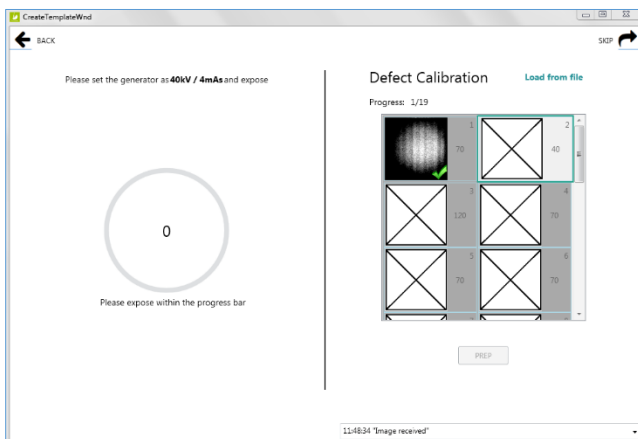
15. If the exposure was acceptable (message in green), click the **Next** button to move to the next frame.



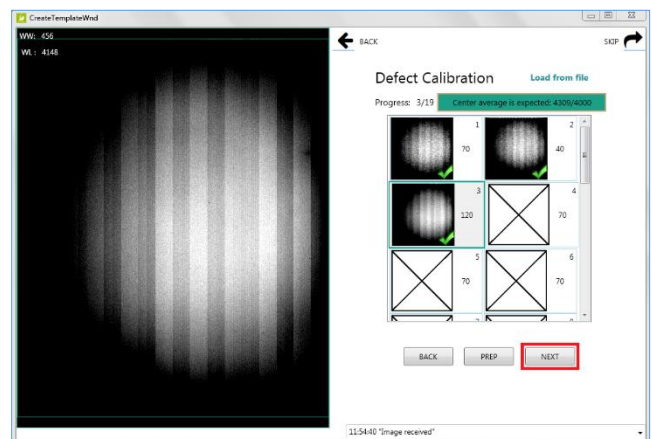
18. Set your techniques to **120kV / 1.2mAs** and take your **third** exposure.



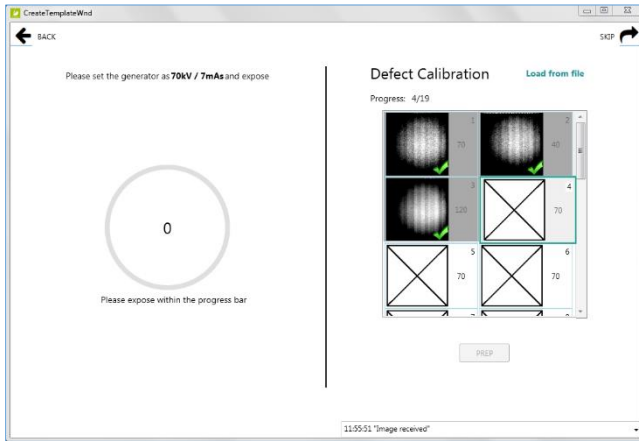
16. Set your techniques to **40kV / 4mAs** and take your **second** exposure.



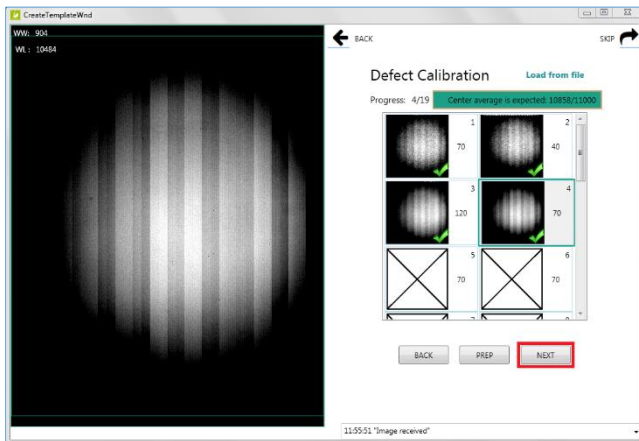
19. If the exposure was acceptable, click **Next** to move to the next frame.



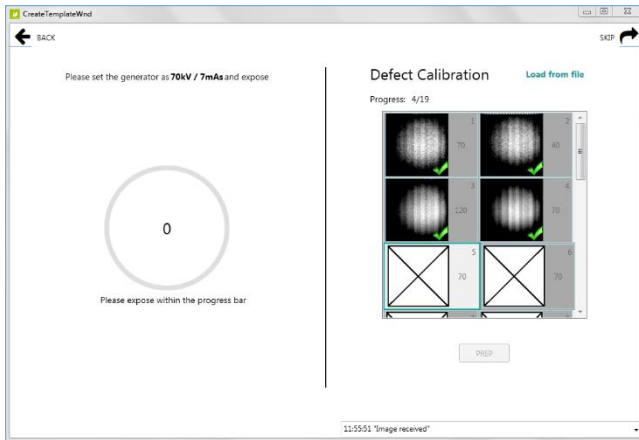
20. Set your techniques to **70kV / 7mAs** and take your **fourth** exposure.



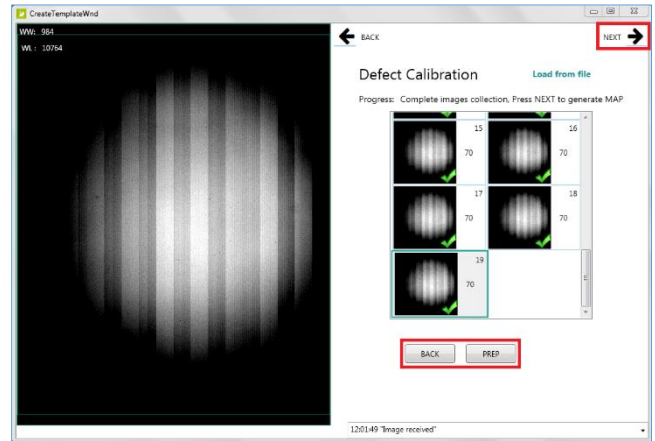
21. If the exposure was acceptable, click **Next** to move to the next frame.



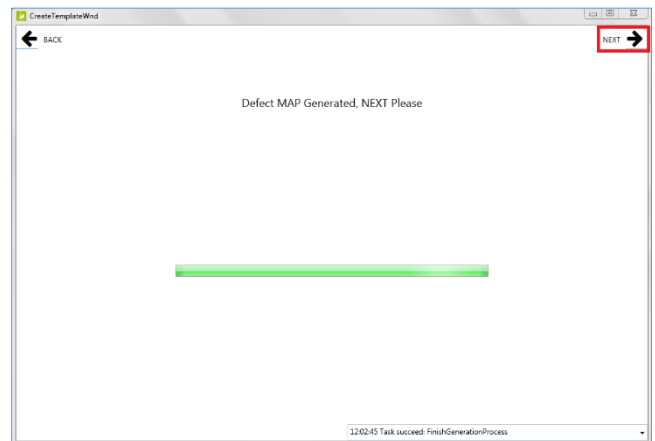
22. Continue to take exposures with techniques set to **70kV / 7mAs** for the remaining frames (5-19).



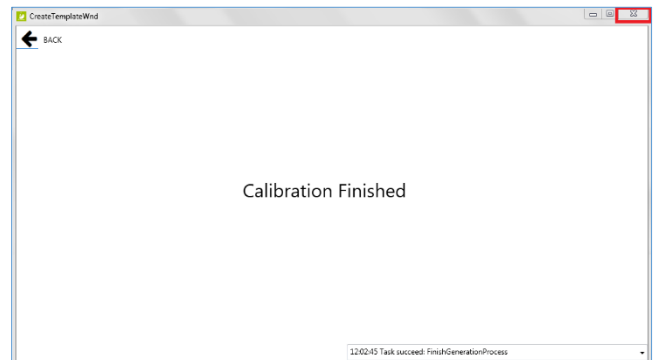
23. After taking all 19 defect exposures, click the **Back** button if you want to retake any previous exposures, then click **Prep** and retake the exposure. Otherwise, if you are satisfied with all exposures, click the **Next** button in the top right corner.



24. Wait for the **Defect Map Generation** to complete and then click **Next**.



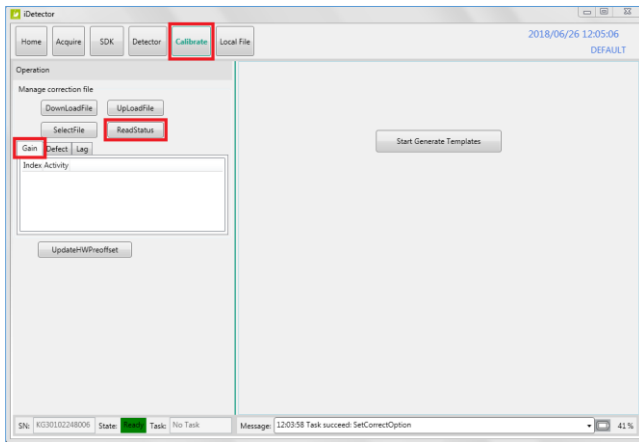
25. Calibration is complete. **Close** the window by clicking **X** in top right corner.



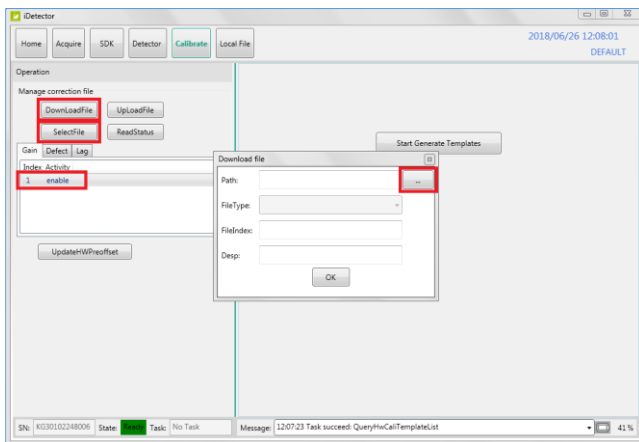
4.7.7 Download the Calibration Files to the Panel

After closing the Calibration window, you will be back where you left off, at the iDetector **Calibrate** tab. Now we need to download the new calibration files to the panel.

1. Within the Calibrate tab, click on the **Gain** tab, then click the **ReadStatus** button.

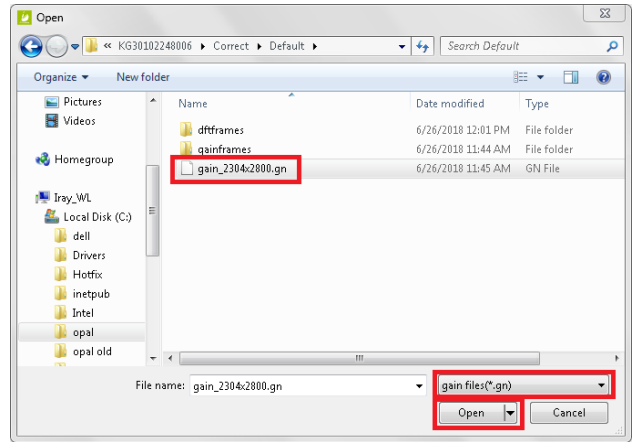


2. Highlight **Index 1**, then click the **SelectFile** button. This will change the Index 1 status to enable.
3. Click the **DownloadFile** button, and then click the **Path** button from the popup window.

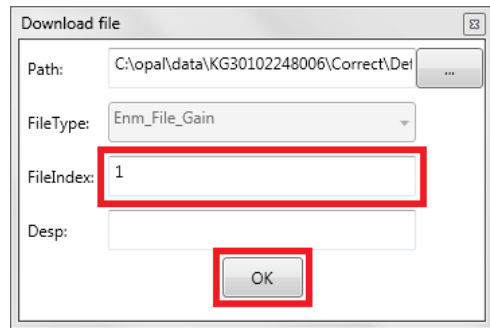


4. Browse to the C:\opal\data\KGxxxxxxx\Correct\Default folder and select the **gain_2304x2800.gn** file and click **Open**.

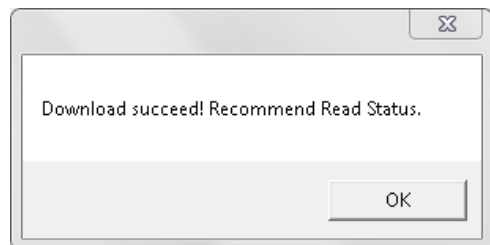
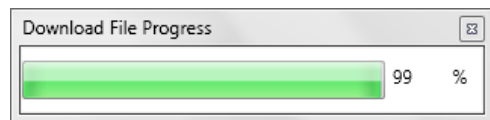
Note: if the gain file does not appear, verify the file type dropdown is set to **gain files(*.gn)**.



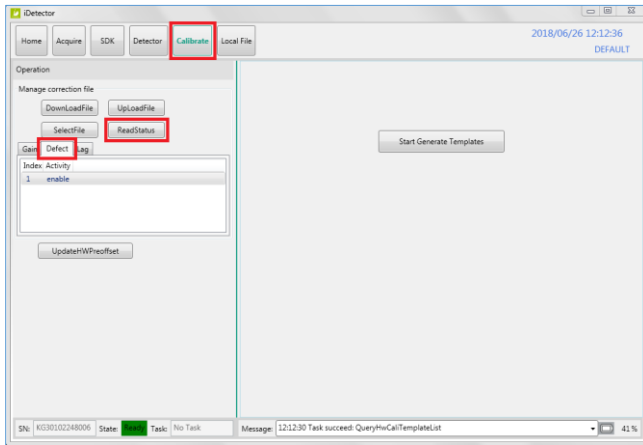
5. Type **1** in the **FileIndex** field and then click **OK**.



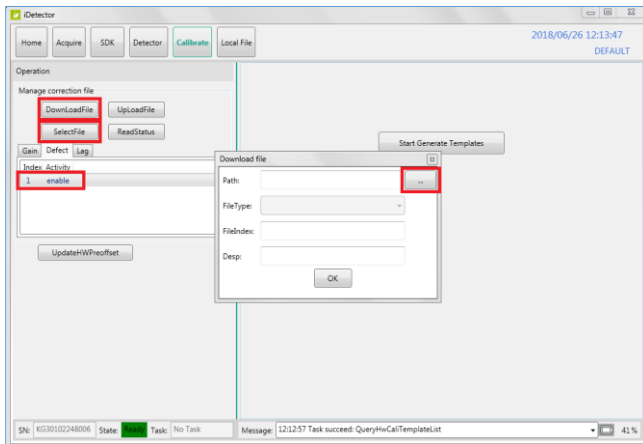
6. After the gain file has been downloaded to the panel. Click **OK**.



7. Within the Calibrate tab, click on the **Defect** tab, then click the **ReadStatus** button.

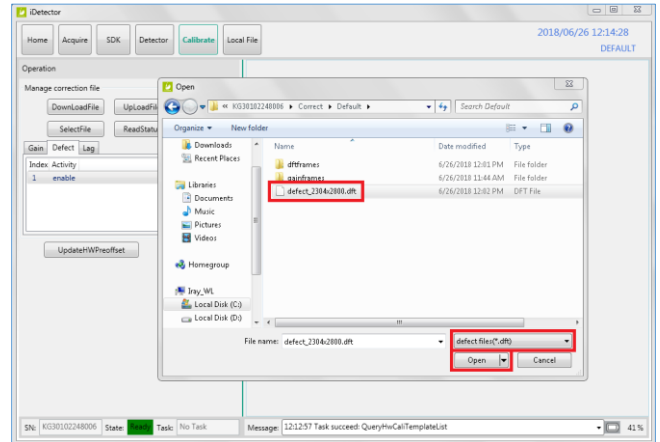


8. Highlight **Index 1**, then click the **SelectFile** button. This will change the Index 1 status to enable.
9. Click the **DownloadFile** button, and then click the **Path** button from the popup window.

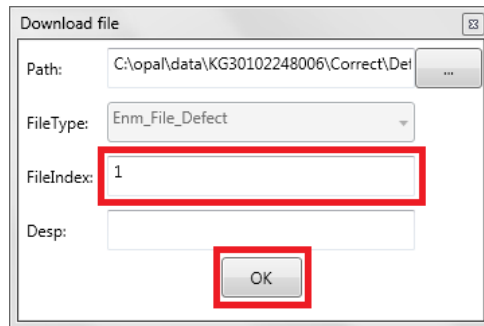


10. Browse to the C:\opa\data\KGxxxxxxx\Correct \Default folder and select the **defect_2304x2800.gn** file. Click **Open**.

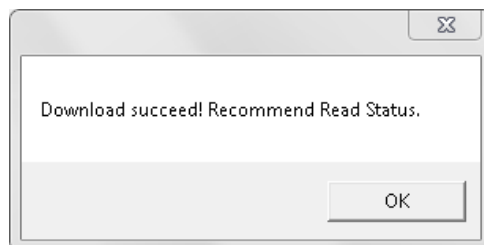
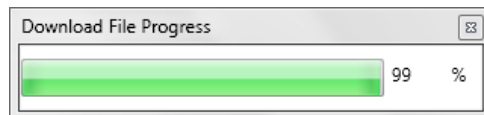
Note: if the defect file does not appear, verify the file type dropdown is set to **defect files (*.dft)**.



11. Type **1** in the **FileIndex** field and then click **OK**.

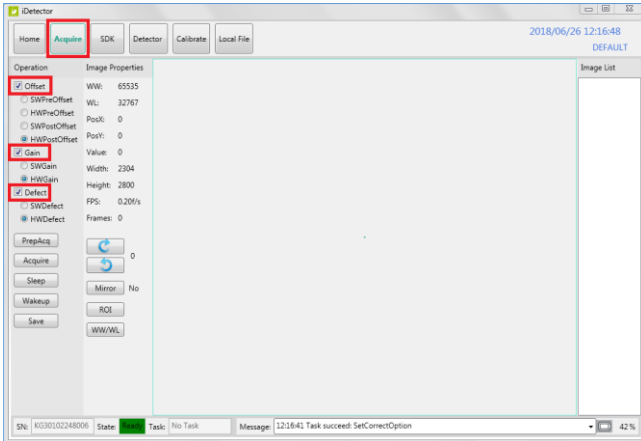


12. After the defect file has been downloaded to the panel. Click **OK**.

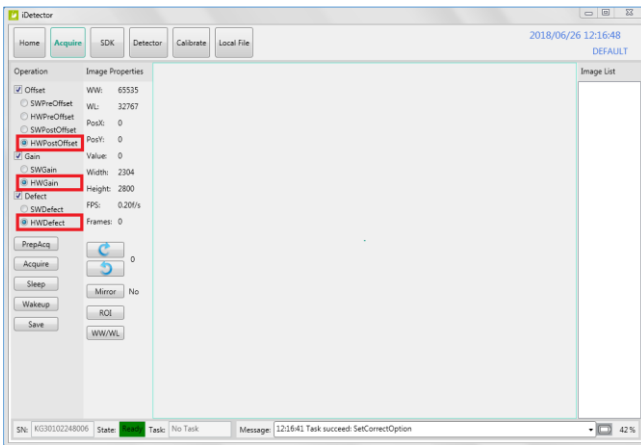


4.7.8 Re-enabling the Calibration Operation Options

13. Select the Acquire tab and check the **Offset, Gain and Defect** checkboxes in that order.



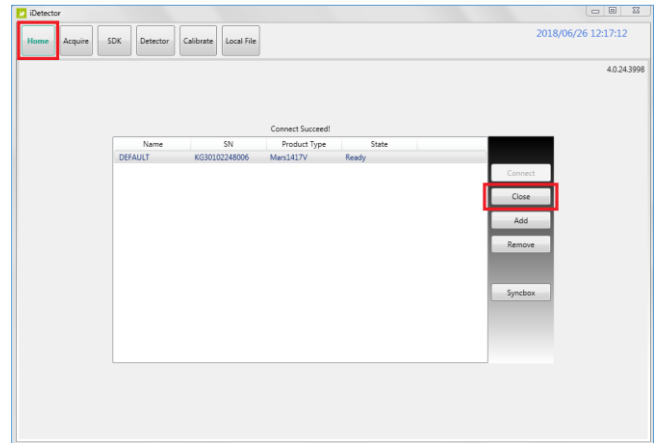
14. Check the radio buttons for **HWPostOffset, HWGain and HWDefect**.



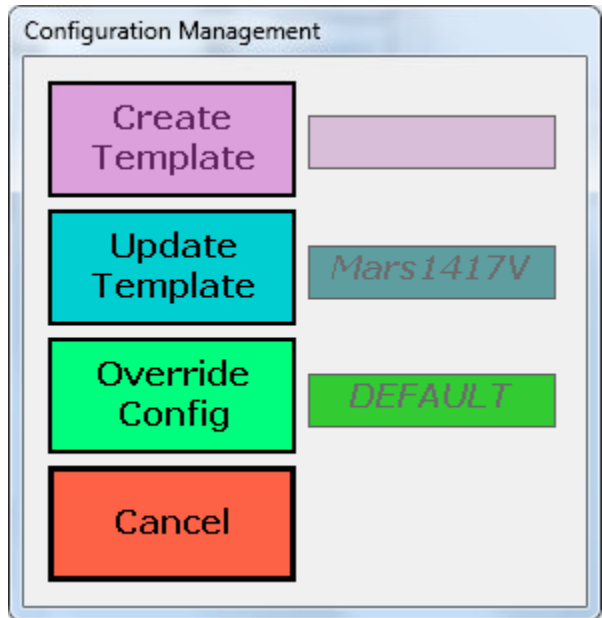
4.7.9 Closing iDetector

It's important to close iDetector properly, in order to sync the changes made in iDetector with Ultra UAI.

15. Select the **Home** tab, and click the **Close** button.



16. Select **Override Config**.



17. Disconnect the Link cable from both ends and store it in a secure place, for future reconfiguration purposes. Mobile techs should store the Link cable in each van, so it is available when needed.

Note: if you configured the panel for **Client mode**, go back to **Section 3.2.2** and follow the instructions for configuring the wireless adapter and installing the TP-Link AP.