

# iDimension Series

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*Version 4.9.3*

## **Manager Reference Guide**

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## SAFETY AND REGULATORY INFORMATION

### Regulatory Information

This product is a Class 1 Laser Product according to IEC 60825-1:2007 Ed. 2.0 and complies with 21 CFR 1040.1 pursuant to Laser Notice No. 50. A laser source with a diffraction optical element is embedded in the product, which produces a maximum output power of 1.1 mW at the aperture with a maximum wavelength of 825 nm.

### FCC

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

Changes or modifications not expressly approved by Rice Lake, Inc. could void the user's FCC granted authority to operate the equipment.

### Safety Instructions

#### ⊘ CAUTION!

Do not use system in hazardous areas!

#### ⚠ DANGER!

Electric shock hazard!

▲ Always pull out the power plug before performing any work on the device.

#### ⚠ DANGER!

Electric shock hazard if the power cable is damaged!

▲ Check the power cable for damage regularly and replace it immediately if it is damaged.

▲ On the side of the device, maintain a clearance of at least 3 cm in order to prevent damage to the cable.

#### ⚠ CAUTION!

Do not open the scanning head!

The warranty and certification is void if this stipulation is ignored. The device may only be opened by authorized persons.

▲ if having problems, contact Rice Lake Weighing Systems [productinfo@ricelake.com](mailto:productinfo@ricelake.com).



#### DISPOSAL

→ Observe environmental regulations when disposing of iDimension.

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This document applies to iDimension models:

iDimension 100 and 100XL

iDimension 200

iDimension 300

Firmware version: 4.9.3 or higher

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Firmware version 4.9.3

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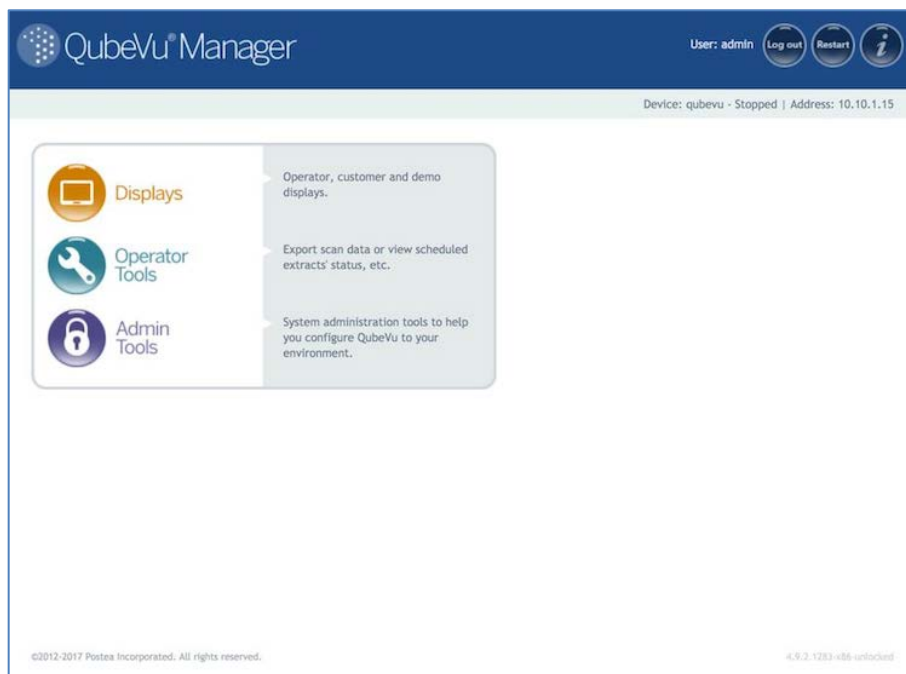
# 1. Overview

QubeVu Manager is a set of embedded software tools provided to set up and configure iDimension in any environment. These tools are recommended for use by a technical systems administrator.

## 1.1. Start QubeVu Manager

iDimension has been defined as a network device during the initial installation and setup. The company Administrator will have the details of how to connect via an IP address or host name.

There is no need to install additional software on the computer. Start any supported Internet browser, and enter the IP address or host name in the address area. The main menu displays.



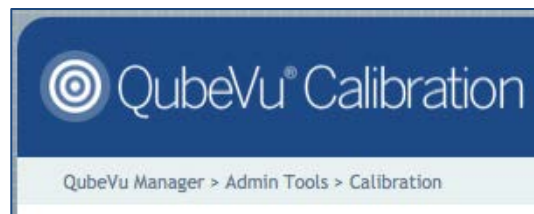
*QubeVu Manager Home page*

## 1.2. Standard Features of QubeVu Manager

### 1.2.1 Navigation

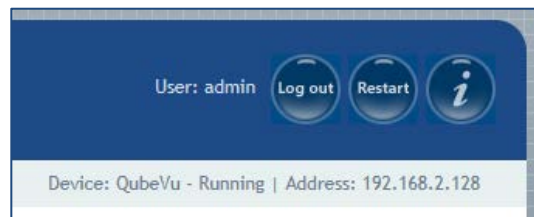
There is a navigation menu in the upper left section of the page that keeps track of the current location and provide links back to each preceding page.

For example, in the image below, the user is in the Calibration screen, and can select “Admin Tools” to return to the Admin Tools menu, or “QubeVu Manager” to return to the home page.



### 1.2.2 Status

In the upper right corner of all pages is an area that displays the status of the device connected to.



- User “admin” is logged in
- The device named “QubeVu” is running.
- Its IP address is 192.168.2.128

### 1.2.3 Status Messages

**Running** – This device is running in normal operations mode.

**Starting** – The device is starting up. Wait for the status to change to “Running” before continuing.

**Restarting** – The device is restarting. Wait for the status to change to “Running” before continuing.



**Configuring** – The device is in “configuration” mode. Edits for some settings will require switching to “Configuration mode”. This should happen automatically when the user selects “edit” and will return back to normal operation mode after a “save”.

**Error** – the browser session is unable to determine the device status.

**Stopped** – The device has stopped running. This status will be displayed during a Restart/Reboot while the system is re-starting. Wait for the status to return to “Running” before continuing.

#### 1.2.4 Restart/Reboot iDimension

Select the Restart button from any screen in QubeVu Manager, the option to Restart or Reboot display.



Restarting will restart the QubeVu Service that is running on the device. Reboot will reboot the full operating system on the device. Rebooting can take a few minutes.

### 1.2.5 Edit/Cancel/Save Buttons

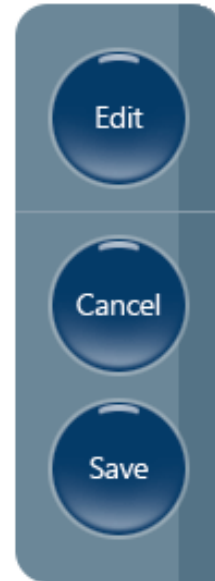
For a number of the tools, on the right-hand side of a number of screens are the Edit, Cancel and Save buttons.

**Edit** – When available, this button will switch into Configuration mode. (Status will change to “Configuring”). Configuration mode will stay on until either a Save or Reboot is done. Be sure to change back to “Running” before exiting from QubeVu Manager.

While QubeVu manager will not save changes from page to page (for example, from the General Settings page to the Network page), it will save changes made from tab to tab within a tool.

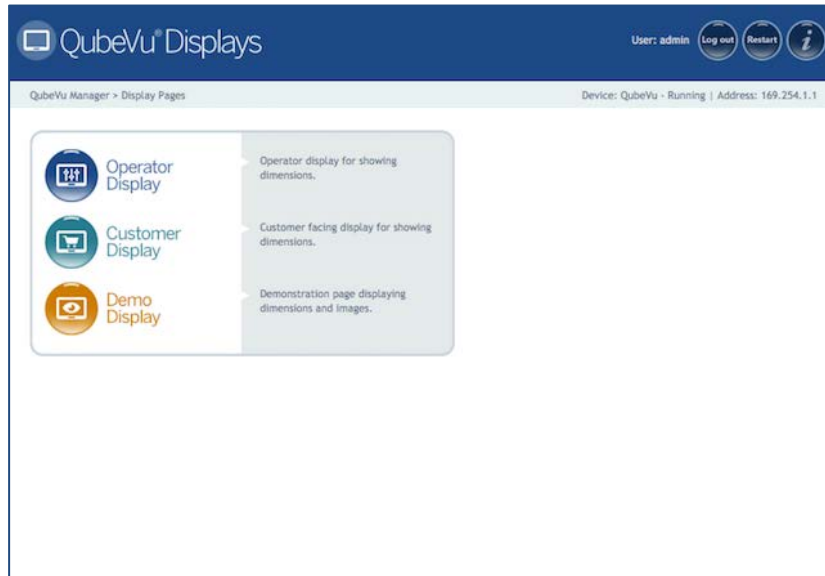
**Cancel** – The Cancel button will cancel all changes that may have been made while in the specific tool. Some tools have multiple tabs, and selecting “Cancel” while viewing information on any tab will cancel edits made to ALL tabs.

**Save** - The Save button will save all changes that may have been made while in the specific tool. Some tools have multiple tabs, and selecting “Save” while viewing information on any tab will save edits made to ALL tabs.



## 2. Displays

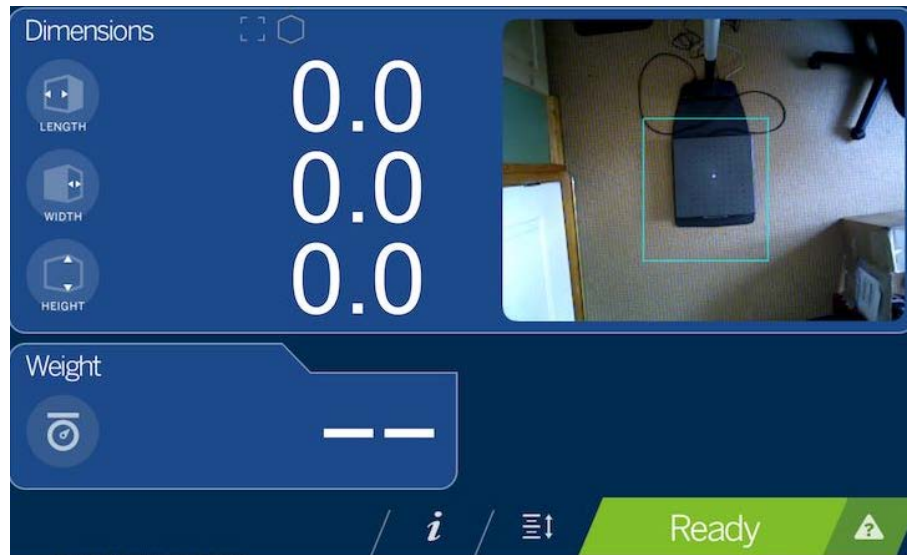
QubeVu Manager has three display screens for displaying dimensions. These displays are accessible from the QubeVu Manager homepage.



*QubeVu Manager Displays menu*




## 2.1. Operator/Touchscreen Display






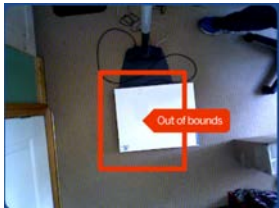
The Operator/Touchscreen Display is an operator facing display intended for use in production environments. It displays the dimensions of an item, optional weight and various status indicators. The Operator Display also gives the operator access to system level controls. It does not display images.



*Operator Display*






### 2.1.1 Indicators and Controls

	Out of bounds indicator. Indicates if the item has been placed within the viewable area.
	Regular shape indicator. Indicates if the item was treated as a regular shape.
	Irregular shape indicator. Indicates if the item was treated as an irregular shape.

	<p>Device Information button.</p>
	<p>Zero height button.</p>
	<p>Indicates the current status of the device. Refer to section 5.5.1 of the QubeVu Web Service Interface document for detailed information.</p>
	<p>Help. Provides real-time feedback based on the current status.</p>
 	<p>An optional live feed from the low resolution camera, including a representation of the Work Area.</p> <p>If an item is placed “Out of Bounds” the Work Area will change alerting the operator.</p>

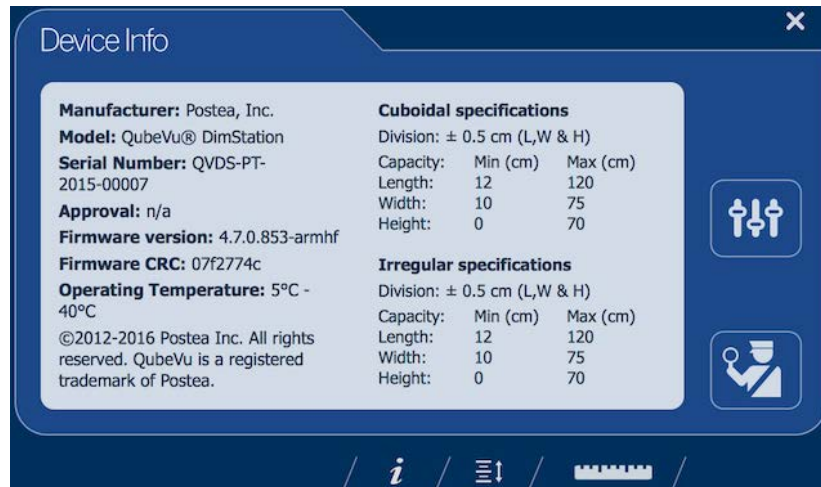
### 2.1.2 Out of Bounds Indicator

The Out of Bounds indicator provides feedback on the placement of the item within the viewable area. An item cannot be dimensioned unless it is completely within the viewable area.

	There is no item on the platform or the item is larger than the max measurable object
	The item is out of bounds to the right.
	The item is out of bounds to the front.
	The item is out of bounds to the left.
	The item is out of bounds to the back.



### 2.1.3 Device Information

The Device Info screen displays important information about the device. It can be accessed by clicking or touching the icon on the bottom of the display.



*Device Info*

The Device Info screen can be exited back to the Operator Display by clicking on either the X top right or the ruler icon.

	Provides access to the configuration menu
	Provide access to the Inspection menu

## 2.1.4 Configuration Menu

The Configuration Menu presents the Operator with a limited set of configuration options. The full range of configuration options can be accessed via the Admin Tools menu.



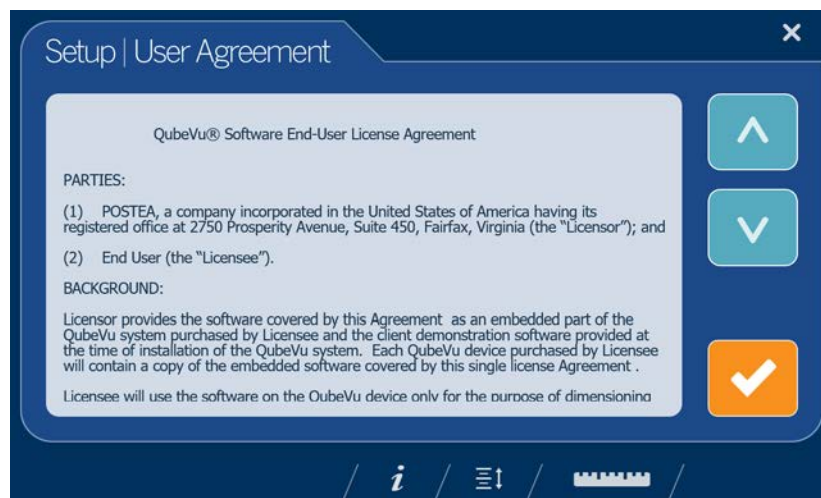
*iDimension 100 Touchscreen – Configuration Menu*

### 2.1.4.1. Setup Wizard

The Setup Wizard button initiates the iDimension setup routine described in the Quick Start guide.

### 2.1.4.2. View EULA

The view EULA button displays the Software End User License Agreement.

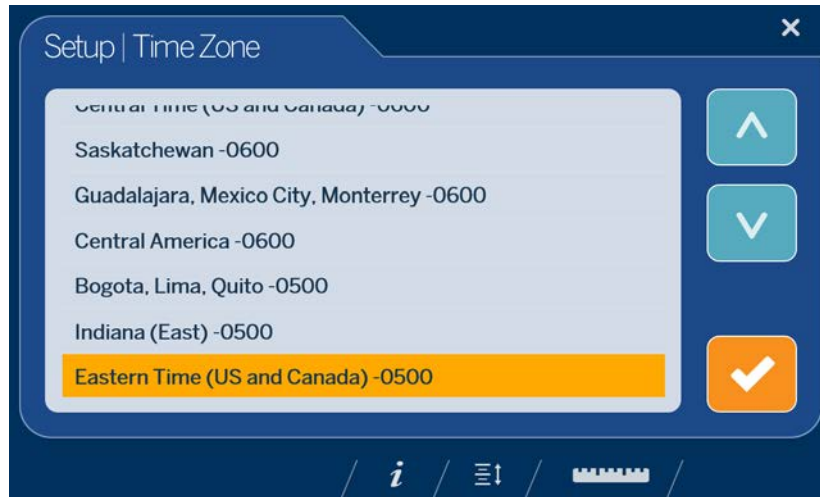


*iDimension 100 Touchscreen – View EULA*



### 2.1.4.3. Time Zone

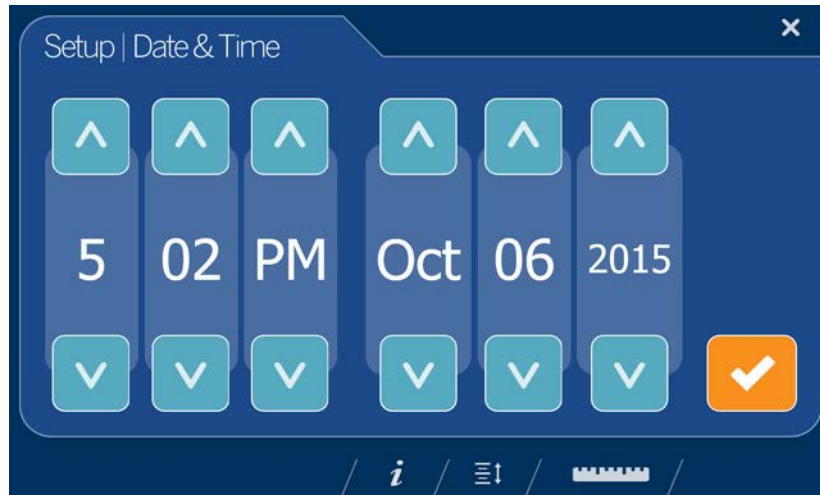
The Time Zone button displays the current time zone. Click on the preferred time zone and then touch the check mark to continue.



*iDimension 100 Touchscreen – Time Zone*

### 2.1.4.4. Date & Time

Adjust the date and time if necessary, and then touch the checkmark to continue.



*iDimension 100 Touchscreen – Date & Time*

### 2.1.4.5. Daily Extract



Daily Extract shows the current status of the daily data extraction process.



*iDimension 100 Touchscreen – Daily Extract*

The following information is displayed:

- The status of the Daily data extraction process: ENABLED or DISABLED
- The Cutoff time: The time after which the extract will run
- The date & time of the last scheduled extraction
- The status of the last extraction
- The Scan ID range included in the last extraction
- The range of Scan IDs captured since the last extraction

	Refreshes the information
	Manually executes the data extraction process

#### 2.1.4.6. Scan Zone

The Scan Zone is the area in which iDimension looks for and dimensions items. For best performance, adjust this to cover the largest area possible that can be used for scanning items and kept clear of all other objects.

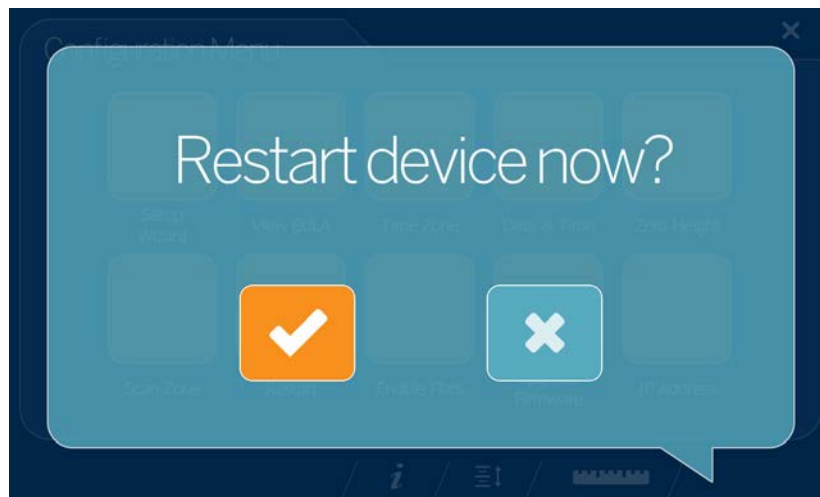
Adjust the scan area by dragging each of the four touch points. Then touch the checkmark to continue.



*iDimension 100 Touchscreen – Scan Zone*

#### 2.1.4.7. Restart

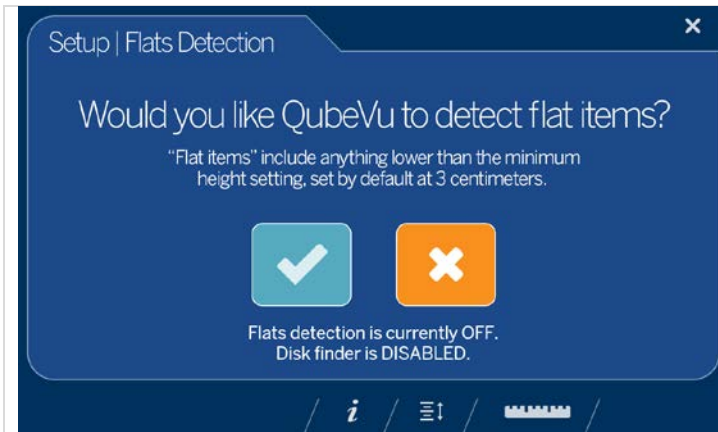
The Restart button will prompt for confirmation before restarting the device. Touch the checkmark to confirm or the X to cancel.



*iDimension 100 Touchscreen – Restart*

### 2.1.4.8. Enable Flats

“Flats” are items measuring less than the minimum height setting, which has a default value of 3cm or 1.2in. Flat detection is disabled by default.



Touch the checkmark to enable flats detection.

**NOTE:** If Flats Detection is already enabled, touching the X will turn it off.

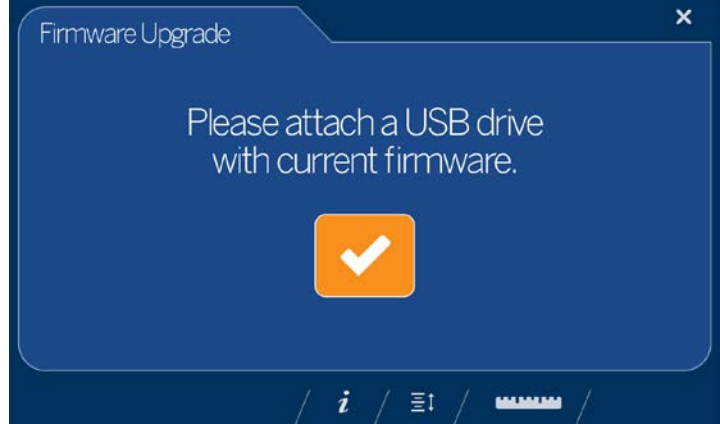
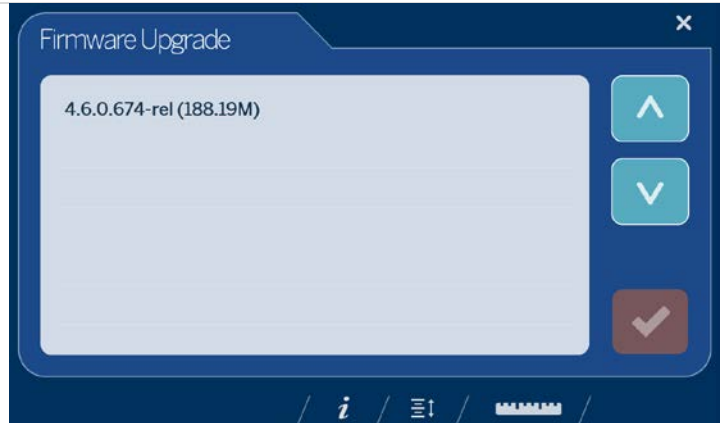



Flats detection requires that either a scale be connected to the device or the white dot on the base is visible.

Touch the appropriate option for the setup.

### 2.1.4.9. Upgrade Firmware

Firmware upgrades will be available on our website, <https://www.ricelake.com/en-us/products/product-details/idimension-100#/information#resourcesDownloads>. When upgrading using iDimension 100 Touchscreen, the firmware release must be downloaded to a USB drive. For more detailed firmware upgrade options refer to section 5.1.1.2.

	<p>Attach the USB thumb drive to a iDimension USB port and touch the checkmark to continue.</p>
	<p>All firmware upgrade files contained on the USB drive will be displayed.</p>
	<p>Touch the preferred version and then touch the checkmark to continue.</p>

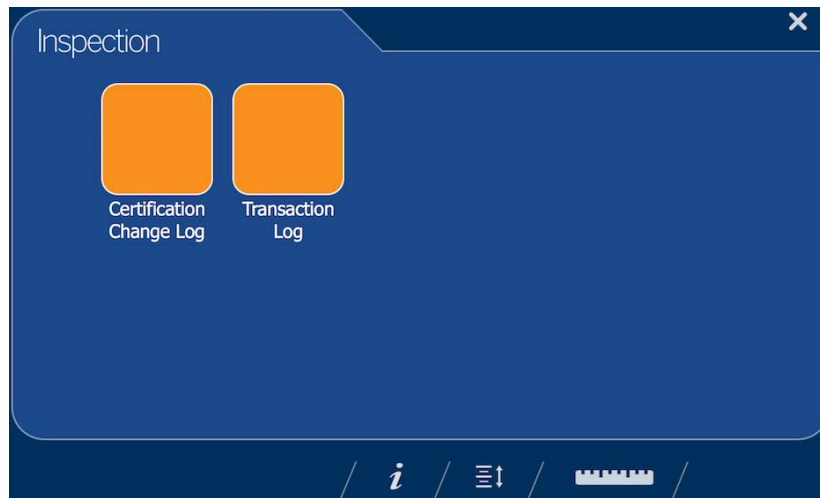
	<p>The new firmware is then copied from the USB drive to the device.</p>
	<p>The firmware upgrade file checksum is used to validate the file.</p>
	<p>Touch the checkmark to proceed with the upgrade. Touch the X to cancel.</p> <p>The update process will take a number of minutes. Do not interrupt the process.</p> <p>The device will restart upon completion.</p>

#### 2.1.4.10. IP Address

The IP address button displays the current IP address.

### 2.1.4.11. Inspection Menu

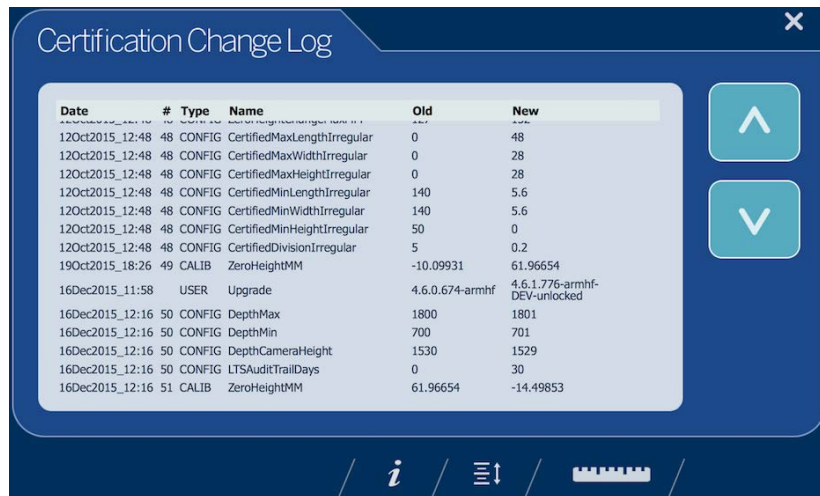
The Inspection Menu provides access to the Certification Change Log and the Transaction Log.



*Inspection Menu*

#### 2.1.4.11.1 Certification Change Log

The Certification Change Log is a permanent record of all configuration changes that have an effect on how the system dimensions. Maintaining a permanent record of these changes is a Certification requirement.



*Certification Change Log*

### 2.1.4.11.2 Transaction Log

The Transaction Log is a record of all scanned items. It requires the Long Term Storage feature to be enabled. See section 5.3.1 *Enabling Long Term Storage*.

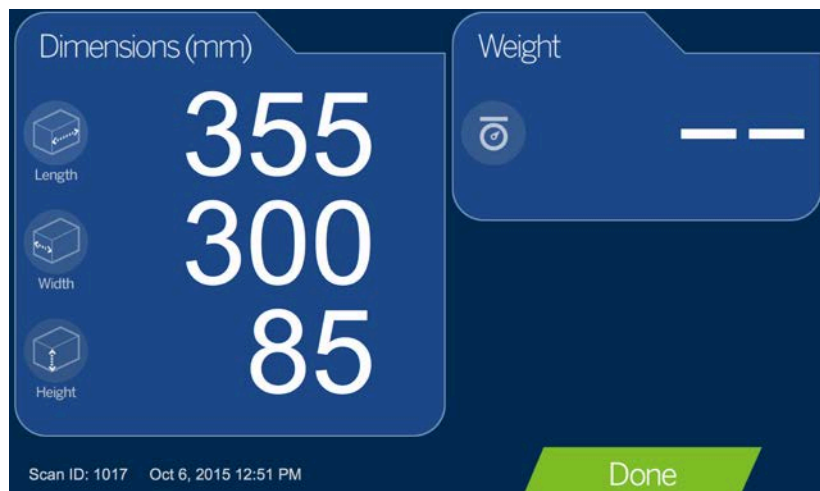


Scan Id	Date/Time	Length	Width	Height	Units	Irregular	Out of Bounds	Refinement	Oversize	Undersize
1	2015-12-16 12:16:55 -0500	14	12	3.2	in	No	No (0)	No (0)	No (0)	No (0)
2	2015-12-16 12:17:04 -0500	14	12	3.2	in	No	No (0)	No (0)	No (0)	No (0)

*Transaction Log*

## 2.2. Customer Display

The Customer Display is a customer facing display intended for use in production environments. It displays the dimensions of an item, optional weight, live feed from the low resolution camera and various status indicators. The difference between the Customer Display and the Operator Display is the Customer Display does not give the customer access to system level controls.

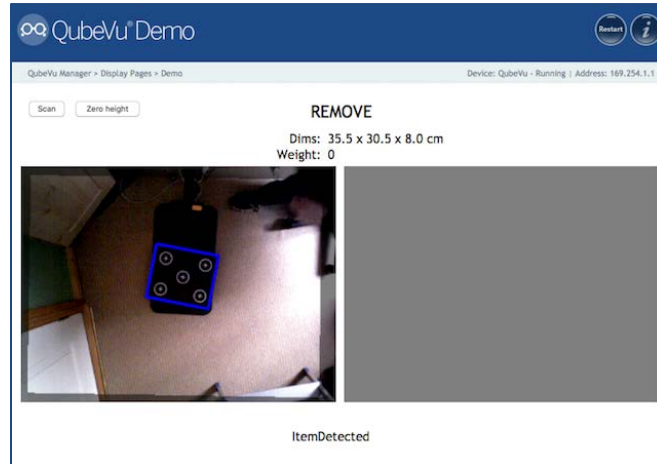


*Customer Display*



## 2.3. Demo Display

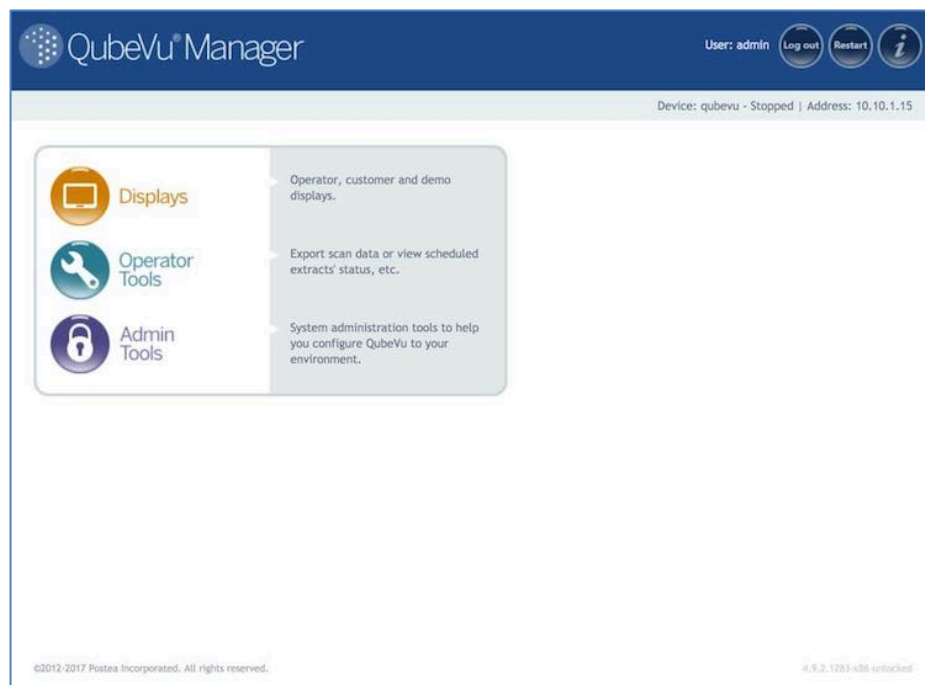
The Demo Display is intended for use in demonstrations of iDimension features. It is also a useful tool for testing the effects of configuration changes. It displays the dimensions of an item, optional weight, various status indicators and images.



*Demo Display*

## 3. Operator Tools

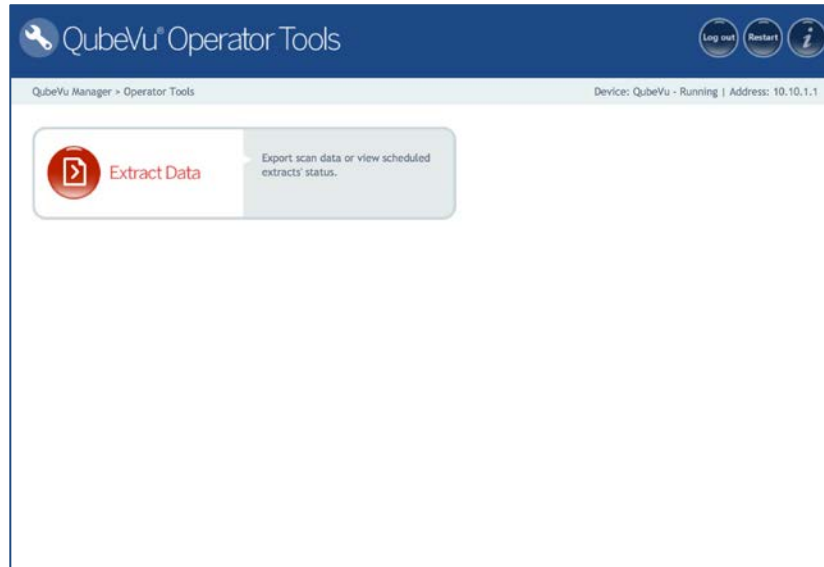
Operator Tools are accessed from the QubeVu Manager main menu and are not password protected. They allow the user to perform certain operational functions without granting access to sensitive areas of QubeVu Manager.



*QubeVu Manager – Operator Tools*

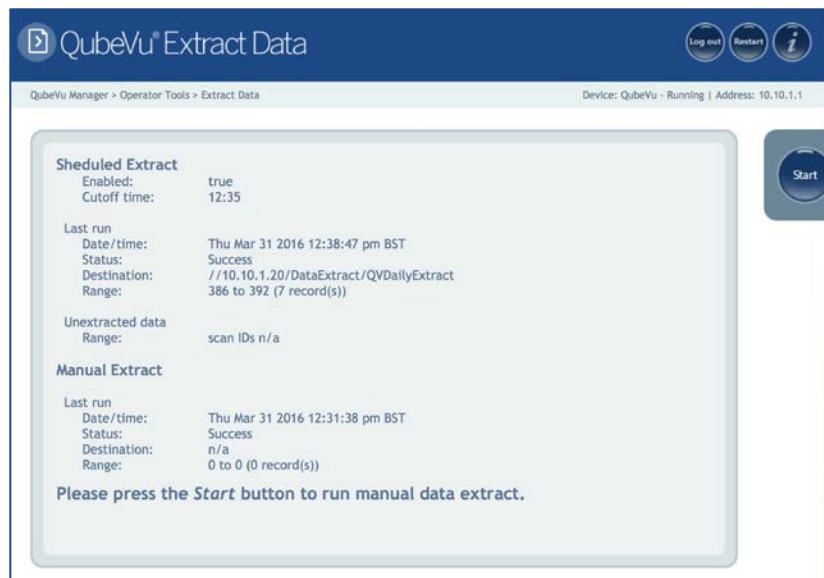
### 3.1. Extract Data

Extract Data allows the user to view the status of the scheduled scan data extract and perform a manual export of the scan data. For detailed information on configuring scan data extract please refer to section *5.1.1.2 Data Extraction Tab*.



*QubeVu Manager – Operator Tools Main Menu*

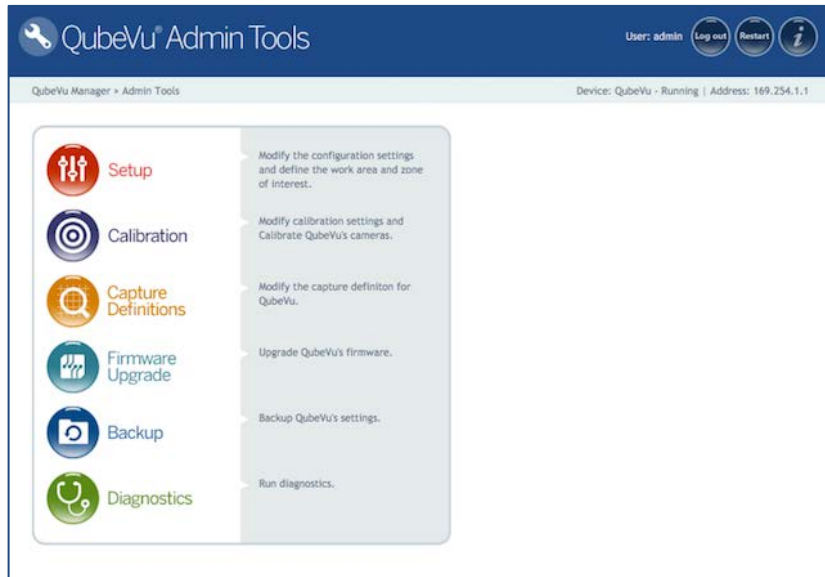
The Extract Data displays the status of both the Scheduled Extract and the Manual Extract. A Manual Extract can be performed by clicking on the START button.



*Operator Tools – Extract Data screen*

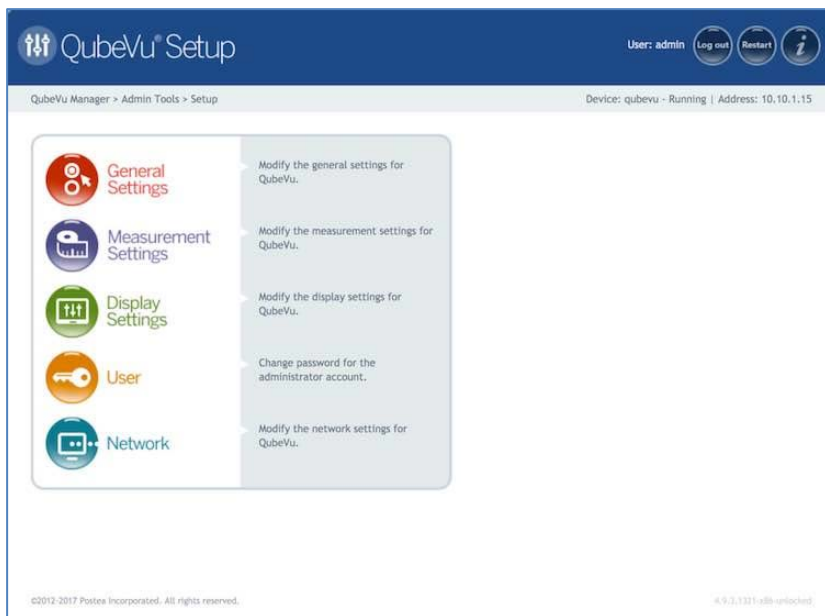
## 4. Admin Tools

Select “Admin Tools” from the main menu. The company administrator will have defined a username and password during the initial setup process. Enter this username and password to access the QubeVu Manager Admin tools.



*QubeVu Manager – Admin Tools Main Menu*

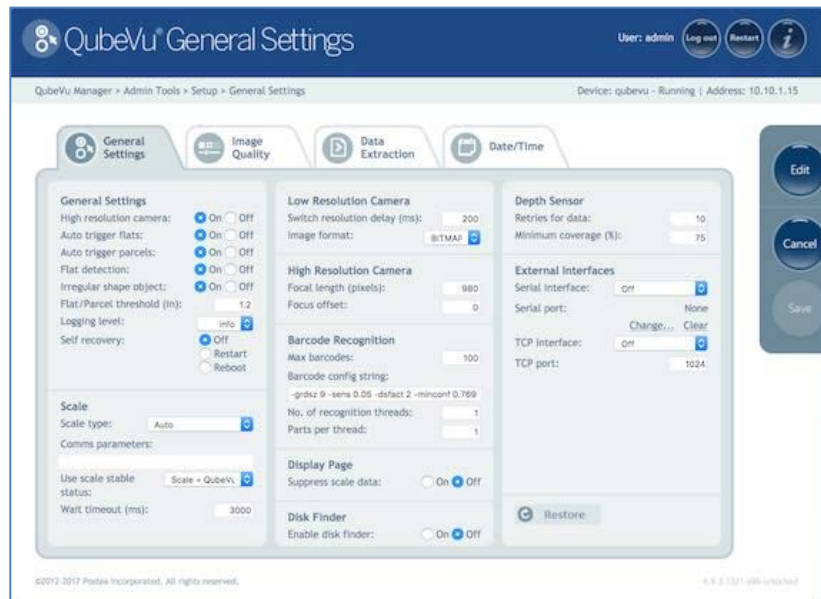
### 4.1. Setup



*QubeVu Setup Main Menu*

## 4.1.1 General Settings

**NOTE:** iDimension 100 & iDimension 100 XL models do not have high resolution cameras. If the device being used does not have a high-resolution camera the General Settings screen will not have the Image Quality tab. Configuration options controlling the use of the high resolution camera will also not be visible.



General Settings tab

### 4.1.1.1. General Settings Tab

General Settings	
<b>High resolution camera</b>	<p><b>Description:</b></p> <p>Determines whether or not a high resolution image of the object should be captured when it is dimensioned.</p> <p><b>NOTE: High resolution cameras are not present in iDimension 100 models</b></p> <p>High resolution image capture is controlled by the Capture Definitions (see chapter on Capture Definitions). This switch can be used to turn off the high res camera completely overriding any capture definitions.</p>

	<p>This may provide some performance improvements for customers that do not need images from the high resolution camera.</p> <p><b>Default value:</b> On</p> <p><b>Valid values:</b> On/Off</p>
<b>Auto trigger flats</b>	<p><b>Description:</b></p> <p>Determines whether the capture of dimensions, weight and image is automatically triggered for items classified as 'Flats'.</p> <p>Flats are items with a height up to the value specified by the "Flat/Parcel Threshold".</p> <p>When switched on, the capture process will be initiated as soon as a 'Flat' item is placed in the work area (see Zone of Interest Tab section for a description of the Work Area) and the item is stable, i.e. a stable weight to be received from a connected scale.</p> <p><b>Default value:</b> On</p> <p><b>Valid values:</b> On/Off</p>
<b>Auto trigger parcels</b>	<p><b>Description:</b></p> <p>Determines whether the capture of dimensions, weight and image is automatically triggered for items classified as 'Parcels'.</p> <p>Parcels are items with a height greater than value specified by the "Flat/Parcel Threshold". When switched on, the capture process will be initiated as soon as a 'Parcel' item is placed in the work area (see Section Zone of Interest Tab below for a description of the Work Area) and the item is stable, i.e. no movement detected by the iDimension, and if a scale is present, the scale weight has settled.</p> <p><b>Default value:</b> On</p> <p><b>Valid values:</b> On/Off</p>
<b>Flat detection</b>	<p><b>Description:</b></p> <p>Determines whether the iDimension will process or ignore items classified as 'Flats'.</p>

	<p>If it is set to 'Off' it will override 'Auto Trigger Flats' and any capture definitions.</p> <p><b>Default value:</b> Off</p> <p><b>Valid values:</b> On/Off</p>
<b>Irregular shape object</b>	<p><b>Description:</b></p> <p>Determines whether the iDimension will process or ignore items classified as 'Irregular Shapes'.</p> <p>If set to "Off", irregular shaped objects will be ignored, i.e. nothing will be returned.</p> <p><b>Default value:</b> On</p> <p><b>Valid values:</b> On/Off</p>
<b>Flat/Parcel threshold (in)</b>	<p><b>Description:</b></p> <p>The maximum height of what should be considered a flat object.</p> <p><b>Default value:</b> 1.2in (30mm)</p> <p><b>Valid values:</b> 1.2in – 2in (30mm – 50mm)</p>
<b>Logging level</b>	<p><b>Description:</b></p> <p>Sets the verbosity level for the log.</p> <p><b>Default value:</b> Info</p> <p><b>Valid values:</b> error / info / debug</p>
<b>Self-recovery</b>	<p><b>Description:</b></p> <p>The desired behavior in the event of a critical error. Restarting will restart the service that is running on the device. Reboot will reboot the full operating system on the device.</p> <p><b>Default value:</b> Reboot</p> <p><b>Valid values:</b> Off/Restart/Reboot</p>

## Scale

Refer to section [6.2 Scales](#) for scale setup instructions.

## Low Resolution Camera

### Switch resolution delay (ms)

**Description:**

A minimum period of time, in milliseconds, that the system should pause after switching the resolution of the camera.

Do not change this setting unless instructed to by Rice Lake.

**Default value:** 200

**Valid values:** 100ms – 500ms

### Image format

**Description:**

The format of the low resolution image.

**Default value:** Bitmap

**Valid values:** Bitmap / JPEG

## High Resolution Camera (Not available in iDimension 100 Models)

### Focal length (pixels)

**Description:**

Focal length, in pixels, of the high resolution camera when the lens is fully zoomed out and the camera is set to 640x480 pixels.

Do not change this setting unless instructed to by RiceLake.

**Default value:** 980

### Focus offset

**Description:**

An offset that will be applied to each value in the focus table. The use of this parameter is reserved.

## Barcode Recognition (Not available in iDimension 100 Models)

<b>Max barcodes</b>	<p><b>Description:</b></p> <p>Maximum number of barcodes the system should consider when processing a single capture.</p> <p><b>Default value:</b> 100</p> <p><b>Valid values:</b> 1-999</p>
<b>Barcode Config String</b>	<p><b>Description:</b></p> <p>A string conveying configuration parameters for the barcode reading engine.</p> <p><b>Default value:</b> -grdsz 9 -dsfact 2 -psdn 64 -sens 0.05 -srnbs 512 -srnbp 21 -srpsp 1 -srshrp 0.5 -minconf 0.769 -minredund 5.0 -shiftrange 1</p> <p><b>Valid values:</b></p> <ul style="list-style-type: none"> <li>-grdsz Barcode map grid size (integer in pixels)</li> <li>-dsfact Barcode map down sampling factor (integer &gt;= 1)</li> <li>-psdn Psd score FFT size (integer power of 2)</li> <li>-sens Contrast sensitivity (in [0.0,1.0])</li> <li>-srnbs Size of super resolution barcode signal (integer nb. of samples)</li> <li>-srnbp Number of parallel paths used for super resolution stage (integer)</li> <li>-srpsp Spacing between parallel paths (integer number of pixels)</li> <li>-srshrp Sharpening factor to be applied to super resolution signal (&gt;=0.0f)</li> <li>-minconf Minimum confidence value that may be considered a successful read (in [0.0,1.0])</li> </ul>

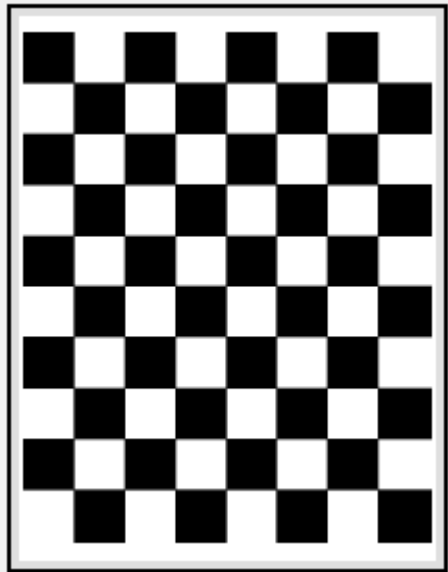


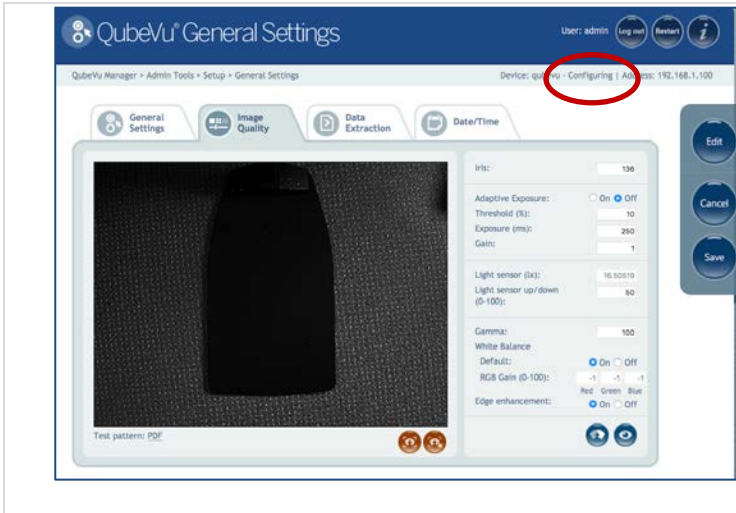
	<p>-minredund Minimum redundancy among parallel paths (in [0.0,&lt;srnbp - 1&gt;])</p> <p>-shiftrange Range of a sliding offset during symbol matching</p>
<b>No. of recognition threads</b>	<p><b>Description:</b></p> <p>The number of processor threads to use when computing barcodes.</p> <p><b>Default value:</b> 1</p> <p><b>Valid values:</b> 1 - 2</p>
<b>Search grid size</b>	<p><b>Description:</b></p> <p>Barcode recognition performance can be improved by both increasing the number of threads, see above, and allowing iDimension to split the image into grids, by setting the grid size to 2.</p> <p><b>Default value:</b> 1</p> <p><b>Valid values:</b> 2</p>
<b>Display Page</b>	
<b>Suppress scale data</b>	<p><b>Description:</b></p> <p>Suppresses the display of scale data (weight) on the Customer and Operator Displays</p> <p><b>Default value:</b> Off</p> <p><b>Valid values:</b> On / Off</p>
<b>Disk Finder</b>	
<b>Enable Disk Finder</b>	<p><b>Description:</b></p> <p>Disk Finder is a feature that provides flat detection without the use of a scale.</p> <p><b>Default value:</b> Off</p> <p><b>Valid values:</b> On / Off</p>

Depth Sensor	
<b>Retries for data:</b>	<p><b>Description:</b></p> <p>The number of times iDimension will attempt to get valid data from the depth sensor before reporting an error</p> <p><b>Default value:</b> 10</p> <p><b>Valid values:</b> N/A</p>
<b>Minimum coverage (%)</b>	<p><b>Description:</b></p> <p>The number valid pixels in a scene, expressed as a percentage. Intended to help in environments with direct sunlight.</p> <p><b>Default value:</b> 75%</p>
External Interfaces	
Refer to section <a href="#">7 External Interfaces</a> .	

#### 4.1.1.2. Image Quality Tab

Since lighting conditions vary from location to location, it is recommended that the camera exposure settings are checked and adjust the exposure to optimize the quality of images that iDimension returns.

	<p>Print the “Checkerboard” pattern included in the Appendix.</p> <p>Place the single sheet of paper on the base (or scale) and center it under the scanning head.</p>
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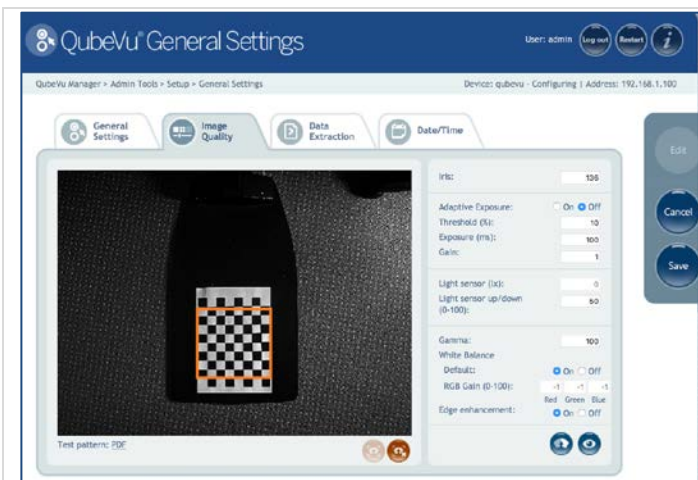


If the status is not already set to “Configuring”, press the “Edit” button to switch the mode to “Configuring”.

	<p>Use these buttons to draw a rectangle on the checkerboard, or to delete the current rectangle (and start over).</p> <p>Click on the button on the left to start drawing. Using a mouse, hold down the left mouse button, and drag the mouse to draw.</p> <p>If not happy with the rectangle, click on the right button to delete the current rectangle, and re-draw.</p>
	<p>“<b>Best Exposure Setting</b>” button</p> <p>Click on this button to automatically find the best Exposure value based on current lighting conditions.</p>
	<p>“<b>Preview</b>” button</p> <p>Click on this button, the current settings are applied and the results of any changes display</p>

**Recommended:**

To let the system automatically determine the best exposure settings for the environment, use the “**Best Exposure Setting**” button.

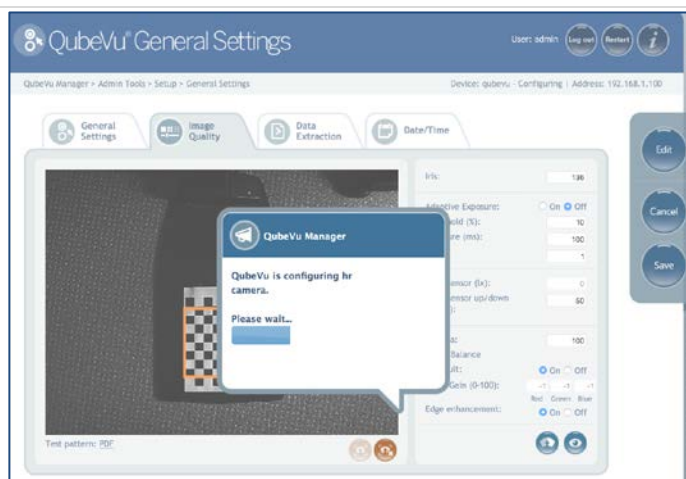


Click on the **Draw** button.



Using the mouse, hold down the left mouse button, and drag the mouse to draw a rectangle around the squares.

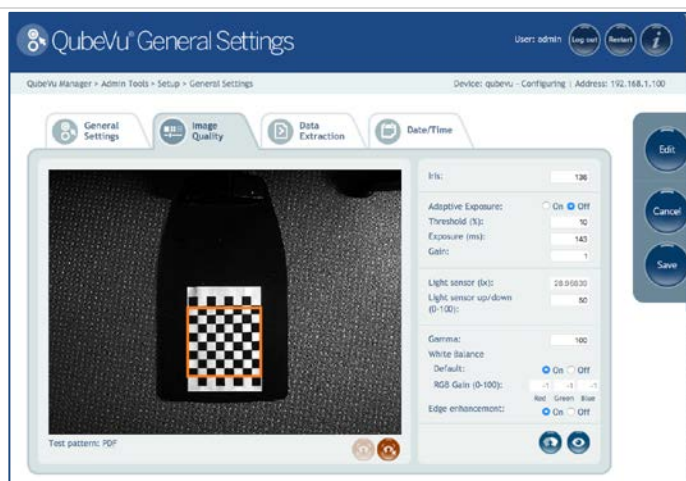
Be sure to draw evenly around the squares, select the same number of white and black squares.



Click on the “**Best Settings**” button.



Wait for QubeVu Manager to find the best exposure setting for the environment.

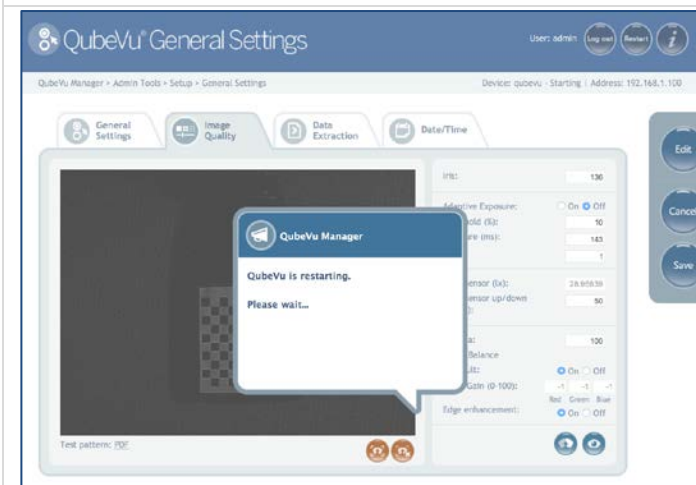


The Exposure setting value has been updated, and the results of the change on the image displays.



If satisfied with the results, select “Save” to apply the new settings.

Confirm the changes by clicking “OK”.



This process may take a few minutes. After applying the setting, iDimension will automatically be restarted to complete the process.

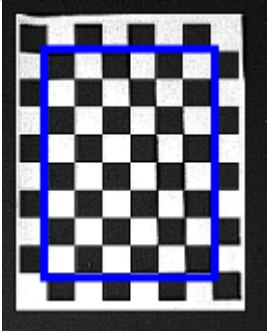
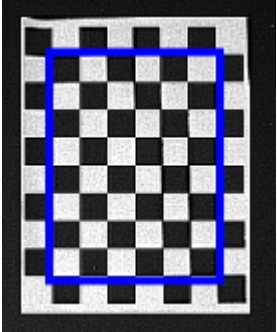
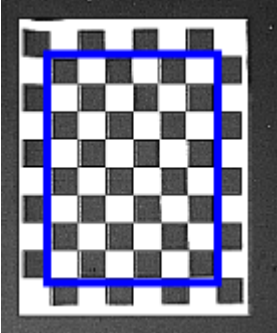
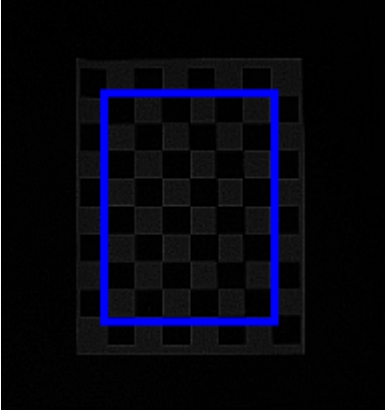
## Image Quality Screen -- Field Values:

Image Quality Screen -- Field Values	
<b>Iris</b>	<p><b>Description:</b></p> <p>This controls the aperture of the high resolution camera's lens: the larger the value, the larger the aperture, the brighter the image, but also the shallower the depth of field.</p> <p>The value is between 0 (fully closed) and 255 (fully open). A setting of 136 provides best image quality.</p> <p><b>Default value:</b> 136</p> <p><b>Valid values:</b> 0-255</p>

<b>Adaptive Exposure</b>	<p><b>Description:</b></p> <p>Allows iDimension to auto-sense the lighting conditions and adjust the exposure accordingly. Intended for use in environments subject to gradual changes in light conditions.</p> <p><b>Default value:</b> Off</p> <p><b>Valid values:</b> On / Off</p>
<b>Threshold</b>	<p><b>Description:</b></p> <p>A threshold value, expressed as a percentage of change in lighting conditions, above which iDimension will re-assess and adjust the exposure</p> <p><b>Default value:</b> 10</p> <p><b>Valid values:</b> 0 - 100</p>
<b>Exposure(ms)</b>	<p><b>Description:</b></p> <p>Exposure time, in milliseconds, for the high resolution camera. The longer the exposure time and the brighter the image.</p> <p>Change the value for Exposure manually, and use the Preview button to review the results.</p> <p><b>Default value:</b> 100</p> <p><b>Valid values:</b> 1ms – 255ms</p>
<b>Gain</b>	<p><b>Description:</b></p> <p>High resolution camera gain setting</p> <p><b>Default value:</b> 1</p> <p><b>Valid values:</b> Camera dependent</p>
<b>Light sensor (lx)</b>	<p><b>Description:</b></p> <p>Environmental illumination as detected by iDimension's light sensor.</p> <p><b>Default value:</b> 0</p> <p><b>Valid values:</b> N/A – Read only value.</p>

<b>Light sensor up/down (0-100)</b>	<p><b>Description:</b></p> <p>Low pass filter controlling how fast/slow the light sensor value will respond with regards to instantaneous reading.</p> <p><b>Default value:</b> 50</p> <p><b>Valid values:</b> 0 – 100</p>
<b>Gamma</b>	<p><b>Description:</b></p> <p>The gamma function brightens dark areas of an image, which corresponds more to the perception of the human eye. In light areas of an image, the differences in brightness are condensed for this.</p> <p><b>Default value:</b> 100</p> <p><b>Valid values:</b> 1 - 1000</p>
<b>White Balance</b>	<p><b>Description:</b></p> <p>Applies only to models with color high resolution cameras. RGB Gain is the global adjustment of the intensities of the red, green and blue colors and is used for color correction of the high res image taken by iDimension 200 or 300. The gain values (intensity) can be controlled independently for the red, green and blue colors.</p> <p><b>White Balance Default value:</b> On</p> <p><b>White Balance Valid values:</b> On / Off</p> <p><b>RGB Gain (0-100) Default values:</b> Red: -1 Green: -1 Blue: -1</p>
<b>Edge Enhancement</b>	<p><b>Description:</b></p> <p>Determines whether or not a sharpness filter should be applied to all high resolution images.</p> <p>This setting should normally remain at the default setting of ‘On’ and provides the best results for barcode and OCR definition.</p> <p><b>Default value:</b> On</p> <p><b>Valid values:</b> On/Off</p>

## Troubleshooting Image Quality

	<p>Exposure setting using default value of 136.</p>
	<p>Exposure setting using “Best Settings”. In this case, the default value was sufficient.</p>
	<p>This image is over-exposed.</p>
	<p>This image is under-exposed.</p>



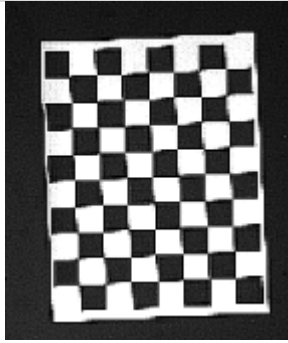


Image 1

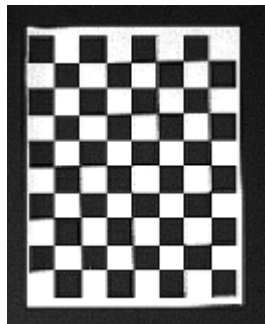


Image 2

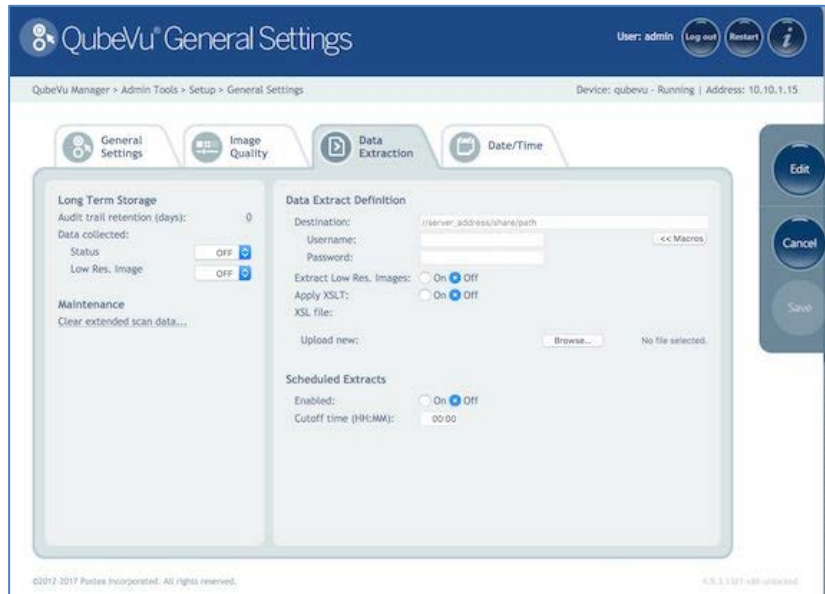
Image 1 shows the squares slightly distorted.

The paper was at a slight angle. Move the paper to straighten, the even squares should be displayed as in Image 2.

### 4.1.1.3. Data Extraction Tab

iDimension stores the results of all successful scans in non-volatile memory for a configured period of time. The information stored includes the data available in Long Term Storage. The status XML, which is the same data seen by the client applications through the web service API, can also be included. Refer to the iDimension API Guide for more detail on the status XML. The use of long term storage will reduce the performance of the processing speed for dimensioning.

The extract will run daily after the specified cutoff and will save the result of the transformation to the specified destination path.



Data Extraction tab

Long Term Storage	
<b>Audit trail retention (days):</b>	<b>Description:</b> Specifies the number of days captured data will be retained in Long Term Storage. This is disabled by default.  <b>Default value:</b> 0
<b>Data collected:</b>  <b>Status</b>	<b>Description:</b> Determines if the status xml is included in the stored data. Data collection can be turned On, Off or set to CRITICAL. If it is set to

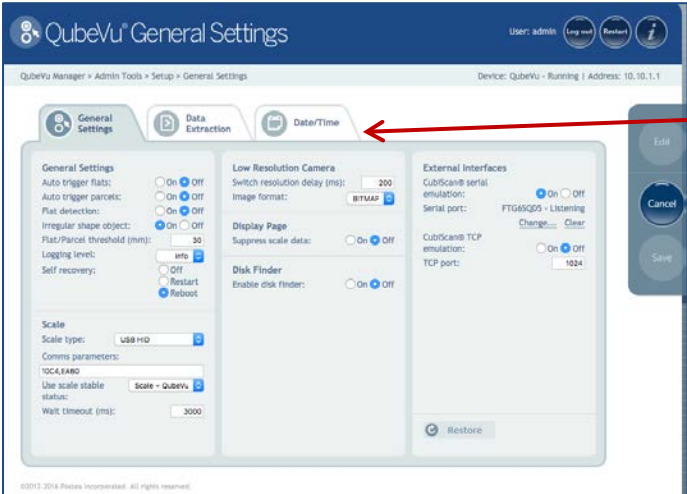
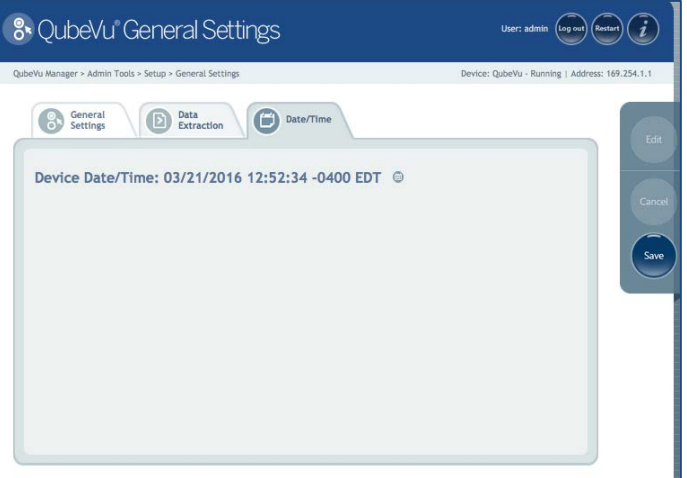

	<p>CRITICAL scanning operations will be prevented in the event all available storage space is consumed.</p> <p><b>Default value:</b> Off</p> <p><b>Valid values:</b> On/Off/Critical</p>
<b>Low Res. Image</b>	<p><b>Description:</b></p> <p>Determines if the low-res image is included in the stored data. Data collection can be turned On, Off or set to CRITICAL. If it is set to CRITICAL scanning operations will be prevented in the event all available storage space is consumed.</p> <p><b>Default value:</b> Off</p> <p><b>Valid values:</b> Off / On / Critical</p>
<b>Maintenance</b>	
<b>Clear extended scan data</b>	<p><b>Description:</b></p> <p>Deletes saved extended scan data (images &amp; status XML).</p>
<b>Data Extraction Definition</b>	
<b>Destination</b>	<p><b>Description:</b></p> <p>The UNC path the extract file will be saved to. Appropriate credentials should be entered into the Username &amp; Password fields. The <b>Test Connection</b> button tests if the specified location is accessible. Contact the local IT Support staff for assistance.</p>
<b>Macros</b>	<p><b>Description:</b></p> <p>The following variables can be used when specifying the destination path.</p> <p><b>%DATETIME%</b> The date and time (yyyymmddHHMMSS) the extract was created</p> <p><b>%HOSTNAME%</b> The hostname of the QubeVu</p> <p><b>%SERIALNO%</b> The serial number of the QubeVu</p> <p><b>%IPADDRESS%</b> The IP address of the QubeVu</p>

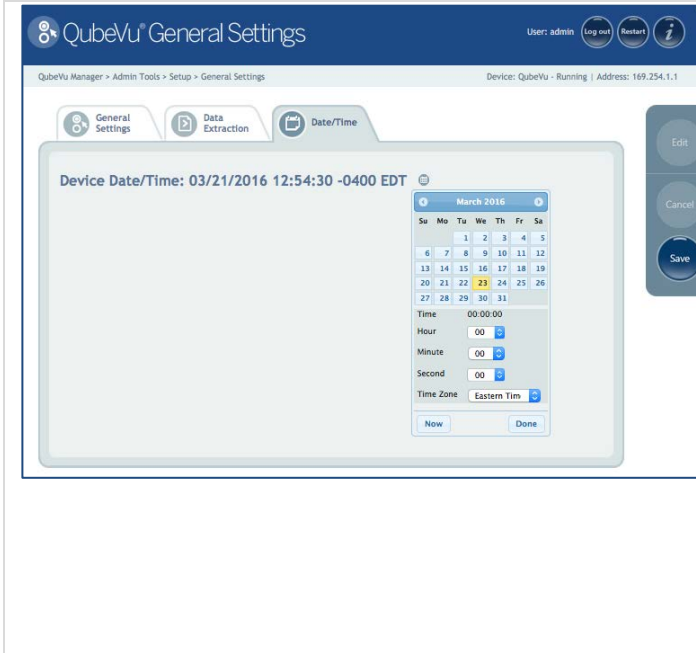
	<p><b>%CUTOFFDATE%</b>      The scheduled date of the extract</p> <p><b>%STARTCAPTUREID%</b>      The start Capture ID of the extract</p> <p><b>%ENDCAPTUREID%</b>      The end Capture ID of the extract</p>
<b>Username &amp; Password</b>	<p><b>Description:</b></p> <p>The credentials required to access the specified UNC destination. The user should have read/write permissions.</p>
<b>Test Connection</b>	<p><b>Description:</b></p> <p>Verifies the Destination is accessible. Contact the local IT Support group for assistance.</p>
<b>Extract Low Res. Images</b>	<p><b>Description:</b></p> <p>Determines if the low resolution images are included in the extracted data.</p> <p><b>Default value:</b>      Off</p> <p><b>Valid values:</b>      On/Off</p>
<b>Apply XSLT</b>	<p><b>Description:</b></p> <p>XSL can be used to transform the XML document to any required format, including CSV format with computed fields and file level summaries. The XML document will contain all status.xml results for a day between cutoffs. The XSLT file can up uploaded using the <a href="#">Browse</a> button.</p> <p>Refer to the QubeVu SDK for XSL transformation samples and a test tool.</p> <p><b>Default value:</b>      Off</p> <p><b>Valid values:</b>      On/Off</p>
<b>Scheduled</b>	
<b>Enabled</b>	<p><b>Description:</b></p> <p>Determines whether Data Extract is enabled</p> <p><b>Default value:</b>      Off</p>

	<b>Valid values:</b> On/Off
<b>Cutoff time (HH:MM):</b>	<b>Description:</b> Specifies the time of day, in hours & minutes, after which the daily extract will run.
<b>Save</b>	<b>Description:</b> Saves changes to the Data Extraction Definition.

#### 4.1.1.4. Date/Time Tab

The Date/Time tab allows the date and time setting to be changed. The date and time are used to timestamp configuration changes that affect the Legal for Trade certification.

	<p>Select <b>"Date/Time"</b> tab from the Setup→General Settings screen.</p>
	<p>Current date and time are displayed.</p> <p>Click on the <b>Date</b> icon  to change the date.</p>



The calendar and time settings from the local computer are displayed.

Click **“Now”** to select the current date and time.

Or, just enter the hour, minutes and seconds directly.

Use the **Time Zone** field to select the time zone.

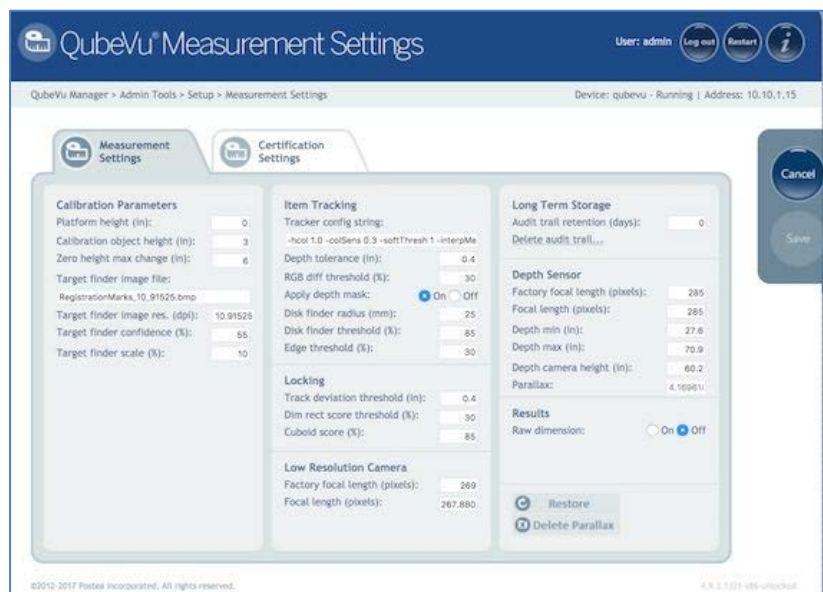
Click **“Done”** to apply the settings.

#### 4.1.2 Measurement settings



**WARNING: CHANGES TO MEASUREMENT SETTINGS WILL INVALIDATE THE LEGAL-FOR-TRADE CERTIFICATION.**

Only change these settings if Legal-for-Trade certification is not important to the enterprise.



Measurement Settings tab

Calibration Parameters	
<b>Platform height</b>	<p><b>Description:</b></p> <p>This setting is primarily required when carrying out a factory calibration of the cameras.</p> <p>The value specifies the height of any platform placed on top of the base plate and intended to be permanently located (e.g. a weigh scale).</p> <p><b>For a factory calibration this value must be set to '0'.</b></p> <p><b>Default value:</b> 0in (0mm)</p> <p><b>Valid values:</b> &lt;height of the platform&gt;</p>
<b>Calibration object height</b>	<p><b>Description:</b></p> <p>The height of the object used to calibrate iDimension.</p> <p>If using the calibration object supplied with the device, this setting will be 3in (76mm).</p> <p><b>Default value:</b> 3in (76mm)</p> <p><b>Valid values:</b> 3in (76mm)</p>
<b>Zero height max change</b>	<p><b>Description:</b></p> <p>The maximum allowable change in height, in inches, for the zero height operation.</p> <p><b>Default value:</b> 6in (152mm)</p> <p><b>Valid values:</b> Any value &gt; 0in (0mm)</p>
<b>Target Finder Image File</b>	<p><b>Description:</b></p> <p>Name of a bitmap file that describes the calibration pattern.</p> <p><b>Default value:</b> RegistrationMarks_10_91525.bmp</p> <p><b>Valid values:</b> Use default file; alternative files may be supplied in the future.</p>

<b>TargetFinder Image Res. (dpi)</b>	<p><b>Description:</b></p> <p>Effective printed size of the calibration pattern on the calibration object. This size is provided in terms of a resolution, in dots per inch, relative to the bitmap file that was provided above.</p>
<b>Target finder confidence (%)</b>	<p><b>Description:</b></p> <p>As it searches for the calibration pattern, the system derives a confidence value alongside its result. This parameter is the minimum confidence value required for a calibration process to be deemed successful.</p> <p><b>Default value:</b> 55%</p> <p><b>Valid values:</b> 0-100%</p>
<b>Calibration target finder scale (%)</b>	<p><b>Description:</b></p> <p>This value describes a tolerance for the expected size of the calibration pattern.</p> <p><b>Default value:</b> 10%</p> <p><b>Valid values:</b> 0-100%</p>
<b>Item Tracking</b>	
<b>Tracking Config String</b>	<p><b>Description:</b></p> <p>A string conveying configuration parameters for the internal calibration target finder module.</p> <p><b>Default value:</b> -hcol 1.0 -colSens 0.3 -softThresh 1 -interpMethod 1 -blobSeg 0 -fftSizes 512</p> <p><b>Valid values:</b></p> <ul style="list-style-type: none"> <li>-hcol                      Heavy color ([0,1]) used to threshold scene image</li> <li>-colSens                    Color sensitivity ([0,1]) used to threshold scene image</li> <li>-softThresh                0: hard threshold; 1: soft threshold</li> </ul>






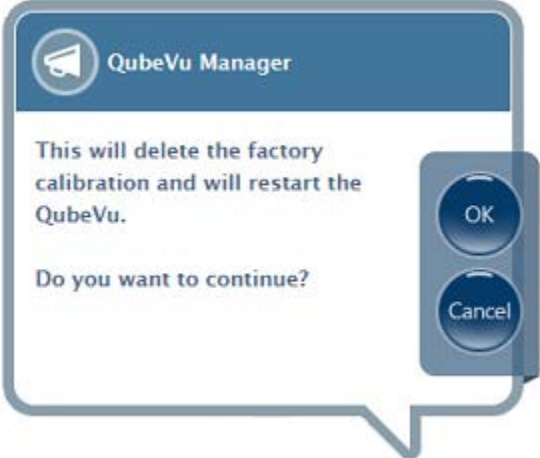
	<p>-interpMethod    0: nearest neighbor; 1: bilinear; 2: quadratic</p> <p>-blobSeg            1: use blob segmentation; 0: don't</p> <p>-fftSizes            size for all internal images and FFTs</p>
<b>Depth Tolerance</b>	<p><b>Description:</b></p> <p>A tolerance value used during the segmentation process of the depth data provided by the sensor. Adjacent depth values that are within this tolerance will be deemed to belong to the same object.</p> <p><b>Default value:</b>    0.4in (102mm)</p> <p><b>Valid values:</b>    0.2in – 0.6in (5mm – 15mm)</p>
<b>RGB Diff Threshold (%)</b>	<p><b>Description:</b></p> <p>A pixel intensity threshold, relative to the full image dynamic, used during the segmentation process of the RGB data provided by the sensor.</p> <p><b>Default value:</b>    30%</p> <p><b>Valid values:</b>    0 – 100%</p>
<b>Apply Depth Mask</b>	<p><b>Description:</b></p> <p>Determines whether or not the system should account for vertical protrusions on the platform. These are very rare cases when the platform may have a backstop or a lip of some sort.</p> <p><b>Default value:</b>    On</p> <p><b>Valid values:</b>    On/Off</p>
<b>Disk finder radius (mm)</b>	<p><b>Description:</b></p> <p>The radius, expressed in millimeters, of the Disk Finder disk.</p> <p><b>Default value:</b>    25</p>

<b>Disk finder threshold (%)</b>	<p><b>Description:</b></p> <p>Score threshold value above which the disk finder will consider a match to be successful.</p> <p><b>Default value:</b> 85</p> <p><b>Valid values:</b> 0 – 100</p>
<b>Edge Threshold (%)</b>	<p><b>Description:</b></p> <p>Gradient threshold value used during scene edge detection. The local image gradient must be above that value in order for the local feature to be considered as an edge.</p> <p><b>Default value:</b> 30</p> <p><b>Valid values:</b> 0 - 100</p>
<b>Locking</b>	
<b>Track Deviation Threshold</b>	<p><b>Description:</b></p> <p>A threshold value below which the deviation of the object's three dimensions should remain in order for the system to settle and lock onto the object.</p> <p><b>Default value:</b> 0.4in (10mm)</p> <p><b>Valid values:</b> 0.2in – 1.2in (5mm – 30.5mm)</p>
<b>Dim rect score threshold (%)</b>	<p><b>Description:</b></p> <p>The rectangle score of an object measures how rectangular its outline appears to be. This parameter is a rectangle score threshold value below which any returned dimension will be ignored.</p> <p><b>Default value:</b> 30%</p> <p><b>Valid values:</b> 0 – 100%</p>
<b>Cuboid score (%)</b>	<p><b>Description:</b></p> <p>The cuboid score of an object measures how box-like it appears to be. This parameter is a cuboid score threshold value below which the object will be deemed to be irregular.</p>

	<p><b>Default value:</b> 85%</p> <p><b>Valid values:</b> 0 – 100%</p>
<b>Low Resolution Camera</b>	
<b>Factory focal length (pixels)</b>	<p><b>Description:</b></p> <p>Initial focal length of the low-resolution camera for the purpose of factory calibration, provided in pixels relative to its resolution.</p> <p><b>Default value:</b> 269</p> <p><b>Valid values:</b> N/A – Use default</p>
<b>Focal length (pixels)</b>	<p><b>Description:</b></p> <p>Focal length of the low resolution camera, provided in pixels relative to its resolution.</p> <p><b>Default value:</b> 269</p> <p><b>Valid values:</b> Use default value unless directed to change by Customer Support.</p>
<b>Long Term Storage</b>	
<b>Audit trail retention (days)</b>	<p><b>Description:</b></p> <p>Specifies the number of days captured data will be retained in Long Term Storage</p> <p><b>Default value:</b> 0</p>
<b>Delete audit trail</b>	<p><b>Description:</b></p> <p>Deletes the contents of the Long Term Storage audit trail.</p>
<b>Depth Sensor</b>	
<b>Factory focal length (pixels)</b>	<p><b>Description:</b></p>

	<p>Initial focal length of the depth sensor for the purpose of factory calibration, provided in pixels relative to its resolution.</p> <p><b>Default value:</b> 285</p> <p><b>Valid values:</b> N/A – Use default</p>
<b>Focal length (pixels)</b>	<p><b>Description:</b></p> <p>Focal length of the depth sensor, provided in pixels relative to its resolution.</p> <p><b>Default value:</b> 285</p>
<b>Depth min</b>	<p><b>Description:</b></p> <p>Threshold depth value below which any depth measure returned by the sensor, will be ignored.</p> <p>This value is the minimum distance, in millimeters, between the device's head and the object it should measure.</p> <p><b>Default value:</b> 27.6in (701mm)</p> <p><b>Valid values:</b> 23.6in – 70.9in (599mm – 1800mm) (or “Depth max” value)</p>
<b>Depth max</b>	<p><b>Description:</b></p> <p>Threshold depth value, above which any depth measure returned by the sensor will be ignored. The values used are determined by the mount height of the scan head.</p> <p><b>Default value:</b> 70.9in (1800mm) @ 60.2in (1.5M) (iDimension 100 and 200)</p> <p>90.6in (2300mm) @ 79in (2M)</p> <p>(iDimension 100XL and 300)</p> <p><b>Valid values:</b> 23.6in (599mm) (or “Depth min value”) to 90.6in (2300mm)</p>
<b>Depth Camera Height</b>	<p><b>Description:</b></p>

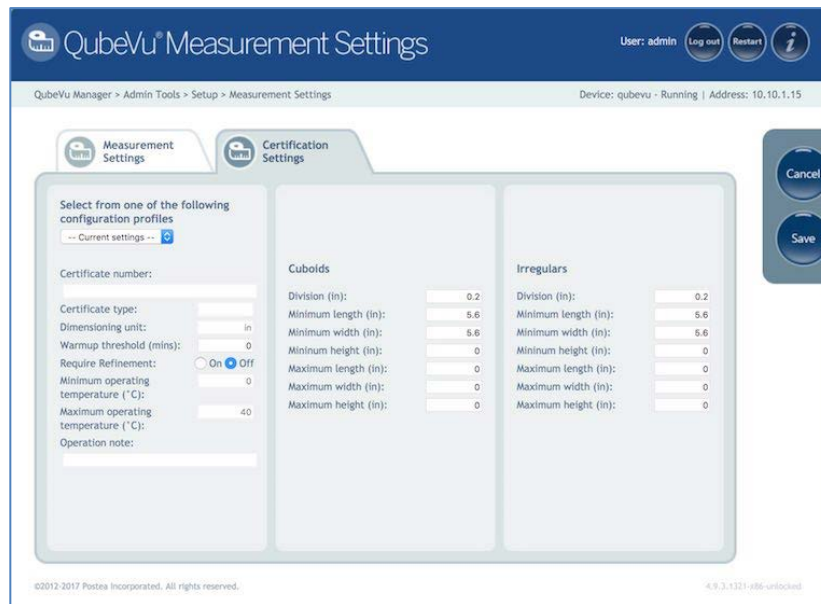
	<p>Distance in inches between the depth sensor and the base of the device. The values used are determined by the mount height of the scan head.</p> <p><b>Default value:</b> 60.2in (1529mm) or 79in (2000mm)</p> <p><b>Valid values:</b> 23.6in – 79in (599mm – 2000mm)</p>
<b>Parallax</b>	<p><b>Description:</b></p> <p>THIS IS A READ ONLY FIELD.</p> <p>Correction factor compensating for slight parallax imperfections.</p>
<b>Results</b>	
<b>Raw dimension</b>	<p><b>Description:</b></p> <p>Instructs iDimension to return raw results that have not been rounded to nearest division.</p> <p><b>Default value:</b> Off</p> <p><b>Valid values:</b> On/Off</p>
<b>Buttons</b>	
 <b>Restore</b>	<p>Use this button to restore the settings on this page to their default values, or to restore from a previously saved backup file.</p> 

	<p>Select OK to restore factory default settings or browse to select a backup file to restore from.</p> <p>iDimension will be restarted after the restore. If the parallax settings have been deleted, a re-calibrate of the cameras must be done before iDimension will be ready for use.</p> <p>Use the Restore action from the Backup menu to completely restore all settings.</p>
<p> Delete Parallax</p>	<p>The Parallax setting is configured at the factory and should not be changed unless directed to by Customer Support.</p>  <p>This action will clear (or delete) the parallax, which is used for calculating dimensions. The parallax may be recreated by performing a camera calibration. iDimension will remain in configuration mode until the parallax value is set.</p>

#### 4.1.4 Certification Settings

Certification Settings allows the selection of pre-defined configuration profiles for Legal for Trade applications. The certificate profile selection is dependent on the jurisdiction. Contact Customer Support for further information.

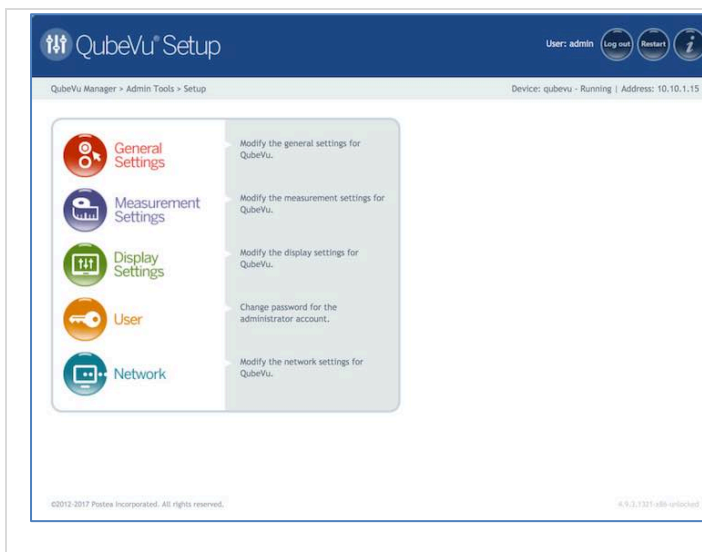
The configuration profile will also set the “Dimensioning unit” to metric or imperial.



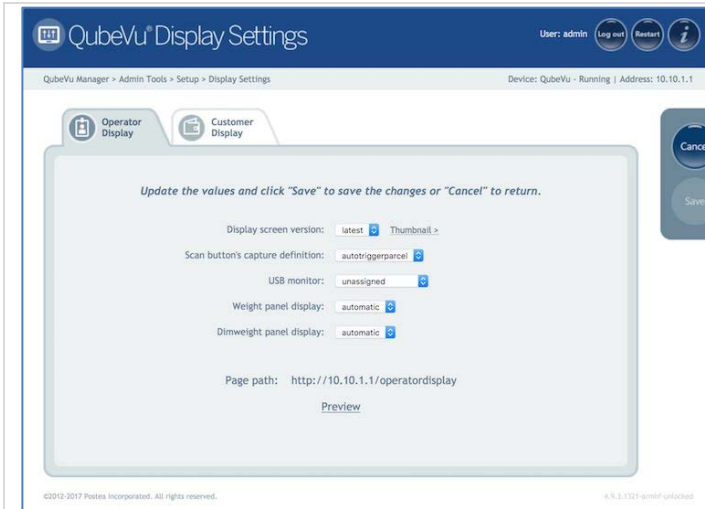
*Certification Settings tab*

#### 4.1.5 Display Settings

Display Setting allows customization of the Operator and Customer Displays.



Select “**Display Settings**”  
from Admin Tools → Setup.



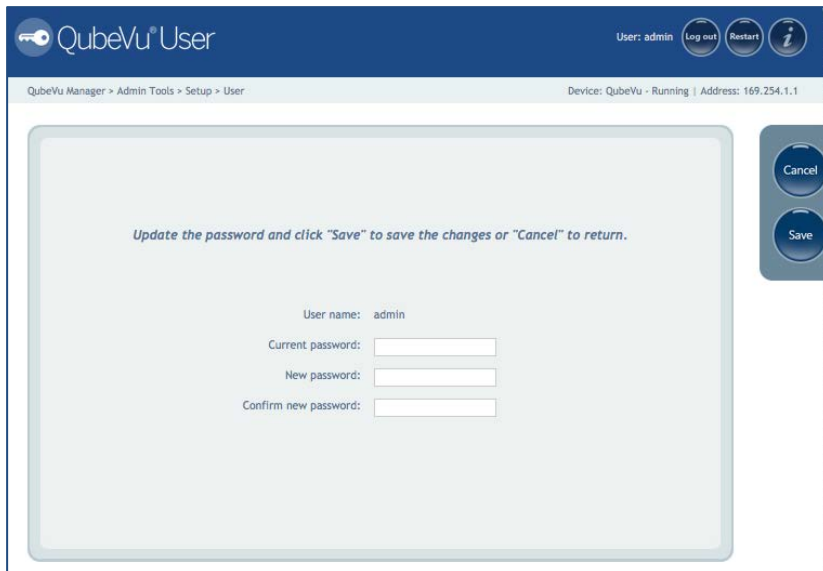
The **Display Settings** menu has 2 tabs; one for configuring the Operator Display, one for configuring the Customer Display.

<p><b>Display screen version</b></p>	<p><b>Description:</b></p> <p>Distance in inches between the depth sensor and the base of the device. The values used are determined by the mount height of the scan head.</p> <p><b>Default value:</b> latest</p> <p><b>Valid values:</b></p> <p>latest</p> <p>1 Camera live feed disabled</p> <p>2 Camera live feed enabled</p>
<p><b>Scan button's capture definition</b></p>	<p><b>Description:</b></p> <p>Assigns a capture definition to the scan button on the Operator Display.</p> <p>NOTE: This option is not available on the Customer Display</p>
<p><b>USB Monitor</b></p>	<p><b>Description:</b></p> <p>Determines which attached USB monitor will show the Operator/Customer Display.</p> <p><b>Default value:</b> unassigned</p>
<p><b>Weight panel display</b></p>	<p><b>Description:</b></p>



	<p>Enables or disables the inclusion of a panel showing weight from a connected scale.</p> <p><b>Default value:</b>        automatic</p> <p><b>Valid values:</b></p> <p>                                 automatic</p> <p>                                 hidden                        Weight panel is hidden</p>
<b>Dimweight panel display</b>	<p><b>Description:</b></p> <p>Enables or disables the inclusion of a panel showing the dimensional weight of an item.</p> <p>NOTE: this is for demo purposes only.</p> <p><b>Default value:</b>        automatic</p> <p><b>Valid values:</b></p> <p>                                 automatic                        The live camera feed is disabled</p> <p>                                 hidden                                Dimweight panel is hidden</p>

#### 4.1.6 User



*User screen*

Use the “User” screen to modify the password. When selecting a new password, keep these rules in mind:

- Minimum length: 6 characters
- Maximum length: 511 characters
- All printable characters are allowed except Unicode characters
- The case cannot be changed, i.e. “oldpassword” to “OLDPASSWORD”
- A new password must be selected that is not too much like the old password, i.e. “oldpassword1” would not be considered a valid change from “oldpassword”.
- The new password cannot just rotate the old password’s characters, i.e. “billy” and “illyb”

## 4.1.7 Network

### 4.1.7.1. Network Settings

QubeVu Network

User: admin Log out Restart

QubeVu Manager > Admin Tools > Setup > Network Interface Device: QubeVu - Running | Address: 169.254.1.1

Network Settings Network Security

Update the values and click "Save" to save the changes or "Cancel" to return.

DHCP:

IP address: n/a

Subnet mask: 255.255.0.0

Gateway: n/a

Hardware address:

Host name:

DHCP Lease Expires: n/a

Cancel Save

*Network Interface settings*

Modify the network settings for the enterprise’s network.

<b>DHCP</b>	Verify with the network administrator if iDimension should be set up on the network using Dynamic Host Configuration Protocol (DHCP).
-------------	---

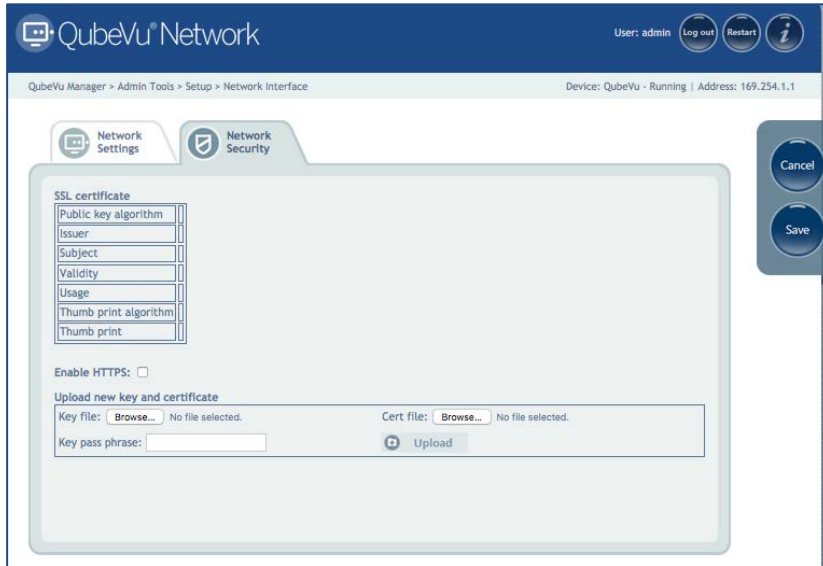
	<p>If DHCP is checked on, also define a unique hostname for this device. This name will be used to access the device from the Manager Tools in the future. A hostname can be up to 15 characters.</p> <p>For example, <code>http://&lt;hostname&gt;/</code></p>
<b>IP Address</b>	<p>If DHCP was checked, an IP address is not entered.</p> <p>If DHCP is not checked, define a unique IP address for each unit that is installed. Consult with the network administrator if help is needed in assigning a new IP address.</p> <p>If using fixed IP addresses, QubeVu Manager can be accessed by either the hostname or the IP address:</p> <ul style="list-style-type: none"> <li>• <code>http://&lt;hostname&gt;/</code></li> <li>• <code>http://&lt;ip address&gt;/</code></li> </ul>
<b>Subnet Mask</b>	Consult with the network administrator for the correct setting.
<b>Gateway</b>	Consult with the network administrator for the correct setting.
<b>Hardware address</b>	Each iDimension has been assigned a unique hardware address. No change is needed for this setting.
<b>Hostname</b>	<p>The default hostname is the alphanumeric part of the device serial number.</p> <p>Up to 15 characters are allowed for the hostname.</p>

#### 4.1.7.2. Network Security

Network Security settings allow the enhancement security by encrypting communications with iDimension using the HTTPS protocol. By default, communication with iDimension is via HTTP.

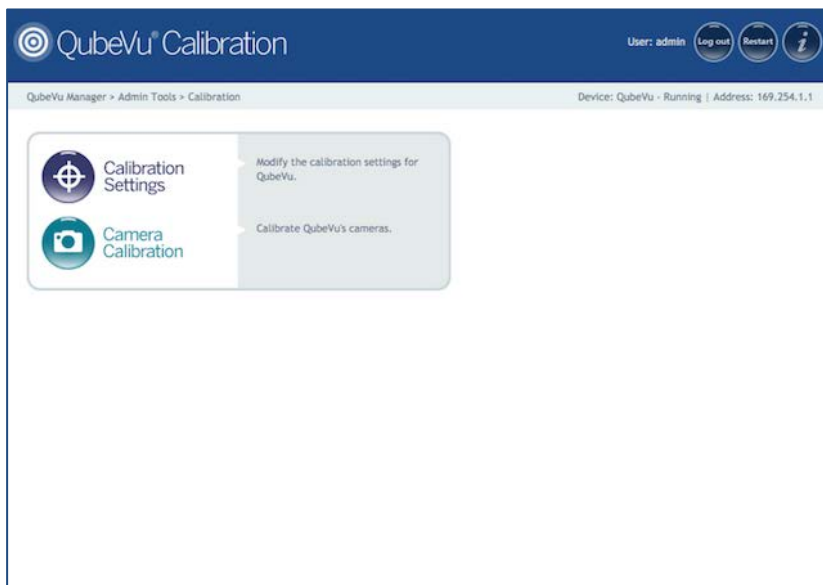
Click on the Network Security tab, the current settings are displayed.

Click on “**Enable HTTPS**” to enable HTTPS, and enter the file name of the key file, certificate file and the key pass phrase. When ready, select **Upload** to transfer the information from the local machine to QubeVu.



*Network Security tab*

## 4.2. Calibration

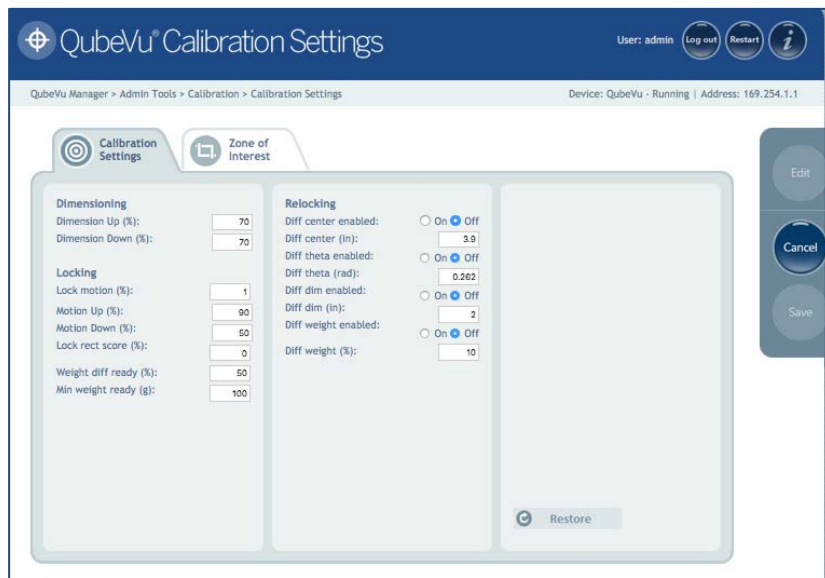


*Calibration Tool Main Menu*

Use the Calibration tool to set the camera settings, and calibrate the Depth, Low Resolution and High Resolution cameras.

This is typically done once at setup, however if the device is moved to a different location or the type of scale has changed, the Calibration settings should be checked to ensure correct calibration.

## 4.2.1 Calibration settings



Calibration Settings tab

Dimensioning	
<b>Dimension Up (%)</b>	<p><b>Description:</b></p> <p>A low-pass filter is applied to the three dimensions of the object from every single frame that is captured. This is intended to overcome noise and further improve accuracy. These two parameters (Up and Down) control the speed of this low-pass filter as a percentage. The closer to 100% and the faster the filter's response; the closer to 0% and the slower the filter's response.</p> <p><b>Default value:</b> 70%</p> <p><b>Valid values:</b> 0 – 100%</p>
<b>Dimension Down (%)</b>	<p><b>Description:</b></p> <p>A low-pass filter is applied to the three dimensions of the object from every single frame that is captured. This is intended to overcome noise and further improve accuracy. These two parameters (Up and Down) control the speed of</p>

	<p>this low-pass filter as a percentage. The closer to 100% and the faster the filter's response; the closer to 0% and the slower the filter's response.</p> <p><b>Default value:</b> 70%</p> <p><b>Valid values:</b> 0 – 100%</p>
<b>Locking</b>	
<b>Lock Motion (%)</b>	<p><b>Description:</b></p> <p>The motion threshold value below which the system must settle in order to lock onto an object.</p> <p><b>Default value:</b> 1%</p> <p><b>Valid values:</b> 0 – 100%</p>
<b>Motion Up (%)</b>	<p><b>Description:</b></p> <p>A low-pass filter is applied to the motion detected from every single frame that is captured. These two parameters (Up and Down) control the speed of this low-pass filter as a percentage. The closer to 100% and the faster the filter's response; the closer to 0% and the slower the filter's response.</p> <p><b>Default value:</b> 90%</p> <p><b>Valid values:</b> 0 – 100%</p>
<b>Motion Down (%)</b>	<p><b>Description:</b></p> <p>A low-pass filter is applied to the motion detected from every single frame that is captured. These two parameters (Up and Down) control the speed of this low-pass filter as a percentage. The closer to 100% and the faster the filter's response; the closer to 0% and the slower the filter's response.</p> <p><b>Default value:</b> 50%</p> <p><b>Valid values:</b> 0 – 100%</p>
<b>Lock rect score (%)</b>	<p><b>Description:</b></p>


	<p>Specifies a minimum tracking confidence value that needs to be reached by the iDimension in order to trigger the capture of the object's dimensions.</p> <p><b>Default value:</b> 0%</p> <p><b>Valid values:</b> 0 – 100%</p>
<b>Weight diff ready (%)</b>	<p><b>Description:</b></p> <p>When an object is removed from the scale, the reported weight will obviously drop. This parameter determines the percentage of weight drop necessary to reset the system to a ready state. This percentage is relative to the weight of the object that was last dimensioned.</p> <p><b>Default value:</b> 50%</p> <p><b>Valid values:</b> 0 – 100%</p>
<b>Min weight ready (g)</b>	<p><b>Description:</b></p> <p>The weight threshold value, in grams, below which the system will determine no object is on the scale and switch to a ready state.</p> <p><b>Default value:</b> 100g</p> <p><b>Valid values:</b> 0g – 200g</p>
<b>Relocking</b>	
<p>Relocking refers to iDimension's ability to dimension a new object even in cases when no ready state was detected due to particularly fast operations.</p>	
<b>Diff center enabled:</b>	<p><b>Description:</b></p> <p>Determines whether or not the system should relock based on the detection of a shift in the object's center.</p> <p><b>Default value:</b> Off</p> <p><b>Valid values:</b> On/Off</p>
<b>Diff center</b>	<p><b>Description:</b></p>

	<p>Specifies the amount of variation in the location of the object placed on the platform that will trigger the capture of new dimensions.</p> <p><b>Default value:</b> 3.9in (99mm)</p> <p><b>Valid values:</b> 0.8in – 11.8in (20.3mm – 300mm)</p>
<b>Diff theta enabled:</b>	<p><b>Description:</b></p> <p>Determines whether or not the system should relock based on the detection of a shift in the object's orientation.</p> <p><b>Default value:</b> Off</p> <p><b>Valid values:</b> On/Off</p>
<b>Diff theta (rad)</b>	<p><b>Description:</b></p> <p>Specifies the amount of variation in the orientation of the object placed on the platform that will trigger the capture of new dimensions.</p> <p><b>Default value:</b> 0.262</p> <p><b>Valid values:</b> 0.1 – 0.4</p>
<b>Diff dim enabled:</b>	<p><b>Description:</b></p> <p>Determines whether or not the system should relock based on inconsistencies in the reported dimensions for the object.</p> <p><b>Default value:</b> Off</p> <p><b>Valid values:</b> On/Off</p>
<b>Diff dim</b>	<p><b>Description:</b></p> <p>Specifies the amount of variation in the dimensions of consecutive objects placed on the platform that will trigger the capture of new dimensions.</p> <p><b>Default value:</b> 2in (51mm)</p> <p><b>Valid values:</b> 0.8in – 4in (20.3mm – 102mm)</p>



<b>Diff weight enabled</b>	<p><b>Description:</b></p> <p>Determines whether or not the system should relock based on inconsistencies in the reported weight for the object.</p> <p><b>Default value:</b> Off</p> <p><b>Valid values:</b> On/Off</p>
<b>Diff weight (%)</b>	<p><b>Description:</b></p> <p>Specifies the amount of variation in the weight received from the scale that will trigger the capture of new dimensions.</p> <p>The threshold value, as a percentage of weight, above which such inconsistencies should be detected in order to trigger a relock.</p> <p><b>Default value:</b> 10%</p> <p><b>Valid values:</b> 0 – 100%</p>

### Configuration Actions

 Restore config

Use this button to restore the settings on this page to their default values, or to restore from a previously saved backup file.



Select OK to restore factory default settings or browse to select a backup file to restore from.

	<p>iDimension will be restarted after the restore. If the parallax settings have been deleted, re-calibrate the cameras before the device will be ready for use.</p> <p>Use the Restore action from the Backup menu to completely restore all settings.</p>
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#### 4.2.2 Zone of Interest & Work Area

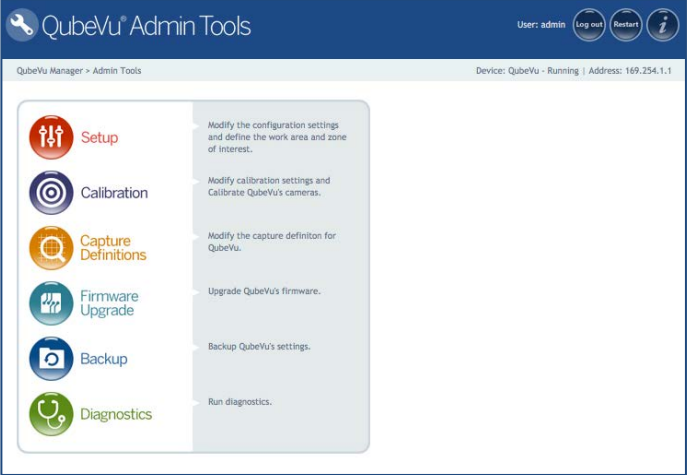
In general, there is need to re-define the Zone of Interest after it has been calibrated during the initial setup.

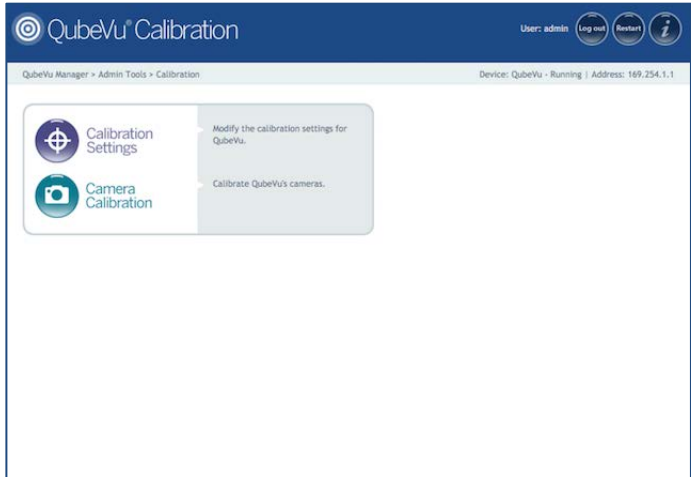
Re-defining the Zone of Interest is required only if:

- If the height of the scanning head has changed
- If the height of the weigh scale has changed
- If the scale has been added or removed from operation

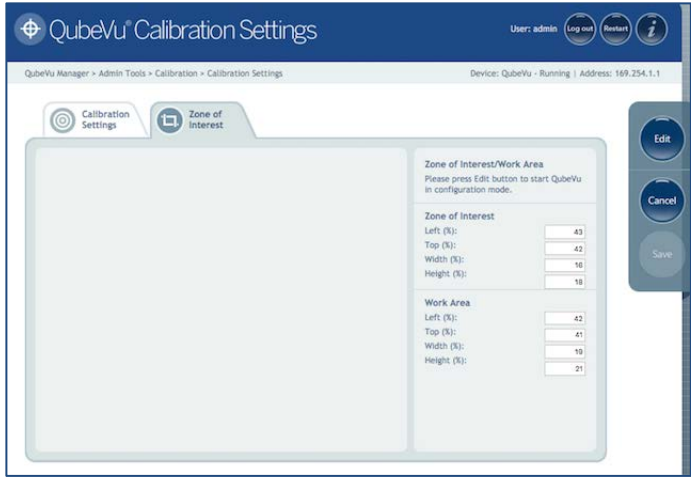
To re-define the Zone of Interest, refer to the Zone of Interest section in the Setup Guide for instructions.

To review the current settings, follow the steps below.

	<p>Return to the <b>Admin Tools</b> menu, and select <b>Calibration</b>.</p>
---	--



Select the **Calibration Settings** tab.

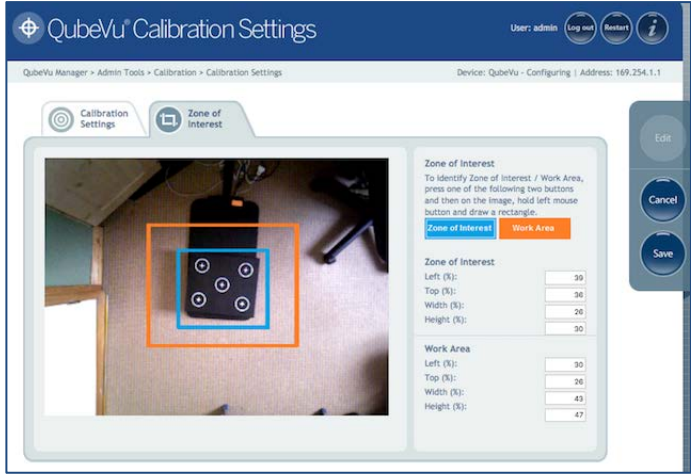


Select the **Zones of Interest** tab.

Press the **Edit** button to switch to Configuration mode.

This will take a minute while the device resets.

It is not recommended to modify the values of Zone of Interest and Work Area directly from this screen. Instead, use the drawing tools to draw the X/Y/Z coordinates for both areas.



The Zone of Interest area (in blue) and the Work Area (in orange) that was previously set up can be reviewed.

### 4.2.3 Camera calibration



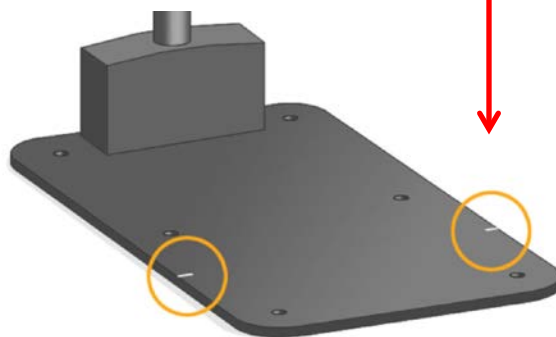
**WARNING: DO NOT CALIBRATE THE CAMERAS UNLESS INSTRUCTED TO DO SO BY TECHNICAL SUPPORT.**

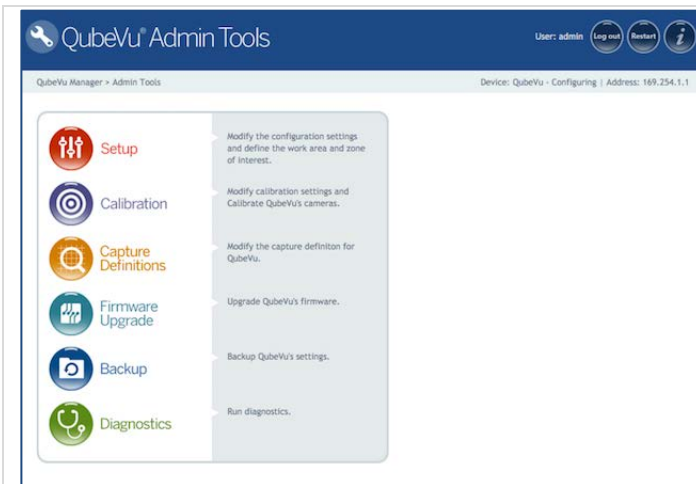
iDimension is calibrated in the factory prior to shipping. In general, there is no need to re-calibrate the cameras.

***NOTE:** iDimension 100 & iDimension 100 XL models do not have high resolution cameras. If the device does not have a high-resolution camera the General Settings screen will not have the Image Quality tab. Configuration options controlling the use of the high resolution camera will also not be visible.*

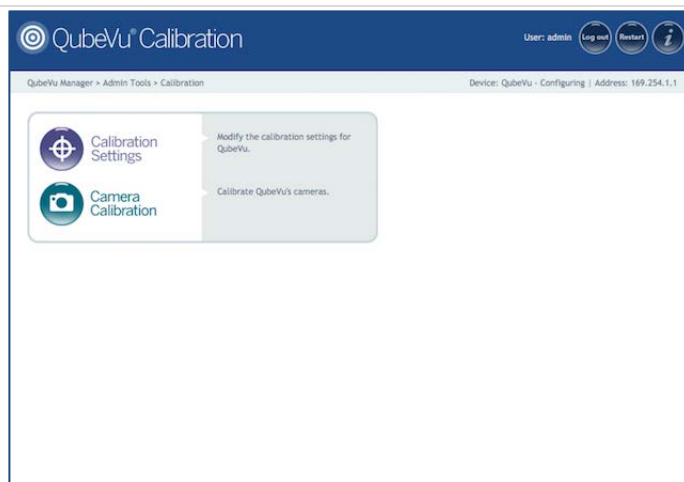
#### **Before beginning:**

- If using a scale, place the scale under the scan head, and put the calibration object on top of the scale. Center the scale under the scan head. iDimension 100 & iDimension 200 have marks on the base plate to assist positioning.
- If not using a scale, just place the calibration object directly onto the measuring platform. Center the calibration object under the scan head and skip to section 9.2. iDimension 100 & iDimension 200 have marks on the base plate to assist positioning.





Select **Calibration** from the Admin Tools menu.



Select **Camera Calibration** from the Calibration menu.



If status is not already set to “Configuring”, select **Edit** to start the calibration process.



Select the **Depth Confidence** tab.

Hold down the left mouse button and drag the mouse to draw a rectangle around the calibration object.



Select the tab for **Low Resolution**.

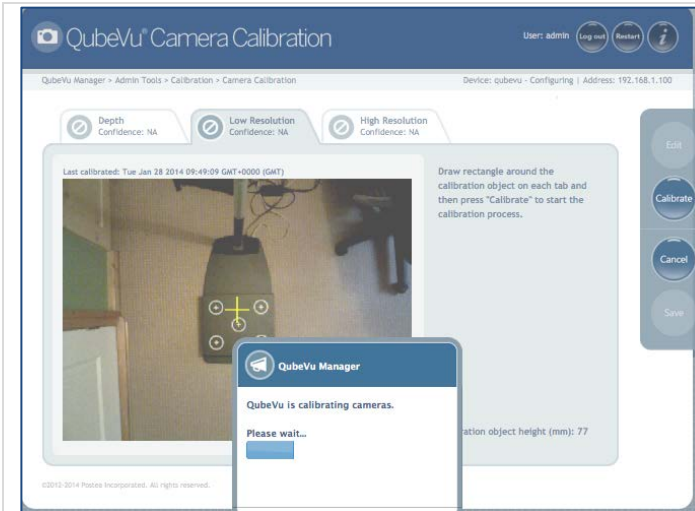
Hold down the left mouse button and drag the mouse to draw a rectangle around the calibration object.



Select the tab for **High Resolution**.

Hold down the left mouse button and drag the mouse to draw a rectangle around the calibration object.

**NOTE:** High resolution camera is not available in iDimension 100 & iDimension 100 XL



Press the **Calibrate** button.



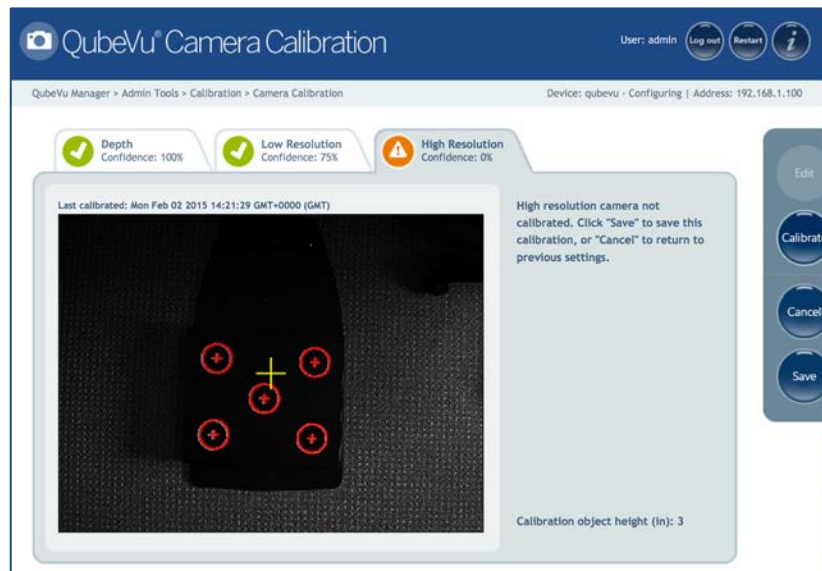
**Calibration successful.**

All tabs must show the green check mark for Calibration to be successful.

Review each tab to ensure that the calibration object was successfully captured, and no other object has mistakenly been placed in the view of the cameras.

**NOTE:** High resolution camera is not available in iDimension 100 & iDimension 100 XL

## If Calibration was not successful:



### Calibration not successful.

Calibration was not successful if any of the tabs show the orange warning sign.

Try re-drawing the rectangle on Depth, Low Resolution and High Resolution tabs, and **Calibrate** again until all three tabs have the green symbol showing a 'check mark'.



## 4.4. Capture Definitions

Customers may create their own capture definitions for use with external triggering or modify the autotrigger capture definitions for automatic triggering as required. Changing the Capture Definition, or defining a new Capture Definition is done by programmers when integrating with a client application.

- **Automatic triggering**

iDimension will dimension and capture the image(s) when it detects that an item has been placed under the scan head and there are no impeding conditions such as movement or unstable scale readings.

The capture definitions that control what gets captured are autotriggerflat and autotriggerparcel depending on the height of the item. The definition “autotriggerflat” is used for items with height less than the flat/parcel threshold while “autotriggerparcel” is used for items with a height greater than the flat/parcel threshold.

- **Manual or external triggering**

iDimension will dimension and capture image(s) when the Capture method is called and detects that an item has been placed under the scan head and there are no impeding conditions such as movement or unstable scale readings.

Note that this very similar to automatic triggering with the addition of requiring the Capture method to be called by the client application.

The capture definition that controls what gets captured is specified as a parameter to the Capture call in a client application.

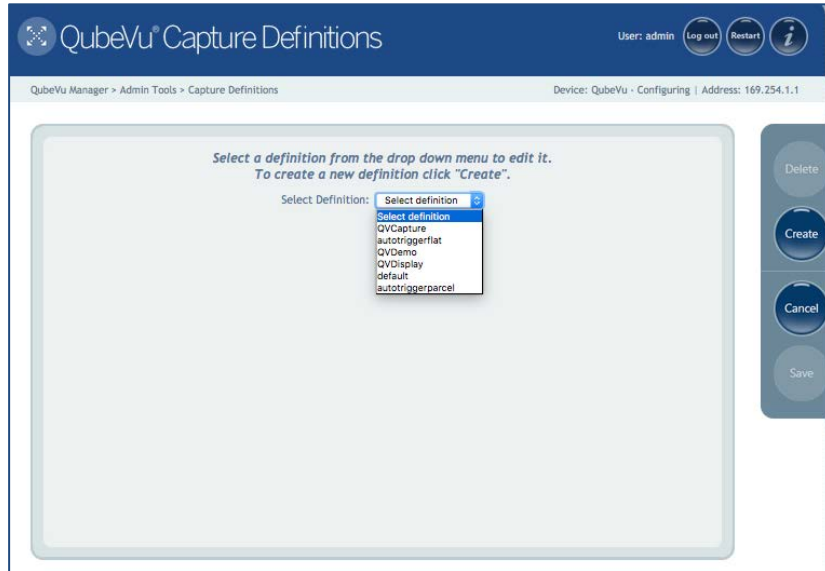
A capture definition is used to describe the processing iDimension will apply to an item after it has detected it. The available processing options depend on which product is being used.

### 4.4.1 Capture Definitions – iDimension 100 & iDimension 100 XL

Currently the following processing options are available on iDimension 100 & iDimension 100 XL:

- Low resolution image
- Markings

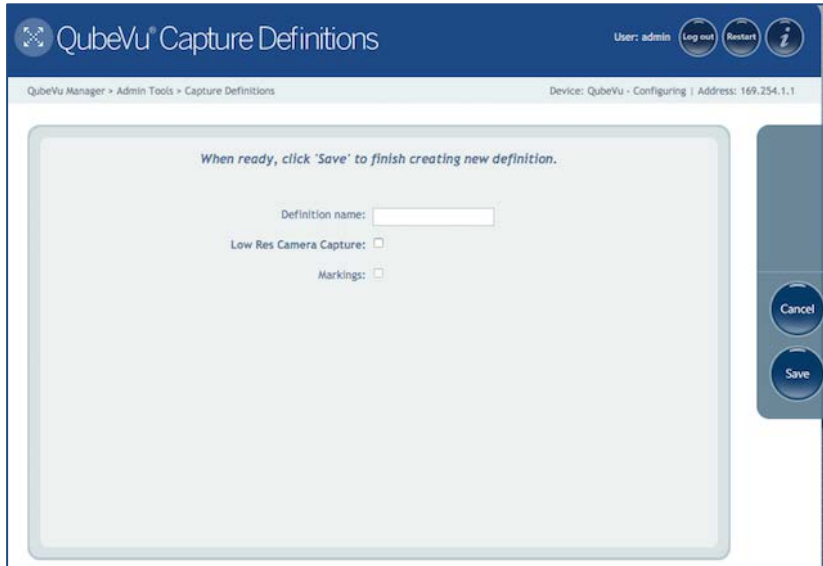
There are five predefined profiles, or they can be created, depending upon the application processing requirements.



*Capture Definitions screen*

The pre-defined Capture Definitions and their use are:

- |                          |   |
|--------------------------|---|
| <b>autotriggerflat</b>   | Used for items with height less than “flat/parcel threshold” when automatic triggering is enabled                       |
| <b>autotriggerparcel</b> | Used for items with height larger than “flat/parcel threshold” when automatic triggering is enabled                     |
| <b>QVDemo</b>            | Used when “Capture” button is pressed in QubeVu Manager Demo  |
| <b>QVCapture</b>         | Used when “Scan” button is pressed in QubeVu Capture application. Also used by QubeVuDepot and other demo applications. |
| <b>default</b>           | Used by the displays  |



*iDimension 100 & iDimension 100 XL Create a Capture Definitions screen*

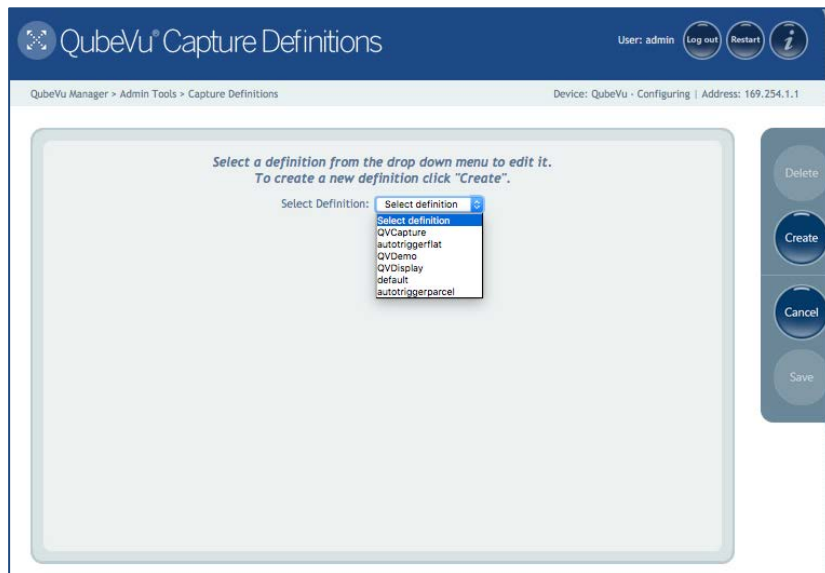
<b>Definition Name</b>	Enter the name to be assigned to this definition.
<b>Low Res Camera Capture</b>	If checked, then iDimension will create a low resolution camera image. ResX and ResY are respectively the desired width and height of such image, in pixels, for example, 640x480.
<b>Markings</b>	<p>If checked, then iDimension will mark the low resolution image with the selected information.</p> <p><b><i>Date and Time:</i></b> The date and time stamp of the scan.</p> <p><b><i>ScanID:</i></b> The unique scan ID number</p> <p><b><i>Dimensions:</i></b> The 3 dimensions of the item</p> <p><b><i>Indicators:</i></b> Any indicators, e.g. undersized, oversized etc.</p> <p><b><i>Item Outline:</i></b> The 2D outline of the dimensioned item.</p>

#### 4.4.2 Capture Definitions – iDimension 200 & iDimension 300

Currently the following processing options are available on iDimension 200 & iDimension 300:

- Dimensioning
- Low resolution image
- Markings
- High resolution image
- Barcode recognition

There are five predefined profiles, or one can be created depending upon the application processing requirements.



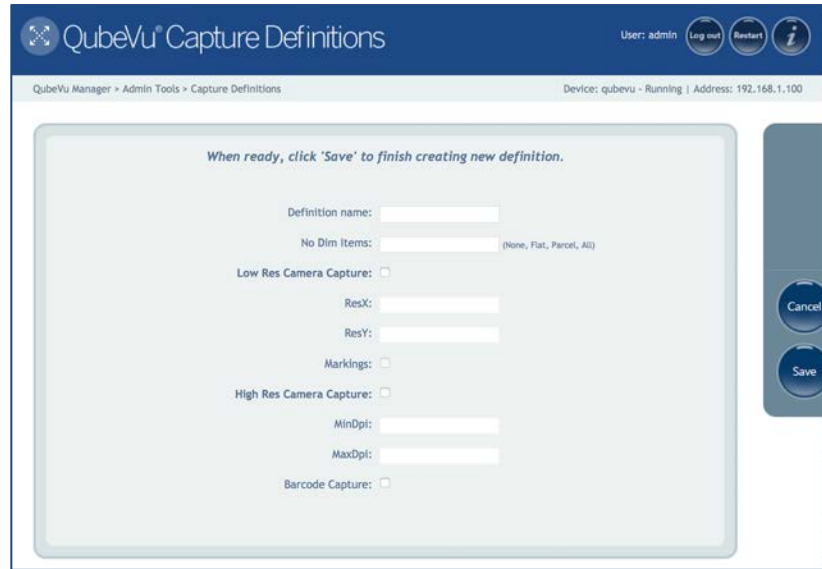
*iDimension 200 & iDimension 300 - Capture Definitions screen*

The pre-defined Capture Definitions and their use are:

- |                          |   |
|--------------------------|---|
| <b>autotriggerflat</b>   | Used for items with height less than “flat/parcel threshold” when automatic triggering is enabled   |
| <b>autotriggerparcel</b> | Used for items with height larger than “flat/parcel threshold” when automatic triggering is enabled |
| <b>QVDemo</b>            | Used when “Capture” button is pressed in QubeVu Manager Demo  |

**QVCapture** Used when “Scan” button is pressed in QubeVu Capture application. Also used by QubeVuDepot and other demo applications.

**default** Used by the Displays



*iDimension 200 & iDimension 300 - Create a Capture Definitions screen*

<b>Definition Name</b>	Enter the name to be assigned to this definition.
<b>No Dim Items</b>	<p>This field defines the items that iDimension will <b>not</b> dimension.</p> <p>Valid values:</p> <p><i>None</i> - All items are dimensioned.</p> <p><i>Flat</i> - Do not dimension Flats.</p> <p><i>Parcel</i> - Do not dimension Parcels.</p> <p><i>All</i> - Neither flats nor parcels are dimensioned.</p>
<b>Low Res Camera Capture</b>	If checked, then iDimension will create a low resolution camera image. ResX and ResY are respectively the desired width and height of such image, in pixels, for example, 640x480.

<p><b>Markings</b></p>	<p>If checked, then iDimension will mark the low resolution image with the selected information.</p> <p><b><i>Date and Time:</i></b> The date and time stamp of the scan.</p> <p><b><i>ScanID:</i></b> The unique scan ID number</p> <p><b><i>Dimensions:</i></b> The 3 dimensions of the item</p> <p><b><i>Indicators:</i></b> Any indicators, e.g. undersized, oversized etc.</p> <p><b><i>Item Outline:</i></b> The 2D outline of the dimensioned item.</p>
<p><b>High Res Camera Capture</b></p>	<p>If checked, iDimension 200 or 300 will create a high resolution camera image. These images will be such that they scan the top surface of the object with a resolution that is comprised between MinDPI and MaxDPI dots per inches.</p> <p><b><i>MinDPI:</i></b> The high resolution image captured will be at least MinDPI in resolution.</p> <p><b><i>MaxDPI:</i></b> The resolution of the high resolution image captured will be capped at MaxDPI. In some cases the actual resolution may be somewhat higher than MaxDPI due to the coarse resolution of the zoom.</p>
<p><b>Barcode Capture</b></p>	<p>If checked, iDimension 200 or 300 will extract the selected barcode symbols from the high resolution image. The results are returned via the API.</p> <p><b>NOTE:</b> Extracting barcodes from images is a resource intensive operation and can be performed by the device or by a client application. By virtue of the fact a PC will have a faster processor than iDimension, performing barcode recognition in a client application will be markedly faster.</p> <p>The following symbols are supported:</p> <p>EAN13, EAN8, CODABAR, PATCHCODE, INT25, CODE128, CODE39, UPCE, UPCX, DATAMATRIX, QRCODE, PDF417</p>

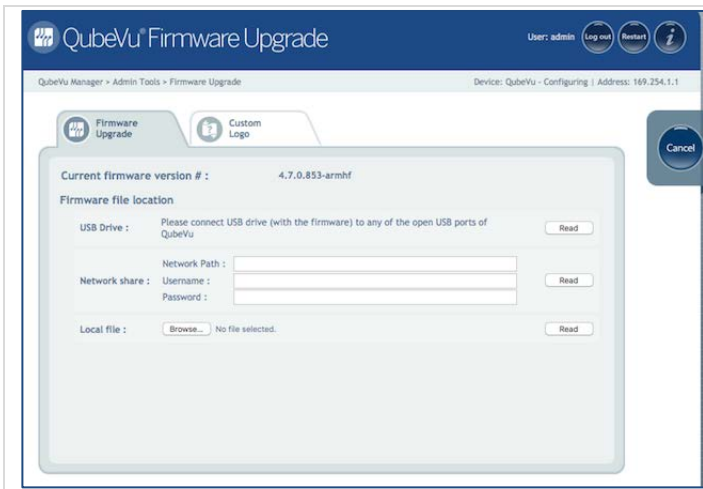
## 4.5. Firmware upgrade

Rice Lake Weighing Systems will make available any firmware upgrades and will make the releases available for download at [www.ricelake.com](http://www.ricelake.com) . The firmware release must be downloaded to one of the following 3 media types before it can be uploaded to iDimension:

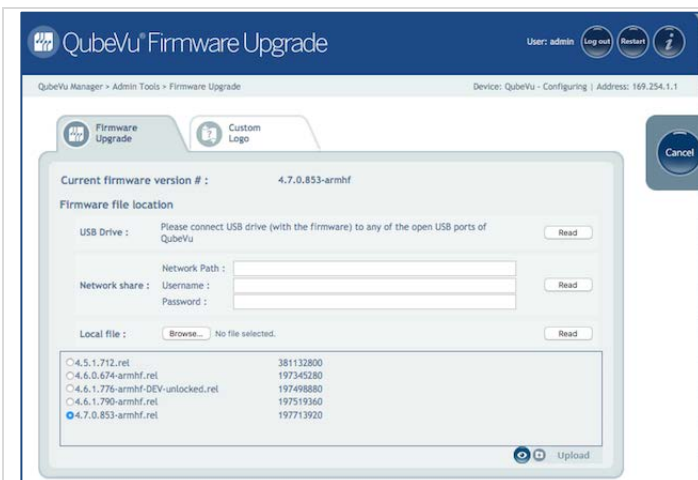
- USB drive
- Network share
- Local file

Below is a description of the firmware upgrade process, using a USB drive as the example.

- Log into QubeVu Manager Tools, and go to the Firmware Upgrade tool.



Select **Read** to read the USB drive.



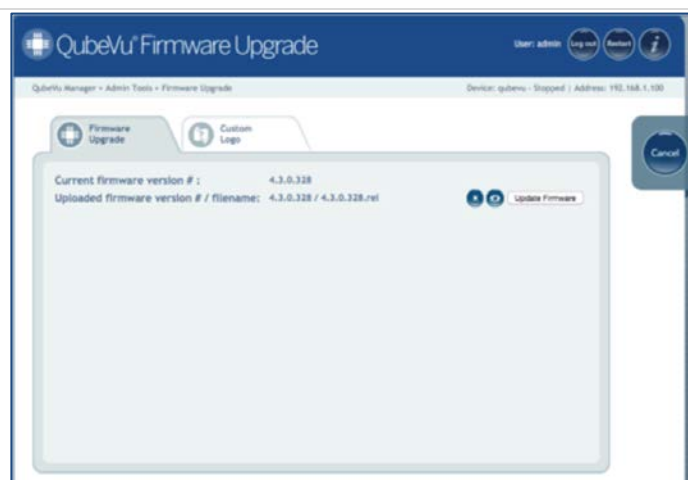
Select the firmware version from the USB drive, and click **Upload**.



The firmware upgrade process will first copy the update file to iDimension's embedded processor.


It is recommended to **not** interrupt the upload process.

There will be one more opportunity to stop the firmware upgrade process.




Once the upload has completed, review the firmware version number displayed, and the uploaded file name.

Select **Update Firmware** to complete the upgrade process, or **Cancel** to cancel.

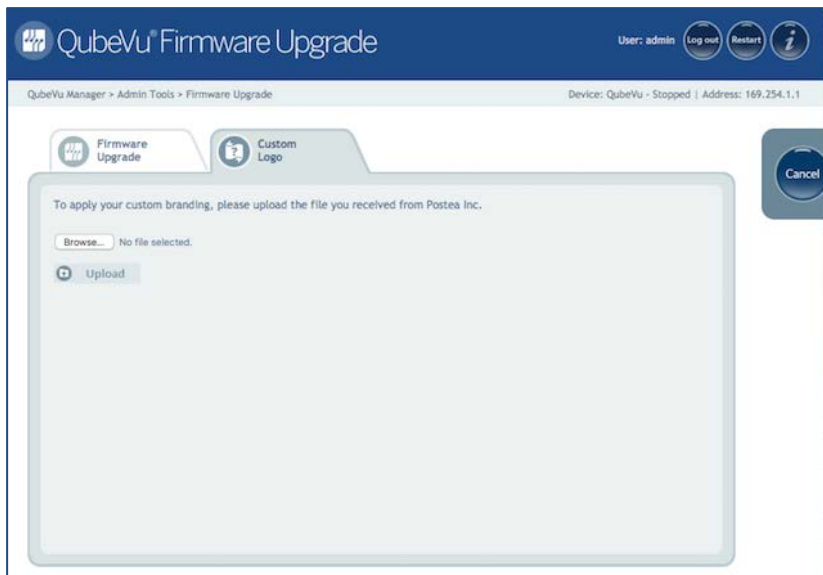
 Deletes the uploaded firmware release file.



 Verifies the firmware release file integrity.
<ul style="list-style-type: none"><li>• Confirm the update. If OK is selected, please wait until the firmware upgrade has been completed. <b><u>Stopping the process at any time is not recommended, and may cause problems with the device.</u></b></li><li>• The device will automatically restart to complete the upgrade.</li></ul> <p>When the device is re-starting, the QubeVu Manager user interface cannot be displayed, and there may be an error from the browser.</p> <p>Close the browser window, and restart the browser, and enter the IP address or host name in the address bar.</p> <p>Wait for the status to show “Running” before running QubeVu Manager or any client application.</p>

## 4.6. Custom Logo

The QubeVu Manager interface can be customized with a company logo. To prevent inappropriate use, the logo file must be pre-approved. Please contact technical support to use this feature.



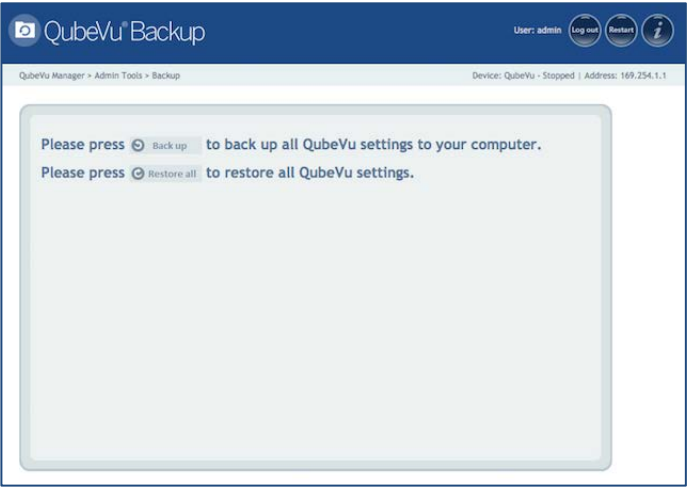
*Custom Logo tab*



## 4.7. Backup and Restore

### 4.7.1 Backup

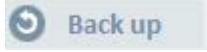
Use the Backup function to create a backup file of all settings. There will always be a factory calibration file, it is recommended that after the initial setup of the device, a full backup be done.

The Backup file is saved to the computer as an XML file.




The screenshot shows the QubeVu Backup web interface. The header includes the QubeVu logo, the title 'QubeVu Backup', and user information: 'User: admin', 'Log out', 'Restart', and 'i'. Below the header, the breadcrumb is 'QubeVu Manager > Admin Tools > Backup' and the device status is 'Device: QubeVu - Stopped | Address: 169.254.1.1'. The main content area contains two instructions: 'Please press  Back up to back up all QubeVu settings to your computer.' and 'Please press  Restore all to restore all QubeVu settings.'

Select **Backup** from the Admin Tools main menu.

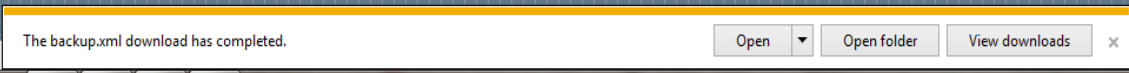


Then select "Backup" button to begin the backup process.



Do you want to open or save **backup.xml** (5.89 KB) from 192.168.2.203? Open Save Cancel ×

Look to the bottom of the window for the file-save dialog box. To proceed with the backup, select "Save As" to custom the file name and save location.

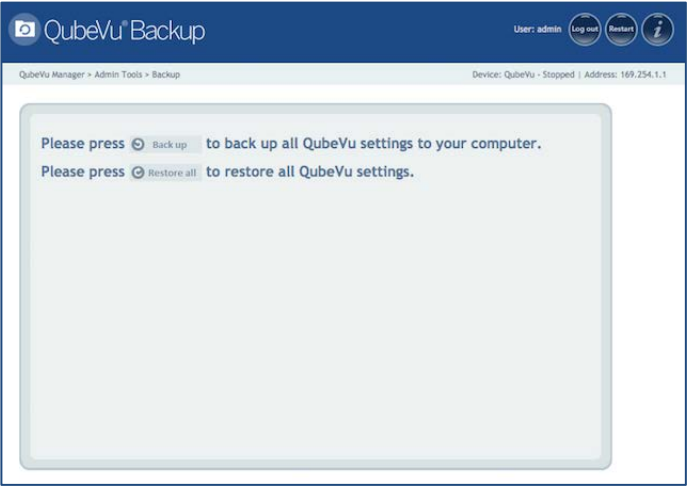

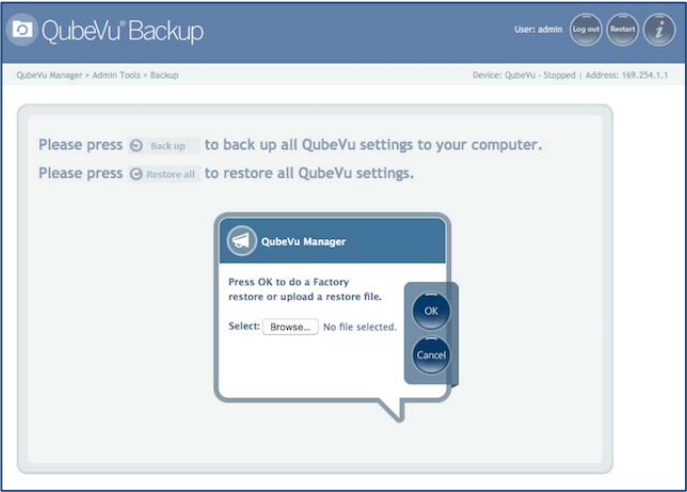


The backup.xml download has completed. Open Open folder View downloads ×

A notification is received when the backup is complete.

## 4.7.2 Restore

Use the Restore function to restore either the factory calibration file or restore from the saved backup file.

	 <p>Select <b>Restore all</b> to begin the restore process.</p>
	<p>Select OK (without entering a file name) to restore all settings from factory calibration.</p> <p>Select Browse to select a previously saved file from the computer to restore all settings.</p>

## 6. Peripherals

iDimension supports optional USB peripherals for additional data capture. Additional USB ports can be added with the use of a powered USB hub.

### 6.1. Barcode Scanner

An optional USB barcode scanner may be connected to iDimension and be used as a trigger for a scan. Auto trigger would typically be turned off in such cases; if not then the item will be scanned once by the auto trigger when it is placed on the measuring platform and once more when the barcode is read by the scanner.

**NOTE:** The barcode scanner interface must be USB and support keyboard wedge emulation.

The data read by the scanner is passed and returned in the status xml along all other data such as dimensions.

```
<QVStatus xmlns="http://postea.com/WebServices/QubeVu" Status="REMOVE" CaptureId="81" ExtendedStatus="ScaleNotZero,ItemDetected" OutOfBounds="0">
  <DateTime>2015-12-16 12:59:36 -0500</DateTime>
  <Error Code="0" Message=""/>
  <CapturedData CaptureDefinitionName="default" CaptureId="81">
    <ExternalData>
      <Barcode>
        <TextData>2056455390400000</TextData>
      </Barcode>
    </ExternalData>
  </CapturedData>
</QVStatus>
```

*Sample status.xml*

### 6.2. Scales

An optional USB or serial scale may be connected to iDimension. If the scale interface is serial a serial to USB adapter must be used. The following scale protocols are currently supported:

- USBHID (lb/kg only)
- Rice Lake BenchPro Series USBHID (lb/kg only)
- Pennsylvania 7300
- Mettler Toledo
- MT-SICS
- NCI

**NOTE:** If a scale is added or removed AFTER iDimension has been setup it is necessary to perform a ZERO HEIGHT operation. Zero Height can be initiated from the Zero Height button the Operator, Customer or Touch display.



To configure a scale go to the [Scale](#) section in [Admin Tools > General Settings](#)

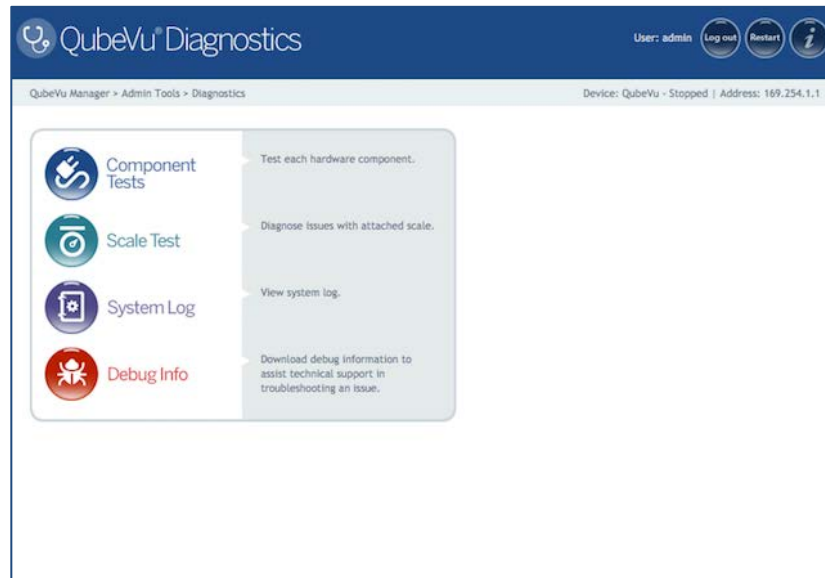
Scale																	
<b>Scale Type</b>	<p><b>Description:</b></p> <p>Scale type is selectable from a drop-down list. If the scale is not listed below, contact Customer Support for assistance.</p> <p><b>Default value:</b> AUTO</p> <p><b>Valid values:</b></p> <table border="0"> <tr> <td style="padding-left: 40px;">AUTO</td> <td>iDimension will attempt to identify the scale and, if identified, will use that scale.</td> </tr> <tr> <td style="padding-left: 40px;">NONE</td> <td>No scale attached to the iDimension.</td> </tr> <tr> <td style="padding-left: 40px;">EXTERNAL</td> <td>No scale attached to iDimension and the application must trigger the iDimension either from a barcode scan or using the ScaleService API to notify the iDimension of a change in weight.</td> </tr> <tr> <td style="padding-left: 40px;">USBHID</td> <td>A scale that uses the USBHID protocol is connected to iDimension.</td> </tr> <tr> <td style="padding-left: 40px;">METTLERTOLEDO</td> <td>A scale that uses the Mettler Toledo standard protocol is connected to the iDimension.</td> </tr> <tr> <td style="padding-left: 40px;">MTSICS</td> <td>A scale that uses the MTSICS (“METTLER TOLEDO Standard Interface Command Set”) protocol is connected to iDimension.</td> </tr> <tr> <td style="padding-left: 40px;">NCI</td> <td>A scale that uses the Weigh-Tronix/NCI protocol is connected to iDimension.</td> </tr> <tr> <td style="padding-left: 40px;">PENNSYLVANIA7300</td> <td>The Pennsylvania 7300 scale is connected to iDimension.</td> </tr> </table>	AUTO	iDimension will attempt to identify the scale and, if identified, will use that scale.	NONE	No scale attached to the iDimension.	EXTERNAL	No scale attached to iDimension and the application must trigger the iDimension either from a barcode scan or using the ScaleService API to notify the iDimension of a change in weight.	USBHID	A scale that uses the USBHID protocol is connected to iDimension.	METTLERTOLEDO	A scale that uses the Mettler Toledo standard protocol is connected to the iDimension.	MTSICS	A scale that uses the MTSICS (“METTLER TOLEDO Standard Interface Command Set”) protocol is connected to iDimension.	NCI	A scale that uses the Weigh-Tronix/NCI protocol is connected to iDimension.	PENNSYLVANIA7300	The Pennsylvania 7300 scale is connected to iDimension.
AUTO	iDimension will attempt to identify the scale and, if identified, will use that scale.																
NONE	No scale attached to the iDimension.																
EXTERNAL	No scale attached to iDimension and the application must trigger the iDimension either from a barcode scan or using the ScaleService API to notify the iDimension of a change in weight.																
USBHID	A scale that uses the USBHID protocol is connected to iDimension.																
METTLERTOLEDO	A scale that uses the Mettler Toledo standard protocol is connected to the iDimension.																
MTSICS	A scale that uses the MTSICS (“METTLER TOLEDO Standard Interface Command Set”) protocol is connected to iDimension.																
NCI	A scale that uses the Weigh-Tronix/NCI protocol is connected to iDimension.																
PENNSYLVANIA7300	The Pennsylvania 7300 scale is connected to iDimension.																

<p><b>Comm parameters:</b></p>	<p><b>Description:</b></p> <p>This field provides an input box into which any required parameters needed to control communication with the scale can be entered. For serial scale connections - namely METTLERTOLEDO, MTSICS, NCI &amp; PENNSYLVANIA7300, other than the default values (which can be left empty), the following format is expected:</p> <p><b>Default value:</b> &lt;empty&gt;</p> <p><b>Valid values:</b></p> <p><i>For serial scale connections, METTLERTOLEDO, MTSICS, NCI &amp; PENNSYLVANIA7300</i></p> <p>The following format is expected:</p> <p>&lt;BAUD RATE&gt;,&lt;PARITY&gt;,&lt;BITS&gt;,&lt;STOPBITS&gt;</p> <p>E.g. 9600,N,8,1</p> <p>valid values:</p> <p>BAUD RATE: 1200, 2400, 4800, 9600, 14400, 19200, 38400, 57600 and 115200</p> <p>PARITY: N,O,E</p> <p>BITS: 5,6,7,8,9</p> <p>STOPBITS: 1,1.5,2</p> <p><i>For USBHID, other than the supported scales listed</i></p> <p>The scale comm parameters should contain the vendor and product ID in the follow format:</p> <p>&lt;VENDOR ID&gt;,&lt;PRODUCT ID&gt;</p> <p>E.g.: 0x0EB8,0xF000</p> <p>Rice Lake Bench Pro: 1C19,0002</p>
--------------------------------	---

<p><b>Use scale stable status</b></p>	<p><b>Description:</b></p> <p>Determines how iDimension will determine the stability of the scale weight or status.</p> <p><b>Default value:</b> QubeVu</p> <p><b>Valid values:</b></p> <p><i>QubeVu</i> iDim uses a filter to determine the status</p> <p><i>Scale</i> iDim uses the scales “stable” flag</p> <p><i>Scale + QubeVu</i> iDim uses both its own filter and the scale “stable” flag.</p>
<p><b>Wait timeout (ms)</b></p>	<p><b>Description:</b></p> <p>The period of time, in milliseconds, iDimension will wait for a response from the scale.</p> <p><b>Default value:</b> 3000</p> <p><b>Valid values:</b> Scale dependent</p>

## 6.3. Diagnostics

QubeVu Manager provides a complete set of diagnostic tools. These tools can be used to test hardware components and gather diagnostic information.



*Diagnostics Menu*

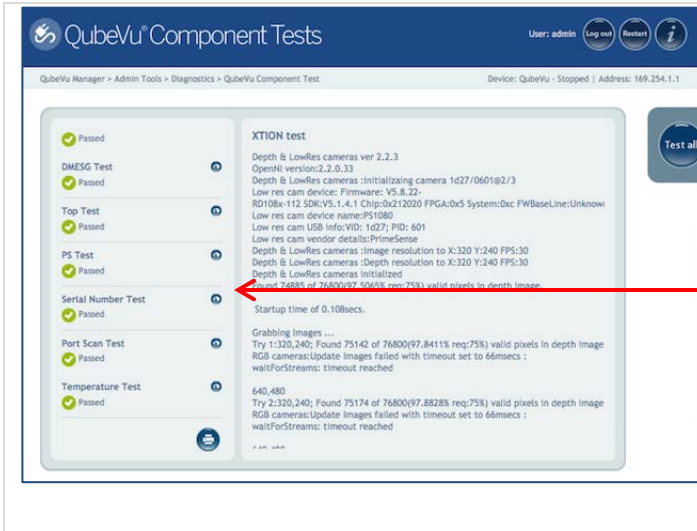
### 6.3.1 Component Test

The screenshot shows the 'QubeVu Component Tests' interface. At the top, there's a header with the QubeVu logo and the text 'QubeVu Component Tests'. On the right side of the header, it says 'User: admin' and has buttons for 'Log out', 'Restart', and an information icon. Below the header, there's a breadcrumb trail: 'QubeVu Manager &gt; Admin Tools &gt; Diagnostics &gt; QubeVu Component Test'. On the right side of this section, it says 'Device: QubeVu - Stopped | Address: 169.254.1.1'. The main content area is divided into two columns. The left column lists several tests: 'XTION Test NA', 'Camera Level Test NA', 'Scale Test NA', 'Network Test NA', 'DMESG Test NA', 'Top Test NA', and 'PS Test NA'. Each test has a small blue circular button with a white 'T' icon next to it. A red arrow points from the 'DMESG Test' button to the right. The right column is titled 'Test' and contains the text 'Details NA'. At the bottom right of the main content area, there is a large blue button labeled 'Test all'.

Click on **Test all** to test all hardware components.

Hardware components can be tested individually by clicking on the **test button** beside each component.





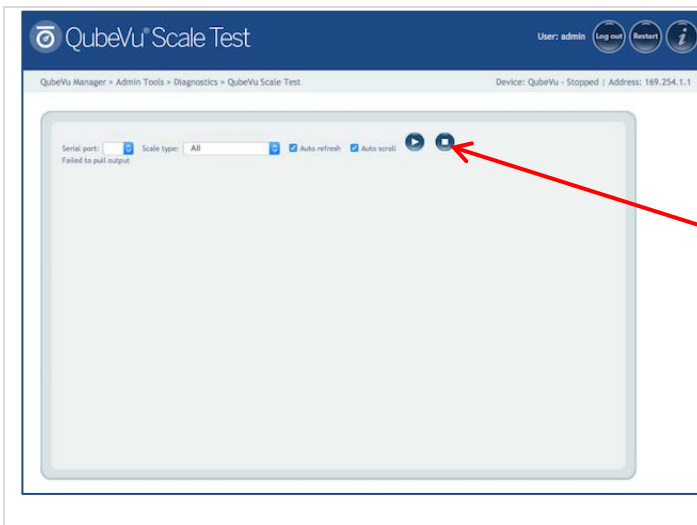
The status of each individual component is returned as either **Passed** or **Failed**.

Further test result details can be viewed by clicking **View Details**.

Component failures should be reported to Technical Support

### 6.3.2 Scale Test

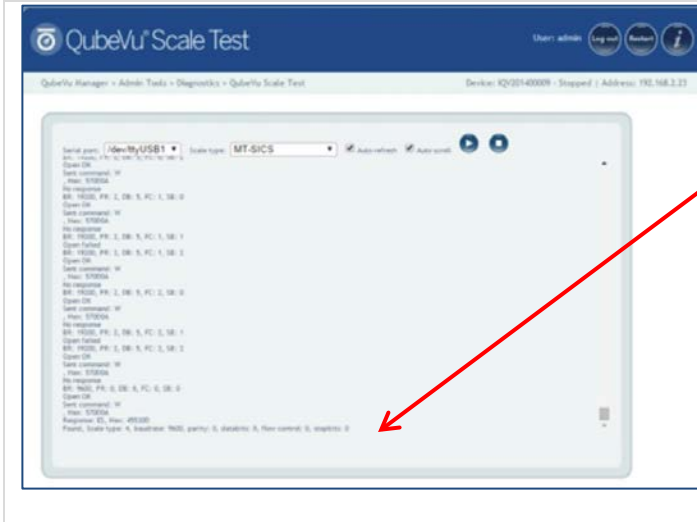
The scale test tool is used to help determine the communication settings of a serial scale attached.



Select the Serial **Port** and **Scale type** from the drop down lists.



Click the play icon to start the test.



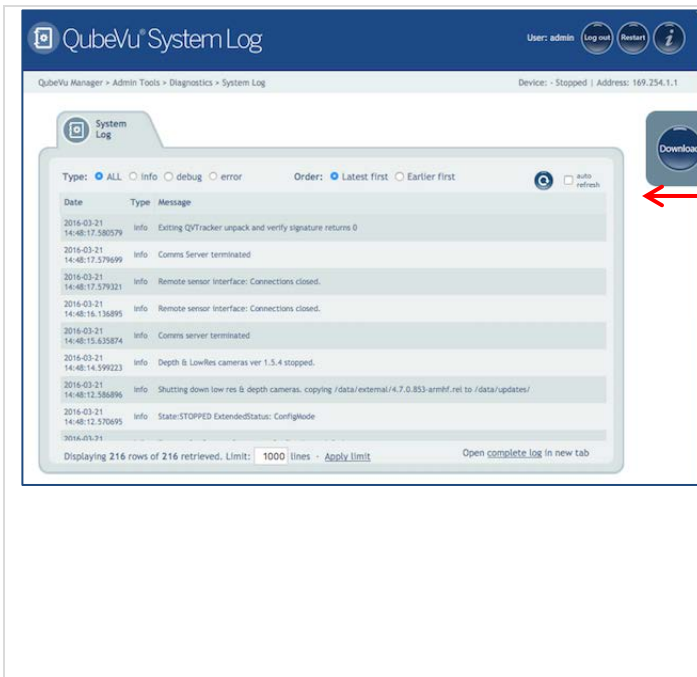
If a valid scale is detected the output will display the scales communication parameters.

### 6.3.3 System Log

The System Log displays system information, debug and error messages.

The log view can be customized by:

- **Type:** all, info, debug or error
- **Order:** Latest first or earliest first



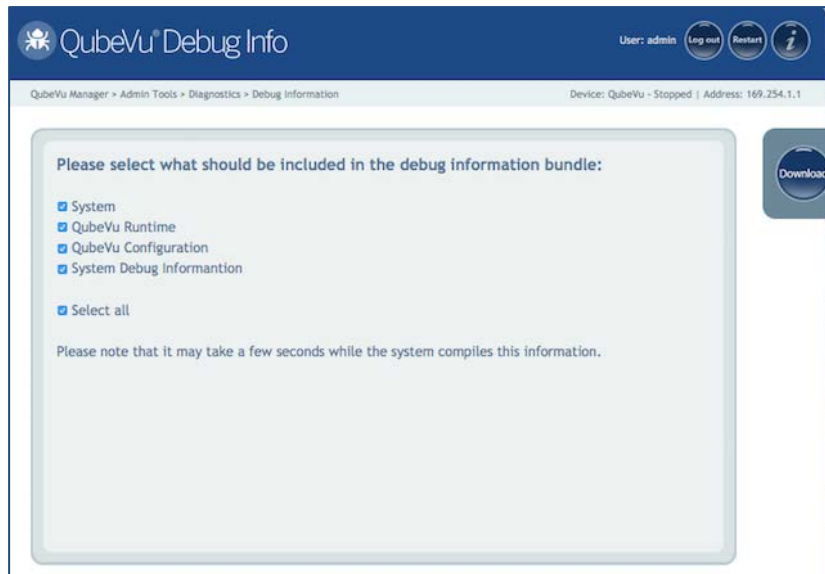
The log can be manually refreshed by clicking the **Refresh** button, or automatically refreshed by ticking the **auto refresh** box.

To download the log to a CSV file, click the **Download** button.



### 6.3.4 Debug Info

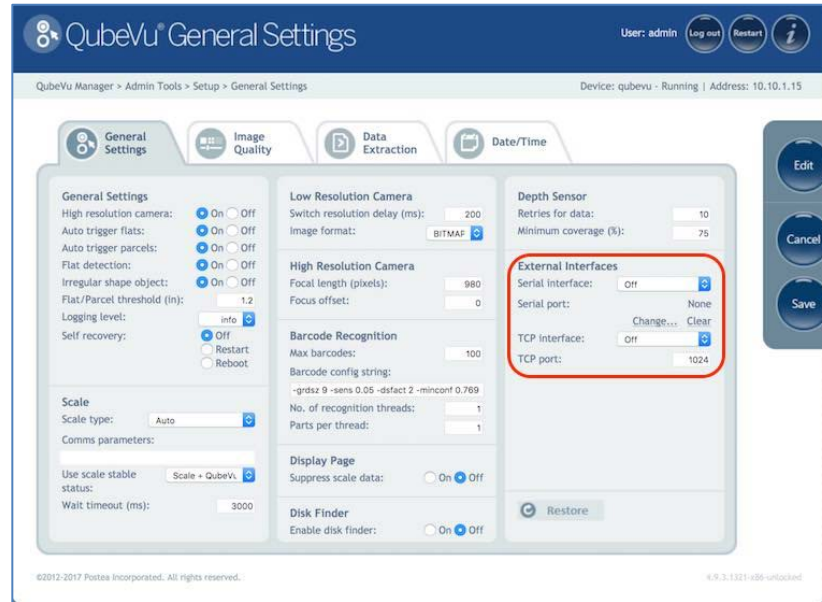
The Debug Info tool allows for the capture and download of a complete set of diagnostic data.



*Debug Info Tool*

## 7. External Interfaces

To facilitate integration with client applications and backend systems, iDimension provides external interfaces that emulate other dimensioning hardware.



Two external interfaces are provided:

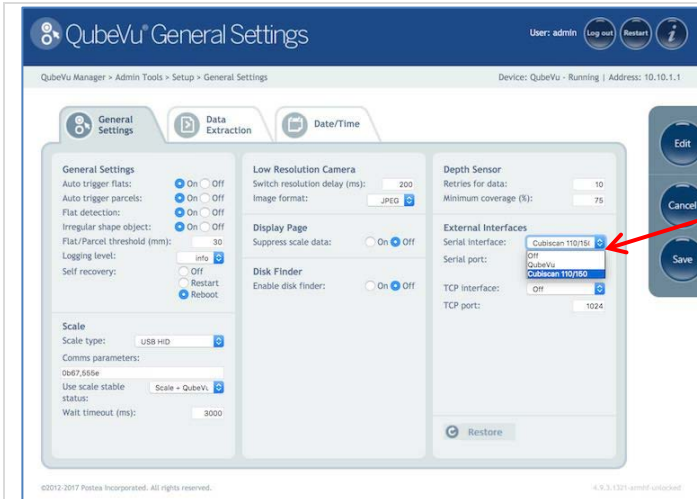
- QubeVu External Interface – see iDimension API Guide for further information
- Cubiscan 110/150

Two physical connectivity modes are supported:

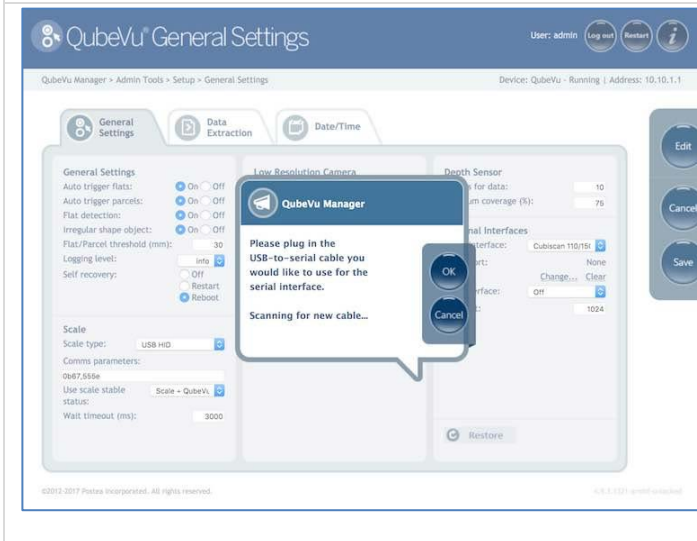
- Emulation over Serial/USB
- Emulation over TCP

## 7.1. Emulation over serial/USB

iDimension does not have a serial port. If using the CubiScan Serial emulation it will need to use an appropriate Serial – USB adapter. Please contact [productinfo@ricelake.com](mailto:productinfo@ricelake.com) for recommendations.



Select **QubeVu** or **Cubiscan 110/150** from the serial interface dropdown list.

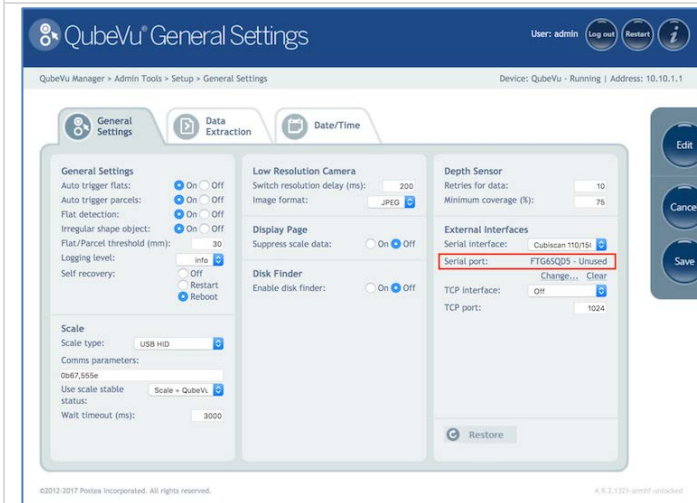


Click **Change** before plugging in the USB – Serial cable. CubiScan serial emulation. iDimension will then begin scanning for a new cable.



Plug the cable into the USB port on iDimension or powered USB hub.

The cable will then be detected. Click **OK** to proceed, the **Save** to complete the serial emulation setup.



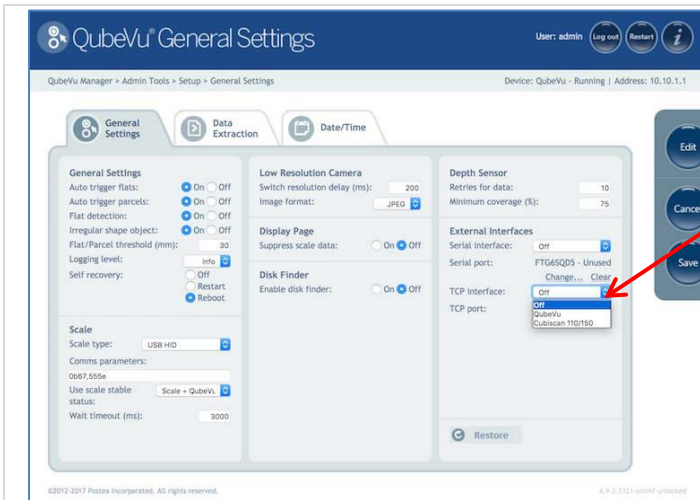
The status of the serial port can be viewed from the **General Settings**

The status is only refreshed when the page is refreshed or after the “Change...” dialog.

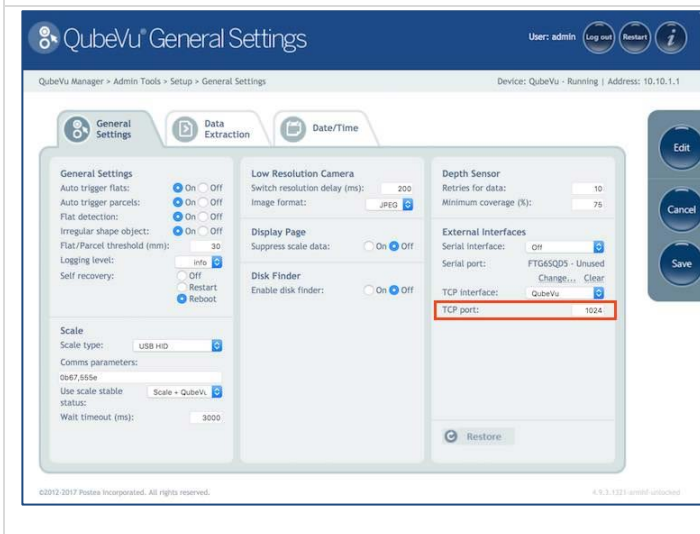
### Serial port statuses:

- **Unused** – Newly plugged in cable, not yet in use by the internal qvsc service
- **Disconnected** – A cable is saved in configuration, but it is not plugged in physically
- **Listening** – The cable is plugged in and the qvsc service is operating
- **Binding** – Cable is plugged in and service is initializing
- **Failed** – An error condition occurred. To get the details of the error, hover over the cable status indicator text and an info bubble with an extended error message will appear.

## 7.2. Emulation over TCP



Select **QubeVu** or **Cubiscan 110/150** from the TCP interface dropdown list.



Set the TCP port. The TCP port configured here should match the port parameter in the “QubeVu Com2Tcp” script explained in section **7.1.2.1 Client/PC Setup**.

Click **Save** to complete the TCP emulation setup.

### 7.2.1 Client/PC Setup

In order for the client application to talk to iDimension via TCP the following pre-requisites must be installed and configured:

- Com0Com
- Com2TCP

a) Download and install Com0Com:

- x86:

[https://storage.googleapis.com/google-code-archive-downloads/v2/code.google.com/powersdr-ig/setup\\_com0com\\_W7\\_x86\\_signed.exe](https://storage.googleapis.com/google-code-archive-downloads/v2/code.google.com/powersdr-ig/setup_com0com_W7_x86_signed.exe)

- x64:

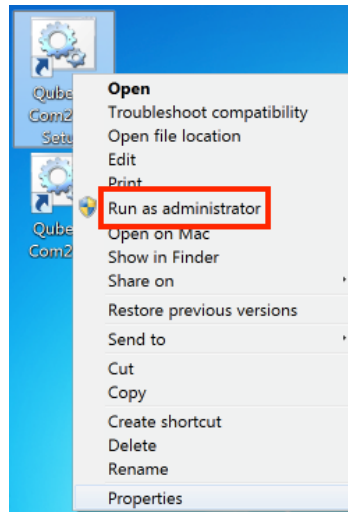
[https://storage.googleapis.com/google-code-archive-downloads/v2/code.google.com/powersdr-ig/setup\\_com0com\\_W7\\_x64\\_signed.exe](https://storage.googleapis.com/google-code-archive-downloads/v2/code.google.com/powersdr-ig/setup_com0com_W7_x64_signed.exe)

b) Download and install Com2TCP:

- X86 / x64:

[https://www.dropbox.com/s/auqu7bw7x4ou7rl/QubeVuCom2TcpSetup\\_4.7.1.9639-DEV.EXE?dl=0](https://www.dropbox.com/s/auqu7bw7x4ou7rl/QubeVuCom2TcpSetup_4.7.1.9639-DEV.EXE?dl=0)

c) Run the Desktop shortcut called ***QubeVu Com2Tcp Setup***. NOTE: This script must be run as an elevated user, e.g. Administrator. Right click on the shortcut, then select “Run as administrator”.



d) Right click on the Desktop shortcut called ***QubeVu Com2Tcp*** and select “Properties”.

e) Append the string in the “Target” field with the IP address of the QubeVu and the TCP port configured in section 7.1.2 above, e.g.:

`"C:\Program Files (x86)\RiceLake\QubeVu Com2Tcp Scripts\qv_com2tcp_run.bat" 10.10.1.1 1024`

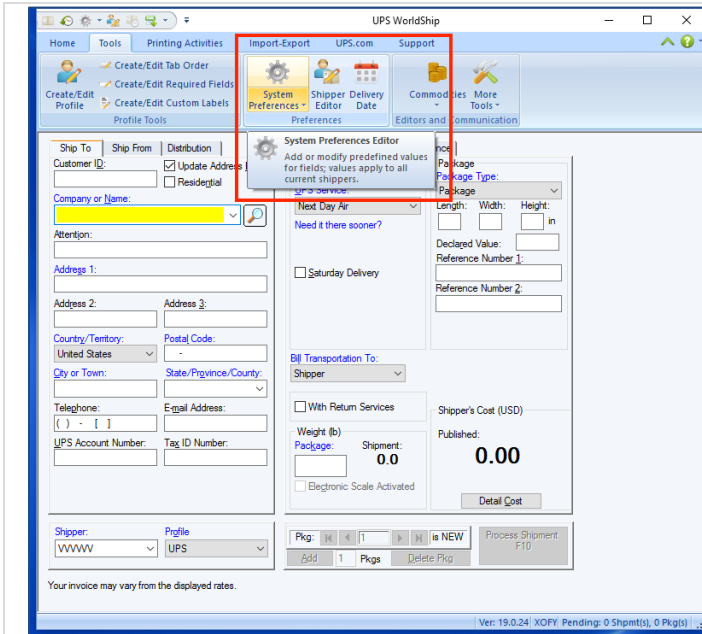
f) Click OK.

g) To establish the TCP connection double click on the Desktop shortcut called ***QubeVu Com2Tcp***. The software will run in a command window which must not be closed. Windows Task Scheduler should be used to automate the startup of Com2TCP.

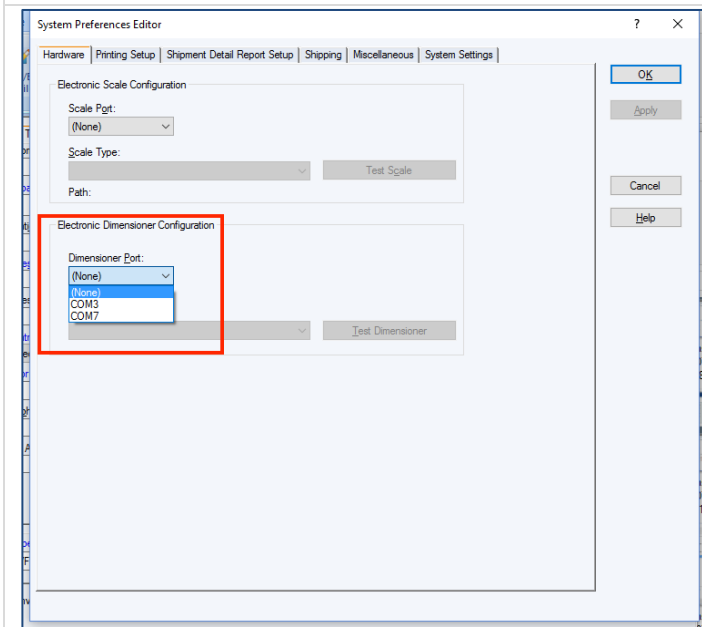


### 7.3. Using CubiScan Emulation

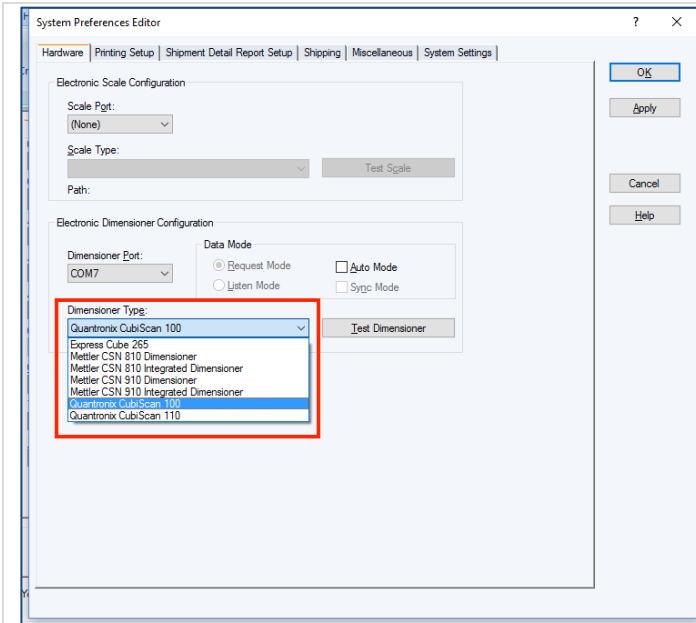
To use the CubiScan Emulation feature an application with CubiScan integration is required. One such application is UPS WorldShip which supports serial connections to CubiScan dimensioners.



Open UPS WorldShip and click on **System Preferences**

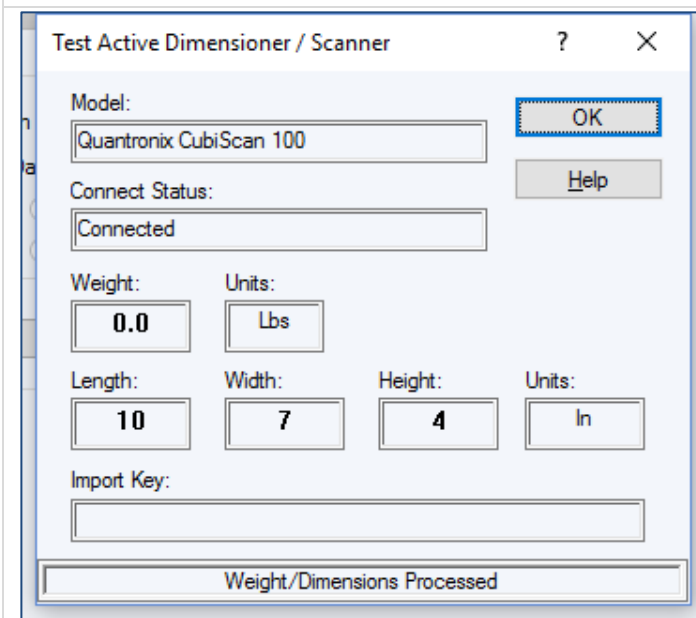


On the **Hardware** tab select the port which had been set up by *QubeVu Com2Tcp Setup Script*.



Select either model of CubiScan devices. Leave the other settings on default.

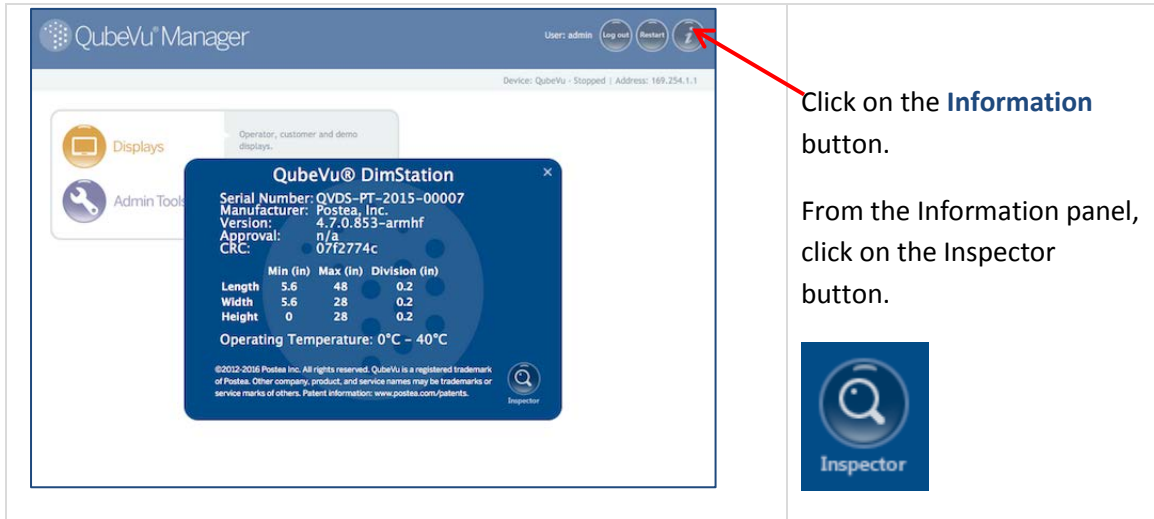
Click on the **Test Dimensioner** button.



The Test Active Dimensioner dialog will confirm the connection to iDimension.

## 8. QubeVu Inspector

QubeVu Inspector is accessed via the Information button on any page of QubeVu Manager. There is no need to log in to view this information.



The screenshot shows the QubeVu Manager interface. At the top right, there are buttons for 'User: admin', 'Log out', 'Restart', and an 'Information' button (represented by an 'i' icon). A red arrow points to the 'Information' button. Below the main navigation, there are sections for 'Displays' and 'Admin Tools'. A modal window titled 'QubeVu® DimStation' is open, displaying the following information:

**QubeVu® DimStation**

Serial Number: QVDS-PT-2015-00007  
Manufacturer: Postea, Inc.  
Version: 4.7.0.853-armhf  
Approval: n/a  
CRC: 07f2774c

	Min (in)	Max (in)	Division (in)
Length	5.6	48	0.2
Width	5.6	28	0.2
Height	0	28	0.2

Operating Temperature: 0°C - 40°C

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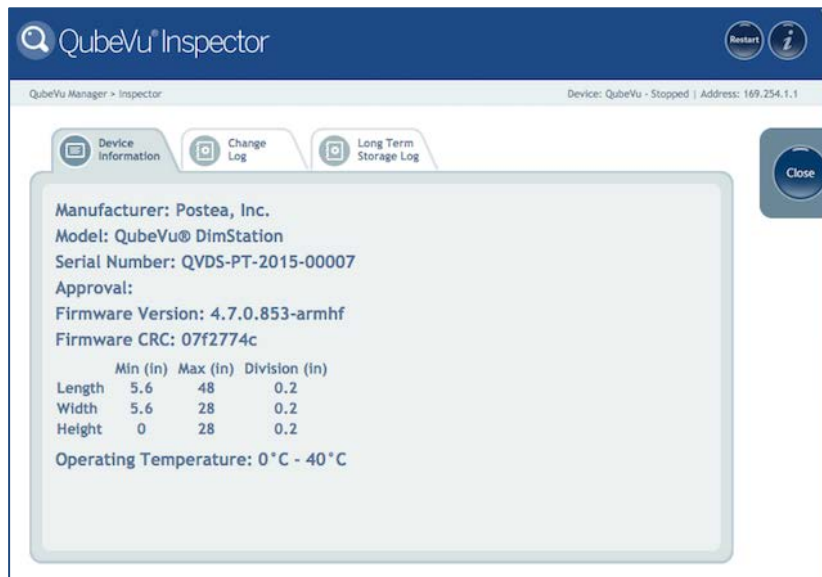
Inspector

Click on the **Information** button.

From the Information panel, click on the Inspector button.



### 8.1. Device Information



The screenshot shows the QubeVu Inspector interface. At the top, there are buttons for 'Restart' and 'Information'. Below the main navigation, there are tabs for 'Device Information', 'Change Log', and 'Long Term Storage Log'. The 'Device Information' tab is selected, displaying the following information:

Manufacturer: Postea, Inc.  
Model: QubeVu® DimStation  
Serial Number: QVDS-PT-2015-00007  
Approval:  
Firmware Version: 4.7.0.853-armhf  
Firmware CRC: 07f2774c

	Min (in)	Max (in)	Division (in)
Length	5.6	48	0.2
Width	5.6	28	0.2
Height	0	28	0.2

Operating Temperature: 0°C - 40°C

Close

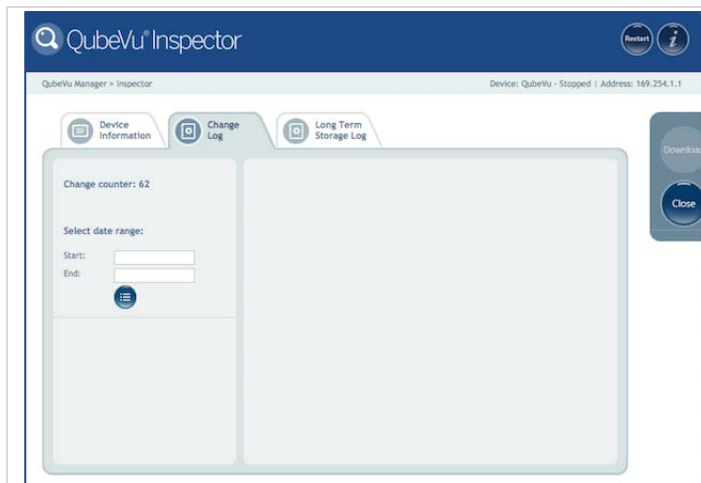
*Device Information tab*

The Device Information tab displays

- Model
- Serial number of this device
- Certification number - This is the EC type-examination certificate number.
- Firmware version that is currently installed
- Firmware CRC number - This is the CRC checksum of the legally relevant part of the firmware. This must match what's on the actual EC type-examination certificate.
- Operating specifications: Min/Max/Division, operating temp etc.

## 8.2. Change Log

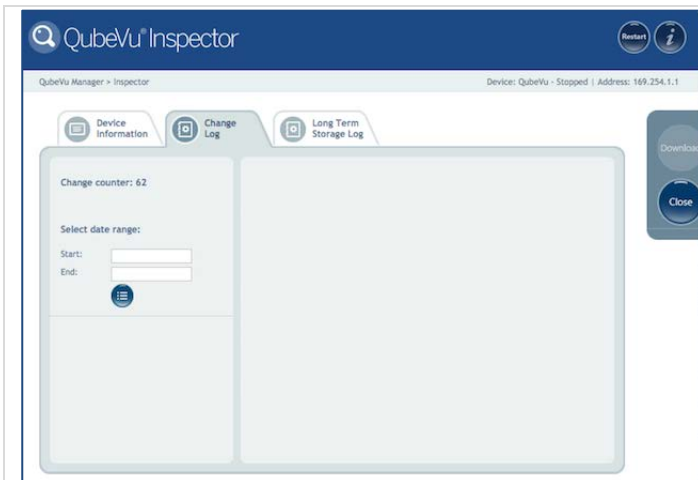
The Change Log will display changes to settings. Select a date range, or view all changes that have occurred since the device was installed.



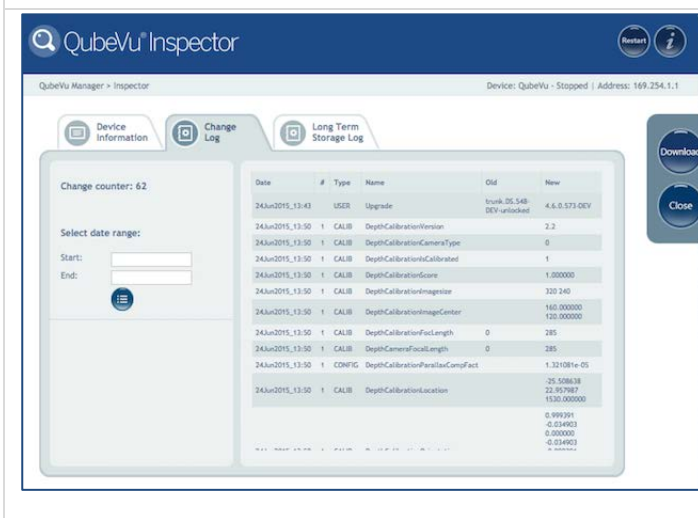
The Change counter displays the number of changes that have been done within the selected date range.

If the Search button is selected without entering a date range, all changes will be displayed.





Or, select a start and end date, and “Search”.



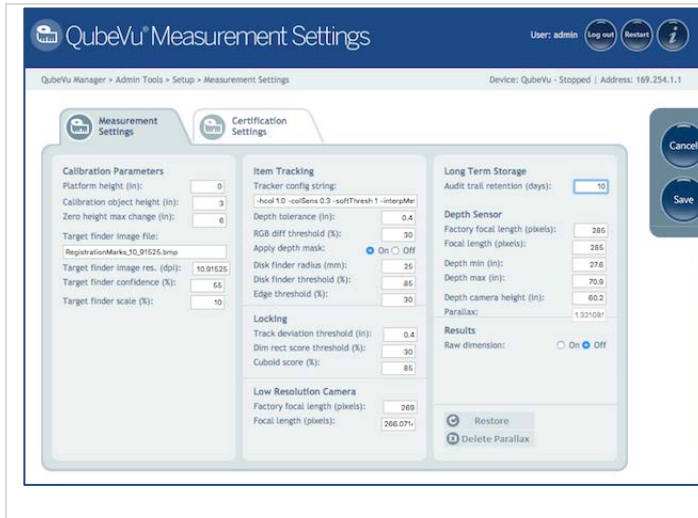
Use the scrolling buttons to scroll through the results.

## Long Term Storage

The Long Term Storage (LTS) feature is necessary to satisfy particular Legal for Trade (LFT) requirements in certain jurisdictions. The measurement data stored in LTS contains all relevant information necessary to reconstruct an earlier measurement. The stored data is protected against accidental, unintentional and intentional changes, and can be authentically traced back to the measurement that generated them.

Long Term Storage (LTS) is also the source data repository for the Data Extraction feature.

## 8.2.2 Enabling Long Term Storage

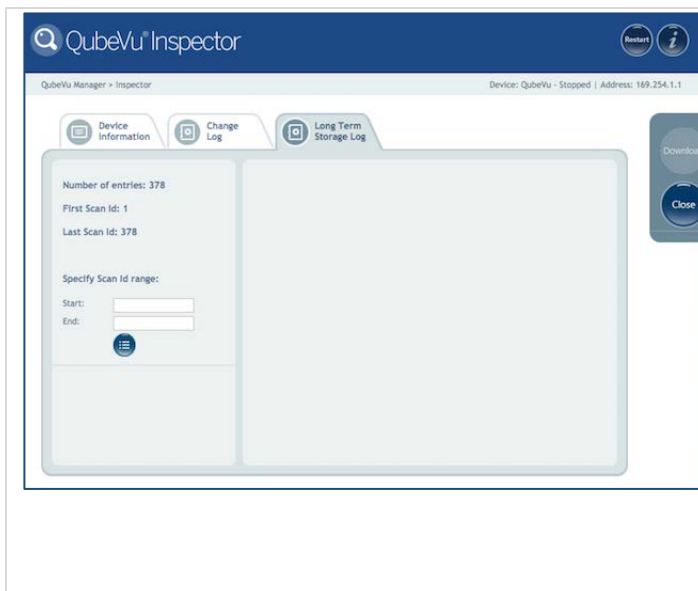


LTS is enabled from the **Measurement Settings** screen. It is disabled by default with a zero value.

To enable, enter the appropriate number of days and click **Save**.

## 8.2.3 Viewing Long Term Storage Data

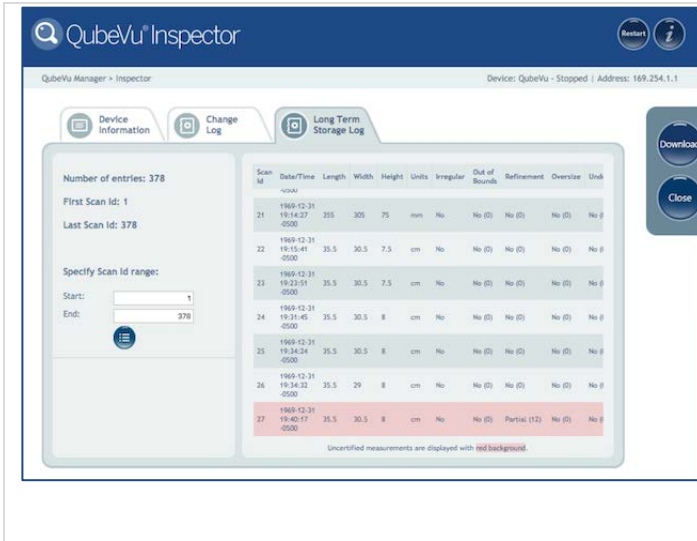
Long Term Storage is viewed from the Long Term Storage Log in QubeVu Inspector.



The log is queried by specifying a start and end scan ID. To assist with this selection the total number of entries is displayed, along with the first and last scan IDs.

Enter the scan ID range and click





Use the scrolling buttons to scroll through the results.

The log can be exported to a CSV file using the **Download** button.



## Appendix A: Performing a Factory Calibration



**WARNING: DO NOT PERFORM A FACTORY CALIBRATION UNLESS INSTRUCTED TO DO SO BY TECHNICAL SUPPORT.**

### Before beginning:

- If using a scale, remove the scale from the base plate.
- Place the calibration object directly onto the base plate.

### Delete the current calibration file

To reset to factory calibration, begin by deleting the Parallax settings.

The screenshot shows the 'QubeVu Measurement Settings' web interface. At the top, it displays 'User: admin' and 'Device: QubeVu - Stopped | Address: 169.254.1.1'. The main content area is organized into several panels:

- Calibration Parameters:** Includes fields for Platform height (in), Calibration object height (in), Zero height max change (in), Target finder image file, RegistrationMarks\_30\_91525.bmp, Target finder image res. (dpi), Target finder confidence (K), and Target finder scale (K).
- Item Tracking:** Includes Tracker config string, Depth tolerance (in), RGB diff threshold (K), Apply depth mask (On/Off), Disk finder radius (mm), Disk finder threshold (K), and Edge threshold (K).
- Long Term Storage:** Includes Audit trail retention (days).
- Depth Sensor:** Includes Factory focal length (pixels), Focal length (pixels), Depth min (in), Depth max (in), and Depth camera height (in).
- Locking:** Includes Track deviation threshold (in), Dim rect score threshold (K), and Cuboid score (K).
- Low Resolution Camera:** Includes Factory focal length (pixels) and Focal length (pixels).
- Results:** Includes Raw dimension (On/Off) and buttons for 'Restore' and 'Delete Parallax'.

On the right side of the interface, there are 'Cancel' and 'Save' buttons. A red arrow points to the 'Delete Parallax' button in the Results section.

Select **Measurement Settings** from the **Setup** menu.

Click on the Delete Parallax button.



### Restore Factory Settings

Use the Restore function to restore from the Factory settings

### Re-Calibrate and define work areas

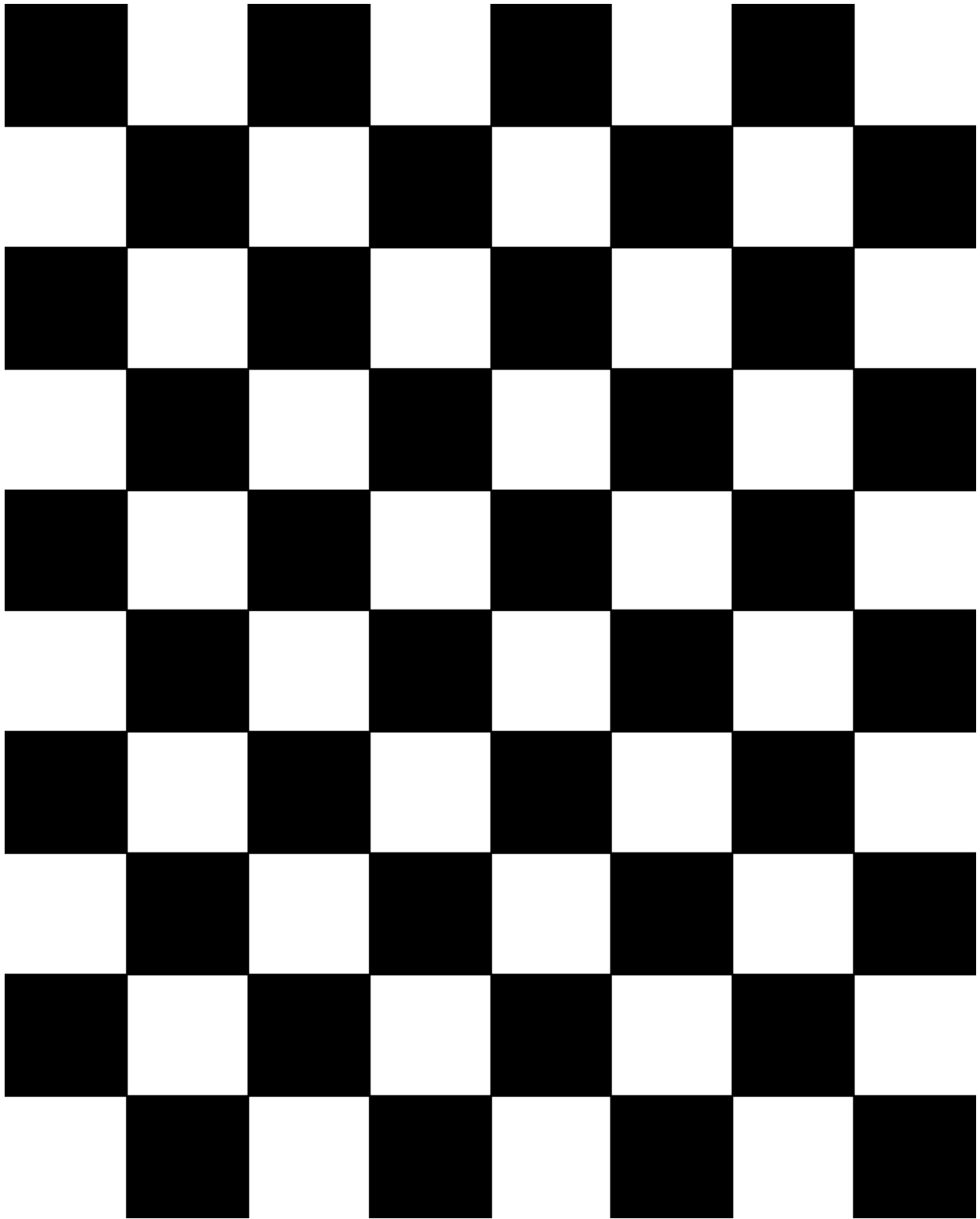
Re-calibration the cameras (without the scale in place) and define the Work Area and Zone of Interest.

If working with a scale, put the scale back in place, and re-calibrate a second time to complete the factory calibration process.

## Appendix B: Test pattern for Image Quality

Print the next page for testing Image Quality.





## Appendix C: Sample XSL file

Sample XSL file for use in the Daily Extract process. For further samples see the QubeVu SDK ([https://www.dropbox.com/sh/Oidltsx9z334vzd/AACYaRBs\\_iam8PMuFd7L5vIsa?dl=0](https://www.dropbox.com/sh/Oidltsx9z334vzd/AACYaRBs_iam8PMuFd7L5vIsa?dl=0))

---

```
<?xml version="1.0" encoding="UTF-8"?>

<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
xmlns:qv="http://postea.com/WebServices/QubeVu">

  <xsl:output method="text"></xsl:output>

  <xsl:template match="/">ScanId,DateTime,Length,Width,Height,DimUnit

<xsl:apply-templates/>

</xsl:template>

  <xsl:template match="qv:QVStatus">

    <xsl:apply-templates select="qv:CapturedData"/>

  </xsl:template>

  <xsl:template match="qv:CapturedData">

    <xsl:value-of select="@CaptureId"/>,<xsl:value-of select="qv:DateTime"/>,<xsl:value-of
select="qv:Dimensions/qv:Length"/>,<xsl:value-of select="qv:Dimensions/qv:Width"/>,<xsl:value-of
select="qv:Dimensions/qv:Height"/>,<xsl:value-of
select="qv:Dimensions/@DimUnit"/><xsl:text>&#13;</xsl:text>

  </xsl:template>

</xsl:stylesheet>
```

---

## Appendix D: Data Extraction Configuration Example

Below is an example of a Data Extraction configuration:

The screenshot displays the QubeVu General Settings interface. The top navigation bar includes the QubeVu logo, the text "General Settings", and user information: "User: admin", "Log out", "Restart", and an information icon. Below the navigation bar, the breadcrumb trail reads "QubeVu Manager > Admin Tools > Setup > General Settings". The device information is "Device: QubeVu - Running | Address: 10.10.1.1".

The main content area is divided into three tabs: "General Settings", "Data Extraction", and "Date/Time". The "Data Extraction" tab is active. The configuration is split into two panes:

- Left Pane:**
  - Long Term Storage:** Audit trail retention (days): 5; Data collected: Status (OFF), Low Res. Image (ON).
  - Maintenance:** Clear extended scan data...
- Right Pane: Data Extract Definition**
  - Destination:** //10.10.1.15/QVData/%SERIALNO%/%DATETIME%/extract.csv
  - Username:** UserAccount
  - Password:** \*\*\*\*\*
  - Test connection:** Button
  - Extract Low Res. Images:** On (selected) / Off
  - Apply XSLT:** On / Off (selected)
  - XSL file:** Upload new: Browse... No file selected.
  - Scheduled Extracts:** Enabled: On (selected) / Off; Cutoff time (HH:MM): 14:33

On the right side of the interface, there are three buttons: "Edit", "Cancel", and "Save".

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The Data Extraction configuration page is split into 2 panes; the configuration item in the left pane specify what data is to be collected and the configuration items on the right specify what data, where, how and when it will be extracted.

## Data Collection

In the example provided the following data collection parameters are set:

Audit trail retention (days): 5	Data will be stored for 5 days
STATUS.xml collection is OFF	Status.xml will not be stored
Low Res. Image collection is ON	A low res image of each scan will be stored

## Data Extraction Definition

**10.10.1.10** is the IP address of the target PC/server

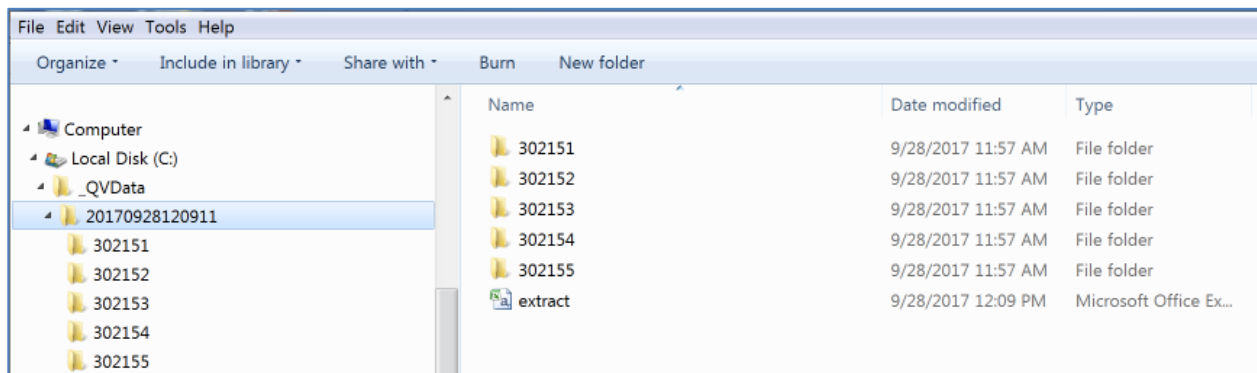
**QVData** is the name of the shared folder on the target PC/server

**%SERIALNO%** will create a sub folder in the share using the serial number of the iDimension as a name. This is useful when multiple units are using the same shared folder.

**%DATETIME%** will create a further sub folder using the date & time of the extract as a name

**extract.csv** will create a results file with the name extract.csv prefixed with the creation date & time.

With the above configuration results in a data set that looks like this:



The folder named “20170928120911” contains the data for the extract. Dim data is stored in the file “extract.csv”. The image files for each scan are stored in individual folders, identified by the numeric CaptureID of the scan. The example above contained 5 scans so the 5 images are in the folders named 302151 to 302155.

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230 W. Coleman St. • Rice Lake, WI 54868 • USA  
U.S. 800-472-6703 • Canada/Mexico 800-321-6703 • International 715-234-9171 • Europe +31 (0)26 472 1319