iDimension® PWD

Static Dimensioning System

Setup Manual

RICE LAKE®
WEIGHING SYSTEMS

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An ISO 9001 registered company

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The most current version of this publication, software, firmware and all other product updates can be found on our website:

www.ricelake.com

Contents

1.0 Introduction

This manual provides an overview on how to setup QubeVu Manager for the iDimension PWD.

Ensure the iDimension PWD unit is fully assembled by following the instructions of the iDimension PWD Assembly Instructions (PN 198812).

When interfacing this device to a third party program, please reference the software manufacturer's documentation for setup and configuration parameters as necessary.

Manuals and additional resources are available from the Rice Lake Weighing Systems website at www.ricelake.com
Warranty information can be found on the website at www.ricelake.com/warranties

1.1 Additional Resources

For additional resources, see the following information:

iDimension PWD Assembly Instructions

The iDimension PWD Assembly Instructions (PN 198812) provides an overview on how to assemble the iDimension PWD.

iDimension PWD Operation Manual

The iDimension PWD Operation Manual (PN 198811) provides an overview on how to operate the iDimension PWD.

iDimension PWD Managers Guide

The iDimension PWD Managers Guide (198680) provides a detailed overview of the installation requirements, operation of the iDimension PWD and configuration parameters to change in the QubeVu Manager to alter the performance of the unit. The iDimension PWD Managers Guide is provided with each unit.

880 Performance™ Series Controller and Indicator Technical Manual

The 880 Performance Series Controller and Indicator Technical Manual (PN 158387) provides a detailed overview of the 880 indicator installation, configuration and operation procedures.

SUMMIT® 3000 Installation Manual

The SUMMIT 3000 Installation Manual (PN 76012) provides a detailed overview of the SUMMIT 3000 installation procedure.

1.2 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 Postea, Inc. could void the user's FCC granted authority to operate the equipment.

1.3 Safety

Safety Signal Definitions:

DANGER — *Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. Includes hazards that are exposed when guards are removed.*

WARNING — *Indicates a potentially hazardous situation that, if not avoided, could result in serious injury or death. Includes hazards that are exposed when guards are removed.*

CAUTION — *Indicates a potentially hazardous situation that, if not avoided, could result in minor or moderate injury.*

IMPORTANT — *Indicates information about procedures that, if not observed, could result in damage to equipment or corruption to and loss of data.*

General Safety

Do not operate or work on this equipment unless this manual has been read and all instructions are understood. Failure to follow the instructions or heed the warnings could result in injury or death. Contact any Rice Lake Weighing Systems dealer for replacement manuals.

WARNING

Failure to heed could result in serious injury or death.

Electric shock hazard!

For pluggable equipment the socket outlet must be installed near the equipment and must be easily accessible.

Always disconnect from main power before performing work on the device.

Do not allow minors (children) or inexperienced persons to operate this unit.

Do not operate without all shields and guards in place.

Do not place fingers into slots or possible pinch points.

Do not use this product if any of the components are cracked.

Do not make alterations or modifications to the unit.

Do not remove or obscure warning labels.

Do not use near water, avoid contact with excessive moisture.

Keep the unit dry.

Never use damaged power cords, plugs or loose electrical sockets.

Never touch the power cord with wet hands.

Mount on a flat surface.

Never use product for anything other than its intended purpose.

Follow OSHA regulations for installation and use of equipment.

1.4 Installation Requirements

IMPORTANT ***Avoid installation of the unit near direct sunlight. Direct sunlight and overhead lighting may cause void pixels and noise that will affect the system from performing a dimension.***

1.5 Site Preparation

Choose a location to meet the following requirements:

1. Forklift scale available for placement of frame and installation of floor scale.
2. Scissor lift or forklift for assembly of the stand.
3. 120 V power within 25'.
4. Network connection, if applicable with static IP address.
5. Flat concrete surface.
6. Minimum ceiling height of 130" without any overhead obstruction.
7. Minimum floor space of 105" depth and 84" width for installation.
8. Indoor lighting only, direct sunlight may affect dimensioning performance.
9. For indoor use only, rated from 32°F–104°F (0°C–40°C).
10. Contact local scale dealer for installation and calibration of floor scale.

1.6 Next Steps

Additional setup requires connection of the iDimension PWD to a PC from a network connection to access QubeVu Manager.

1. Connect the iDimension PWD to the network (Section 2.0 on page 4).
2. Remote sensor calibration (Section 5.1 on page 22).
3. Alignment of IFM sensors to the center of the floor scale and calibration (Section 4.0 on page 14).
4. Default factory settings are preconfigured for the 880 indicator and the .bmp image type.
5. Work area and zone of Interest configuration (Section 5.0 on page 20).
6. Configure network (Section 6.0 on page 30).

2.0 Network Connection

This section provides an overview of iDimension PWD network connections and configuration.

2.1 Service Port Connection

Configuring the iDimension PWD uses the embedded firmware, QubeVu Manager, which is accessed via an IP address over a wired Ethernet connection through a web browser. The system default is set to Dynamic Control Host Protocol (DCHP).

To access QubeVu Manager, connect the iDimension PWD via ethernet to a computer then open a web browser and enter: http://192.168.0.2, or 169.254.1.1 which are factory defaults.

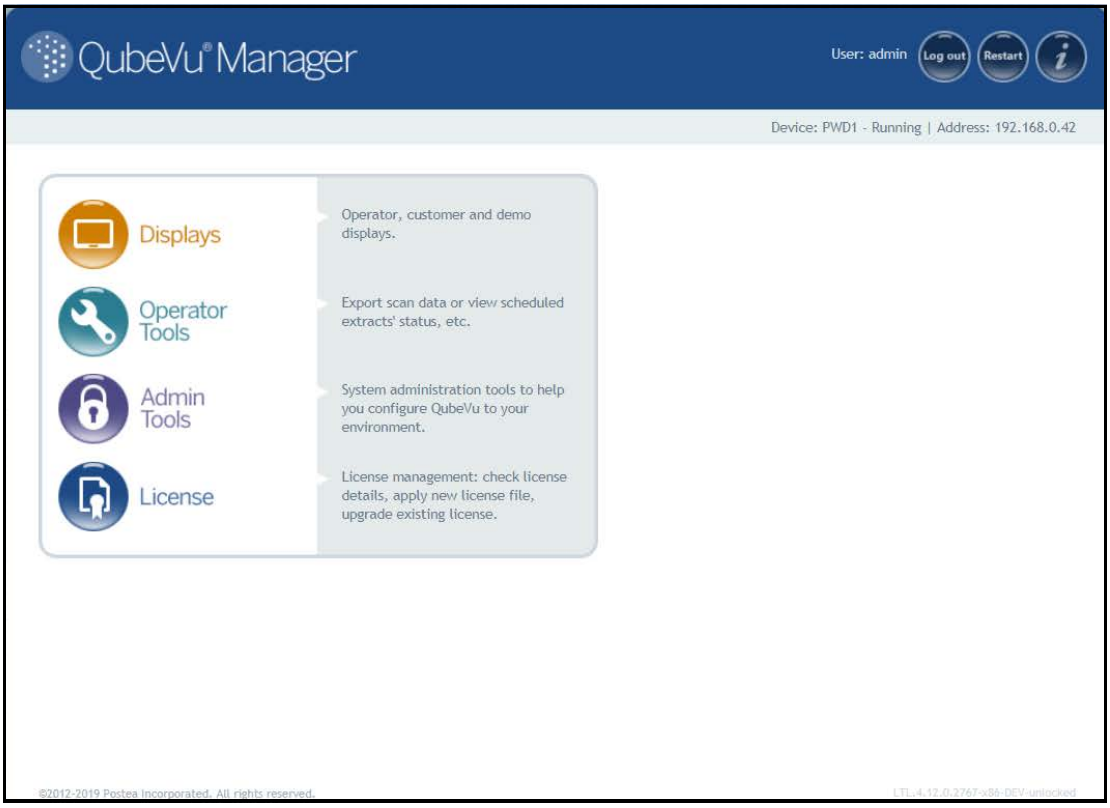

Figure 2-1. QubeVu Manager Home Page

Parameter	Description
Displays	Display information (iDimension PWD Managers Guide (PN 198810))
Operator Tools	Operator tools information (iDimension PWD Managers Guide (PN 198810))
Admin Tools	Admin tools instructions (Section 2.2 on page 5)
License	License information (iDimension PWD Managers Guide (PN 198810))

Table 2-1. QubeVu Manager Home Page Navigation

2.2 Admin Tools

The ***Admin Tools*** menu is used for configuring, calibrating, defining, upgrading, backing up and running diagnostics on the system.

To enter the ***Admin Tools*** menu use the following procedure:

1. Press Admin Tools from the ***QubeVu Manager*** menu (Figure 2-1 on page 4) to enter the ***Admin Tools*** menu.
2. The QubeVu Manager login screen displays. The default username and password are **admin** and **password**.

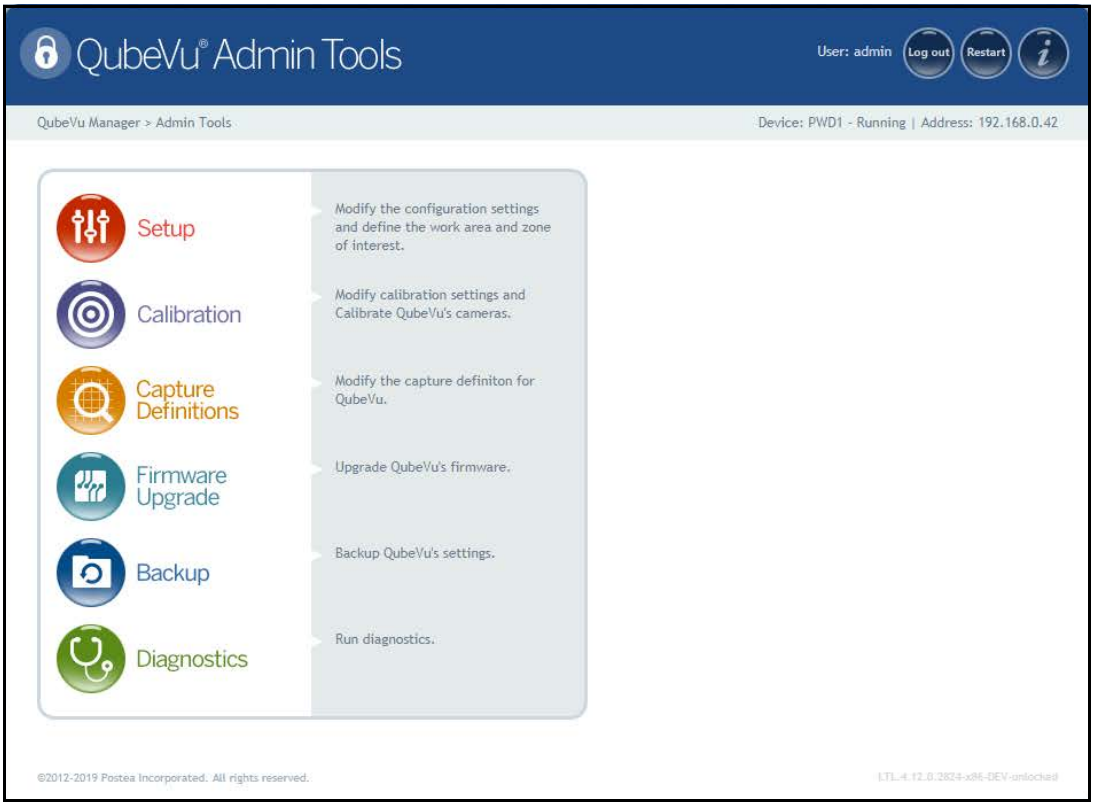

Figure 2-2. Admin Tools Menu

Parameter	Description
Setup	General (optional and scale), time and date, data extraction and long term storage, measurement, network settings (Section 3.0 on page 8)
Calibration	Calibration settings, define work area and calibrate cameras (Section 5.0 on page 20)
Capture Definitions	Capture definitions for QubeVu (iDimension PWD Managers Guide (PN 198810))
Firmware Upgrade	Update firmware (iDimension PWD Operation Manual (PN 198811))
Backup	Backup and restore settings (Dimension PWD Managers Guide (PN 198810))
Diagnostics	Diagnostics settings (iDimension PWD Operation Manual (PN 198811))

Table 2-2. Admin Tools

2.3 Navigation

A navigation menu is located in the upper left section of all pages. This allows users to keep track of their current location and provides links back to each preceding page.

Example: The user is in the Calibration Settings screen and can select Admin Tools to return to the Admin Tools menu or Qubevu Manager to return to the home page.

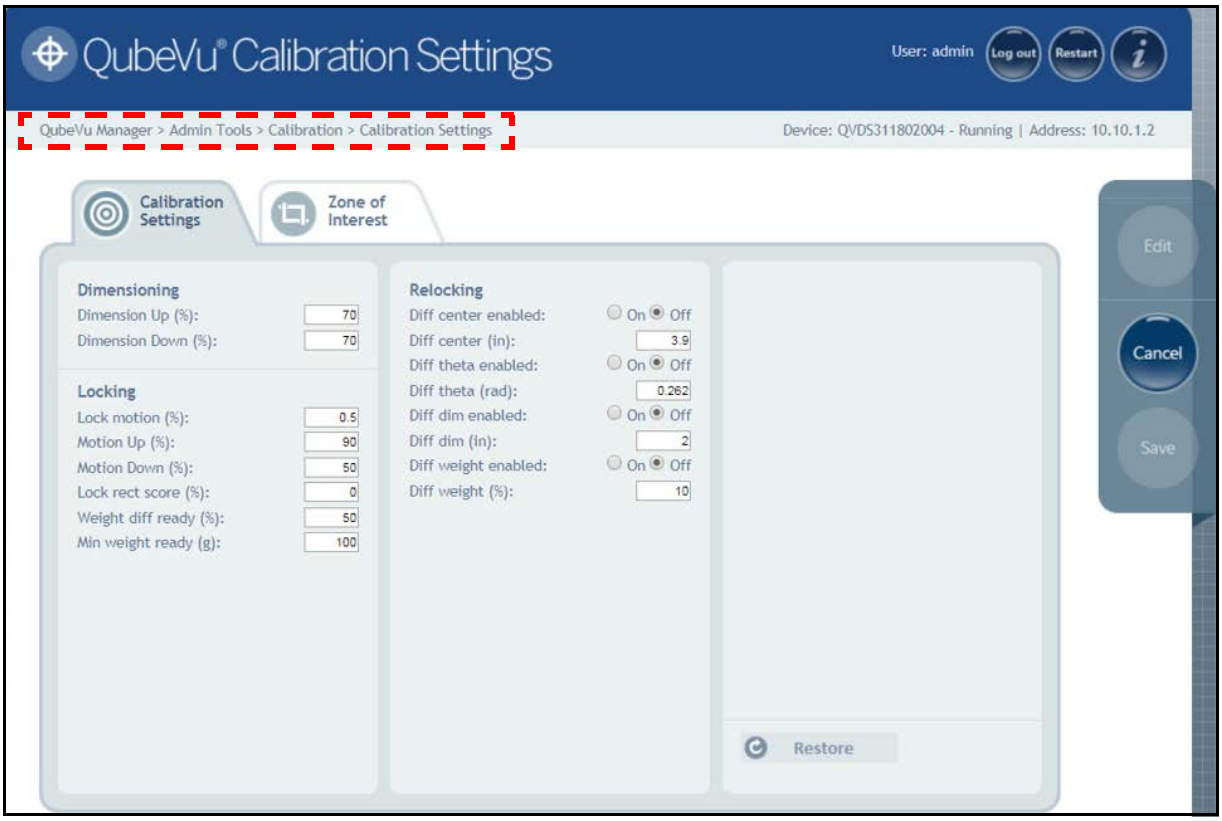

Figure 2-3. Menu Navigation

2.4 Edit/Cancel/Save Keys

Within various menus, there are three active keys: Edit, Cancel and Save.

Figure 2-4. Edit, Cancel and Save Keys

Edit

Press Edit to enable settings within the general setting mode and calibration menu settings to be changed.

After changing the settings, press Save to continue.

Cancel

Press Cancel to cancel all edits made to all tabs, unless saved.

Save

Press Save to save all changes made during the edit process within the page and a sub menu tab. Upon save, the unit may restart and return to the home screen.

3.0 Setup

This section provides an overview of iDimension PWD ***Setup*** menu instructions.

To enter the ***Setup*** menu use the following procedure:

1. Press Admin Tools from the ***QubeVu Manager*** menu (Figure 2-1 on page 4) to enter the ***Admin Tools*** menu.
2. The QubeVu Manager login screen displays. The default username and password are **admin** and **password**.
3. Press Setup from the ***Admin Tools*** menu (Figure 2-2 on page 5) to enter the ***Setup*** menu.

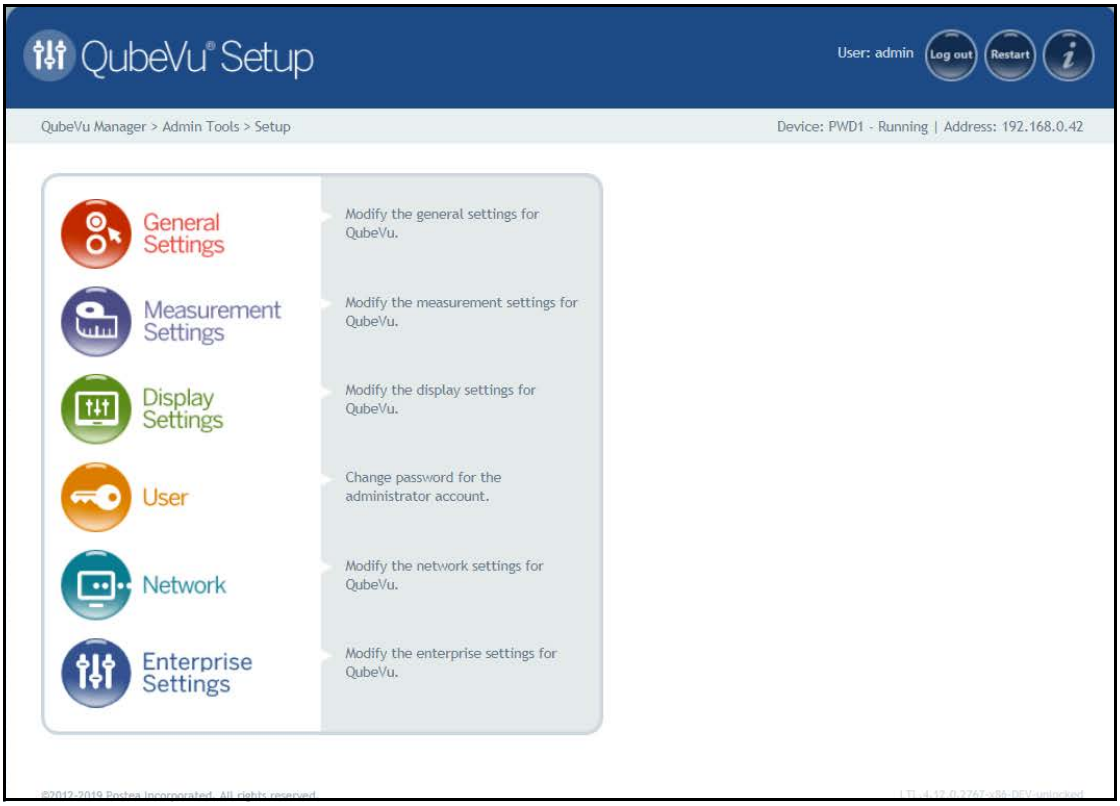

Figure 3-1. Setup Menu

Parameter	Description
General Settings	Modify the scale settings, default is 880 indicator; Add and configure optional external camera (Section 3.1 on page 9)
Measurement Settings	Configure IFM sensors (Section 4.0 on page 14)
Display Settings	Modify the display settings for QubeVu (iDimension PWD Managers Guide (PN 198810))
User	Change password for the administrator account (iDimension PWD Operation Manual (PN 198811))
Network	Modify the network settings for QubeVu (Section 6.0 on page 30)
Enterprise Settings	Not applicable

Table 3-1. Setup Navigation

3.1 General Settings

General setting provides access to configuring the operation of the unit, configure the scale and other external interface methods for retrieving data. Allows a user to modify settings in the parameters menus.

To enter the ***General Settings*** menu use the following procedure:

- Press General Settings from the ***Setup*** menu (Figure 3-1 on page 8) to enter the ***General Settings*** menu

For ***General Settings*** menu navigation, see the following information:

Parameter	Description
General Settings	General settings (Section 3.1.1)
Data Extraction	Date extraction settings (iDimension PWD Managers Guide (PN 198810))
Date/Time	Date and time settings (iDimension PWD Managers Guide (PN 198810))
External Cameras	External cameras settings (iDimension PWD Managers Guide (PN 198810))

Table 3-2. General Settings Navigation

3.1.1 General Settings Tab

The ***General Settings*** tab allows dimensioning settings to be customized and changed (Table 3-3 on page 10).

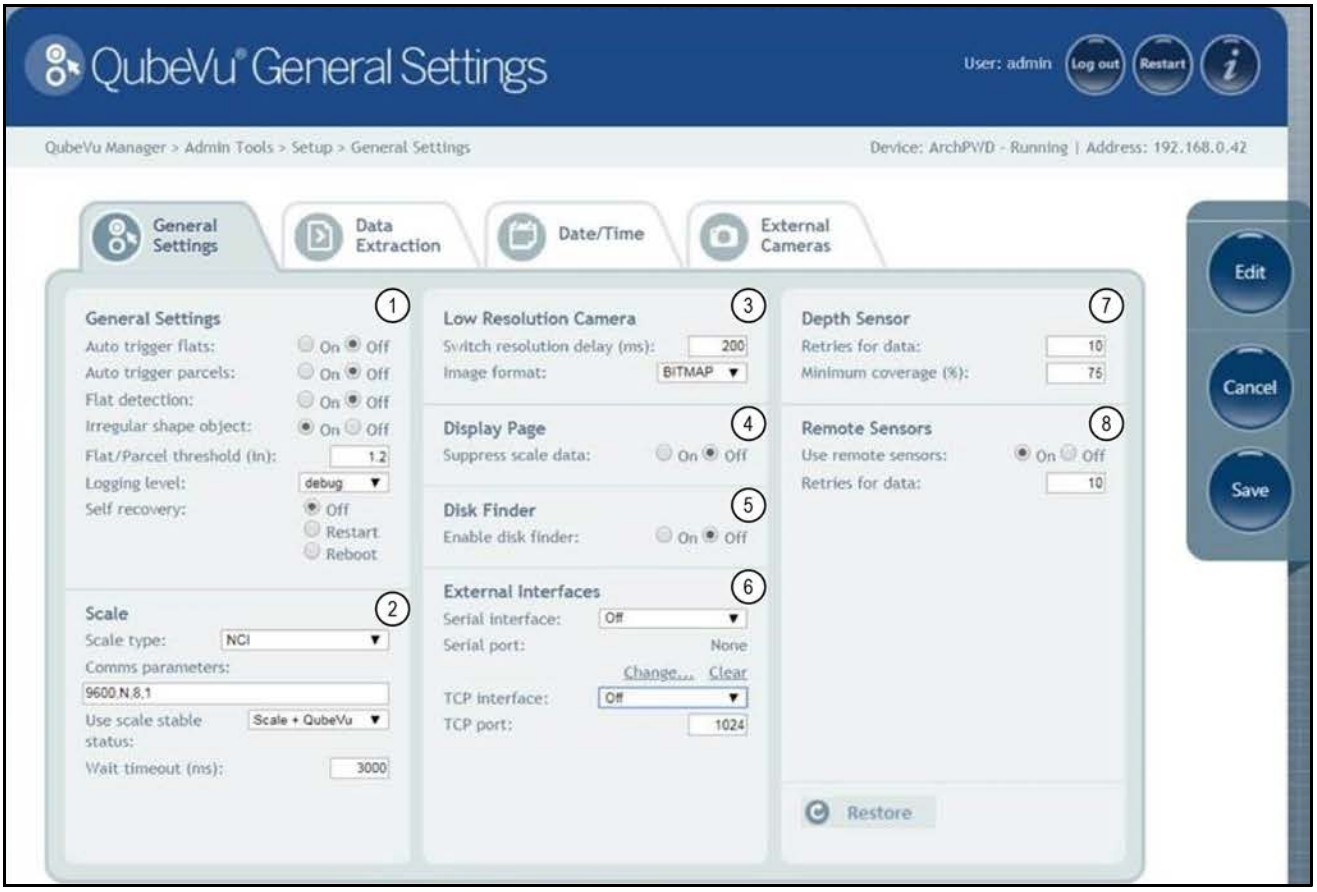

Figure 3-2. General Settings Tab

Item No.	Parameter	Description
1	General Settings	Auto Trigger Flats – Not applicable for this application, do not modify Default: **Off** Selections: On, Off
		Auto Trigger Parcels – Not applicable for this application, do not modify Default: **Off** Selections: On, Off
		Flat Detection – Not applicable for this application, do not modify Default: **Off** Selections: On, Off
		Irregular Shape Object – Do not modify Default: **On** Selections: On, Off
		Flat/Parcel Threshold (in) – Not applicable for this application, do not modify Default: **1.2**
		Logging Level – Changing to error or debug will increase the amount of engineering and performance information stored in the diagnostics and log files shown in "ipaddress/log" command Default: **debug**
		Self Recovery – Determines the recovery option of the unit: Default: **Off** Selections: Off, Restart, Reboot Off – System will not perform a self recovery Restart – If the system has determined a critical error state, the unit will perform a restart of the software and returns the system to normal mode; If an object is under the device during a reboot, Wait will be displayed on the USB display Reboot – If the system has determined a critical error state, the unit will perform a reboot, an automatic power cycle that clears the error and returns the system to normal mode; If an object is under the device during a reboot; The USB display cycles power and return to normal operating mode
2	Scale	Scale Type – The 880 indicator includes a custom NCI protocol setting to communicate with the PWD Application setting required: **NCI**
		Communication Parameters USB/RS-232 – The 880 indicator is configured for the following data: Application setting required: 9600,N,8,1 Baud rate: 9600 Parity: **N**one Start bits: 8 Stop bit: 1
		Use Scale Stable Status – Do not modify Determines when the iDimension locks the displayed weight and dimensions on the touchscreen display; Dimensions are locked and the remove state is displayed using both the scale stable reading and iDimension filter: Default: **Scale+QubeVu** Selections: Scale+QubeVu, QubeVu, Scale Scale+QubeVu – This is the default factory setting and is recommended for use QubeVu – Not recommended for use, using this feature may provide incorrect weight on the display; Dimensions are locked and remove is displayed without checking if the scale is stable Scale – Dimensions are locked and remove is displayed when the scale has returned a state
		Wait Timeout – Do not modify The time in milliseconds the dimensions will wait for the scale to return a stable weight; System will timeout and not return to the remove state; Increase this settings if the scale is in an unstable environment Default: **3000**
3	Low Resolution Camera	Switch Resolution Delay (ms) – Do not modify unless instructed by Rice Lake Weighing Systems dimensioning support Default: **200**
		Image Format – Defines the image format used in QV/status Default: **BITMAP** (**.BMP**) Selections: BITMAP (.BMP), .JPEG

Table 3-3. General Settings Parameters

Item No.	Parameter	Description
4	Display Page	Suppress Scale Data – Suppresses the display of scale data (weight) on all displays, even if the scale is attached Default: **Off** Selections: On, Off
5	Disk Finder	Enable Disk Finder – Not applicable for this application, do not modify; Default: **Off** Selections: On, Off
6	External Interfaces	Serial Interface – For use when capturing data from RS-232/Serial Converter when connected to the PC; For detailed information on using these interfaces refer to the iDimension API Guide (iDimension PWD Managers Guide (PN 198810)) for details on configuration of TCP Interface Default: **Off** Selections: Off, QubeVu, Cubiscan 100/110
		Serial Port – Set-up a RS-232/USB converter for interface to the PC
		TCP Interface – For use when using the TCP command/response format when attached to the network Default: **Off** Selections: Off, QubeVu, Cubiscan 100/110
7	Depth Sensor	Retries for Data – Do not modify unless instructed by Rice Lake Weighing Systems dimensioning support The maximum number of instances each sensor will attempt to capture data before error occurs Default: **10**
		Minimum Coverage – Do not modify unless instructed by Rice Lake Weighing Systems dimensioning support The minimum number of pixels each sensor requires before an error occurs; Values are shown in the debug logging level: www.ipaddess/log Default: **75**
8	Remote Sensors	Use Remote Sensors – Do not modify Default: **On** Selections: On, Off
		Retries for Data – Do not modify unless instructed by Rice Lake Weighing Systems dimensioning support The maximum number of instances each sensor will attempt to capture data before error occur Default: **10**

Table 3-3. General Settings Parameters (Continued)

3.1.2 External Cameras Tab

Adding external cameras, requires the configuration of the AXIS IP camera using the AXIS IP Utility program. Ensure the IP camera matches the PC network settings to configure. The default static IP address of the camera is 192.168.0.90.

See the iDimension PWD Managers Guide (PN 198810) for instructions on using the Axis IP utility program. The utility program is found on the installation thumb drive, located within the kiosk.

1. To add a new external camera, select ***Add New Camera***.

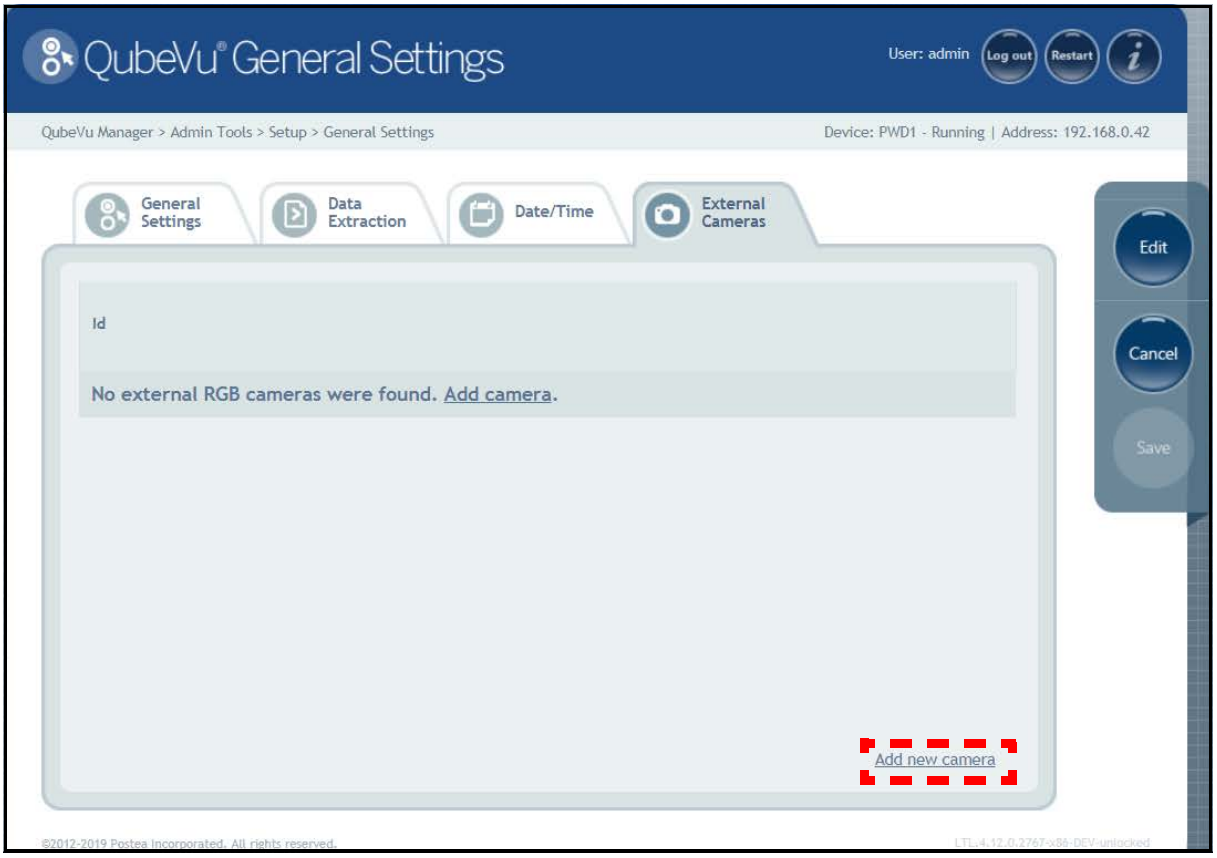

Figure 3-3. External Camera Tab

2. Enter the information:
   a. IP address = 192.168.0.90 (camera default)
   b. Username = root
   c. Password, entered twice = password
   d. ImageUrl = /axis-cgi/jpg/image.cgi
   e. Select Save to continue

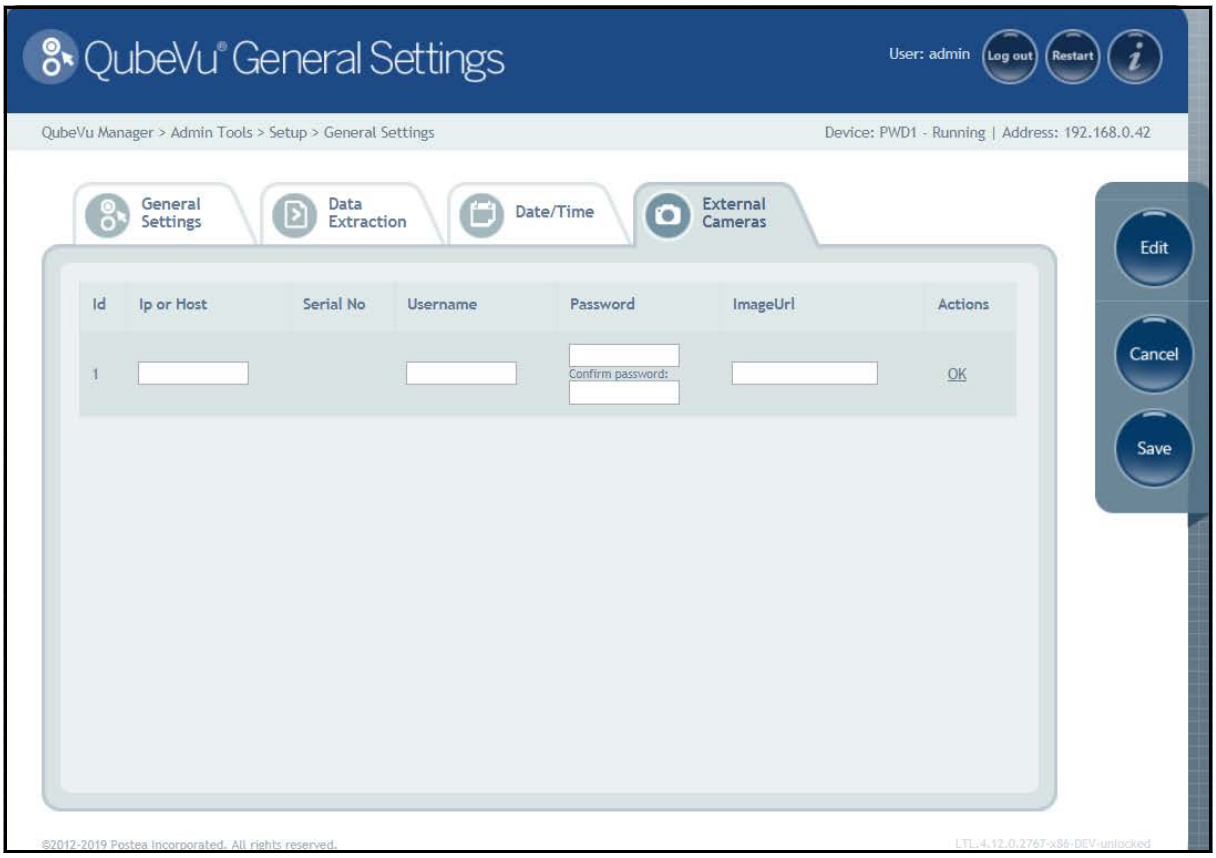

Figure 3-4. External Cameras Tab Camera Information

3. The QubeVu Manager restarts and returns to the Home page. Return to the external cameras tab and press **Test**.

4. Select OK.

Figure 3-5. External Camera

4.0 Measurement Settings

This section provides an overview of iDimension PWD ***Measurement Settings*** menu instructions.

The ***Measurement Settings*** menu allows a user to modify settings in the parameters menus.

To enter the ***Measurement Settings*** menu use the following procedure:

1. Press Admin Tools from the ***QubeVu Manager*** menu (Figure 2-1 on page 4) to enter the ***Admin Tools*** menu.
2. The QubeVu Manager login screen displays. The default username and password are **admin** and **password**.
3. Press Setup from the ***Admin Tools*** menu (Figure 2-2 on page 5) to enter the ***Setup*** menu.
4. Press Measurement Settings from the ***Setup*** menu (Figure 3-1 on page 8) to enter the ***Measurement Settings*** menu.

For Measurement Settings menu navigation, see the following information:

Parameter	Description
Measurement Settings	Measurement settings (Section 4.1)
Remote Sensors	Remote sensor settings (Section 4.2 on page 17)
Certification Settings	Certification settings (Section 4.3 on page 19)

Table 4-1. Measurement Settings Navigation

4.1 Measurement Settings Tab

Modify the values within ***Measurement Settings***. See Table 4-2 on page 15 for parameter information.

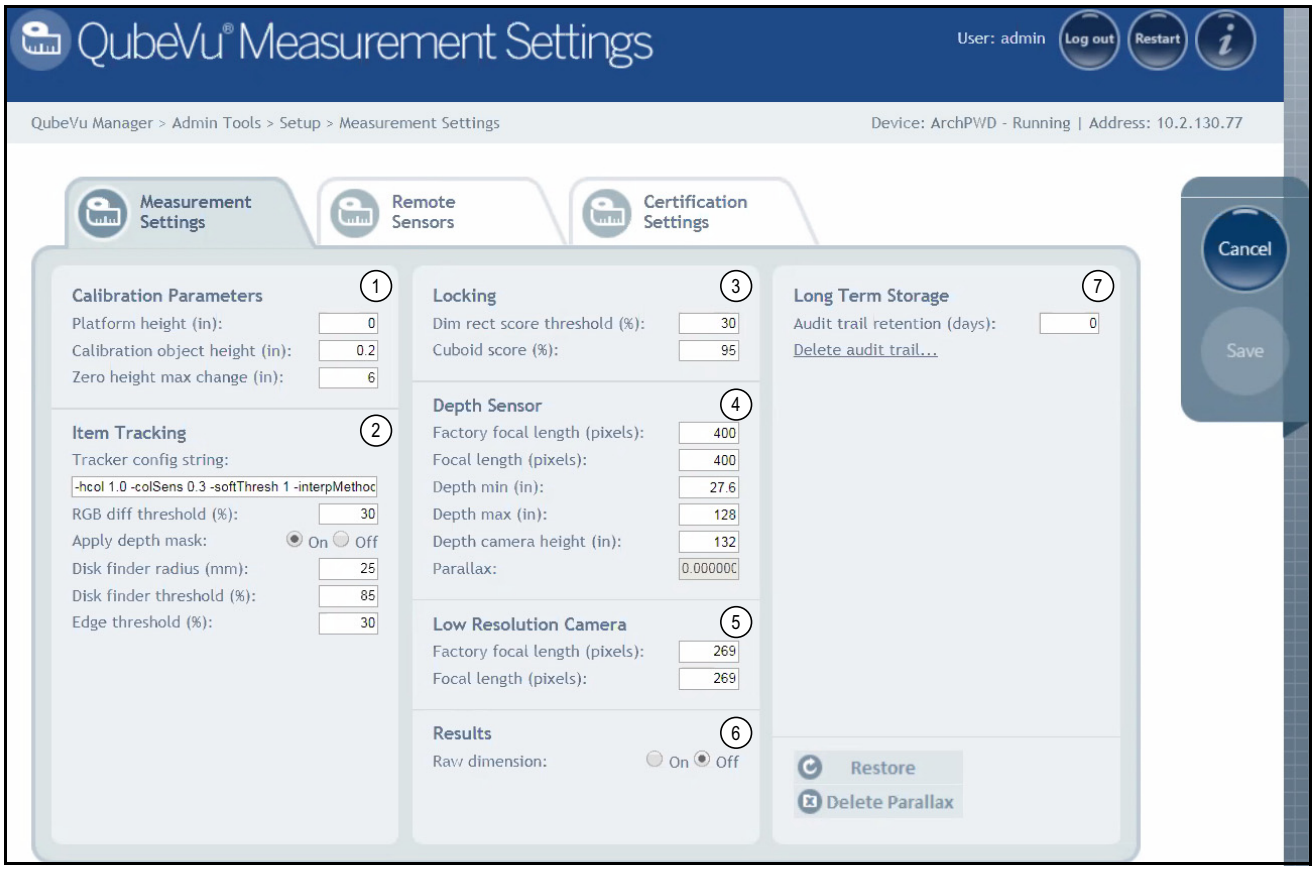

Figure 4-1. Measurement Settings Tab

Item No.	Parameter	Description
1	Calibration Parameter	Platform height (in) – Not applicable for this application, do not modify Default: **0**
		Calibration Object Height (in) – Do not modify Default: **0.2**
		Zero Height Max Change (in) – Not applicable for this application, do not modify the default setting Default: **6**
2	Item Tracking	Tracker Config String – Not applicable for this application, do not modify the default setting Default: **-hcol 1.0 -colSens 0.3 -softThresh 1 -interpMethod**
		RGB Diff Threshold (%) – Not applicable for this application, do not modify Default: **30**
		Apply Depth Max – Not applicable for this application, do not modify Default: **On** Selections: **On** or Off
		Disk Finder Radius – Not applicable for this application, do not modify Default: **25**
		Disk Finder Threshold – Not applicable for this application, do not modify Default: **85**
		Edge Threshold – Not applicable for this application, do not modify Default: **30**
3	Locking	Dim Rect Score Threshold (%) – Not applicable for this application, do not modify the default setting Default: **30**
		Cuboid Score (%) – Not applicable for this application, do not modify the default setting Default: **95**
4	Depth Sensor	Factory Focal Length (pixels) – Do not modify Default: **400**
		Focal Length (pixels) – Do not modify Default: **400**
		Depth Min (inches) – Threshold depth value below which any depth measure returned by the sensor will be ignored; This value is the minimum distance in inches between the unit head and the object it should be measure Default: **27.6**
		Depth Max (inches) – The maximum camera height total has minus 4" to the total height to compensate for the device height; The iDimension PWD will not recognize an item less than 4" Default: **128**
		Depth Camera Height (inches) – The measurement from the bottom of the IFM remote sensors to the top of the floor scale or dimensioning surface Default: **132**
		Parallax – Not applicable for this application Default: **0**
5	Low Resolution Camera	Factory focal Length (pixels) – Not applicable for this application, do not modify, for use with QV Core main head Default: **269**
		Focal Length – Not applicable for this application, do not modify, for use with QV Core main head Default: **269**
6	Results	Raw Dimension – Returns raw results which have not been rounded to the nearest division; Default: **Off** Selections: On or Off
7	Long Term Storage	Audit Trail Retention (days) – Used if Data Extraction is enabled; Specifies the number of days captured data will be retained in long term storage; Long term storage is managed in the general settings data extraction tab and can be displayed in the inspector function Default: **0**
		Delete Audit Trail – Deletes contents of long term storage held in memory

Table 4-2. Measurement Settings Parameters

Restore

Restores the ***Measurement Settings*** tab parameters to default values, or restores from a previously saved backup file.

1. Select Restore. The factory restore prompt displays.

Figure 4-2. Restore Prompt

2. Press OK to restore the factory default settings or if backing up from a file press Browse... to select a backup file.
3. Press OK. The iDimension PWD restarts after the restore.

Delete Parallax

This command must not be used unless directed by the Rice Lake Weighing Systems Dimensioning Team.
Factory Calibration may be required. Not applicable, do not modify.

Select Delete Parallax.

4.2 Remote Sensors Tab

The remote sensors tab provides access to the iDimension PWD Remote sensor setting and configuration status. The remote sensors tab can also be used to determine the working status of a remote sensor.

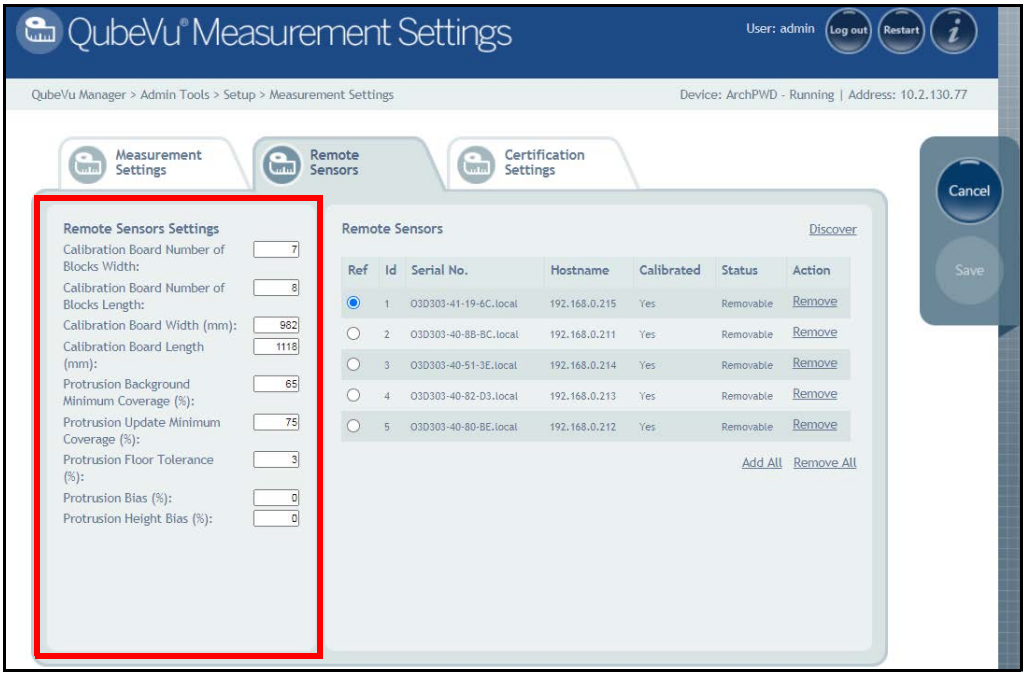

Figure 4-3. Remote Sensors Settings

Parameter	Description
Calibration Board Number of Blocks Width	Do not modify Matches the calibration object for the PWD Default: **7**
Calibration Board Number of Blocks Length	Do not modify Matches the calibration object for the PWD Default: **8**
Calibration Board Width (mm)	Do not modify Matches the calibration object for the PWD Default: **982**
Calibration Board Length (mm)	Do not modify Matches the calibration object for the PWD Default: **1118**
Protrusion Background Minimum Coverage (%)	Do not modify Controls minimum background coverage defined in ipaddress/log to allow the system to provide a valid dimension Default: **65**
Protrusion Update Minimum Coverage (%)	Do not modify Controls minimum valid pixel coverage defined in ipaddress/log to allow the system to provide a valid dimension Default: **75**
Protrusion Floor Tolerance (%)	Do not modify Depth camera height x%; Data ignored by sensors Default: **3**
Protrusion Bias (%)	Not applicable for this application, do not modify Default: **0**
Protrusion Height Bias (%)	Not applicable for this application Default: **0**

Table 4-3. Remote Sensor Settings

Note ***The iDimension PWD uses 4 sensors as the factory standard configuration. An optional 5th overhead sensor is required for dimensioning highly reflective pallet wrap material.***

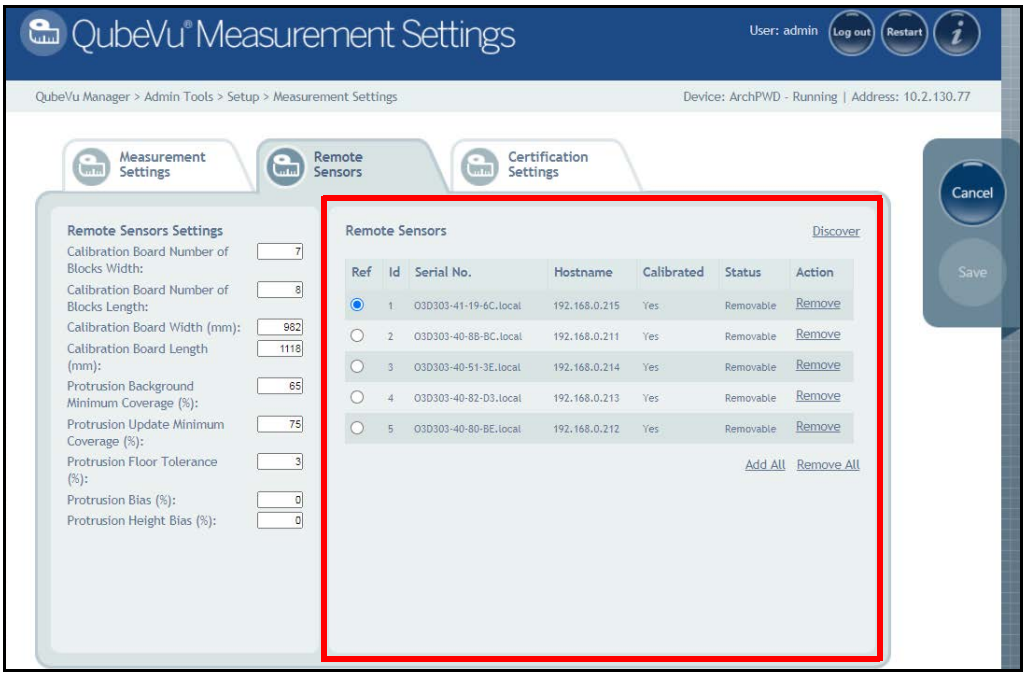

Figure 4-4. Remote Sensors: Discovery Settings

Parameter	Description
Discovery	Upon a new installation, a “Remove All” function or replacement of sensor, select this feature to update the Remote sensor table and firmware with IFM sensors used for the iDimension system
Ref	The “Ref” or reference selection configures which sensor will be used as the visual reference when configuring “Set Work Area” in the calibration menu and defines the Out-Of-Bounds indications on the USB display correctly; If a fifth overhead sensors is used, the iDim PWD will automatically select this sensor as a reference sensor
ID	Automatic assignment of sensor by firmware; The id number is configured in the IFM sensor using the vision assistant
Serial No.	Serial number of IFM sensor
Host Name	IP address of IFM sensor; IP addresses are configured using the IFM vision assistant and must use the same network address and subnet with unique host numbers as the iDimension PWD Network settings The factory default setting of the IFM sensors are: ID 1 = 192.168.0.4 ID 2 = 192.168.0.5 ID 3 = 192.168.0.6 ID 4 = 192.168.0.7 ID 5 = 192.168.0.8 (applicable for 5 sensor installation)
Calibrated	The Calibrated parameter indicates whether or not the individual sensor has been previously calibrated No – During initial installation, the sensors have not been calibrated to the individual unit; Upon successful calibration, the status will change to Yes; If a sensor has been replaced in the field, a new serial No will appear and display No Yes – The remote sensors have been calibrated during initial installation; If the sensors, IP address has been changed in the field after installation, make sure you remove all sensors, perform a discover and add new sensors prior to a new calibration being performed
Status	The status filed defines the current connection status of each sensor after initial installation, discovery and Action of add all has been performed Removable – Sensor has been identified during initial installation Pending Add – Sensor has not been added Disconnected – Sensor is not connected to network switch or sensor has error
Action	Available selections: Add – Individually add each sensor to embedded firmware for use with the iDimension PWD; It is recommended to use “Add All”; After selecting this function calibration is required Remove - Individually remove each sensor from the embedded firmware for use with iDimension PWD; It is recommended to use “Remove All” when changing sensors or IP addresses, then Add all; After selecting this function calibration is required
Add All	Select this feature to add all sensors when status is “Pending Add”; Calibration is required after selected
Remove All	Select this feature to remove all sensors when status shows removable; For use when changing a sensor or changing IP addresses after calibration; Calibration is required after selected

Table 4-4. Remote Sensor Discovery Settings

4.3 Certification Settings Tab

The ***Certification Settings*** tab controls the under-size and oversize flags and configures the displayed resolution used during dimensioning. The defaults shown below should not be increased or decreased unless instructed by the factory.

If the application is Legal-for-Trade, select PWD NTEP 19-076 from the configuration profile to add the certificate number to display on the inspector screen.

Figure 4-5. Measurement Settings Tab

Item No.	Parameter	Description
1	Configuration Profiles	Configuration profiles will adjust the system to the correct units of measure and measurement settings required for installation Selections: NTEP19-040, Metric, US Customary NTEP 19-040 – Configured the device for inches based on the Legal-for-Trade settings; Setting cannot be modified Metric – Configured the iDimension PWD for metric and allows configuration of available settings US Customary – Configured the iDimension PWD for inches and allows configuration of available settings
		Certificate Number – Certification number
		Dimensioning Unit – Measurement for the unit of weight used Selections: in, kg
	Warm-up Threshold (minutes)	Upon system restart the time the system requires warm-up prior to entering into the Ready Mode Default: **0**
	Require Refinement	Do not modify Default: **Off** Selections: On or **Off**
		Minimum Operating Temperature (C°) – The minimum temperature the unit can function
		Maximum Operating Temperature (C°) – The maximum temperature the unit can function
		Operation Note – Field for the operator to provide notes
2	Cuboids Size	Controls the displayed increment of the measurement on the USB display and status; Modifying the division size does not affect accuracy Division: 0.5" (1 cm)
	Minimum (L x W x H)	Controls the under-size flag on the USB display and web service API
	Maximum (L x W x H)	Controls the oversize indication on the USB display and web service API
3	Irregulars	Irregulars share the same information as cuboids

Table 4-5. Certification Settings

5.0 Calibration

This section provides an overview of iDimension PWD ***Calibration*** menu instructions.

The ***Calibration*** menu provides access to the following information:

- Calibration settings for the ***Sensor Calibration*** and ***Set Work Area*** configuration
- Camera calibration – if required, calibrates the iDimension PWD using the calibration object

To enter the ***Calibration*** menu use the following procedure:

1. Press Admin Tools from the ***QubeVu Manager*** menu (Figure 2-1 on page 4) to enter the ***Admin Tools*** menu.
2. The QubeVu Manager login screen displays. The default username and password are **admin** and **password**.
3. Press Calibration from the ***Admin Tools*** menu (Figure 2-2 on page 5) to enter the ***Calibration*** menu.

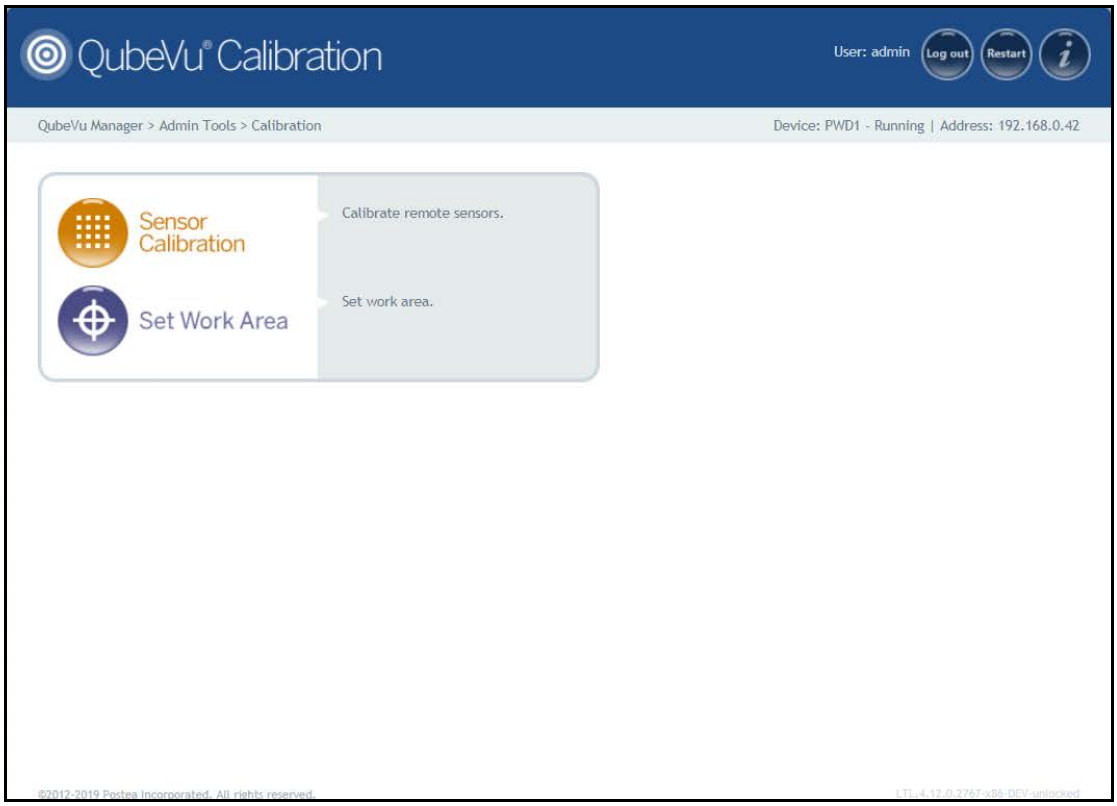

Figure 5-1. Calibration Menu

Parameter	Description
Sensor Calibration	Calibrate remote sensors (Section 5.1 on page 22)
Set Work Area	Set work area (Section 5.2 on page 28)

Table 5-1. Calibration Navigation

Calibration Object

A calibration object is provided with each unit and is required for calibration. The calibration object is an 8 x 7 square checkerboard and packaged in a 982 mm x 1118mm (57" x 48") carton with protective foam inserts.

The calibration objects must be kept free from dirt, fingerprints and damage. To store the calibration object, carefully repackage the calibration object back into the carton for future use.

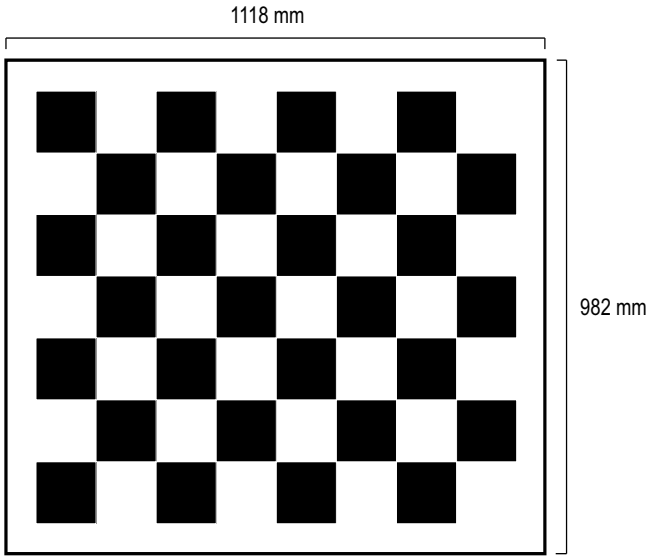

Figure 5-2. Calibration Object

5.1 IFM Sensor Alignment and Calibration

Initial setup requires alignment of IFM sensors towards the middle of the floor scale using the cross hairs.

Calibration requires the use of the calibration object and requires a 5-point procedure. Calibration is performed by placing the calibration object on the floor scale, starting at the 4 o'clock position (120°) and rotating the object 30° each step.

1. Press Sensor Calibration from the ***Calibration*** menu (Figure 5-1 on page 20) to enter the ***Remote Sensors Calibration*** menu.

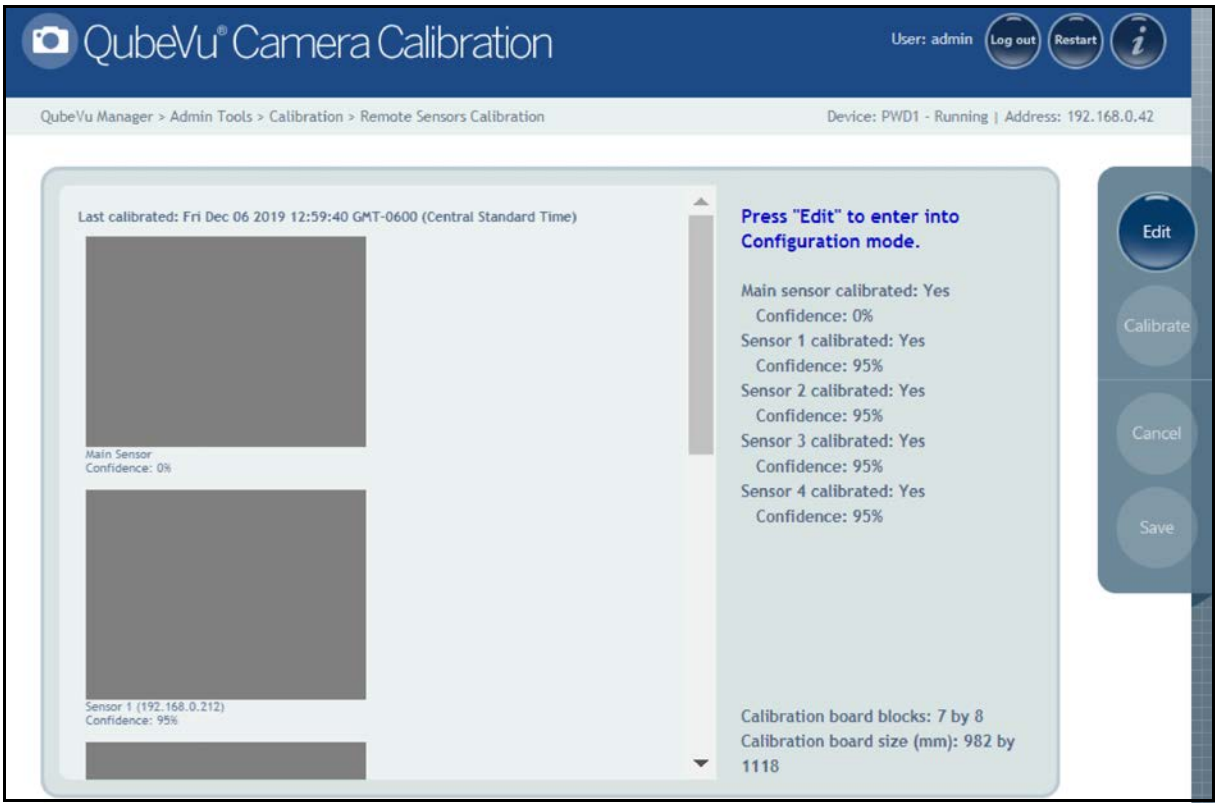

Figure 5-3. Remote Sensors Calibration

2. Align remote sensors towards the center of the floor scale using the cross hairs to guide, provided by the IFM sensors.
   - Ensure the sensor rods are securely mounted in place
   - Exact alignment is not critical
   - Aligning is defining the calibration position of each sensor
3. Press Edit to enter configuration mode. If a pop-up menu displays, refresh the web browser.
4. Place calibration object on the scale.

5. Align calibration object so the cross hairs are centered. Rotate the calibration object to 4 o'clock with the tower assembly being at 12 o'clock (Figure 5-4).

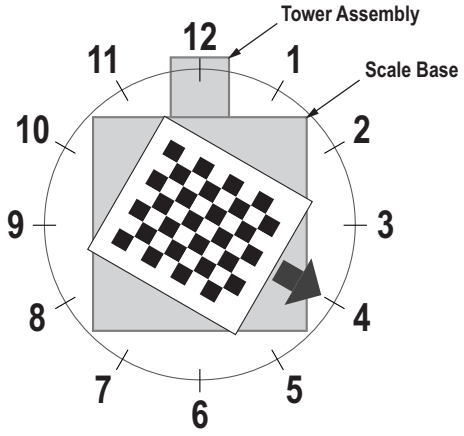

Figure 5-4. Rotate to 4 o'clock

6. Press Calibrate.

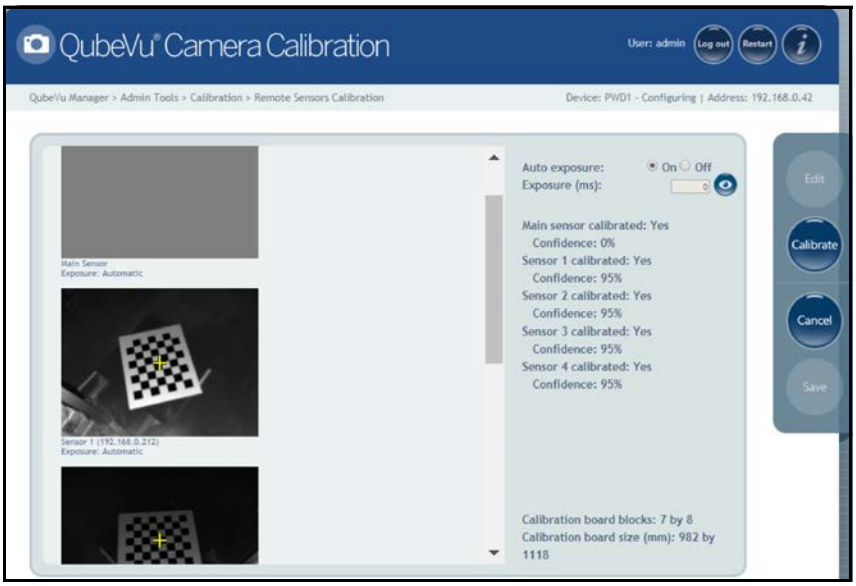

Figure 5-5. Object Calibration 1

7. Align calibration object so the cross hairs are centered. Rotate the calibration object to 5 o'clock with the tower assembly being at 12 o'clock (Figure 5-6).

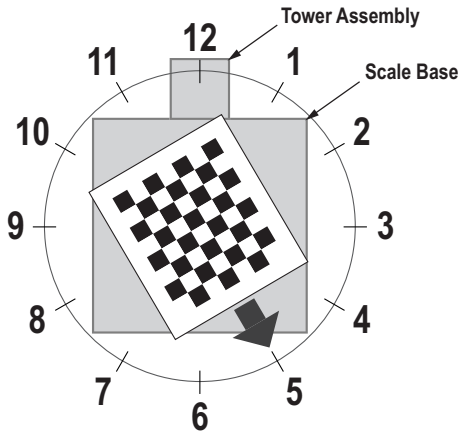

Figure 5-6. Rotate to 5 o'clock

8. Press Calibrate.

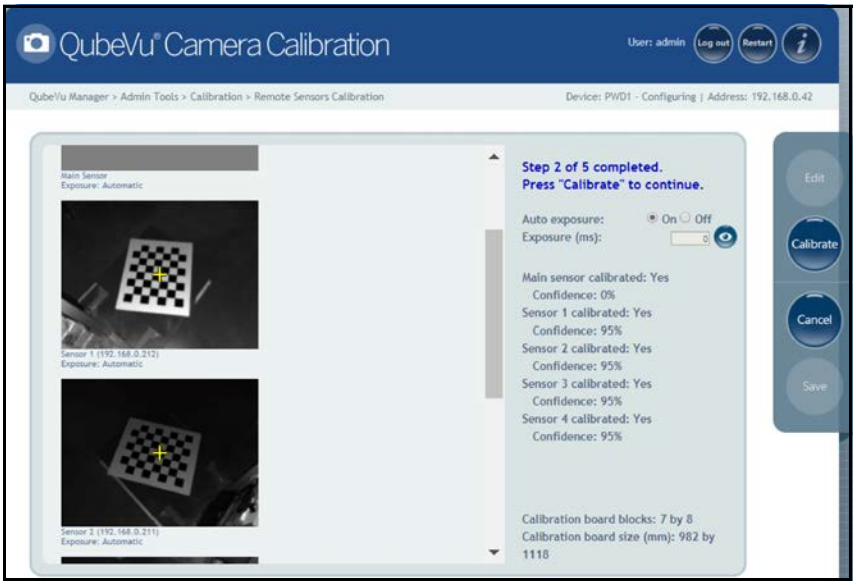

Figure 5-7. Object Calibration 2

9. Align calibration object so the cross hairs are centered. Rotate the calibration object to 6 o'clock with the tower assembly being at 12 o'clock (Figure 5-8).

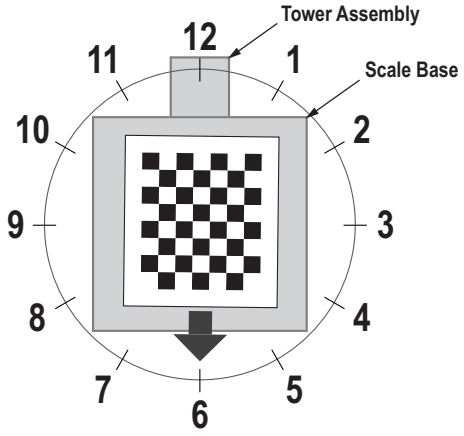

Figure 5-8. Rotate to 6 o'clock

10. Press Calibrate.

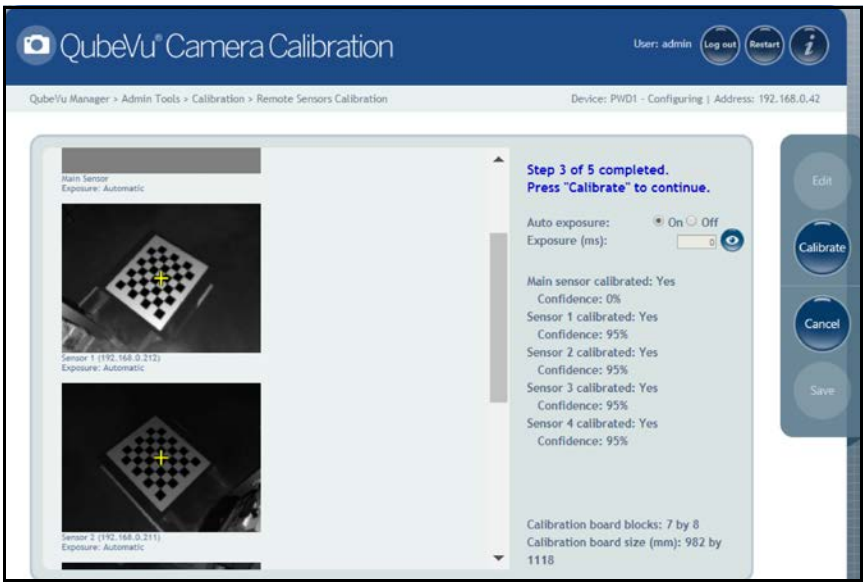

Figure 5-9. Object Calibration 3

11. Align calibration object so the cross hairs are centered. Rotate the calibration object to 7 o'clock with the tower assembly being at 12 o'clock (Figure 5-10).

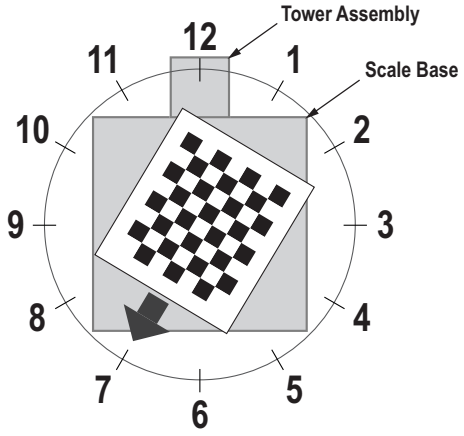

Figure 5-10. Rotate to 7 o'clock

12. Press Calibrate.

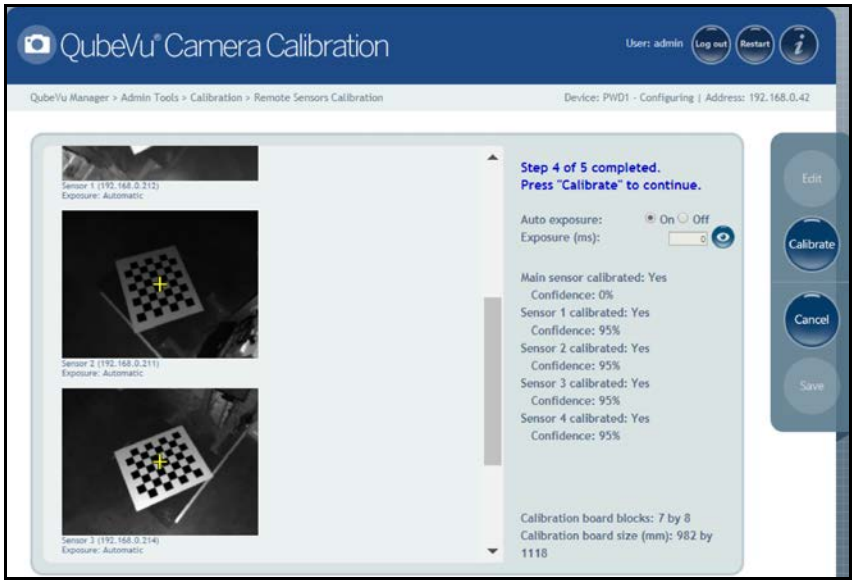

Figure 5-11. Object Calibration 4

13. Align calibration object so the cross hairs are centered. Rotate the calibration object to 8 o'clock with the tower assembly being at 12 o'clock (Figure 5-12).

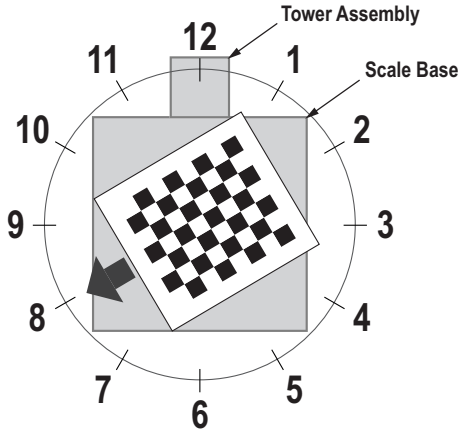

Figure 5-12. Rotate to 8 o'clock

14. Press Calibrate.

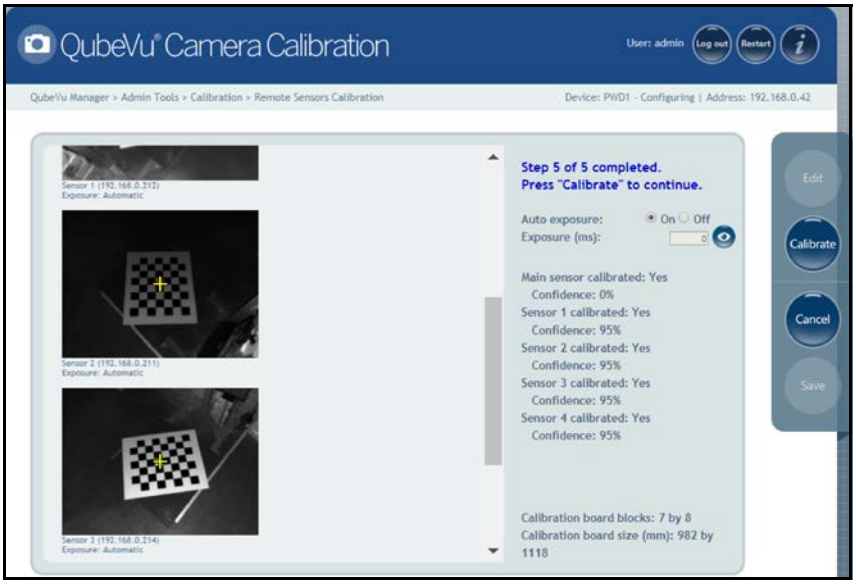

Figure 5-13. Object Calibration 5

Note ***If calibration fails, check for direct sunlight affecting the system then perform a new calibration.***

15. Upon successful calibration, press Save. The system returns to the ***Calibration*** menu.

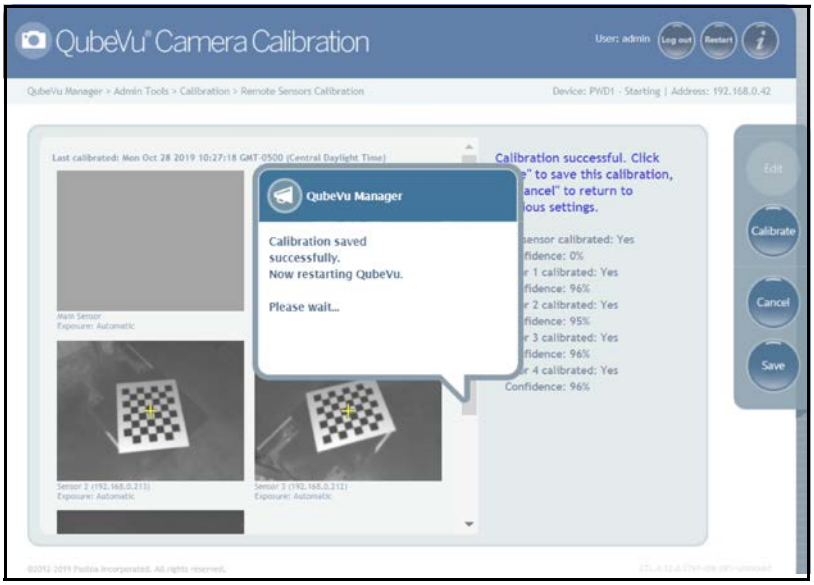

Figure 5-14. Successful Calibration

5.2 Setup Work Area

The Setup Work Area configures the iDimension PWD to control the out of bounds indications.

1. Press Set Work Area from the ***Calibration*** menu (Figure 5-1 on page 20) to enter the ***Set Work Area*** menu.

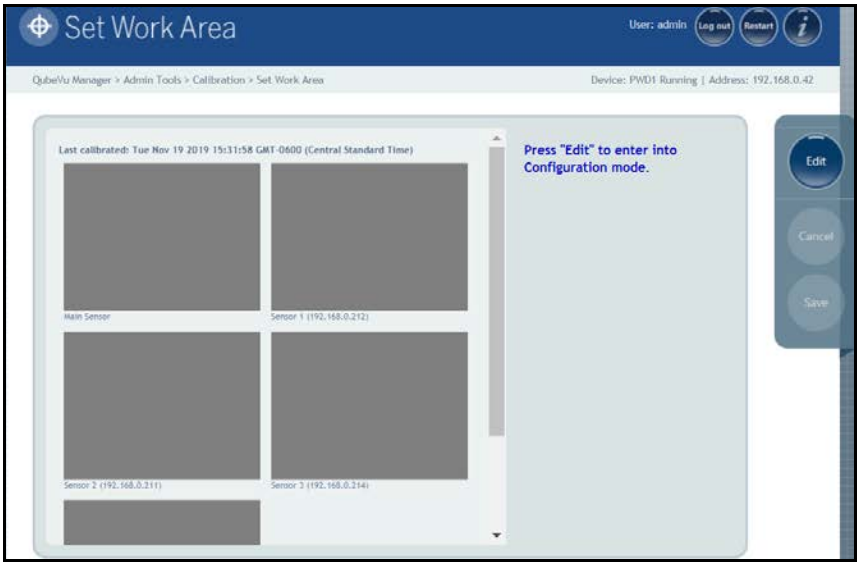

Figure 5-15. Work Area Settings

2. Press Edit and configure the settings as shown below:

Note ***Rice Lake Weighing Systems suggests using a minimum of 76" for the work area to ensure proper placement of the maximum 6' x 6' pallet.***

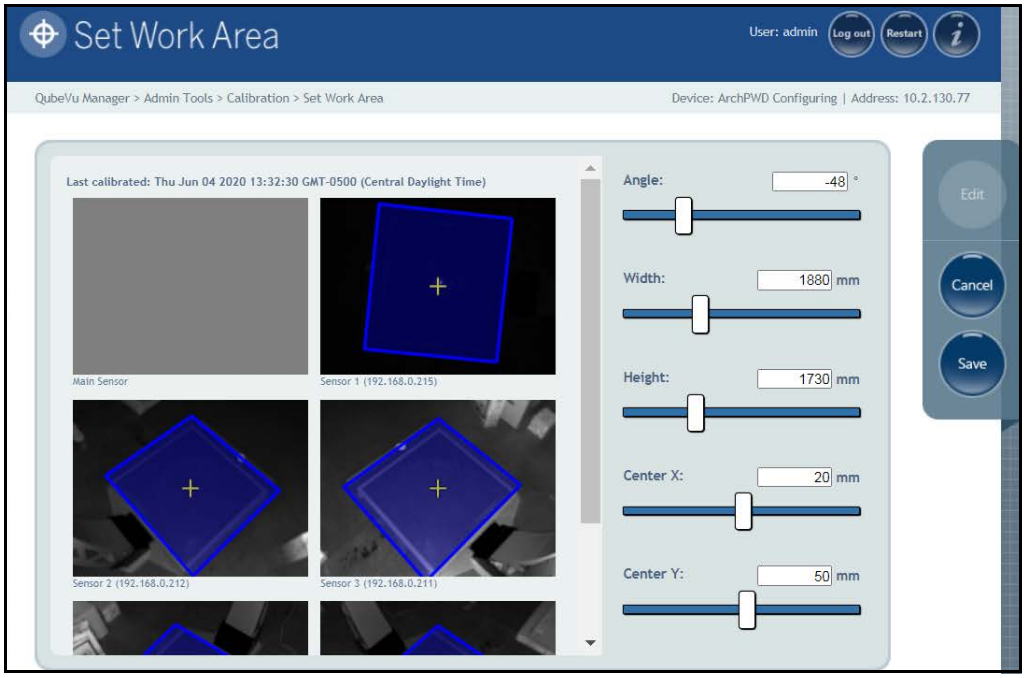

Figure 5-16. Work Area Configuration

Note ***Negative values (-48) are set using the slider bar. Adjust the numeric values (-xx) only.***

Note ***The default values shown in Figure 5-16 is for reference only.***
Refer to Table 5-2 for default values.

Definition	Description
Angle	Enter the value for the desired work area angle Default: **-48°**
Width	Enter the value for the desired work area width Default: **1880 mm (80")**
Height	Enter the value for the desired work area height Default: **1730 mm (80")**
Center X	Enter the value for the desired work area center X Default: **20 mm (1.14")**
Center Y	Enter the value for the desired work area center Y Default: **50 mm (4.72")**

Table 5-2. Work Area Values

3. Press Save to continue.

6.0 Network

This section provides an overview of iDimension PWD network configuration instructions.

Use the ***Network*** tool to define network settings.

- Press Network from the ***Setup*** menu (Figure 3-1 on page 8) to enter the ***Network*** menu.

6.1 Network Settings Tab

Network Security tab allow enhanced security by encrypting communications with the iDimension PWD using the Hypertext Transfer Protocol Secure (HTTPS). By default, communication with the iDimension PWD is via HTTP.

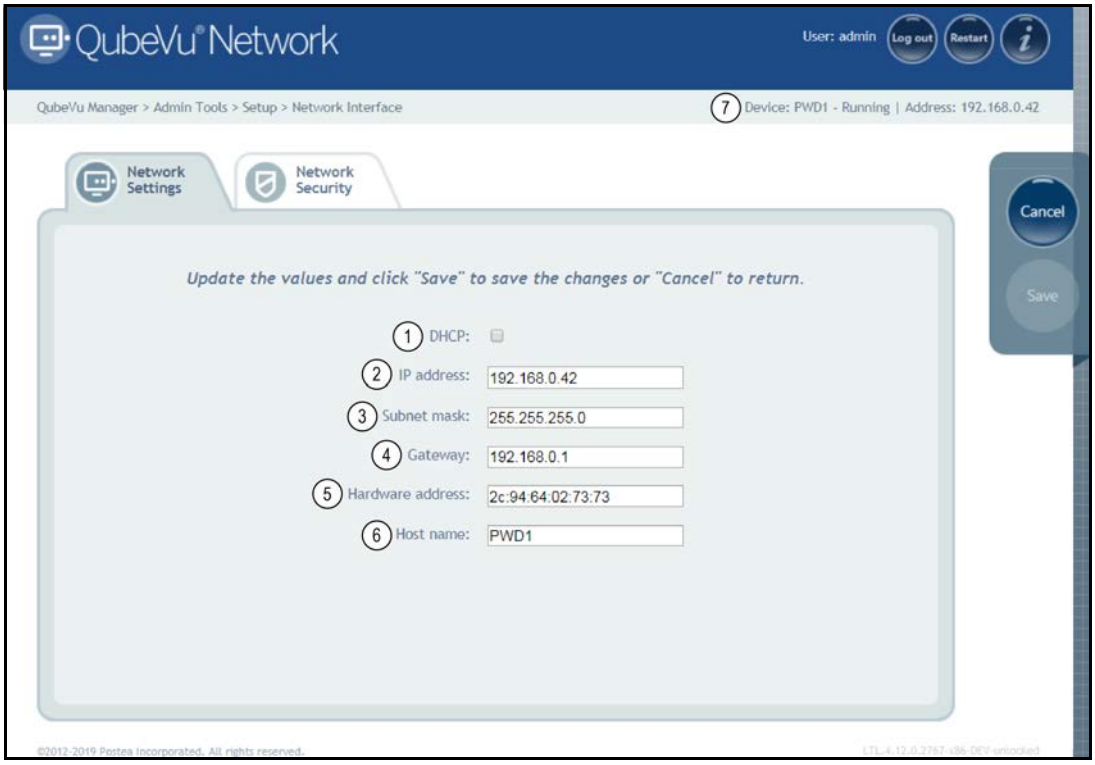

Figure 6-1. Default Network Interface Settings

Enter or modify the network settings for the network.

Item No.	Parameter	Description
1	Interface DHCP	Do not modify Default: **eth1**
2	IP Address	If DHCP is not checked, define a unique IP address for each iDimension PWD installed Consult with the network administrator if unsure how to assign a new IP address; If using fixed IP addresses, access iDimension PWD by the hostname or the IP address: http://<hostname>/; http://<ip address>/ Default IP address: **192.169.0.1**
3	Subnet Mask	Consult the network administrator for the correct setting Default: **255.255.255.0**
4	Gateway	Consult the network administrator for the correct setting Default: **192.168.0.2**
5	Hardware Address	Do not modify Each iDimension PWD has been assigned a unique hardware MAC address
6	Host Name	The default host name is the alphanumeric portion of the device serial number; A unique host name may be defined for each device; Up to 15 characters are allowed for the ***Host Name***
7	Device Name	Default: **PWD1**

Table 6-1. Network Interface Parameters

6.2 Network Security Tab

Selecting the ***Network Security*** tab displays the current settings. To configure ***Network Security***, follow the procedure below:

1. Select **Enable HTTPS** to enable HTTPS.
2. Select Choose File.
3. Select the certification file.
   - Certifications may be self-signed or sourced by third-parties and are not exclusively provided by Rice Lake Weighing Systems
4. Enter the file name of the key file, certificate file and key pass phrase.
5. Press Upload to transfer the information from the PC to the iDimension PWD.

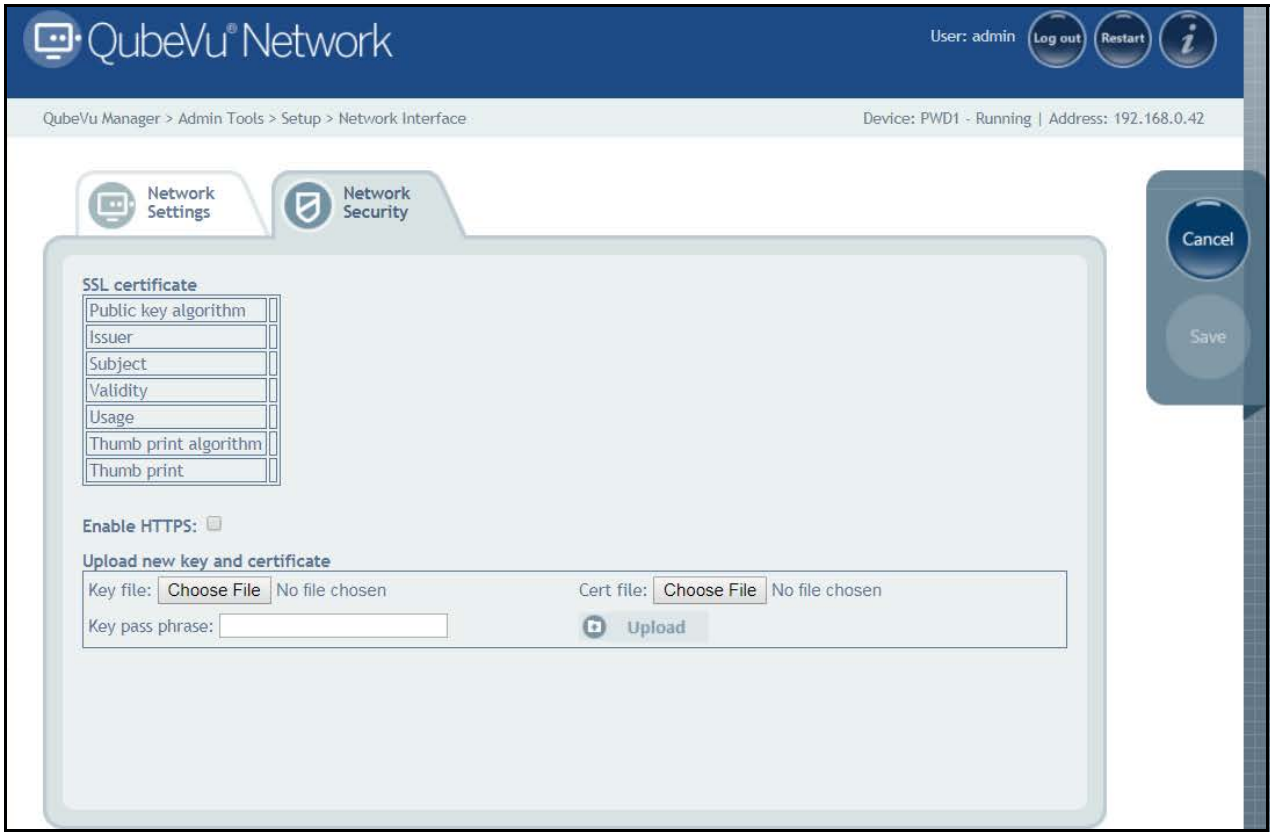

Figure 6-2. Network Security Tab

Note ***With HTTPS enabled, both the HTTP and the HTTPS addresses are available.***

7.0 Specifications

Product Dimensions

Length	92.7" (235.46 cm)
Width	117.34" (298.04 cm)
Height	131.86" (334.92 cm)
Weight	993.64 lb

Legal for Trade Measurement Range

Capacity	Minimum	Maximum
Length	6" (15.24 cm)	72" (182.88 cm)
Width	6" (15.24 cm)	72" (182.88 cm)
Height	6" (15.24 cm)	72" (182.88 cm)

Measurement Capabilities

48" x 42" x 84" (121.92 cm x 106.69 cm x 213.36 cm)
Contact factory for more examples

Measurement Increment

Division ±0.5" (1.27 cm)

Throughput

Average transaction time of 7 seconds

Performance Characteristics

Most surfaces are captured, transparent/translucent and glossy surfaces may provide a variance

Item Placement

Single pallet centered on the floor scale for best performance

Minimum Pallet Height

4.25" (10.80 cm) wood pallets

Shapes

Solid shapes, (3" (7.62 cm) protrusions or more) will be included in dimensions

Lighting Conditions

Operates in any indoor lighting environment

System Contents

iDimension PWD
Calibration Object 12" x 12" x 12" (30.48 cm x 30.48 cm x 30.48 cm)
Test Box

Dimensioning Speed

Within 2 seconds from the time the target area is clear and the unit has been triggered to scan

Unobstructed Floor Space

For best performance, provide a 15' (457 cm) width area clear of walls, inventory racks of barriers

Minimum Ceiling Height

11' (335.28 cm)

Sensor Height

10' (304.8 cm)

Network Interface

One static IP address required when used with a mobile PC; Up to 11 IP addresses reserved when connected directly to the network

Power Requirements

Single power source (96–264 VAC), with 25' (762 cm) power cable

Optional Network Camera

.24 cm (2.4 mm) POE network cable camera with 3-axis camera angle adjustment IP24 rating;
Standard 2688 x 1606 pixels, 96 dpi @ 751 kb standard output in .jpeg format;
Configurable for time and date, scan ID, system serial #, dimensions and dimensional indicators

Operating Temperature

14° – 104° F (-10° – 40° C)

Humidity

0–90% non-condensing

Warranty

Two-year limited warranty
Five-year limited warranty, sensors only

Approvals

NTEP
CoC 19-076

The iDimension PWD complies with Part 15 of the FCC Rules. Operation is subject to the following conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

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