# iDimension<sup>®</sup>QubeVu<sup>®</sup>

Static Dimensioning Systems Firmware: 6.X.X.XXXX

# **Administrator Guide**

	eVu® Manager	Restart
		Device: QubeVu - CONFIGURING   Address: 192.168.0
Displays	Operator, customer and demo displays System administration and configuration tools	
License	View, apply, or upgrade the system's license	



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# **Revision History**

This section tracks and describes manual revisions for awareness of major updates.

Revision	Date	Description	
A	October 20, 2023	Initial manual release	
В	October 28, 2024	Updated menus; added new model calibration procedures	
С	March 6, 2025	Jpdated replacement parts; general updates	

Table i. Revision Letter History



Technical training seminars are available through Rice Lake Weighing Systems. Course descriptions and dates can be viewed at **www.ricelake.com/training** or obtained by calling 715-234-9171 and asking for the training department.

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#### Introduction 1.0

QubeVu Manager is an embedded program that configures iDimension products. This manual discusses configuring QubeVu with pallet dimensioners. and is recommended for use by technical system administrators.



#### NOTE: When interfacing to a third party program, reference the software manufacturer's documentation for configuration as necessary.

This manual is applicable with the following iDimension products:

- iDimension Flex Series Parcel and Pallet Dimensioning System
- iDimension LTL Pallet Dimensioning System
- iDimension LTL XL Pallet Dimensioning System
- iDimension PWD Pallet Weighing and Dimensioning System
- iDimension Plus Static Dimensioning System

NOTE: For information regarding iDimension Plus/Plus XL Static Dimensions Systems, see:

•iDimension Desktop Wedge Software Manual (214650)

•iDimension Software Suite (201231)

•iDimension Plus Managers Guide (206287)



Manuals are available from Rice Lake Weighing Systems at www.ricelake.com/manuals Warranty information is available at www.ricelake.com/warranties

#### 1.1 Additional Resources

For additional resources, see the following information:

#### **iDimension Flex Series Assembly Instructions**

The iDimension Flex Assembly Instructions (PN 220532) provides an overview on how to assemble iDimension products.

#### iDimension PWD Assembly Instructions

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

#### **iDimension Plus Assembly Instruction**

The iDimension Plus Assembly Instructions (PN 197164) provides an overview on how to assemble the iDimension Plus.

#### 880 Performance™ Series Indicator/Controller Technical Manual

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

#### 1280 Enterprise<sup>™</sup> Series Indicator/Controller Technical Manual

The 1280 Enterprise Series Technical Manual (PN 167659) provides a detailed overview of the 1280 indicator installation. configuration and operation procedures.

#### SUMMIT<sup>®</sup> 3000 Installation Manual

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

#### RoughDeck<sup>®</sup> Floor Scale Installation Manual

The RoughDeck Installation Manual (PN 66662) provides a detailed overview of the RoughDeck HP/HC installation procedure.



# 2.0 QubeVu Manager

This section provides an overview of QubeVu Manager. QubeVu Manager is the embedded program installed with the iDimension pallet dimensioner and provides configuration, system diagnostics and calibration not accessible from the touchscreen display.

To access QubeVu Manager, connect the iDimension pallet dimensioner via Ethernet to a computer and then open a web browser and enter the dimensioner's IP address: http://192.168.0.2 (primary) or 169.254.1.1 (secondary).

Dimension	💮 QubeVu Manager	Restant
		Device: QubeVu - CONFIGURING   Address: 192.168.0.2
Dis Dis Ad Too	Deprator, customer and demo         displays         min         System administration and configuration tools         View, apply, or upgrade the system's license	

Figure 2-1. QubeVu Manager Home Page

Parameter	Description	
Displays	Display information (Section 3.0 on page 16)	
Admin Tools	Admin tools information (Section 4.0 on page 21)	
License	License information (Section 11.0 on page 84)	

Table 2-1. QubeVu Manager Home Page Navigation



# 2.1 Navigation

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

For example, from the General Settings menu select Admin Tools to return to the Admin Tools menu or QubeVu Manager to return to the home page.

QubeVu N	Nanager > Admin Tools >	Setup > General Settings
	ı" General Settings	User: admin Log out Restart i
QubeVu Manager > Admin Tools > Setup > General S General Settings	ettings Il Server Configuration	Device: idim-UA51963 - REMOVE   Address: 192.168.0.102
Device Date/Time 09/23/2024 11:35:52 -0500 CDT () Self-recovery () None () Restart () Reboot Log level () Error () Info () Debug	Scale Scale type: <u>None</u> Comms parameters:	Serial Interface Protocol: Cff Cff Cff Cff Cff Cff Cff Cff Cff Cf

Figure 2-2. Menu Navigation



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iDimension Pallet Dimensioning Administrator Guide

# 2.2 Edit/Cancel/Save Buttons

Throughout the menus, three active buttons commonly display: (



Edit

Cancel and Save

Figure 2-3. Edit, Cancel and Save Buttons



Table 2-2. QubeVu Manager Home Page Navigation



## 2.3 System Status

The system status of the connected device is displayed in the upper right corner of all pages.



Figure 2-4. Status Display

Item No.	Description
1	User
	Logged into the device under the Admin mode. Select log out to return to the standard user mode.
2	Device
	The default setting is the serial number of the iDimension device. This can be renamed in the Host Name parameter in Network Set-
	tings (while in Admin mode).
3	System Status (Section 2.3.1)
	The current status of the unit.
4	IP Address
	10.184.1.58: The Current IP address of the unit.
5	Log Out (Log In displays if not signed in)
6	Restarts or Reboots system (Section 2.3.2 on page 12)
7	QubeVu Inspector (Section 2.4 on page 13)

Table 2-3. System Status Indicators

If **Edit** is selected while in the Calibration section, the unit may change to **Configuring** status. The system will restart

automatically upon saving or canceling changes and return to *Ready* mode.

#### 2.3.1 System Status Messages

The device status messages which may be displayed are described below.

Status	Description	
STARTING	The system is starting up	
STARTED	The device has been power cycled or rebooted. Wait for the status to change to RUNNING before performing a dimension. If the device remains in STARTING mode, use the demo display or USB display <b>Help</b> button to view and clear dimensions	
READY	The system is ready	
ERROR	The internet browser is unable to determine the status. ERROR may display during a system reboot	
DIMENSIONING	The system is processing a dimension	
REMOVE	Dimensions are processed and the item may be removed	
STOPPING	The system is transitioning to the STOPPED state	
STOPPED	The service has stopped. STOPPED displays during a restart or reboot of the system. If the unit continues to display STOPPED, perform a restart or power cycle the unit from the AC Outlet or power switch on the kiosk	
CALIBRATING	The device has been power cycled, reset or rebooted and the system is restarting services. Wait for the status to change to RUNNING before performing a dimension	
CONFIGURING	While in Admin mode an Edit condition has been activated to change configuration settings. If the settings are saved, the device should return to the RUNNING mode. If a save function has not been performed and the device is in the configuring mode, perform a restart	
RECOVERING	The system is attempting to reestablish connection with sensors	

Table 2-4. Status Messages



#### 2.3.2 Restart Device Information

To restart or reboot the system, select one of the following buttons:

- Select Restart from the system start bar. The QubeVu Manager restart/reboot prompt appears.
- Select Restart to restart the service currently running on the device.
- Select Reboot to reboot the operating system. Rebooting the unit takes several minutes and power cycles the unit.
- Select cancel to return to the previous menu.



Figure 2-5. Restart/Reboot Prompt



### 2.4 QubeVu Inspector

**QubeVu Inspector** provides **Device Information** and **Change Log** tabs. These tabs provide information regarding the device and changes made to settings. It is not necessary to log in to view the information available on the **QubeVu Inspector** tab.

#### 2.4.1 Device Information Tab

The **Device Information** tab lists system information such as the serial number, firmware version number and specifications. Perform the following to access the **QubeVu Inspector**:



Figure 2-6. QubeVu Inspector



#### 2.4.2 Change Log Tab

The **Change Log** tab provides a list of changes made to settings. This menu is used by the local weights and measures inspector and factory service personnel.

• To view changes using a date range, enter a Start and End date and then Select

	QubeVu Inspector	Restart i
QubeVu Manager > Inspect	or Device: idi	m-UA51963 - REMOVE   Address: 192.168.0.102
Device Information	on O Change O Audit Trail	Close
Change counter:	# Date Name Changed to	
139 Select date range: Start: 2024-09-	crimmarskipdates cActionsubpate Received(Actions Useraddiact/data/data/action/data/action/ criter/data/ criter/ crite	Internal-testing.4967-DEV
End: 2024-09-	22] 109 045ep2024_13:05 FirmwareUpdate (Versions6.1.1.pallet_vdp-internal-te (VersmareUpdate)	sting,4967-DEV-x86-unlock4
<u>Download</u> complete char log	99	
	densorCluster Hwodel="SIDVIZ" Track	eride"4"> ~ Hurveconnany,

Figure 2-7. Change Log Tab (Date Range)

To view all previous logs, select e without entering a date range.

	QubeVu° Ir	nspecto	Dr Restart (	i
beVu Manager > Inspector			Device: idim-UA51963 - REMOVE   Address: 192.168.	0.102
Device Information	Change Log	Auc Trai	dit il	Close
Change counter:	# Date	Name	Changed to	$\cup$
139	1 19Jul2024_10:56	FirmwareUpdate	<pre><finmwaneupdate> (Version5.1.0.pallet.4812-x86c/Version&gt; </finmwaneupdate></pre>	
Select date range: Start: 2024-01-01 End: 2024-09-23	2 19Jul2024_10:56	FirmwareUpdate	<pre><pirmwareupdate></pirmwareupdate></pre>	
	3 20Aug2024_12:55	FirmwareUpdate	<pre><finmwareupdate> &lt;(Version56.1.0.pallet.4012-w06 </finmwareupdate></pre>	
<u>Download</u> complete change log	4 20Aug2024_12:55	FirmwareUpdate	<pre><pinmwareupdates <="" version="">6.1.8.pallet.4812-x86 <!--/FinmwareUpdates</pre--></pinmwareupdates></pre>	
	5 20Aug2024_13:00	FirmwareUpdate	<firmwareupdate> <version5.1.0.pallet.4812-x86< version=""> </version5.1.0.pallet.4812-x86<></firmwareupdate>	
		_	(Firmwarelipdate)	

Figure 2-8. Change Log Tab (All Data)

- Use the arrow keys on the PC keyboard to scroll through the results.
- Select pownload to export the log to a \*.csv file.

#### 2.4.3 Audit Trail Tab

The Audit Trail Tab displays record audits history.

To fetch records, fill the First record Id: and Nb. of records: fields and select



Figure 2-9. Audit Trail Tab (Record Range)

To fetch all records, select = without entering the fields.



Figure 2-10. Audit Trail Tab (All Records)

- · Use the arrow keys on the PC Keyboard to scroll through the results.
- Select Download to export records to a \*.csv file.

# 3.0 Display

This section provides an overview of the QubeVu *Display Pages* menu. There are types of displays that can be used to relay information.

To enter the **Display Pages** menu, perform the following procedure:

• Select Displays from the QubeVu Manager menu (Figure 2-1 on page 8) to enter the Display Pages menu

	eVu®Displays	Restart
QubeVu Manager > Display Pages		Device: idim-Brian - SLEEPING   Address: 10.184.1.42
Operator Display	Operator-facing display Customer-facing display	

Figure 3-1. Displays Menu

ltem	Description	
Operator Display	Operator display information (Section 3.2 on page 18)	
Customer Display	Customer display information (Section 3.3 on page 18)	

Table 3-1. QubeVu Manager Home Page Navigation



## 3.1 Touchscreen Display

The touchscreen display is used to navigate QubeVu. The **Power** button for the USB display is located on the back of the unit. The USB display can be configured in QubeVu Manager.



Figure 3-2. Touchscreen Display

Function keys allow the iDimension software to be managed via the touchscreen display.

Item No.	Function	Function	
1	Out of Bounds Indication	Displays when objects are out of bounds (see Section 3.1.1)	
2	Dimension Display	Displays measured dimensions	
3	Weight Display	Displays the weight of the item when the item's metrics when captured. Use Indicator weight display to view live weight data, including negative weight	
4	Information Button	Accesses configuration menu to set up time and date, display configured IP address and firmware updates via USB flash drive	
5	Scan Button	Activates the device to dimension	
6	Help Key	Displays the Issue Review menu; Provides instructions to clear conditions such as started, stopped, wait or remove condi- tion with no object in the scan area	
7	Live Image	The weigh area provides a real-time view of the scanning area transmitted from the scanning head to the USB display	

Table 3-2. Key Functions

#### 3.1.1 Customer Display Icon – Out of Bounds Indications

The Out of bounds (OOB) indication provides a visual symbol if the placement of the pallet or box is outside of the work area. Figure 3-3 indicates the pallet is out of bounds on the left edge, when facing the scale on a PWD:



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## 3.2 Operator Display

The **Operator Display** function simulates the USB touchscreen display. The **Operator Display** menu can be configured using the Admin Tools/Setup/Displays Settings function (Section 5.3.1 on page 34).

• Select Operator from the **Display Pages** menu (Figure 3-1 on page 16). The Operator Display appears.

Dimensions (in)	24.0 24.0 24.0 24.0	2023-Sep-13 16:44:49 Scan: 43 S/H: FLEX_B15 Dime (L:W:H): 24.0 × 24.0 (in)
Weight (stable) <b>15</b> #43 · 2023-Sep-13 10	.95 lbs	/ <i>i</i> Remove 🛦

Figure 3-4. Operator Display

NOTE: See Section 3.1 on page 17 for function descriptions.

## 3.3 Customer Display

The **Customer Display** menu can be used for applications when a visible display is required for dimensioning. The **Customer Display** menu does not provide access to operator controls and is configured with Admin Tools/Setup/Displays Settings function (Section 5.3.2 on page 36).

Select	Customer from t	he <b>Display Pages</b> menu (	Figure 3-1 on page 16). The Customer display appears
	Dimensions (in) LENGTH WIDTH HEIGHT	24.0 24.0 24.0	2023-Sep-13 16:44:48 Scin: 43 S/N: FLEX_B15 Dirne (L=WxH): 24.0 × 24.0 × 24.0 (n)
	Weight (stable)	.95 lbs	
	#43 · 2023-Sep-13 16	5:44:48	Remove
		Figure 3-5. Cus	tomer Display



# 3.4 Forklift Display

The *Forklift Display* is used in freight applications to give operators clearance or error messages. Forklift Display access must be addressed by typing the IP address of the unit into the web browser followed by /forkliftdisplay.

Example: 10.2.131.197\forkliftdisplay



Figure 3-6. Ready Message



Figure 3-7. Clearance Message



Figure 3-8. Error Message



Error Message	Description
ERROR getting QubeVu status - the device is probably off or restarting	System is rebooting
No item in sight	The object on the forklift is undetected
Center the freight	The object is inside the work area but outside of the central zone
Failed to collect data from the sensors - check connections	System cannot detect the sensors due to network failure
Failed to connect to the sensors after recovery attempt	System attempted but failed to detect sensors due to network failure
Error - Lost connection to device, check network - reconnecting	System failed to reconnect

Table 3-3. Error Messages



# 4.0 Admin Tools

This section provides an overview of the **QubeVu Admin Tools** menu. **Admin Tools** configure, calibrate, upgrade, back up and run diagnostics on the system.

To enter the *Admin Tools* menu, perform the following procedure:

- 1. Select
- Admin from the **QubeVu Manager** menu (Figure 2-1 on page 8).
- 2. The QubeVu Manager login screen displays. Enter account credentials.

#### NOTE: The default username and password are <u>admin</u> and <u>password</u>.

3. Admin Tools screen displays.

	peVu® Admin Tools	User: admin Log out Restart
QubeVu Manager > Admin Tools		Device: QubeVu - READY   Address: 169.254.1.1
fit Setup	System configuration tools	
Calibration	System calibration tools	
Capture Definitions	Capture definition management tools	
Firmware Upgrade	Firmware upgrade tool	
Backup	System configuration backup to and restore from files	
Diagnostics	Diagnostic tools	
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Figure 4-1. Admin Tools Menu

ltem	Description	
Setup	eneral (optional and scale), measurement, user and network settings (Section 5.0 on page 22)	
Calibration	Calibration settings, define work area and calibrate cameras (Section 6.0 on page 42)	
Capture Definitions	Capture definitions for QubeVu (Section 7.0 on page 70)	
Firmware Upgrade	Update firmware (Section 8.0 on page 72)	
Backup	Backup and restore settings (Section 9.0 on page 76)	
Diagnostics	Diagnostics settings (Section 10.0 on page 79)	

Table 4-1. Admin Tools Navigation



# 5.0 Setup

1.

This section provides an overview of the QubeVu Setup menu.

To enter the Setup menu, perform the following procedure:

- Select Admin from the **QubeVu Manager** menu (Figure 2-1 on page 8).
- 2. The QubeVu Manager login screen displays. Enter account credentials.

NOTE: The default username and password are <u>admin</u> and <u>password</u>.

3. Select Setup from the Admin Tools menu (Figure 4.0 on page 21). The Setup menu displays.

	eVu" Setup	User: admin Log out Restart i
QubeVu Manager > Admin Tools > Setup		Device: QubeVu - STOPPED   Address: 169.254.1.1
General Settings	General settings include peripherals and external interfaces	
Measurement Settings	Measurement setting are closely tied to the metrological functions of the system	
Display Settings	Modify the display settings for QubeVu.	
User	Change the administrator account's password	
Network	Network settings include IP addresses and SSL	

Figure 5-1. Setup Menu

Parameter	Description	
General Settings	Modify general settings for QubeVu (Section 5.1 on page 23)	
Measurement Settings	Modify measurement settings for QubeVu (Section 5.2 on page 30)	
Display Settings	Modify the display settings for QubeVu (Section 5.3 on page 34)	
User	Change password for the administrator account (Section 5.4 on page 38)	
Network	Modify network settings for QubeVu (Section 5.5 on page 39)	

Table 5-1. Setup Navigation



### 5.1 General Settings

*General Settings* menu provides access to general device configuration, scale configuration, communication interface configuration.

To access General Settings menu, perform the following procedure:

• Select Settings from the Setup menu (Figure 5-1 on page 22). The General Settings menu displays.

The General Settings menu provides two tabs:

- General Settings (Section 5.1.1)
- External Cameras (Section 5.1.2 on page 27)

#### 5.1.1 General Settings Tab

The General Settings tab allows device settings to be customized and changed (Table 5-2 on page 24):

User: admin Log out Restart
Device: idim-UA51963 - REMOVE   Address: 192.168.0.102
Serial Interface   Protocol:   Change   Clear

Figure 5-2. General Settings Tab



Item No.	Parameter	Description	
1	Device Date/Time	Configurable date and time	
2	Self-recovery	<ul> <li>Determines the recovery option of the unit.</li> <li>Default: Reboot</li> <li>Selections: <ul> <li>None – System switches to Stop mode and a manual restart is required</li> <li>Restart – If the system has determined a critical error state, the unit restarts after 10 seconds.</li> <li>Reboot – If an error occurs three times within 15 minutes, the unit will restart.</li> </ul> </li> </ul>	
3	Log level	Changing to error or debug increases the amount of engineering and performance information stored in the diagnost tics and log files shown in "ipaddress/log" command Default: <b>debug</b> Selections: • Error – Only logs error messages? • Info – Only logs info messages? • Debug – Logs all messages/	
4	Scale	Scale Type – Scale options: Auto, None, External, USB HID, Pennsylvania 7300, METTLER TOLEDO, MT-SICS, NCI, A&D FG, Dini, Rice Lake Indicator Communication Parameters USB/RS-232 – Enter settings of the scale selected; configured indicator example: Application setting required: 9600,N,8,1 • Baud rate: 9600 • Parity: None • Start bits: 8 • Stop bit: 1	
5	Serial Interface	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 (Section 12.5.1 on page 94 for details on configuration of TCP Interface) • Default: <b>Off</b> • Selections: Off, QubeVu, Cubiscan 110/150 Serial Port – Set-up a RS-232/LISB converter for interface to the PC	
6	TCP Interface	<ul> <li>For use when using the TCP command/response format when attached to the network</li> <li>Default: Off</li> <li>Selections: Off, QubeVu, Cubiscan 110/150</li> <li>TCP Port:</li> </ul>	
7	HTTP Interface	For use when using the HTTP command/response format when attached to the network Protocol • Default: <b>Off</b> • Selections: Off, Text HTTP port – The port used to establish communication • Default: <b>blank</b> • Selections: Off, Text HTTP output format • Default: <b>blank</b> • Selections: %DATETIME%, %CAPTUREID%, %LENGTH%, %WIDTH%, %HEIGHT%, %VOLUME%, %DIMUNIT%, %WEIGHT%, %WEIGHT-LB%, %WEIGHT-KG%, %WEIGHTUNIT%, %DISPLAYWEIGHT%, %BARCODES%, %STATUS, and %%%,	

Table 5-2. Measurement Settings Parameters



#### **Configuring the Serial Interface**

1. Select **QubeVu** or **Cubiscan 110/150** from the serial interface drop-down list (Item 5 in Figure 5-2 on page 23).



Figure 5-3. Adapter Select

2. Select **Change...** before plugging in the USB – Serial cable. iDimension software begins scanning for a new cable.



Figure 5-4. Cable Scan

- 3. Plug the cable into the iDimension USB port or the USB-hub. The cable will be detected.
- 4. Select ok to proceed.
- 5. Select save to compete the serial emulation setup.



Figure 5-5. Cable Detected

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 selecting the **Change...** dialog.



#### **Configuring Date/Time**

The *Date/Time* parameter sets the date and time. The date and time are used to time stamp configuration changes which affect the Legal-for-Trade certification.

1. In General Settings, select ( to change the date and time settings of the unit.

Dimension Rice Lake & QubeVu® General Settings	User: admin Log out Restart
Server Comeral Settings General Settings Server Configuration	Device: idim-UA51963 - REMOVE   Address: 192.168.0.102
Device Date/Time Scale 09/23/2024 13:16:34 -0500 CDT  Self-recovery Su Mo Tu We Th Fr Sa	Serial Interface Protocol: Off  Serial port: Save Change Clear
None         Restart         I <thi< th="">         I         I         <thi<< th=""><td>TCP Interface Protocol: COT TCP port:</td></thi<<></thi<>	TCP Interface Protocol: COT TCP port:
Time     00:00:00       Hour     00 ♥       Minute     00 ♥       Second     00 ♥       Time Zone     Central Time (L♥)	HTTP Interface Protocol: Off HTTP port: HTTP output format:
Now Done	( << Maoros )

Figure 5-6. Date and Time Tab

- 2. Select **Now** to set the date and time to match the local computer date and time or enter a new date and time.
- 3. Select a Time Zone.
- 4. Select **Done** to apply the settings.



#### 5.1.2 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. The default static IP address of the camera is 192.168.0.90. See Section 12.2 on page 87 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.

u Manager > Admin Tools > Se General Settings	tup > General Settings External Cameras	Device: idim-	UA51963 - REMOVE   Address: 192,108.0
Name	Path	Scale factor	Action
QVRemoteCameraImage1	http://root:password@192.168.0.9/axis-cgi/jpg/image.cgi	0.25	Edit Test Delete
Qmemolecalmerannagez	ntch//rootchasmold@//2100.010.acto.acto.gr/jpg/magacegr	0.23	

Figure 5-7. External Camera Tab

2. The page refreshes with temporary text added to Name, Path, and Scale factor columns.



Figure 5-8. Temporary Camera Information

3. Enter the desired camera name.

NOTE: The operator display only shows images named QVRemoteImageX (where X is the numerical order of the camera).

- 4. Configure the Path information (http://username:password@xx.xx.xx.xx/mjpg/video.mjpg) as the following:
  - username:password User name and password credentials
  - @xx.xx.xx.xx IP address of camera (for example 192.168.0.90)
  - Mpg/video.mjpg



5. Set the Scale factor as 0.25.

NOTE: The scale factor shrinks the original image size to save bandwidth by a user defined percentage. In this example the images is reduced by 25 percent (0.25).

- 6. Select **OK**.
- 7. Select Save to continue.
- 8. The QubeVu Manager restarts and returns to the Home page.
- 9. Return to the external cameras tab and Select Test.

10. Select OK



Figure 5-9. External Camera

#### 5.1.3 Server Configuration Tab

Provides server details where the device uploads measurement and image data.



NOTE: Currently only one server can be configured.

#### Adding a server

- 1. Files can be selected in the following ways:
  - Drag and drop the file in the Server #1 box.
  - Select browse for files... to pick server configuration file (see Figure 5-10 on page 28).

	🛞 QubeVu General Settings	User: admin (log out) (Restart)
QubeVu Manager > Adı	min Tools > Setup > General Settings	Device: idim-UA51963 - READY   Address: 192.168.0.102
Server #1 Enabled: Stop On Error: Connect Timeout Begver Insfor Server Insfor	al Cameral Configuration Con © Off On © Off On © Off (a): 2 (b): 5	Save
©2012-2024 Rice Lake Weij	gling Systems. All rights reserved.	6.1.1.pullet_yop-internat-feeting.2005-DEV-028-matocies4

Figure 5-10. Server Configuration Tab



2. Adjust server parameters.

Server #1 Enabled: ①
Press Save to apply settings from: aws.json

Figure 5-11. Server Configuration Parameters

3. Select Save

Item No.	Parameter	Description		
1	Enabled	Nust be ON for system to upload measurement and image data to the server.		
2	Stop On Error	On - System will stop uploading in case of error. Off - System will ignore upload errors and continue processing. <b>NOTE: The system does not resend failed uploads.</b>		
3	Connect Timeout	Time in seconds the system will stop attempt to connect to the server.		
4	Request Timeout	Time in seconds the system will stop attempt to send data to the server.		
5	Server Info	isplays name of server.		

Table 5-3. Server Configuration Parameters



## 5.2 Measurement Settings

Displays and allows a user to modify settings in the parameters menus.

#### () IMPORTANT: Changing measurement parameters voids CubeVu's legal for trade certification.

To enter the *Measurement Settings* menu, perform the following information:

- Select Measurement from the **Setup** menu (Figure 5-1 on page 22). The **Measurement Settings** menu displays.
- A prompt appears describing the affect of changing Measurement parameters. If terms are acceptable select OK.



Figure 5-12. Measurement Settings Prompt

· Measurement Settings appears.

	QubeVu° Measurer	nent Setti	ngs	User: admin Log out R	start i
QubeVu Manager > Admin Tools	> Setup > Measurement Settings		Device: Q	ubeVu - STOPPED   Address	169.254.1.1
Preset Profile	Sensor List				Cancel
click "Save" in order to apply it to the system	Min (in) Division (in)	Drop and Clear 12 x 12 x 12 96 x 96 x 96 0.5	Stop and Go 14 x 12 x 12 72 x 72 x 84 0.5	the reference plane	Save
Advanced settings					
©2012-2023 Rice Lake Weighing System	ns. All rights reserved.			PhoenixEricPallet-050323-x8	6-DEV-unlocked

Figure 5-13. Measurement Settings Tab

The Measurement Settings menu contains two tabs:

- Preset Profile (Section 5.2.1)
- Sensors List (Section 5.2.3 on page 33)



#### 5.2.1 Measurement Settings Tab

Modify the values within *Measurement Settings*. See Table 5-2 on page 24 for parameter information.

	QubeVu®Measurement Set	tings User: admin Log out Restart 🥡
QubeVu Manager > Admin Tools > S	jetup > Measurement Settings	Device: QubeVu - STOPPED   Address: 169.254.1.1
Preset Profile	Sensor List	Cancel
Select a configuration profile bellow and click "Save" in order to apply it to the system LTL NTEP V 1	NTEP-certified LTL setup, consisting of 4 or 5 sensors mounted Drop and Clear Min (in) 12 x 12 x 12 Max (in) 96 x 96 x 96 Division (in) 0.5	11 feet (3.3 meters) over the reference plane Stop and Go 14 x 12 x 12 72 x 72 x 84 0.5
3 Advanced settings		

Figure 5-14. Measurement Settings Tab

Item No.	Parameter	Description			
1	Preset profile	<ul> <li>Multiple profiles configured with specific measurement settings:</li> <li>Pallet: Metric, LTL NTEP, LTL OIML/EU, US Customary</li> <li>Parcel: Metric 1.2m, Metric 1.5m, Metric 2.0m, US 48in, US 60in, US 80in</li> <li>In-motion: Metric, US Customary</li> </ul>			
2	Profile description	Lists specifications of the Preset Profile			
3	Advanced Settings	Dpens Advanced Measurement Settings (see Section 5.2.2 on page 32)			

Table 5-4. Measurement Settings Functions



#### 5.2.2 Measurement Advanced Settings (Configuration Editor)

This menu contains various parameters that affect Measurements.

To enter the *Measurement Advanced Settings* menu, perform the following information:

 Select Advanced settings from the Measurement Settings menu (Figure 5-1 on page 22). The Configuration Editor menu displays.

() IMPORTANT: Do not modify parameters without contacting Rice Lake Weighing Systems first.

Dimension QubeVu® Measurement Settings	User: admin Log out Resart 1
QubeVu Manager > Admin Tools > Setup > Configuration Editor	Device: QubeVu - STOPPED   Address: 169.254.1.1
<ul> <li>Configuration Version="2.0" 3</li> <li>(No text value. Click to edit.) add child</li> <li>ProtectedParameters 3</li> <li>(No text value. Click to edit.) add child</li> <li>DepthMax 3</li> <li>DepthMin 3</li> <li>FloorTolerance 3</li> <li>EdgeThreshold 3</li> <li>Certification 3</li> <li>FareParameters 3</li> <li>ReferenceCamView 3</li> <li>SensorCluster Hwkodel="IFM_OgDg" Trackertd="1" 3</li> <li>PresetName 3</li> <li>Cho text value. Click to edit.) add child</li> <li>Vortext value. Click to edit.</li> <li>add child 3</li> <li>WorkAreaMM 3</li> <li>MotionDetection 3</li> <li>MotionDetection 3</li> </ul>	Import from file

Figure 5-15. Measurement Advanced Settings



#### 5.2.3 Sensor List Tab

The Sensor List tab provides access to the iDimension working status status and calibration status.

L	Dimension Rice Lake QubeVu® Measurement Settings User: admin Log out Restart 2							
Qı	QubeYu Manager > Admin Tools > Setup > Measurement Settings       Device: QubeYu - STOPPED   Address: 169.254.1.1							
		Prese Profil		Sensor List	0	0		Cancel
	2	3	(4)	(5)	6	(1)	8 Discov	<u>ver</u>
	Ref	Id	Serial No.	Hostname	Calibrated	Status	Action	Save
	۲	1	O3D303-40-66-71	192.168.0.4	true	Removable	Remove	
	0	2	O3D303-40-95-00	192.168.0.6	true	Removable	Remove	
	0	3	O3D303-40-96-AF	192.168.0.5	true	Removable	Remove	
	0	4	O3D303-40-62-D3	192.168.0.7	true	Removable	Remove	
							Add All Remove All	
							0 (1)	

Figure 5-16. Sensors List Functions

ltem	Parameter	Description	
1	Discover	Upon a new installation, a "Remove All" function or sensor replacement; select <b>Discover</b> to update the Sensor List and firmware with IFM sensors used for the iDimension system	
2	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 iDimension software will automatically select this sensor as a reference sensor	
3	ID	Automatic assignment of sensor by firmware; The id number is configured in the IFM sensor using the vision assistant	
4	Serial No.	Serial number of IFM sensor	
5	Host Name	<ul> <li>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 software Network settings The factory default setting of the IFM sensors are:</li> <li>ID 1 = 192.168.0.4</li> <li>ID 2 = 192.168.0.5</li> <li>ID 3 = 192.168.0.6</li> <li>ID 4 = 192.168.0.8 (applicable for 5 sensor installation)</li> <li>ID 6 = 192.168.0.24 (applicable for 8 sensor installation)</li> <li>ID 7 = 192.168.0.25 (applicable for 8 sensor installation)</li> <li>ID 8 = 192.168.0.26 (applicable for 8 sensor installation)</li> </ul>	

Table 5-5. Remote Sensor Discovery Settings



ltem	Parameter	Description	
6	Calibrated	<ul> <li>The Calibrated parameter indicates whether or not the individual sensor has been calibrated</li> <li>True – During initial installation, the sensors have not been calibrated to the iDimension unit; Upon successful calibration, the status changes to Yes; If a sensor has been replaced in the field, a new serial No will appear and display No</li> <li>False – The remote sensors have been calibrated during initial installation; If the sensors, IP address has been changed in the field after installation, remove all sensors, perform a Discovery and add new sensors prior to a new calibration being performed</li> </ul>	
7	Status	<ul> <li>The status filed defines the current connection status of each sensor after initial installation, Discovery and Add All have been performed</li> <li>Removable – Sensor has been identified during initial installation</li> <li>Available – Sensor has been identified but not connected to network switch</li> </ul>	
8	Action	<ul> <li>Available selections:</li> <li>Add – Individually add each sensor to embedded firmware for use wit; It is recommended to use Add All; After selecting this function calibration is required</li> <li>Remove - Individually remove each sensor from the embedded firmware; It is recommended to use Remove when changing sensors or IP addresses, then use Add All; After selecting this function calibration is required</li> </ul>	
9	Add All	Adds all sensors when status is Pending Add; Calibration is required after selected	
10	Remove All	Removes all sensors when status shows removable; For use when changing a sensor or changing IP addresses after calibration; Calibration is required after selected	

Table 5-5. Remote Sensor Discovery Settings (Continued)

# 5.3 Display Settings

To access Display Settings:

• Select Display Settings from the Setup menu (Figure 5-1 on page 22) to enter the Display Settings menu.

#### 5.3.1 Operator Display

The display settings configures the functionality of the USB display.

Dimension RICE LAKE	🖽 QubeVu Display Settings	User: admin Log out Restart
QubeVu Manager > Au	Innin Tools > Setup > Display Settings Itor Update the values and click "Save" to save the changes of Scan button's capture definition: QVDisplay ~ 2 Weight panel display: automatic ~ 3 QR output format: 4 Page path: http://10.2.130.118/operators 5 Preview	Device: Idim-UA51963 - REMOVE   Address: 192.168.0.102



NOTE: See Section 3.1 on page 17 for touchscreen display information.

The scan button and live image feed are not available in the customer display.



7

Item No.	Parameter	Description
1	Scan button's capture definition	<ul> <li>Select a capture definition from the available list to add a Scan button onto the Operator Display.</li> <li>Adding a Scan button to the Operator Display enables manual triggering the system to perform a dimension.</li> <li>Available selections: <ul> <li>QVDemo - The scan button performs the QVDemo scan</li> <li>QVDisplay - The scan button performs the QVDisplay scan</li> <li>Default - No scan button</li> </ul> </li> <li>NOTE: The parameters in this drop-down menu are retrieved from capture definitions (see See Section 7.0 on page 70).</li> </ul>
2	Weight panel display	Default: Automatic Available selections: • Automatic – USB display shows weight panel display with or without scale attached • Hidden – The weight panel display is removed from the USB display
3	QR output format	Configures a QR code that is presented on the USB display. Macros provide definitions that may be selected: • %DATETIME% • %CAPUREID% • %LENGHT% • %WIDTH% • %VOLUME% • %VOLUME% • %DIMUNIT% • %DIMUNIT% • %WEIGHT-LB% • %WEIGHT-LB% • %WEIGHT-KG% • %WEIGHTUNIT% • %DISPLAYWEIGHT% • %BARCDODE% • %%%%
4	Page path	The address to the operator display page.
5	Preview	Displays a preview of the configuration

Table 5-6. Operator Display Settings



#### 5.3.2 Customer Display

-/

The display settings configures the functionality of the USB display.

- Select Display Settings from the Setup menu (Figure 5-1 on page 22) to enter the Display Settings menu.
- Select the Customer Display tab.

Dimension Rice Lake	🖽 QubeVu Display Settings	User: admin Log ov) Resart
QubeVu Manager > Ao	dmin Tools > Setup > Display Settings	Device: idim-UA55819 - SLEEPING   Address: 192.168.0.2
Opera Displa	ator ay Customer Display	Cancel
	Update the values and click "Save" to save the chan Weight panel display: automatic v	ges or "Cancel" to return.
	Page path: http://192.168.0.2/custo 3 Preview	merdisplay
©2012-2024 Rice Lake W	righing Systems, All rights reserved.	6.1.0.parcel-internal-testing.5117-DRVx86-unlocked

Figure 5-18. Customer Display

NOTE: See Section 3.1 on page 17 for touchscreen display information.

The scan button and live image feed are not available in the customer display.

Item No.	Parameter	Description
1	Weight panel display	Default: Automatic Available selections: • Automatic – USB display shows weight panel display with or without scale attached • Hidden – The weight panel display is removed from the USB display
2	Page path	The address to the operator display page.
3	Preview	Displays a preview of the configuration

Table 5-7. Customer Display Settings


#### **Display Examples**



Figure 5-19. Default Display Screen



Figure 5-20. Customer Display

NOTE: The display screen shown in Figure 5-20 is a different dimensioning unit and is only used for reference.



Figure 5-21. Example Display Screen with QR code



#### 5.4 User

This section provides an overview of the QubeVu *User* menu. The *User* menu provides access to modify the default password. To enter the *User* menu, perform the following information:

• Select Over from the **Setup** menu (Figure 5-1 on page 22). The **User** menu displays.

Dimension Rice Lake QubeVu®User	User: admin Log out Restart
QubeVu Manager > Admin Tools > Setup > User	Device: QubeVu - STOPPED   Address: 169.254.1.1
Update the password and click "Save" to save the changes or "Can User name: admin Current password:	ncel" to return.

Figure 5-22. User Tab

When entering a new password, adhere to the following criteria:

- Minimum length: 6 characters
- Maximum length: 511 characters
- All printable characters are allowed except Unicode characters
- · Password may not resemble the last password



### 5.5 Network

Use the *Network* menu to configure network parameters. To enter the *Network* menu, perform the following:

Select Network from the Setup menu (Figure 5-1 on page 22). The Network menu displays.

#### 5.5.1 Network Settings Tab

Network Settings tab provides parameters that set the network configuration.

Dimension Rice Lake QubeVu® Network	User: admin Log out Restart
QubeVu Manager > Admin Tools > Setup > Network Settings	Device: idim-UA51963 - REMOVE   Address: 192.168.0.102
Network Security Settings	Cancel
Update the values and click "Save" to save the changes or "Co	ancel" to return.
3 IP address: 192.168.0.102	1
4 Subnet mask: 255.255.240	
5 Gateway (optional): n/a	
6 Hardware address: 84:8b:cd:49:f2:91	]
Host name: idim-UA51963	
B DHCP Lease Expires: n/a	

Figure 5-23. Default Network Interface Settings

Enter or modify the network settings for the network.

Item No.	Parameter	Description
1	Interface	There are two Ethernet parameters, eth0 or eth. These parameter configure which port is used on the system. Default: <b>eth0</b>
2	DHCP	Enables or disables DHCP.
3	IP Address	If DHCP is disabled, define a unique IP address for each iDimension pallet dimensioner installed. Consult with the network administrator if unsure how to assign a new IP address. If using static IP addresses, access pallet dimensioner by the hostname or the IP address: http:// <hostname>/; http://<ip address="">/ Default IP address: <b>192.169.0.1</b></ip></hostname>
4	Subnet Mask	Consult the network administrator for the correct setting Default: <b>255.255.255.0</b>
5	Gateway	Consult the network administrator for the correct setting Default: <b>192.168.0.2</b> NOTE: The Gateway parameter is unavailable when DHCP is enabled.
6	Hardware Address	Do not modify, each iDimension pallet dimensioner has been assigned a unique hardware MAC address.
7	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 <i>Host Name</i>
8	DHCP Lease Expires	Displays the time when DHCP lease expires. The DHCP lease time is typically set by the internet service provider and varies in duration.

Table 5-8. Network Interface Parameters

#### 5.5.2 Network Security Tab

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

To configure Network Security, perform the following:

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

	• QubeVu® Network	User: admin Log out Restart 1
eVu Manager > Admin Too	ls > Setup > Network Settings	Device: idim-UA51963 - REMOVE   Address: 192.168.0.102
Network Settings	Network Security Settings	Cance
SSL certificate		
Public key algorithm	IrsaEncryption	
Issuer	CN = QubeVuCharlestown lestCA, C = US, L = Charlestown	Save
Subject	C = US, ST = Massachusetts, L = Charlestown, O = QubeVuTest, QubeVuCharlestownTestCA	, OU = QubeVu lest, CN =
Validity	Nov 2 15:34:26 2022 GMT to Nov 2 15:34:26 2023 GMT	
Usage		
Thumb print algorithm	sha1	
Thumb print	40:5e:a4:d6:eb:3f:3e:49:7f:5e:dc:87:98:f9:4d:f4:ef:4b:f8:28	
Enable HTTPS: Upload new key and Key file: Choose F Key pass phrase:	certificate le No file chosen Cert file: Choose	File No file chosen

Figure 5-24. Network Security Tab

NOTE: With HTTPS enabled, both the HTTP and the HTTPS addresses are available.



#### 5.5.3 WiFi Settings Tab

The WiFi Settings displays WiFi connection characteristics and details.

ı Manager > Admin Tools > S	etup > Network Settings		Device	e: idim-UA55819 - READY   Address: 192.168
Network Settings	Network Security	WiFi Settings		
~	~	0		Discover
1)ssid	2 Security	(3) Signal	4 Action	
eng_test	psk	-68 dBm	Forget Connect	
RLWSUsers	8021x	-69 dBm	Forget Connect	
4Corn3\$	psk	-69 dBm	Add	
MisGuest	open	-69 dBm	Add	
abf-wlan-5g	psk	-69 dBm	Add	
spectra	psk	-69 dBm	Add	
MISTest	8021×	-70 dBm	Add	
RFTesting	psk	-70 dBm	Add	
spectra2	psk	-70 dBm	Add	

Figure 5-25. WiFi Settings Tab

Item No.	Parameter	Description
1	SSID	Name of the wireless network
2	Security	Network security type: • open - no authentication • psk - pre-shared key used for authentication • 8021x - WPA Enterprise security
3	Signal	Signal strength of wireless network
4	Action	<ul> <li>Available actions:</li> <li>Add - adds the wireless network to the list of remembered networks and connects</li> <li>Connect - connects to a previously added wireless network</li> <li>Disconnect - disconnects from a connected the wireless network</li> <li>Forget - removes the wireless network from the list of remembered networks</li> </ul>

Table 5-9. WiFi Setting Parameters



# 6.0 Calibration

This section provides an overview of the QubeVu *Calibration* menu. Calibration is required during initial setup, adding sensors, replacing sensors or if the sensors have become out of alignment during use. This sections discusses the following topics:

- Calibration Object Section 6.1 on page 42
- Accessing Calibration Section 6.2 on page 43
- FLEX, LTL, and PWD Calibration Section 6.3 on page 44
- LTL XL Calibration Section 6.4 on page 50
- Plus Calibration Section 6.5 on page 59
- Set Work Area Section 6.6 on page 65
- Verify Calibration Section 6.7 on page 69

## 6.1 Calibration Object

A calibration object is provided with each unit and is required for calibration. There are three types of calibration objects:

- 8 x 7 square checkerboard (1118 mm x 982 mm / 44.02 in x 38.66 in) packaged in a carton with protective foam inserts
- 7 x 6 square checkerboard (980 mm x 840 mm / 38.58 in x 33.07 in) packaged in a carton with protective foam inserts
- 7 x 6 square checkerboard (288 mm x 252 mm / 11.33 in x 9.92 in) packaged in a carton with protective foam inserts

**NOTE:** The calibration procedure remains the same regardless which calibration object is used.

The smallest checkerboard is only used with the iDim Plus.

#### () IMPORTANT: 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 6-1. Calibration Objects



### 6.2 Accessing Calibration

3.

To enter the Calibration menu, perform the following:

- 1. Select Admin from the **QubeVu Manager** menu (Figure 2-1 on page 8). The **Admin Tools** menu displays (Figure 4.0 on page 21).
- 2. The QubeVu Manager login screen displays. Enter account credentials.

NOTE: The default username and password are <u>admin</u> and <u>password</u>.

Select O Calibration from the *Admin Tools* menu (Figure 4.0 on page 21). The *Calibration* menu displays.



Figure 6-2. Calibration Menu

- 4. Proceed to one of the following:
  - Section 6.3 on page 44 for Flex, LTL and PWD calibration
  - Section 6.4 on page 50 for LTL XL calibration



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# 6.3 FLEX, LTL, and PWD Calibration

Initial setup requires alignment of sensors towards the middle of the floor scale or calibration object using crosshairs. Calibration requires the use of the calibration object and requires a 5-point procedure. Calibration is performed by placing the calibration object at the 4 o'clock position (120°) and rotating the object clockwise 30° each step.



Dimension Rece LAKE User: admin QubeVu® Sensor Calibration User: admin (ugout Resart)	i
QubeVu Manager > Admin Tools > Calibration > Sensors Calibration       Device: QubeVu STOPPED   Address: 169.7         Last calibration:       Sensor 1 calibrated: Yes         Confidence: 97%       Sensor 2 calibrated: Yes         Sensor 1 (192.188.0.4)       Sensor 2 (192.188.0.6)         Confidence: 97%       Sensor 4 calibrated: Yes         Sensor 1 (192.188.0.5)       Sensor 4 (192.188.0.7)         Confidence: 97%       Sensor 4 (192.188.0.7)         Confidence: 97%       Sensor 4 (192.188.0.7)         Confidence: 97%       Sensor 4 (192.188.0.7)	Edit Calibrate Cancel Save

Figure 6-3. Sensors Calibration

2. Select **Edit** to enter configuration mode. The switching to configuration mode pop-up message briefly displays.

NOTE: Select the internet browser's refresh if the message does not close after several minutes.



Figure 6-4. Switching to Calibration Mode Message



- 3. Align calibration object under remote sensors using sensor crosshairs as guides to center:
  - · Ensure sensor rods are securely mounted in place
  - Exact alignment is not critical
  - · Alignment defines the calibration position of each sensor



Figure 6-5. Sensors Calibration

4. Select Grab. The grabbing frame pop-up message briefly displays.



Figure 6-6. QubeVu Frame Grabbing Message



5. The first frame is now collected. Observe the frame counter increased from 0 to 1.



Figure 6-7. Sensors Calibration

- 6. Rotate the calibration object clockwise for the next grab as indicated in Table 6-1.
- 7. Repeat steps Step 3 through Step 6 four additional instances (a total of 5 grabs).



Table 6-1. Required Calibration Object Orientation





Table 6-1. Required Calibration Object Orientation (Continued)



8. When all frame grabs are completed, QubeVu displays calibration results and sensor confidence levels.



Figure 6-8. Sensor Calibration Result

- NOTE: At least three grabs are needed to save captured images. If calibration fails, check for direct sunlight affecting the system then perform a new calibration.
  - 9. Select save. The calibration details prompt displays.



Figure 6-9. Calibration Details Save Prompt





- 11. After calibration details are saved, the restart or reboot prompt displays.
- 12. Select the desired option and allow QubeVu to process the command.



Figure 6-10. Reboot or Restart Prompt

13. A message displays alerting of choice selected. In this example restart is selected.

QubeVu Manager	
QubeVu is restarting.	
Please wait	

Figure 6-11. Restart Message

14. Calibration is complete. Proceed to Section 6.6 on page 65.



## 6.4 LTL XL Calibration

Initial setup requires alignment of sensors towards the middle of the floor scale or calibration object using crosshairs. During calibration, frames of the calibration object are grabbed at strategic positions under S1 (4), S2 (4), and directly under the device (2). Under S1 and S2, the calibration object is positioned at the 3 o'clock position and rotated clockwise 30° each step. When directly under the device, the calibration object is positioned on the floor scale at the 3 o'clock position and rotated clockwise 30° each step. When directly under the device, the calibration object is positioned on the floor scale at the 3 o'clock position and rotated clockwise 30° once.





Figure 6-12. Remote Sensors Calibration

2. Select Edit to enter configuration mode. A pop-up window briefly displays.

NOTE: Refresh the internet browser if the message does not close after several minutes.



Figure 6-13. Switching to Configuration Message



- 3. Place the calibration object directly under the reference sensor (S1) and then align S3/S5/S7 sensors to the center of the calibration object:
  - · Ensure the sensor rods are securely mounted in place
  - · Exact alignment is not critical
  - · Alignment defines the calibration position of each sensor



Figure 6-14. Calibration Object Under S1 and Aligned with S3/S7/S5



Figure 6-15. Calibration Object Under S1



4. Select Grab. The grabbing frame pop-up message briefly displays.



Figure 6-16. QubeVu Frame Grabbing Message

- 5. The first frame is collected and the Frame parameter increases to 1.
- 6. Rotate the calibration object clockwise for the next grab as indicated in Table 6-2.
- 7. Repeat steps Step 4 through Step 6 three additional instances (a total of 4 grabs for S1).



Table 6-2. Calibration Object Orientation for Sensors S1/S3/S7/S5

- 8. Place the calibration object directly under the reference sensor (S2) and then align S4/S6/S8 sensors to the center of the calibration object:
  - · Ensure the sensor rods are securely mounted in place
  - · Exact alignment is not critical
  - · Alignment defines the calibration position of each sensor



Figure 6-17. Calibration Object Under S3 and Aligned with S/S4/S6/S8



Figure 6-18. Calibration Object Centered Under S2



9. Select Grab. The grabbing frame pop-up message briefly displays.



Figure 6-19. QubeVu Frame Grabbing Message

- 10. The frame is collected and the Frame parameter increases by one.
- 11. Rotate the calibration object ct clockwise for the next grab as indicated in Table 6-3.
- 12. Repeat steps Step 9 through Step 11 three additional instances (total of 4 grabs for S2).



Table 6-3. Calibration Object Orientation for Sensors S2/S8/S4/S6

13. Center the calibration object directly under the dimensioner.



Figure 6-20. Calibration Object Under Dimensioner



Figure 6-21. Calibration Object Under Dimensioner



14. Select Grab. The grabbing frame pop-up message briefly displays.



Figure 6-22. QubeVu Frame Grabbing Message

15. After the message closes, rotate calibration object 30° clockwise.



Figure 6-23. Rotate to 4 o'clock

16. Select Grab. The grabbing frame pop-up message briefly displays.



Figure 6-24. QubeVu Frame Grabbing Message



17. Select Calibrate. The calibrating sensors pop-up message briefly displays.



Figure 6-25. Sensors Calibrating Message

18. Calibration completes and QubeVu displays calibration result and sensor confidence levels.

veVu Manager > Admin Tools > Calibration > Remote Sensors Calibration	Device: QubeVuMatrixHub Configuring   Address: 192.168.0
Last calibrated: Tue Jun 13 2023 14:51:37 GMT-0500 (Central Daylight Time) + + + Sensor 1 (192.168.0.5) Confidence: 90% Sensor 2 (192.168.0.4) Confidence: 91% Sensor 3 (192.168.0.8) Confidence: 92%	Sensor 1 calibrated: Yes Confidence: 90% Sensor 2 calibrated: Yes Confidence: 91% Sensor 3 calibrated: Yes Confidence: 90% Sensor 4 calibrated: Yes Confidence: 90% Sensor 5 calibrated: Yes Confidence: 95% Sensor 6 calibrated: Yes Confidence: 95% Sensor 8 calibrated: Yes

Figure 6-26. Sensor Calibration Result

NOTE: At least three grabs are needed to save captured images. If calibration fails, check for direct sunlight affecting the system then perform a new calibration.



19. Select **Save**. The save calibration details prompt displays.



Figure 6-27. Save Calibration Details Prompt





Figure 6-28. Calibration Saving Message

21. After the save is completed, restart message displays while QubeVu restarts.



Figure 6-29. QubeVu Restart Message

22. After QubeVu restarts, calibration is complete. Proceed to Section 6.6 on page 65.



#### 6.5 Plus Calibration

Initial setup requires alignment of sensors toward the middle of the floor scale or calibration object using crosshairs. Calibration requires the use of the calibration object with a 4-point procedure. Calibration is performed by placing the calibration object at the 6 o'clock position (180°) and rotating the object clockwise 30° each step.



Figure 6-30. Sensors Calibration

- Select **Edit** to enter configuration mode. The switching to configuration mode pop-up message briefly displays.
- NOTE: Select the internet browser's refresh button if the message does not close after several minutes.



Figure 6-31. Switching to Calibration Mode Message



2.

- 3. Align calibration object under remote sensors using sensor crosshairs as guides to center:
  - · Ensure sensor rods are securely mounted in place
  - Exact alignment is not critical
  - Alignment defines the calibration position of each sensor

	III QubeVu Sensor Calibration	User: admin (Log out) (Restant)
QubeVu Manager > Ad	min Tools > Calibration > Sensors Calibration	Device: idim-UA55819 - CONFIGURING   Address: 192.168.0.2
Lat calibration:		Frame : 0 Grab/Clear Sensor I calibrated: Yes Confidence: 86%
©2012-2024 Rice Lake We	ighing Systems. All rights reserved.	6.1.0.parcel-internal-testing.5117-DEV-x86-unlocked

Figure 6-32. Sensors Calibration

4. Select Grab. The grabbing frame pop-up message briefly displays.



Figure 6-33. QubeVu Frame Grabbing Message



5. The first frame is now collected. Observe the frame counter increased from 0 to 1.



Figure 6-34. Sensors Calibration

- 6. Rotate the calibration object clockwise for the next grab as indicated in Table 6-4.
- 7. Repeat steps Step 3 through Step 6 four additional instances (a total of 5 grabs).



Table 6-4. Required Calibration Object Orientation









8. When all frame grabs are completed, QubeVu displays calibration results and sensor confidence levels.



Figure 6-35. Sensor Calibration Result

- **NOTE:** At least three grabs are needed to save captured images. If calibration fails, check for direct sunlight affecting the system then perform a new calibration.
  - 9. Select Save . The calibration details prompt displays.



Figure 6-36. Calibration Details Save Prompt

10. Select or to continue.



- 11. After calibration details are saved, the restart or reboot prompt displays.
- 12. Select the desired option and allow QubeVu to process the command.



Figure 6-37. Reboot or Restart Prompt

13. A message displays alerting of choice selected. In this example restart is selected.

QubeVu Manager	
QubeVu is restarting.	
Please wait	1

Figure 6-38. Restart Message

14. Calibration is complete. Proceed to Section 6.6 on page 65.



### 6.6 Set Work Area

The Set Work Area configures the area that is used for dimensioning.

1. Select

Set Work Area from the *Calibration* menu (Figure 6-2 on page 43). The Set Work Area menu displays.

o enter into 1 mode. 0 mm	C.
0 mm	
0 mm	
	Can
: 0 mm	
0 mm	50
0 mm	
0 -	
erest	
erest	0 mm

Figure 6-39. Work Area Settings

- 2. Select Edit
- 3. Configure the Work Area parameters as displayed in Figure 6-5:



Table 6-5. Work Area Parameter Configuration



Table 6-5. Work Area Parameter Configuration (Continued)



4. Configure the Zone of Interest parameters as shown in Figure 6-6:



Table 6-6. Zone of Interest Parameter Configuration



Product	Cor	ifiguration
Product Plus	Cor Last calibration: Sensor 1 (N/A) Confidence: 86%	Work Area         Vork Area         Zone of Interest         Side to side:         0 mm         Front to back:         0 mm         Uddth:         350 mm         Length:         250 mm
	C	

Table 6-6. Zone of Interest Parameter Configuration (Continued)



Figure 6-40. Work Area Save Prompt

5. Select OK Camera calibration and Work Area save messages briefly display.

QubeVu Manager	QubeVu Manager
Saving camera calibration and restarting QubeVu.	Work area saved successfully. Now restarting QubeVu.
Please wait	Please wait

Figure 6-41. Camera Calibration and Work Save Message

6. Work Area configuration is complete.



## 6.7 Verify Calibration

Verify calibration with the test box in Operator Display.

- 1. Place the test box under the dimensioner.
- 2. Select Displays from the QubeVu Manager menu (Figure 2-1 on page 8) to enter the Display Pages menu.
  - Demo Display from the **Display Pages** menu (Figure 3-1 on page 16).
- 4. Select Scan.

Select

3.

5. Measurement results should be the test box dimensions  $\pm 0.5$  in.



Figure 6-42. Operator Display



# 7.0 Capture Definitions

This section provides an overview of the QubeVu Capture Definitions menu.

Unique capture definitions can be created with external triggering, or modify the existing capture definitions. A programmer can change the capture definition, or define a new one, when integrating with a client application. The capture definitions controls the low resolution images available through the web-service API, displays and the markings on each image.

Capture definitions are used to define the operations and output of a capture request.

To enter the *Capture Definitions* menu, perform the following procedure:

- 1. Select Admin from the **QubeVu Manager** menu (Figure 2-1 on page 8). The **Admin Tools** menu displays (Figure 4.0 on page 21).
- 2. The QubeVu Manager login screen displays. Enter account credentials.

NOTE: The default username and password are <u>admin</u> and <u>password</u>.

3. Select Capture Definitions from the Admin Tools menu (Figure 4.0 on page 21). The Capture Definitions menu displays.

Dimension RICE LAKE	😒 QubeVu° Capture Definitions	User: admin Log out Restart 🥡
QubeVu Manager > Ac	Imin Tools > Capture Definitions   Select a definition from the drop down menu to ed To create a new definition click "Create". (1) Select Definition: default (2) Low Res Camera Capture: (3) Markings: (3) Markings: (4) Stop and Go Markers Distance (mm): [787 (5) Stop and Go Markers Locations (mm): [0-124 497 (6) Tare Mode: AutodetectForktruck v (7) Pallet	Device: QubeVu - CONFIGURING   Address: 169.254.1.1
©2012-2023 Rice Lake We	ighing Systems. All rights reserved.	PhoenixEricPallet-050323-x86-DEV-unlocked

Figure 7-1. Capture Definitions Menu with Definition Selected

🗹 Serial Number	🗹 Date and Time	🗹 Scan ID
Dimensions	Indicators	🗹 Item Outline
Barcodes	🗌 Weight	

Figure 7-2. Capture Definitions Menu with Definition Selected



Item No.	Parameter	Description
1	Select Definition	QV Demo – The scan button performs the QVDemo scan
		QVDisplay – The scan button performs the QVDisplay scan
		Default – Used when capture command is triggered from attached barcode scanner
2	Low Res Camera Capture	If enabled, configures cameras and remote sensors to capture images during each scan using capture definitions. <i>NOTE: If disabled, images are not captured and the operator display does not display image data.</i>
3	Markings	If enabled, iDimension software marks low resolution images with the selected information (Figure 7-2 on page 70): <ul> <li>Serial Number – Serial number</li> <li>Date and Time – Date and time stamp of the scan</li> <li>Scan ID – Unique scan ID number</li> <li>Dimensions – Height, width, length dimensions</li> <li>Indicators – Any indicators (Undersized, oversized, irregular and other indications)</li> <li>Item Outline – 2D outline of the dimensioned item</li> <li>Barcodes – Barcode number</li> <li>Weight – Weight of object</li> </ul>
4*	Stop and Go Markers Distance (mm)	The distance in mm between the two markers that were applied to the fork scale.
5*	Stop and Go Markers Locations (mm)	A 3D vector that locates the center between the two markers in the fork's heel coordinate system. In Figure 7-1 on page 70 the center of the marker is centered with the middle of the forks (0 -124 497), it is 497 mm higher than the heel, and back 124 mm from the backplane of the forks.
6*	Tare Mode	<ul> <li>Selections:</li> <li>None – Performs scans as "Drop and Clear"</li> <li>ForkTruck – Performs scans as "Stop and Go"</li> <li>AudoDetectForkTruck – Attempts to automatically determine the mode by trying both parameters (none and ForkTruck).</li> <li>Default: None</li> </ul>
7*	Pallet	A non-Legal-for-Trade feature; If selected, enter the height of the pallet in mm. The system measures the object on the pallet; <tareexpectedheight>0<tareexpectedheight></tareexpectedheight></tareexpectedheight>
* = not app	licable to the iDimension Pl	US

Table 7-1. Pre-Defined Capture Definitions

# 8.0 Firmware Upgrade

This section provides an overview of the QubeVu Firmware Upgrade menu.

Firmware upgrades are available at www.ricelake.com. Operators may be instructed to update the unit firmware to take advantage of new features or software improvements to increase the performance of the unit.

To enter the Firmware Upgrade menu, perform the following procedure:

- 1. Select Admin from the **QubeVu Manager** menu (Figure 2-1 on page 8) to enter the **Admin Tools** menu (Figure 4.0 on page 21).
- 2. The QubeVu Manager login screen displays, enter login credentials. The default username and password are <u>admin</u> and <u>password</u>.
- 3. Select W Firmware from the Admin Tools menu (Figure 4.0 on page 21) to enter the Firmware Upgrade menu.

NOTE: The Administrator defined a username and password during the initial setup process. The username and password are required to log into and access the iDimension software Admin Tools.

## 8.1 Firmware Upgrade Tab

The Firmware Upgrade tab configures how firmware is upgraded and facilitates the firmware upgrade process.

	💮 QubeVu' Firmware Upgrade	User: admin (Log out) (Restart)
QubeVu Manager > Adr	nin Tools > Firmware Upgrade Device: ID	IM-UA08803 - READY   Address: 192.168.0.2
Firmwa Upgrad	are e	Cancel
Current firm	ware version # : 6.1.0.parcel-internal-testing.5117-DEV-x86-unlocked	
2 Firmware file	location	
USB Drive	Please connect USB drive (with the firmware) to any of the open USB ports of QubeYu	Read
Local file :	Choose File No file chosen	Upload
©2012-2024 Rice Lake Weig	hing Systems. All rights reserved.	6.1.0.parcel-internal-testing.5117-DEV-x86-urlocked

Figure 8-1. Firmware Upgrade

Item No.	Parameter	Description
1	Current Firmware Version #	Displays the current firmware version number
2	Firmware File Location	USB Drive – Connect a USB drive with the firmware for the iDimension unit to an open USB port of the unit (Section 8.1.1 on page 73) Network Share – Network path, username and password for sharing information with the local network (Section 8.1.1 on page 73) Local File – Choose a file to load firmware (Section 8.1.2 on page 74)

Table 8-1. Firmware Upgrade Definitions
### 8.1.1 USB Drive or Network Share

To upgrade firmware with a USB drive or network share, perform the following:

- 1. Perform one of the following:
  - Connect USB drive with firmware to the device.
  - Enter the Network Path, Username and Password to the network with the firmware update.
- 2. Select Read

	QubeVu Fi	rmware Upgrade	O User:	admin Log out Rest	art i
eVu Manager > Admin To	ols > Firmware Upgrade		Device: IDIM-UA08803	- STOPPED   Address: 1	192.168.0.2
Firmware Upgrade	e version # :	6.1.0.parcel-internal-testing.511	17-DEV-x86-unlocked		Ca
Firmware upload sta	aging area has been cleared ation				
USB Drive :	Please connect USB drive QubeVu	(with the firmware) to any of the op	en USB ports of	Read	
Local file :	Choose File No file ch	losen	[	Upload	
	nal-testing.5117-DEV-x86-	705239040			
			00	Upload	
	stems All rights reserved		610 0000	internal-tecting 5117.DEV	x86-unlocke

Figure 8-2. Firmware Upgrade USB File Read

- 3. Select the firmware version from the list of firmware version updates.
- 4. Select **(O)** to compute the checksum.
- 5. Select **Upload** after the checksum is computed. The firmware upgrade process copies the update file to the iDimension pallet dimensioner's embedded processor.
- 6. Proceed to Update Firmware (see Section 8.1.3 on page 75).

NOTE: Do not interrupt the upload process. An opportunity to stop the firmware upgrade is available after the file is uploaded.



### 8.1.2 Local File

To upgrade firmware with a local file, perform the following:

- 1. Select Choose File .
- 2. Select the firmware from the directory.
- 3. Select Read to Compute Checksum and upload firmware.

			srauc -		
Vu Manager > Admin To	ols > Firmware Upgrade		Device: IDI/	N-UA08803 - READY   Address: 19	2.168
Firmware Upgrade					
•					
Current firmware	e version # :	6.1.0.parcel-internal-te	esting.5117-DEV-x86-unlocked		
Firmware file loc	Ation	B drive (with the firmware) to any	of the open USB ports of		
USB Drive :	QubeVu	b drive (with the firmware) to any	or the open dab porta of	Read	
Local file :	Choose File 6.1	.0.parcel-internal-testing.5117-D	EV-x86-unlocked.rel	Upload	

Figure 8-3. Firmware Select with Local File

- 4. The uploaded firmware notice appears and instructs to wait for firmware upload to complete. The firmware upgrade process uploads the update file to the iDimension pallet dimensioner's embedded processor.
- 5. The notice closes when the firmware is uploaded to the iDimension pallet dimensioner's embedded processor.



Figure 8-4. Upload Firmware Notice

6. Proceed to Update Firmware (see Section 8.1.3 on page 75).



### 8.1.3 Updating Firmware

Once the firmware has been uploaded, Select Update Firmware and follow the pop-up window directions.

Select **x** to delete the firmware uploaded, in case an error has been made.

Select **(O)** to validate checksum.

The system will enter into a stopped state and return to normal operating mode within a few minutes.

	Firmware Upgrade					
	Current firmware version # :	6.1.0.parcel-internal-testing.5117-DEV-x86-unlocked				
	Uploaded firmware version # / filename:	6.1.0.parcel-internal-testing.5117-DEV-x86- unlocked / 6.1.0.parcel-internal- testing.5117-DEV-x86-unlocked.rel				
Eiguro 9.5. Undeting Eigmuoro						

Figure 8-5. Updating Firmware



# 9.0 Backup and Restore

This section provides an overview of the QubeVu *Backup* menu.

To enter the *Backup* menu, perform the following procedure:

- 1. Select Admin from the **QubeVu Manager** menu (Figure 2-1 on page 8) to enter the **Admin Tools** menu (Figure 4.0 on page 21).
- 2. The QubeVu Manager login screen displays. The default username and password are admin and password.
- 3. Select Backup from the Admin Tools menu (Figure 4.0 on page 21). The Backup menu displays.

NOTE: The Administrator defined a username and password during the initial setup process. The username and password are required to log into and access the iDimension software Admin Tools.

The Backup menu is used to create a backup file of settings and to restore those settings.

Dimension QubeVu® Backup	Log out Restart
QubeVu Manager > Admin Tools > Backup Device: QubeVu - STOPP	'ED   Address: 169.254.1.1
Please press S Backup to back up all QubeVu settings to your computer. Please press Restore all to restore all QubeVu settings.	
©2012-2023 Rice Lake Weighing Systems. All rights reserved. PhoenixEricF	Pallet-050323-x86-DEV-unlocked

Figure 9-1. Backup and Restore Menu

Parameter	Description
Backup	Back up all QubeVu settings to the local computer (Section 9.1 on page 77)
Restore All	Restore all QubeVu settings (Section 9.2 on page 78)

Table 9-1. Setup Navigation



### 9.1 Backup

The **Backup** function creates a backup file of all settings. It is recommended to create a backup after the initial setup of the iDimension pallet dimensioner. The backup file is saved to a PC folder as an XML file. Also, a backup file can be sent to the customer support to help troubleshoot the device.



1. Select 🕑 Back up to begin the backup process.

The installed internet browser and its configuration determines the behavior when downloading the backup. The internet browser may automatically download the backup, open the Save As window, or request if the file should be downloaded. In this example the Save As window appears.

2. Navigate to the desired folder and then select Save.



Figure 9-2. Download Ribbon - Accept



### 9.2 Restore

The *Restore* function is used to restore settings to factory default or from a saved backup file.

1. Select 🕑 Restore all to begin the restore process.



Figure 9-3. Restore Menu Browse Window

- 2. Select or to restore all settings from the factory calibration or Select Choose File to select a saved file from the PC.
- 3. If Choose File is selected in Step 2, find and select the desired backup file. Select ox to restore settings.



# 10.0 Diagnostics

This section provides an overview of the QubeVu Diagnostics menu.

To enter the **Diagnostics** menu, perform the following procedure:

- 1. Select Admin from the **QubeVu Manager** menu (Figure 2-1 on page 8) to enter the **Admin Tools** menu (Figure 4.0 on page 21).
- 2. The QubeVu Manager login screen displays. Enter account credentials.

NOTE: The default username and password are <u>admin</u> and <u>password</u>.

3. Select Obignostics from the Admin Tools menu (Figure 4.0 on page 21). The Diagnostics menu. Displays

Diagnostics tools can be used to test hardware components and gather diagnostic information.

	JubeVu®Diagnostics	User: admin Log out Restart i
QubeVu Manager > Admin Tools > Di	lagnostics	Device: QubeVu - STOPPED   Address: 169.254.1.1
Component Tests System Log	Test individual hardware components View the system's log	
Debug Info	Download debug information to assist technical support in troubleshooting an issue	

#### Figure 10-1. Diagnostics Menu

Parameter	Description
Component Tests	Tests each hardware component (Section 10.1 on page 80)
System Log	Views system log (Section 10.2 on page 83)
Debug Info	Downloads debug information to assist technical support in troubleshooting an issue (Section 10.3 on page 83)

Table 10-1. Setup Navigation



# 10.1 Component Tests

Select Se

The **Component Tests** menu helps diagnose operation status of the iDimension pallet dimensioner. Tests include **Scale Test**, **Sensors Test** and **Network Test**. Contact the factory to determine if a failure has occurred.

- Select ( ) to perform a specific test
- Select test each component
- The status of each component is returned as either Passed or Failed. Select ( to view additional details.
- Select control on a test with results. A new tab in internet browser tab opens with details that is print formatted.

NOTE: Upon completion of a component test, restart the system to return to normal operating mode.

### Scale Test

The Scale Test determines if the configured scale is communicating and operating correctly with the attached unit.

### **Network Test**

The **Network Test** confirms the iDimension software network address is 169.254.1.1. The **Network Test** checks if the remote sensors and IP cameras, which are connected through ethernet to the device, are pinging correctly. Report component failures to the Rice Lake Weighing Systems technical support team.

NOTE: Network tests are for manufacturing purposes only.



Figure 10-2. Network Test



vu manager > Aurini roots >	pragnoscies > Que	eru component rest	Device, Qubera - STOPPED   Address, 107,2341.1
Scale Test Passed	0	Network test	Test
Network Test Passed	0	Supported ports: [TP] Supported link modes: 10baseT/Half 10baseT/Full 100baseT/Half 100baseT/Full 100obaseT/Full	
Sensors Test Passed	0	Supported pause frame use: Symmetric Supports auto-negotiation: Yes Supported FEC modes: Not reported Advertised link modes: 10baseT/Half 10baseT/Full	
DMESG Test	0	100base1/Full 100base1/Full Advertised pause frame use: Symmetric Advertised auto-negotiation: Yes Advertised ECC mode: Net reported	
Top Test NA	0	Speed: 1000Mb/s Duplex: Full Port: Twisted Pair PHYAD: 1	
PS Tost NA	0	Transceiver: internal Auto-negotiation: on MDI-X: off (auto) Supports Wake-on: pumbe	
Serial Number Test NA	•	Wake-on: g Current message level: 0x00000007 (7) drv probe link	

Figure 10-3. Network Test (Continued)

### DMESG Test

The DMESG Test performs a firmware diagnostics test.

NOTE: DMESG tests are for manufacturing purposes only.

•Vu Manager > Admin Tools >	Diagnostics > Qub	veVu Component Test Device: QubeVu - STOPPED   Address: 169.254.
Scale Test	۰ ۵	DMESG test [ 0.000000] Linux version 4.15.0-20-generic (buildd@lgw01-amd64-
Network Test Passed	۵	039) (gcc version 7.3.0 (Ubuntu 7.3.0-16ubuntu3)) #21- Ubuntu SMP Tue Apr 24 06:16:15 UTC 2018 (Ubuntu 4.15.0-20.21- generic 4.15.17) [0.000000] Command Line: BOOT_IMAGE=/vmlinuz root=/dev/sda3 ro console=
Sensors Test	٥	0.00000) Retries Supported cruss:     0.000000] Intel GenuineIntel     0.000000] AMD AuthenticAMD     0.000000] Centaur CentaurHauls     0.000000] Centaur CentaurHauls
DMESG Test Passed	O	0.000000 x86/fpu: Supporting XSAVE feature 0x001: X57 registers'     0.000000 x86/fpu: Supporting XSAVE feature 0x002: S5E registers'     0.000000 x86/fpu: Supporting XSAVE feature 0x008: MPX bounds registers'     0.000000 x86/fpu: Supporting XSAVE feature 0x008: MPX bounds registers'     0.000000 x86/fpu: Supporting XSAVE feature 0x008: MPX bounds registers'
Top Test NA	O	[ 0.000000] x86/fpu: xstate_offset[2]: 576, xstate_sizes[2]: 256 [ 0.000000] x86/fpu: xstate_offset[3]: 832, xstate_sizes[3]: 64 [ 0.000000] x86/fpu: xstate_offset[4]: 896, xstate_sizes[4]: 64 [ 0.000000] x86/fpu: sstate]eatures 0xff, context size is 960 bytes, u:
PS Test NA	0	[ 0.000000] e820: BIOS-provided physical RAM map: [ 0.000000] BIOS-e820: [mem 0x00000000000000 0x000000009d3ff] usable [ 0.000000] BIOS-e820: [mem 0x000000000004400-
Serial Number Test	Ø	0x0000000009ffff] reserved

Figure 10-4. DMESG Test



**Sensor Test** – determines if sensors are connected and retrieves data frames from each sensor. This test runs for approximately 3-5 minutes. Scroll through pages to identify failures, each of the sensors has a unique IP address. This test runs through the configuration of the IFM sensor, including firmware and application file loaded.

evu manager > Aurini Tours >	Diagnostics > Qu	upera component rest perice, quiera - promotor parameters, 1972.
Scale Test	۰ ۵	Sensors test
Vassed		Connecting to the sensors defined in the configuration
Network Test	٢	2023-07-13 15:59:26.398177 [0x00007fb4320e3500] [1] Connecting t 2023-07-13 15:59:23.2475951 [0x00007fb4320e3500] [2] Connecting t 2023-07-13 15:59:38.377839 [0x00007fb4320e3500] [3] Connecting t 2023-07-13 15:59:44.22733 [0x00007fb4320e3500] [3] Connecting t
Sensors Test	0	Grabbing data frames from each sensor
Passed		
DMESG Test Passed	0	
Top Test Passed	٥	
PS Test	O	
Passeu		
Serial Number Test	0	

Figure 10-5. Depth Information Test

### Top Test, PS Test, Serial Number Tests

Do not modify unless instructed by Rice Lake Weighing Systems dimensioning support.

### Port Scan Test

The Port Scan Test provides details about devices connected to ports.







# 10.2 System Log Tab

Select System Log from the *Diagnostics* menu (Figure 10-1 on page 79). The *System Log* menu displays.

The system log log level is configured in the setup menu. The log view can be customized by type (ALL, debug, info, warning or error messages only) or by order (view latest first or earliest first).

Dimension RICE LAKE	0	QubeVu" System Log	User: admin log out Restart 🧃
beVu Manager > Adn	nin Tools :	Diagnostics > System Log	Device: QubeVu - STOPPED   Address: 169.254.1.1
System Log	O debur	Ωinfo Quarraino Querror <b>Ordar: ®</b> Latart first Q.Ea	rlier first
Date	Туре	Message	refresh
2023-07-05 12:55:51.497054	info	TCP server was stopped	
2023-07-05 12:55:51.495814	info	TCP server exited	
2023-07-05 12:55:51.494326	info	Stopping TCP server	
2023-07-05 12:55:51.335287	info	Successfully stopped the retriever daemon	
2023-07-05 12:55:51.328230	info	Stopping the retriever daemon	
2023-07-05 12:55:51.327225	debug	<clientip></clientip> <	
2023-07-05 12:55:51.325963	info	Processing command from	
2023-07-05 12:01:13.263241	debug	<clientlp>192.168.0.11</clientlp> <capturedefinition></capturedefinition> <list></list>	
2023-07-05 12:01:13.262320	info	Processing command from 192,168,0,11	*
Displaying 644	rows of	644 retrieved. Limit: 1000 lines - Apply limit Op	en <u>complete log</u> in a new tab

Figure 10-7. System Log Tab

## 10.3 Debug Info

Select Debug Info from the **Diagnostics** menu (Figure 10-1 on page 79). The **Debug Information** menu displays. The **Debug Info** provides engineering and troubleshooting information on the operation of the unit. This file may be requested

for troubleshooting purposes. Enable the Select All box and then Select commond to save the file to the computer.

	😹 QubeVu Debug Info	User: admin Log our Resart
QubeVu Manager > A	dmin Tools > Diagnostics > Debug Information	Device: QubeVu STOPPED   Address: 169.254.1.1
Please se	lect what should be included in the debug information	n bundle:
System		
QubeVu H	Runtime	
	configuration	
- System b		
Select al	t i i i i i i i i i i i i i i i i i i i	
Please note	• that it may take a few seconds while the system compiles this in	formation.



#### 11.0 License

This section provides an overview of the QubeVu License menu.

To enter the *License* menu, perform the following procedure:

Select 1.

License from the QubeVu Manager menu (Figure 2-1 on page 8). The License menu displays.

2. The QubeVu Manager login screen displays. Enter account credentials.

NOTE: The default username and password are admin and password.

NOTE: A license file is uploaded at the time of manufacturing and includes the the installation date. A QubeVu license will not expire. A license code request is sent to support@postea.com, with the license request code.

3. Select Choose File to upload the license provided.

Dimension Rice Lake	💮 QubeVu License	User: admin Log out Restart 🥡
beVu Manager > Lio	zense	Device: QubeVu - STOPPED   Address: 169.254.1.1
License is	s valid	Save
Licensed to:	RLWS	
Created on:	May 1, 2023 5:03 PM	
Expiration:	never	
Allowed fea	tures: stop-and-go	
License requ Serial nb.: F Model ID.: II Download a lig	uest code: d9b664867449cea1df563f25fd9f5e85 FLEX_B15 DIMLTL cense request file	
Please selec	t a valid license file below, and click Save to apply (or re	eapply) license.
Choose File	No file chosen	
Go to <u>upgrade</u>	firmware page.	

Figure 11-1. QubeVu License



# 12.0 Appendix

This section provides an overview of additional iDimension software documentation.

# 12.1 QubeVu Engineering Application

The QubeVu Engineering Application downloads a record of data that can be emailed to the factory for engineering analysis.

- 1. Using an internet browser, type the following in the address bar:
  - IPaddress/tools/engapp.php
- NOTE: IP addresses may vary. The IP address In this example is 192.168.0.2, therefore, 192.168.0.2/tools/engapp.php is entered in the internet browser. 2. Select Connect is located in the same spot as Disconnect . Figure 12-1 is for reference. NOTE: Connect × + QubeVu® Engineering  $\rightarrow$ C A Not secure | 192.168.0.2/tools/engapp.php Q \* 0 -QubeVu <sup>®</sup> Engineering Web Download Home

Figure 12-1. Engineering Application

- 3. The status message changes from *Disconnect* to HS1; *Ready* or *Remove*
- 4. Select Details

NOTE:

may not available until the device detects an object. Figure 12-1 is for reference.



### 5. Select Scan.

← → C ③	Not secure   10.2.	199.14/tools/engapp	php	(1)	52: REMO	PVE; ITEN	IDETECTED	-	Scan Download	ର୍ୁ Home	<b>e</b> Restan
Details Id : 176020 Length: 45.5	Live Width: 39.0	Depth Viewer Height: 36	5								
Irregular: trub MotionAreas: IsConsistentVMHEmpty Depthing, d2: RgbDigDita: CenterXmm: VolumeSB: ProtrusionData.D1mm0	Undersize: 0 4.428e+24 5cale: 1.752e+9 0.0000e+0 1.936e+2 4.418e+24 4.418e+24 4.418e+24 4.424e+24 4.424e+24 4.424e+24 4.424e+24	Oversize: 0 DiffArea: Depthing.theta: Depthing.area: Rgbling.d2: DepthObJDist: CenterYmm: Cuboid/Score: ProtrusionData.D2mm	Refinem 4.429e+24 -8.203e-1 4.418e+24 1.643e+24 1.642e+24 1.627e+2 0.000e+0 12.1.150e+3	ent: 0 D FeatureArea: DepthImg_center? RgbImg_theta: Dada: Dimm: CenterZmm: Fps: ProtrusionData.D:	imUnit: (: 2mmDelta:		OutOffBounds: 0 RectangleScore: Depthing centerX: Dzdy: DZmm; Abs theta: LightSensorLux:	imensions: false FromRgbOrDepth: Depthing d1: Rgbing_center?: FilterSq: D3mm: VolumeFB: ProtrusionData.D1		isReason:	

Figure 12-2. Application Scan

- 6. Select Download .
- 7. Enter the length, width and height (L, W and H) then select Download . The file is downloaded.
- 8. Navigate to the downloaded file location on the local PC.
- 9. Emeail this file to the Rice Lake Weighing Systems Dimensioning support team for analysis.

NOTE: If known, the ground truth is the exact dimensions measured with a tape measure.

QubeVu® En	gineering	× +						
$\leftarrow \rightarrow \ {\tt C}$	A Not see	cure   192.168.	0.2/tools/engapp	p.php				९ ☆ Ө :
QubeVu <sup>®</sup> Eng Disconnect	ineering We	əb						Scan Download Home Restart
Live	Ground L:	<b>Truth:</b> 32.5	W: Cancel	32	H:	40.5	in Download	×
· · · · · ·				×.				
©2012-2015 Post								



# 12.2 Configuring Axis IP Camera Using IP Utility

- 1. Run IPUtility.exe.
- 2. Select the camera, right-click and select Assign Network Parameters.

📍 🗊 😘		Type to filter	
Name	IP Address	Serial N	lumber
AXIS M3046-V - ACCC8EA793AB	192.168.0	View Home Page	
		Assign Network Parameters	N
		Assign IP Address	5
		Test IP Address	
		Properties	

Figure 12-4. Assign Network Parameters

3. If prompted, login using the *username* and *password*.

NOTE: The default Axis username and password are <u>root</u> and <u>password</u>.

Windows Security	×			
IPUtility.exe				
The server 192.168.0.9 is asking for your user name and password. The server reports that it is from AXIS_ACCC8EA793AB.				
root				
•••••				
Remember my credentials				
ОК	Cancel			

Figure 12-5. Login

OK

4. Make necessary changes and select

Assign Network Parameters X				
Obtain an IP add	lress automatically (DHCF	<b>')</b>		
Assign the follow	ving IP address:			
IP Address:	192.168.0.9			
Subnet mask:	255.255.255.0			
Default Router:	192.168.0.1			
	ОК	Cancel		

Figure 12-6. Assign Network Parameters



5. Select OK .



Figure 12-7. Network Parameter Confirmation

IP AXIS IP Utility			—		Х
<u>F</u> ile <u>V</u> iew <u>T</u> ools <u>H</u> elp					
\$5 **		Type to filter			×
Name	IP Address		Serial Nu	umber	
AXIS M3046-V - ACCC8EA793AB	192.168.0.9		ACCC8E	A793AB	
<					>
1 devices	Interface	192.168.0.11			

Figure 12-8. AXIS IP Utility

- 6. Type the new IP address of the IP camera (192.168.0.9 is the default IP address for the iDimension software).
- 7. The login displays. Enter the *username* and *password*.

NOTE: The default Axis username and password are <u>root</u> and <u>password</u>.

🔺 AXIS M3046-V 🗙 🔪		θ	-		×
← → C ③ Not secure   192.168.0.9				Ŷ	1
Sign in http://192.16 Your connect Username Password	80.9 root Sign in Cancel				

Figure 12-9. AXIS Sign-in

8. Select Sign in

### 9. Select Next



Figure 12-10. Network Camera

10. Select Next

AXIS M3046-V Network Camera AXIS M3046-V Network Camera AXIS M3046-V Network Camera AXIS M3046-V Network Camera Defeat name Defeat router 192 108 0.0 255 255 0 Defeat router 192 108 0.1 Domain name Domain name Domain name 0 0.0 0 0 0.0 0 0 0.0 0	← → C ① Not se	ecure   192.168.0.9/#wij	zard		4	5
Image: Secondary DNS server       Secondary DNS server         0 0.0.0       Default saving time adjustment		ture   152.100.015/****	AXIS M3046-1	/ Network Camera	,	<u> </u>
IP4         Manual IP and manual DNS         IP address       Subnet mask         192.108.0.9       255.255.25         Default router       100.00         192.108.0.1       Connect to NTP-server         Domain name       Imanual DNS server         192.108.0.0       0.0.0         Primary DNS server       Secondary DNS server         0.0.0       0.0.0	Get starte	ed				
Manual IP and manual DNS       ▼         IP address       Subnet mask         192:168.0.9       255:255.0         Default router       10         192:168.0.1       0         Domain name       0         Image: Comparison of the secondary DNS server       0         0.0.0       0.0.0         Daylight saving time adjustment       ▼		IPv4		Date and time		
IP address       Subnet mask         192.168.0.9       255.255.0         Default router       192.168.0.1         Domain name       Image: Connect to NTP-server         Domain name       Image: Connect to NTP-server         Image: Connect to NTP-server       Image: Connect to NTP-server         Primary DNS server       Secondary DNS server         0.0.0       0.0.0		Manual IP and manual	DNS V	Automatic date and time		
Default roader         192:168.0.1         Domain name         Ormain name         Image: Constant name         Image: Const		IP address 192.168.0.9	Subnet mask 255.255.255.0	Year Month Day		
Domain name     Image: Secondary DNS server       Image: Primary DNS server     0.0.0       0.0.0     0.0.0		Default router 192.168.0.1				
		Domain name		Automatically (DHCP)		
Primary DNS server     Secondary DNS server     Time zone       0.0.0     0.0.0     GMT (Dubin, Linbon, London, Reykjavík)       Daylight saving time adjustment     Image: Compare the second		+		O Manually		
0.0.0 0.0.0 Configuration (second, concord, expression) Configuration (second) (seco		Primary DNS server	Secondary DNS server	Time zone		
Usyngin saving time squisment		0.0.0.0	0.0.0.0	Gwi i (Dublin, Lisbon, London, Reykjavik)		
				Daylight saving time adjustment		

Figure 12-11. Network Camera (Continued)



- 11. Adjust camera angle and zoom to application requirements.
- 12. Select Done



Figure 12-12. Camera Feed

13. Close the window.



Figure 12-13. Camera Feed (Expanded)

## 12.3 Installation Notes

The following actions are required to configure an iDimension pallet dimensioner during initial installation. This process is followed after the unit has been installed using one of the mounting methods. The IP camera and Forklift Operator display should be configured prior to mounting into the ceiling.

- 1. Check for Customer network IP address. If connected to the customer's network:
  - · Configure sensors using IFM vision assistant with new network addresses
  - · Configure Network Setting tab
  - · Configure IP camera using Axis IP utility program

The following is the network scheme used from the factory:

Device	IP Address	Notes
Gateway	192.168.0.1	For all sensors, internal PC, JLT and IP camera
Subnet Mask	255.255.255.0	For all sensors, main head, JLT and IP camera
Internal PC	192.168.0.2	After configuration default/back door, connect to this on first power up
	169.254.1.1	
Web Relay	192.168.0.3	When applicable
Remote Sensor #1	192.168.0.4	-
Remote Sensor #2	192.168.0.5	-
Remote Sensor #3	192.168.0.6	-
Remote Sensor #4	192.168.0.7	-
Remote Sensor #5	192.168.0.8	Center sensor, for 5 sensor systems
IP Camera 1	192.168.0.9	If applicable (optional)
IP Camera 2	192.168.0.10	If applicable (optional)
Mobile HMI PC	192.168.0.11	Ethernet connection to the iDimension pallet dimensioner
Forklift Operator Display	192.168.0.12	If applicable (optional)
Remote Sensor #6	192.168.0.24	For 8 sensor systems
Remote Sensor #7	192.168.0.25	For 8 sensor systems
Remote Sensor #8	192.168.0.26	For 8 sensor systems

Table 12-1. Network IPs

Use the QubeVu Manager Admin Tools to calibrate settings in each tab:

- 2. Configure Capture Definitions (QV Demo and Default) to meet application requirements. Markings to meet customer requirements and Tare mode should be none.
- 3. Configure Displays/Customer Display:
  - a. iDimension software Display Screen Version 1
- 4. Add Remote Sensors:
  - a. Discover
  - b. Add all
- 5. Calibration Mode:

a. Align sensors centered onto calibration object

b. Perform calibration



# 12.4 Status Messages

Status and error messages are visible from the QubeVu Manager Demo Display.

Qube∀u Manager > Display Pages > Demo	Device: PWD1 - Running   Address: 192.168.0.42
Scan	() REMOVE
	Dims: 32.5 x 32.0 x 41.0 in Weight: 278 lb
	20191220 11:29:57 Scan: 32969 S/N: RLPWDT-3019-01001 L: 32.5 in W: 32 in H: 41 in [R]
	ItemDetected

Figure 12-14. Demo Display

Item No.	Description			
1	Status			
2	Extended Status			
Table 12-2. Status				

Status	Description		
STARTING	The system is starting up		
STARTED	The system has started but is not ready for processing a dimension; If the device is in this status for more than a couple of seconds there is most likely an object on the platform that needs to be cleared or the scale is not at zero weight; If no object is on the platform, perform a zero height		
READY	The system is ready and waiting to be used		
TRACKING	The system is processing a dimension		
REMOVE	The dimension has been fully processed - the item can be removed when the client processing has completed transferring the data		
STOPPING	The system is transitioning into STOPPED state		
STOPPED	The service has stopped – there is a problem; Perform a restart or power cycle the unit from the AC Outlet		
CALIBRATING	The device is in calibration mode		
CONFIGURING	The device is in configuration mode; A restart can take the device out of configuration mode		

Table 12-3. Status Messages



### 12.4.1 Extended Status Messages

Status	Description		
ScaleNotStable	This is set during tracking if the scale indicates that the value returned is not stable. This is only used when a recognized scale is connected to the system. Processing will not progress to the next step until this flag is cleared by receiving a stable weight from the scale		
MotionDetected	This is set during tracking and ready states and indicates that the system has detected movement. Processing will not progress to the next step while this is set		
ItemDetected	This is set when the system detects an item is placed on the device platform/scale. When a scale is used this indicates that weight returned is not zero. In 'scale-less' mode this indicates that the system cannot find the target panel		
ItemNotDetected	This is set when the system is in ready mode and there is no item on the platform/scale		
TrackerNotConfident	t This indicates that the tracker detected an item but it is not confident what the dimensions of the item are. After a timeout (configurable) the system progresses to the next step and return zero-valued dimensions		
ExceptionOccured	This is set when an exception occurs		
DeviceNotStable	This is set during tracking if one of the sensors indicates that the sensor value returned is not a stable. Processing will not progress to the next step until this flag is cleared by receiving a stable value from the sensor		
ServiceStarting	This is set when the system is initializing		
ConfigMode	This is set when the system is in configuration mode, such as during calibration or image exposure adjustment. A restart operation takes the device out of configuration mode		
ResultNotStable	This is set when the item is being manipulated such as when the item is in the act of being placed on the platform or removed from it		
ItemOutOfBounds	This indicates that the item protrudes outside the measurable area. Repositioning the item is necessary		
WaitingToWarmUp	This is set during the warm-up period. If device is used in a certified-for-trade application the warm-up period must have been elapsed before certified measurements can be taken		
PlatformNotClear	This is set when there is something on the platform		

Table 12-4. Extended Status Messages

### 12.4.2 Error Messages

The device error messages which may be displayed are described below.

Error Code	Description		
1 Hardware Initialization FAILED			
2	Tracker Config Initialization FAILED		
3	Missing RegistrationMarksCropped.bmp		
4	Setting reference image for Targetfinder FAILED		
5	Loading of Calibration files FAILED		
6	Getting new Images from hardware FAILED		
7	Tracking FAILED		
8	Calibrating		
9	TCP Server Port binding failed		
10	TCP Server exception in Processing Client		
11	TCP Server time out on Imaging		
12	Low res camera needs to be calibrated first		
13	Calibration stopped		
14	Error loading / parsing Configuration		
15	Unable to save Calibration to file		
16	Unable to use name set in Capture/Get command; CaptureDefinition with name were not set		
17	Invalid CaptureDefinition command		
18	Unable to delete Calibration files		
19	Unable to Zero Height		
20	Failed to write or verify audit trail		

Table 12-5. Error Messages



# 12.5 TCP Interface

To edit the TCP interface, see Item 6 in Section 5.1 on page 23. The TCP interface operates in two modes:

- QubeVu A request or response protocol; See the QubeVu Developer Guide for information on using this interface
- Cubiscan 110/150 Emulates a subset of commands supported by Cubiscan 110/150

### 12.5.1 TCP Interface

```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.
C:\Users\chrsen.RLWS>telnet 169.254.1.1 1024
```

Figure 12-15. TCP Interface Example 1



Figure 12-16. TCP Interface Example 2

### 12.5.2 TCP Interface Configuration

- 1. Select QubeVu or Cubiscan 110/150 from the TCP interface drop-down list.
- 2. Set the TCP port.
- 3. Select Save

ve to compete the TCP emulation setup.

## 12.6 QubeVu Protocol

Command					
Description	Request	Response			
Causes the QubeVu to send the dimension and weight data to the client computer	D <cr></cr>	{length} x {width} x {height} {dimUnit} {displayWeight} <cr><lf></lf></cr>			
Error Handling					
Unit will return following response when dimensions are not available	D <cr></cr>	0 x 0 x 0 {dimUnit} <cr><lf></lf></cr>			

Table 12-6. Remote Sensors Parameters

### 12.6.1 Sample Requests and Responses

- 1. Dimension Command Request: D<CR> Response: 9.75 x 7.25 x 3.50 in<CR><LF>
- 2. Dimension Command Request: D<CR> Response: 0 x 0 x 0 in<CR><LF>
- 3. Invalid Command Request: M<CR> Response: ?<CR><LF>

### 12.6.2 Serial Interface

The serial interface operates in two modes:

- QubeVu A simple request or response protocol; Refer to the iDimension API Guide (Section 12.5.1) for detailed information on using this interface
- Cubiscan 110/150 Emulates a subset of commands supported by Cubiscan 110/150



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