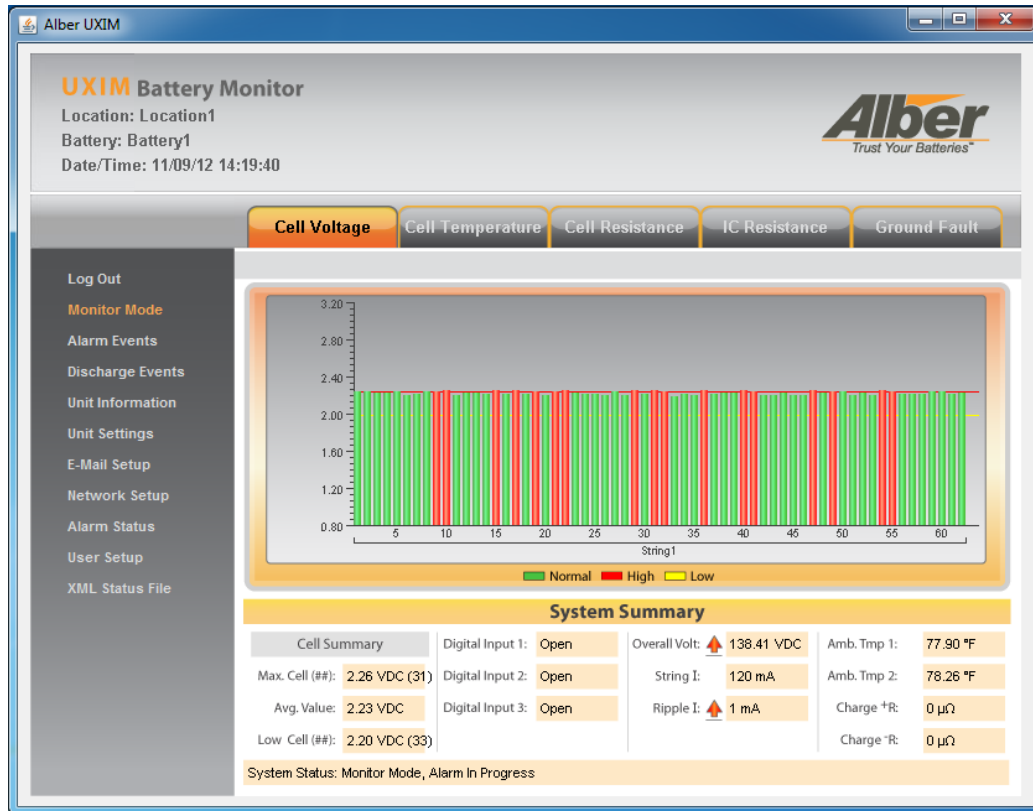


Alber Universal Xplorer Industrial and Telecom Monitors (UXIM) and (UXTM) Battery Monitor

Web Interface User's Guide



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Albér Universal Xplorer Industrial and Telecom Monitors (UXIM) and (UXTM) Battery Monitor Web Interface User's Guide

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Albér Universal Xplorer Industrial and Telecom Monitors (UXIM) and (UXTM) Battery Monitor Web Interface User's Guide,
Part Number 4200-109

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1. About the Alber UXIM/UXTM Battery Monitor Application

The Universal Xplorer Industrial Monitor (UXIM) and Universal Xplorer Telecom Monitor (UXTM) is a stationary battery monitor application designed for use in industrial or in DC powered data centers. The system architecture is a flexible design architecture for monitoring virtually any battery configuration using VLA, VRLA or NiCd technologies in 24 to 48VDC applications.

What sets Alber monitors apart from others is the ability to provide early warning of potential battery problems. The monitors check the state of health of each cell and its associated connections by performing a proactive, patented DC resistance test, a proven technology to reliably predict battery performance.

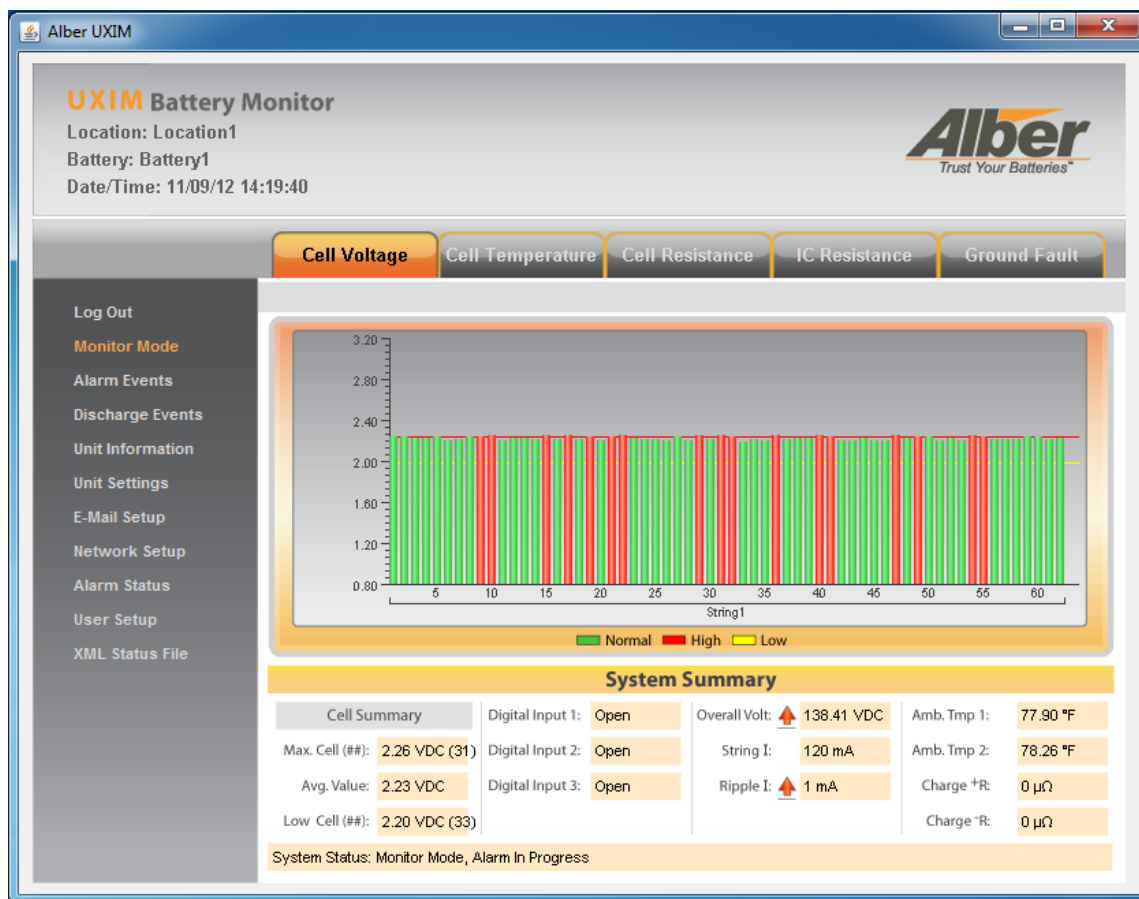


Figure 1 – About the UXIM/UXTM Web Interface Application Tool

The UXIM/UXTM battery monitoring system, uses several views that provide intuitive utilization of the UXIM/UXTM battery monitor application.

Real-time data viewing of all battery parameters including:

- **Monitor Mode** - shows all system level parameters such as cell voltage, cell temperature, cell resistance, and intercell resistance.
- **Alarm Events** - shows active alarm event number, start date and time, parameter, type, string, cell, and value.
- **Discharge events** - shows discharge event number, start time, end time, string number, lowest over all voltage, highest intercell string current and end ambient.
- **Unit Information** - shows model number, serial number, system configuration, installation date, firmware version, hardware version, applet version, server version, and manufacturer support site information.
- **Unit Settings** - allows you to sync the computer date and time. Thresholds; high and low cell voltage (DC Volts), high and low cell resistance alarm (microhms), high intercell resistance alarm (microhms), high and low cell temperature alarm (°F), high and low ambient temperature (°F), high and low overall voltage (DC volts), high string current (DC amps), high ripple current (AC amps), high and low float current (DC amps), high cell to ambient temperature deviation (°F), high discharge trigger (DC amps).
- **E-Mail Setup** - outgoing server name, username, password, from address, email addresses, amount of attempts per recipient, amount of minutes between attempts, data schedule type, data on day of month, data day interval and start date.
- **Network Setup** - general has the following options; IP address, Web port, Netmask, UXIM/UXTM port, gateway address, remote URL, and DNS address. SNMP has the following options; enable SNMP, SNMP port, Read community, write community, polling interval, trap interval, trap recipient 1 through 4, and MB download. Modbus has the following options; modbus port and register map download web address.
- **Alarm Status** - gives the ability to enable or disable the following alarms cell voltage alarm, cell temperature alarm, cell resistance alarm, ambient temperature alarm, overall voltage alarm, string current alarm, float current alarm, ripple current alarm, thermal runaway alarm, discharge alarm disable timer, and resistance test alarm disable timer

Other features include:

- Overall voltage of battery strings, cell temperature, cell internal resistance, and cell intercell resistance information are all accessible by clicking on the items in the system navigation pane.
- Start Test button for starting a cell resistance test and inter cell resistance test.
- Graphical real time data appears to show important information at a glance.
- Tabs allow for one click access to panels that allow for voltage, temperature, internal resistance, intercell resistance and other battery information.

2. Navigating through the UXIM/UXTM Monitor Application

The battery monitoring system uses several views that provide intuitive utilization of the UXIM/UXTM monitor application.

The toolbar node allows for quick access to select the following:

- Logging in and out
- Discharge Events
- E-Mail Setup
- Monitor Mode
- Unit Information
- Net work Setup
- Alarm Events
- Unit Settings
- Alarm Status

Other features include:

- Customer, location, hardware, battery, battery cell voltage, and discharge information is accessible by clicking on items in the system navigation pane.
- Graphical real time data appears to show important information at a glance.
- Tabs allow for one click access to panels that allow for battery setup and other battery information, such as:
 - cell voltage
 - cell temperature
 - cell resistances
 - intercell resistance

Note: For additional information on specific panels and setup, refer to the help text.

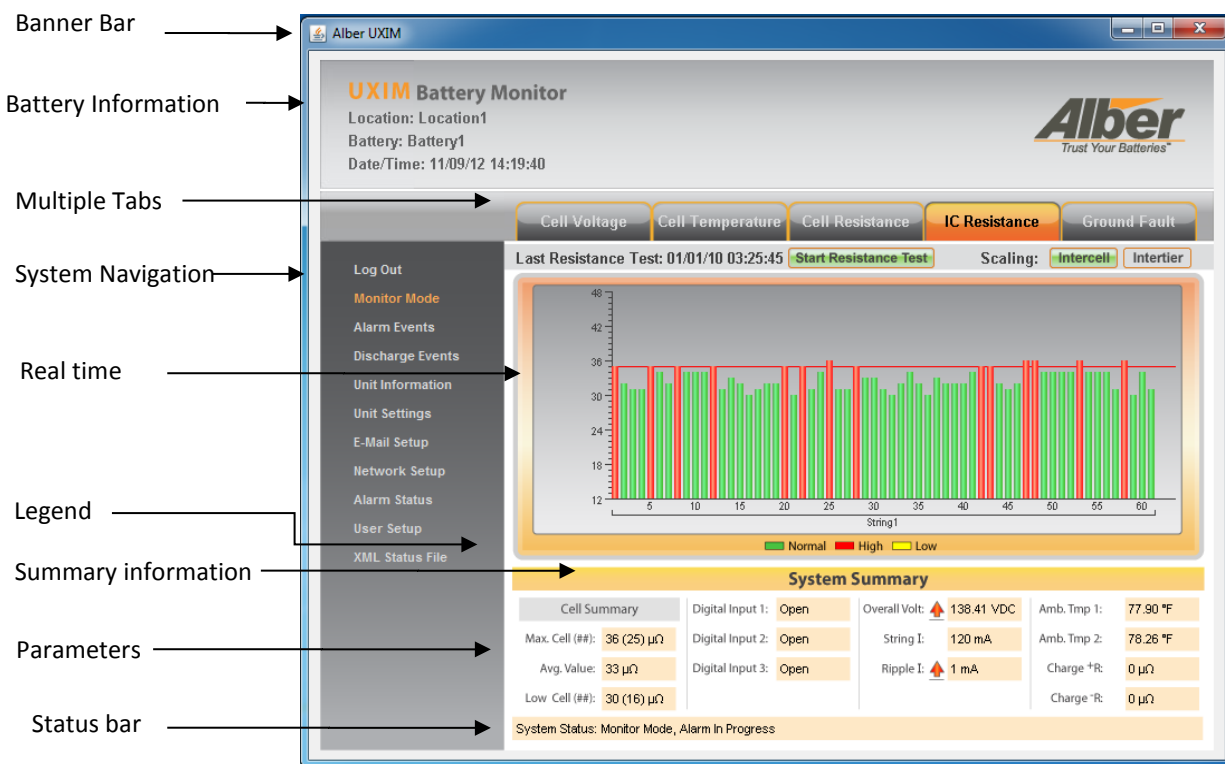


Figure 2 – UXIM/UXTM Main Window Navigation Description

3. Logging into the UXIM/UXTM Battery Monitor Application

In order to access the UXIM/UXTM, you must log into the system. You are required to enter a username and password with assignable access rights. The UXIM/UXTM system supports up to ten usernames and passwords.

To Log in to the UXIM/UXTM Battery Monitor application, click **Log In**. The Password window appears.

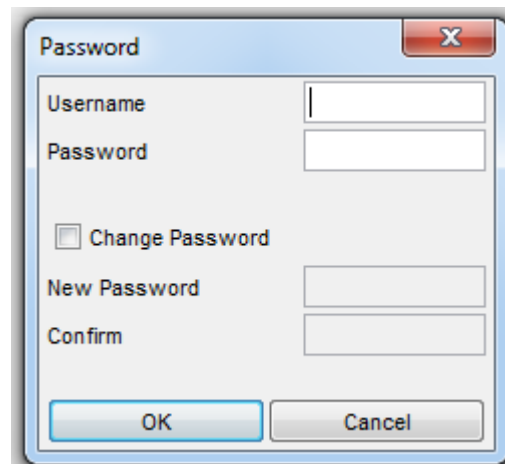


Figure 3 – UXIM/UXTM Log in Window

Minimum username and password requirements include ten of the following:

- **Lower case characters** – can use any lower case letter from a through z.
- **Upper case characters** – can use any upper case letter from A through Z
- **Numbers** – can use any number from 1 through 9
- **Symbols** – Exclamation point!, open parenthesis (, closed parenthesis), dash -, period ., Question mark ?, open bracket [, closed bracket], and underscore _.

Note: The Username is not case sensitive. The Password is case sensitive.

The default username is **admin** and password is **alber**. You will be prompted to change your password when using the default password. This password gives you administrative rights and the ability to setup other users and access rights.

3.1 Assigning Access Rights

After the Administrator creates a new user account and assigns access rights to a user, the user will be required to change the password upon the first login.

When creating a new user from the administrator login, the following functions will be accessible or denied based on privileges.

1. In the left pane, select **User Setup**. The User Setup window appears allowing you to add users, and passwords with the following privilege selections:
 - **User Setup** – allows the user access to select all setup items and has the ability to setup new user accounts on the system. **Note:** If User Setup is not selected, the User setup will not be displayed in the left hand pane at the bottom of the window.
 - **Perform Resistance Test** – allows the user access to be able to start and stop resistance tests on the system.
 - **Acknowledge Alarms** – allows the user access be able to acknowledge battery alarm events on the system.
 - **Reset Alarms** – allows the user access to be able to reset any battery alarm on the system.
 - **Delete Discharge events** – allows the user access to be able to delete a discharge event on the system.
 - **Change unit setting and time** – allows the user access to be able to change a unit setting and/or unit time.
 - **Change Email setting** – allows the user access to be able to change an Email address.
 - **Change Network setting** – allows the user access to be able to change the network settings, for example general settings has IP address, SNMP settings has MIB Download or Modbus settings has Modbus port.

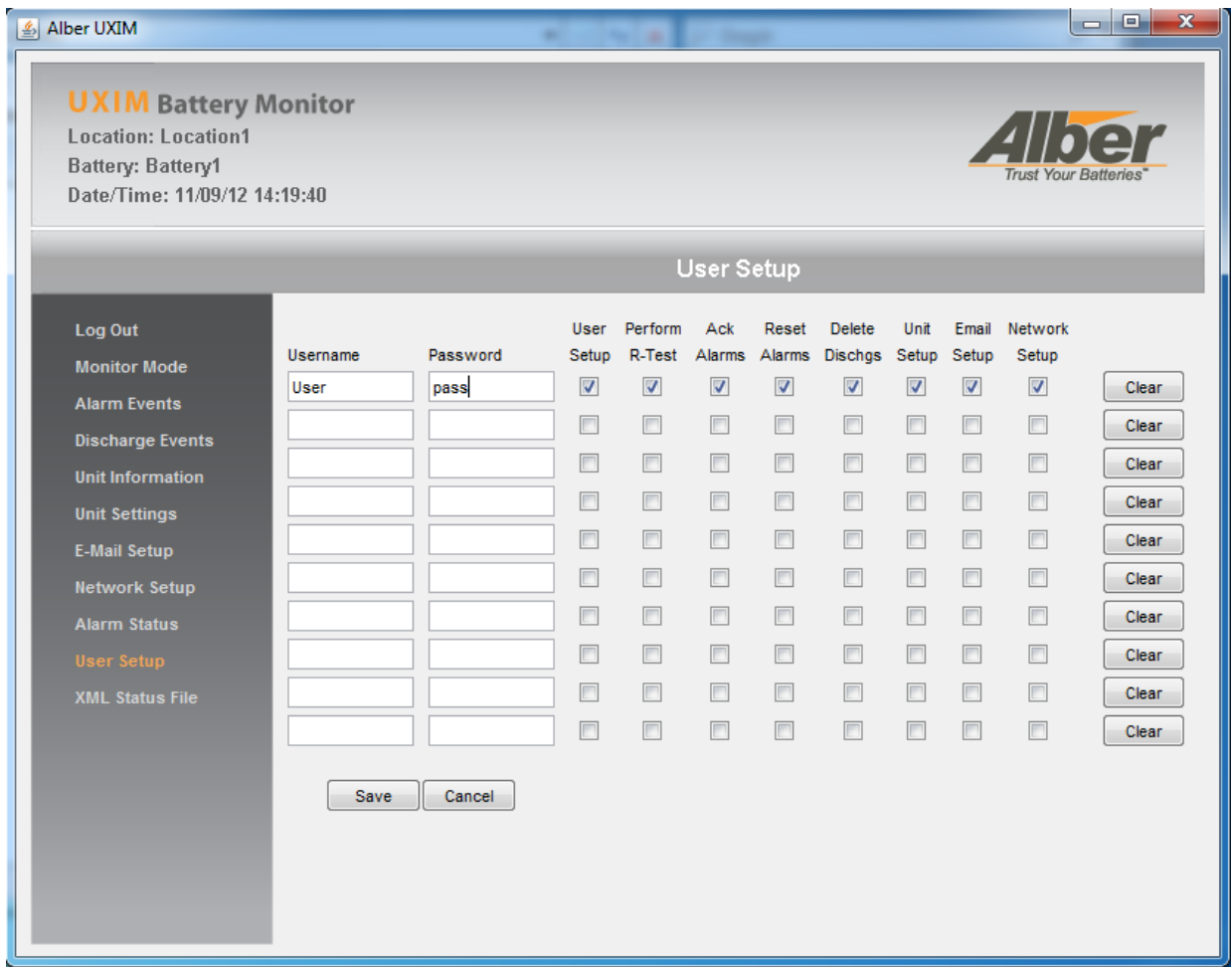


Figure 4 – User Setup Information Window

- 2. To clear all user settings for a specific user, click the **Clear** button.
- 3. After all user settings are complete, click **Save**. The user settings are then saved for those users appearing in the username list.

4. Monitor Mode

To access the monitor mode, on the left pane of the **UXIM/UXTM** window in the system navigation area, click **Monitor Mode**. This is the default window for the UXIM/UXTM Battery Monitor application. In normal monitor mode, the system continuously scans the following parameter readings:

- Cell Voltage
- Cell Temperature (optional)
- Overall Volts
- String Current (string, float and ripple)
- Ambient Temperature
- Digital Input's

Each parameter is constantly compared to the previously scanned value and, if the value exceeds an alarm threshold, the unit triggers an alarm event. During this alarm event, (if configured) the system can send an email notification of the particular alarm event.

4.1 Cell Voltage Parameter Readings

The cell voltage tab shows a graphical status of the voltage. Threshold level lines for high and low will appear in the graph. These graphs are used for determining minimum and maximum threshold levels. It also shows the high and low cell voltage thresholds, the overall summary of each associated cell summary with voltage readings of, max, average and low with cell number in parenthesis, overall voltage, ambient temperature, digital inputs, string current, ripple current, and system status.



Figure 5 – Cell Voltage Readings and Summary Information

4.2 Cell Temperature Parameter Readings

The cell temperature tab shows a graphical status of the temperature readings. Threshold level lines will appear in the graph. These graphs are used for determining minimum and maximum threshold levels. It also shows the high and low cell voltage thresholds, the overall summary of each associated cell summary with temperature readings of, max, average and low with cell number in parenthesis, overall voltage, ambient temperature, digital inputs, string current, ripple current, and system status.

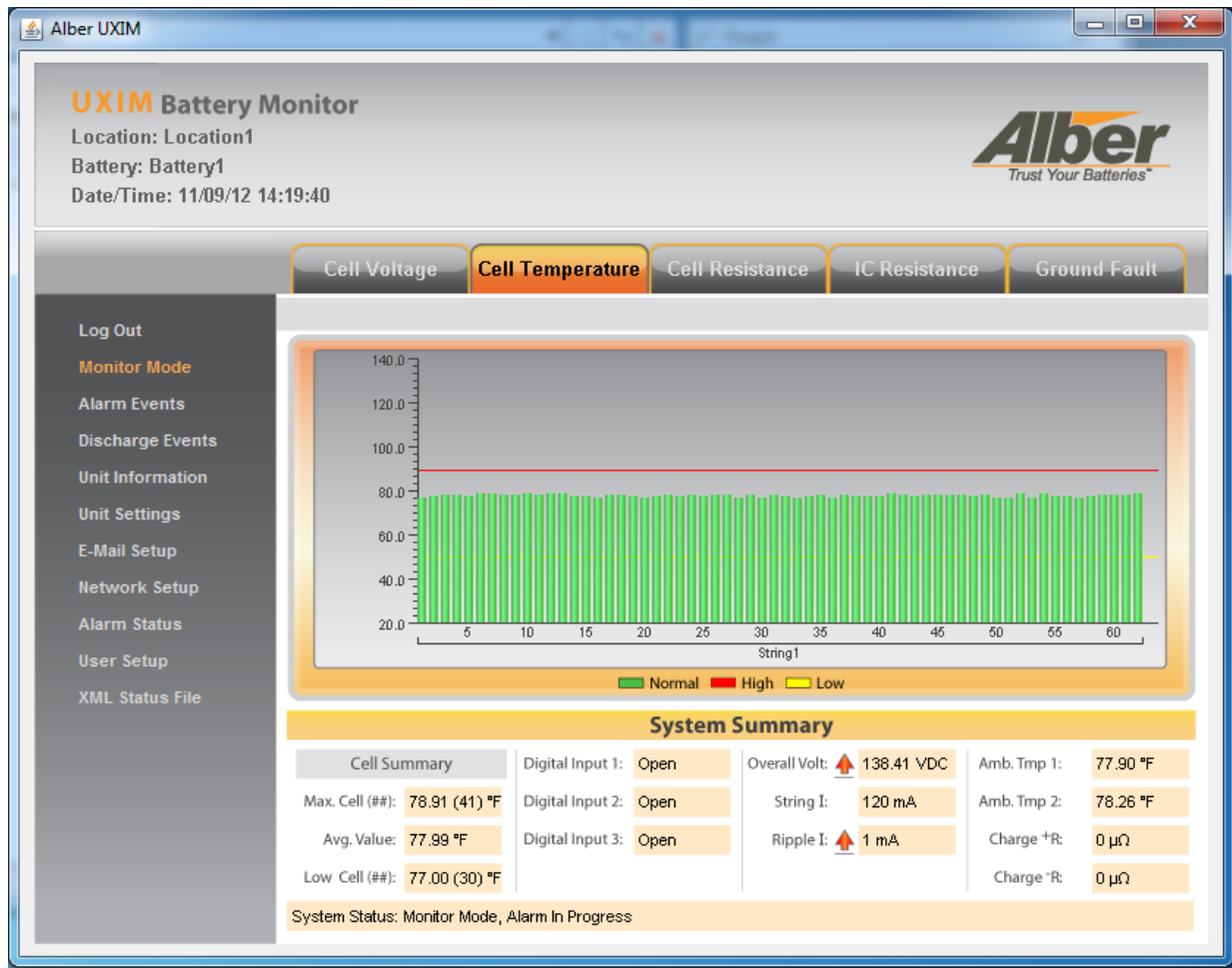


Figure 6 – Cell Temperature Readings and Summary Information

4.3 Cell Resistance Parameter Readings

The cell resistance tab shows a graphical status of the resistance readings. Threshold level lines will appear in the graph. These graphs are used for determining minimum and maximum threshold levels. It also shows the high and low cell resistance thresholds, the overall summary of each associated cell summary with resistance readings of, max, average and low with cell number in parenthesis, overall voltage, ambient temperature, digital inputs, string current, ripple current, and system status.

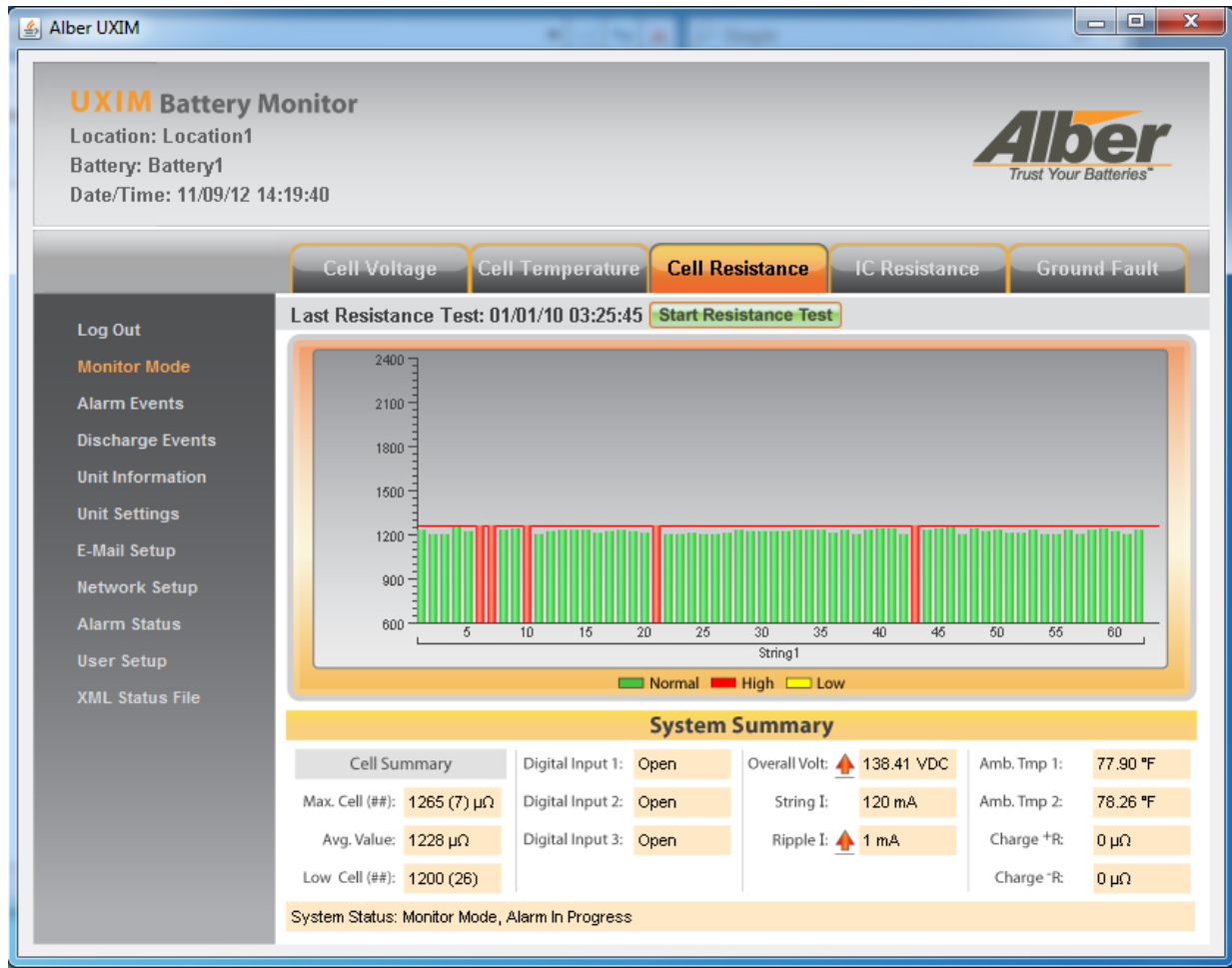


Figure 7 – Cell Resistance Readings and Summary Information

4.4 Intercell Resistance Parameter Readings

The intercell cell resistance tab shows a graphical status of the resistance readings. Threshold level lines will appear in the graph. These graphs are used for determining minimum and maximum threshold levels. It also shows the high and low intercell cell resistance thresholds, the overall summary of each associated cell summary with resistance readings of, max, average and low with cell number in parenthesis, overall voltage, ambient temperature, digital inputs, string current, ripple current, and system status.



Figure 8 – Intercell Resistance Readings and Summary Information

4.5 Ground Fault Parameter Readings

The ground fault tab shows a graphical status of the ground fault readings. Threshold level lines will appear in the graph. These graphs are used for determining minimum and maximum threshold levels. It also shows the high and low ground fault thresholds, the overall summary of each associated string summary with ground fault readings of, max, average and low with string name and system status.

Note: This feature is not available at this time. Coming soon!

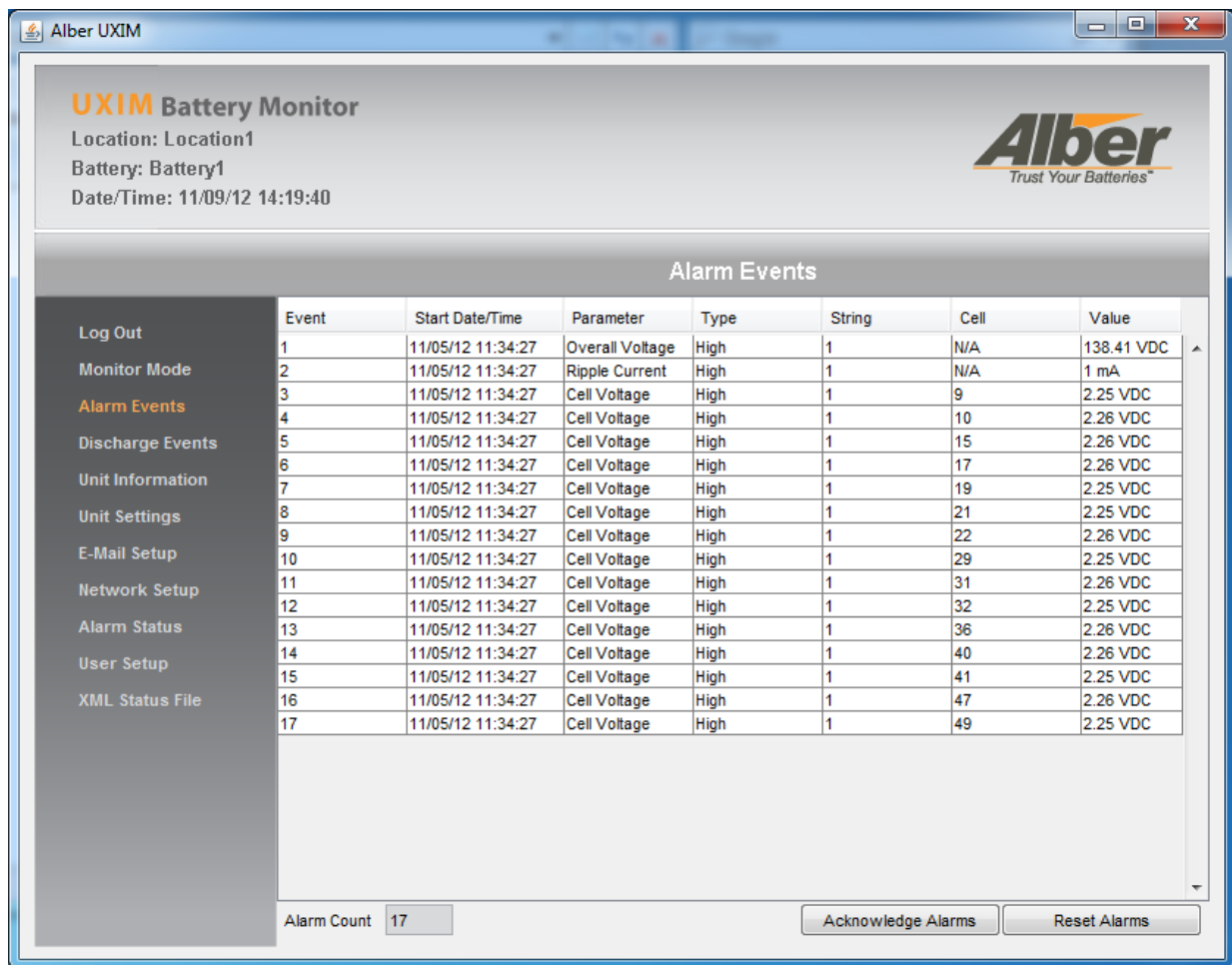


Figure 9 – Ground Fault Readings and Summary Information

5. Alarm Events

To access alarm events, on the left pane of the **UXIM/UXTM** window in the system navigation area, click **Alarm Events**. The alarm events window shows all the system alarm events. The system is continuously scanning against the thresholds set under unit settings. When a threshold is violated, the system will create an event with the following information:

- **Event** - shows the event name
- **Start Date/Time** - shows the starting date and time of the event
- **Parameter** - shows the name of the parameter
- **Type** - shows the type of event
- **String** - shows the name of the string
- **Cell** - shows the cell number
- **Value** - shows the parameters actual real-time value



Event	Start Date/Time	Parameter	Type	String	Cell	Value
1	11/05/12 11:34:27	Overall Voltage	High	1	N/A	138.41 VDC
2	11/05/12 11:34:27	Ripple Current	High	1	N/A	1 mA
3	11/05/12 11:34:27	Cell Voltage	High	1	9	2.25 VDC
4	11/05/12 11:34:27	Cell Voltage	High	1	10	2.26 VDC
5	11/05/12 11:34:27	Cell Voltage	High	1	15	2.26 VDC
6	11/05/12 11:34:27	Cell Voltage	High	1	17	2.26 VDC
7	11/05/12 11:34:27	Cell Voltage	High	1	19	2.25 VDC
8	11/05/12 11:34:27	Cell Voltage	High	1	21	2.25 VDC
9	11/05/12 11:34:27	Cell Voltage	High	1	22	2.26 VDC
10	11/05/12 11:34:27	Cell Voltage	High	1	29	2.25 VDC
11	11/05/12 11:34:27	Cell Voltage	High	1	31	2.26 VDC
12	11/05/12 11:34:27	Cell Voltage	High	1	32	2.25 VDC
13	11/05/12 11:34:27	Cell Voltage	High	1	36	2.26 VDC
14	11/05/12 11:34:27	Cell Voltage	High	1	40	2.26 VDC
15	11/05/12 11:34:27	Cell Voltage	High	1	41	2.25 VDC
16	11/05/12 11:34:27	Cell Voltage	High	1	47	2.26 VDC
17	11/05/12 11:34:27	Cell Voltage	High	1	49	2.25 VDC

Figure 10 – Alarm Events

The system counts each event and gives you a total number at the bottom of the window. The user may **Acknowledge Alarms** or **Reset Alarms** that were previously scanned alarm events.

6. Discharge Events

To access discharge events, on the left pane of the **UXIM/UXTM** window in the system navigation area, click **Discharge Events**. The discharge events window shows all the system discharges.

If a discharge is detected, the system goes into a data logging mode and stores discharge start and end times, the lowest overall voltage reached, and the highest string current reached during the discharge event. The following information is recorded and displayed for each discharge event:

- **Event** - shows the discharge event number
- **Start Time** - shows the starting date and time of the discharge event
- **End Time** - shows the end date and time of the discharge event
- **String** - shows the name of the string that was discharged
- **Low OV** - shows the low overall voltage during the discharge event
- **High I** - shows the high intercell value during the discharge event
- **End Ambient** - shows the ambient temperature at the end of the discharge event in Celsius and/or Fahrenheit.

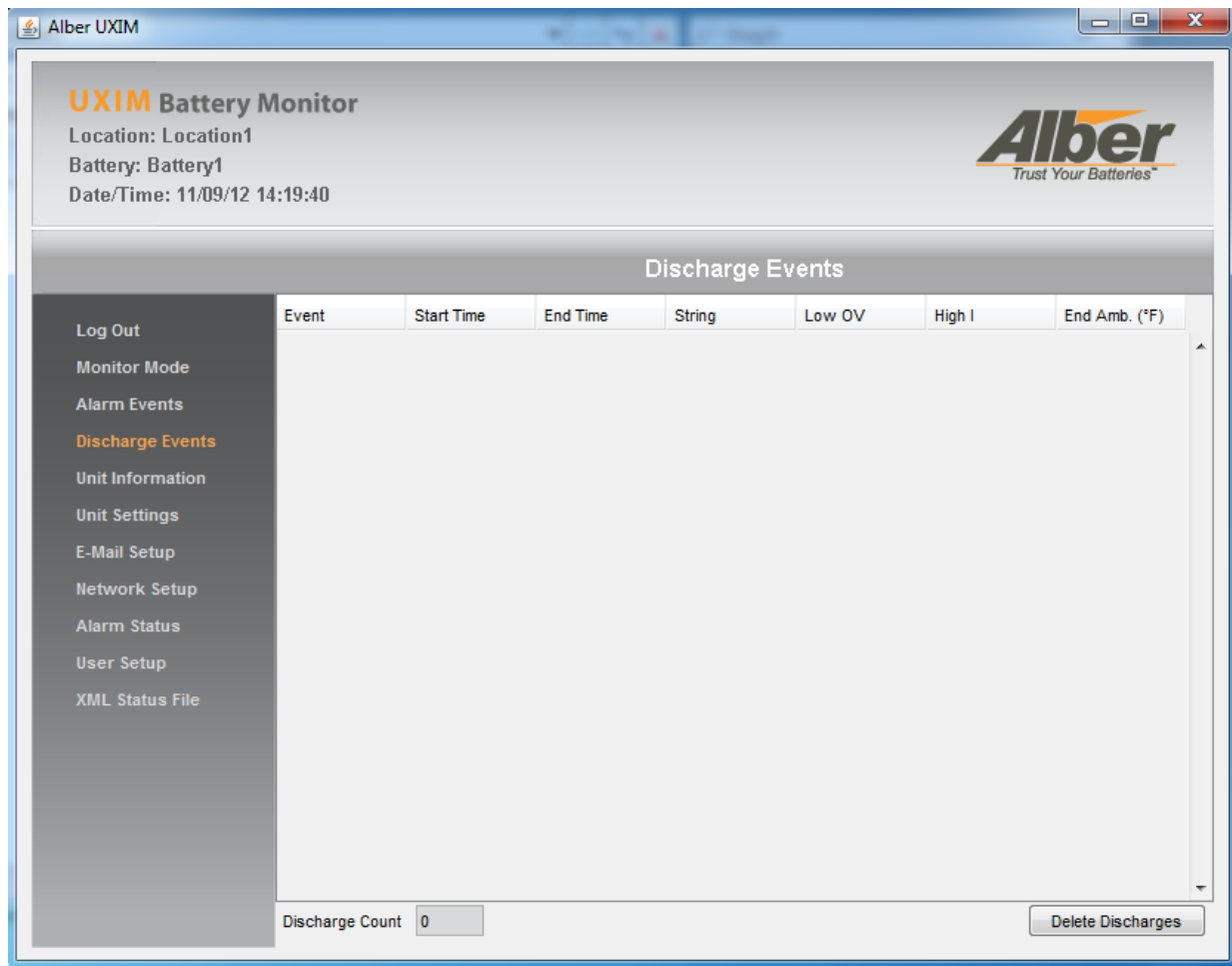


Figure 11 – Discharge Events

The system counts each discharge event and gives you a total number at the bottom of the window. The user may **Delete Discharges** that are listed in the **Discharge Event** window.

7. Unit Information

To access information about the units, on the left pane of the **UXIM/UXTM** window, in the system navigation area, click **Unit Information**. The unit information window shows all the details about the unit and system.

The unit information describes all the information about the system you are monitoring. The following information is shown:

- **Model Number** - shows the model number of the device.
- **Serial Number** - shows the serial number of the device.
- **System Configuration** - shows the system configuration of the string.
- **Install Date** - shows the date of the installation.
- **Firmware Version** - shows the firmware version number of the device.
- **Hardware Version** - shows the hardware version number of the device.
- **Applet Version** - shows the applet version number of the application.
- **Server Version** - shows the server version number of the application.
- **Manufacturer Support** - gives the Web address of Alber for future reference of support.



Figure 12 – Unit Information

8. Unit Settings

To view and access unit settings and its thresholds, on the left pane of the **UXIM/UXTM** window, in the system navigation area, click **Unit Settings**. The unit settings window shows all the details about the unit and its settings for the system.

A Thermal Runaway alarm will appear if the thresholds exceed deviation levels in the cell to ambient temperature in degrees.

The following unit settings can be viewed, modified and saved:

- **Computer Date/Time** - the date and time can be displayed. Click Sync to sync the current time of the UXIM/UXTM to the current time of the computer.
- **Resistance Test Frequency (days)** - shows the amount of days the resistance test is initiated

The following unit threshold settings can be viewed, modified and saved:

- **Cell Voltage Alarm (VDC)** - is used to set the high and low cell voltage alarm (VDC)
- **Cell Resistance Alarm ($\mu\Omega$)** - is used to set the high and low cell resistance alarm ($\mu\Omega$)
- **Intercell Resistance Alarm ($\mu\Omega$)** - is used to set the high intercell resistance alarm ($\mu\Omega$)
- **Cell Temperature Alarm ($^{\circ}\text{F}$)** - is used to set the high and low cell temperature alarm in degrees $^{\circ}$
- **Ambient Temperature Alarm ($^{\circ}\text{F}$)** - is used to set the high and low ambient temperature alarm in degrees $^{\circ}$
- **Overall Voltage Alarm (VDC)** - is used to set the high and low overall voltage alarm (VDC)
- **String Current Alarm (A DC)** - is used to set the high string current alarm (A DC)
- **Ripple Current Alarm (AAC)** - is used to set the high ripple current alarm (AAC)
- **Float Current Alarm (mA DC)** - is used to set the high and low float current alarm (mA DC)
- **Cell To Ambient Temp Deviation ($^{\circ}\text{F}$)** - is used to set the high cell to ambient temp deviation in degrees $^{\circ}$
- **Discharge Trigger Current (A DC)** - is used to set the high discharge trigger current (A DC).
- **Temperature Scale** – is used to set the temperature scale option to Celsius or Fahrenheit.



UXIM Battery Monitor
 Location: Location1
 Battery: Battery1
 Date/Time: 11/09/12 14:19:40

Unit Settings

Log Out
 Monitor Mode
 Alarm Events
 Discharge Events
 Unit Information
Unit Settings
 E-Mail Setup
 Network Setup
 Alarm Status
 User Setup
 XML Status File

Computer Date/Time: 11/09/12 15:14:37

High Ambient Temp (°F)	<input type="text" value="90.0"/>	R-Test Freq (days)	<input type="text" value="0"/>
Low Ambient Temp (°F)	<input type="text" value="50.0"/>	High Cell Voltage (VDC)	<input type="text" value="2.250"/>
High Overall Voltage (VDC)	<input type="text" value="60.0"/>	Low Cell Voltage (VDC)	<input type="text" value="2.000"/>
Low Overall Voltage (VDC)	<input type="text" value="40.0"/>	High Cell Resistance (μΩ)	<input type="text" value="1260"/>
High String Current (DC A)	<input type="text" value="200"/>	Low Cell Resistance (μΩ)	<input type="text" value="500"/>
High Ripple Current (AC A)	<input type="text" value="1"/>	High Cell Temp (°F)	<input type="text" value="90.0"/>
High Float Current (DC mA)	<input type="text" value="5000"/>	Low Cell Temp (°F)	<input type="text" value="50.0"/>
Low Float Current (DC mA)	<input type="text" value="20"/>	High Intercell Resistance (μΩ)	<input type="text" value="35"/>
Cell To Ambient (°F)	<input type="text" value="5.0"/>		
Discharge Trigger (DC A)	<input type="text" value="5"/>		
Runaway Cell To Ambient (°F)	<input type="text" value="5.0"/>		
Runaway Float Current (DC mA)	<input type="text" value="2000"/>		
Ground Fault Current (DC mA)	<input type="text" value="5"/>		
Enable Charger Cable	<input type="checkbox"/>		
Charger Cable + (μΩ)	<input type="text" value="56832"/>		
Charger Cable - (μΩ)	<input type="text" value="767"/>		

Intertier	String	Cell	High μΩ
Intertier 1	<input type="text" value="1"/>	<input type="text" value="3"/>	<input type="text" value="501"/>
Intertier 2	<input type="text" value="1"/>	<input type="text" value="5"/>	<input type="text" value="502"/>
Intertier 3	<input type="text" value="1"/>	<input type="text" value="7"/>	<input type="text" value="503"/>
Intertier 4	<input type="text" value="1"/>	<input type="text" value="21"/>	<input type="text" value="504"/>

Temperature Scale:

Figure 13 – Unit Settings

Click **Save** to save all unit settings or click **Cancel** to not accept the changes made.

9. Email Setup

Use the UXIM/UXTM email setup to send out emails of the UXIM/UXTM status report and Unacknowledged alarms reports to review the following information:

- **Unit information** - reports the model number and serial number
- **System information** - reports the location name, battery name and string name.
- **Summary information** - reports the ambient temperature, digital input 1 through 3, string overall voltage, string current and ripple current.
- **String information** - reports the cell number, cell voltage, cell temperature, cell resistance, and intercell resistance.
- **Alarm Events** - reports the start, date and time, parameters, type, string and cell name and value.
- **Discharge Events** - reports the start and end time, string name, low overall voltage, high intercell and end ambient temperature.

To view, modify and save e-mail setup, on the left pane of the **UXIM/UXTM** window, in the system navigation area, click **E-Mail Setup**. The e-mail setup window shows all the details about setting up your email for system notification. The following email settings can be viewed, modified and saved:

- **Outgoing Server** - enter the outgoing server name.
- **Username** - enter name of the user.
- **Password** - enter the password information.
- **From Address** - enter the from email address name.
- **Email Addresses** - enter e-mail address names that will receive the e-mail.
- **Incl Data** - use the checkbox to include an XML file of the data.
- **Attempts Per Recipient** - include how many attempts to have the email sent to the email address.
- **Minutes Between Attempts** - enter the minutes of time between attempting to send the email again since the prior one did not get sent.
- **Data Schedule Type** – is used for selecting a method for scheduling data to be sent out. Use the pull down menu to enter the data schedule type. Selections are:
 - **Day of Month** – use this selection to schedule the report of data information email to be sent out on a specific day of the month.
 - **Number of Days** – use this selection to schedule the report of data information email to be sent out every x amount of days. For example every 5 days.
- **Data on Day of Month** - enter a specific day of the month for the report of data information email to be sent out.
- **Data Day Interval** - enter the number of days that should go by before sending out the next report of data information.

- **Start Date** - enter the exact month, day and year of when the start date should be for the first report to be sent. Use the pull down selections to pick the email report start date.

UXIM Battery Monitor
Location: Location1
Battery: Battery1
Date/Time: 11/09/12 14:19:40

Email Setup

Log Out
Monitor Mode
Alarm Events
Discharge Events
Unit Information
Unit Settings
E-Mail Setup
Network Setup
Alarm Status
User Setup
XML Status File

Outgoing Server
Username
Password
From Address
External URL

Email Address	Priority	Incl Data
	1	<input type="checkbox"/>
	2	<input type="checkbox"/>
	3	<input type="checkbox"/>
	4	<input type="checkbox"/>
	5	<input type="checkbox"/>

Attempts Per Recipient: 3
Minutes Between Attempts: 5
Data Schedule Type: Number of Days
Data on Day of Month: 1
Data Day Interval: 1
Start Date: Dec 31 2012

Save Cancel

Figure 14 – Email Setup

Click **Save** to save all unit settings or click **Cancel** to not accept the changes made.

10. UXIM/UXTM Status Report

The following is an example of a UXIM/UXTM Status Report that was emailed by the system:

Unit Information

Unit Model Number: 1007-100

Unit Serial Number: Proto35

To connect to this device click here: (IP Address)

System Information

System Location: Pompano Beach

Battery Name: Battery1

String Name 1: String1

String Name 2: String2

String Name 3: String

Summary Information

Ambient Temperature: 25.1

Digital Input 1: Closed

Digital Input 2: Closed

Digital Input 3: Open

String Overall Voltage 1: 53.9

String Overall Voltage 2: 53.0

String Overall Voltage 3: 53.0

String Current 1: 0.10

String Current 2: 0.10

String Current 3: 0.10

Ripple Current 1: 0

Ripple Current 2: 0

Ripple Current 3: 0

String 1

Cell Number	Cell Voltage	Cell Temperature	Cell Resistance	Intercell Resistance
1	6.00	24.0	1176	29
2	6.32	24.1	1145	468
3	6.09	24.1	1406	27
4	6.09	24.1	1065	18
5	6.10	24.3	1197	27
6	6.10	24.1	1098	28
7	6.17	24.2	1189	26
8	6.12	24.2	1079	0

String 2

Cell Number	Cell Voltage	Cell Temperature	Cell Resistance	Intercell Resistance
1	6.20	24.3	1160	26
2	6.34	24.3	1078	28
3	6.31	24.3	1125	27
4	6.18	24.5	1083	17
5	6.94	24.4	1175	27
6	6.08	24.4	1085	31
7	6.96	24.4	1121	26
8	6.00	24.5	1229	0

String 3

Cell Number	Cell Voltage	Cell Temperature	Cell Resistance	Intercell Resistance
1	6.31	24.6	1201	27
2	6.15	24.7	1114	26
3	6.31	24.5	1168	27
4	6.99	24.6	1077	20
5	6.02	24.7	1197	27
6	6.12	24.5	1094	27
7	6.10	24.7	1136	25
8	6.02	24.7	1017	0

Alarm Events

Start Date/Time	Parameter	Type	String	Cell	Value
11/26/12 15:09:19	Overall Voltage	High	1	1	536.9
11/26/12 15:09:28	Float Current	High	1	1	10574
11/26/12 15:09:19	Cell Voltage	High	1	1	6.699
11/26/12 15:09:19	Cell Temperature	High	1	1	24653
11/26/12 15:09:19	Cell Voltage	High	1	2	6.732
11/26/12 15:09:19	Cell Temperature	High	1	2	24747
11/27/12 10:06:17	Intercell Resistance	High	1	2	468
11/26/12 15:09:19	Cell Voltage	High	1	3	6.709
11/26/12 15:09:19	Cell Temperature	High	1	3	24747
11/26/12 15:09:19	Cell Voltage	High	1	4	6.709
11/26/12 15:09:19	Cell Temperature	High	1	4	24747
11/26/12 15:09:19	Cell Voltage	High	1	5	6.710

Alarm Events

Start Date/Time	Parameter	Type	String	Cell	Value
11/26/12 15:09:19	Cell Temperature	High	1	5	24938
11/26/12 15:09:19	Cell Voltage	High	1	6	6.710
11/26/12 15:09:19	Cell Temperature	High	1	6	24747
11/26/12 15:09:19	Cell Voltage	High	1	7	6.717
11/26/12 15:09:19	Cell Temperature	High	1	7	24843
11/26/12 15:09:19	Cell Voltage	High	1	8	6.712
11/26/12 15:09:19	Cell Temperature	High	1	8	24843
11/26/12 15:09:29	Overall Voltage	High	2	1	537.0
11/26/12 15:09:38	Float Current	High	2	1	10579
11/26/12 15:09:29	Cell Voltage	High	2	9	6.720
11/26/12 15:09:29	Cell Temperature	High	2	9	24938
11/26/12 15:09:29	Cell Voltage	High	2	10	6.734
11/26/12 15:09:29	Cell Temperature	High	2	10	24938
11/26/12 15:09:29	Cell Voltage	High	2	11	6.731
11/26/12 15:09:29	Cell Temperature	High	2	11	24938
11/26/12 15:09:29	Cell Voltage	High	2	12	6.718
11/26/12 15:09:29	Cell Temperature	High	2	12	25129
11/26/12 15:09:29	Cell Voltage	High	2	13	6.694
11/26/12 15:09:29	Cell Temperature	High	2	13	25033
11/26/12 15:09:29	Cell Voltage	High	2	14	6.708
11/26/12 15:09:29	Cell Temperature	High	2	14	25033
11/26/12 15:09:29	Cell Voltage	High	2	15	6.696
11/26/12 15:09:29	Cell Temperature	High	2	15	25033
11/26/12 15:09:29	Cell Voltage	High	2	16	6.700
11/26/12 15:09:29	Cell Temperature	High	2	16	25129
11/26/12 15:09:39	Overall Voltage	High	3	1	537.0
11/26/12 15:09:18	Float Current	High	3	1	10579
11/26/12 15:09:39	Cell Voltage	High	3	17	6.731
11/26/12 15:09:40	Cell Temperature	High	3	17	25225
11/26/12 15:09:39	Cell Voltage	High	3	18	6.715
11/26/12 15:09:40	Cell Temperature	High	3	18	25319
11/26/12 15:09:39	Cell Voltage	High	3	19	6.731
11/26/12 15:09:40	Cell Temperature	High	3	19	25129
11/26/12 15:09:39	Cell Voltage	High	3	20	6.699

Alarm Events

Start Date/Time	Parameter	Type	String	Cell	Value
11/26/12 15:09:40	Cell Temperature	High	3	20	25225
11/26/12 15:09:39	Cell Voltage	High	3	21	6.702
11/26/12 15:09:40	Cell Temperature	High	3	21	25319
11/26/12 15:09:39	Cell Voltage	High	3	22	6.712
11/26/12 15:09:40	Cell Temperature	High	3	22	25129
11/26/12 15:09:39	Cell Voltage	High	3	23	6.710
11/26/12 15:09:40	Cell Temperature	High	3	23	25319
11/26/12 15:09:39	Cell Voltage	High	3	24	6.702
11/26/12 15:09:40	Cell Temperature	High	3	24	25319
11/26/12 15:09:18	Ambient Temperature	High	1	1	77

Discharge Events

Start Time	End Time	String	Low OV	High I	End Ambient
12/1/11 11:02:43	12/1/11 11:15:24	1	0.0	30	63.3
11/18/12 11:32:10	1/18/12 11:32:33	1	51.0	24	23.9
11/18/12 11:39:30	1/18/12 11:40:42	1	49.3	17	22.5
11/18/12 11:48:29	1/18/12 11:49:13	1	50.2	17	23.6
11/18/12 16:15:14	1/18/12 16:15:59	1	50.8	35	22.7
11/18/12 16:42:12	1/18/12 16:43:55	1	49.0	18	23.1
11/18/12 16:46:03	1/18/12 16:46:27	1	50.2	29	23.9
11/18/12 11:33:16	1/18/12 11:33:39	2	51.5	22	23.4
11/18/12 11:55:12	1/18/12 11:57:07	2	49.5	32	23.5
11/18/12 16:21:53	1/18/12 16:22:15	2	50.5	32	22.5
11/18/12 16:42:14	1/18/12 16:42:57	2	49.6	17	22.5
11/18/12 16:43:12	1/18/12 16:44:06	2	49.2	18	23.1
11/18/12 16:49:57	1/18/12 16:50:44	2	49.5	27	23.9
11/18/12 16:58:56	1/18/12 17:01:13	2	49.3	27	23.6
11/18/12 11:34:21	1/18/12 11:34:44	3	50.9	22	23.9
11/18/12 11:39:28	1/18/12 11:41:03	3	49.5	17	22.5
11/18/12 11:48:27	1/18/12 11:49:34	3	49.2	17	23.6
11/18/12 16:30:42	1/18/12 16:31:26	3	49.9	33	23.4
11/18/12 16:42:16	1/18/12 16:43:45	3	49.1	18	23.1

11. Network Setup

The following network settings can be viewed, modified and saved.

General settings:

- **IP Address** - enter the IP address in the format of xx.xxx.xxx.xx
- **Web Port** - enter the Web port number. The default Web port number is set to 80.
- **Net Mask** - enter the net mask address in the format of xx.xxx.xxx.xx
- **UXTM Port** - enter the UXTM port number.
- **Gateway Address** - enter the gateway address in the format of xx.xxx.xxx.xx
- **Remote URL** - enter the remote URL address. This remote URL address is the link to the UXIM/UXTM that will be inserted into the e-mail.
- **DNS Address** - enter the DNS address in the format of xx.xxx.xxx.xx

SNMP settings:

- **Enable SNMP** - use the checkbox to enable the SNMP polling settings.
- **SNMP Port** - enter the SNMP Port number. The default SNMP port number is 161
- **Read Community** - enter the read community name.
- **Write Community** - enter the write community name.
- **Polling Interval** - enter the polling interval number. The polling interval is the interval between polls in seconds.
- **Trap Interval (min)** - enter the number of traps in minutes between trap intervals. The trap interval is the interval between traps in minutes.
- **Trap Recipient 1** - enter the IP address of up to four trap recipients.
- **Trap Recipient 2** - enter the IP address of up to four trap recipients.
- **Trap Recipient 3** - enter the IP address of up to four trap recipients.
- **Trap Recipient 4** - enter the IP address of up to four trap recipients.
- **MIB Download** - enter the MIB download information by linking to the MIB file.

Modbus settings:

- **Modbus Port** - enter the modbus port number. The default Modbus port number is 502
- **Register Map Download** – link to the UXTM Modbus map.

Alber UXIM

UXIM Battery Monitor
Location: Location1
Battery: Battery1
Date/Time: 11/09/12 14:19:40

Alber
Trust Your Batteries™

Network Setup

Log Out
Monitor Mode
Alarm Events
Discharge Events
Unit Information
Unit Settings
E-Mail Setup
Network Setup
Alarm Status
User Setup
XML Status File

General

IP Address
Net Mask
Gateway Address
DNS Address

SNMP

Enable SNMP ☒
Read Community
Polling Interval
Trap Recipient 1
Trap Recipient 2
Trap Recipient 3
Trap Recipient 4
MIB Download <http://www.alber.com/softwareupdates.htm>

Modbus

Modbus Port
Register Map Download <http://www.alber.com/TechLibraryModbusPage.htm>

Web Port
Device Port
SNMP Port
Write Community
Trap Interval (min)

Save **Cancel**

Figure 15 – Network Setup

Click **Save** to save all network settings or click **Cancel** to not accept the changes made and to keep the previous changes.

12. Alarm State

The Alarm Status window will indicate the current status of the alarm enable/disable state. Each time a discharge event or resistance test occurs, certain alarms are temporarily disabled to prevent false alarms. This is indicated by a Normalization mode in the status area. This window will not only show you the current enable/disable state but will indicate a timer of when the alarms will become active again. The discharge timer will automatically be set to 72 hours if a discharge occurs and the Resistance Test Alarm timer will be set to 1 hour. Whichever timer is larger will take priority. Once the timers count down to 0 then the appropriate alarms will become enabled and if any parameter is in violation, an email will be generated if setup to do so.

Note: The fields in this window cannot be modified. They are for viewing purposes only.

Review the following statuses for alarms being enabled or disabled and timers being initiated by the UXIM/UXTM device.

- **Cell Voltage Alarm** - shows that the cell voltage alarm is either set to an enabled or disabled state.
- **Cell Temperature Alarm** - shows that the cell temperature alarm is either set to an enabled or disabled state.
- **Cell Resistance Alarm** - shows that the cell resistance alarm is either set to an enabled or disabled state.
- **Ambient Temperature Alarm** - shows that the ambient temperature alarm is either set to an enabled or disabled state.
- **Overall Voltage Alarm** - shows that the Overall voltage alarm is either set to an enabled or disabled state.
- **String Current Alarm** - shows that the string current alarm is either set to an enabled or disabled state.
- **Float Current Alarm** - shows that the float current alarm is either set to an enabled or disabled state.
- **Ripple Current Alarm** - shows that the ripple current alarm is either set to an enabled or disabled state.
- **Thermal Runaway Alarm** - shows that the thermal runaway alarm is either set to an enabled or disabled state.
- **Discharge Alarm Disable Timer** - shows the time the system alarms are disabled during and after a discharge until normalized. The system is set to take an expected time of 72 hours to normalize a discharge.
- **R Test Alarm Disable Timer** - shows the time the system alarms are disabled during and after a resistance test until normalized. The system is set to take an expected time of 1 hour to normalize a resistance test.

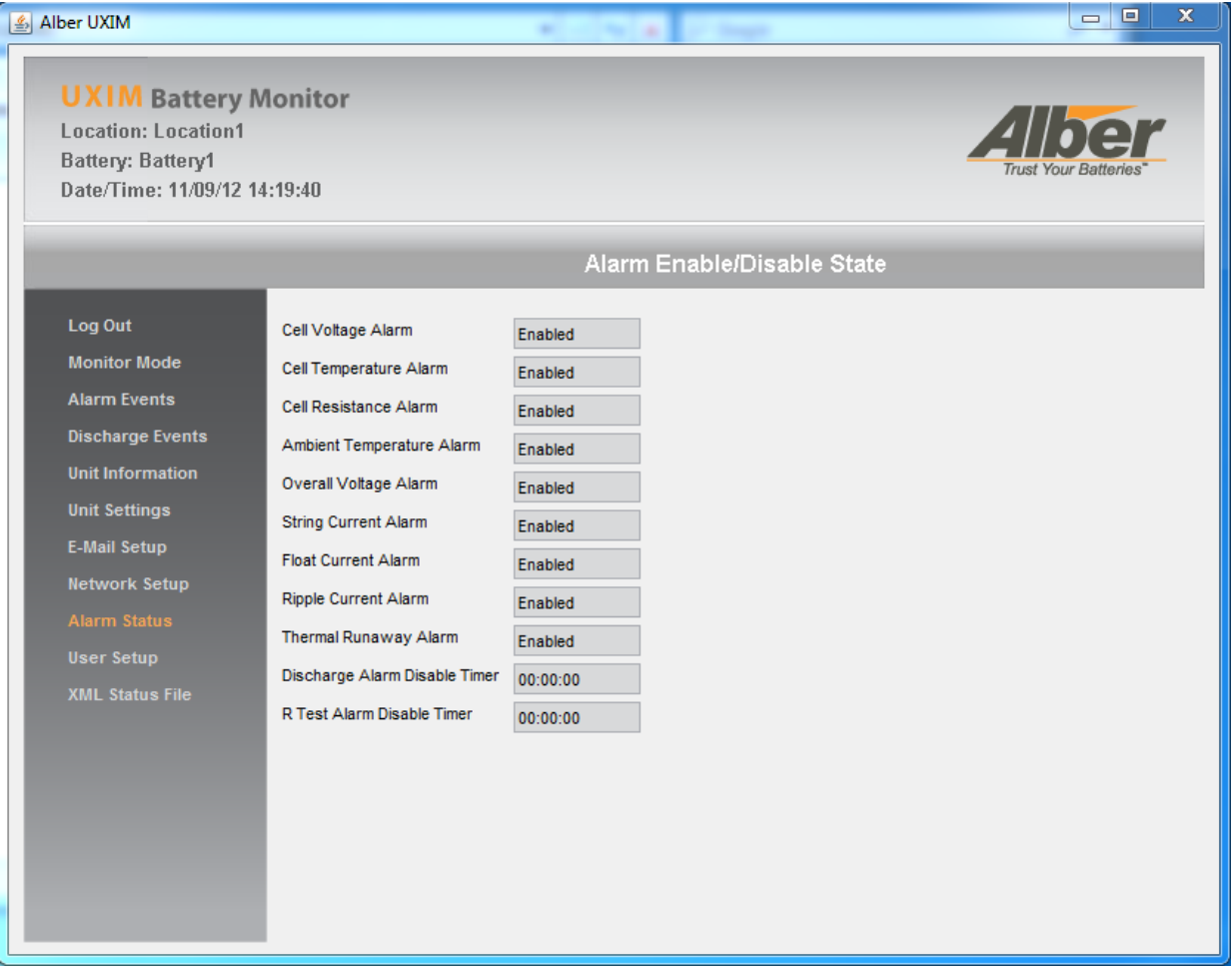


Figure 16 – System Alarm Status

13. Upgrade the Web Server Firmware on Lantronix Network Cards

Note: If Network Access to the UXIM/UXTM device is available, skip to section 13.1 “Upgrade the Web Server Firmware on the Network Interface Cards if Network Access to the UXIM/UXTM device is Available”. A “crossover” network cable is not necessary if network access is available.

If Network Access to the UXIM/UXTM device is not available, follow the procedures in this section.

The UXIM/UXTM Web server network firmware upgrades are installed and loaded using TFTP commands. For ease of upgrades, these commands are executed from a batch file located in “C:\Program Files\Alber\UXTM Configurator\UXTM Firmware” called “upload.bat” or “C:\Program Files\Alber\UXIM Configurator UXIM Firmware” called “upload.bat”.

Note: On this example, all required firmware files and “upload” batch file were copied to a folder named “UXIMWebFirm” or “UXTMWebFirm” and the network address of the Xport device was set to: **192.168.1.2**. A direct connection was made between the PC and Xport using a crossover network cable.

To upgrade the UXIM/UXTM network firmware, follow these steps:

1. Connect the computer and the UXTM device using a USB cable.
2. Connect to the UXIM/UXTM device through USB the connection type.

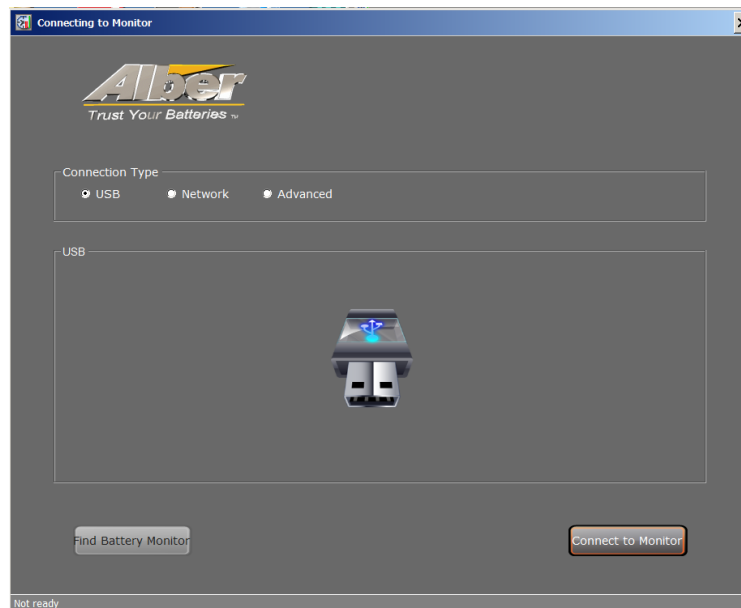


Figure 17 – Connection Type Window

3. Browse to the Network tab and set the IP Address to 192.168.1.2.

Note: Write down the current IP address as this will need to be restored upon completion of the upgrade in step 14.

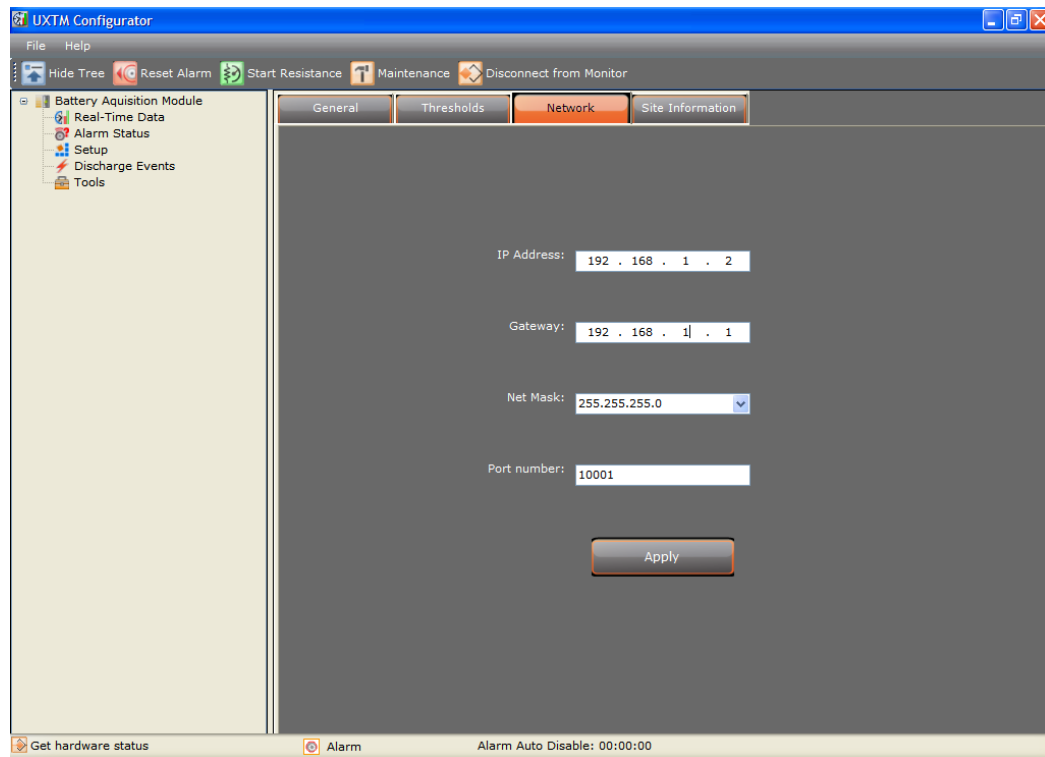


Figure 18 – Setting Up Network Address on Xport/Network Card

4. Right click the **Upload.bat** file located at “C:\Program Files\Alber\UXIM Configurator\UXIM Firmware” or “C:\Program Files\Alber\UXTM Configurator\UXTM Firmware” and click edit. It will open a upload.bat notepad window displaying the commands. Verify that the IP Address on the UXIM or UXTM device matches the TFTP commands addresses in the window as shown.

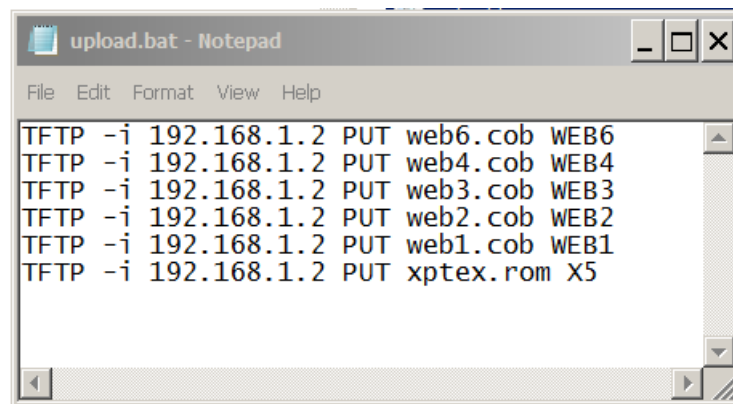


Figure 19 – Upload.bat Notepad Window

5. Setup the UXIM/UXTM and the computer used for programming to the same network. To do this, configure the workstation's Local Area Network connection as shown in the window below so that the UXIM/UXTM will be on the same network when connection is made with the crossover network cable. For more information on changing the TCP/IP settings refer to <http://windows.microsoft.com/en-US/windows-vista/Change-TCP-IP-settings>.

Note: Write down the current IP address as this will need to be restored upon completion of the upgrade in step 15.

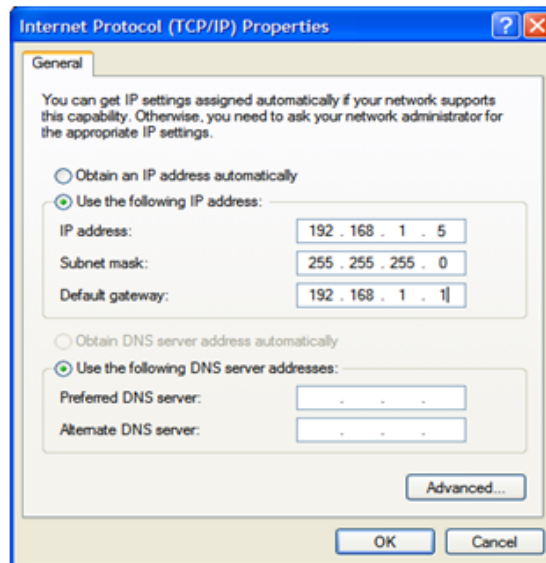


Figure 20 – Setting Up Internet Protocol (TCP/IP) Properties on Xport/Network Card

For Windows 7 Users only (If not a windows 7 user skip to step 10 in this procedure)

For Windows 7 users, follow these steps to enable the TFTP client.

6. Go to **Control Panel\All Control Panel Items** and double click on the **Programs and Features** option
7. Click **Turn Windows Features On or Off** option in the left hand pane.

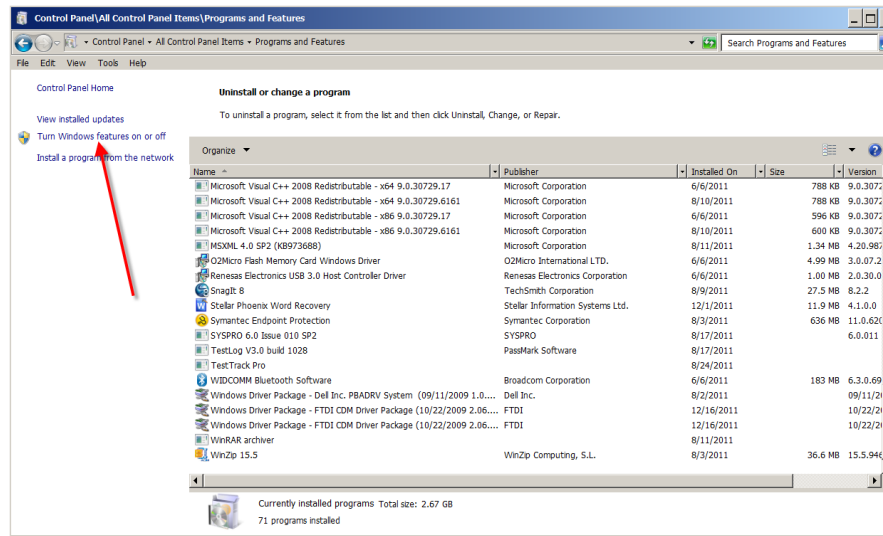


Figure 21 – Turn Windows Features On or Off

8. Place a check mark in the **TFTP Client** option and click **OK**

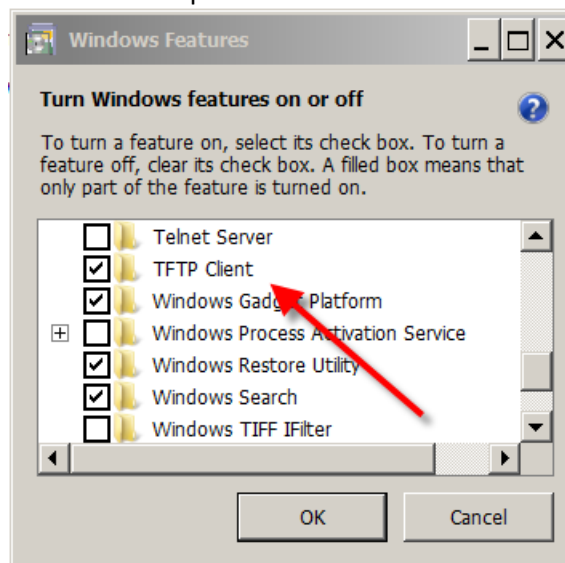


Figure 22 – Turn Windows Features On or Off TFTP Client

9. A window appears with a progress bar. Once this window disappears, the TFTP client has been activated.
10. Create a new folder called "UXIMWebFirm" or "UXTMWebFirm" on the root of the C:\ directory and copy all the upgrade files in the "UXIM Firmware" or "UXTM Firmware" folder to the UXIMWebFirm or UXTMWebFirm folder.
11. On the workstation, open the **Command Prompt** window by typing **cmd** in the run command box and navigate to the folder containing the network card firmware and batch files, for example enter:

C:\>cd UXTMWebFirm

Or
C:\>cd UXIMWebFirm

Note: The batch and firmware files will be in same folder location.

12. Type the name of the batch file “upload” and press **Enter**. The commands will be shown on the screen and each of the six files will load with a “**transfer successful**” message.

C:\>cd UXIMWebFirm

Or

C:\>cd UXTMWebFirm

C:\UXIMWebFirm>upload

Or

C:\UXTMWebFirm>upload

C:\UXIMWebFirm>TFTP -i 192.168.1.2 PUT web6.cob WEB6

Or

C:\UXTMWebFirm>TFTP -i 192.168.1.2 PUT web6.cob WEB6
Transfer successful: 26589 bytes in 3 second(s), 8863 bytes/s

C:\UXIMWebFirm>TFTP -i 192.168.1.2 PUT web4.cob WEB4

Or

C:\UXTMWebFirm>TFTP -i 192.168.1.2 PUT web4.cob WEB4
Transfer successful: 47194 bytes in 5 second(s), 9438 bytes/s

C:\UXIMWebFirm>TFTP -i 192.168.1.2 PUT web3.cob WEB3

Or

C:\UXTMWebFirm>TFTP -i 192.168.1.2 PUT web3.cob WEB3
Transfer successful: 60041 bytes in 7 second(s), 8577 bytes/s

C:\UXIMWebFirm>TFTP -i 192.168.1.2 PUT web2.cob WEB2

Or

C:\UXTMWebFirm>TFTP -i 192.168.1.2 PUT web2.cob WEB2
Transfer successful: 59536 bytes in 8 second(s), 7442 bytes/s

C:\UXTMWebFirm>TFTP -i 10.203.123.2 PUT web1.cob WEB1

Or

C:\UXTMWebFirm>TFTP -i 10.203.123.2 PUT web1.cob WEB1
Transfer successful: 59797 bytes in 7 second(s), 8542 bytes/s

C:\UXIMWebFirm>TFTP -i 10.203.123.2 PUT xptex.rom X5

Or

C:\UXTMWebFirm>TFTP -i 10.203.123.2 PUT xptex.rom X5
Transfer successful: 131072 bytes in 15 second(s), 8738 bytes/s

C:\UXIMWebFirm>

Or

C:\UXTMWebFirm>

13. Check the installation by establishing a browser connection to the IP address of the UXIM/UXTM set in step 3 and confirm that the Web page displays and the correct version appears in the UXIM/UXTM Unit Information window under Firmware Version. The upgrade is now complete.
14. When logging into the UXIM/UXTM Web application, you must to enter **both** a password and a user name where previously, only a password was required in the previous version. You must know the old password from when the prior upgrade/update was done. **Important:** The old password will remained intact and will not reset to the default password. The default user name is “admin” and the default password is “alber”.

Note: Check the firmware revision level by opening the **Version.txt** file in **UXIMWebFirm** or **UXTMWebFirm** folder. This will give you the reference to the version number that is known prior to update. Or, check the version of the firmware in the UXIM/UXTM before performing the update. Verify that the Version changed on completion of the update.

15. Restore the UXIM/UXTM Network settings noted in step 3 on your system after the upgrade is complete.
16. Be sure to revert your computer network settings to automatically obtain an IP Address or the IP address noted in step 5 as shown in the window below. For more information on changing the TCP/IP settings refer to <http://windows.microsoft.com/en-US/windows-vista/Change-TCP-IP-settings>

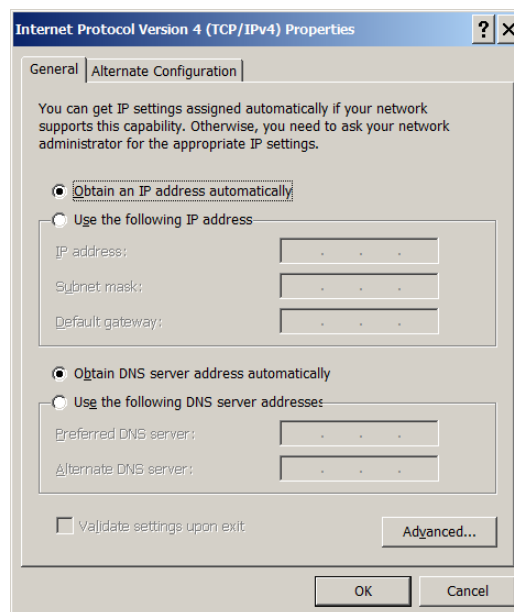


Figure 23 – Internet Protocol Window

13.1 Upgrade the Web Server Firmware on the Network Interface Cards if Network Access is Available.

If access to the network is available, use these upgrade procedures for upgrading the UXIM or UXTM XPort Firmware.

1. Locate the latest firmware upgrade file.

2. Unzip the latest “UXIM_UXTM_XPort_XXX.zip” file to your local drive.
3. Right click the **upload.bat** file and click **Edit** to modify it and replace the IP address XXX.XXX.XXX.XXX with the IP Address of your UXIM or UXTM unit.

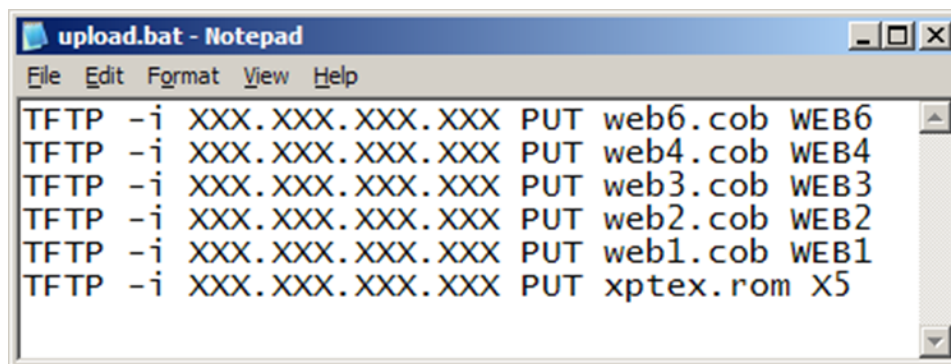


Figure 24 – Upload.bat Notepad Window

4. Run the **upload.bat** file and then login to your UXIM/UXTM and check the version under **Unit Information**. Verify that the new server version appears in the **Server Version** field.

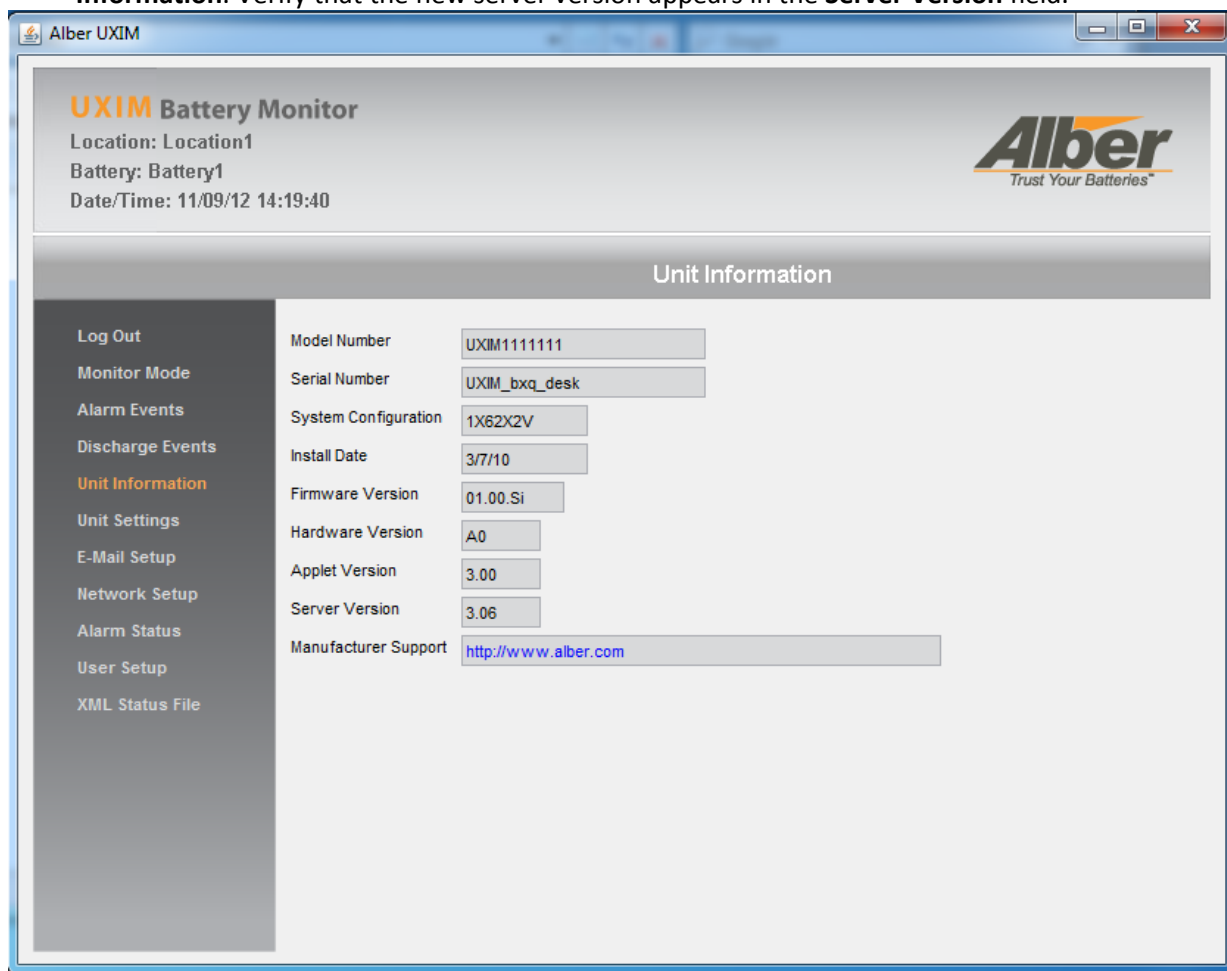


Figure 25 – Unit Information to Verify Upgrade

14. Viewing and Saving the UXIM/UXTM Status File in XML

The UXIM/UXTM has an option to view and save the UXIM/UXTM status report files in XML format. These files can be sent out as emails. To create an UXIM/UXTM status report in XML format do the following:

1. On the left pane of the **UXIM/UXTM** window, in the system navigation area, click **XML Status File**. The Windows Internet Explorer browser window appears showing the status details about the UXIM/UXTM status in XML format. The UXIM/UXTM status report can be viewed and saved.

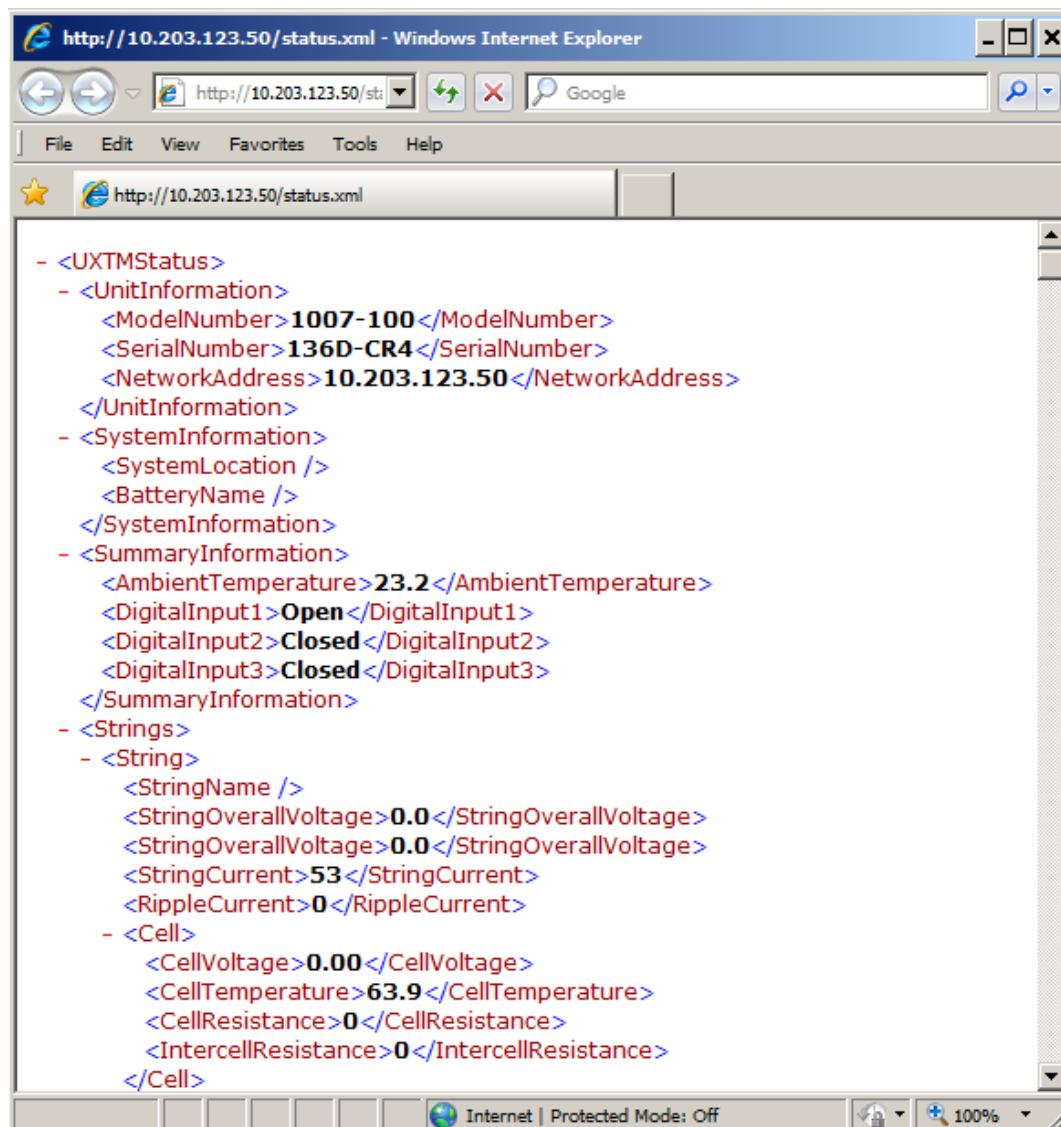


Figure 26 – UXIM/UXTM XML Status File

Information shown on this UXIM/UXTM status report includes:

- **Unit information** - reports the model number, serial number and network address.
- **System information** - reports the location name, battery name and string name.
- **Summary information** - reports the ambient temperature, digital input 1 through 3 and whether it is open or closed.
- **String information** - reports the string name, overall voltage, string current, ripple current, cell number, cell voltage, cell temperature, cell resistance, and intercell resistance.
- **Alarm Events** - reports the start, date and time, parameters, type, string and cell name and value.
- **Discharge Events** - reports the start and end time, string name, low overall voltage, high intercell and end ambient temperature.

To save and e-mail the UXIM/UXTM Status report, do the following:

1. On the UXIM/UXTM report, click **File** then **Save As...** save the file to a location on your local disk and create an email and browse to attach the status.xml file to an email. To automatically email the UXIM/ UXTM report, refer to the Email setup section for including data files into an email.

15. For More Information about Alber

Use the following links to access additional information about Alber and all the products, services and training we provide.

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Technical Information Library

<http://www.alber.com/TechLibraryMainPage.htm>

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