



Franklin Electric
GRID SOLUTIONS

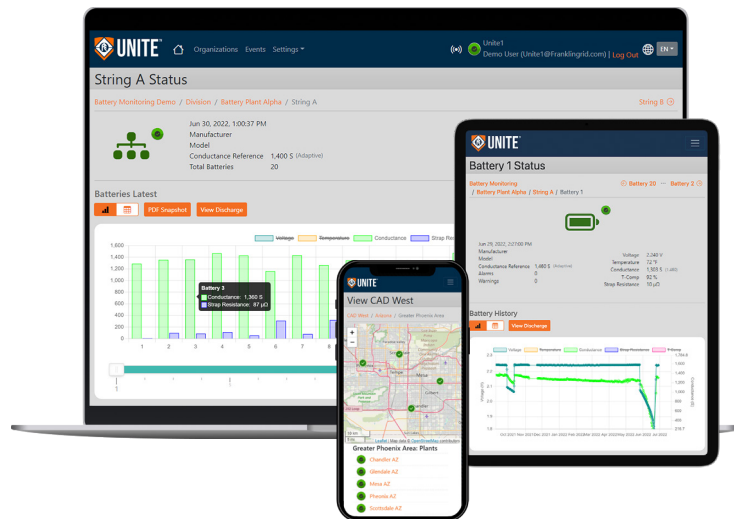
BATTERY ASSET MANAGEMENT



UNITE™

BATTERY ASSET MANAGEMENT DATABASE

UNITE™ is a sophisticated IoT database that features advanced data visualization tools for Franklin Electric handheld battery testers and battery monitoring systems. UNITE™ provides centralized data storage for an entire network of battery plants, enabling remote analysis and reporting from a centralized location.



ENHANCED
DATA VISUALIZATION



NETWORK
OVERSIGHT



SIMPLIFIED
BATTERY TESTING

HIGHLIGHTS & TECHNOLOGY

UNITE™ presents detailed views of all key performance indicators for each plant, string, and individual battery within your network. Various battery attributes can be selected and compared among batteries within the string for quick visualization of performance trends.

Visualize your entire plant network geographically in a single map view. Visually confirm the status of all plants and quickly key in on those that may require attention or maintenance.

UNITE™ provides a realtime diagnostic snapshot of all key battery health indicators. Additionally, a historical timeline of all previous readings is displayed, allowing you to dive into any point in time to review details.

Quickly review the status of your entire network with green (normal), yellow (warning), and red (alarm) status indicators at the plant, string, and individual battery level. Each alarm or warning status provides a direct link to a list of events for quick targeting and diagnosis of the problem area.

At the individual battery level, UNITE™ provides a realtime diagnostic snapshot of all key battery health indicators. Additionally, a historical timeline of all previous readings is displayed, allowing you to dive into any point in time to review details.

When paired with a CELLTRON™ Advantage Digital Battery Tester, UNITE™ enables users to wirelessly pre-program and export plant and string details to the handheld tester, then upload battery test results to UNITE™ via Wifi before leaving the site. No cords, no apps, no return trips for undiscovered testing errors.

When paired with a CELLGUARD™ Battery Monitoring System, UNITE™ provides a graphical timeline view of every string discharge event, including duration, voltage, temperature, and current data for advanced performance analysis and NERC compliance reporting.

APPLICATIONS



DATA CENTERS



CRITICAL POWER



TRANSMISSION/
DISTRIBUTION



TELECOMMUNICATIONS

With a single click, a battery string report PDF is generated, including the latest battery data, a string overview table and graph, battery reference information, and battery threshold details.



SPECIFICATIONS

GENERAL

Navigation Hierarchy

- Organization > Optional Hierarchy Entities > Plant > String > Battery

Hardware Compatibility

- CELLGUARD™ Wireless Battery Monitoring System (Gen 3)
- CELLGUARD™ Wired Battery Monitoring System
- CELLTRON™ Advantage Digital Battery Testers
- CELLTRON™ Advantage Battery Testers

AVAILABLE DATA DISPLAYED

Organization Overview

- View all CELLGUARD™ Wireless Battery Monitoring System and CELLTRON™ Advantage Digital Battery Tester organizations
- Status: Green = Normal, Yellow = Warning, Red = Alarm
- View a map of each plant within the organization
- Manage each organization:
 - Add users
 - Add monitoring hardware and tester devices

Plant Map View

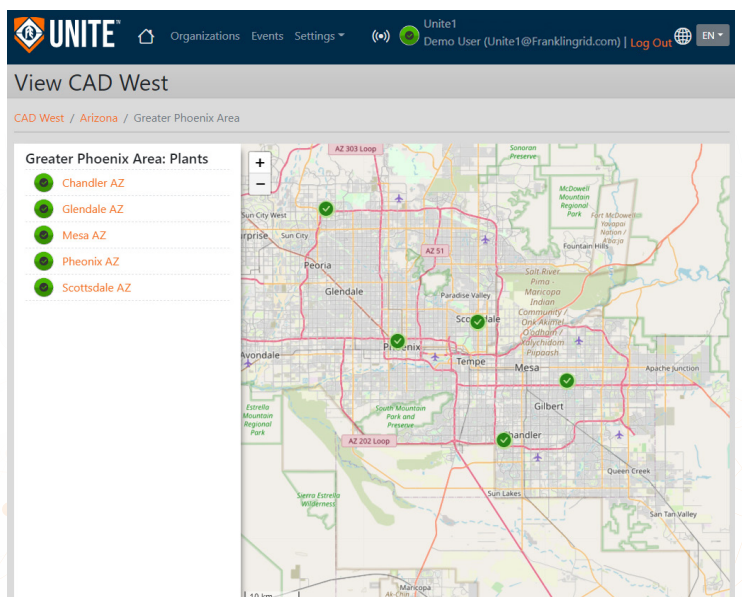
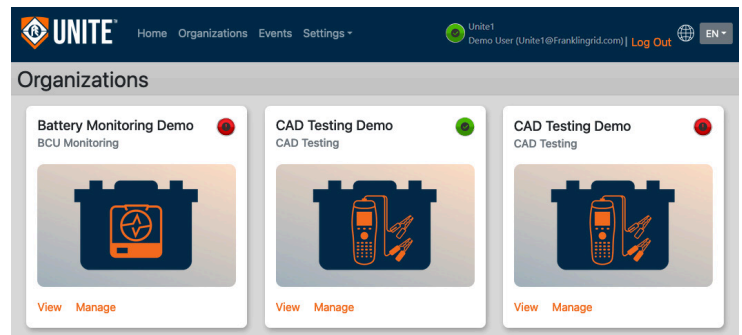
- View all plants geographically in a map view
- Click on each plant for direct access
- Status: Green = Normal, Yellow = Warning, Red = Alarm
- Plants located closely are clustered, zoom in to display individual plants

Security

- Hosted on the Microsoft® Azure cloud, UNITE™ features state-of-the-art, multi-layered platform security and multi-factor authentication user login
- Azure is FedRAMP (Federal Risk Authorization Management Program) certified which is the driving criteria for third-party hosting services on behalf of major utilities and NERC

Device Compatibility

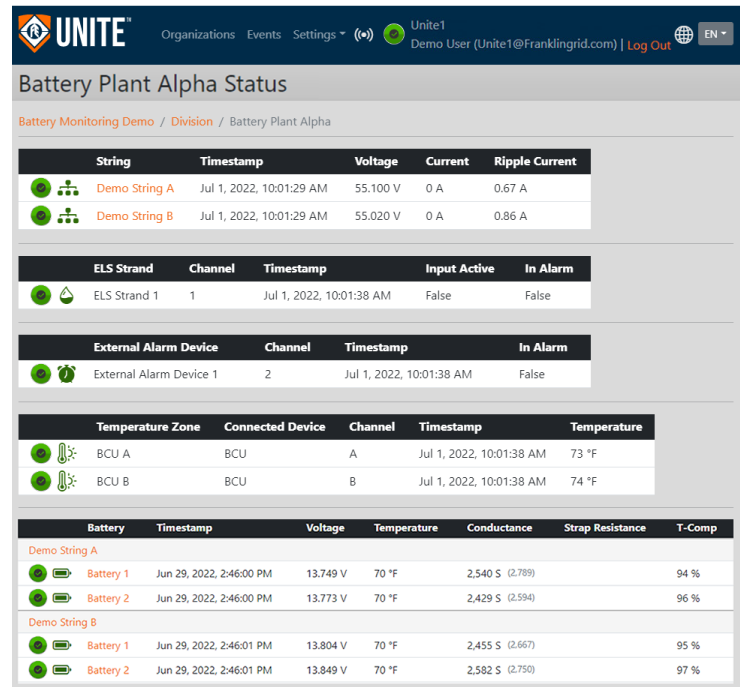
- Scales to fit any computer or connected device – including smartphones, tablets, notebooks and workstations





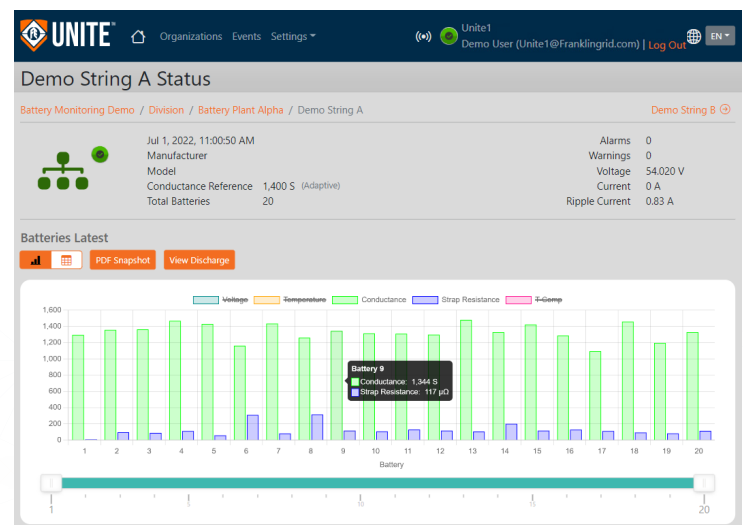
Plant Overview

- The present status of all strings, devices, and batteries within a plant can be viewed by selecting it from within the map view
- Status: Green = Normal, Yellow = Warning, Red = Alarm
- Warning or Alarm status provides a direct link to a list of events in the history
- The following latest measurements are displayed:
 - String (Voltage, Current & Ripple Current)
 - ELS Strand (Input State, Alarm State)
 - External Alarm Device (Alarm State)
 - External Analog Device (Value)
 - Ambient Temperatures Zone (Temperature)
 - Battery Voltage, Temperature, Conductance, Strap Resistance, Conductance Temperature-Compensated Percentage (T-Comp)



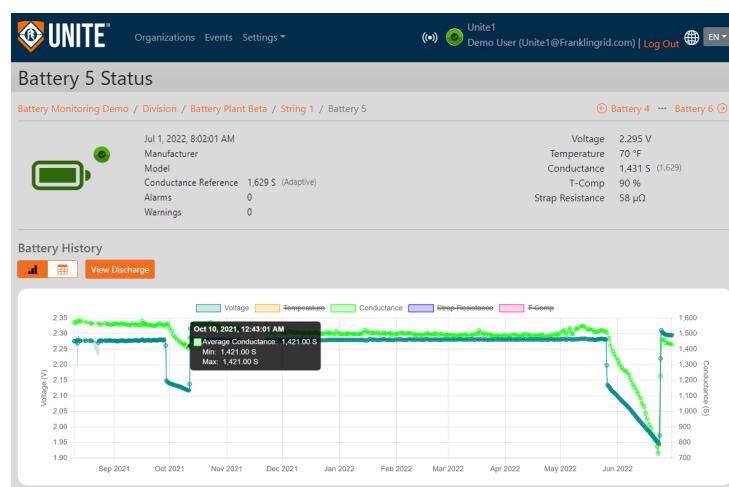
String Overview

- The present status of a specific string can be viewed by selecting it from the list within the plant
- Status: Green = Normal, Yellow = Warning, Red = Alarm
- Warning or Alarm status provides a direct link to a list of events in the history
- Within the selected string graph, a view of specific data can be turned on or off including:
 - Voltage, Temperature, Conductance, Strap Resistance, Conductance Temperature-Compensated Percentage (T-Comp)
- Hover over any data point for a detailed view
- The range of batteries displayed in the graph can be changed by sliding the upper and lower limits to the left or right



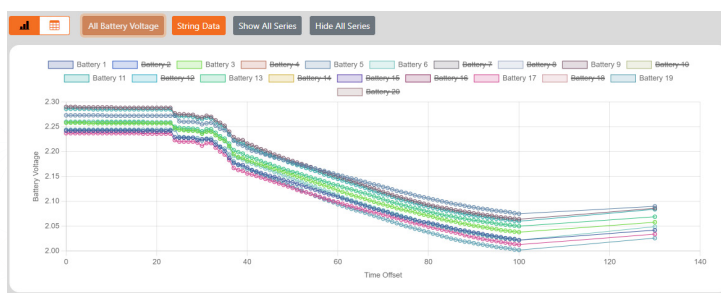
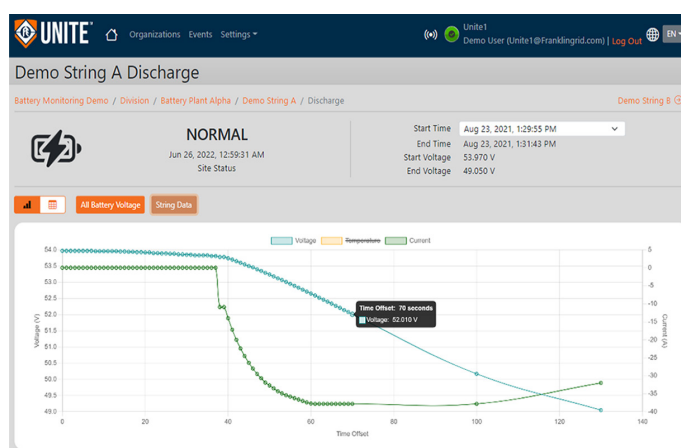
Battery Overview

- The present status of a specific battery can be viewed by selecting it from the list within the string
- Status: Green = Normal, Yellow = Warning, Red = Alarm
- Warning or Alarm status provides a direct link to a list of events in the history
- Within the selected battery graph, a view of specific data can be turned on or off including:
 - Voltage, Temperature, Conductance, Strap Resistance, Conductance Temperature-Compensated Percentage (T-Comp)
 - Hover over any data point for a detailed view



Discharge View

- The details of a discharge can be viewed by clicking "View Discharge" within a string
- Discharge status including start time, end time, start voltage, and end voltage can be viewed
- Within the selected string data discharge graph, the view of specific data can be turned on or off:
 - Voltage, Temperature, and Current
 - Hover over any data point for a detailed view
- All battery voltage within a discharge can be viewed graphically
 - Each battery voltage can be turned on or off individually or as a group
 - Hover over any data point for a detailed view





Events View

- View all events, active and inactive, within the organization
- Filter by event state, event severity, organization, or date
- Click through to an individual event to view/enter notes

Event Types

● = Normal ● = Warning ● = Alarm

Plant Level Event Types

- Plant Is In Charge Mode
- Plant Is In Discharge Mode
- Firmware Upgrade Required for UNITE™ Connection
- Plant Requires Validation

String Level Event Types

- Communication failure
- High Voltage
- Low Voltage
- High Current
- Low Current

Temperature Zone Level Events

- Low Temperature
- High Temperature

ELS Strand Level Events

- ELS Strand Active

Battery Level Event Types

- Communication failure
- High Conductance
- Low Conductance
- High Resistance
- Low Resistance
- High Conductance %
- Low Conductance %
- High Temperature
- Low Temperature
- High Voltage
- Low Voltage

UNITE

Home

Organizations

Events

Settings -

Unite1

Demo User (Unite1@franklingid.com) | [Log Out](#)

EN

Events

Event State

Any

Event Severity

Any

Event Date





07/07/2021 to 07/07/2022


Event Organization

Any

Submit

Filtering and displaying timestamps using timezone: United States - New York

Description	Details	State	Occurred
 High Conductance	Battery Monitoring Demo TEST STATION B: ASSET 1 String 1 Battery 31	Inactive	Jul 4, 2022, 2:52:09 AM
 High Conductance	Battery Monitoring Demo TEST STATION C: ASSET 1 String 1 Battery 25	Inactive	Jul 3, 2022, 8:51:07 PM
 High Temperature	Battery Monitoring Demo Battery Plant Beta String 1 Battery 16	Inactive	Jun 27, 2022, 2:12:45 AM
 Low Voltage	Battery Monitoring Demo Battery Plant Beta String 1 Battery 32	Inactive	Jun 16, 2022, 8:41:33 PM




UNITE™


Organizations

Events


Settings ▾



Unite1



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EN ▾

Event Information

Priority

Description

Details

State

Occurred

Notes

Warning

Low Voltage

BCU Saco Organization - UPS 12V Sensor Array: String 1 Battery 38

Active

Jul 1, 2022, 8:36:12 AM

Update

External Alarm

Device Level Events

- External Device Warning
- External Device Alarm

External Analog Device Level Events

- External Analog Device High Warning
- External Analog Device High Alarm
- External Analog Device Low Warning
- External Analog Device Low Alarm

PDF Snapshot String Report

- String overview in both table and graph format
- Includes battery reference information and thresholds

UNITE

Company Name Here

BATTERY STRING REPORT

BATTERY STRING REPORT

Last Available

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Site/Plant

Site Name

Battery Monitoring Demo

Site ID

64567450333209

Plant Name

Battery Plant Alpha

Number of Strings

2

ELS Strands

ELS Strand

Channel

Timestamp

Input Active

ELS Strand 1

2

10/26/2021 19:08

External Alarm Devices

Device

Channel

Timestamp

External Alarm Device 1

1

10/26/2021 19:08

String

String Name

Demo String A

Battery Count

20

Active Warnings

0

Batteries

String Thresholds

High Alarm Threshold

High Warning Threshold

No results available

Low Warning Threshold

Low Alarm Threshold

Latest String Data

Timestamp

Voltage

Current

Ripple Current

Temperature Zone A

Temperature Zone B

11/26/2021 16:06

(V)

(A)

(A)

(°F)

(°F)

Batteries

Battery Information

Name

Manufacturer

Model

Type

Voltage Reference

Conductance Reference

Date of Manufacture

Battery 1

Test

Test

Custom

2.000

1.400

Battery 2

Test

Test

Custom

2.000

1.400

Battery 3

Test

Test

Custom

2.000

1.400

Battery 4

Test

Test

Custom

2.000

1.400

Battery 5

Test

Test

Custom

2.000

1.400

Battery 6

Test

Test

Custom

2.000

1.400

Battery 7

Test

Test

Custom

2.000

1.400

Battery 8

Test

Test

Custom

2.000

1.400

Battery 9

Test

Test

Custom

2.000

1.400

Battery 10

Test

Test

Custom

2.000

1.400

Battery 11

Test

Test

Custom

2.000

1.400

Battery 12

Test

Test

Custom

2.000

1.400

Battery 13

Test

Test

Custom

2.000

1.400

Battery 14

Test

Test

Custom

2.000

1.400

Battery 15

Test

Test

Custom

2.000

1.400

Battery 16

Test

Test

Custom

2.000

1.400

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CELLTRON™ ADVANTAGE DIGITAL BATTERY TESTER CAPABILITIES

Add a CELLTRON™ Advantage Digital Battery Tester to the Organization

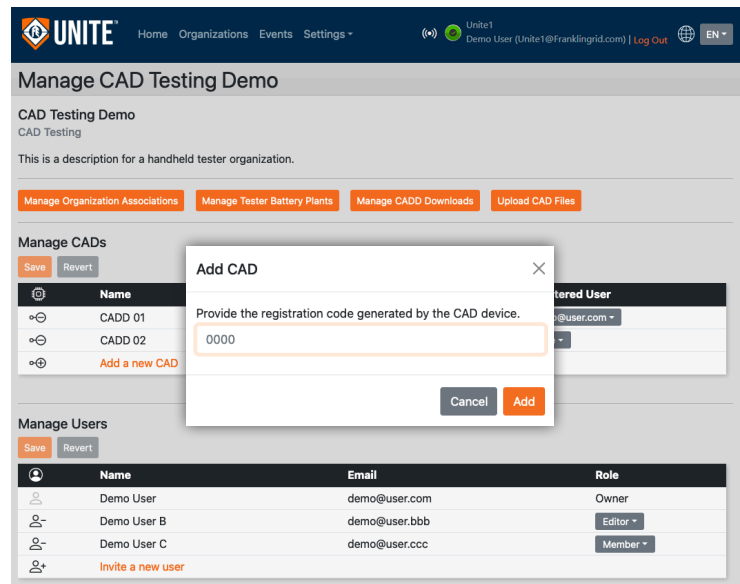
- Add a CAD by entering the registration code of the CAD device
- Invite a new user by generating a sharable invite link

Upload Hierarchy (optional)

- Import an auto hierarchy spreadsheet to carry over existing organizational structure of entities, plants, strings, batteries, and battery specifications

Manage Tester Battery Plants

- Add a plant
 - Enter the plant name and set the location
 - Enter battery specifications or use default specifications for new strings
 - Enter battery type, manufacturer, and model
 - Enter conductance reference and voltage reference
- Add strings
 - Enter string name, installation date, warranty date, enable or disable adaptive reference
 - Enter battery specifications or use default specifications for new strings
- Enter thresholds
 - String voltage, battery voltage, temperature, conductance, strap resistance, temperature-compensated conductance
- Add batteries
 - Enter serial numbers, manufacturer dates, battery specifications (can be entered as a batch)



UNITE Home Organizations Events Settings • Unite1 Demo User (Unite1@Franklingrid.com) | Log Out EN •

Manage CAD Testing Demo

CAD Testing Demo
CAD Testing

This is a description for a handheld tester organization.

Manage Organization Associations Manage Tester Battery Plants Manage CADD Downloads Upload CAD Files

Manage CADs

Save Revert

Name	Registered User
CADD 01	demo@user.com
CADD 02	demo@user.com
Add a new CAD	

Add CAD

Provide the registration code generated by the CAD device.

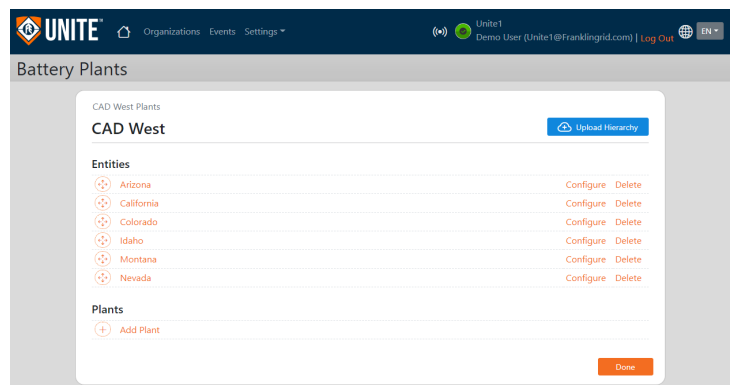
0000

Cancel Add

Manage Users

Save Revert

Name	Email	Role
Demo User	demo@user.com	Owner
Demo User B	demo@user.bbb	Editor •
Demo User C	demo@user.ccc	Member •
Invite a new user		



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Battery Plants

CAD West Plants

CAD West Upload Hierarchy

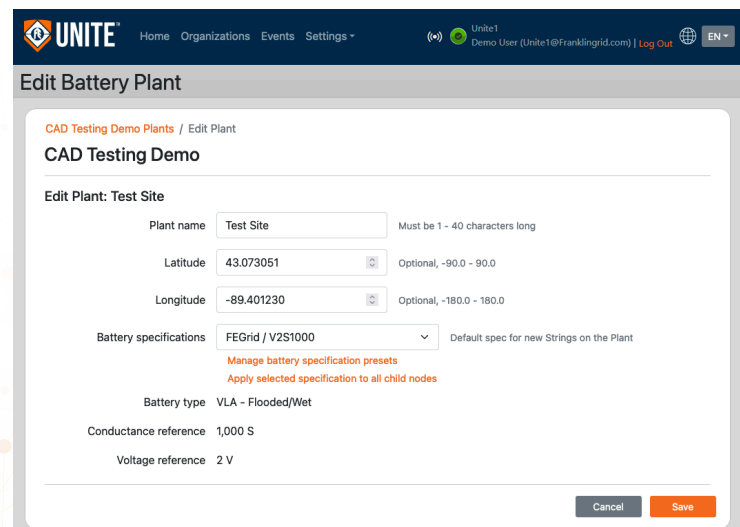
Entities

Arizona	Configure	Delete
California	Configure	Delete
Colorado	Configure	Delete
Idaho	Configure	Delete
Montana	Configure	Delete
Nevada	Configure	Delete

Plants

[Add Plant](#)

Done



UNITE Home Organizations Events Settings • Unite1 Demo User (Unite1@Franklingrid.com) | Log Out EN •

Edit Battery Plant

CAD Testing Demo Plants / Edit Plant

CAD Testing Demo

Edit Plant: Test Site

Plant name Test Site Must be 1 - 40 characters long

Latitude 43.073051 Optional, -90.0 - 90.0

Longitude -89.401230 Optional, -180.0 - 180.0

Battery specifications FEGrid / V2S1000 Default spec for new Strings on the Plant

Manage battery specification presets
Apply selected specification to all child nodes

Battery type VLA - Flooded/Wet

Conductance reference 1,000 S

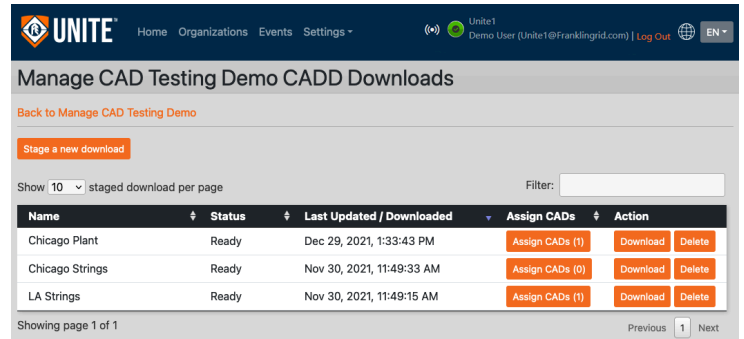
Voltage reference 2 V

Cancel Save



Manage CAD Battery Tester Downloads & Uploads

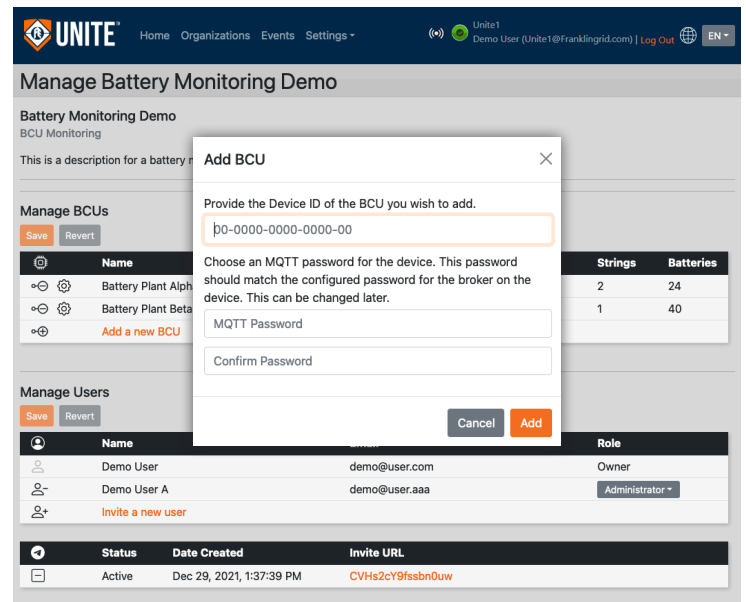
- When paired with a CELLTRON™ Advantage Digital Battery Tester, UNITE™ enables users to wirelessly pre-program and export plant and string details to the handheld tester, then upload battery test results to UNITE™ via Wifi before leaving the site
- UNITE™ is also compatible with legacy CELLTRON™ Advantage Battery Testers
 - Enables manual upload of CDI and CDO files, for uploading plants / data from legacy CELLTRAQ or uploading measurements to existing UNITE plants.



CELLGUARD™ BATTERY MONITORING SYSTEM CAPABILITIES

Add a new CELLGUARD™ Base Control Unit (BCU) to the Organization

- Add a BCU by entering the BCU device ID, entering the MQTT password, and setting the location
- Invite a new user by generating a sharable invite link



ORDERING INFORMATION

Model	Description
UNITE-Y	UNITE™ annual subscription for 1 device, unlimited users and plants

Note: Calculate the number of credits needed by using the online calculator at <https://www.franklingrid.com/en/products/battery-testers/unite-asset-management-database/#order-info/>