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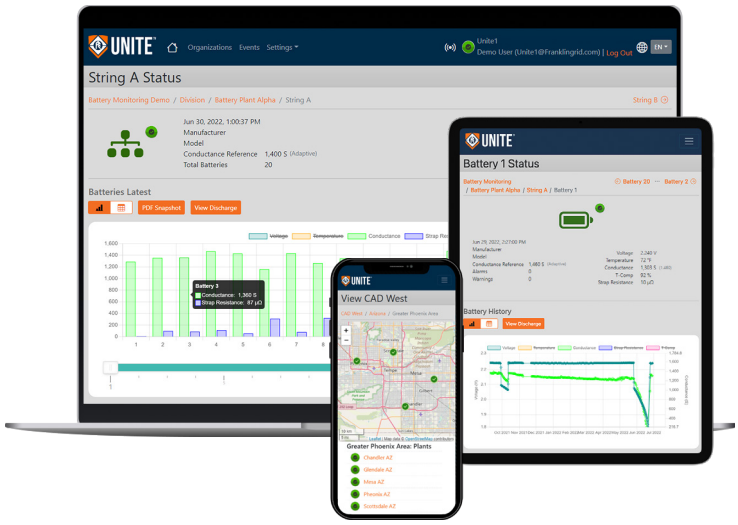
GRID SOLUTIONS

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 heath 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 heath 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.

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.

APPLICATIONS

DATA CENTERS

CRITICAL POWER

TRANSMISSION/ DISTRIBUTION

TELECOMMUNICATIONS

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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

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

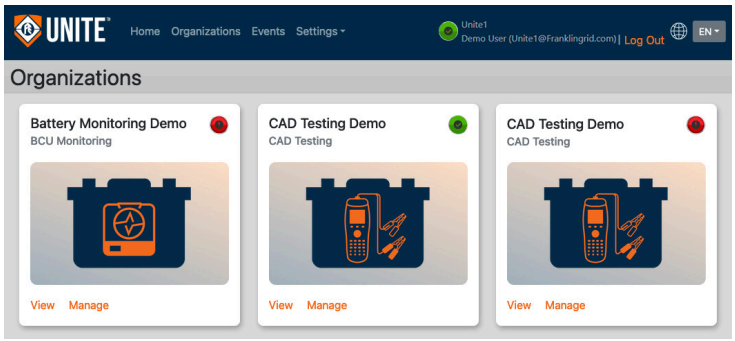
Device Compatibility

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

AVAILABLE DATA DISPLAYED

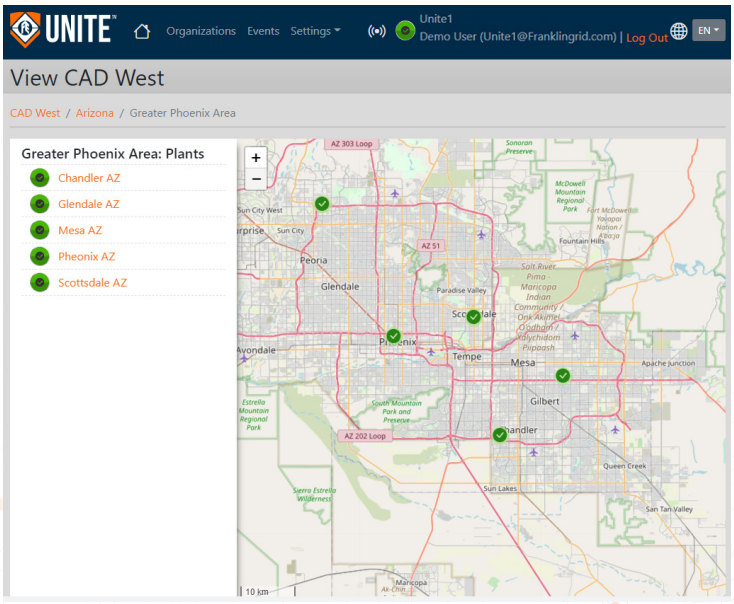
Organization Overview

- 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



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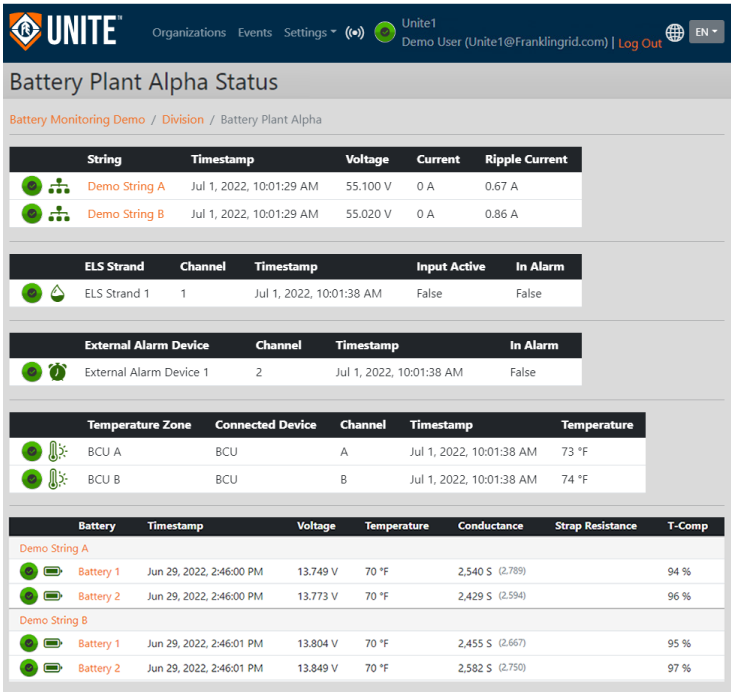
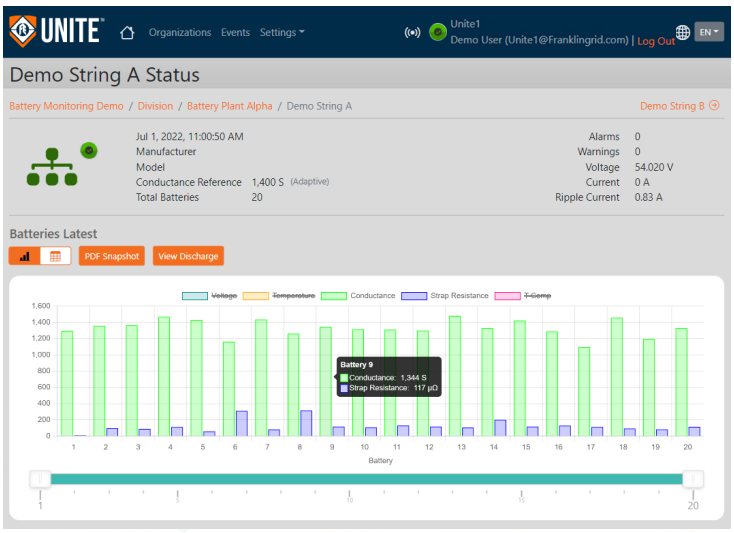
Plant Overview

- 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



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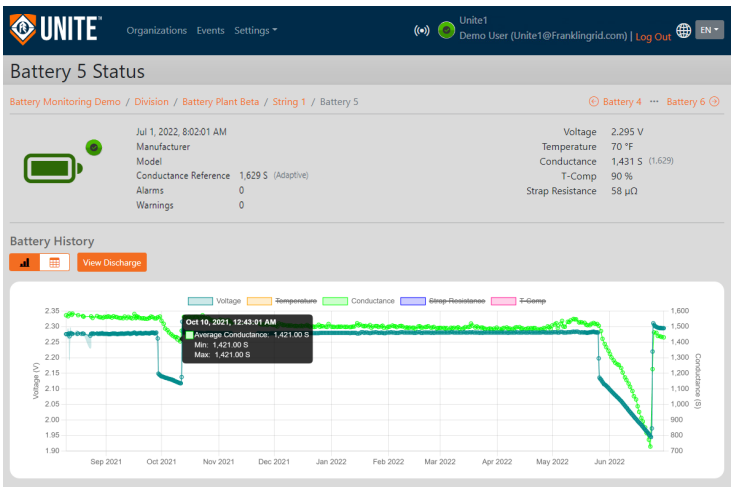
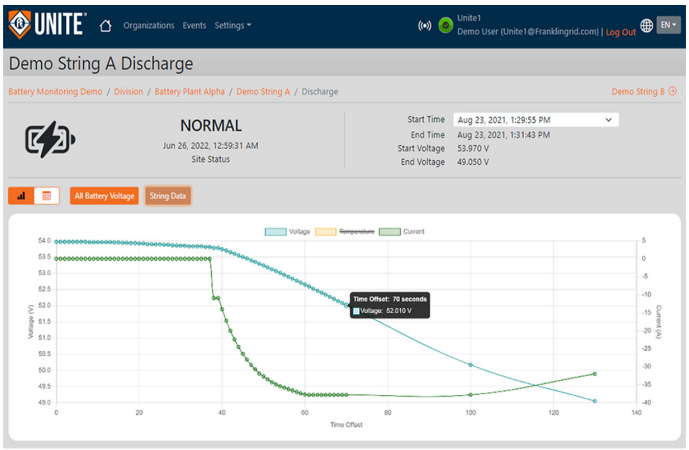
Battery Overview

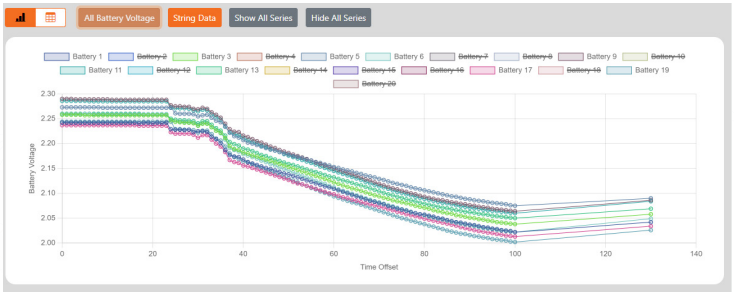
- The present status of a specific battery can be viewed by selecting it from the list within the string
- Status: Green = Normal, Yellow = Warning, Red = Alarm
- Warning or Alarm status provides a direct link to a list of events in the history
- Within the selected battery graph, a view of specific 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





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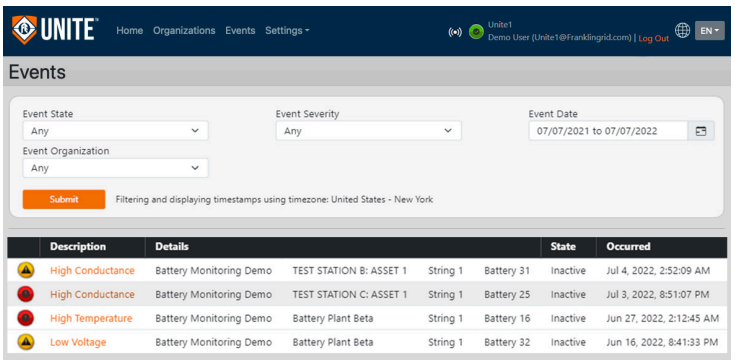
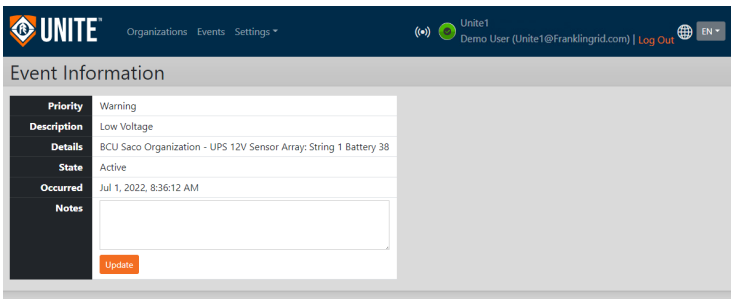
Events View

- 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

External Alarm Device Level Events

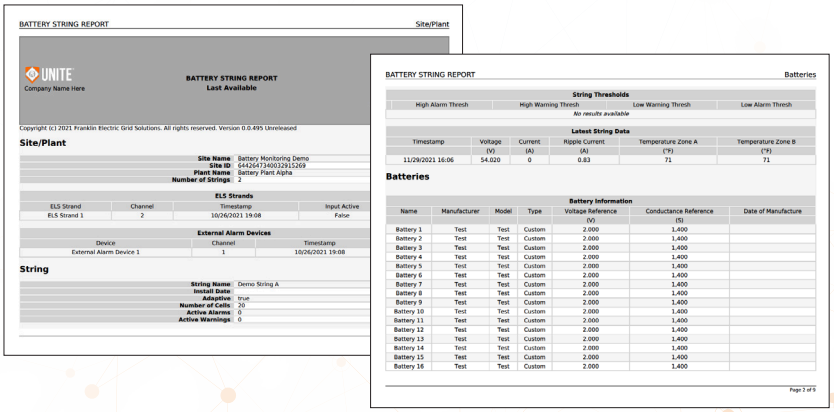
- External Device Warning
- External Device Alarm

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



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CELLTRON™ ADVANTAGE DIGITAL BATTERY TESTER CAPABILITIES

Add a CELLTRON™ Advantage Digital Battery Tester to the Organization

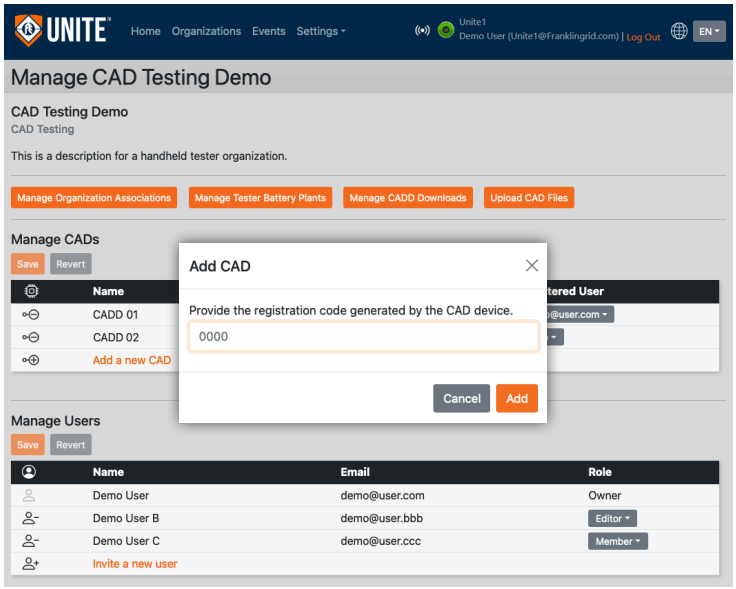
- Add a CAD by entering the registration code of the CAD device
- Invite a new user by generating a sharable invite link

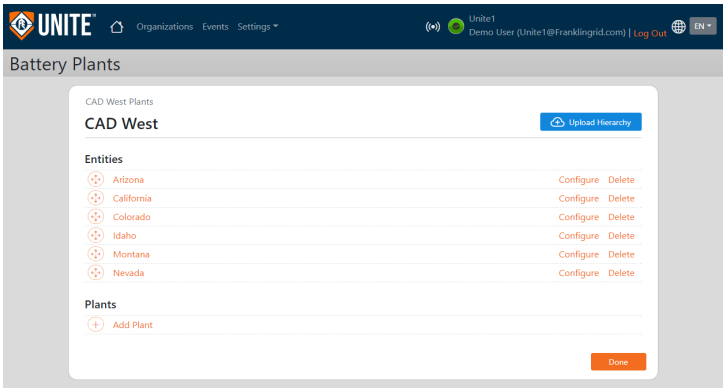
Upload Hierarchy *(optional)*

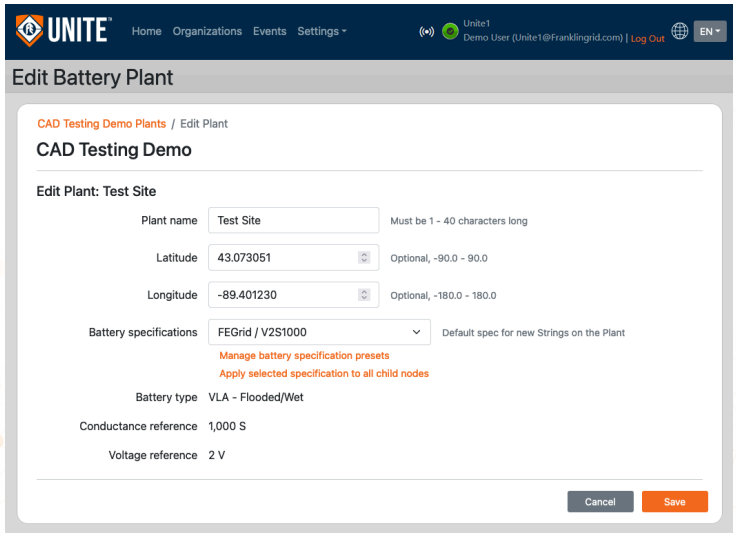
- Import an auto hierarchy spreadsheet to carry over existing organizational structure of entities, plants, strings, batteries, and battery specifications

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)







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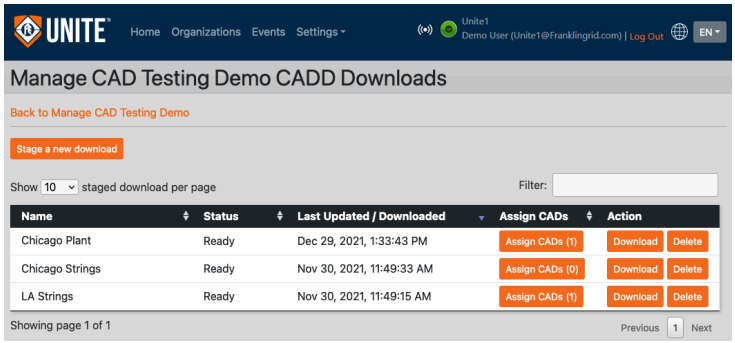
Manage CAD Battery Tester Downloads & Uploads

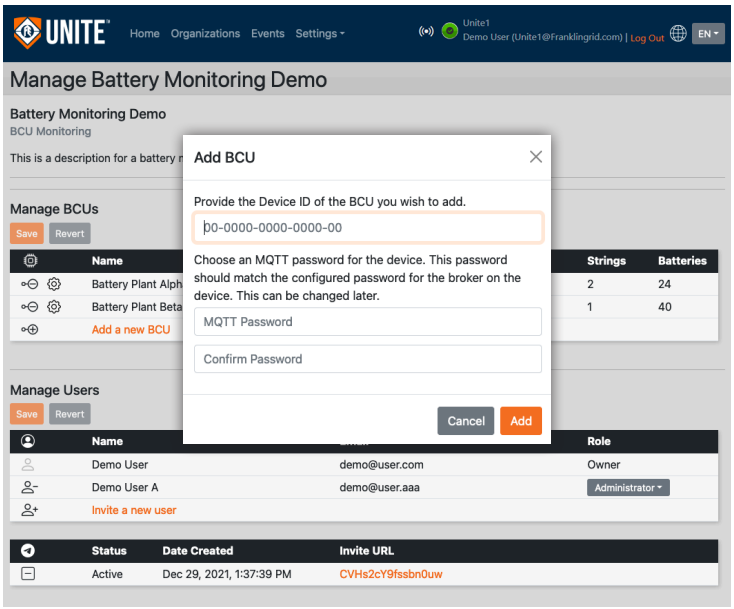
- When paired with a CELLTRON™ Advantage Digital Battery Tester, UNITE™ enables users to wirelessly pre-program and export plant and string details to the handheld tester, then upload battery test results to UNITE™ via Wifi before leaving the site
- UNITE™ is also compatible with legacy CELLTRON™ Advantage 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/

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