# EG4® MONITOR CENTER

### OVERVIEW

The EG4 Monitor Center has new features that allow the end-user to easily check real-time system information regarding inverters, batteries, and other informative values. The images and descriptions in this guide will provide an overview of the EG4 Monitor Center, its settings and what they entail.

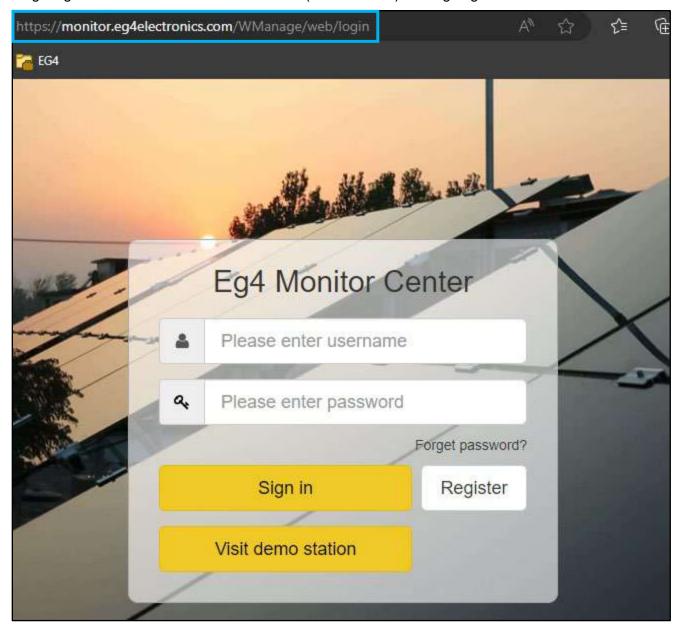


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### 1. MONITOR CENTER OVERVIEW

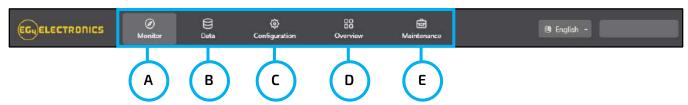
The EG4® Monitor Center is a cloud-based software that is accessible using a web browser. Begin by navigating to the EG4 Monitor Center website (*shown below*) and signing in.





#### NOTE:

Certain features shown in this guide are only available on select EG4® inverter models.



Once signed in to the Monitor Center, the user is placed on the default landing page. This page is referred to as the "Monitor" tab. Located at the top of the Monitor Center page, there are 5 tabs that can be selected.

- **A. Monitor** The "Monitor" tab displays Solar Yield, Battery Discharge/Charge, Feed-In Energy/Import, Consumption, and real time System Information.
- **B.** Data The "Data" tab contains detailed charts and data for inverters, solar arrays (if applicable) and batteries. This tab also has 5 pages.
  - Chart Displays various parameters in chart format over a 24-hour period. There are separate charts for "PV Side," "Battery,"
     "AC Side," "Backup Output," "Gen Side," and "Internal Sample."
  - Energy Displays how key energy parameters have varied over time.
  - Data History Displays the measured technical values of PV, battery, load, and grid for users or their distributor's examination to promptly address any potential issues.
  - Local Data The data captured during the offline periods are displayed in the "Local data" section (loss of internet or Wi-Fi).
  - Event History The "Event History" section displays a timeline of Notice and Fault events.

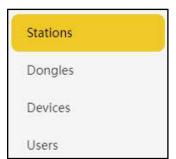




#### NOTE:

The "Data" tab will only display information on solar arrays when using Tlgo Optimizers.

- **C. Configuration** The "Configuration" tab is designated for users to manage their station, dongle, and user information. This tab has 4 pages.
  - **Stations** The "Stations" section will show all stations linked to the account. Selecting a station name will display all inverters under that station or location.
  - **Dongles** Users can add the dongle Serial Number (SN) in the station if they have more than one inverter in the station.
  - **Devices** Users can view the general data for each of the inverters tied to the user's account.
  - Users This page shows a full list of users, distributors, and any other roles linked to the account.



- **D. Overview** The "Overview" tab allows EG4® or its distributors to quickly monitor system-wide data for their end users, such as solar yields, battery discharging, and other factors. This tab will have 2 pages.
  - Station Overview All stations linked to the account can be found here.
  - Device Overview All inverters linked to the account can be found here.
- **E. Maintenance** The "Maintenance" tab allows the end-user to set up and update their system. This tab will have 3 pages.
  - Remote Set This page will allow end users to set up their system for their specifications and uses.
  - **Weather Optimize** This page will allow the end user to set up their system for the best results according to weather conditions.
  - **Remote Update** This page shows all firmware updates for the system, past or present.





To access more on the "Data", "Configuration", "Overview", and "Maintenance" tabs, navigate to the corresponding sections in this document. This provides the end user more information of what each tab does and the information within each subpage.

#### 2. MONITOR TAB

After logging in to the EG4® Monitor Center and setting up the station, confirm that the correct inverter station has been selected. The default selection upon logging in will take the end-user to the "Monitor" tab, showing real time System Information, with tabs across the top of the screen. See image below.



#### NOTE:

Settings will vary depending on which inverter and firmware version is installed.



#### 2.1 SOLAR YIELD

The data in this section shows power generated by the solar array. AC coupled inverters will display the power generated by the grid-tied inverter. To accurately show data, the PV CT clamp for the AC ESS inverter will have to be installed. When the "Solar Yield" image is selected, the area displays the amount of solar energy used that day and a second mouse click displays the total Solar Yield since commissioning the system (see images below). Solar Yield data also includes the percentage portion of load supplied, total charge of battery, and total energy exported.





Total since commissioning



### 2.2 BATTERY DISCHARGE/CHARGE

The data in this section shows the charge and discharge of energy from the battery bank. When the battery picture is selected, the display will switch between Battery Discharge and Battery Charge showing totals for that day and since commissioning.





### 2.3 FEED-IN ENERGY/IMPORT

Displays energy exported to grid for that day and since commissioning. When the image is selected, it shows energy imported from the grid for that day and since commissioning.





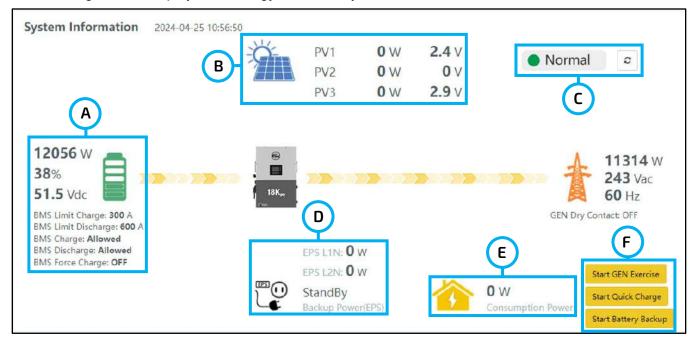
#### 2.4 CONSUMPTION

The data in this section displays the total energy consumption of the location for that day and since commissioning.



#### 2.5 SYSTEM INFORMATION

The image below displays live energy data with dynamic flows.



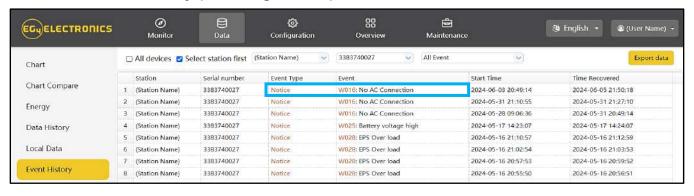
- **A. Battery Information** When the battery image is selected, the display will show battery charge and discharge limitations. The battery image color represents the following: Green = Healthy, Yellow = Warning, Red = Fault.
- **B.** Solar Yield The data will show the watts and volts that each array in the system is producing.
- **C. Status** The end-user can see what state their inverter is in.
  - **Grey color:** Inverter is offline and will stop power input and output.
  - Green color: Inverter is functioning properly.
  - Orange color: Inverter has experienced an event with a level of Notice or Warning. See note below.
  - Red color: Inverter has a fault.





#### NOTE:

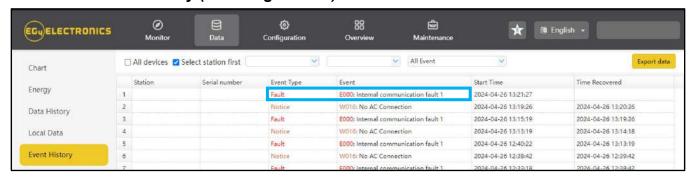
Selecting the "Notice" event type will display the event(s) within the Data Tab under Event History (see image below).





#### NOTE:

Selecting the "Fault" event type will display the event(s) within the Data Tab under Event History (see image below).



**EPS** – The system converts power from battery/solar to AC line 1 and 2. EPS L1N and L2N will display the amount of watts consumed on each line.

- **D. Utility/Grid** Displays the grid input is present.
- **E.** Consumption Power When the inverter is running in bypass mode, this value shows the power being pulled from the grid.
- **F. Start Functions** Three start options for Gen Exercise, Quick Charge and Battery Backup.
  - Start Gen Exercise Starts generator automatically to ensure it is functioning properly.
  - **Start Quick Charge** Takes AC power for one hour and diverts it to charge batteries while putting the inverter in Bypass Mode.
  - **Start Battery Backup** The battery will charge all the way and not discharge until the grid goes down or selected to stop.

### 2.6 EXTENDED SYSTEM INFORMATION

The image below shows additional battery information. See callout 6 on Page 4 for full screen.



- Remain Cap: Remaining Ah capacity in the battery.
- Full Cap: Remaining Ah capacity in the full bank.
- Total Battery: The number of batteries.
- Discharge Current: Total discharge for all batteries.
- Total Voltage: Total voltage for entire bank.

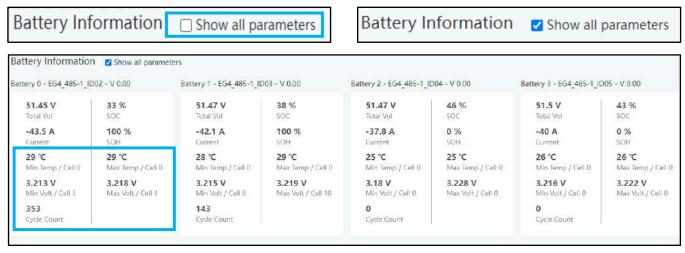
#### 2.7 BATTERY INFORMATION

Next, scroll down the "Monitor" tab and this section will show the number of batteries an end-user has on their system. Here the end-user will be able to see additional values of the battery bank.



- Battery ID The name of the battery.
- **Total Voltage** Total voltage of the battery.
- **SOC** The state of charge of the battery.
- Current The charge/discharge current of the battery.
- SOH State of health of the battery.

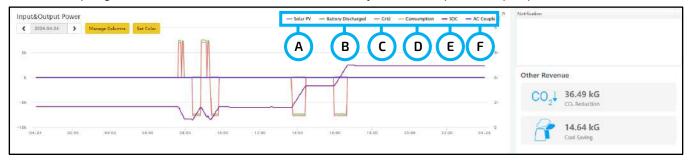
Show all parameters: Select the check box to display additional details about the battery.



- **Min. Temp** The cell number with the lowest temperature.
- Max. Temp The cell number with the highest temperature.
- Min. Volt The cell number with the lowest voltage.
- Max. Volt The cell number with the highest voltage.
- Cycle Count Number of times the battery has been fully charged and discharged.

#### 2.8 INPUT & OUTPUT POWER

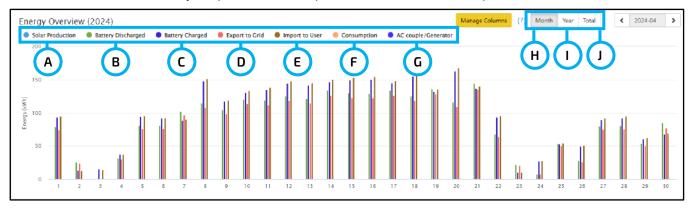
Located further down on the "Monitor" tab, the power curve for Input & Output Power per day can be found. The graph below displays the statistics for Solar PV, Battery, Grid, Consumption, SOC, and AC Coupling. These can also be selected individually to show input & output power.



- A. Solar PV Displayed by a blue line.
- B. **Battery Discharged** Displayed by a green line.
- C. **Grid** Displayed by a red line.
- D. Consumption Displayed by an orange line.
- E. SOC Displayed by a purple line.
- F. AC Couple Displayed by a dark blue line.

#### 2.9 ENERGY OVERVIEW

At the bottom of the "Monitor" tab is the Energy Overview. This displays the Month, Year, and Total Solar Production, Battery, Export to Grid, Import to User, and Consumption.



- A. **Solar Production** Displayed in light blue.
- B. Battery Discharged Displayed in green.
- C. **Battery Charged** Displayed in dark blue.
- D. **Export to Grid** Displayed in red.
- E. Import to User Displayed in brown and shows energy from the grid.
- F. Consumption Displayed in orange and shows how much loads are consuming.
- G. AC couple/Generator Displayed in blue.
- H. **Month** Select to see energy statistics for each day.
- Year Select to see energy statistics for each month.
- J. **Total** Select to see energy statistics for each year.

### 3. DATA TAB

The "Data" tab displays detailed data, including technical details for PV, battery, grid, and loads, that are helpful for analysis, maintenance, and troubleshooting. The data tab is made up of five pages: Chart, Energy, Data History, Local Data, and Event History. For more details on each page, see the following tables.

### 3.1 CHART

Displays various parameters in chart format over a 24-hour period. There are separate charts for PV Side, Battery, AC Side, Backup Output, Gen Side, and Internal Sample.



The following table gives a brief description of the parameters found in the chart shown on the previous page:

Section	Name	Description
PV Side	Vpv	Voltage of solar input
PV Side	Ppv	Power of solar input
	SOC(%)	Battery state of charge
Potton	vBat(V)	Battery voltage
Battery	Charge Power(W)	Total battery charging wattage
	Discharge Power(W)	Total battery discharging wattage
	Vacr(V)	Voltage of AC output
	Qac(Var)	Reactive power of AC output
AC Side	pToGrid(W)	Power being exported to the grid
AC Side	pFromGrid(W)	Power being utilized from the grid
	pACoupling(W)	Total power being utilized from AC coupled system
	pLoad(W)	Power being utilized for the load
	V Backup Output r(V)	Load rated voltage
Pookup Output	F Backup Output(Hz)	Load frequency
Backup Output	P Backup Output(W)	Load output power
	S Backup Output(VA)	Load apparent power
	GenVolt(V)	Voltage of generator connected to inverter
Gen Side	GenFreq(Hz)	Frequency of generator connected to inverter
	GenPower(W)	Amount of power being utilized from the generator
	vBus2(V)	2 <sup>nd</sup> sample from high voltage BUS
Internal Sample 1	Vbat_Inv(V)	Voltage sample from batteries after boost
Internal Sample 1	vBus1(V)	1 <sup>st</sup> sample from high voltage BUS
	vBusP(V)	Total high voltage sample

### 3.2 ENERGY

The "Energy" section displays how key energy parameters have varied over time by Month, Year, and Total.

- Selecting "Month" will show the energy statistics for each day of the month.
- Selecting "Year" will show energy for each month of the year.
- Selecting "Total" will show energy for each year.



Name	Description
E_pv_all(kWh)	Energy generated by entire PV array
E_pv1(kWh)	Energy generated by PV string 1
E_pv2(kWh)	Energy generated by PV string 2
E_inv(kWh)	Energy output via AC output
E_rec(kWh)	Energy of AC charge
E_charge(kWh)	Energy used for battery charge
E_discharge(kWh)	Energy output by battery discharging
E_backupPower(kWh)	Load energy output
EnergyToGrid(kWh)	Feed-in energy
EnergyFrom Grid(kWh)	Energy import from grid

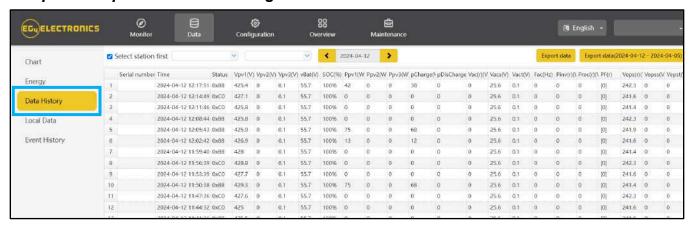
#### 3.3 DATA HISTORY

This page displays the measured technical values of PV, battery, load, and grid for users or their distributor's examination to promptly address any potential issues. Advanced technical knowledge is necessary to properly comprehend this table. End users are advised to concentrate solely on the "Monitor", "Chart", and "Energy" sections as these offer simple to comprehend performance data.



#### NOTE:

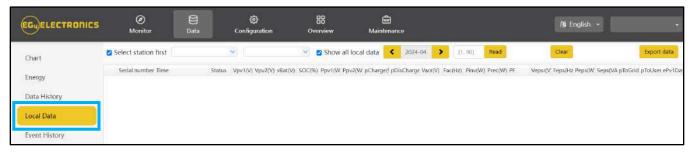
Data can be exported to an Excel file to be provided to the distributor for technical support. Distributors can then analyze the following factors to perform quick troubleshooting for their end users.



Name	Description
PtoGrid/PtoUser	Checks if CT was connected correctly
Vpv/Ppv	Checks the MPPT
Vo/Po/So	Checks the load type and check if there is an overload when in load mode
Vb/SOC	Checks the current state of charge and if the battery is overcharged or overly discharged.
Vac/Fac	Evaluates Grid performance and to check if working voltage and frequency range is adjusted to comply with grid
E-xxday	Evaluates energy distribution
E-xxall	Checks if the system is working well under off grid mode

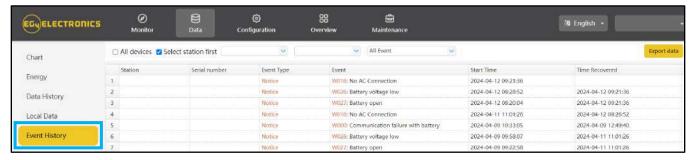
#### 3.4 LOCAL DATA

The data captured during the offline periods is displayed in the "Local Data" section (loss of internet or Wi-Fi). The only distinction from "Data History" is that it is used for offline data recording. Local data is recorded while the system is offline for more than 20 minutes and is taken every 5 minutes. Data can be stored in the system for a maximum of 90 days.



#### 3.5 EVENT HISTORY

The "Event History" page displays a timeline of Notice and Fault events. If there is not a record of a "historical event," the inverter is properly connected and working without any issues.



#### 4. CONFIGURATION TAB

The "Configuration" tab is designated for users to manage their Stations, Dongles, Devices, and User information.



#### 4.1 STATIONS

The "Stations" page will show all stations linked to the account. Selecting a station name will display all inverters under that station or location.

Selecting the "Add Station" button creates another site if there is more than one station under the same account. This is useful for distributors who have multiple customers who would like assistance with monitoring/troubleshooting their inverters.



#### 4.2 DONGLES

Users can add a dongle Serial Number (SN) to the station if they have more than one inverter in the station. The inverter will be shown on the system once the dongle has been properly configured to communicate with the server and the inverter has been powered on.



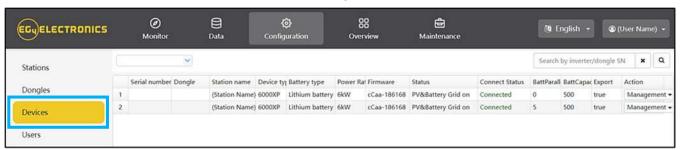
#### **IMPORTANT:**

Before configuring the password for the Wi-Fi dongle, add the dongle to the monitor center.



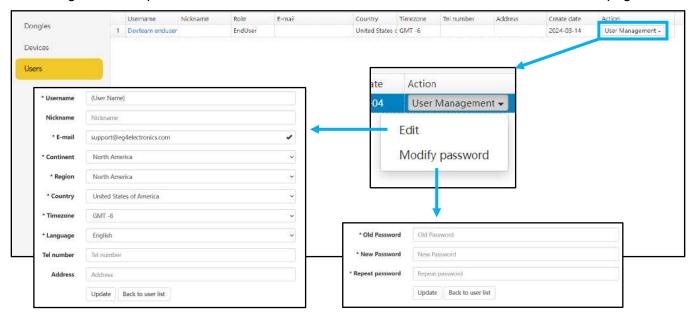
#### 4.3 DEVICES

The "Devices" page displays any inverter tied to the user's account, listed by serial number. Data can be exported to an Excel file for record keeping or to view specific inverter stats.



#### 4.4 USERS

The "Users" page shows a full list of users, distributors and any other roles linked to the account. End users can modify passwords and edit personal information in the user page under the "User Management" drop down box. Distributors can add installer or end user accounts on this page.

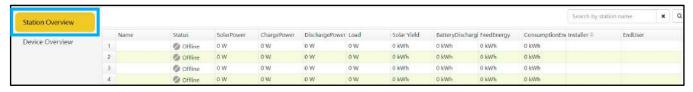


#### 5. OVERVIEW TAB

The "Overview" tab allows EG4® or its distributors to quickly monitor system-wide data for their end users, such as solar yields, battery discharging, and other factors.

#### 5.1 STATION OVERVIEW

All the stations linked to the account can be found here. Selecting a station name will switch the main page to show the real time data.



#### 5.2 DEVICE OVERVIEW

All the inverters linked to the account can be found here. Selecting a serial number will switch the main page to show the real time data for that inverter.

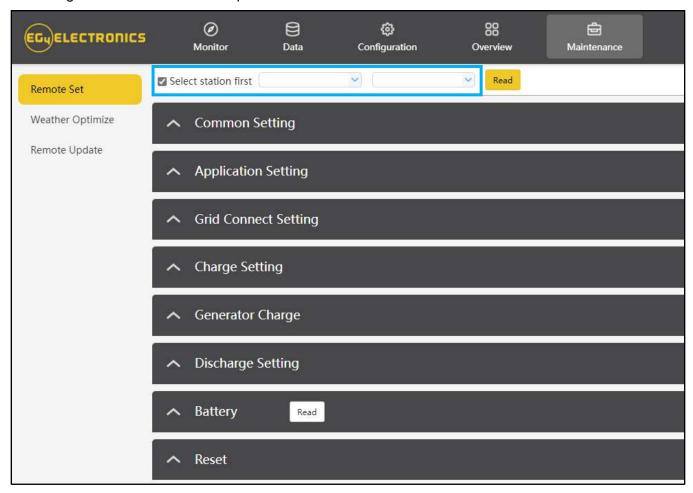


#### 6. MAINTENANCE TAB

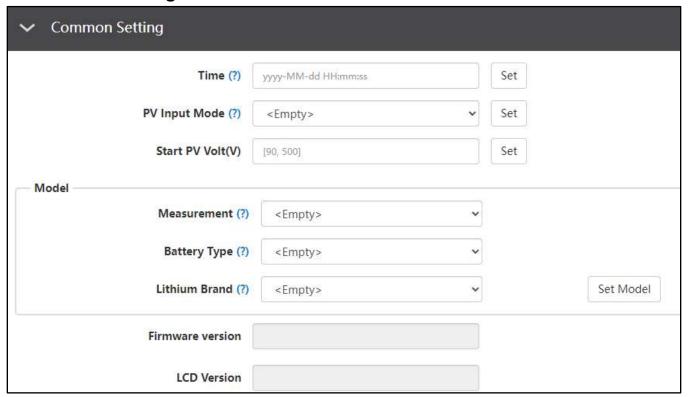
The "Maintenance" tab is used to remotely change settings on the inverter by selecting a station and then an inverter serial number. The Maintenance tab includes Remote Set, Weather Optimize, and Remote Update. See image below.

### **6.1 REMOTE SET**

The "Remote Set" page is used to configure inverter settings. Select the station to begin configuring settings. Each sub-section is explained below.



### **Common Settings**



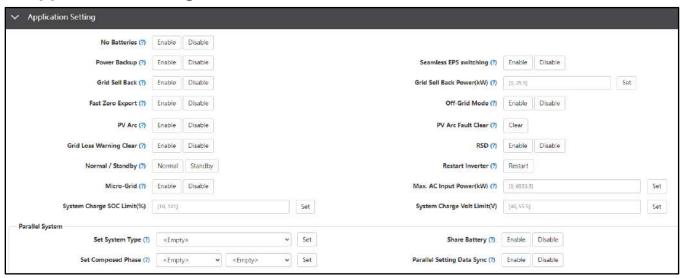
- **Time:** Set the time/date of the inverter. The input format is 2019-02-14 14:44:00 (YYYY-MM-DD HH:MM:SS)
- **PV Input Mode:** The connection type of solar modules.
- Start PV Volt (V): Voltage at which the MPPT utilizes solar for loads/charging.
- **Measurement:** Choose the correct "Measurement" according to Meter Type or CT Sample Ratio according to the external measuring device that is installed. The default measurement is 1000/1. The measurement can be adjusted if there is a meter connected to the inverter.
- **Battery Type:** Choose the "Battery Type" and then select Lithium Brand (for closed-loop communications), or battery capacity for lead-acid/lithium batteries with no communications. *Note: after setting the battery type, all other settings will reset to default.*
- Lead-acid Capacity: Set the total capacity when using lead-acid batteries.
- Lithium Brand: Choose the brand of lithium battery being used.
- Firmware version: Shows the current firmware version being used.
- LCD Version: Shows the current LCD version being used.



#### NOTE:

When the "Model" settings need to be changed, users need to set inverter to "Standby" in the Application Settings menu first, then select "Set Model" to change the model.

### **Application Settings**



- No Batteries: Allows access to off-grid mode when only solar input is available without battery storage.
- Power Backup: If "Power Backup" function is Enabled, the LOAD terminal will maintain output
  when AC is interrupted. "Power Backup" can be set via the web or "Off-Grid Output" by LCD.
  (When enabling this mode, the inverter's output will be uninterrupted.)
- **Seamless EPS Switching:** When power is interrupted, the inverter will seamlessly switch to EPS mode unless there is a grid voltage fluctuation issue; in which case, we suggest setting to "Disable" to avoid misjudgment.
- **Grid Sell Back:** In some cases, the customer cannot feed energy into grid. If the customer does not want to feed energy to the grid, the "Grid Sell Back" function can be disabled.
- **Grid Sell Back Power(kW):** If "Grid Sell Back" function is enabled, the power limitation feed can be adjusted.
- Fast Zero Export: Normally, the inverter will adjust output power every 5 seconds to avoid export. If "Fast Zero Export" is enabled, the inverter will adjust output power accordingly.
- **Off-Grid Mode:** Enable for nominal Off-Grid operations while utilizing AC input as a backup power source, allowing for absolute zero export.
- **PV Arc:** The inverter will detect when there is an arc fault on the PV inputs in order to protect itself from potential damage.
- PV Arc Fault Clear: Clear the records of PV arc fault.
- **Grid Loss Warning Clear:** Enable for an absolute Off-Grid system. The "No AC Connection" and "AC V /F out of range" warning will not occur when enabled.
- RSD: The rapid shut-down detection of the PV inputs.
- **Normal/Standby:** "Standby" is used to set the system into standby mode, stopping feed in, charge and discharge. "Normal" is used to set the whole system to auto run status.
- Restart Inverter: Restarts the inverter.
- **Micro-Grid:** Should be set only when the generator is connected to the Inverter's Grid terminal. With this option enabled, the inverter will use AC power to charge the battery and will not export any power through the Grid terminal if AC power is present at the inverter's Grid terminal.
- Max. AC Input Power(kW): The inverter can adjust the charge power based on the detected inverter's load consumption and "Max. AC Input Power(kW)" limitation.
- System Charge SOC Limit(%): The limit to which the battery can be charged measured by SOC%. Once set, the battery SOC will not exceed the set value.

 System Charge Volt Limit(V): The limit to which the battery can be charged measured by voltage. Once set, the battery voltage will not exceed the set value.



- **Set System Type:** EG4<sup>®</sup> inverters support paralleling of multiple inverters. In this scenario, one of the inverters must be set to Master and the others set to Slave. If all inverters are installed as single-phase, be sure to set one of the inverters to "1 Phase Master." If a three-phase system is needed, set one of the inverters to "3 Phase Master." All inverters are set to Slaves by default. Upon purchase/receipt of the inverters, one will need to be set to Master before paralleling multiple inverters.
- **Share Battery:** For paralleled systems: if all inverters connect to same battery bank, "Share Battery" must be enabled. The Master inverter will broadcast the battery information to all other inverters.
- Set Composed Phase: When using ≥ 3 inverters to compose a three-phase system, the AC terminals of the inverter must be connected to a three-phase grid. If the system is connected to the grid, the inverter will detect the phase it connects to automatically, record it and output the phase as it detected. If the user setting is different from the phase the inverter detected, it will output the phase detected. The output phase record will be cleared if the customer clears it. If the system is not connected to the grid, the inverter will use the user output phase setting to compose the three-phase output. If the customer sets the wrong phase (i.e., 2 U phase and no W phase) the system will report error.
- Parallel Setting Data Sync: Syncs master inverter settings to those of the slave inverter(s).

### **Grid Connect Settings**



• **Grid Frequency:** If the "Grid Frequency" is nominal at 50Hz, then the inverter's frequency will be adjusted to 50Hz automatically. If there is no grid power and it is read as 50Hz, but the devices are 60Hz, then it can be set to 60Hz manually. This is based on the rated frequency of the local grid regulation and devices.

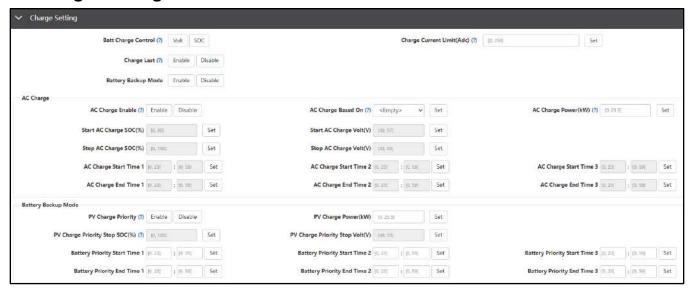


### **WARNING:**

Settings should be adjusted while the device is on Standby. Ensure this setting is correctly configured before powering on the system. Using the wrong power frequency can lead to home appliance damage.

Grid Type: Select the correct "Grid type" to function, such as split phase: 240/120 or 208/120V.

### **Charge Settings**



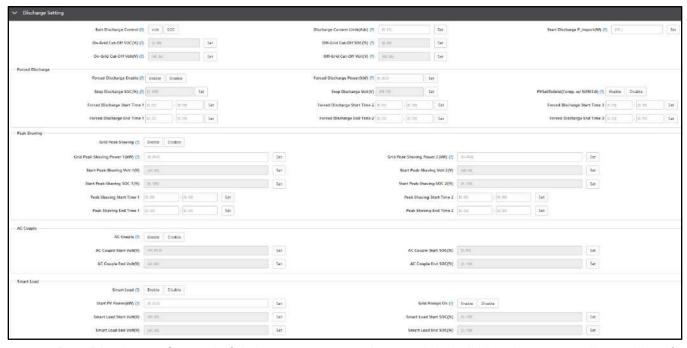
- Battery Charge Control: If the inverter communicates with the lithium battery and is capable of closed-loop communication, then select "Batt. Charge Control" according to "SOC." If communication is not available, users can select "Batt. Charge Control" according to "VOLT."
- Charge Current Limit (Adc): The maximum charge current limitation of the entire system.
- Charge Last: Charges battery last.
- AC Charge Enable: If using AC (i.e., the Grid) to charge the battery, the customer must (1) "Enable" AC Charge Enable, (2) set the max power to charge the battery from AC; "AC Charge Power (kW)", (3) set the SOC and Voltage Limits; "Start AC Charge SOC(%)/Volt(V)" and "Stop AC Charge SOC (%)/Volt(V)" and (4) set the time period to use the AC to charge the battery. There are 3 time periods that can be set. If the battery SOC and Voltage is within the limits, the system will use AC from the Grid to charge the battery during the time that is set.
- AC Charge Based On: According to time: Set a preferred time period to charge the battery range: 00:00 – 23:59. According to voltage: Set AC to charge the battery when it drops to a preset voltage. Range: 50-59V.
- AC Charge Power (kW): The max charging power from grid.
- AC Charge: Set AC charging according to Time or Volt(V)/SOC (%).
- Start AC Charge SOC(%)/Volt(V): Limit of SOC and Voltage at which system will start charging batteries from AC.
- Stop AC Charge SOC(%)/Volt(V): Limit of SOC and Voltage at which system will stop charging batteries from Grid.
- AC Charge Start Time 1-3: Start AC Charging according to these time settings.
- AC Charge End Time 1-3: Stop AC Charging according to these time settings.
- **PV Charge Priority:** In this mode, solar will charge battery first. After charging batteries, solar will supply any loads. Lastly, it will feed into the grid if surplus power is generated.
- PV Charge Power(kW): The max charging power from solar.
- PV Charge Priority Stop SOC (%): When SOC reaches this limit, charge first mode will end.
- PV Charge Priority Stop Volt (V): When voltage reaches this limit, charge first mode will end.
- Battery Priority Start Time 1-3: Start time for charge first setting.
- Battery Priority End Time 1-3: End time for charge first setting.

### **Generator Charge Settings**



- **Generator Boost Enable/Disable:** Enable or disable the generator boost feature. Enable to allow the inverter to pull supplemental power from both PV and battery whenever the generator power is not sufficient to handle all loads.
- **Generator Cool-Down Time(Min):** Set the cool-down time period for the generator before re-engaging the generator's output to the inverter.
- Batt Charge Current Limitation(Adc): Battery charge current limitation from Generator.
- **Gen Rated Power(kW):** The battery charge power can be limited based on the detected inverter's load consumption and Generator input power limitations.
- Charge Starts Volt(V)/SOC(%): While using auto-start function of the generator, the "Charge Start Voltage / SOC (%)" can be limited to start up the generator automatically.
- Charge End Volt(V)/SOC(%): While using auto-start function of the generator, the "Charge End Voltage / SOC (%)" can be limited to turn off the generator automatically.

### **Discharge Settings**



- Batt Discharge Control: If the inverter communicates with the lithium battery and is capable of closed-loop communication, users should select "Batt. Discharge Control" according to "SOC."
   When using lead-acid batteries or lithium batteries without communication, users should select discharge control according to "VOLT."
- Discharge Current Limit (Adc): The Max. discharge current limit when grid power is on.
- Start Discharge P\_Import(W): Default value is 100 which means the battery will begin to discharge power to take the load when the import power from grid is higher than 100W. (Adjust range [50-100]).

- On-Grid Cut-Off SOC(%)/Volt(V): When the inverter connects to the grid and if the battery is
  discharging to take the load, it will stop discharge when the SOC/Voltage is lower than this limit.
- Off-Grid Cut-Off SOC(%)/Volt(V): When the inverter is not connected to the grid and the battery is discharging to take the load, the battery will stop discharging when the SOC/Voltage is lower than this limit.
- **Forced Discharge Enable/Disable:** If the customer wants to simply discharge the battery, they can enable forced discharge function and set both the discharge power and time period.
- Forced Discharge Power(kW): Forced discharge power limit.
- Stop Discharge SOC(%)/Volt(V): If Battery SOC is lower than this limit, the inverter will stop forced discharging function.
- PVSellToGrid(Comp. w/ NEM3.0): Enable or disable PV sell back to grid feature.
- Forced Discharge Start Time 1-3: Start time for Forced Discharge.
- Forced Discharge End Time 1-3: End time for Forced Discharge.
- **Grid Peak-Shaving:** Peak-Shaving is used to avoid peak demand charges from the grid. Peak shaving can be accomplished by halting Grid Charging at specific times. For example, during periods of peak demand (i.e., high grid rates), or when the batteries are near fully charged based on SOC and Voltage.
- **Grid Peak-Shaving Power 1-2(kW):** Used to set the maximum power that the inverter can draw from the grid.
- Start Peak-Shaving Volt(V)/SOC(%) 1-2: The point at which Peak-Shaving starts.
- **Peak-Shaving Start Time 1-2:** The time of day at which charging by the grid will be halted.
- Peak-Shaving End Time 1-2: The time of day at which charging by the grid will resume.
- AC Couple Enable/Disable: When connecting an existing on-grid system to the GEN terminal, AC Couple must be set to enable.
- AC Couple Start Volt(V)/SOC (%): AC Coupling will start at this set Voltage/SOC.
- AC Couple Stop Volt(V)/SOC (%): AC Coupling will stop at this set Voltage/SOC.
- **Smart Load Enable/Disable:** When Smart load function is enabled, the GEN terminal will be reused to Smart Load, and the inverter will offer power to this load based on the setup values.
- Start PV Power (kW): This is the minimum PV power limit to function with smart load output.
- On Grid Always On: Once this function is enabled, smart load will always function when grid power is on.
- Smart Load Start SOC (%) / Volt (V): The high limit for battery to turn on smart load.
- Smart Load Stop SOC (%) / Volt (V): The low limit for battery to turn off smart load.

### **Battery**



Restart battery module

#### Reset



Reset: Reset all settings to default.

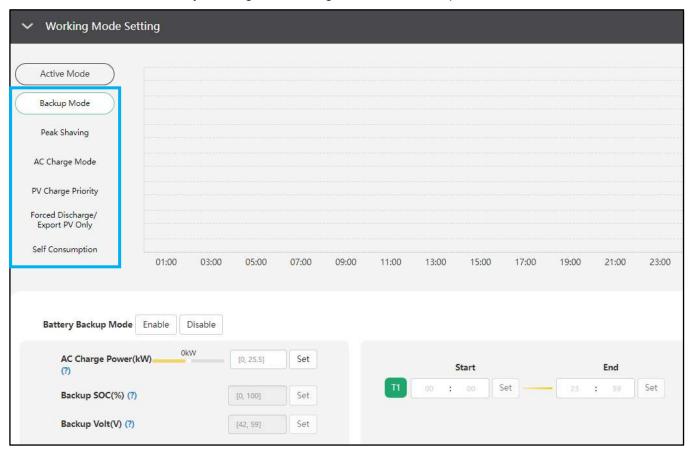
### **Working Mode**

The "Working Mode" feature has several different preset working modes that allow the user to configure the system to meet their needs through customizing settings. Working modes include Backup Mode, Peak Shaving, AC Charge Mode, PV Charge Priority, Forced Discharge/Export PV Only, and Self Consumption. The steps to access the working modes and a brief description of the modes are outlined below.

1. In the "Maintenance" tab on the Remote Set page, ensure that the correct station is selected. Select "Read" (*shown below*) for the Monitor Center to fetch the default or pre-configured settings for the station. Located to the top right of the page, select "Working Mode".



 After "Working Mode" is selected, navigate below Application Settings for the "Working Mode Setting" section (shown below). This section gives users access to configure the system to their own needs by utilizing both settings and time of use periods.



- **Backup Mode:** The system prioritizes battery backup/storage by ensuring the battery is only utilized when PV and Grid power is not sufficient for powering loads.
- **Peak Shaving:** The user can define a time-frame of when the system will compensate the power pulled from the grid for loads during peak demand times to avoid higher electricity rates.
- AC Charge Mode: Allows the grid to both charge batteries and power loads.
- PV Charge Priority: Prioritizes PV power to charge batteries first.
- Forced Discharge/Export PV Only: Forced discharge prioritizes battery power for powering loads and grid sell back. Export PV Only prioritizes PV power to export to the power grid.
- **Self Consumption:** Prioritizes the energy stored/generated from the system to power loads.

Upon selecting a "Working Mode", the system must be configured using specific settings for each mode. For required information concerning the settings of each Working Mode, scan the QR codes.

# 6000XP Monitor System Working Modes



# 18kPV Monitor System Working Modes



### **Export Pdf**

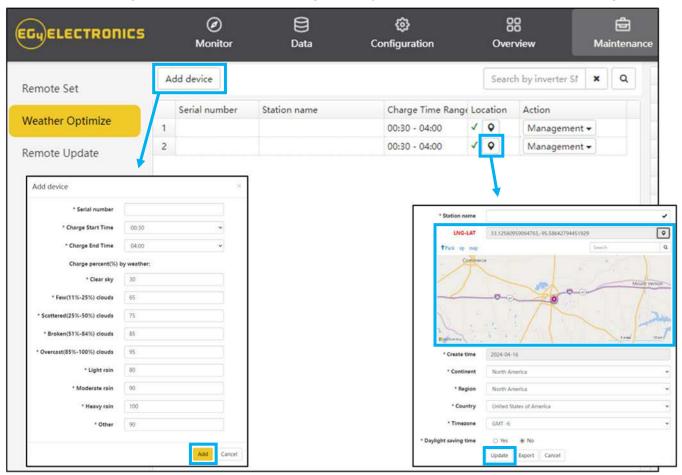
The "Export PDF" feature creates a PDF document with the system's selected settings and values for ease of troubleshooting. To use the Export PDF function, ensure the correct station is selected. Select "Read" for the Monitor Center to fetch the default or pre-configured settings for the station. If "Read" is not selected before trying to Export PDF, the PDF will be missing the specified settings and values. Next, select "Export PDF" (shown below) to create a document showing the system settings.



#### 6.2 WEATHER OPTIMIZE

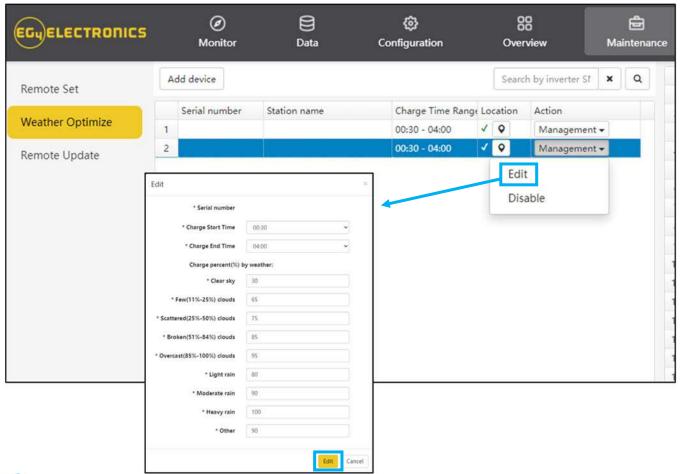
The "Weather Optimize" feature uses real-time weather information to adjust charging strategies based on tomorrow's local weather conditions, ensuring the battery bank remains adequately charged. Weather Optimize reviews the weather one day at a time starting at 5pm the day before. All weather data is based on the forecast from openweathermap.org. For example, if heavy rain is predicted in the next day's forecast the battery bank will be charged to the heavy rain SOC value as configured in charge percent (%) by weather area. The configuration steps are outlined below:

To enable Weather Optimize, the device will need to be added. To add the device, select
"Add Device" (shown below). The Charge Start Time, Charge End Time and SOC values are
populated with default values. All the values can be changed to the preferred time and
percentages. Once the desired settings are adjusted, select "Add" to save the changes.



2. After the device is added, the location for the device needs to be set. Select the pin icon (shown above) and use the map, latitude and longitude coordinates, or the search option to select a location. Without a set location, there will be a red X next to the pin icon and Weather Optimize will not function. Once all location settings have been verified as correct, select the "Update" button to save the location. The red X should be changed to a green check.

3. Users can edit the Charge Start Time, Charge End Time and SOC percentages, by selecting the "Management" drop down menu and selecting "Edit" (*shown below*). Once settings are changed to the preferred values, select the yellow "Edit" button to save the changes.



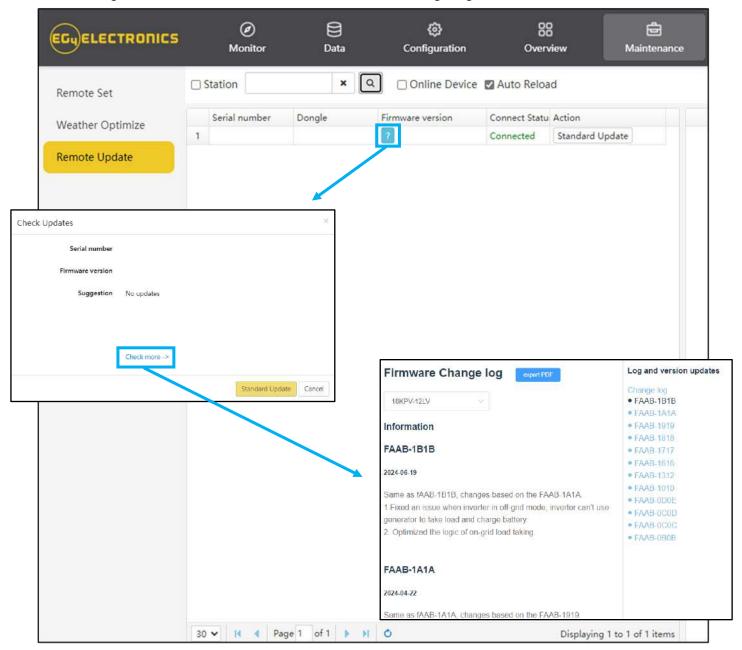


### **NOTE:**

At this time, the 6000XP does not support the Weather Optimization feature.

### **6.3 REMOTE UPDATE**

The "Remote Update" page allows users to check and upgrade firmware on the inverters connected to the account. To check for available updates, select the blue question mark (*shown below*). If there is a suggested update the firmware version will be displayed. From the Check Updates window, selecting "Check more" will redirect to the Firmware Change log.





# **CONTACT US**

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