# Table of Contents

Log onto EMA Website 5
Add a New Customer Installation 6
  Step 1: Entering the Customer’s Personal Information 6
  Step 2: Configure the ECU 9
  Step 3: Configure the Inverters 11
    Method 1: Importing the IDs from the ECU 11
    Method 2: Manually Entering IDs into the EMA 13
  Step 4: Configuring Group View 16
    Method 1: Creating a View Automatically 17
    Method 2: Creating a View Manually 17
  Step 5: Uploading the Installation Drawings and/or Photo 20
Resume an Incomplete Registration 21
Edit an Existing Customer’s Password 22
Modify an Existing User Account 24
  Adding an ECU 24
  Editing an ECU 26
  Replacing an ECU 27
  Deleting an ECU 28
  Adding an Inverter 30
    Method 1: Importing the IDs from the ECU 31
    Method 2: Manually Entering IDs into the EMA 33
  Editing an Inverter 37
  Replacing an Inverter 38
  Deleting an Inverter 39
  Editing Basic Customer Information 40
Monitoring and Analysis 42
  Reviewing the Customer’s Dashboard 42
  Reviewing the Customer’s Modules 44
  Reviewing the Customer’s System Reports 46
    Summary Reports 47
    ECU Reports 48
    Inverter Reports 49
    Download Reports 54
  Reviewing System Maintenance History 55
    ECU History 56
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inverter History</td>
<td>57</td>
</tr>
<tr>
<td>Remote ECU Management</td>
<td>58</td>
</tr>
<tr>
<td>Managing the ECU Remotely</td>
<td>58</td>
</tr>
<tr>
<td>ECU Status</td>
<td>59</td>
</tr>
<tr>
<td>ECU Settings</td>
<td>60</td>
</tr>
<tr>
<td>Manage Time Zone</td>
<td>60</td>
</tr>
<tr>
<td>Manage Inverter Links</td>
<td>61</td>
</tr>
<tr>
<td>AC Protection Parameters</td>
<td>61</td>
</tr>
<tr>
<td>Inverter Status</td>
<td>62</td>
</tr>
<tr>
<td>Inverter GFDI</td>
<td>63</td>
</tr>
<tr>
<td>Setting List</td>
<td>64</td>
</tr>
<tr>
<td>Managing Your Installer Account Information (and Password)</td>
<td>66</td>
</tr>
<tr>
<td>Introduction to Your Customer’s System Dashboard</td>
<td>67</td>
</tr>
</tbody>
</table>
Log onto EMA Website

1. Go to http://www.apsystemsema.com

The APsystems EMA Login page is displayed.

![EMA Login Page]

Note: You are issued a permanent Username, and a temporary Password when you complete Installer Training with APsystems. Contact APsystems Technical Support to register for Installer Training (go to https://usa.apsystems.com/resources/training, or call 1.844.666.7034).

2. Enter your “Username” and “Password”.

Note: The Password is case sensitive.

Note: If you forget your password, select “Lost your password? Click here ...”.

3. Press the “Login” button.

Your specific Customer List page is displayed.

Continued ...
Note: You won’t have any customers in your Customer List the first time you log into the system.

Add a New Customer Installation

There are five (5) major steps involved in adding a new installation (registering) in the EMA.

Step 1: Entering the customer’s personal information.
Step 2: Configuring the Energy Communication Unit (ECU).
Step 3: Configuring the inverter information.
Step 4: Configuring the Group View.
Step 5: Uploading the installation drawings and/or photo.

**Step 1: Entering the Customer’s Personal Information**

1. Log onto the EMA.

Your specific Customer List page is displayed.

2. Select the REGISTRATION icon at the top of the page.

The New User page is displayed.

Continued ...
Note: Optimizer not available in all regions.

3. Fill in the customer details by field, making sure to include all required information.

**UserName**

This is a single “name” (typically the customer’s last name) that identifies this specific customer’s installation. The username appears in the customer’s area on the EMA. *(Required)*

Only “letters”, “numeric digits”, “underscores”, “@”, “spaces”, and “.” Can be used when creating a username.

**Note:** A username cannot be modified once it has been submitted.

**Password**

This is a temporary password that is emailed to your customer so they can access their account on the EMA. Your customer can change their password should they so choose. *(Required)*

**Confirm Password**

Enter the same password again to confirm. *(Required)*

*Continued ...*
Email  This is your customer’s email address. (Required)

APsystems sends your customer their password and all system related notifications to this email address.

First Name  Your customer’s first name. (Required)

Last Name  Your customer’s last name. (Optional)

Phone Number  Your customer’s phone number. (Optional)

Installation Company  This field is automatically generated by the system and can be changed using the pull down selector if necessary. (Required)

Country  This field is automatically generated by the system and can be changed using the pull down selector if necessary. (Required)

State/Province  Customer’s state or province. (Required)

City  Customer’s city. (Required)

Address  Customer’s street address. (Optional)

Postal Code  Customer’s postal code. (Optional)

System Size  Calculate the overall system size and enter it here. (Optional)

Remarks  Add any notes that you may find useful at a later date. (Optional)

4. Select whether to “Allow visitors to access this site”.

   Note: This is an optional selection step. If selected, the system displays an authorization code to be used in embedding this specific customer’s EMA data within another website.

5. Select whether to have APsystems “Send a weekly production report”.

   Note: This is an optional selection step. If selected, the customer will receive an automatically generated production report on a weekly basis.

Continued ...
6. Select the “Submit” button.

**Note:** Once you have selected either the “Next” or “Submit” buttons in any of the major registration steps (1-5), your customer information is saved in the system and you can step away from the process and resume by selecting “Incomplete Customer” (see page 21 – Resume an Incomplete Registration).

The ECU Information page is displayed.

---

**Step 2: Configure the ECU**

7. Press the “Add” ECU button.

The Add ECU window is displayed.

---

8. Enter the 12-digit ECU UID number(s) into the ECU ID field.

*Continued ...*
The ECU UID is located on the top of the ECU, as well as on the front flap of the shipping box.

**Note:** The ECU UID is a unique APsystems “serial number” that is assigned to the ECU during manufacture. It is **NOT** the IP Address of the device.

It is critical that you enter the ECU UID correctly because the EMA uses this number to identify the system it is monitoring and reporting.

9. Select the time zone where the ECU is to be installed.
10. Press the “OK” button.

**Note:** Check Resume an Incomplete Registration – Page 21 if you get a system message that indicates that the UID already exists while making these entries.

Once you have entered all of the ECU UID numbers to be installed at a specific location ...

11. Press the “Next” button.

The Inverter Information page is displayed.
**Step 3: Configure the Inverters**

In this step you are assigning the inverters to their associated ECU(s).

12. Select the ECU (ECU Selection field).
13. Press the “Add” button.

The Input Inverter IDs page is displayed.

14. Enter the 12-digit inverter ID numbers.

There are two (2) methods for adding inverters to the EMA:

1) Importing them from the ECU.
2) Manually entering them into the EMA.

**Method 1: Importing the IDs from the ECU**

**Note:** When importing the inverter IDs from the ECU, make sure that you have entered all of the inverter IDs into the ECU, and that the ECU is correctly connected to the Internet so that the APsystems server can retrieve the IDs.

1) Select the “Import From ECU” tab.

*Continued ...*
2) Select the ECU from the “ECU ID” pulldown.
3) Press the “Insert ID to List” button.

The EMA begins importing all of the inverter IDs on the ECU and placing them onto the Temporary Inverter List.

4) Verify that the temporary list of inverter IDs is complete and correct.
5) Press the “Submit” button.

The “permanent” inverter list is displayed.

**Note:** This list can be edited if necessary by selecting either “Edit” or “Replace” for each inverter and its associated channel.

*Go to Step 4: Configuring Group View to complete the Registration Process.*
Method 2: Manually Entering IDs into the EMA

Each inverter has a unique UID which is located on the front of the inverter, as well as on the back flap of the inverter’s shipping box.

1) Select the “Manual ADD” button.
2) Select the ECU from the “ECU ID” pulldown.
3) Select the Inverter type from the “Inverter Type” pulldown.
4) Select the Channel(s) for the inverter type.

Continued …
**Note:** You’ll be presented with a number of inverter types. Select the type you are installing, remembering that the YC500 has two (2) channels (A & B), and the YC1000 has up to four (4) channels (1, 2, 3 & 4).

5) Enter the 12-digit inverter ID numbers.

**Tip:** You can scan the inverter UIDs into a spreadsheet and then copy and paste the UIDs from the spreadsheet into the EMA, which makes the entry process easier to manage. The EMA does however have a limitation of 20 UIDs per paste.

**Note:** Check Resume an Incomplete Registration – Page 21 if you get a system message that indicates that the UID already exists while making these entries.

6) Press the “Insert ID to List” button.

The EMA places the inverter onto the Temporary Inverter List.

7) Verify that the temporary list of inverter IDs is complete and correct.

8) Press the “Submit” button.

*Continued ...*
The “permanent” inverter list is displayed.

**Note:** This list can be edited if necessary by selecting either “Edit” or “Replace” for each inverter and its associated channel.

9) Press the “Link” button to remotely link the inverters to the ECU.

At this point in the registration process you can decide to “complete the registration”, capturing the customer’s personal information, ECU configuration, and Inverter IDs, coming back to mapping the inverters at a later time (see page 16 — **Step 4: Configuring Group View**) – or – continue to move forward with the inverter mapping before completing the registration.

**Note:** If you choose to “complete the registration” at this time, you’ll still need to return to the customer’s account to finish the job by mapping the inverters. Once you have “completed the registration”, the customer account will move from “INCOMPLETED” to the standard customer list and your customer will be able to view their account online.

To “complete the registration” process, press the “Complete Registration” button.

To continue with the mapping process before completing the registration, press the “Next” button.
**Step 4: Configuring Group View**

This step assumes you have pressed the “Next” button after entering the inverter IDs.

The Group View page is displayed.

Add View Button

15. Press the “Add” view button.

The Create View window is displayed.

Create View Window

There are two (2) methods for creating a view (inverter layout) in the EMA:

1) Having the system do it for you automatically.
2) Laying out the panels manually.
Method 1: Creating a view automatically.

Automatic view creation is best for relatively simple layouts.

1) Select the ECU from the “ECU ID” pulldown.
2) Select the “Auto” arrangement toggle.
3) Enter a view name in the View Name field.
4) Enter a number (1-50) in the Row field (rows are horizontal).
5) Enter a number (1-50) in the Column field (columns are vertical).
6) Press the “Create” button.

The EMA arranges the panels (and their associated inverters) are laid out from top-left to bottom right based on their entry into the Inverter List.

Method 2: Creating a view manually.

Manual view creation is best for more complex installations where you’ll want to have complete control of where the panels (and their associated inverters) are laid out.

1) Select the ECU from the “ECU ID” pulldown.
2) Select the “Manual” arrangement toggle.
3) Enter a view name in the View Name field.
4) Enter a number (1-50) in the Row field (rows are horizontal).
5) Enter a number (1-50) in the Column field (columns are vertical).
6) Press the “Create” button.

The EMA arranges the panels, without the associated inverters, on a panel layout page based on the rows and columns you have specified.

Continued ...
The panel layout page is displayed.

**Note:** Right clicking on any individual panel exposes a list of possible shortcuts.

- **Import ID** Import a specific inverter ID to the selected panel.
- **Delete ID** Delete a specific inverter ID from the selected panel.
- **Change Orientation** Change panel’s orientation to vertical or horizontal.

*Continued ...*
Change Module
Type

Change the module type for the specified panel.

Delete Module

Delete both the inverter ID and panel position.

Add Row Above

Adds a row above the current panel location.

Add Column Above

Adds a column next to the current panel location.

Delete Current Row

Delete the row where the specified panel is located.

Delete Current Column
Delete the column where the specified panel is located.

Special Functionality Buttons

7) Drag and drop Inverter IDs onto specified inverters.
8) Drag the panels on the layout area as they are arranged on the site.
9) Press the “Save” button.

The Upload Drawings page is displayed.
Step 5: Uploading the installation drawings and/or photo

The installation drawings are displayed on the customer’s Module Performance page, and the site photo is displayed on the customer’s Dashboard.

Only the following drawing and photo formats are supported:

- jpeg – jpg
- png
- pdf

16. Enter the drawing’s name in the “Drawing Name” field.
17. Select drawing type in the “Drawing Type” pulldown.
18. Locate the file you want to upload (Scan button functions just like a Browse button).
19. Press the “Upload” button.

The drawings you want uploaded to the EMA are reflected in the Drawing List.

20. Press the “Complete Registration” button.
Resume an Incomplete Registration

Once you have selected either the “Next” or “Submit” buttons in any of the major registration steps (1-5), your customer information is saved in the system and you can step away from the process and resume by selecting “Incomplete Customer” under Registration.

1. Log onto the EMA.

Your specific Customer List page is displayed.

2. Select the “REGISTRATION” icon.

3. Select the “INCOMPLETE CUSTOMER” in the left side bar.

A list of your incomplete customer registrations is displayed.

4. Select the customer account you want to complete.

5. Continue where you left off following the steps in the previous section.
Edit an Existing Customer’s Password

*Note:* Your customer can change their own password by going into the Setting section on their account page.

1. Log onto the APsystemsEMA website.

Your specific Customer List page is displayed.

2. Select the customer that wants to have their password changed.

The customer’s Dashboard is displayed.

3. Select “USER REGISTRATION” in the left side bar.

The USER REGISTRATION pulldown is displayed.

*Continued ...*
4. Select “BASIC INFORMATION” under “USER REGISTRATION”.

The user’s basic information page is displayed.

5. Enter the new password in the “Password” field.
6. Confirm the new password.
7. Press the “Submit” button.
Modify an Existing User Account

Adding an ECU

1. Log onto the EMA website.

Your specific Customer List page is displayed.

2. Select the customer account you want to modify.

The customer’s DASHBOARD is displayed.

3. Select “USERREGISTRATION” in the left side bar.

The USER REGISTRATION pulldown is displayed.

Continued …
4. Select “ECU CONFIGURATION” under “USER REGISTRATION”.

The ECU information page is displayed.

5. Press the “Add” button.

The ADD ECU window is displayed.

6. Enter the 12-digit ECU UID number(s) into the ECU ID field.
7. Select the time zone where the ECU is to be installed.
8. Press the “OK” button.
**Editing an ECU**

1. Log onto the EMA website.

Your specific Customer List page is displayed.

2. Select the customer account you want to modify.

The customer’s DASHBOARD is displayed.

3. Select “**USERREGISTRATION**” in the left side bar.

The USER REGISTRATION pulldown is displayed.

4. Select “**ECU CONFIGURATION**” under “**USER REGISTRATION**”.

The ECU information page is displayed.

5. Press the “*Edit*” button.

The EDIT ECU page is displayed.

Continued ...
6. Edit the ECU UID and/or the time zone.
7. Press the “OK” button.

**Note:** Editing the ECU does not update the system “History”, so no record of the changes are made. Go to Replace an ECU (see below) if you have replaced an ECU and want it recorded in the system “History”.

**Replacing an ECU**

1. Log onto the EMA website.

Your specific Customer List page is displayed.

2. Select the customer account you want to modify.

The customer’s DASHBOARD is displayed.

3. Select “USERREGISTRATION” in the left side bar.

The USER REGISTRATION pulldown is displayed.

4. Select “ECU CONFIGURATION” under “USER REGISTRATION”.

The ECU information page is displayed.

5. Press the “Replace” button.

*Continued ...*
The REPLACE ECU window is displayed.

6. Select the ECU you want to replace.
7. Enter the new 12-digit ECU UID number into the “Replace ECU” field.
8. Press the “OK” button.

Deleting an ECU

1. Log onto the EMA website.

Your specific Customer List page is displayed.

2. Select the customer account you want to modify.

The customer’s DASHBOARD is displayed.

3. Select “USERREGISTRATION” in the left side bar.

The USER REGISTRATION pulldown is displayed.

4. Select “ECU CONFIGURATION” under “USER REGISTRATION”.

The ECU information page is displayed.

Continued …
5. Press the "Delete" button.

The DELETE ECU confirmation window is displayed.

6. Select the ECU you want to delete.
7. Press the "OK" button.
**Adding an Inverter**

1. Log onto the EMA website.

Your specific Customer List page is displayed.

2. Select the customer account you want to modify.

The customer’s DASHBOARD is displayed.

3. Select “USERREGISTRATION” in the left side bar.

The USER REGISTRATION pulldown is displayed.

4. Select “INVERTER CONFIGURATION” under “USER REGISTRATION”.

Continued …
The Inverter Information page is displayed.

5. Press the “Add” button.

The Input Inverter IDs page is displayed.

There are two (2) methods for adding inverters to the EMA:
   1) Importing them from the ECU.
   2) Manually entering them into the EMA.

**Method 1: Importing the IDs from the ECU**

**Note:** When importing the inverter IDs from the ECU, make sure that you have entered all of the additional inverter IDs into the ECU, and that the ECU is correctly connected to the Internet so that the APsystems server can retrieve the IDs.

Continued ...
1) Select the “Import From ECU” tab.
2) Select the ECU from the “ECU ID” pulldown.
3) Press the “Insert ID to List” button.

The EMA begins importing all of the inverter IDs on the ECU and placing them onto the Temporary Inverter List.

4) Verify that the temporary list of inverter IDs is complete and correct.
5) Press the “Submit” button.

The “permanent” inverter list is displayed.

**Note:** This list can be edited if necessary by selecting either “Edit” or “Replace” for each inverter and its associated channel.
Method 2: Manually Entering IDs into the EMA

Each inverter has a unique UID which is located on the front of the inverter, as well as on the back flap of the inverter’s shipping box.

1) Select the “Manual ADD” button.
2) Select the ECU from the “ECU ID” pulldown.
3) Select the Inverter type from the “Inverter Type” pulldown.
4) Select the Channel(s) for the inverter type.

Continued ...
**Note:** You’ll be presented with a number of inverter types. Select the type you are installing, remembering that the YC500 has two (2) channels (A & B), and the YC1000 has up to four (4) channels (1, 2, 3 & 4).

5) Enter the 12-digit inverter ID numbers.

**Tip:** You can scan the inverter UIDs into a spreadsheet and then copy and paste the UIDs from the spreadsheet into the EMA, which makes the entry process easier to manage. The EMA does however have a limitation of 20 UIDs per paste.

**Note:** Check Resume an Incomplete Registration – Page 21 if you get a system message that indicates that the UID already exists while making these entries.

6) Press the “Insert ID to List” button.

The EMA places the inverter onto the Temporary Inverter List.

7) Verify that the temporary list of inverter IDs is complete and correct.

8) Press the “Submit” button.

The “permanent” inverter list is displayed.

**Note:** This list can be edited if necessary by selecting either “Edit” or “Replace” for each inverter and its associated channel.

*Continued ...*
9) Press the “Link” button to remotely link the inverters to the ECU.

10) Press the “Next” button.

11) Select “VIEW CONFIGURATION” under “USER REGISTRATION”.

The View Configuration page is displayed.
6. Select “Edit”.

The EDIT VIEW Window is displayed.

7. Select the “Detailed” toggle.
8. Press the “Submit” button.

The panel layout page is displayed.

9. Drag and drop the new inverters into position on the layout map.
10. Press the “Save View” icon.
Editing an Inverter

1. Log onto the EMA website.

Your specific Customer List page is displayed.

2. Select the customer account you want to modify.

The customer’s DASHBOARD is displayed.

3. Select “USERREGISTRATION” in the left side bar.

The USER REGISTRATION pulldown is displayed.

4. Select “INVERTER CONFIGURATION” under “USER REGISTRATION”.

The Inverter Information page is displayed.

5. Select “Edit” for the inverter you want to edit.

The EDIT INVERTER window is displayed.

Continued ...
6. Edit the inverter information.
7. Press the “Submit” button.

Replacing an Inverter

1. Log onto the EMA website.

Your specific Customer List page is displayed.

2. Select the customer account you want to modify.

The customer’s DASHBOARD is displayed.

3. Select “USERREGISTRATION” in the left side bar.

The USER REGISTRATION pulldown is displayed.

4. Select “INVERTER CONFIGURATION” under “USER REGISTRATION”.

The Inverter Information page is displayed.

5. Select “Replace” for the inverter you want to replace.

The REPLACE INVERTER window is displayed.

Continued ...
6. Enter the new/replacement inverter’s ID in the Inverter ID field.
7. Press the “Submit” button.

Deleting an Inverter

1. Log onto the EMA website.

Your specific Customer List page is displayed.

2. Select the customer account you want to modify.

The customer’s DASHBOARD is displayed.

3. Select “USERREGISTRATION” in the left side bar.

The USER REGISTRATION pulldown is displayed.

4. Select “INVERTER CONFIGURATION” under “USER REGISTRATION”.

The Inverter Information page is displayed.

5. Select the inverter you want to delete.
6. Press the “Delete” button.

A confirmation message is displayed.

7. Press the “Submit” button.
**Editing Basic Customer Information**

1. Log onto the APsystemsEMA website.

Your specific Customer List page is displayed.

2. Select the customer that wants to have their password changed.

The customer’s Dashboard is displayed.

3. Select “USER REGISTRATION” in the left side bar.

The USER REGISTRATION pulldown is displayed.

*Continued ...*
4. Select “BASIC INFORMATION” under “USER REGISTRATION”.

The user’s basic information page is displayed.

5. Edit the information you want changed.

6. Press the “Submit” button.
Monitoring and Analysis

Reviewing the Customer’s Dashboard

1. Log onto the APsystemsEMA website.

Your specific Customer List page is displayed.

2. Select the customer you want to review from the customer list.

The installer’s view of the customer’s Dashboard is displayed.

Note: While you are viewing the customer’s system data, it is presented differently than the System Owner’s view.

Continued …
Customer View for Comparison

![Image of a customer view dashboard]

**System Status**

- Working normally.
- No Data – System not reporting in as expected. System requires attention.
- System configured without Internet connection.

**Data Type**

Data reporting period; Power for the current day, daily power for the current month, monthly for the current year, and yearly for the lifetime of the system.

**Power Curve**

Graphic representation of each of the data types.

**System Date/Time**

The date and time at the array location.

**Personal Information**

The customer’s personal information.

**Today’s Energy**

The amount of energy produced for today’s date – expressed in kWh.

**Current Power**

The amount of energy being produced at this given time – expressed in watts.

**Action**

A short cut to ECU reporting (Detail) and reviewing the ECU status (Status).

**Installer Contact Information**

The installer’s contact information. This information shows up on your customer’s view of their account.

*Continued ...*

**Note:** You can check power production at any given point along the “Power Curve” graphs by moving the cursor to the specific time or date in question.
**Reviewing the Customer’s Modules**

1. Log onto the APsystemsEMA website.

Your specific Customer List page is displayed.

2. Select the customer you want to review from the customer list.

The installer’s view of the customer’s Dashboard is displayed.

3. Select “**MODULE**” in the left side bar.

The Module Performance page is displayed.

---

*Continued …*
**Group View Name**  Pulldown of the group names associated with this account.

**Viewing Period**  Viewing period selection; Power for the current day, and daily energy over the last 30 days.

**Query Date**  Select date you want to review.

**Timeline Controller**  Advances the Timeline Marker on the timeline.

**Panels/Modules**  A graphic representation of how the array is laid out. The number in the center of each module represents the power being generated by the module at the current time – expressed in watts/DC.

**System Performance**  Graphic representation of the power being generated by the entire system during the current viewing period.

**Timeline Marker**  Time indicator for timeline. Power is simultaneously displayed on the panels/modules. There are two ways to display power across time; One, select the time period and press the “Timeline Controller”, and two dragging the timeline marker across the timeline to view a specific production time.

**Note:** Detailed information on each module can be reviewed by clicking on the module.
**Reviewing the Customer’s Systems Reports**

1. Log onto the APsystemsEMA website.

   Your specific Customer List page is displayed.

2. Select the customer you want to review from the customer list.

   The installer’s view of the customer’s Dashboard is displayed.

3. Select “REPORT” in the left side bar.

   The sub-menu areas are displayed under “REPORT”.

![REPORT Sub-Menu](image)
Summary Reports

1) Select “SUMMARY REPORT” under “REPORT” in the left side bar.

The Summary Report page is displayed.

Note: The savings reflected in the Production/Cost Savings timeline are calculations based on the utility company’s price per kWh at this location. The price per kWh is entered in the “Price Per kWh” field in the timeline.
ECU Reports

1) Select “ECU LEVEL DATA” under “REPORT” in the left side bar.

The ECU level data page is displayed.

**Data Reporting Period**  
Data reporting period; Power for the current day, daily power for the current month, monthly for the current year, and yearly for the lifetime of the system.

**Query Date**  
Select date you want to review.

**Export Button**  
Exports the data in a spreadsheet format.

**Power Production Graph**  
Graphic representation of the system’s power production over time.
Inverter Reports

**Tip:** This reporting area is extremely useful in troubleshooting inverter problems.

The Inverter Level reports are used to analyze module power (DC – power/watts, volts, and current/amps), grid parameters (AC volts, frequency, and temperature).

1) Select “INVERTER LEVEL DATA” under “REPORT” in the left side bar.

The inverter level data page is displayed.

2) Select inverter ID you want to review from the Inverter ID pulldown.

The data graphic for the selected inverter ID is displayed.

- **Inverter ID** Pulldown field for viewing and selecting the inverter IDs associated with the account.
- **Data Type** Data reporting period; Power for the current day, daily power for the current month, monthly for the current year, and yearly for the lifetime of the inverter.
- **Comparison Toggle** ON and OFF toggle for comparing the data/performance of more than one inverter or data level (see directions for comparisons page 52).
- **Query Date** Select date you want to review.

*Continued ...*
**Data Level** Pulldown field for selecting AC or DC data by channel.

**Data Graph** Graphic representation of the selected data types and data levels over time.

**Data Toggles** Used to toggle Data Levels graphs ON or OFF.

**Examples of Inverter Data Graphs**

![Inverter Data Graphs Example](image)

Note the following in the example above:

ECU ID: 21300019948 – Because of 213 prefix, it is a zigbee based ECU
Inverter ID: 503000000687 – Because of 503 prefix, it is a YC1000 inverter, which will have up to four (4) Channels identified as 1, 2, 3, and 4
Query Date: Dec 5, 2016 (2016-12-05 in international date format)
Data Type: Power for the current day
Data Level: DC Power/Watts, Volts, Current (Amps)
Comparison: OFF (so only seeing one inverter channel and/or data level)

You can see power levels for a specific time by dragging the cursor along the graph.
To view the AC (grid) parameters on the same channel for the same inverter:

1) Select “AC-1” in the “Data Level” pulldown.

You can see parameters for a specific time by dragging the cursor along the graph.

Continued ...
To compare the data levels for two different inverters:

1) Turn ON the “Compare” toggle.
2) Select the inverters you want to compare.

**Note:** You can select the same inverter and compare different channels if required.

3) Select the Channels you want to compare.
4) Select whether you want to compare DC or AC.

The graph with both inverter data levels is displayed.

**Note:** You can toggle graph data elements ON and OFF by using the Data Toggles if needed for clarity of the data.
Download Reports

The reports in this area are detailed numeric reports that can be exported to a spreadsheet.

1) Select "DOWNLOAD REPORT" under "REPORT" in the left side bar.

The Download Reports data page is displayed.

ECU ID Pulldown - Pulldown field for viewing and selecting the ECU ID.

Type Pulldown - There are a number of report "types" you can select.
   - Hourly Energy for the day
   - Detailed Daily Energy for a week (prior to the Query Date)
   - Daily Energy for a specified period
   - Daily Energy for a specified year
   - Weekly Energy for a specified year
   - Monthly Energy for a year
   - Yearly Energy for the lifetime of the system

Query Date - Select date, or data range where appropriate, you want to review

Query Button - The Query Button activates the reporting process for the Type and Date(s) you have selected.

Export Button - Exports the data in a spreadsheet format.
Reviewing System Maintenance History

1. Log onto the APsystems EMA website.

Your specific Customer List page is displayed.

2. Select the customer you want to review from the customer list.

The installer’s view of the customer’s Dashboard is displayed.

3. Select “HISTORY” in the left side bar.

The sub-menu areas are displayed under “HISTORY”.

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![Dashboard](image1.png)

![Sub-menu](image2.png)
1) Select “ECU HISTORY” under “HISTORY” in the left side bar.

The ECU History page is displayed.

- **ECU ID List**: A list of all of the ECU that have been on the system.
- **Create Date**: The date the ECU was activated on the EMA.
- **Replace Date**: The date the ECU was replaced and edited on the EMA.
- **Lifetime Energy**: A history of the amount of energy (expressed in kWh) produced while the ECU was on the system.

**Note**: Clicking on the ECU ID in the ECU ID List allows you to review power production from the date the ECU was first activated on the EMA.
Inverter History

1) Select “INVERTER HISTORY” under “HISTORY” in the left side bar.

The Inverter History page is displayed.

**Inverter ID List**
- A list of all of the inverters that have been on the system.

**Create Date**
- The date the inverter was activated on the EMA.

**Replace Date**
- The date the inverter was replaced and edited on the EMA.
Remote ECU Management

The ECU has been designed with remote connection and management functionality. You can access this remote functionality through the EMA website, using your installer login credentials. Changes made remotely through the EMA do not take affect until the ECU’s next reporting cycle.

*The ECU must first be installed with verified Power Line Communication [PLC] and Internet connectivity.*

Refer to the ECU Installation/User Manual for detailed ECU installation and operation instruction.

The ECU remote functionality allows you to do the following:

- Set the ECU Status
- Set Time Zones
- Manage Inverter UIDs

*Managing the ECU Remotely*

1. Log onto the APsystems EMA website.

Your specific Customer List page is displayed.

2. Select the customer you want to review from the customer list.

The installer’s view of the customer’s Dashboard is displayed.

3. Select “REMOTE CONTROL” in the left side bar.

The sub-menu areas are displayed under “REMOTE CONTROL”.

*Continued ...*
ECU Status

Entering the ECU Status is for “information only”.

1) Select “ECU STATUS” under “REMOTE CONTROL” in the left side bar.

The ECU status page is displayed.

2) Select the ECU ID from the ECU ID pulldown.
3) Select the current connection station from the pulldown.
4) Press the “Submit” button.
ECU Settings

1) Select “ECU SETTINGS” under “REMOTE CONTROL” in the left side bar.

The ECU settings page is displayed.

Manage Time Zone

1) Select the ECU ID from the ECU ID pulldown.
2) Select the correct time zone corresponding to the ECU’s location.
3) Press the “Send” button.
Manage Inverter Links

1) Select the ECU ID from the ECU ID pulldown.
2) Select the operation (Add, Clear, or Delete) from the Operation pulldown.
3) Select the inverter from the Inverter List, or input the inverters.
4) Press the “Send” button.

AC Protection Parameters

The AC protection parameters are preset at the factory, but can be adjusted to meet the specific local grid requirements.

1) Select “AC PROTECTION PARAMETERS” under “REMOTE CONTROL” in the left side bar.

The AC Protection Configuration page is displayed.
2) Select the ECU ID from the ECU ID pulldown.
3) Enter the parameters that need to be adjusted.

**WARNING:** Be extremely careful when adjusting these parameters. All APsystems microinverters are factory-set to inherently meet IEEE 1547 / UL 1741 by-design and do-not require adjustment by the site owner or installation team. APsystems microinverters monitor voltage disturbances, frequency disturbances, loss of synchronization and/or loss of phase. If required, please consult your local Authorities Having Jurisdiction (AHJ) and APsystems Technical Support before adjusting any parameters.

4) Using the “Choose the Inverters” pulldown, decide whether you want to adjust all of the inverters, or specific ones from the Inverter List.
5) Press the “Send” button.

**Inverter Status**

The Inverter Status area is for turning ON and OFF the inverters.

1) Select “INVERTER STATUS” under “REMOTE CONTROL” in the left side bar.

The Inverter Status page is displayed.

2) Select the ECU ID from the ECU ID pulldown.
3) Select either ON or OFF.
4) Using the “Choose the Inverters” pulldown, decide whether you want to turn ON or OFF all of the inverters, or specific ones from the Inverter List.
5) Press the “Send” button.
Inverter GFDI

Check the GFDI status to see if the GFDI protection has been tripped. If so, you can reset.

1) Select “INVERTER GFDI” under “REMOTE CONTROL” in the left side bar.

The Inverter GFDI page is displayed.

2) Select the ECU ID from the ECU ID pulldown.
3) Check the GFDI Status for each of the inverters in the Inverter List.
4) Using the “Choose the Inverters” pulldown, decide whether you want to reset all of the inverters, or specific ones from the Inverter List.
5) Press the “Send” button.

Setting List

This page is used to confirm that a remote control command has indeed been send to the APsystems server, and that the ECU has “replied” that the command has been received.

1) Select “SETTING LIST” under “REMOTE CONTROL” in the left side bar.

The Setting List page is displayed.
2) Select the ECU ID from the ECU ID pulldown.
3) Select the command that you want confirmed from the Command pulldown.

The Send and Reply times are displayed once the commands have been sent and received.

**Note:** It can take a few reporting cycles for the commands to be reflected in the monitoring sections of the EMA.
Managing Your Installer Account Information

1. Log onto the EMA.

Your specific Customer List page is displayed.

2. Select either the “Setting Icon” or “Setting” tab (they both do the same thing).

The Installer Account Personal Information Configuration page is displayed.

3. Edit the Personal Information form, or change your password.

4. Press the “Submit” button.
Introduction to Your Customer’s System Dashboard

**Functionality Icons**
Select area of the EMA site that you want to review: DASHBOARD, MODULE, REPORT, or MANAGEMENT.

**System Status**
- **Green** (Normal) – The system is operating and reporting as expected.
- **Grey** (No Data) – There is a system malfunction that should be investigated. No Production data is being communicated to the EMA server. Check the ECU connection to see if you can isolate the problem. If not, contact your installer.

**Settings Tab**
Where you can change your personal information, including your password.

**Daily Power**
The amount of power generated during the current day.

**Lifetime Power**
The amount of power the system has generated during its lifetime.

*Continued ...*
**CO2 Equivalent**

The equivalent amount of CO2 (expressed in tons) benefit the system has provided in its lifetime.

**System Information**

The current date and time for the system, and the date the original account was created.

**Installer Contact Information**

Your installer’s company name, phone number and email address.

*Continued ...*
Current Daily Power Graph

Graphic representation of the power being generated during the current day.

Current Weekly Power Graph

Graphic representation of the energy that has been generated each day during the current seven day period.

Yearly Energy by Month Graph

Graphic representation of the energy that has been generated each month during the last 12 month period.