

Battery Cave User Guide

GENERAL DESCRIPTION

Battery Cave is a web-based tool for creating and tracking characterization requests and performing model gauge simulations. It can be accessed at <https://batterycave.app.analog.com/>. Users must sign in to the myAnalog account to have access. If the user does not already have a myAnalog account, create one and inform the Analog Devices field application engineer (FAE). The Analog Devices team then provides access to the tool.

FEATURES

- Battery Characterization
 - Create characterization requests
 - Track characterization requests
 - Provides access to performance reports and the model INI file.
- Battery Cave Simulator
 - Evaluate fuel gauge performance for custom battery cycling data.
 - Visualize performance with INI files delivered from ADI characterization or a custom INI file modified by the customer.
 - **Note: This simulator feature currently supports only a limited Part numbers. The FAE is to be contacted to verify the availability of support for the specified part number.**

HOW TO ACCESS THE TOOL

- A myAnalog account is required to access Battery Cave.
- Go to <https://batterycave.app.analog.com/> and log in using the myAnalog account.
- Clicking ‘Log in’ using myAnalog redirects to the myAnalog landing page.
- Enter the login credentials, or select Register with email if there is no account.

Battery Cave

This application helps evaluate our battery management IC by allowing you to upload your recorded data logs and edit configuration settings.

The Battery Cave enables efficient evaluation based on configuration adjustments without needing to recollect data.

[Browse Documentation](#)

[Read Release Notes](#)

Log in

Access Battery Cave using a myAnalog account.

[Log in using myAnalog](#)

Don't have a myAnalog account? [Create Account](#).

By logging in via myAnalog, you agree to our [Privacy Policy](#).



myAnalog

Log in with email

Email

Password

☐ Remember Me

[Forgot password?](#)

[Log in](#)

Or continue with your



Google Account



LinkedIn Account



Analog Devices Account

[Need assistance with login or registration?](#)

Register now

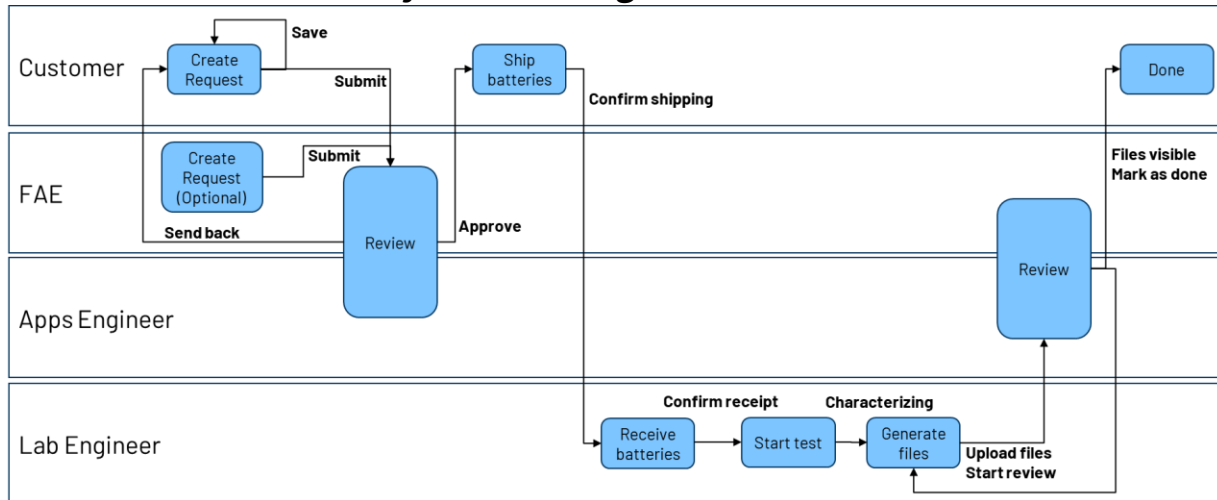
myAnalog is your access to the full analog.com experience!

- Navigate faster
- Organize & collaborate with projects
- Manage product notifications (PCN/PDN)
- Engage with ADI experts on EngineerZone
- Order products & samples
- Plus many more...

[Register](#)

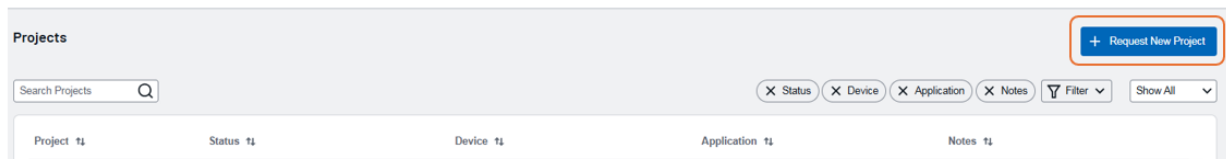
1. BATTERY CHARACTERIZATION REQUESTS

1.1 Characterization Project Flow Diagram



1.2 Create Characterization Requests

- To initiate a new characterization request, click **Request New Project** located in the top-right corner of the website.



- Once the tool is accessed, all projects associated with the current user are displayed on the projects dashboard. The project's dashboard displays information about all projects created in Battery Cave, including their current status.
- In the **Create New Request** section, enter the following details:
 - Project Name**
 - Device Integrated Circuit:** Select the device to be used for characterization.
 - FAE Name**
 - After verifying all details, click **Confirm** to proceed.
 - Note:** Where an FAE is not assigned, a ticket must be created on the ADI Technical Support website: <https://support.analog.com/en-US/technical-support/create-case-techsupport/>

Create New Request

Battery characterisation will be based on the specifications provided in the form. It is essential that these values accurately reflect the actual application to ensure precise results. [Learn more about the process.](#)

Project Name

Device Integrated Circuit

Field Application Engineer

4. On the next page, enter the required **Project Details**. Ensure all mandatory fields are completed to proceed. Click **Next** to continue. To save progress and return later, use the **Save** option.
- **Design Freeze date** must be **at least 8 weeks** from the day the project is created to allow enough time for the characterization to be completed.

The screenshot shows the 'Edit Request' form with the 'Project Details' tab selected. The form contains the following fields:

- Application**: eReader (Optional)
- Sales Volume**: 100 k / yr (Optional)
- Design Freeze**: 11/28/2025
- Mass Production**: 12/19/2025
- End Customer**: (Optional)
- Other Contacts**: (Optional)

Navigation buttons at the bottom right include 'Previous', 'Next' (highlighted with a red box), and 'Save' (highlighted with a red box in the top right corner). The top right corner also shows 'Last saved: Today, 14:52'.

5. The following section requests **Battery Details**. Ensure all mandatory fields are filled in.
- **Protection Voltage** is the minimum voltage specified by the manufacturer at which the protection circuit trips to prevent any damage to the battery.

The screenshot shows the 'Edit Request' form with the 'Battery Details' tab selected. The form contains the following fields:

- Manufacturer**: ATL
- Part Number**: xyz
- Configuration**: 1S2P
- Capacity**: 250 mAh / pack
- Protection Voltage**: 2.7 V / cell
- Rsense Value**: 20 mOhm (Optional)
- Geometry**: Polymer (Optional)
- Chemistry**: Lithium Ion (Li+)
- Packaging Type**: Sealed Pack (Optional)
- Units to Ship**: 4 (Selected)

Navigation buttons at the bottom right include 'Previous' and 'Next' (highlighted with a red box). The top right corner shows 'Last saved: Today, 14:49' and a 'Save' button.

6. The **Discharging** section contains mandatory fields that must be completed:

- **System Shutdown Voltage:** This is equivalent to the *V_{Empty}* voltage, at which the fuel gauge indicates 0% state of charge (SOC). It is recommended that this value be greater than or equal to the lowest operating voltage of the system.
- **Discharge Stop Voltage:** This is the voltage at which the characterization discharge should terminate. It is recommended to set this value at least **0.2V** below the shutdown voltage and above the protection voltage.
- **Note:** The RunTime x Load is approximately equal to Battery Capacity.
For Example: Standby Runtime x Standby Load = Battery capacity
Typical Runtime x Typical Load = Battery capacity and
Minimum Runtime x Maximum Load = Battery capacity
The minimum supported discharge rate is C/25.

The screenshot shows the 'Edit Request' form with the 'Discharging' tab selected. The form contains the following fields:

Field	Value	Unit
System Shutdown Voltage	3	V / cell
Discharge Stop Voltage	2.8	V / cell
Standby Runtime	20	Hour
Standby RMS Load	12.5	mA / pack
Typical Runtime	10	Hour
Typical RMS Load	25	mA / pack
Minimum Runtime	1	Hour
Max RMS Load	245	mA / pack

Navigation buttons: Previous, Next, Save. Status: Last saved: Today, 14:57.

7. In the **Charging** section, provide the following application-specific parameters:

- **Charge Voltage:** Specify the charge voltage used by the application.
- **Charge Current:** Enter the maximum current supplied by the charger to the battery.
- **Termination Current:** Specify the charge termination current for the application.

The screenshot shows the 'Edit Request' form with the 'Charging' tab selected. The form contains the following fields:

Field	Value	Unit
Charge Voltage	4.5	V / cell
Charge Current	100	mA / pack
Termination Current	22	mA / pack

Navigation buttons: Previous, Next, Save. Status: Last saved: Today, 14:59.

8. Enter any additional details or comments in the **Notes** section.

Edit Request Last saved: Today, 15:44 Save

Project Details Battery Details Discharging Charging **Notes**

Anything Unclear or Unusual?  Optional

Previous Go to Summary

9. Click **Go to Summary Page** to review and confirm all project details before submitting the request. Use the **Edit** button to make any necessary changes.

Submit - customer_testcase1?

Project Details	Battery Details	Discharging	Charging
Requested Date: 2025-09-18	Manufacturer: ATL	System Shutdown Voltage: 3V / cell	Charge Voltage: 4.5V / cell
Device: MAX17335	Part Number: xyz	Discharge Stop Voltage: 2.8V / cell	Charge Current: 100mA / pack
Application: eReader	Configuration: 1S2P	Standby Runtime: 20Hour	Termination Current: 22mA / pack
Sales Volume: 100k / yr	Capacity: 250mAh / pack	Standby RMS Load: 12.5mA / pack	
Design Freeze: 2025-11-28	Protection Voltage: 2.7V / cell	Typical Runtime: 10Hour	
Mass Production: 2025-12-19	Risense Value: 20mOhm	Typical RMS Load: 25mA / pack	
FAE: fae.faraday@analog.com	Geometry: Polymer	Minimum Runtime: 1Hour	
End Customer:	Chemistry: Lithium Ion (Li+)	Max RMS Load: 245mA / pack	
Other Contacts:	Packaging Type: Sealed Pack		
	Units to Ship: 4		

Notes

Edit Submit

10. After the request is submitted, the project status updates to **Awaiting Approval**. The Analog Devices FAE reviews the submitted form. If all required information is complete and accurate, the request is approved. If additional details are needed or any information is unclear, the form is returned to the customer for revision. The customer is notified when the request is sent back for further review.

Project #1	Device #1	Application #1	Notes #1	Status #1
customer_test2	max17335	Cell Phone	Please specify the heavy load condition. Heavy load max is 245mA for this application.	Awaiting Approval
customer_testcase1	max17335	eReader		Awaiting Approval
userguide_test1	max17335			Draft
customer_test4026	max17335	Cell Phone		Done

11. If the FAE edits the request and sends it back for customer review, the project status updates to **Action Required**. Click **Edit Request** to view each section and review the changes made by the FAE.

The screenshot displays a project management interface. At the top, a table lists projects with columns for Project, Status, Device, Application, and Notes. The first row, 'customer_testcase1', is highlighted with an orange border and shows a status of 'Action Required'. Below the table, a detailed view for 'customer_testcase1' is shown, also with an orange border. This view includes a breadcrumb trail, tabs for 'Details', 'Progress', 'Files', and 'Simulations', and a sub-header 'About'. On the right side of the 'About' section, there is an 'Edit Request' button with a pencil icon, highlighted by an orange box. The main content area is divided into four columns: Project Details, Battery Details, Discharging, and Charging, each containing specific project parameters.

Project	Status	Device	Application	Notes
customer_testcase1	Action Required	max17335	eReader	
customer_test2	Awaiting Approval	max17335	Cell Phone	Please specify the heavy load condition. Heavy load max i...

< customer_testcase1 Action Required
MAX17335

Details require your attention.

Details Progress Files Simulations

About Edit Request ...

Project Details

Requested Date	2025-09-18
Device	MAX17335
Application	eReader
Sales Volume	100k / yr
Design Freeze	2025-11-28
Mass Production	2025-12-19
FAE	fae.faraday@analog.com
End Customer	
Other Contacts	

Battery Details

Manufacturer	ATL
Part Number	xyz
Configuration	1S2P
Capacity	250mAh / pack
Protection Voltage	2.7V / cell
Rsense Value	20mOhm
Geometry	Polymer
Chemistry	Lithium Ion (Li+)
Packaging Type	Sealed Pack
Units to Ship	4

Discharging

System Shutdown Voltage	3.3 V / cell
Discharge Stop Voltage	3V / cell
Standby Runtime	20Hour
Standby RMS Load	12.5mA / pack
Typical Runtime	10Hour
Typical RMS Load	25mA / pack
Minimum Runtime	1Hour
Max RMS Load	245mA / pack

Charging

Charge Voltage	4.5V / cell
Charge Current	100mA / pack
Termination Current	22mA / pack

Notes

12. Edits made by the FAE are highlighted within each section. The customer can review these changes, confirm them, or make additional edits, as needed. Once finalized, click **Submit** to send the updated request.

Edit Request[Go to Summary](#)

Project Details

Battery Details

Discharging

Charging

Notes

System Shutdown Voltage ⓘ
3.3 V / cell
Value changed by FAE
Edited: Today, 14:05

Discharge Stop Voltage ⓘ
3 V / cell
Value changed by FAE
Edited: Today, 14:05

Project Details

Requested Date	2025-09-18
Device	MAX17335
Application	eReader
Sales Volume	100k / yr
Design Freeze	2025-11-28
Mass Production	2025-12-19
FAE	fae.faraday@analog.com
End Customer	
Other Contacts	

Battery Details

Manufacturer	ATL
Part Number	xyz
Configuration	1S2P
Capacity	250mAh / pack
Protection Voltage	2.7V / cell
Rsense Value	20mOhm
Geometry	Polymer
Chemistry	Lithium Ion (Li+)
Packaging Type	Sealed Pack
Units to Ship	4

Discharging

System Shutdown Voltage	3.3V / cell
Discharge Stop Voltage	3V / cell
Standby Runtime	20Hour
Standby RMS Load	12.5mA / pack
Typical Runtime	10Hour
Typical RMS Load	25mA / pack
Minimum Runtime	1Hour
Max RMS Load	245mA / pack

Charging

Charge Voltage	4.5V / cell
Charge Current	100mA / pack
Termination Current	22mA / pack

Notes

[Edit](#)[Submit](#)

13. Once the FAE approves the request, the project status updates to **Approved**, and a project number is assigned. This number appears in the **Project** section. It is recommended to label the battery packs with this project number to ensure proper identification during shipment to Analog Devices.

Project #	Status	Device #	Application	Notes
userguide_test3 4074	Approved	max17335	Cell Phone	
customer_testcase1 4076	Approved	max17335	eReader	

1.3 Track Characterization Request

1. To view the shipping address, select the project and click **Confirm Shipping**.

<

customer_testcase1

Approved

4076 | MAX17335

Details

Progress

Files

Simulations

Confirm Shipping

Batteries need to be shipped.

Confirm Shipping Details?

X

Send the batteries to the address below to proceed. Characterization can only be done once the Lab Engineer receives them.

Project: 4093
Analog Devices, Att: Jeanie Le, D1-82
160 Rio Robles
San Jose, CA
USA
95134-1813

Delivery Provider

2. After shipping the batteries, update the tool by selecting **Confirm Shipping**. Enter the delivery provider's details and tracking information for the battery packs. Any supplementary information can be added in the **Notes** section.

<

customer_testcase1

Approved

4076 | MAX17335

Details

Progress

Files

Simulations

Confirm Shipping

Batteries need to be shipped.

About

Project Details

Project Namecustomer_testcase1

Device NameMAX17335

Requested Date2025-09-23

ApplicationeReader

Sales Volume100k / yr

Design Freeze2025-11-28

Mass Production2025-12-19

End Customer

Other Contacts

Battery Details

ManufacturerATL

Part Numberxyz

Configuration1S2P

Capacity250mAh / pack

Protection Voltage2.7V / cell

Rsense Value20mOhm

GeometryPolymer

ChemistryLithium Ion (Li+)

Packaging TypeSealed Pack

Units to Ship4

Discharging

System Shutdown Voltage3.3V / cell

Discharge Stop Voltage3V / cell

Standby Runtime20Hour

Standby RMS Load12.5mA / pack

Typical Runtime10Hour

Typical RMS Load25mA / pack

Minimum Runtime1Hour

Max RMS Load245mA / pack

Charging

Charge Voltage4.5V / cell

Charge Current100mA / pack

Termination Current22mA / pack

Notes

Confirm Shipping Details?

Send the batteries to the address below to proceed. Characterization can only be done once the Lab Engineer receives them.

Project: 4093
Analog Devices, Att: Jeanie Le, D1-82
160 Rio Robles
San Jose, CA
USA
95134-1813

Delivery Provider

FedEx

Tracking Details

0123456789

Notes

Expected Arrival in 2 days

[Cancel](#) [Confirm Shipping](#)

Projects					+ Request New Project
Search Projects		X Status X Device X Application X Notes Filter Show All			
Project #1	Status #1	Device #1	Application #1	Notes #1	
customer_testcase1 4076	Shipping	max17335	eReader		
test1 3937	Characterizing	max17201	Cell Phone	pp	
walkthrough 4019	Characterizing	max17310	Wearables		

3. Click the **Progress** tab to view the current project status.

The screenshot shows the 'Progress' tab for project 'customer_testcase1' (ID 4076, MAX17335). The progress bar is divided into five stages: Request, Approved, Shipping, Characterizing, and Done. The 'Shipping' stage is currently active and highlighted with an orange box. Below the progress bar, the 'History' section lists several events: 'Shipped batteries to Limerick Lab' (Today, 16:00), 'Approved by fae.faraday@gmail.com' (Today, 15:19), 'Changes required after reviewed by fae.faraday@gmail.com' (Sep 19, 2025, 08:29), 'Request sent for approval.' (Sep 18, 2025, 15:08), and 'Characterization requested by customer.yushino@gmail.com' (Sep 18, 2025, 14:44). The 'Comments' section contains a single comment: 'Will be released soon'.

4. Once the lab engineer initiates the characterization process and updates the project status, the system reflects the status as **Characterizing**.

The standard turnaround time for delivering the Model.INI file and the **Performance Report** is approximately six to seven weeks from the date the project is approved, and Analog Devices receives the battery samples. This duration may be extended if the customer specifies special requirements, such as custom load profiles or temperature conditions.

The screenshot shows the 'Projects' table with a search bar and filter buttons. The table has five columns: Project #, Status, Device #, Application, and Notes. The project 'customer_testcase1' (ID 4076) is highlighted with an orange box, showing a status of 'Characterizing', device 'max17335', application 'eReader', and no notes.

Project #	Status	Device #	Application	Notes
test1 3937	Characterizing	max17201	Cell Phone	pp
walkthrough 4019	Characterizing	max17310	Wearables	
Test project for BD 4062	Characterizing	max17201	Cell Phone	
customer_testcase1 4076	Characterizing	max17335	eReader	

5. Once the characterization and analysis are complete, the user is notified after the performance report and INI files are uploaded. The **Progress** tab then shows the status as Done, and the **Files** tab provides access to download the performance report and the custom model INI files.

< customer_testcase1 Done

4076 | MAX17335

Details Progress Files Simulations

Progress

Request Approved Shipping Characterizing Done

History

- FF Project is done. Results are visible in Files. Today, 10:31
- FF Characterizing battery. Sep 23, 2025, 16:15
Batteries to Characterize: 3
- CY Shipped batteries to Limerick Lab Sep 23, 2025, 16:00
Delivery Provider: FedEx
Tracking Details: 012345678
Shipping Address: Raheen Business Park, Munster, Limerick, EirCode, Ireland
Note: Expected Arrival in 2 days
- FF Approved by fae.faraday@gmail.com Sep 23, 2025, 15:19
- FF Changes required after reviewed by fae.faraday@gmail.com Sep 19, 2025, 08:29
- CY Request sent for approval. Sep 18, 2025, 15:08
- CY Characterization requested by customer.yushino@gmail.com Sep 18, 2025, 14:44

Comments

Will be released soon

< customer_testcase1 Done

4076 | MAX17335

Details Progress Files Simulations

Files

sample.model.ini.txt INI File	Uploaded Sep 23, 2025, 16:24	Download
Sample_Performance.pdf Performance Report	Uploaded Sep 23, 2025, 16:25	Download

REVISION HISTORY

REVISION NUMBER	REVISION DATE	DESCRIPTION	PAGES CHANGED
0	12/25	Initial release	—

NOTES

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