

edgeRX™ Platform User Guide

sensei.tdk.com

TDK SensEI edgeRX™ Dashboard User Guide

Version 3.2.0 – 03 June 2026

Note: This guide covers the dashboard workflows. Physical installation steps and hardware specifications are intentionally excluded and should be referenced from the respective hardware datasheets and user guides.

Contents

1. Introduction	6
1.1 About This Guide.....	6
1.2 Related Documentation.....	6
2. Getting Started	7
2.1 Logging into Your Account.....	7
2.1.1 First-Time Login (New Users).....	7
2.1.2 MFA / Authenticator Setup.....	8
2.1.3 Existing Users.....	9
2.1.4 Forgot Password	10
2.1.5 Profile Settings	11
2.2 Navigating the Homepage Dashboard	12
2.2.1 Location / Facility Selector	12
2.2.2 Trend Analysis Chart.....	13
2.2.3 Language Selector	13
2.2.4 Theme Toggle	13
3. Managing Users & Permissions	13
3.1 Manage Users.....	13
3.1.1 Viewing the User List.....	14
3.1.2 Adding a New User.....	14
3.1.3 Managing Existing Users	15
3.2 Manage Roles	17
3.2.1 Adding a New Role.....	17
3.2.2 Configuring Role Permissions	17
3.3 Global Executive Role.....	18
3.4 Profile Settings.....	18

3.5 Adding a Department.....	18
4. Gateway Management.....	19
4.1 Adding a Gateway to the Dashboard.....	19
4.2 Managing Gateways.....	21
4.2.1 Reboot a Gateway.....	21
4.2.2 Delete a Gateway.....	21
4.2.3 Edit a Gateway.....	21
4.3 Gateway Table Features	21
4.4 Gateway Detail View.....	22
4.4.1 Detail Tab	22
4.4.2 Sensor Tab	22
4.4.3 Diagnostics Tab.....	23
4.4.4 Logs Tab	24
5. Sensor Management	25
5.1 Adding a Sensor to the Dashboard	25
5.2 Managing Sensors.....	26
5.2.1 Edit a Sensor	26
5.2.2 Delete a Sensor.....	26
5.3 Sensor Table Features	27
5.4 Sensor Configuration	28
5.4.1 Process Queue.....	28
5.4.2 Configure KPI Interval.....	28
5.5 Sensor Detail View.....	29
5.5.1 Overview Tab.....	30
5.5.2 Diagnostics Tab.....	33
5.5.3 Event Log Tab	35
5.5.4 Sensor History Tab	36
6. Asset Management.....	37
6.1 Adding Assets	37
6.2 Asset Table Features.....	39
6.3 Managing Assets.....	39
6.3.1 Delete an Asset.....	39

6.4 Binding Sensors to Assets	40
6.5 Asset Location Management	42
6.6 Asset Detail View.....	43
6.6.1 Overview Tab.....	43
6.6.2 Status Tab	43
6.6.3 Event Tab.....	44
6.6.4 Asset Logs Tab	44
7. Machine Learning in edgeRx	46
7.1 ML Information Overview.....	46
7.2 ML Model Types	46
7.3 Class Labels and Score Thresholds	46
8. Viewing AI Inference Results	48
8.1 ML Insights Tab	48
8.2 Live Diagnostics.....	48
8.3 ML Progress bar and Asset pie chart.....	49
8.3.1 ML Progress States	49
8.3.2 Asset Activity Ratio (Pie Chart)	52
8.4 ML Inference Tab.....	52
8.5 Start/Stop Live Inference	52
8.6 Historical Trends Analysis.....	54
9. Data & Monitoring	55
9.1 Data Records	55
9.1.1 KPI Trend	56
9.1.2 Raw Data.....	57
9.1.3 Exporting Data.....	61
9.2 ISO-Based Results.....	62
9.2.1 Understanding ISO Standards.....	62
9.2.2 Viewing ISO Results	62
9.2.3 Configuring ISO Standards	62
9.3 Live View.....	62
10. Predictive Maintenance (PDM).....	65
11. Notifications & Alerts	69

11.1 Notification Types.....	69
11.1.1 Asset Tab.....	69
11.1.2 Device Tab.....	69
11.2 Managing Notifications	70
11.2.1 Acknowledge a Notification	70
11.2.2 Delete a Notification	71
11.2.3 Bulk Actions.....	71
11.3 Notification Filters	72
11.4 Email & Mobile Push Notifications.....	72
11.5 Setting Warning/Alarm Thresholds	73
11.6 Notification Table Features.....	74
12. Configuring Settings.....	76
12.1 Location Hierarchy.....	76
12.1.1 Adding a Site	77
12.1.2 Managing Existing Locations.....	78
12.1.3 Adding a Building.....	80
12.1.4 Adding a Floor	81
12.1.5 Adding a Room.....	81
12.1.6 Map Toolbar	82
12.2 Manage Asset DB / Asset Types	83
12.2.1 Adding a Custom Field.....	83
12.2.2 Adding an Asset Model	84
12.2.3 Managing Asset Models	85
12.3 Bearing DB.....	85
12.3.1 Adding Bearing Fault Data.....	86
12.3.2 Editing Bearing Fault Data	86
12.3.3 Deleting Bearing Fault Data.....	87
12.3.4 Bulk Upload Bearing Faults.....	87
12.4 ISO Standards.....	87
12.4.1 Adding an ISO Standard	88
12.4.2 Editing an ISO Standard	88
12.4.3 Deleting an ISO Standard.....	88

12.5 Fault Diagnosis	89
13. Troubleshooting.....	90
13.1 Sensor Issues	90
13.1.1 Sensor Appears Offline on Dashboard	90
13.2 Gateway Issues	90
13.2.1 Gateway Appears Offline on Dashboard.....	90
13.3 Dashboard Issues.....	91
13.3.1 No Data Appearing on Dashboard	91
13.3.2 Widget Appears Inactive or Blank	91
13.4 Contacting Support.....	91
Appendix.....	92
A. Glossary of Terms	92

1. Introduction

1.1 About This Guide

TDK SensEI's edgeRX™ end-to-end platform is a complete solution for real-time equipment health monitoring. The edgeRX™ solution leverages edge AI to process data locally at the source for faster, more accurate, and more efficient insights. edgeRX™ is a user-friendly, low-maintenance solution that optimizes the collection, analysis, and management of machine health data. By continuously monitoring the health status of critical assets, edgeRX™ reduces unexpected downtime, optimizes maintenance to improve efficiency and effectiveness, and enables predictive maintenance for users.

This guide provides a comprehensive step-by-step approach to using the edgeRX™ Dashboard for monitoring machine performance. By leveraging real-time data visualization on the dashboard, factory operators can proactively address maintenance needs, reducing downtime and operational costs.

1.2 Related Documentation

For hardware setup, installation, and physical device troubleshooting, please refer to the following user manuals:

Document	Model Number	Contents
edgeRX™ Gateway User Manual	SE5100204G-01	Gateway hardware setup, power connection, network configuration, LED indicators, physical troubleshooting
edgeRX™ Lynq User Manual	SE1111101G-01	Sensor hardware activation, physical installation, battery information, LED indicators, physical troubleshooting

These documents can be obtained from your local TDK SensEI representative.

2. Getting Started

2.1 Logging into Your Account

Follow these steps to log into your account:

2.1.1 First-Time Login (New Users)

1. Admin can trigger a welcome email via the dashboard as mentioned in [3.1.2 Adding a New User](#)
2. Open the welcome email received from TDK SensEI.
3. Click the login link to access the edgeRX™ Dashboard.
4. Create your password during the first login.
4. Complete the MFA setup process (see Section 2.1.2).

Figure 1: Create Password Page

2.1.2 MFA / Authenticator Setup

Multi-Factor Authentication (MFA) adds an extra layer of security to your account.

1. After entering your credentials, you will be prompted to set up MFA.
2. Download an authenticator app on your mobile device (e.g., Google Authenticator, Microsoft Authenticator).
3. Scan the QR code displayed on screen using your authenticator app.

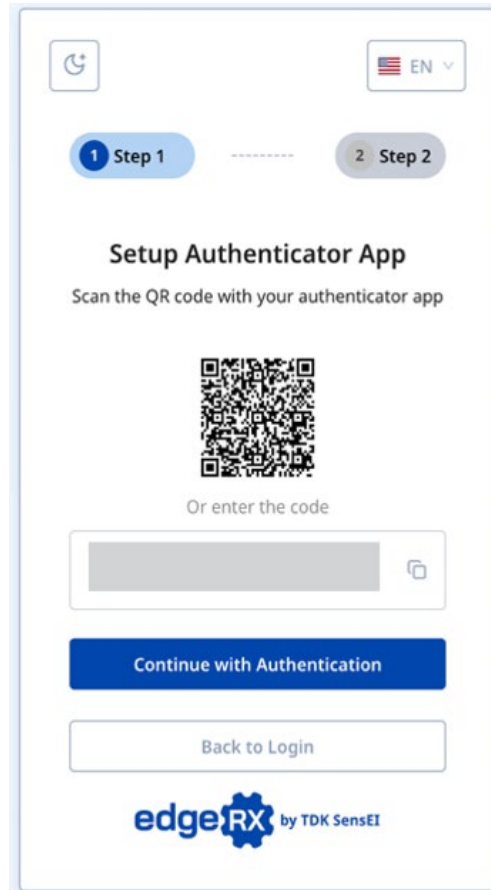


Figure 2: MFA Setup Page

4. Enter the 6-digit verification code generated by your authenticator app.
5. Click "**Verify**" to complete the setup.

The screenshot displays a mobile-style interface for entering an authentication code. At the top right, there is a language selector showing 'EN' with a dropdown arrow. Below this, a progress bar indicates 'Step 1' is complete (green) and 'Step 2' is the current step (blue). The main heading is 'Authentication Code', followed by the instruction: 'Please enter the authentication code sent to your authenticator app.' There are six empty input boxes arranged horizontally for the code. Below the boxes is a prominent blue 'Verify' button and a lighter 'Back to Setup' button. The bottom of the screen features the 'edgeRX™ by TDK SensEI' logo.

Figure 3: Authentication Code Entry

⚠ Trust This Device: You may select the **"Trust This Device"** checkbox to bypass MFA for 30 days on that specific device.

2.1.3 Existing Users

1. Navigate to the edgeRX™ Dashboard login page.
2. Enter your registered email address and password.
3. Enter the 6-digit code from your authenticator app (if MFA is enabled and device is not trusted).

Figure 4: Login Page

4. Click "**Login**" to access the Dashboard.

2.1.4 Forgot Password

If you have forgotten your password:

1. Click the "**Forgot Password**" link on the login page.

Figure 5: Forgot Password Highlighted

2. Enter your registered email address.
3. Click "**Submit**" to receive a password reset link via email.
4. Open the email and click the reset link.
5. Enter and confirm your new password.

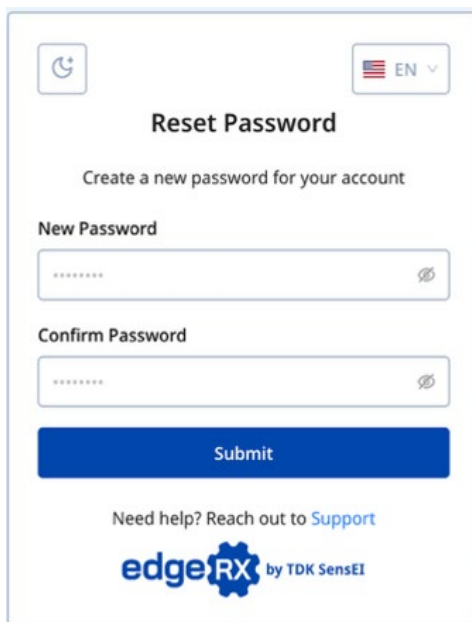


Figure 6: Password Reset Flow

6. Click "**Reset Password**" to complete the process.
7. Return to the login page and sign in with your new credentials.

2.1.5 Profile Settings

Users can manage their personal account settings by clicking the user icon located at the bottom-left corner and navigating to "**Profile Settings**".

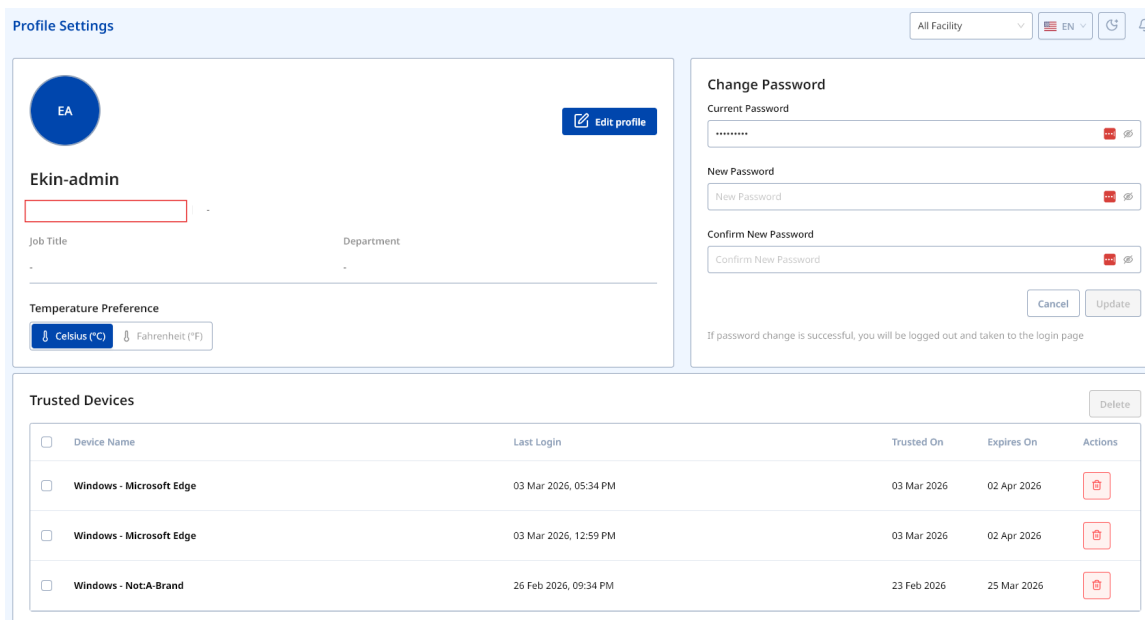


Figure 7: Profile Page

From here, users can:

- **Edit personal profile details** – Update your name and contact information.
- **Change password** – Update your account password.
- **Manage devices** – View or remove devices that have been trusted for MFA bypass.
- **Temperature Preference** – Update your preferred temperature unit.

2.2 Navigating the Homepage Dashboard

After logging in, you will be directed to the Homepage Dashboard. Here you'll see an overview of real-time information:

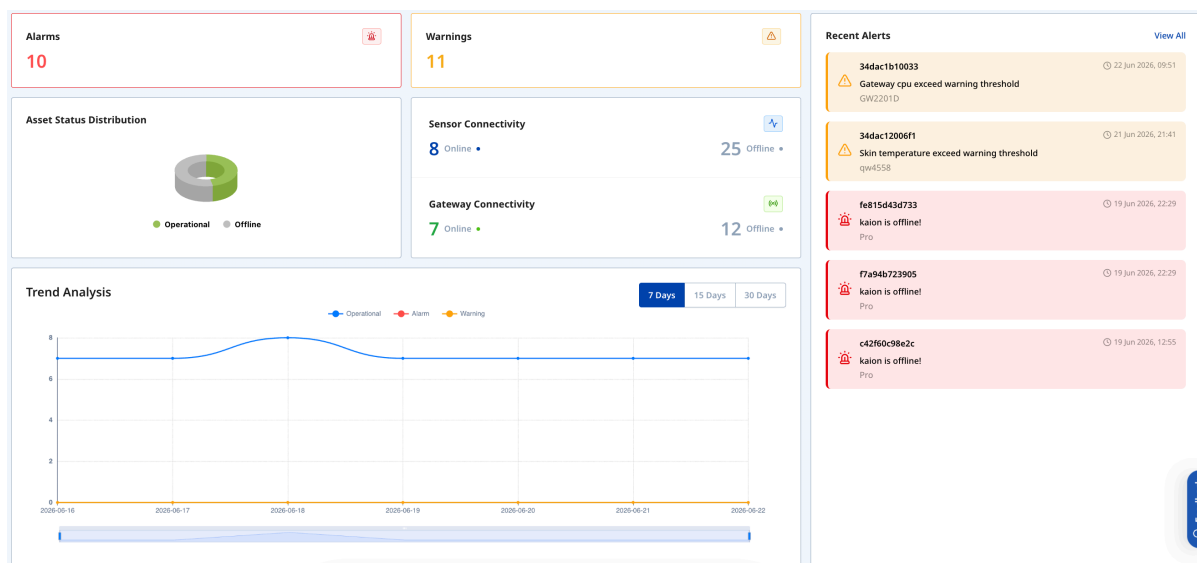


Figure 8: Dashboard Homepage

Widget	Description	CTA (Click Action)
Alarms	Active alarms across connected assets	Click to navigate to the Notification screen with filtered Alarm data
Warnings	Active warnings across connected assets	Click to navigate to the Notification screen with filtered warning data
Sensor Connectivity	Sensor connection health	Click to view sensor listing screen
Top 5 Notification	Recent Top 5 Notifications	Click to view all notifications
Gateway Connectivity	Gateway connection health	Click to view gateway listing screen
Trend Analysis Chart	High-level metrics showing asset behaviour over time	N/A

2.2.1 Location / Facility Selector

Use the location/facility selector dropdown to switch between different sites or facilities within your organization.

⚠ Note: Access to this dropdown is restricted to **Admin** and **Global Executive** users only.

2.2.2 Trend Analysis Chart

The Trend Analysis chart analyses historical trends of notifications using a line chart. Features include:

- Custom date range picker
- Time adjustment slider

2.2.3 Language Selector

The Global Language Selector is located in the top right corner of the dashboard screen. Users can switch between the following languages:

- English (default)
- Japanese
- Simplified Chinese

The selected language persists across all pages of the application.

2.2.4 Theme Toggle

The theme toggle is located in the top right corner of the screen. Users can switch between:

- Light theme
- Dark theme

The selected theme persists across all pages of the application.

⚠ Troubleshooting: If any widget appears inactive or blank, confirm that your gateways and sensors are online.

3. Managing Users & Permissions

The Administrator ("Admin") can create separate roles and assign specific permissions based on the organization's requirements. The TDK SensEI team will set up an organization account on the edgeRX™ Dashboard and grant access to a designated Administrator user.

3.1 Manage Users

Navigate to **Settings > Manage Users** to access user management functions.

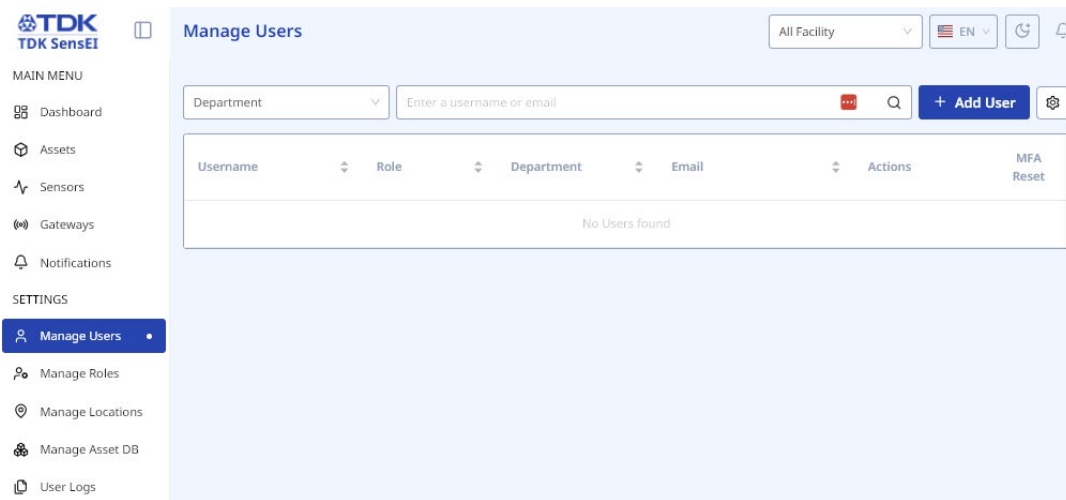


Figure 9: Manage Users

3.1.1 Viewing the User List

The user list displays all users within your organization. You can:

- View all registered users
- Filter users by Department using the dropdown in the top left corner
- Search for users using the search bar by username or email ID
- Adjust the number of rows displayed per page using the "Rows per Page" dropdown

3.1.2 Adding a New User

To add a new user:

1. Click the **"Add"** button on the top right corner.
2. Enter the following details in the modal:

Add User ✕

User Name*

Email*

Role*

Location*

Department

Figure 10: Add User Modal

Field	Description
User Name	Full name of the user
Email	User's email address (used for login)
Role	Select from existing roles dropdown
Location	Select from existing locations dropdown
Department (Optional)	Select from existing departments dropdown

3. Click **"Add User"** to create the new user account.
4. Click **"Cancel"** to terminate the action without adding the user.

 **Note:** The new user will receive a welcome email with instructions to set up their password and MFA.

3.1.3 Managing Existing Users

For each user in the list, you can perform the following actions:

Action	Description	When to Use
Edit User Details	Update user information including email address	User changes role, department, or email
Assign Roles	Change the user's role and permissions	User responsibilities change
Resend Welcome Email	Send a new welcome email to inactive users	User hasn't completed initial setup
Reset Password	Force password reset for active users	User forgot password
Resend Verification Email	Send verification email after email address update	User's email address was updated
Reset MFA	Clear MFA setup for a user	User lost access to authenticator app

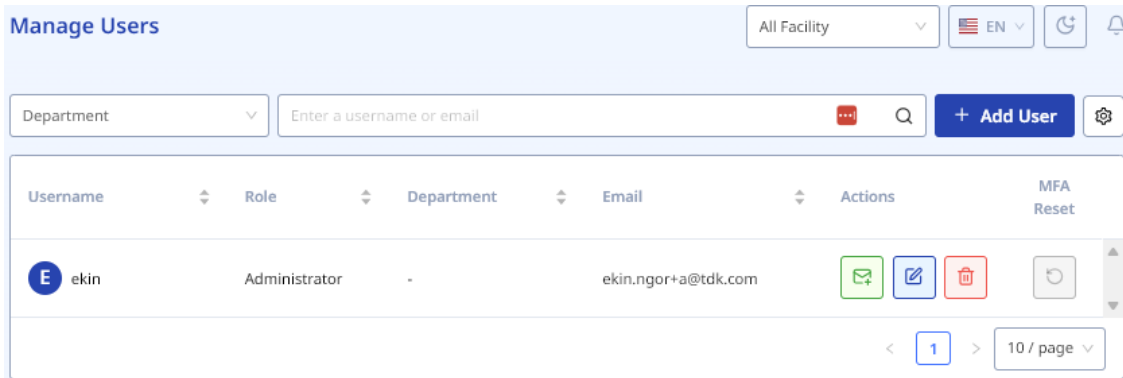


Figure 11: Members List

To perform any of these actions, click the corresponding icon or button in the **Actions** column next to the user's name.

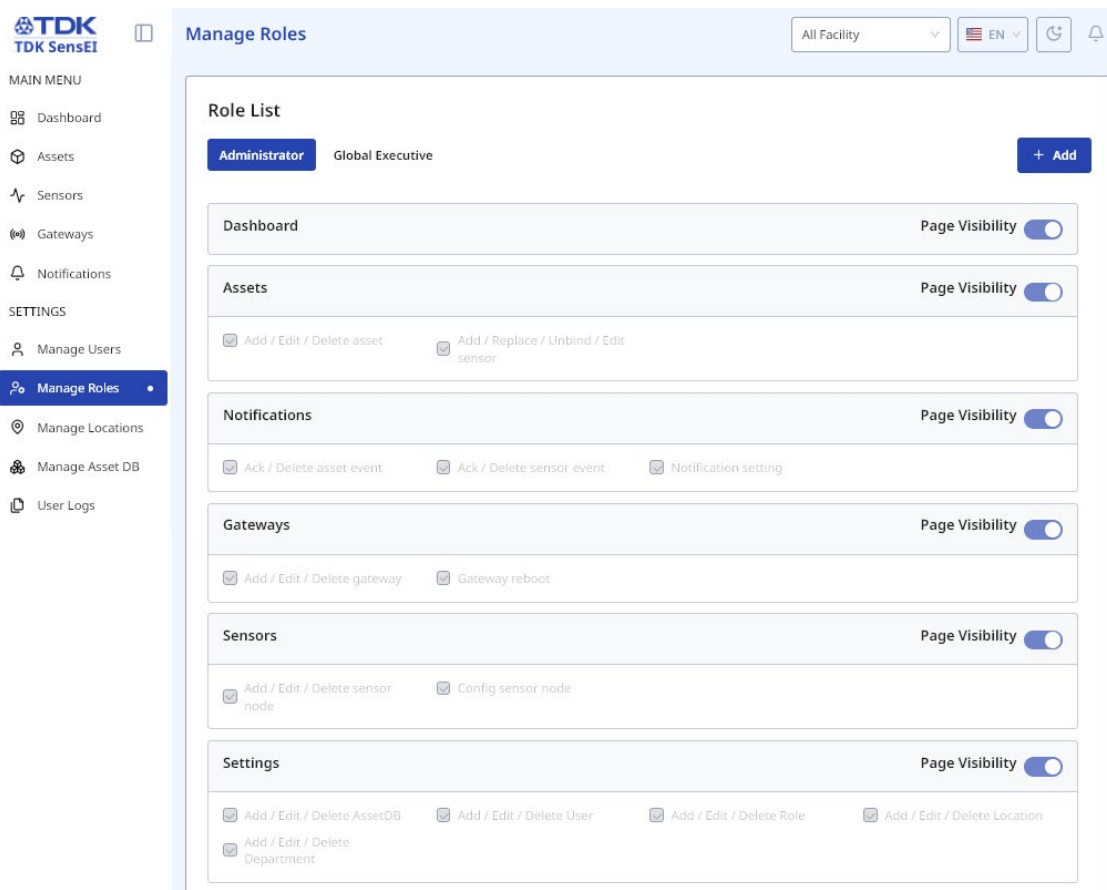


Figure 12: Manage roles

3.2 Manage Roles

Navigate to **Settings > Manage Roles** to create or edit roles and assign module-level access.

3.2.1 Adding a New Role

To add a new role:

1. Click the **"Add"** button.
2. Enter the role name in the field.
3. Click **"Create"** to add the new role.
4. Click **"Cancel"** to terminate the action.

Figure 13: Add Role Viewer

3.2.2 Configuring Role Permissions

Use the toggle buttons and checkboxes to enable or disable permissions for each role:

- Toggle buttons control **module access** (e.g., Sensors, Gateways, Assets, Notifications)
- Checkboxes control **specific actions** within modules (e.g., View, Add, Edit, Delete)

Figure 14: Role Permissions

Click **"Save"** to apply permission changes across all users assigned to that role.

3.3 Global Executive Role

The **Global Executive** role provides special privileges:

- **Read-only access** to every location in the organization
- Ability to **switch between locations** using the location selector
- View all dashboards and data including:
 - Sensors
 - Gateways
 - Notifications
 - Insights
 - Home KPIs

⚠ Note: Global Executives cannot modify data or settings, only view them.

3.4 Profile Settings

Every user has access to their own account management options via **Profile Settings**. For detailed instructions, see Section 2.1.5.

3.5 Adding a Department

To add a new department:

1. Click the Department dropdown.
2. Enter the department name in the field.
3. Click "+" to create the new department.

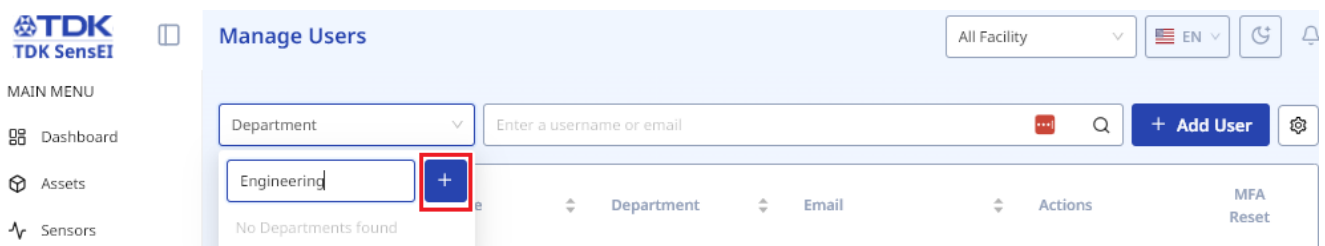


Figure 15: Adding a Department

4. Gateway Management

4.1 Adding a Gateway to the Dashboard

Note: Before we can add a gateway, we must set up a location, refer to [11.1 Location Hierarchy](#) to set up a location.

Log into the edgeRX™ Dashboard, then navigate to **Gateway Summary** page.

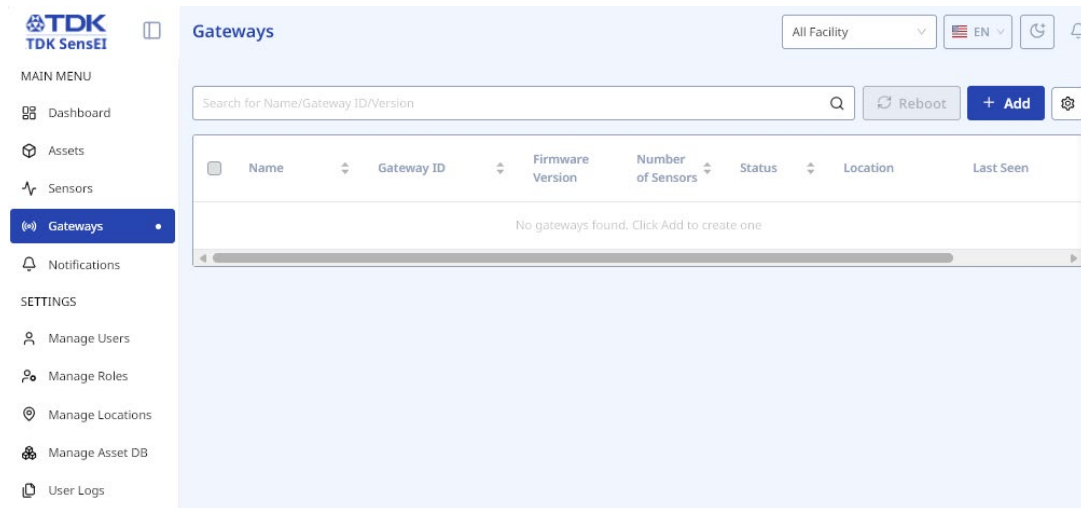


Figure 16: Gateway Summary

Steps to Add a Gateway

1. Navigate to **Gateway > Add Gateway**.

Figure 17: Add Gateway Modal

2. Enter the required details:

Field	Description
Gateway Name	A custom name for identification
Gateway ID	The 12-character Gateway ID (found on the Gateway's box or on the flat-bottom surface of the Gateway)
Location	Select the location of the Gateway on the floorplan

Gateway ID* Name*

Location*

Coordinate X (Meter) Coordinate Y (Meter)

📍 Please click on the map to select a location

Figure 18: Add Gateway Details

3. Plot the coordinates (Optional) on the map component.
4. Click **"Save"** to register the Gateway into the system.

The new Gateway will appear in the table and be available for monitoring and management.

⚠️ Note: Ensure that your edgeRX™ Gateway is online and connected using the Detail tab. If your edgeRX™ Gateway appears offline, see [Section 12](#) for troubleshooting steps. For physical sensor installation instructions, refer to the **edgeRX™ Gateway User Manual**.

4.2 Managing Gateways

4.2.1 Reboot a Gateway

1. Click the **"Reboot"** button.
2. Click **"Confirm"** to reboot the Gateway.
3. Clicking **"Cancel"** will terminate the reboot action.

⚠ Note: Users can only reboot one Gateway at a time.

4.2.2 Delete a Gateway

1. Click the **"Delete"** icon.
2. Click **"Delete"** to remove the Gateway.
3. Clicking **"Cancel"** will terminate the delete action.

4.2.3 Edit a Gateway

1. Click the **"Edit"** button from the actions column.
2. Update the Gateway ID, Name, and/or Location fields.
3. Click **"Save"** to ensure your changes are saved.
4. Clicking **"Cancel"** will terminate the edit action.

4.3 Gateway Table Features

The table provides a searchable, paginated view of all Gateway devices.

Feature	Description
Search Bar	Locate Gateways by Name, Gateway ID, or Version
Rows per Page	Adjust the number of rows displayed (dropdown in bottom right corner)
Column Settings	Customize visible columns (Settings icon on top right corner)

The screenshot shows the 'Gateways' management interface. At the top right, there are filters for 'Singapore-ATS', 'EN', and a refresh icon. Below this is a search bar with the placeholder text 'Search for Name/Gateway ID/Version' and a search icon. To the right of the search bar are buttons for 'Reboot', '+ Add', and a settings icon. The main table has the following columns: Name, Gateway ID, Firmware Version, Number of Sensors, Status, Location, Last Seen, and Actions. Two gateway entries are visible: 'SG_lab1' with Gateway ID '34dac1b1011c', Firmware Version 'v0.0.1', 5 sensors, and status 'Offline'; and 'SG_lab2' with Gateway ID '213da239af8c', Firmware Version '-', 0 sensors, and status 'Offline'. Each row has edit and delete icons in the Actions column. At the bottom right, there is a pagination control showing '1' of 10 pages.

Figure 19: Gateway Table

4.4 Gateway Detail View

To access detailed information about a Gateway, click on the **Gateway ID** from the listing. This opens the Gateway Detail View with multiple tabs:

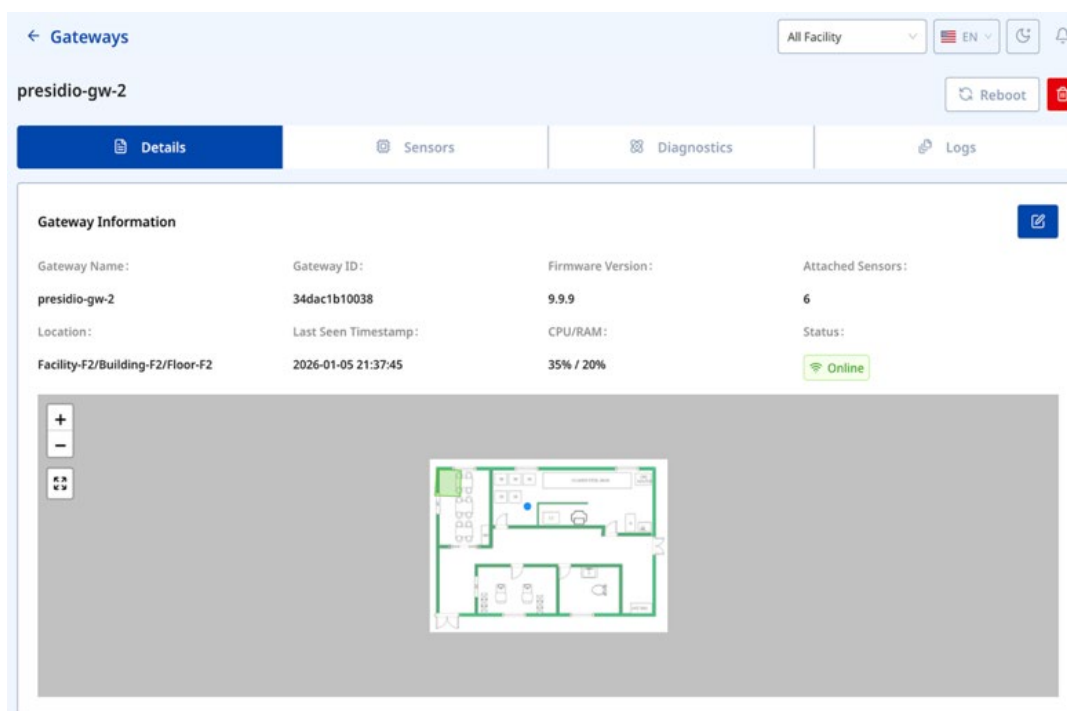


Figure 20: Gateway Detail View

4.4.1 Detail Tab

Displays the following information:

- Name
- Gateway ID
- Online/Offline Status
- Firmware Version
- Number of Connected Sensors
- Location
- Last Seen Timestamp
- Real-time CPU and RAM usage

4.4.2 Sensor Tab

Allows you to:

- View sensors currently connected to the Gateway
- Add/delete sensors
- Click on a Sensor ID to view sensor details (see Section 5)

Sensor List							
Sensor ID	Sensor Type	Associated Asset	Firmware Version	RSSI	Last Seen on	Status	Action
34dac1200909	Lynq	lab_motor	1.105	-47dBm	2026-02-06 14:53:04	Offline	
34dac1200a23	Lynq	lab_motor	1.105	-39dBm	2026-02-03 14:36:53	Offline	
34dac120018a	Lynq	lab_motor	1.105	-40dBm	2026-02-03 14:36:14	Offline	
34dac1200b94	Lynq	lab_motor	1.105	-21dBm	2026-01-14 09:52:54	Offline	
34dac1200860	Lynq	lab_motor	1.105	-35dBm	2026-01-14 09:52:46	Offline	

Figure 21: Attached Sensors

4.4.3 Diagnostics Tab

Monitor the health and performance of the Gateway over time:

CPU and RAM Usage Graph

- Toggle between predefined time ranges: **1 Day, 3 Days, 1 Week**
- Alternatively, use the custom date range picker



Figure 22: Ram and CPU Chart

Received Packets Statistics Graph

- Analyse network traffic patterns
- Toggle between predefined time ranges: **1 Day, 3 Days, 1 Week**
- Alternatively, use the custom date range picker - Users can now select a **maximum range of 3 months** when viewing up to **1 year of historical data**



Figure 23: Packet Statistics

4.4.4 Logs Tab

View the Gateway's behaviour and operational history:

- Last firmware update date with user details
- Event details including:
 - Online/offline status changes
 - Reboots
 - Sensor assignments
 - Location changes

Details Sensors Diagnostics Logs			
Item	Event	User	Updated On
1	Gateway is offline!	admin	2026-02-19 16:44:05
2	cpu alarm	-	2026-02-19 16:37:05
3	Gateway is online	-	2026-02-19 16:36:22
4	Gateway is offline!	admin	2026-02-19 15:14:05
5	bind a cn2202b 3.0(200909)	ekin.ngor	2026-02-06 14:52:34
6	unbind a cn2202b 3.0(123456)	ekin.ngor	2026-02-06 14:52:00
7	bind a cn2202b 3.0(123456)	ekin.ngor	2026-02-06 14:48:32
8	unbind a cn2202b 3.0(200909)	ekin.ngor	2026-02-06 14:47:41
9	bind a cn2202b 3.0(200909)	ekin.ngor	2026-02-06 14:39:28
10	unbind a cn2202b 3.0(123456)	ekin.ngor	2026-02-06 14:39:11

< 1 2 3 4 > 10 / page ▾

Figure 24: Gateway Logs

5. Sensor Management

5.1 Adding a Sensor to the Dashboard

Note: You can add up to 10 sensors to a single gateway.

Log into the edgeRX™ Dashboard using your authorised credentials, then navigate to **Sensor Summary** to view all registered sensors in a paginated table.

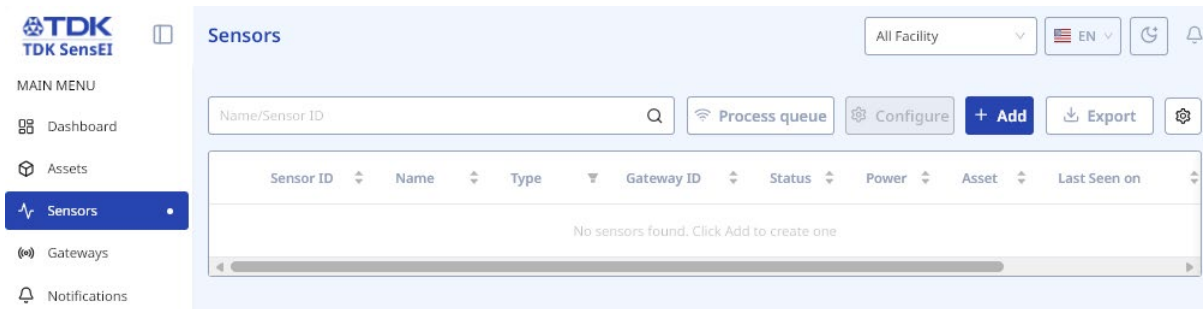


Figure 25: Sensor Summary

Steps to Add a Sensor

1. Go to **Sensor > Add Sensor**.

Figure 26: Add Sensor Modal

2. Enter the required details:

Field	Description
Sensor Type	Select the appropriate Type from the dropdown (Lynq or Nano)
Sensor ID	The Sensor ID (found printed on the side of each sensor)
Sensor Name	A custom name for the sensor
Gateway	Select the appropriate Gateway from the dropdown

3. Click **"Add"** to register the sensor into the system.

The new sensor will appear in the table and be available for monitoring and configuration.

5.2 Managing Sensors

5.2.1 Edit a Sensor

1. Navigate to the sensor listing.
2. Click the **"Edit"** icon from the actions column.
3. Update the Sensor Name and/or Gateway details.
4. Click **"Confirm"** to save the edited changes.
5. Clicking **"Cancel"** will terminate the edit action.

Figure 27: Edit Sensor

5.2.2 Delete a Sensor

1. Click the **"Delete"** icon from the actions column.
2. Click **"Confirm"** to delete the sensor.
3. Clicking **"Cancel"** will terminate the delete action.

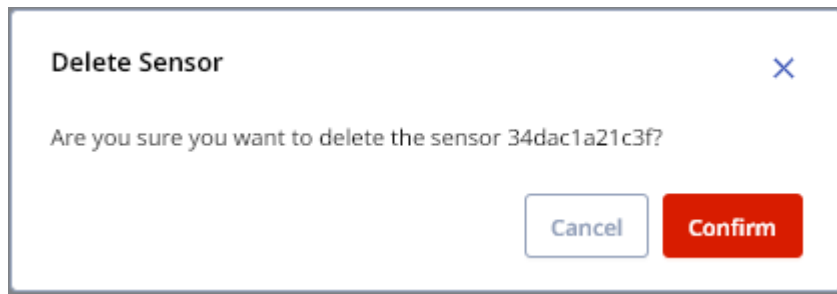


Figure 28: Delete Sensor Modal

The sensor will be removed from the table and no longer available for monitoring.

5.3 Sensor Table Features

The Sensor table provides a searchable, paginated view of all Sensors.

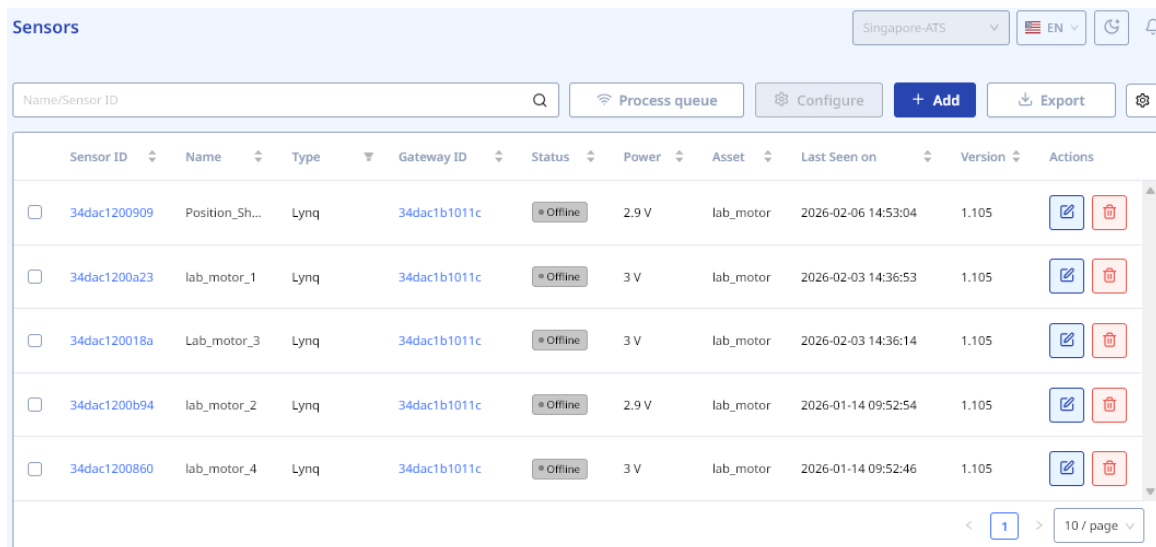


Figure 29: Sensor Table

Feature	Description
Search Bar	Locate sensors by Name or Sensor ID
Rows per Page	Adjust display (dropdown in right bottom corner)
Column Settings	Customize visible columns (Settings gear in top-right corner)

Table Columns:

- Sensor ID
- Sensor Name
- Sensor Type
- Linked Gateway
- Online/offline status
- Battery Life
- Linked Asset

- Last Seen Time
- Firmware version
- Delete and Edit actions

5.4 Sensor Configuration

5.4.1 Process Queue

The "**Process Queue**" button (on the top panel) enables you to view current and pending OTA & Configuration updates to the sensors.

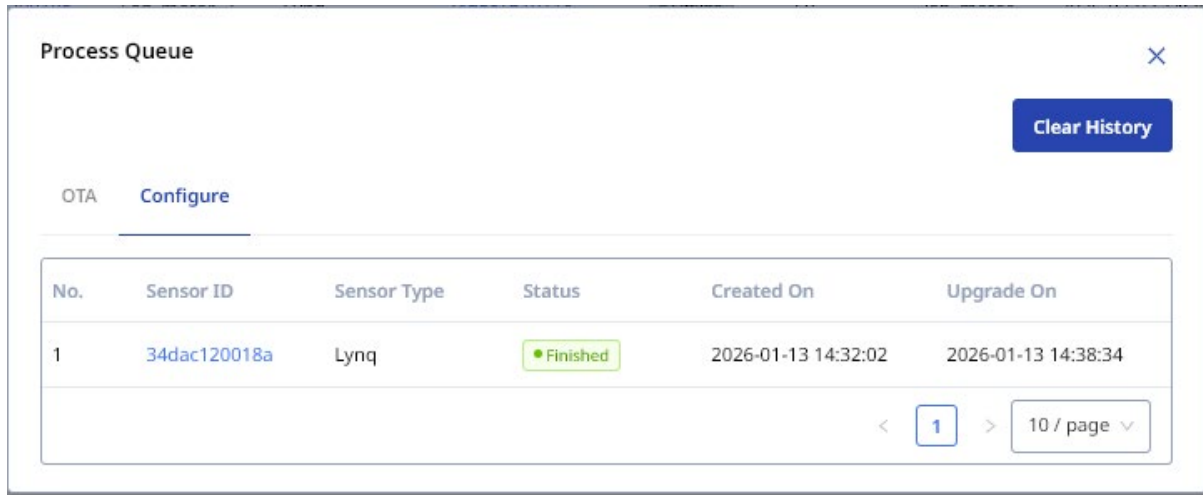


Figure 30: Process Queue Modal

5.4.2 Configure KPI Interval

1. Select one Sensor from the listing screen.
2. Click the "**Configure**" button on the top panel.
3. Input your desired KPI Interval.
4. Click "**Save**" to apply changes.

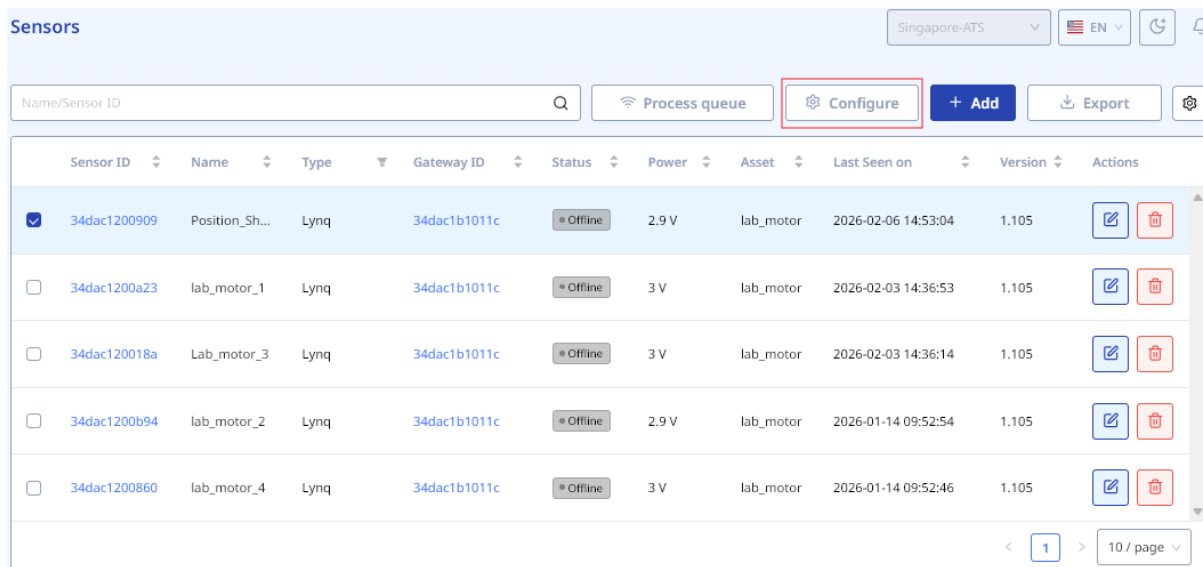


Figure 31: Configure Sensor

Sensor Configuration



KPI Interval*

0 Hours ▼ 10 Mins ▼

Sensor List

Item	Sensor ID	Name	Sensor Type	KPI Interval	Actions
1	34dac1200909	Position_Shaft	Lynq	0 Hours 10 Minutes	

< 1 > 10 / page ▼

Figure 32: Configuration Modal

5.5 Sensor Detail View

Click on a sensor from the listing to open its **Sensor Detail View**. This page includes configuration settings, performance metrics, and AI insights. The user can navigate to the detailed view either by selecting the tab directly or by using the **“View More”** option present in the top-right corner of the respective cards.

Figure 33: Sensor Detail View

5.5.1 Overview Tab

Displays the following information:

Visual Sensor Placement

- Shows where the sensor is mounted



Figure 34: Bind Sensor Visual Guide

⚠ Note: Installation diagram will only show up after binding sensor to an asset.

Connectivity and Signal Status



Figure 35: Connectivity indicators

Sensor Specifications:

- Output Data Rate (ODR)
- Full-Scale Range (FSR)
- KPI Interval
- Raw Data Interval
- Inference Interval
- Network

Specifications ^

Name	sensord0
Gateway	presidio-gw-2
Sensor ID	34dac12000d0
Sensor Type	Lynq
Version	1.104
ODR	8K Hz
FSR	±4 g

Figure 36: Sensor Specifications

ML Specification:

- ML Model in use
- ML Type
- Class Label
- Score Threshold
- Class Alarm/Warning

ML Specifications

ML Type	Multi-Class Anomaly Classification
ML Model	2505271_AUTOENCODER+CNN
Class Label	cluster_0, cluster_1, Anomaly
Class Alarm	-
Class Warning	-
Score Threshold	0.60
KPI Interval	1 hr
Raw Data Interval	10 mins
Inference Interval	4 hrs

Figure 37: Machine Learning Page

Sensor Data:

- Battery Voltage/Wired (Based on sensor type)
- RSSI
- Latency
- Skin Temperature
- VRMS (X, Y, Z)
- ML Classification

Configurations

You can customize the **alarm and warning thresholds** for each Class. Additionally, select the **edit icon** to modify the **KPI and inference intervals**. While the system provides default intervals, users can adjust their frequency.

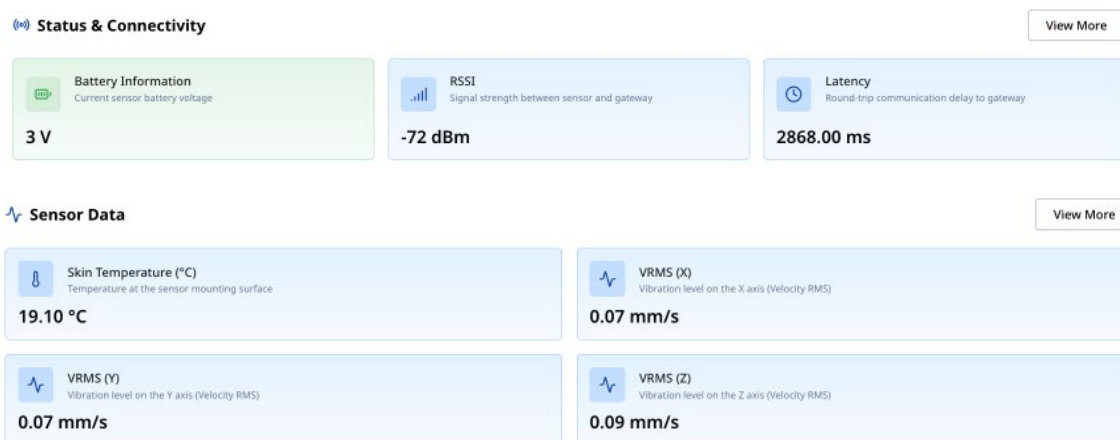


Figure 38: Sensor Data

Asset Details:

- Asset Type
- Asset Model
- Asset Name
- Location

Asset Details

Asset Type	Motor
Asset Model	Model1
Asset Name	Motor-test
Asset Location	Facility-F2 / Building-F2 / Floor-F2
Mounting Location	front


Figure 39: Asset Details

Click on the Info button, to view the Mounting Location

Asset Details

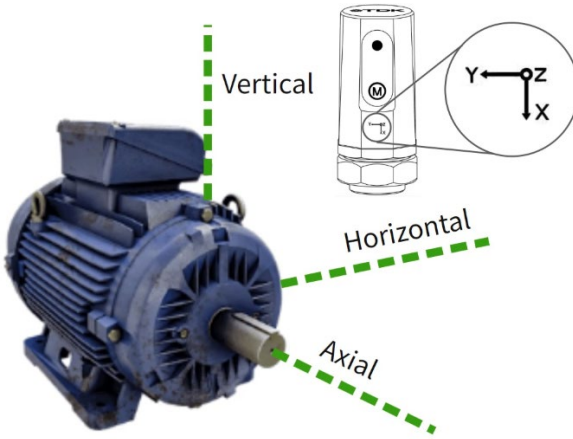
Asset Type	Motor
Asset Model	Model1
Asset Name	Motor-test
Asset Location	Facility-F2 / Building-F2 / Floor-F2
Mounting Location	front

Installation



- 1 front Currently Viewing Sensor
- 2 top
- 3 back
- 4 bottom
- 5 side-test

Sensor Axis



X axis: Axial Y axis: Horizontal Z axis: Vertical

5.5.2 Diagnostics Tab

Select a time range to view historical data including:

- Battery Voltage (Won't be there for Nano Sensors)
- RSSI (Signal Strength)
- Packet Statistics
- Latency

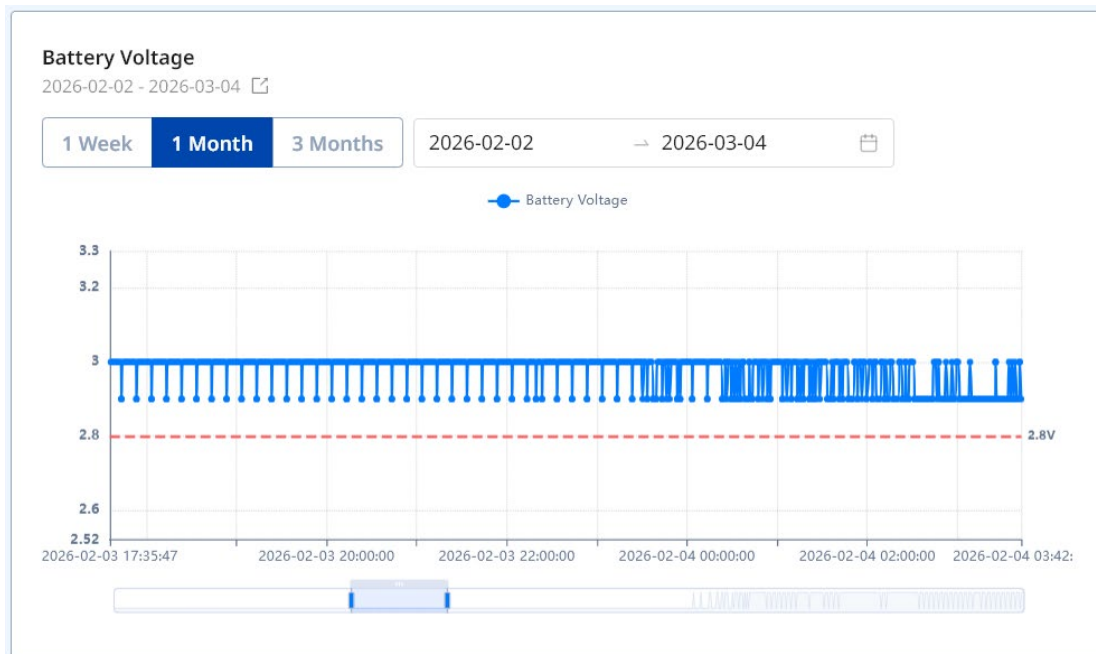


Figure 41: Battery Voltage



Figure 42: RSSI Graph

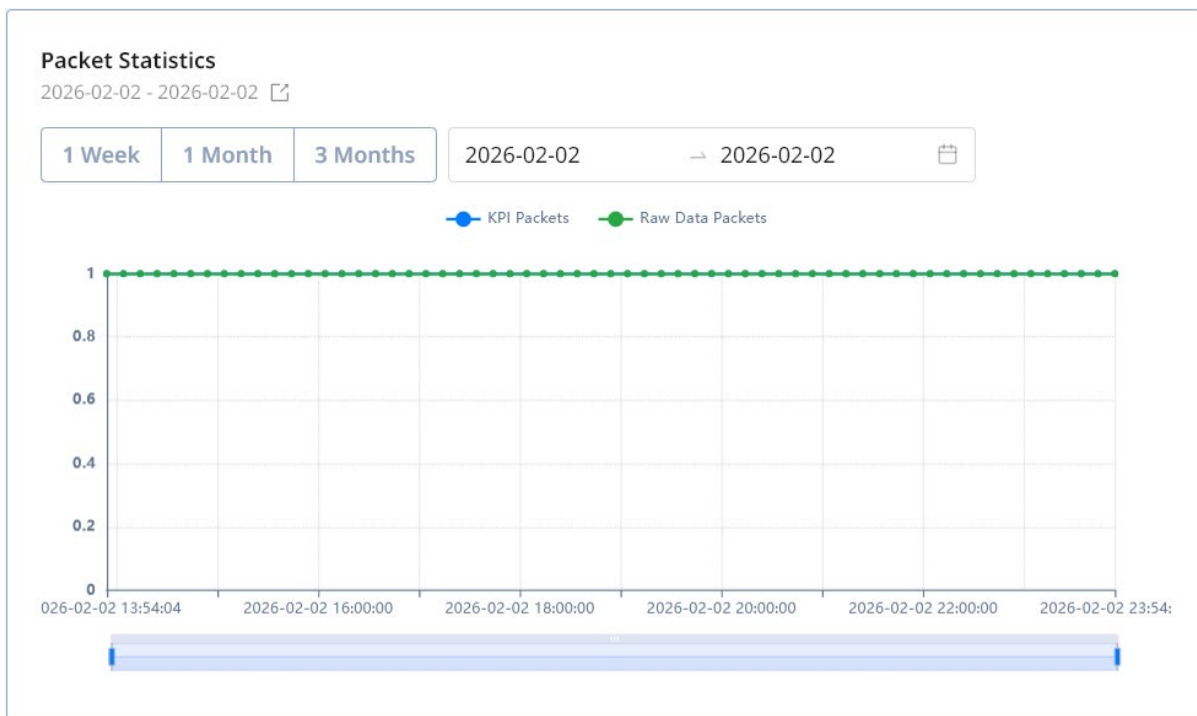


Figure 43: Packet Statistics

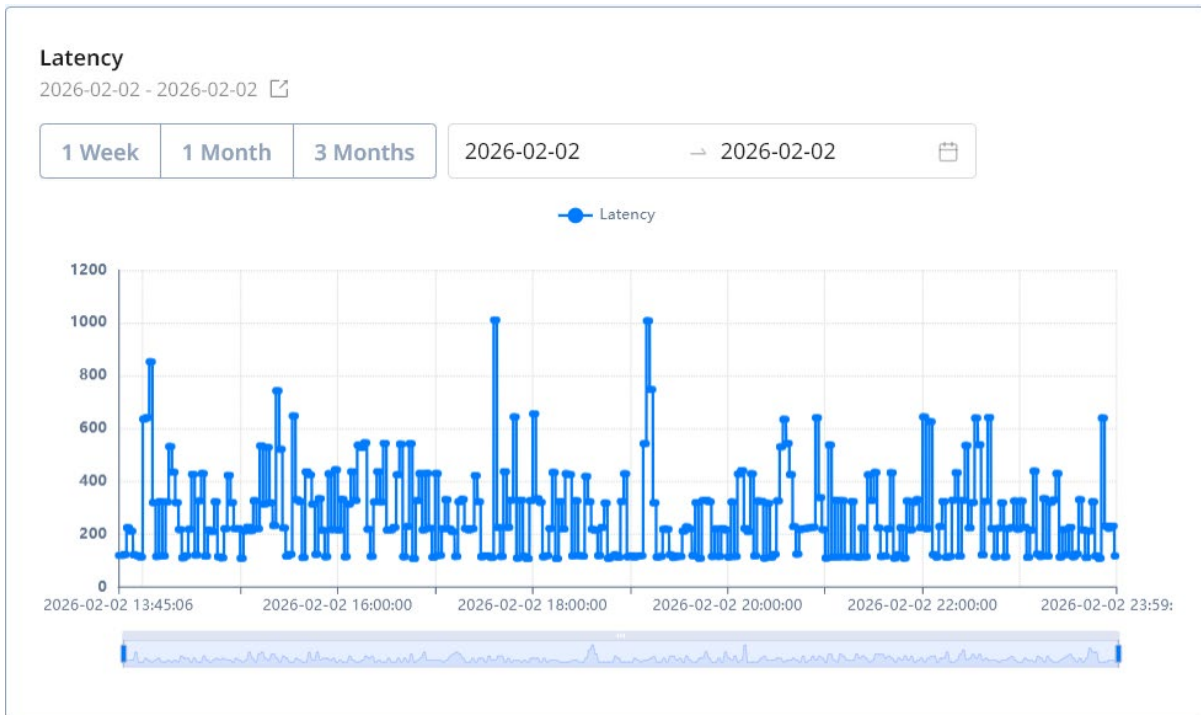


Figure 44: Latency

Data Filters

- Toggle between predefined time ranges: **1 Week**, **1 Month**, **3 Months**.
- Alternatively, use the custom date range picker - Users can now select a **maximum range of 3 months** when viewing up to **1 year of historical data**.

5.5.3 Event Log Tab

View a chronological record of system and model-related events, including:

- Configuration changes
- Model deployments
- Sensor status changes
- Sensor resets
- Cluster/class label renaming
- Firmware updates
- Interval changes
- Changes in associations with assets, Gateways, or networks

Lynq | 34dac1200a23

Overview Machine Learning Insights Data Record Live View Diagnostics **History**

Activity Logs

Item	Asset Name	Asset Type	Install time	Remove time
1	lab_motor	Motor	2026-01-13 14:25:35	-
2	YTC-PUMP1-UAT	Pump	2025-12-26 23:58:11	2026-01-13 14:23:13

< 1 > 10 / page

Figure 45: Sensor Event

5.5.4 Sensor History Tab

View installation and removal records associated with the sensor or system.

Lynq | 34dac1200a23

Overview Machine Learning Insights Data Record Live View Diagnostics **History**

Activity Logs

Item	Event	User	Updated On
1	cn2202b 3.0 is offline!	-	2026-02-03 14:54:05
2	update Change parameter "Live view:Data source" from no selection to Axial/Radial_V/Ra Change parameter "Live view:ODR" from 0kHz to 1kHz Change parameter "Live view:FSR":no selection to 2	Karan.Shetti	2026-02-02 13:45:45
3	cn2202b 3.0 is online	-	2026-02-02 13:44:56
4	cn2202b 3.0 is offline!	-	2026-01-14 09:56:05
5	cn2202b 3.0 is online	-	2026-01-13 14:53:31
6	cn2202b 3.0 is offline!	-	2026-01-13 14:48:05
7	Change parameter "Name" from Shaft-end to lab_motor_1	Karan.Shetti	2026-01-13 14:25:02
8	cn2202b 3.0 is online	-	2025-12-22 17:01:50
9	add cn2202b 3.0 sensorID:200a23 bind to gatewayID:34dac1b1011c.	Karan.Shetti	2025-12-22 17:00:27

< 1 > 10 / page

Figure 46: Sensor History

6. Asset Management

6.1 Adding Assets

Note: To set up assets on the edgeRX™ dashboard, users must

1. have created a department (see [Section 3.5](#)).
2. add an asset model in the AssetDB section (see [Section 11.2.2](#)) or add a model during asset creation.

Log into the edgeRX™ Dashboard using your authorised credentials, then navigate to **Assets Page** to view all registered assets in a searchable, paginated table.

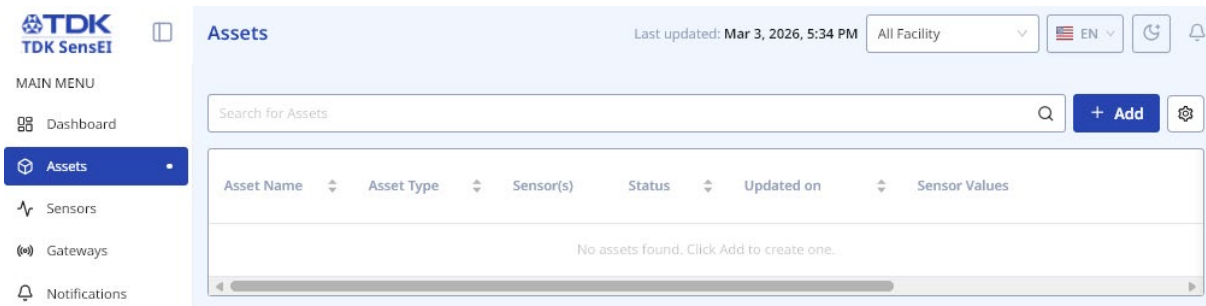


Figure 47: Asset Table

Steps to Add a New Asset

1. Go to **Assets > Add Asset**.

Figure 48: Add Asset Model

2. Enter the required details:

Field	Description
Asset Name	Custom name for identification
Department	Select from pre-selected list
Asset Type	Select from predefined types
Criticality	Select criticality level
Asset Model	Choose an existing model or create a new one
Image	Upload an image of the asset
Facility	Assign the asset to a mapped facility or zone
Coordinate X and Y	Plot the coordinates on the map component.

Figure 49: Creating New Asset Model

3. Click **"Add"** to register the asset into the system.

The new asset will appear in the table and be available for monitoring and configuration.

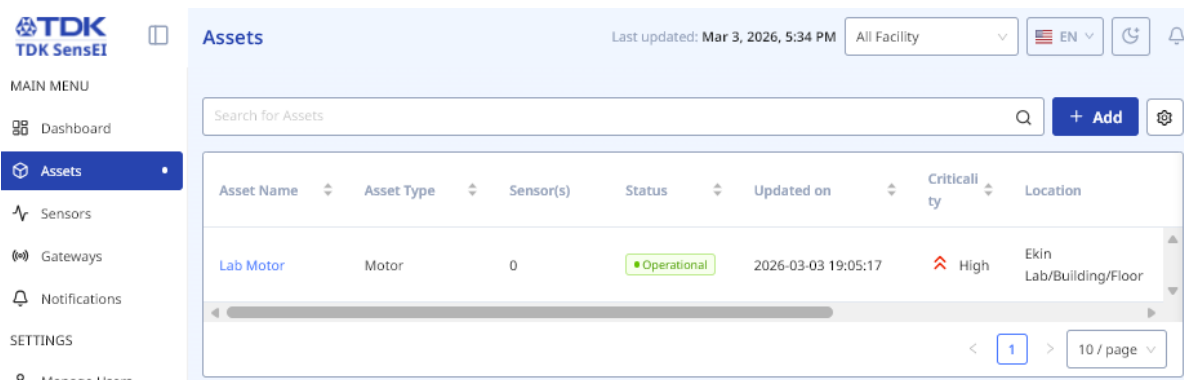


Figure 50: Asset Table

6.2 Asset Table Features

Feature	Description
Search Bar	Locate assets by name, ID, or keyword
Column Settings	Show or hide specific fields
Rows per Page	Adjust display (dropdown in right bottom)

Table Columns:

- Asset Name
- Asset Type
- Linked/Associated Sensor(s)
- Status
- Last Updated Time
- Sensor Values
- Criticality
- Location
- Actions

6.3 Managing Assets

6.3.1 Delete an Asset

1. Click the **"Delete"** icon from the Actions column.
2. Click **"Delete"** in the modal that appears to confirm.
3. Clicking **"Cancel"** will cancel the delete action.

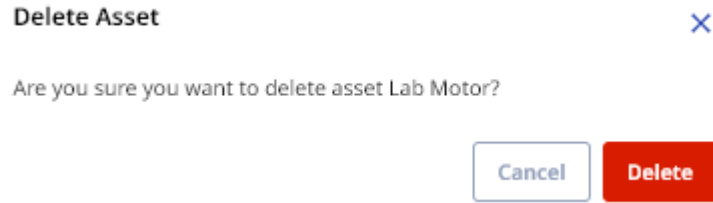


Figure 51: Delete Asset Model

Upon confirmation, the asset will be removed from the system.

6.4 Binding Sensors to Assets

To bind a sensor to an asset:

1. Click on an **Asset Name** to open the Asset Detail View.

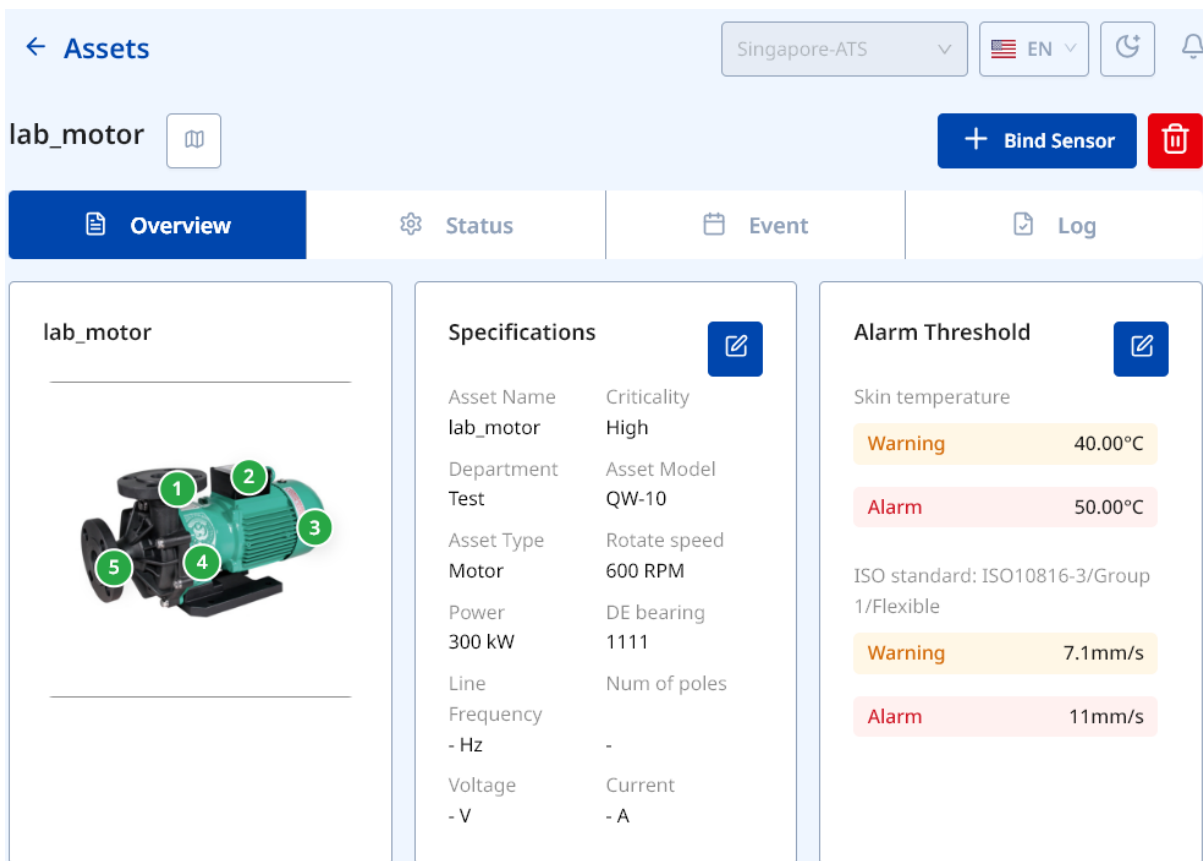


Figure 52: Asset Details

2. Click the **"Bind Sensor"** button on the top right corner.
3. Enter the following details in the modal:

Field	Description
Sensor Type	Type of sensor
Sensor ID	Select from available sensors

Field	Description
Mounting Position	Physical mounting location on the asset
Orientation	Sensor orientation (X, Y, Z axis)

Bind Sensor ✕

Sensor Type* Sensor ID (Sensor Name)*


Lynq 34dac1323232 (Test_323232 Lynq)

Position* Orientation

front X-Horizontal/Y-Axial/Z-Vertical

X Axis* Y Axis* Z Axis*

Horizontal Axial Vertical



Vertical

- 1 front
- 2 top
- 3 back
- 4 bottom
- 5 side-test

Cancel
Add

Figure 53: Bind Sensor

4. Click **"Add"** to bind the sensor to the asset.

Unbinding a Sensor

1. Click on the **Sensor ID** of the sensor bound to that asset.
2. You will be redirected to the Sensors page.
3. Click the **"Unbind"** button on the top right corner.
4. Click **"Confirm"** to unbind.
5. Clicking **"Cancel"** terminates the action.

Unbind Sensor



Are you sure you want to unbind this sensor from the asset?



Figure 54: Unbind sensor

6.5 Asset Location Management

To update the asset location:

1. Click the **"View Map"** button to open the interactive map.

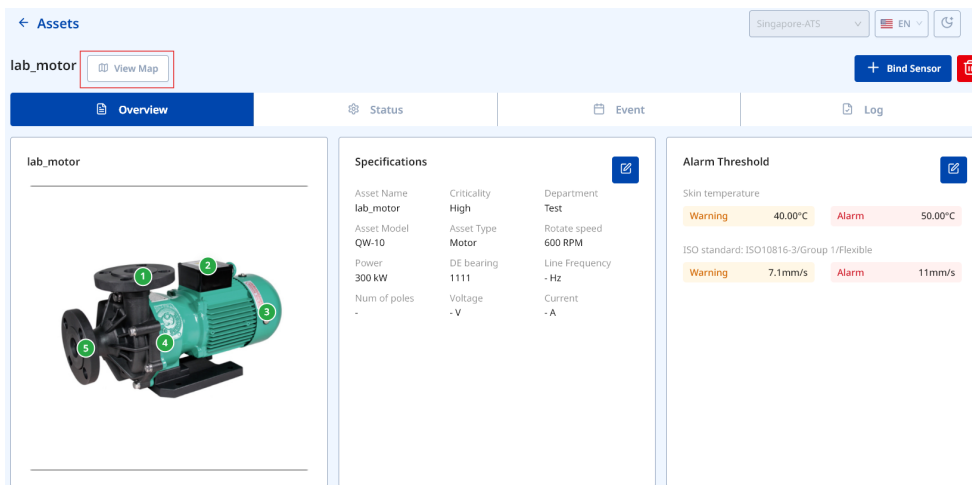


Figure 55: Asset Detail View Map

2. Click the **"Edit"** icon next to Asset Location.
3. Select a predefined zone from the dropdown list.



Figure 56: Asset Detail Edit Location

4. Click **"Save"** to update the location.

6.6 Asset Detail View

Click on any asset from the listing to open its **Asset Detail View**. This page includes configuration settings, sensor assignments, and performance metrics.

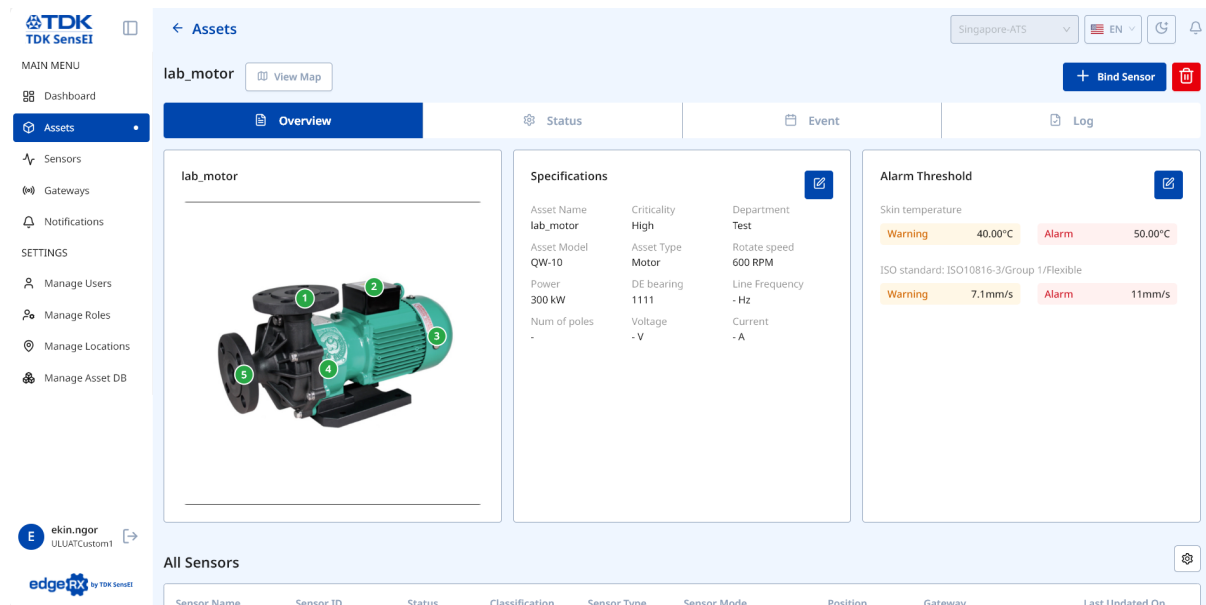


Figure 57: Asset Detail View

6.6.1 Overview Tab

Displays:

- Asset Specifications
- Linked Sensor Information

Sensor Name	Sensor ID	Status	Classification	Sensor Type	Sensor Mode	Position	Gateway	Last Updated On
lab_motor_1	34dac1200a23	Offline	--	Lynq	KPI/Raw Data/--	Top	SG_lab1	2026-02-13 05:25:40
lab_motor_2	34dac1200b94	Offline	--	Lynq	KPI/Raw Data/--	black	SG_lab1	2026-02-13 05:25:53
Lab_motor_3	34dac120018a	Offline	--	Lynq	KPI/Raw Data/--	3	SG_lab1	2026-02-13 05:25:58
lab_motor_4	34dac1200860	Offline	--	Lynq	KPI/Raw Data/--	side	SG_lab1	2026-02-13 05:19:07

Figure 58: Asset Detail Linked Sensors

- Threshold Settings
- Location (View Map)
- Model Details

6.6.2 Status Tab

Displays:

- Sensor trend data for vibration and temperature over time
- Visual indicators for anomalies and performance degradation



Figure 59: Asset Status Trend

6.6.3 Event Tab

Provides:

- A chronological record of sensor and asset-related actions

Status	Source	Sensor	Event	Reported On	Updated On	Count	User
Warning	lab_motor	34dac1200a23	Skin temperature exceed warning threshold	2026-01-13 14:27:16	-	1	-
Closed	lab_motor	34dac1200b94	Skin temperature exceed alarm threshold	2026-01-13 14:36:54	2026-01-13 14:37:24	1	Karan.Shetti
Closed	lab_motor	34dac1200b94	Skin temperature exceed alarm threshold	2026-01-13 14:37:54	2026-01-13 14:52:34	1	Karan.Shetti

Figure 60: Asset Detail Event

6.6.4 Asset Logs Tab

Shows:

- Installation and removal records
- Historical changes such as binding, unbinding, and coordinate updates

← Assets Singapore-ATS | EN | 🔄 | 🔔

lab_motor + Bind Sensor | 🗑️

Overview | Status | Event | **Log**

Item	Event	User	Updated On
1	Unbound the sensor "200909"	ekin.ngor	2026-03-04 17:23:19
2	Machine status changed from normal to offline		2026-02-06 14:57:12
3	Machine status changed from offline to normal		2026-02-06 14:53:03
4	Bound the sensor "200909"	ekin.ngor	2026-02-06 14:52:58
5	Bound the sensor "123456"	ekin.ngor	2026-02-06 14:50:12
6	Machine status changed from normal to offline		2026-02-06 14:48:32
7	Machine status changed from offline to normal		2026-02-06 14:47:03
8	Bound the sensor "200909"	ekin.ngor	2026-02-06 14:46:09
9	Machine status changed from normal to offline		2026-02-06 14:38:47

< 1 2 3 4 > 10 / page ▾

Figure 61: Asset Detail Logs

7. Machine Learning in edgeRX™

7.1 ML Information Overview

The edgeRX™ platform leverages Edge AI to process data locally at the source. Machine Learning models analyze sensor data to detect anomalies and classify asset conditions in real-time.

ML Information is displayed in the **Sensor Detail View > Overview Tab** (see [Section 5.5.1](#)).

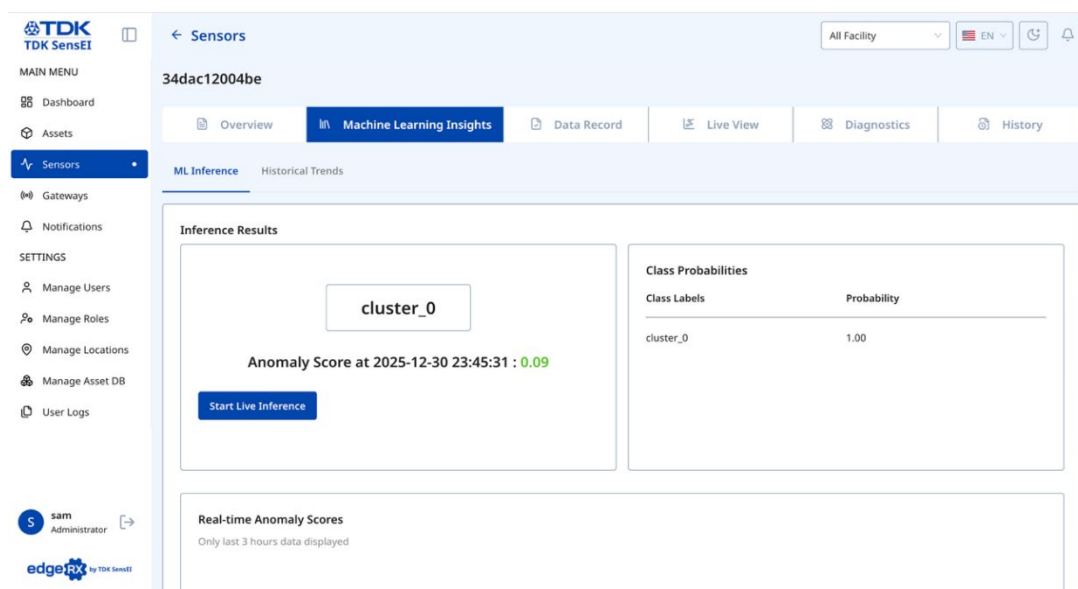


Figure 62: Sensor Machine Learning

7.2 ML Model Types

The edgeRX™ system supports various ML model types optimized for different asset monitoring scenarios. The specific model type deployed to each sensor depends on:

- Asset type
- Monitoring requirements
- Historical performance data

7.3 Class Labels and Score Thresholds

Class Labels

Class labels represent different operational states of monitored assets, such as:

- Normal Operation
- Degradation
- Fault Conditions
- Specific Failure Modes

Score Thresholds

Score thresholds determine when alerts are triggered:

Threshold Type	Description
Warning	Indicates potential degradation; requires monitoring
Alarm	Indicates critical condition; requires immediate attention

Administrators can configure these thresholds in the ML Information section of each sensor.

8. Viewing AI Inference Results

8.1 ML Insights Tab

The **Machine Learning (ML) Insights** tab enables you to view AI-based classifications and anomaly scores of the sensor, allowing you to assess the operational status of the asset and detect abnormal conditions in real-time.

To access: Navigate to **Sensor Detail View > ML Learning Insights Tab**.

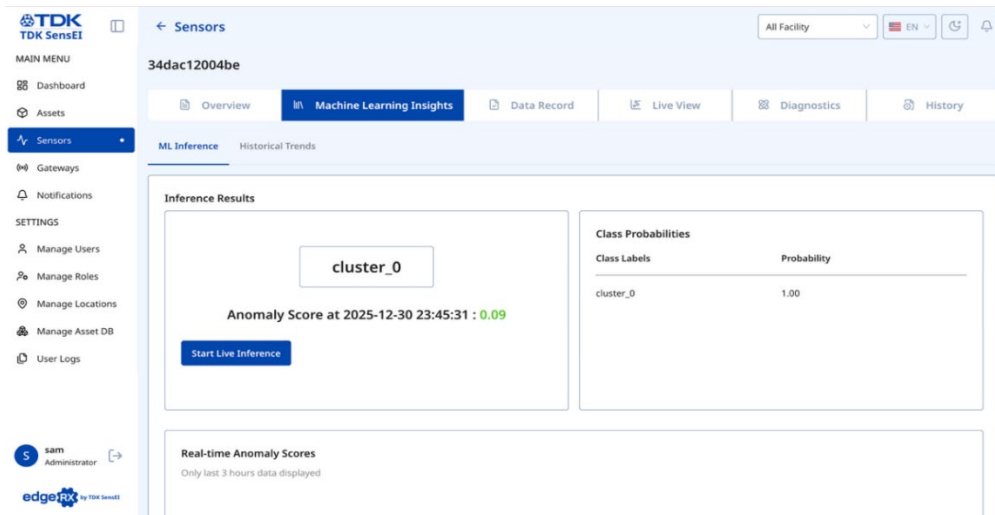


Figure 63: Sensor ML Class

8.2 Live Diagnostics

The user can also navigate via **Insight > Sensor Listing screen > ML Learning Insights Tab**

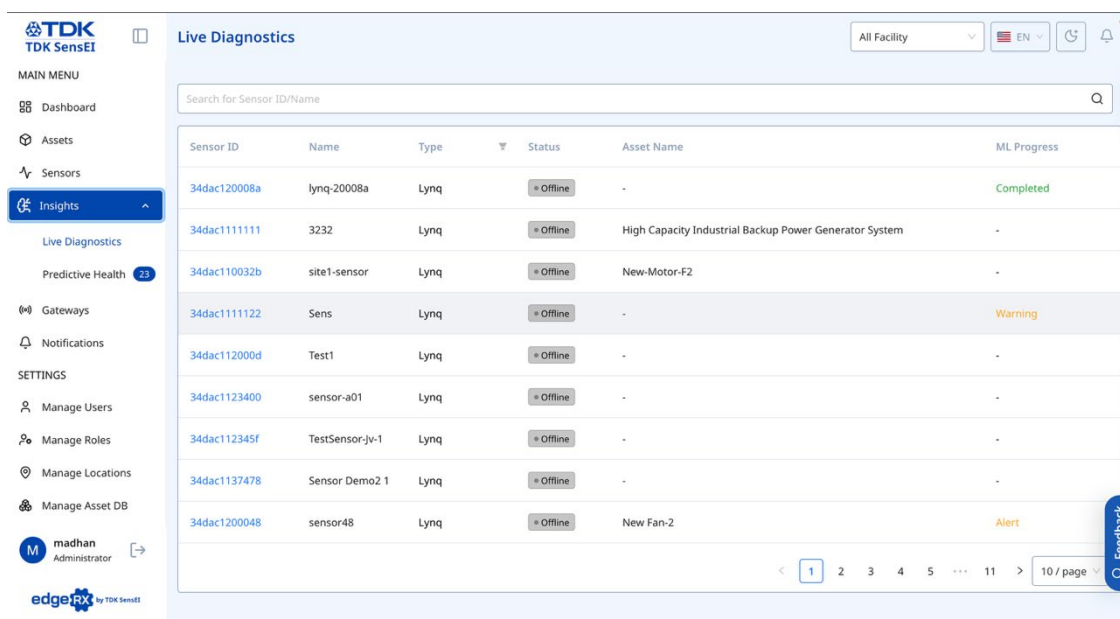


Figure 64: Live Diagnostics Listing

8.3 ML Progress bar and Asset pie chart

The **ML Progress section** provides visibility into the Machine Learning pipeline status for each sensor. It helps Users understand data collection progress, model readiness, and asset behaviour during the ML lifecycle.

8.3.1 ML Progress States

The ML Progress section dynamically updates based on the current state of the ML pipeline.

In Progress State

- Displays current data collection progress.
- Shows:
 - Status: *In Progress*
 - Start Date
 - Estimated Ready Date
 - Progress bar with completion percentage
 - Estimated days remaining

If data collection has not started:

- Progress is shown as **0%**
- Dates and estimates are displayed as “-”

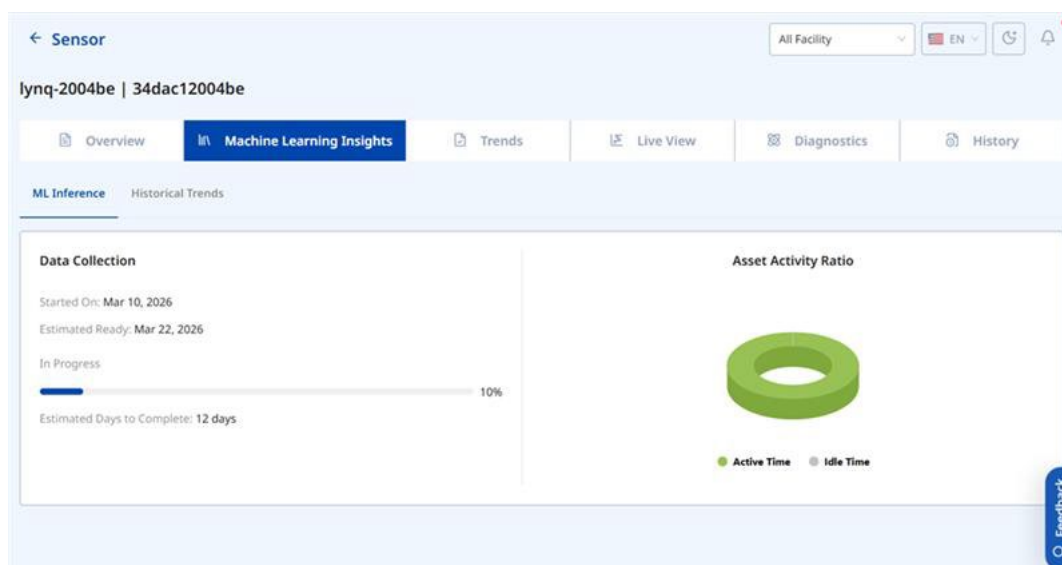


Figure 65: In Progress State

Completed State

- Displays message: **“Data Collection Completed – Model Deployment in Progress”**
- Progress bar and related details are removed.
- Automatically transitions to the ML Insights view after deployment.

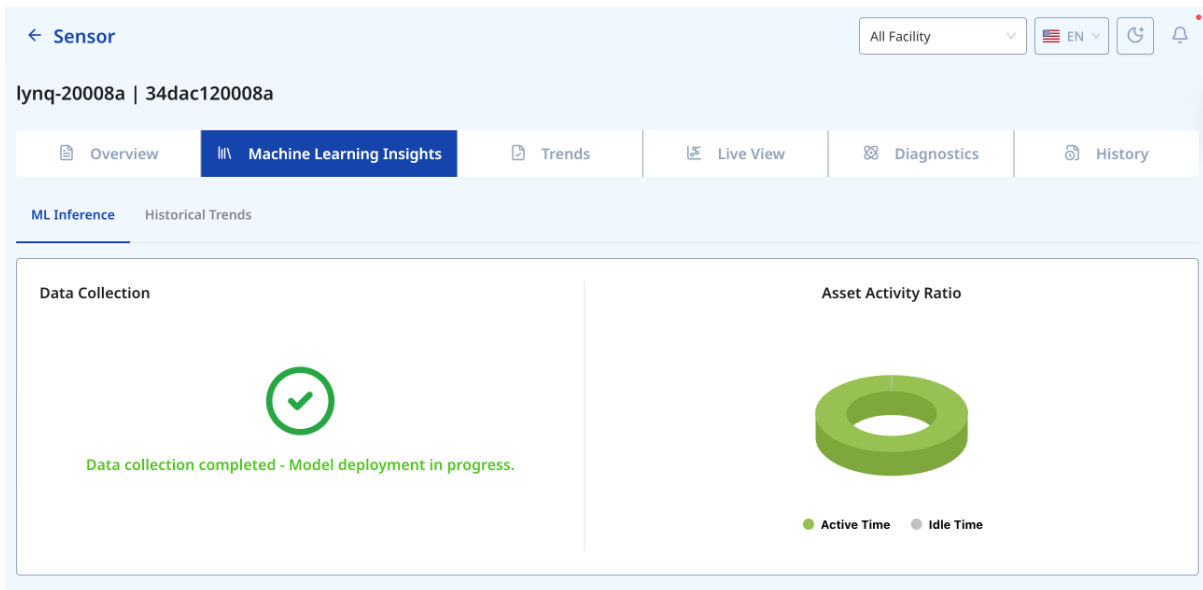


Figure 66: Completed State

Failure State

- Displays Status: *Failure*
- Shows failure message with current progress percentage.
- Provides a **Restart / Recalibrate** button (*placeholder in this phase*).
- ML insights are not displayed in this state.

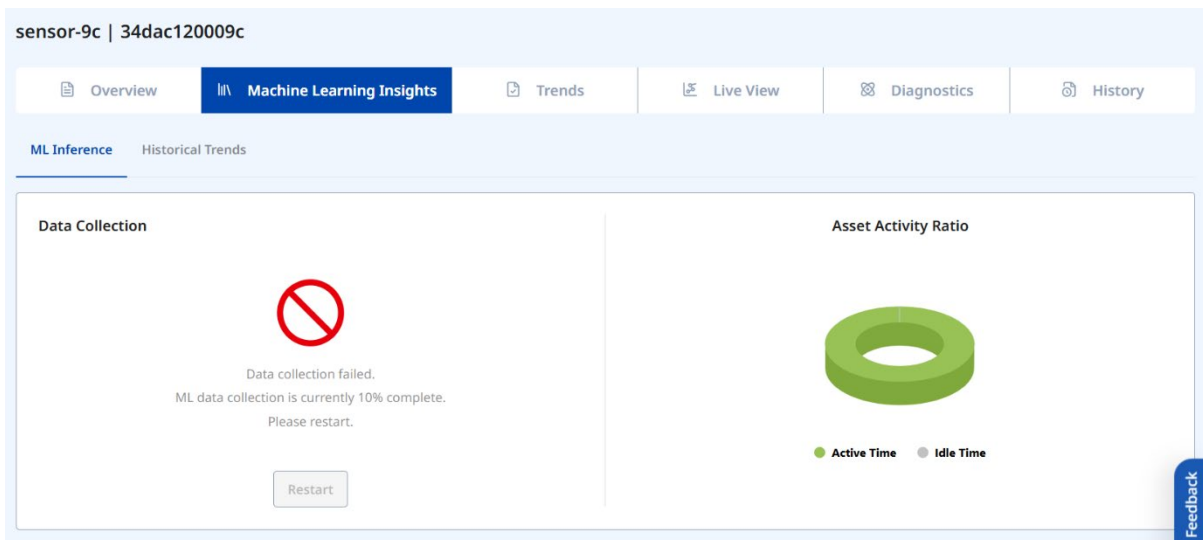


Figure 67: Failure State

Warning / Generic State

- Displays backend status (e.g., Warning, Alert).
- Shows message indicating temporary impact on results.
- ML insights are hidden to prevent misleading data.

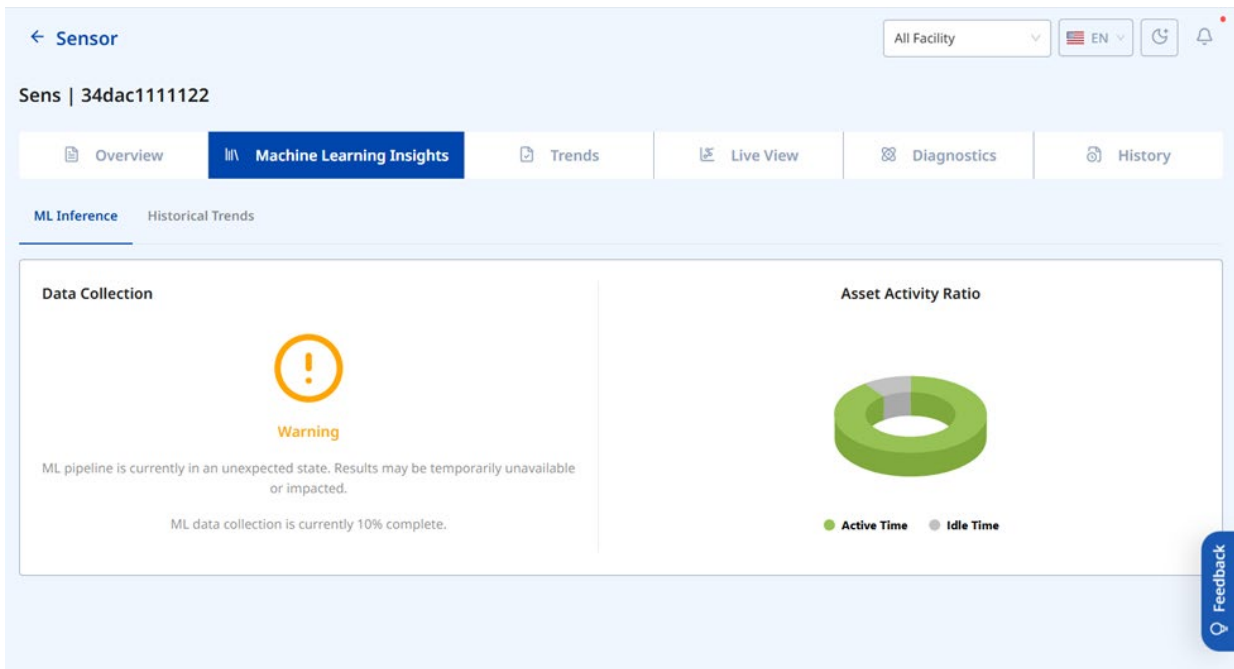


Figure 68: Warning/Generic State

Alert State (High Idle Activity)

- Displays alert message when excessive idle time is detected.
- Shows:
 - Idle percentage
 - Current ML progress
- Automatically restores once conditions normalize.

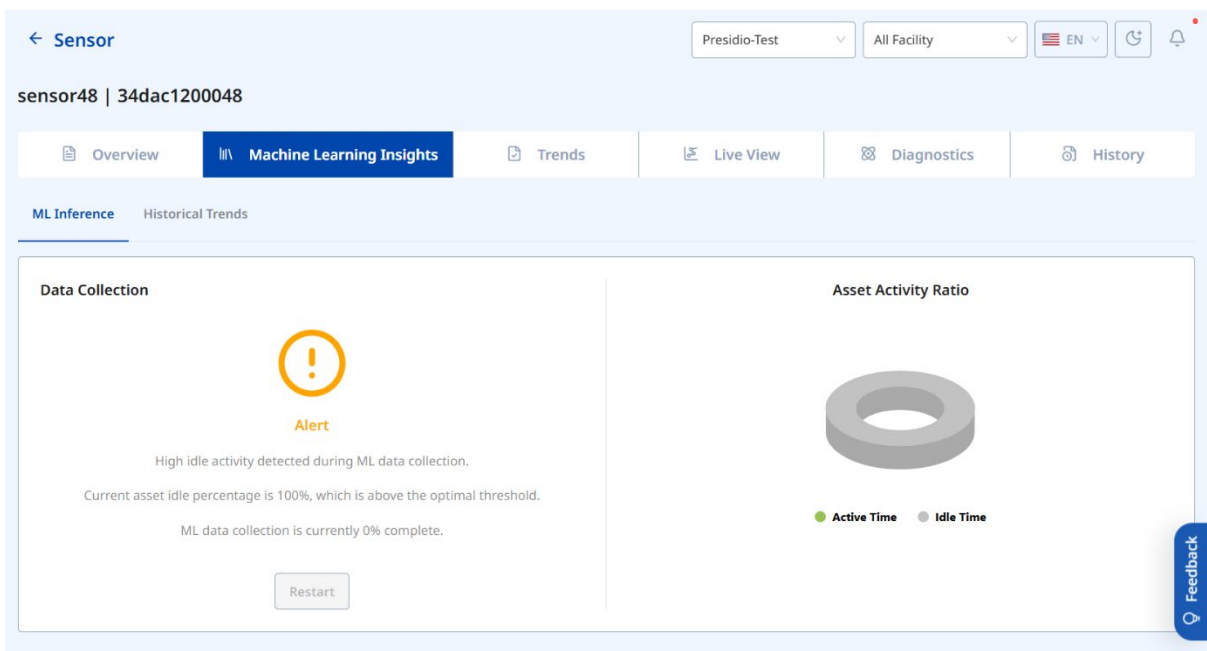


Figure 69: Alert State

8.3.2 Asset Activity Ratio (Pie Chart)

During ML data collection, the system provides a visual representation of asset usage.

Chart Details

- Title: **Asset Activity Ratio**
- Displays:
 - **Active Time**
 - **Idle Time**
- Includes legend for clear differentiation
- Hover interaction shows percentage values

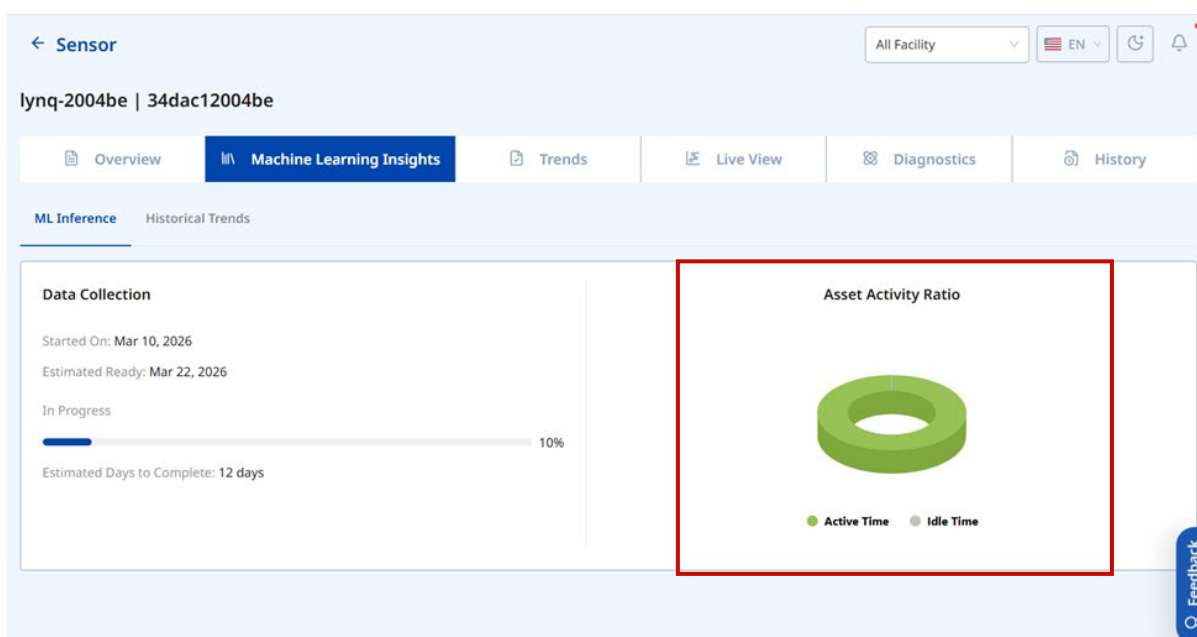


Figure 70: Asset Activity Ratio

8.4 ML Inference Tab

The ML Inference tab displays:

- Inference results
- Class probabilities
- Real-time Anomaly scores

8.5 Start/Stop Live Inference

Starting Live Inference

1. Click "**Start Live Inference**".
2. Click "**Confirm**" to start obtaining real-time anomaly scores.

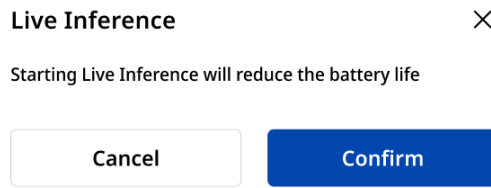


Figure 71: ML Live Inference Confirmation

3. Clicking "**Cancel**" will stop the live inference action.

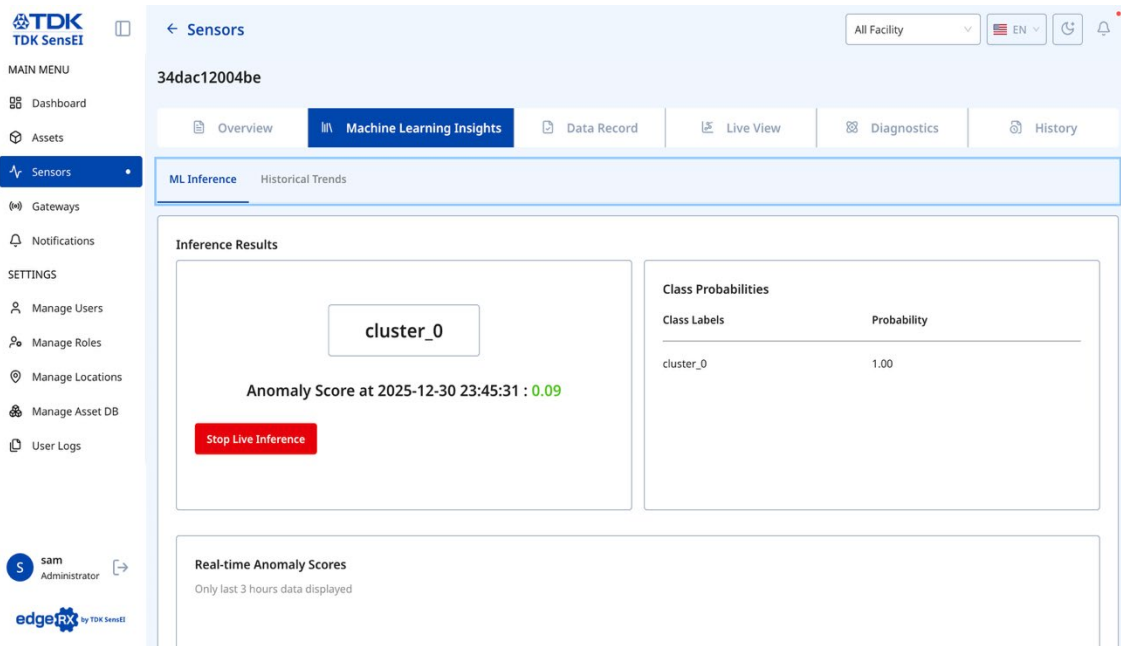


Figure 72: Sensor ML Live Inference

Stopping Live Inference

Clicking "**Stop Live Inference**" before the predefined 10-minute timer ends will terminate the action and stop collecting live inference data.

Viewing Real-Time Data

The user can view:

- Real-Time Anomaly scores
- Real-Time Anomaly Trend Chart of most recent 3 hours

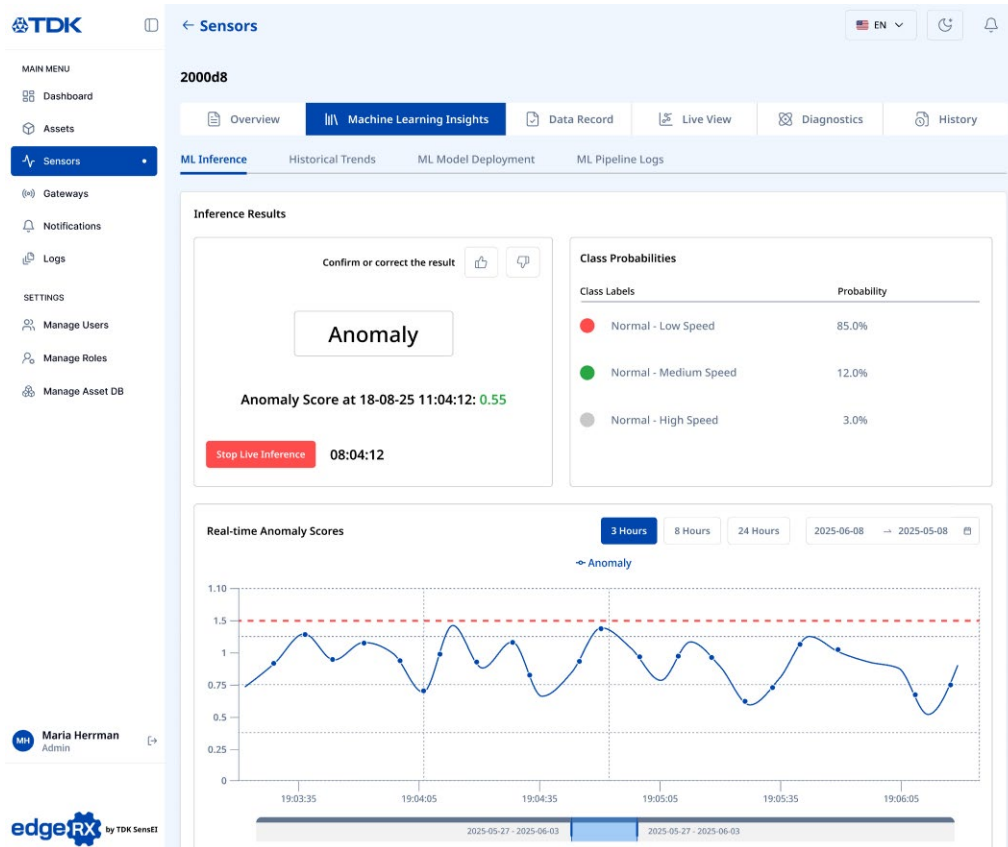


Figure 73: ML Real Time Chart

8.6 Historical Trends Analysis

The **Historical Trends** tab displays trend analysis of the sensors. Users can see:

- Median Score
- Anomaly Rate
- Max Anomaly Score

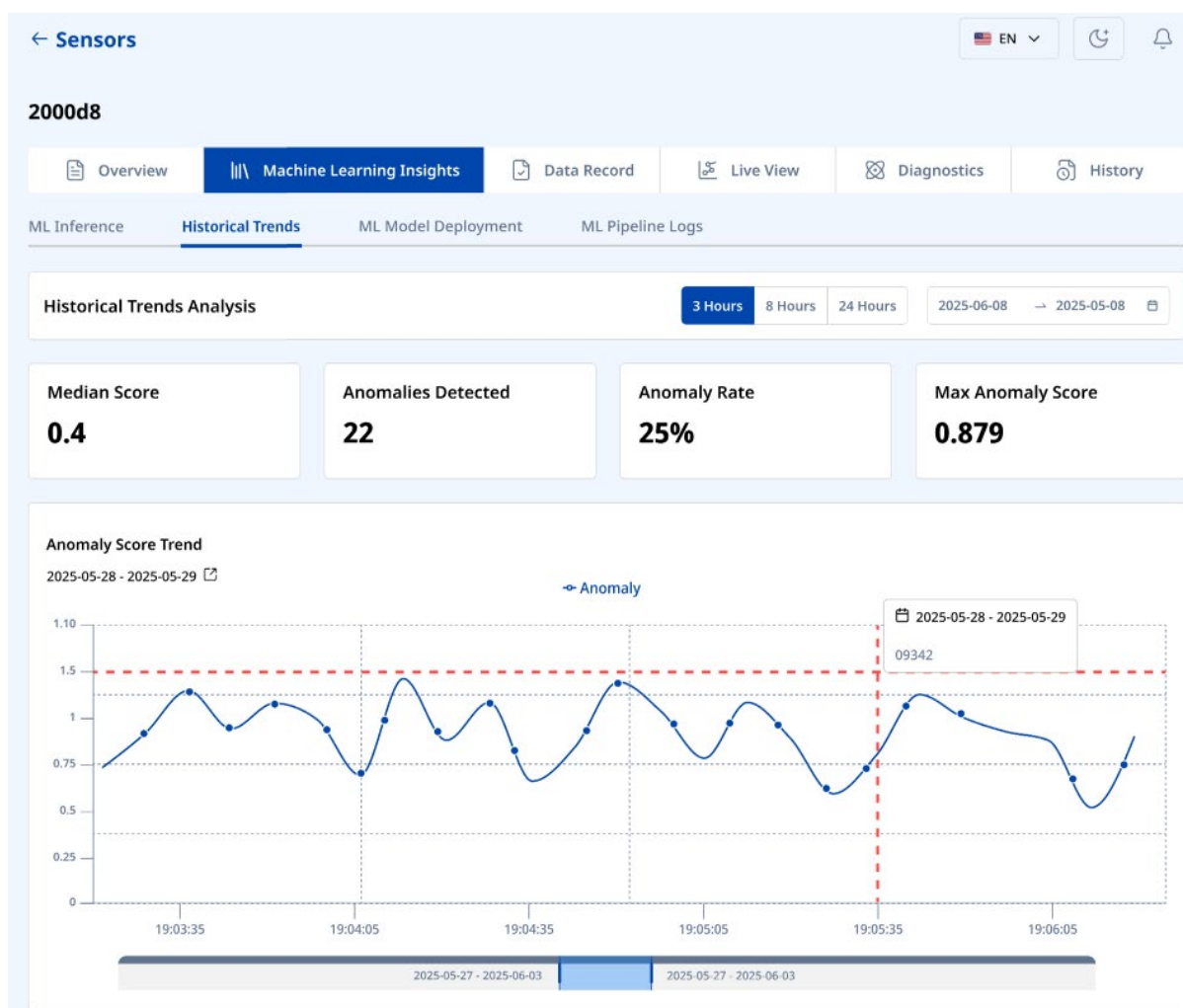


Figure 74: ML Historical Trends

Time Range Selection

Toggle between predefined time ranges:

- **3 hours**
- **8 hours**
- **24 hours**

Alternatively, use the date range picker to observe data in:

- Anomaly Score Trend charts
- Class Probability Trends charts

9. Data & Monitoring

9.1 Data Records

Navigate to **Sensor Detail View > Data Record Tab** to view performance trends and raw signal values.

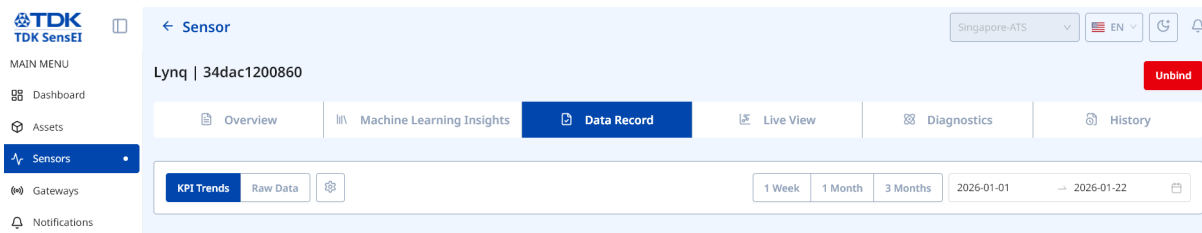


Figure 75: Sensor Data Records

9.1.1 KPI Trend

The KPI Trend tab includes two sub-tabs:



Figure 76: Sensor KPI Trend

ISO/Temp Sub-tab

- Velocity RMS
- Rotating Speed
- Skin Temperature

Acceleration Sub-tab

- Acceleration Peak
- Acceleration RMS
- Crest Factor

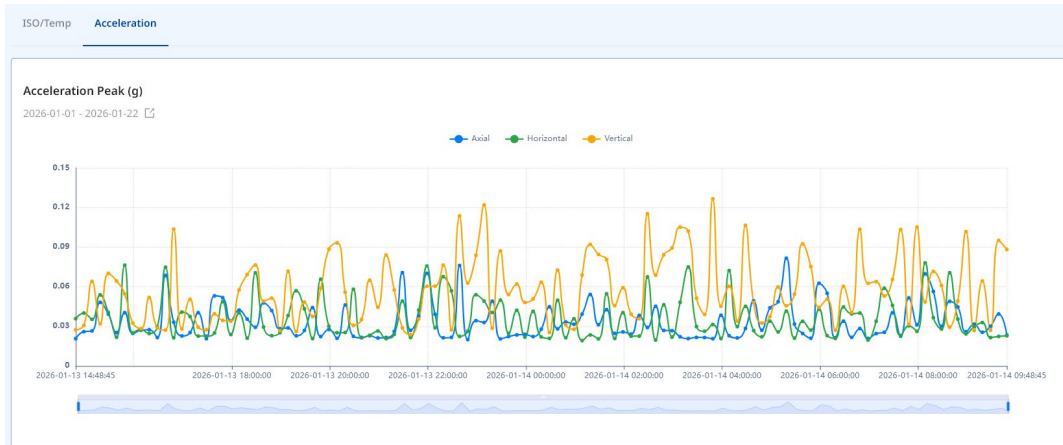


Figure 77: Sensor Acceleration Chart

Time Range Selection:

- Toggle between **1 Week**, **1 Month**, **3 Months**
- Alternatively, use the custom date picker

9.1.2 Raw Data

The Raw Data tab includes two sub-tabs: **Velocity** and **Acceleration**.

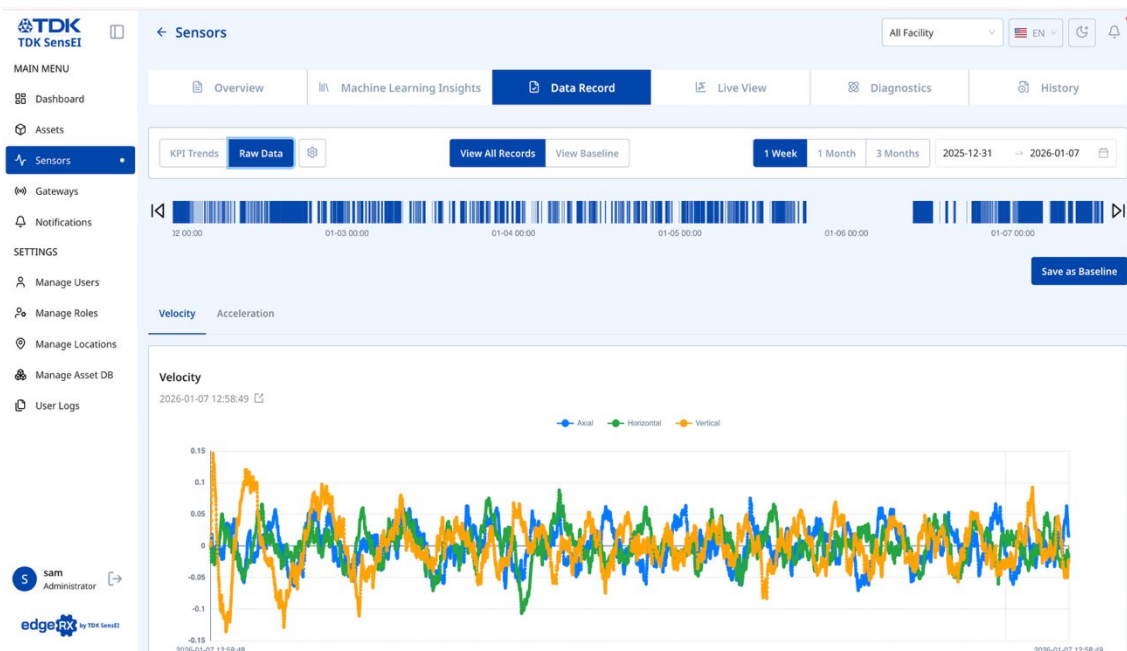


Figure 78: Sensor Raw Data

Use the "**View Baseline**" button to show only records marked as baselines.

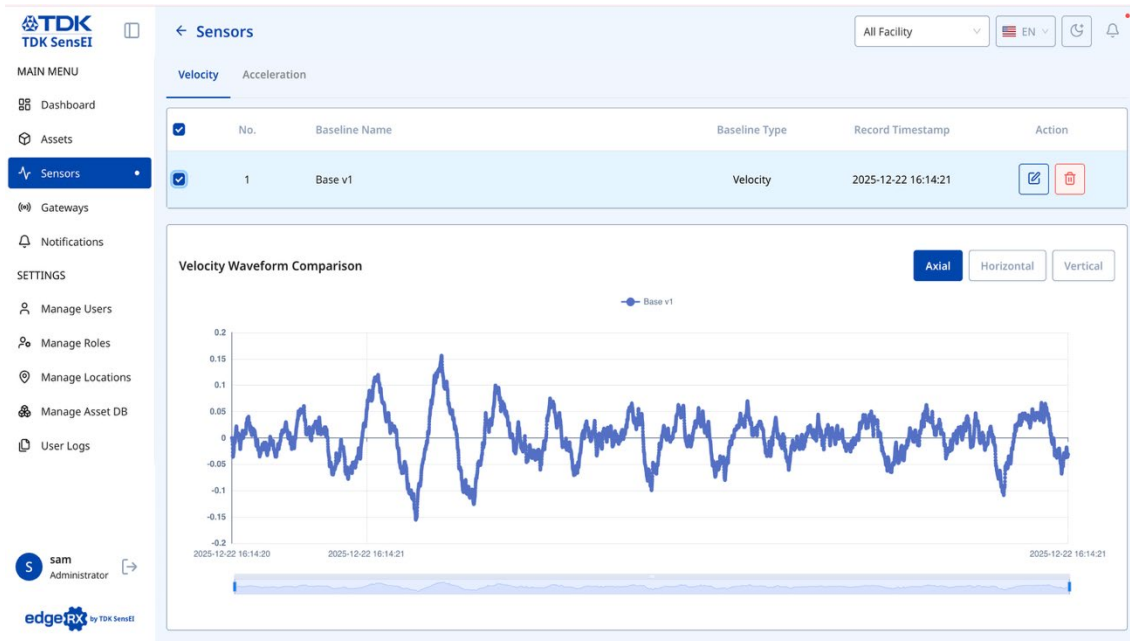


Figure 79: Sensor View Baseline

Velocity Sub-tab

- Velocity Chart
- Data table containing velocity details
- Velocity Spectrum Chart
- Peak Frequencies
- Harmonic Frequencies

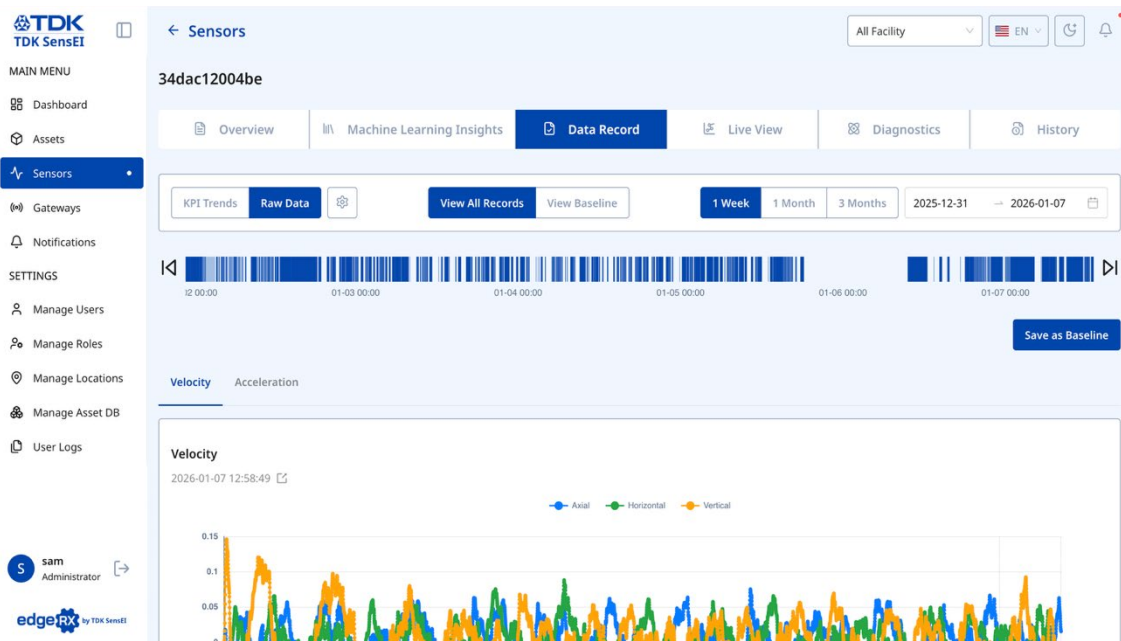


Figure 80: Sensor Raw Data Velocity

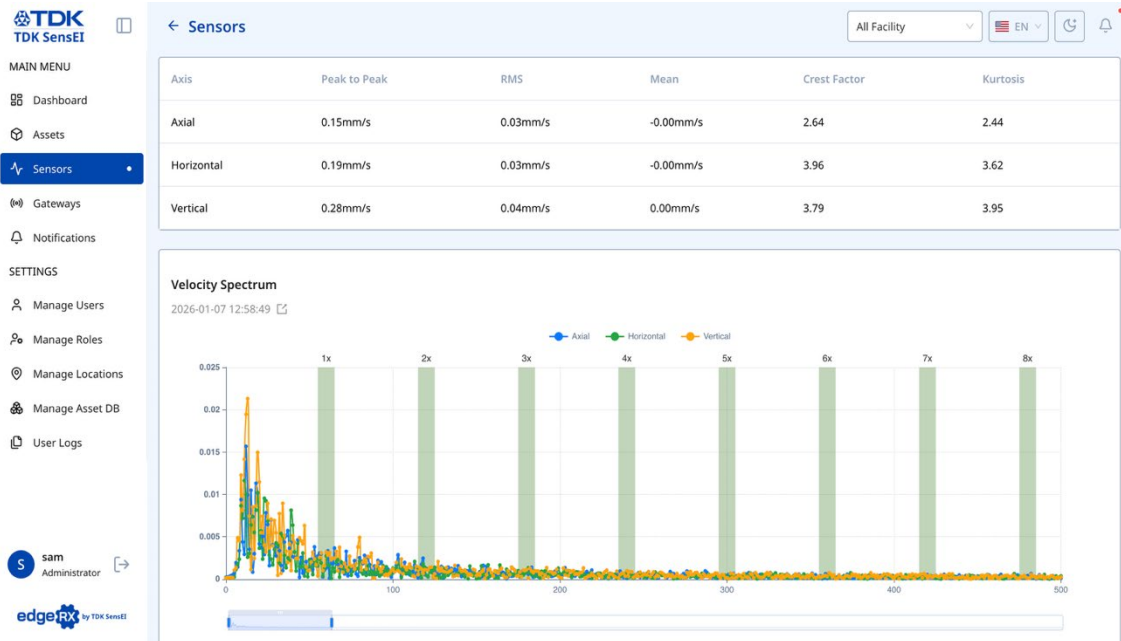


Figure 81: Sensor Raw Data Velocity Spectrum

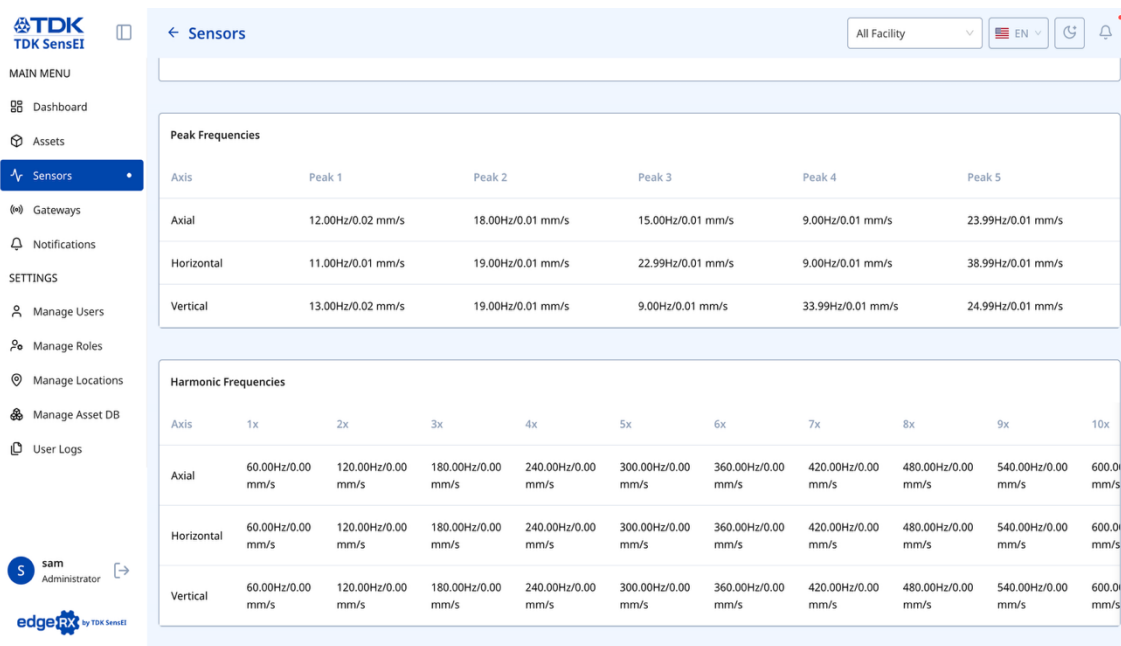


Figure 82: Sensor Raw Data Peak and Harmonic Frequencies

Acceleration Sub-tab

- Acceleration Chart
- Data table with Acceleration details
- Acceleration Envelope Spectrum Chart
- Peak Frequencies
- Envelope Analysis results chart
- Bearing Frequencies

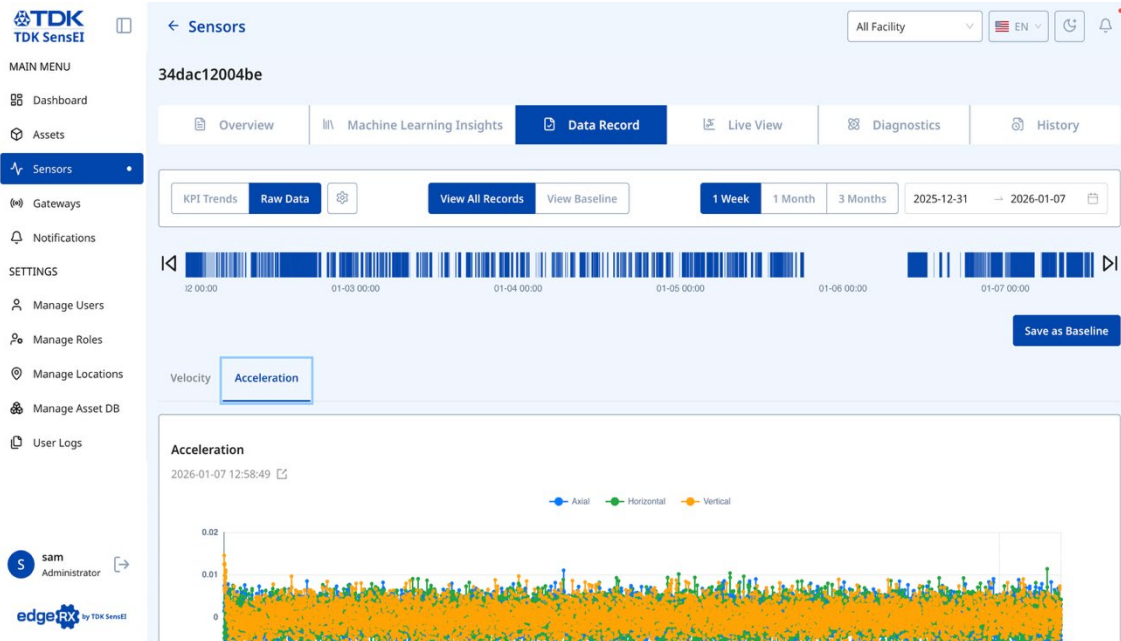


Figure 83: Sensor Raw Data Acceleration

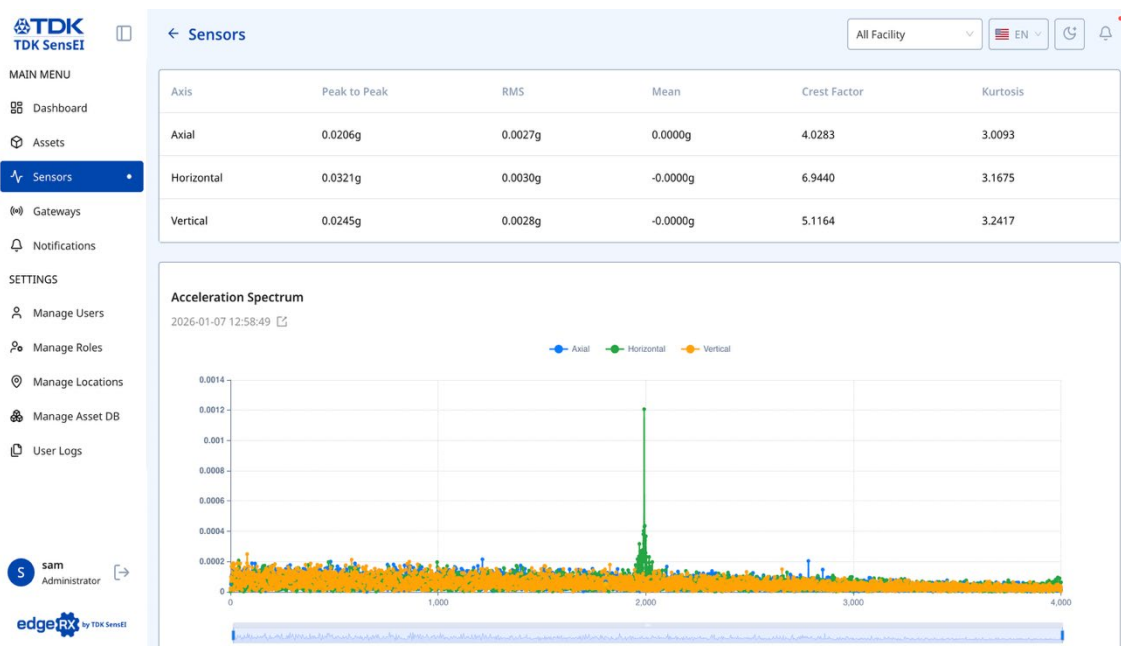


Figure 84: Sensor Raw Data Acceleration Spectrum



Figure 85: Sensor Raw Data Envelop Analysis

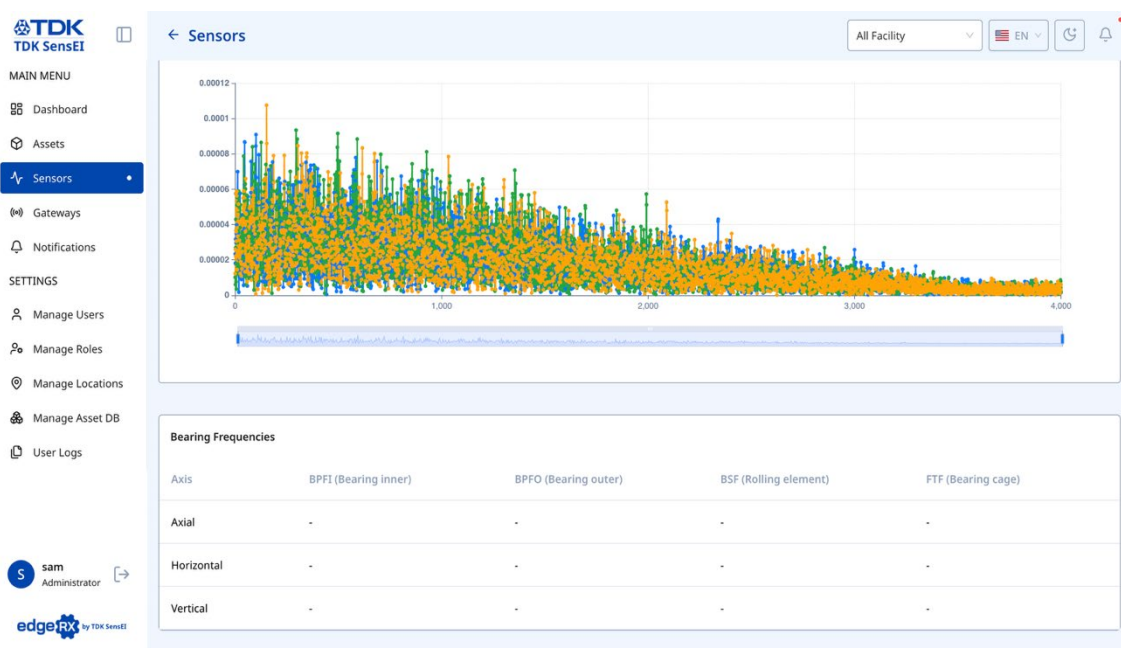


Figure 86: Sensor Raw Data Bearing Frequencies

9.1.3 Exporting Data

Each chart includes an **"Export"** button to download data in **CSV format**.

To export:

1. Navigate to the desired chart (KPI Trend or Raw Data).
2. Click the **"Export"** button.
3. The data will be downloaded as a CSV file.

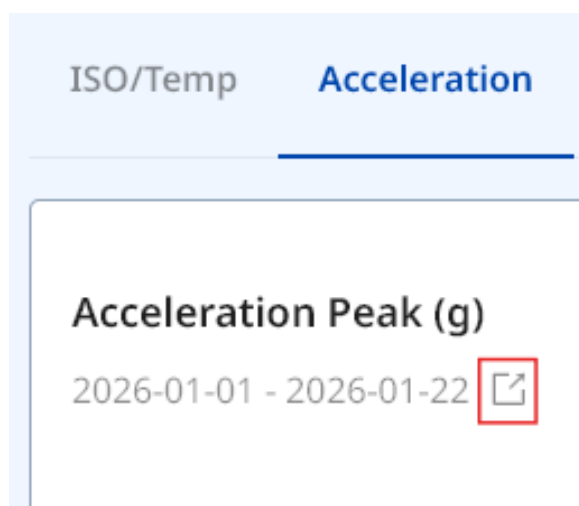


Figure 87: Graph Export Button

9.2 ISO-Based Results

ISO standards provide vibration thresholds for machinery condition monitoring.

9.2.1 Understanding ISO Standards

ISO vibration standards define acceptable vibration levels for rotating machinery based on:

- Machine type
- Operating speed
- Mounting configuration

9.2.2 Viewing ISO Results

ISO-based results are displayed in the **KPI Trend > ISO/Temp** sub-tab (see [Section 9.1.1](#)).

The system compares measured vibration levels against configured ISO thresholds to determine asset health status

9.2.3 Configuring ISO Standards

For information on configuring ISO standards and thresholds, see [Section 11.4](#).

9.3 Live View

Navigate to **Sensor Detail View > Live View Tab** to monitor real-time acceleration waveforms across vertical, axial, and horizontal axes. Connection status is displayed in real time.

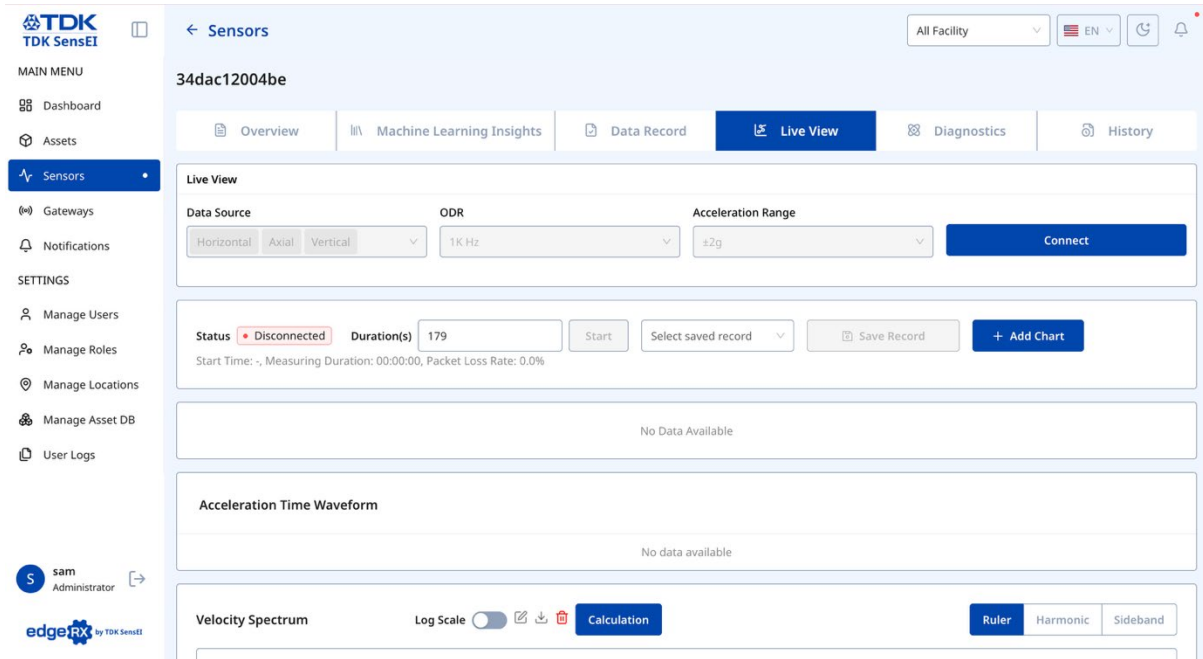


Figure 88: Sensor Live View

Adding Charts

To add a new chart:

1. Click **"Add Chart"**.
2. Configure chart parameters:

Parameter	Description
Chart type	Select visualization type
Band pass filter	Configure frequency filtering
Frame Size	Set data frame size
FFT window type	Select FFT window function
Number of average	Set averaging samples

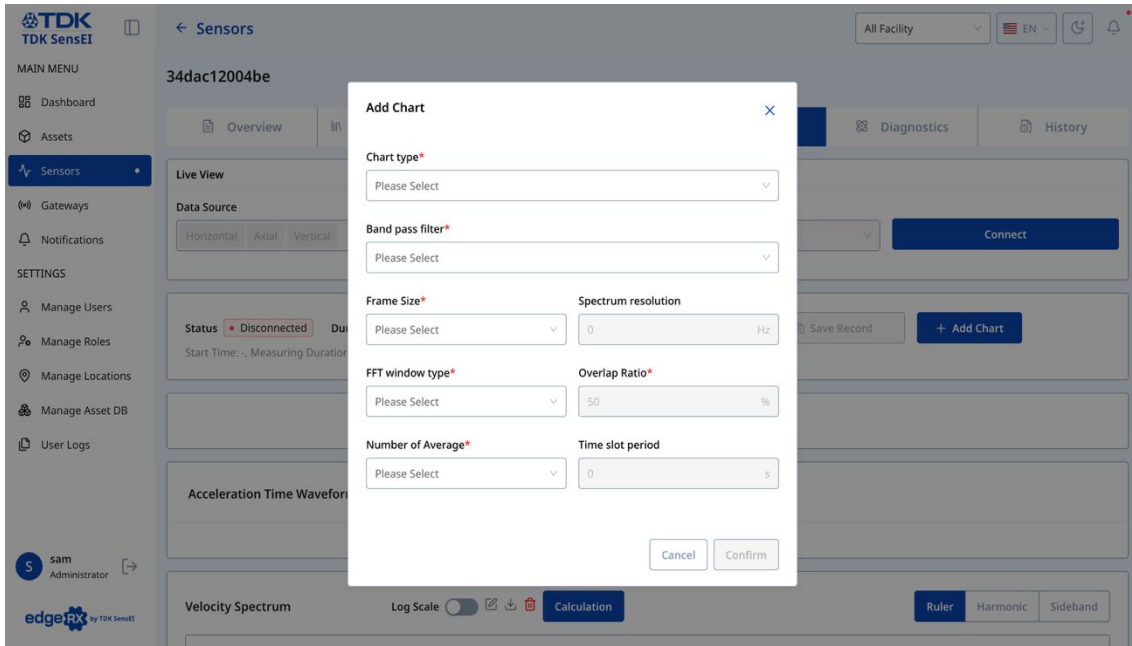


Figure 89: Live View Add Chart

3. Click "**Confirm**" to add the chart.
4. Clicking "**Cancel**" will terminate the action and the chart will not be added.

⚠ Note: Multiple charts can be added for comparative analysis.

10. Predictive Maintenance

10.1 Navigating to Predictive Health Page

1. Select Insights
2. Go to Predictive Health

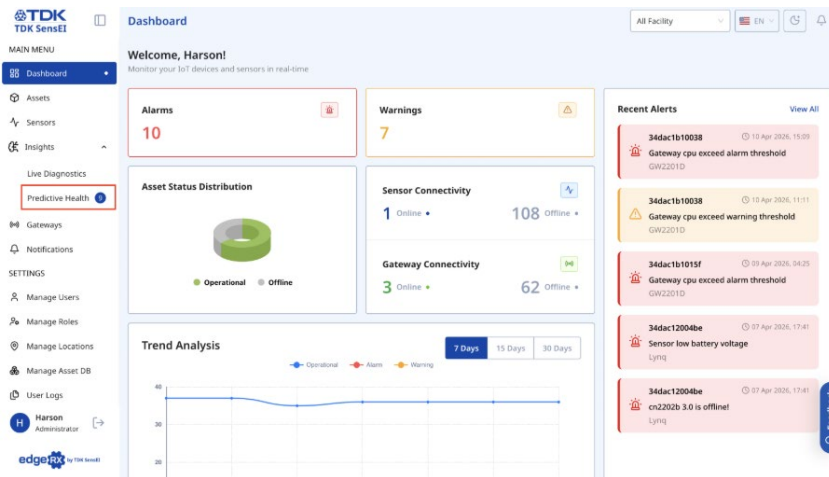


Figure 90: Predictive Health Tab

The predictive health page provides:

1. Visibility into all open predictive maintenance alerts related to your asset
2. A consolidated view of alert history, including resolved and expired alerts

Asset Name	Description	Location	Reported On	Count
High Capacity Industrial Backup Power Generator System	Critical bearing and coupling faults with unacceptable vibration levels	-	2026-04-09 17:50:34	67
High Capacity Industrial Backup Power Generator System	Critical bearing and coupling faults with unacceptable vibration levels	-	2026-04-09 17:50:34	67
PDM-Non-iso asset	Critical bearing wear with radial-dominant vibration pattern	-	2026-04-09 17:50:34	40
pre-compressor	Critical bearing wear and impeller imbalance detected	-	2026-04-09 17:50:34	61
High Capacity Industrial Backup Power Generator System	Multiple critical bearing and alignment faults detected	-	2026-04-09 16:06:32	67
High Capacity Industrial Backup Power Generator System	Multiple critical bearing and alignment faults detected	-	2026-04-09 16:06:32	67

Figure 91: Predictive Health Open Alerts

10.2 Accessing Individual Alerts

Click on the desired alert to open its detailed view.

Asset Name	Description	Location	Reported On	Count
High Capacity Industrial Backup Power Generator System	Critical bearing and coupling faults with unacceptable vibration levels	-	2026-04-09 17:50:34	67
High Capacity Industrial Backup Power Generator System	Critical bearing and coupling faults with unacceptable vibration levels	-	2026-04-09 17:50:34	67
PDM-Non-iso asset	Critical bearing wear with radial-dominant vibration pattern	-	2026-04-09 17:50:34	40
pre-compressor	Critical bearing wear and impeller imbalance detected	-	2026-04-09 17:50:34	61
High Capacity Industrial Backup Power Generator System	Multiple critical bearing and alignment faults detected	-	2026-04-09 16:06:32	67
High Capacity Industrial Backup Power Generator System	Multiple critical bearing and alignment faults detected	-	2026-04-09 16:06:32	67

Figure 92: Individual Alert

10.3 Current Prediction

The predictive health alerts page provides a comprehensive view of all predictive alerts.

AI Analysis 09 Apr 2026, 17:50

Fault Detected - The Test-Generator is operating in a critical fault state with severe mechanical degradation across multiple measurement points. Both sensors report unacceptable vibration levels that exceed ISO 20816-3 safety standards, with axial and radial vibrations in the Critical severity range (Zone D). Sensor 34dac1344566 exhibits an axial-dominant vibration pattern (9.16 mm/s) indicating primary coupling misalignment or thrust bearing degradation, combined with significant radial imbalance (H/V ratio 2.07) suggesting parallel misalignment or mounting problems. Sensor 34dac1111111 shows a radial-dominant pattern (10.85 mm/s total radial) with a 55% increase in vibration over 31 days, indicating rapid rotor imbalance progression and accelerating radial bearing wear. The convergence of these fault signatures across both sensors—combined with forecast data predicting sustained critical conditions through April 12, 2026—indicates imminent catastrophic failure risk. Root cause analysis reveals concurrent mechanical faults: coupling/thrust bearing issues at the primary measurement point, rotor imbalance and radial bearing degradation at the secondary point, and potential mounting or foundation integrity problems affecting both locations. Immediate shutdown and comprehensive maintenance intervention is required to prevent equipment failure and ensure operational safety.

Critical bearing and coupling faults with unacceptable vibration levels

Primary Concerns

- Coupling misalignment and thrust bearing degradation (Sensor 34dac1344566)
- Rotor imbalance with accelerating radial bearing wear (Sensor 34dac1111111)
- Parallel misalignment and mounting integrity issues
- Rapid vibration degradation trend (55% increase over 31 days)
- Multiple axes at Critical severity (Zone D) exceeding ISO 20816-3 thresholds

Figure 93: Predictive Health Alerts

Possible sensor alert indicators:

- Red (Alert): Prediction indicates that the threshold is likely to be reached
- Green (Normal): The asset is operating within the threshold; there are no issues predicted.
- Blue (Calibrating): Data collection in progress; predictions will begin once ample data has been collected.

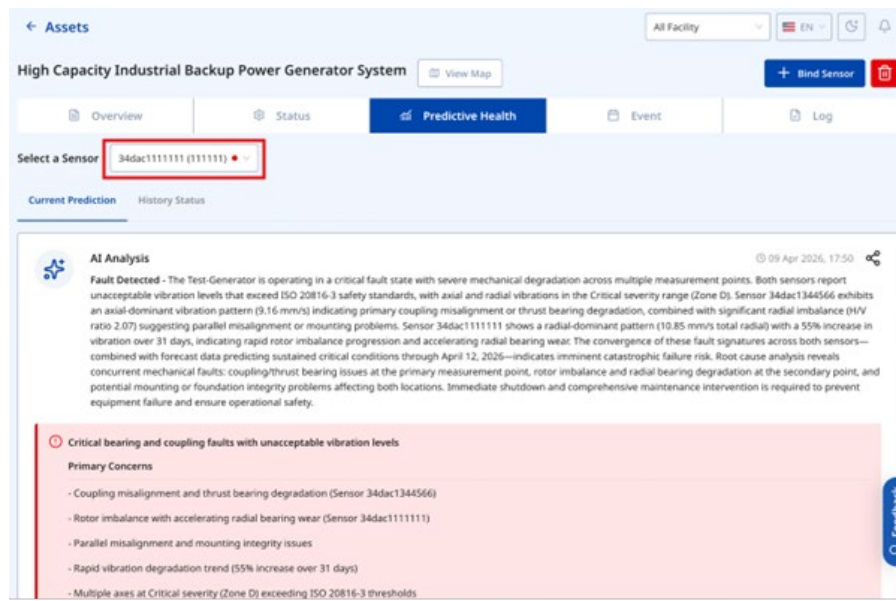


Figure 94: Predictive Health Colour



Figure 95: Predictive Health Charts

When there is an active prediction, you can take the following actions:

1. **Confirm:** Indicates that the predicted issue has been validated and addressed.
2. **False Alarm:** Indicates that the prediction is not a concern or is a false alarm.

Assets | All Facility | EN | [Refresh] [Alert]

- Sustained critical conditions forecast through April 12, 2026
- Imminent risk of catastrophic bearing failure and rotor damage

Critical Sensors

- 34dac1344566: Coupling misalignment and thrust bearing degradation
- 34dac1111111: Rotor imbalance and radial bearing wear

The generator exhibits critical mechanical faults with unacceptable vibration levels across multiple axes. Axial vibration (x-axis) at 9.16 mm/s and horizontal radial vibration (y-axis) at 7.73 mm/s both exceed ISO 20816-3 Zone D thresholds, indicating severe coupling/thrust bearing issues combined with significant radial imbalance. The radial H/V ratio of 2.07 reveals pronounced directional imbalance, suggesting parallel misalignment or mounting problems requiring immediate intervention.

Axis	Current (Vrms)	Current ISO Zone	Predicted (Vrms)	Forecasted ISO Zone
Y-Axis	7.73 mm/s	Zone D	7.70 mm/s	Zone D
X-Axis	9.16 mm/s	Zone D	8.94 mm/s	Zone D
Z-Axis	3.73 mm/s	Zone C	3.64 mm/s	Zone C

Conclusion

[Issue Confirmed] [False Alarm]

The generator is operating in a FAULT state with unacceptable vibration levels that exceed ISO 20816-3 safety standards. Both axial and horizontal radial vibrations are in Zone D (unacceptable), indicating critical mechanical faults. The directional analysis reveals axial-dominant vibration (9.16 mm/s) suggesting coupling misalignment or thrust bearing degradation, combined with significant radial imbalance (H/V ratio 2.07) indicating parallel misalignment or mounting issues. Forecast data predicts sustained critical conditions through April 12, 2026. Immediate corrective action is required to prevent catastrophic failure. Recommended actions: (1) Inspect and realign generator coupling, (2) Check thrust bearing condition and lubrication, (3) Verify mounting bolts and foundation integrity, (4) Perform detailed frequency analysis to identify specific fault frequencies.

Operational Health Trend

Feedback

Figure 96: Alert Potential Actions

⚠ Note: The feedback helps to improve the model accuracy, enabling better predictions.

10.4 Historical Predictions

The historical prediction page contains a complete record of all predictive alerts belonging to this asset alongside historical context.

Assets | All Facility | EN | [Refresh] [Alert]

High Capacity Industrial Backup Power Generator System | View Map | Bind Sensor | [Remove]

Overview | Status | **Predictive Health** | Event | Log

Select a Sensor: 34dac1344566 (344566)

Current Prediction | History Status

Alert History

- 09 Apr 2026, 17:50 **Open**
The generator exhibits critical mechanical faults with unacceptable vibration levels across multiple axes. Axial vibration (x-axis) at 9.16 mm/s and horizontal radial vibration (y-axis) at 7.73 mm/s both exceed ISO 20816-3 Zone D thresholds, indicating severe coupling/thrust bearing issues combined with significant radial imbalance. The radial H/V ratio of 2.07 reveals pronounced directional imbalance, suggesting parallel misalignment or mounting problems requiring immediate intervention.
- 09 Apr 2026, 16:06 **Open**
The generator exhibits critical mechanical faults with unacceptable...

AI Analysis | 09 Apr 2026, 17:50

Fault Detected - The Test-Generator is operating in a critical fault state with severe mechanical degradation across multiple measurement points. Both sensors report unacceptable vibration levels that exceed ISO 20816-3 safety standards, with axial and radial vibrations in the Critical severity range (Zone D). Sensor 34dac1344566 exhibits an axial-dominant vibration pattern (9.16 mm/s) indicating primary coupling misalignment or thrust bearing degradation, combined with significant radial imbalance (H/V ratio 2.07) suggesting parallel misalignment or mounting problems. Sensor 34dac1111111 shows a radial-dominant pattern (10.85 mm/s total radial) with a 55% increase in vibration over 31 days, indicating rapid rotor imbalance progression and accelerating radial bearing wear. The convergence of these fault signatures across both sensors—combined with forecast data predicting sustained critical conditions through April 12, 2026—indicates imminent catastrophic failure risk. Root cause analysis reveals concurrent mechanical faults: coupling/thrust bearing issues at the primary measurement point, rotor imbalance and radial bearing degradation at the secondary point, and potential mounting or foundation integrity problems affecting both locations. Immediate shutdown and comprehensive maintenance intervention is required to prevent equipment failure and ensure operational safety.

Critical bearing and coupling faults with unacceptable vibration levels

Primary Concerns

- Coupling misalignment and thrust bearing degradation (Sensor 34dac1344566)
- Rotor imbalance with accelerating radial bearing wear (Sensor 34dac1111111)
- Parallel misalignment and mounting integrity issues

Feedback

Figure 97: Predictive Health Historical Alerts

11. Notifications & Alerts

11.1 Notification Types

Log into the edgeRX™ Dashboard using your authorised credentials, then navigate to **Notifications** page.

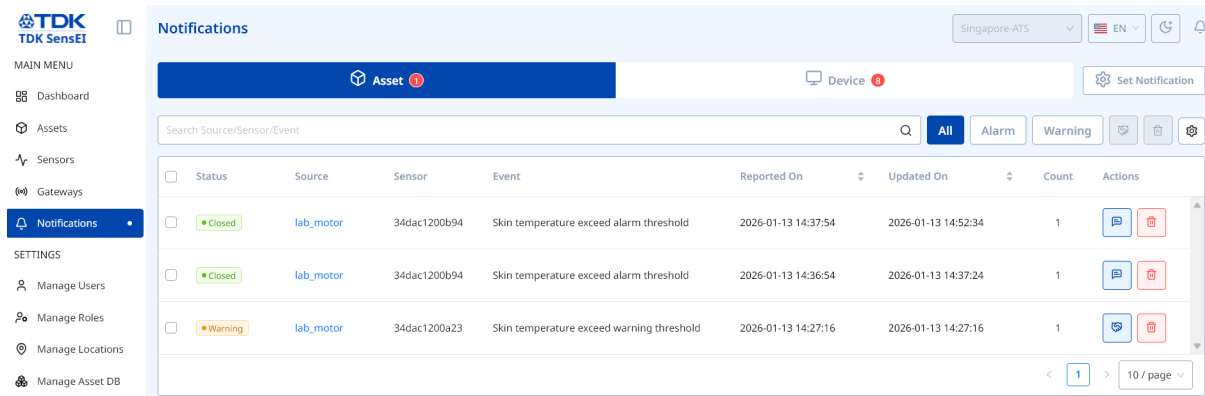


Figure 98: Notifications Tab

The Notifications page has two tabs:

11.1.1 Asset Tab

View the list of alarm, warning, and ML notifications from assets.

Search Capabilities:

- Source
- Sensor
- Event

11.1.2 Device Tab

View the list of notifications from Sensors & Gateways regarding offline/online status.

Search Capabilities:

- Device ID
- Event

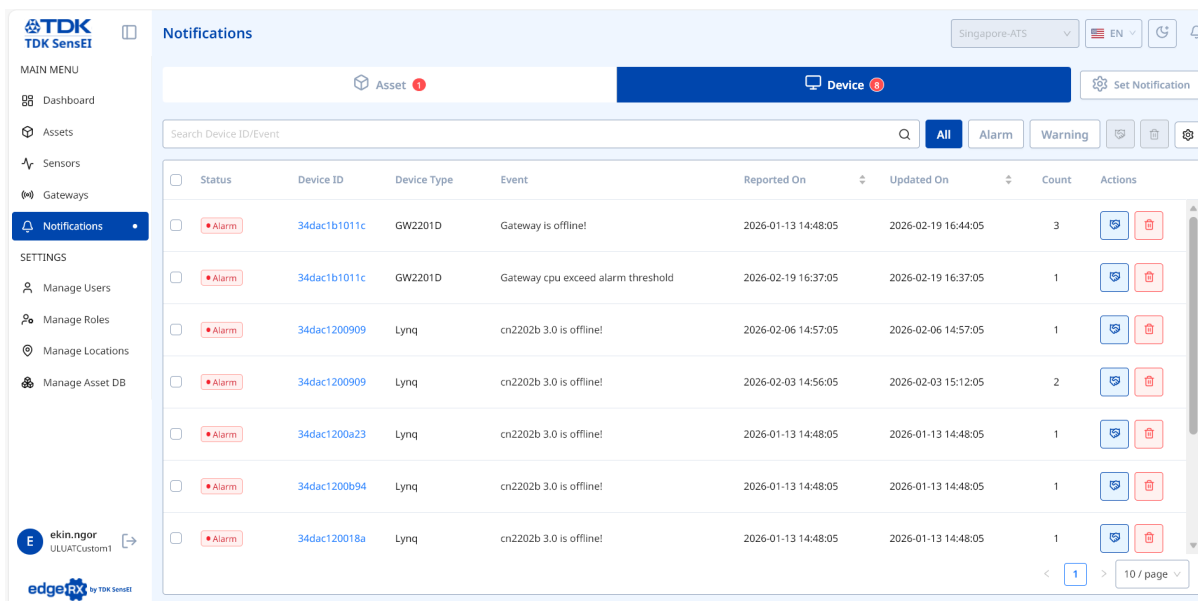


Figure 99: Notifications Tab Device

11.2 Managing Notifications

11.2.1 Acknowledge a Notification

1. Click the **"Acknowledge"** (handshake) icon.
2. Add a comment in the field provided (optional).
3. Click **"Confirm"** to acknowledge the notification.
4. Clicking **"Cancel"** terminates the action.

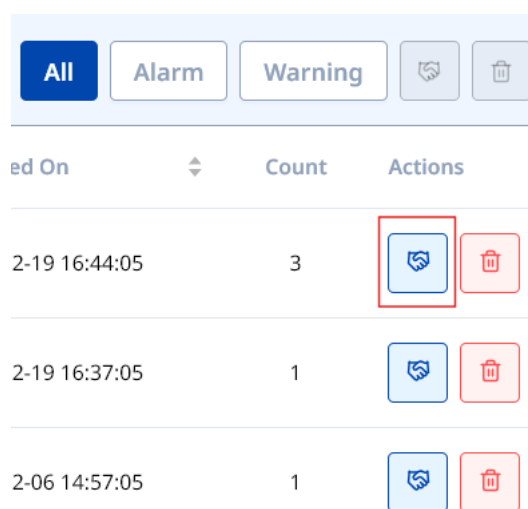


Figure 100: Acknowledge Icon

Acknowledge Alarm ✕

Comment*

Enter your comment

Cancel
Confirm

Figure 101: Acknowledging Alarm Modal

11.2.2 Delete a Notification

1. Click the "**Delete**" (trash) icon.
2. Click "**Confirm**" to delete the notification.
3. Clicking "**Cancel**" will stop the action and the notification will not be deleted.

Created On	Count	Actions
2-19 16:44:05	3	🔒 🗑️
2-19 16:37:05	1	🔒 🗑️
2-06 14:57:05	1	🔒 🗑️

Figure 102: Delete Icon

Delete Notification ✕

Are you sure you want to delete the selected notification(s)?

Cancel
Confirm

Figure 103: Deleting Alert Modal

11.2.3 Bulk Actions

To acknowledge or delete notifications in bulk:

1. Select multiple notifications using the checkboxes.
2. Click the "**Acknowledge**" or "**Delete**" icons on the top right.
3. The count of selected notifications is shown as badges on the icons.

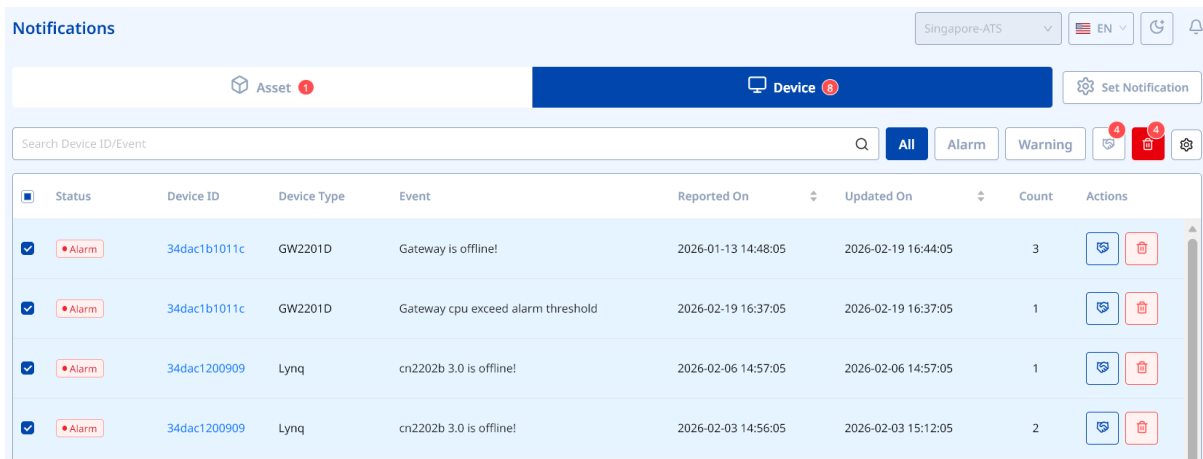


Figure 104: Batch Selection

11.3 Notification Filters

Notifications can be toggled between the following filters:

- **All** – Show all notifications
- **Alarm** – Show only alarm notifications
- **Warning** – Show only warning notifications

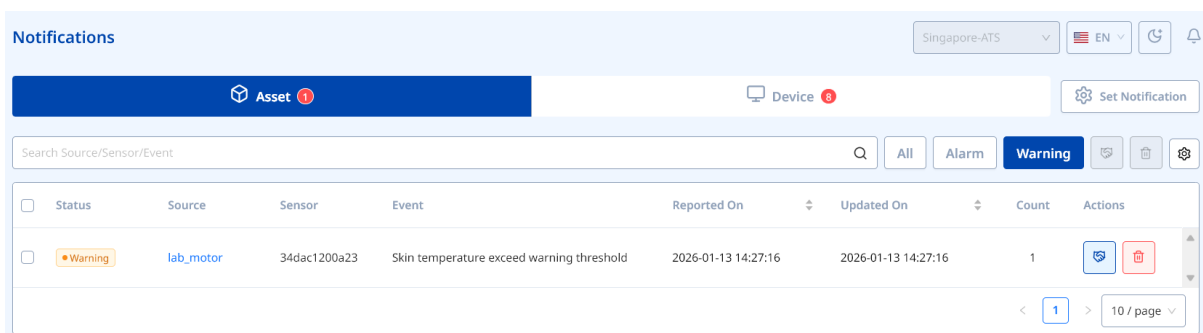


Figure 105: Filter Selection

11.4 Email & Mobile Push Notifications

To receive notifications via email or mobile push:

1. Click the **"Manage Notifications"** button.
2. Enable the desired toggles:
 - Asset Alarm
 - Asset Warning
 - Device Offline

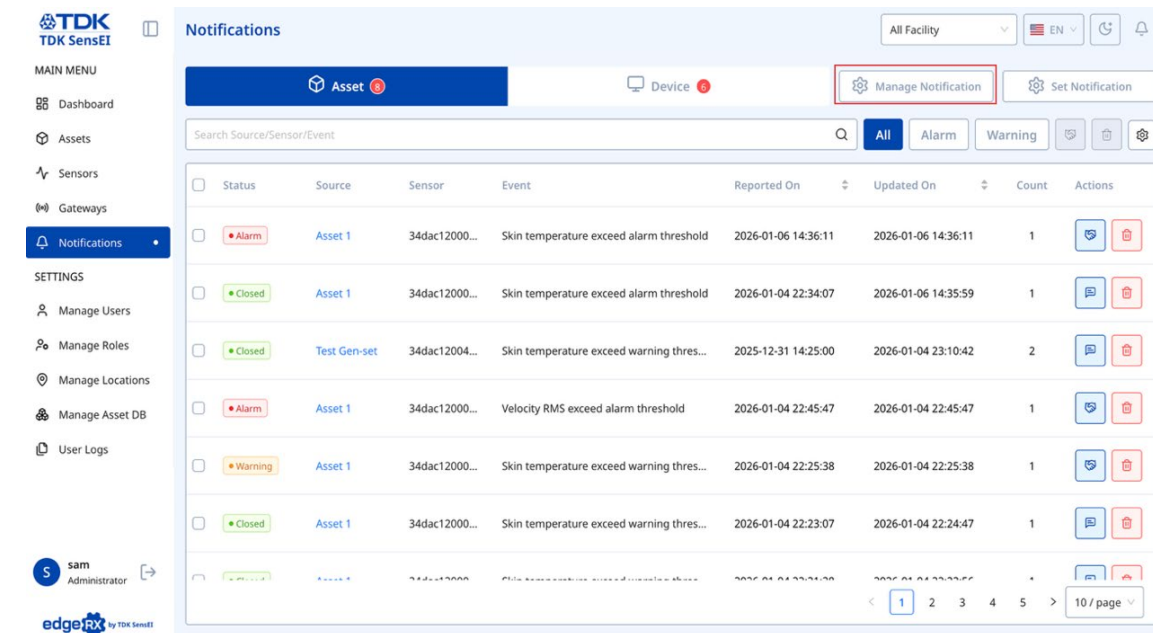


Figure 106: Manage Notifications Entry Point

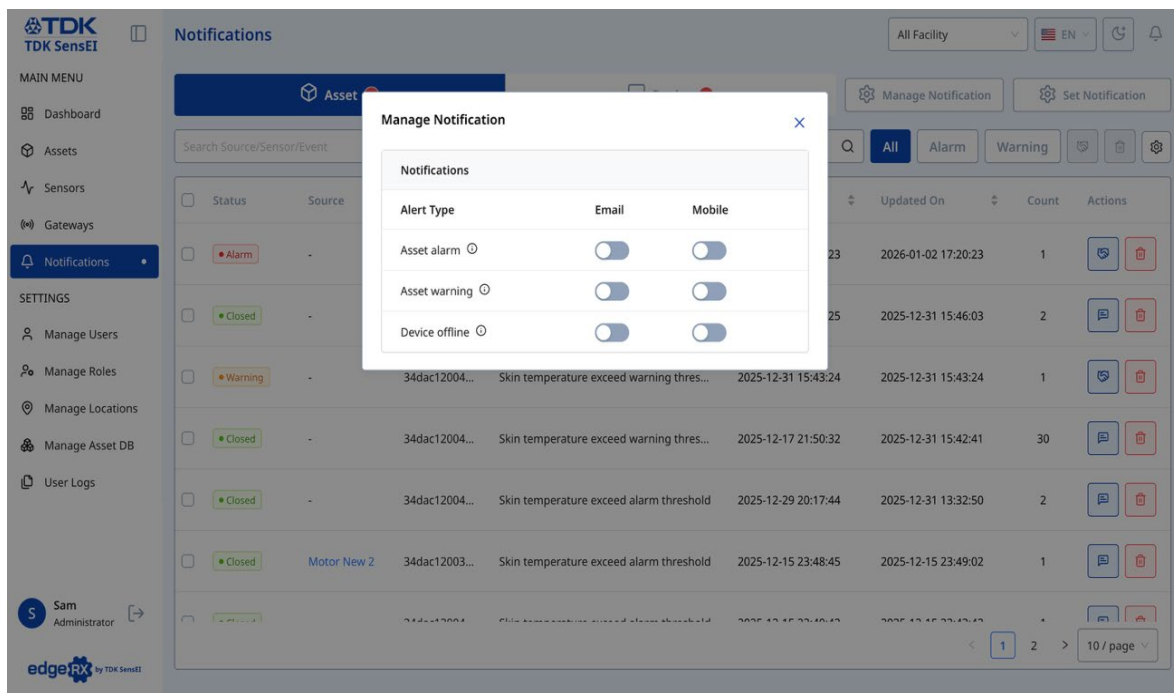


Figure 107: Manage Notifications Modal

Notifications will be sent to your registered email address and/or mobile device.

11.5 Setting Warning/Alarm Thresholds

The **"Set Notification"** button allows users to set Warning and Alarm Thresholds for parameters of Sensors and Gateways.

To configure thresholds:

1. Click **"Set Notification"**.
2. Select the device (Sensor or Gateway).

3. Configure the threshold values for relevant parameters.
4. Click **"Save"** to apply changes.

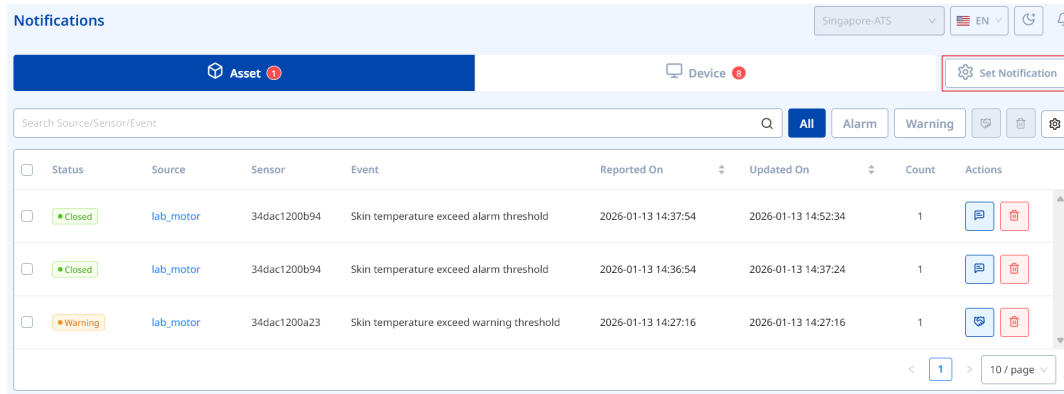


Figure 108: Set Notifications Entry Point



Figure 109: Set Notifications Modal

11.6 Notification Table Features

The Notifications table provides a searchable, paginated view of all notifications.

Feature	Description
Search Bar	Find notifications from Assets and Devices
Rows per Page	Adjust display (dropdown in bottom right corner)
Column Settings	Customize visible columns (Gear option on top right corner)

Notifications Singapore-ATS | EN | 🔔

Asset 1 Device 3 | ⚙️ Set Notification

Search Source/Sensor/Event 🔍 **All** Alarm Warning 🗑️ ⚙️

<input type="checkbox"/>	Status	Source	Sensor	Event	Reported On	Updated On	
<input type="checkbox"/>	Closed	lab_motor	34dac1200b94	Skin temperature exceed alarm threshold	2026-01-13 14:37:54	2026-01-13 14:52:34	
<input type="checkbox"/>	Closed	lab_motor	34dac1200b94	Skin temperature exceed alarm threshold	2026-01-13 14:36:54	2026-01-13 14:37:24	
<input type="checkbox"/>	Warning	lab_motor	34dac1200a23	Skin temperature exceed warning threshold	2026-01-13 14:27:16	2026-01-13 14:27:16	

Column Display [Reset](#)

- Status
- Source
- Sensor
- Event
- Reported ...
- Updated ...
- Count
- Actions

1 / 10 page

Figure 110: Notifications Column Display

12. Configuring Settings

Log into the edgeRX™ Dashboard using your authorised credentials, then navigate to **Settings** to manage system-wide configurations including location hierarchy, asset specifications, fault databases, and ISO standards.

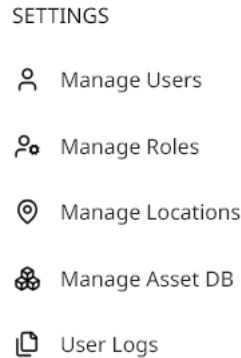


Figure 111: Menu Bar

12.1 Location Hierarchy

Navigate to **Settings > Manage Locations** to view the hierarchical layout of Sites, Buildings, Floors, and Rooms. By default, the system automatically selects the most relevant level in the hierarchy, allowing Users to quickly view associated data.

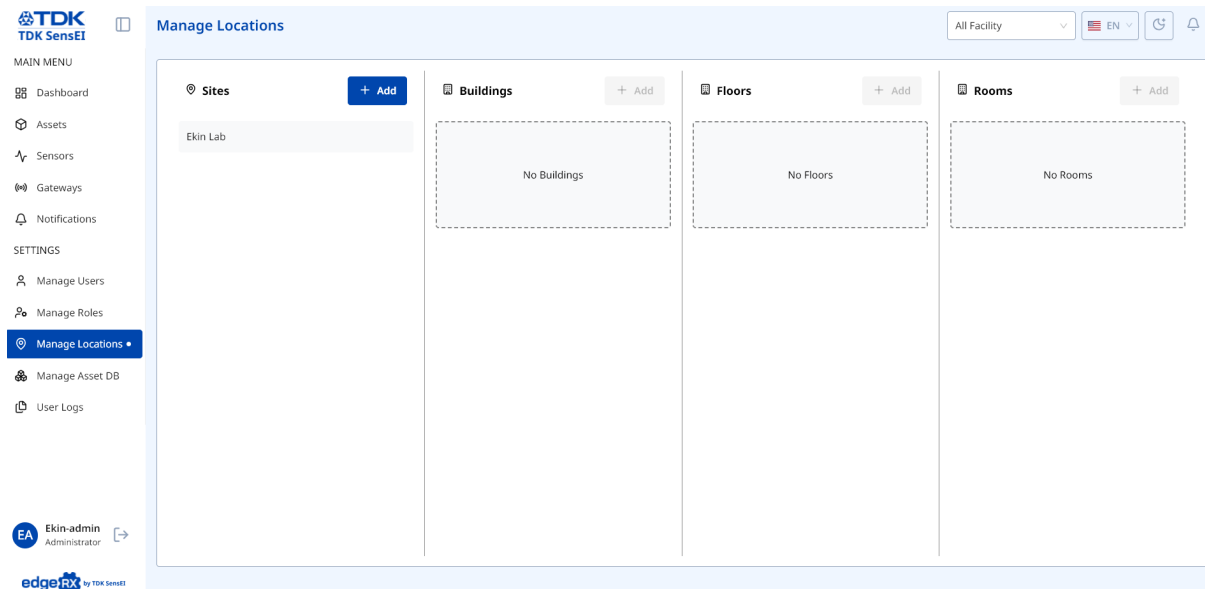


Figure 112: Manage Locations

Hierarchy Structure:

Site → Building → Floor → Room

Boxes labelled with names will be visible on the screen.

12.1.1 Adding a Site

1. Click **"Add"** to create a new site.
2. Enter the following details:

Field	Description
Site Name	Name of the site
Site Map (Optional)	Upload a site map image

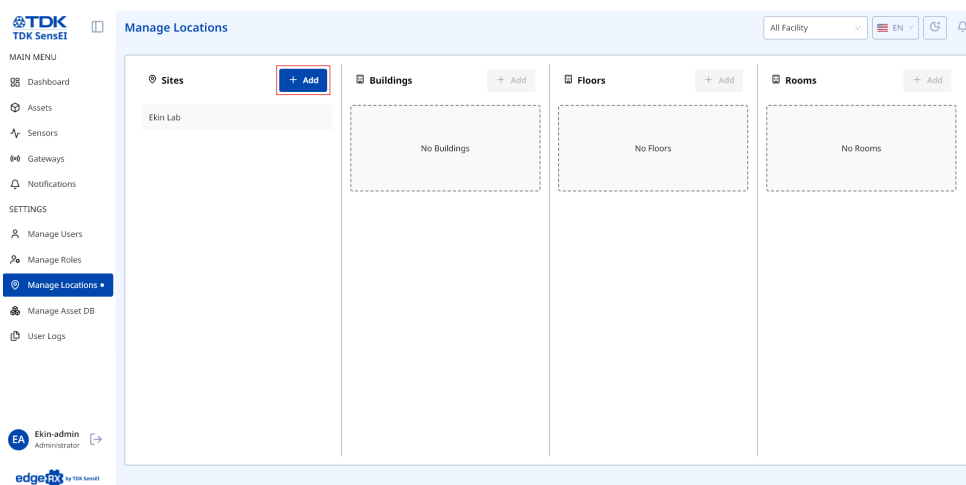


Figure 113: Add Site

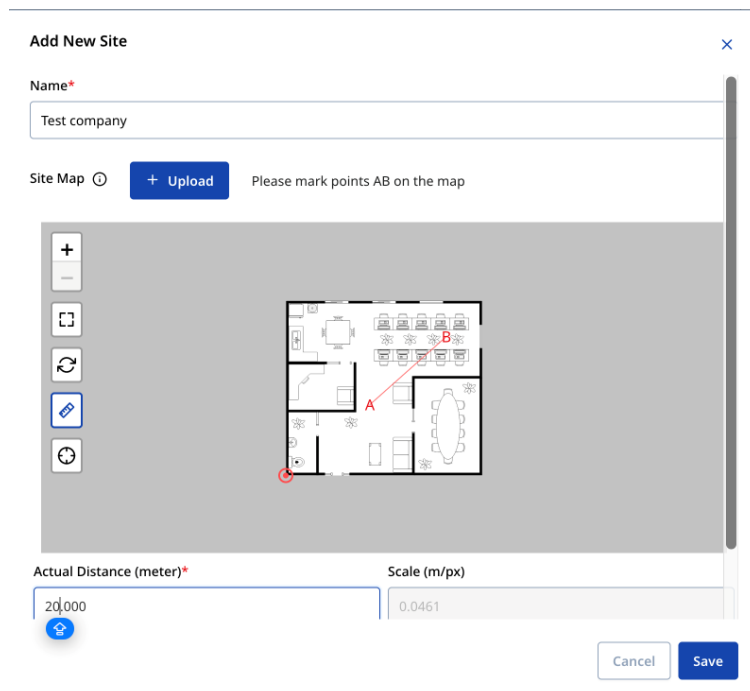


Figure 114: Add Site Modal

3. Click on 2 separate points to mark A and B
4. Enter the Actual Distance in meters.
5. Click "**Save**" to add the Site.

12.1.2 Managing Existing Locations

Use the following controls to manage Sites, Buildings, Floors, and Rooms:

Control	Action
Edit	Click the "Edit" icon, update Name/Image/Actual Distance, click "Save"
Delete	Click the "Delete" icon and confirm the action
Preview	Click the "Preview" (eye) icon to view location on map
Reorder	Use "Up" and "Down" arrow controls

Note: These controls behave the same for Sites, Buildings, Floors, and Rooms.

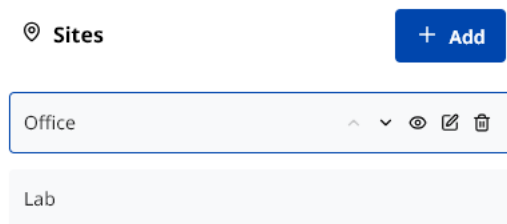


Figure 115: Site Controls

Edit Site ✕

Name*

Site Map ⓘ **+ Upload** Please mark points AB on the map

+

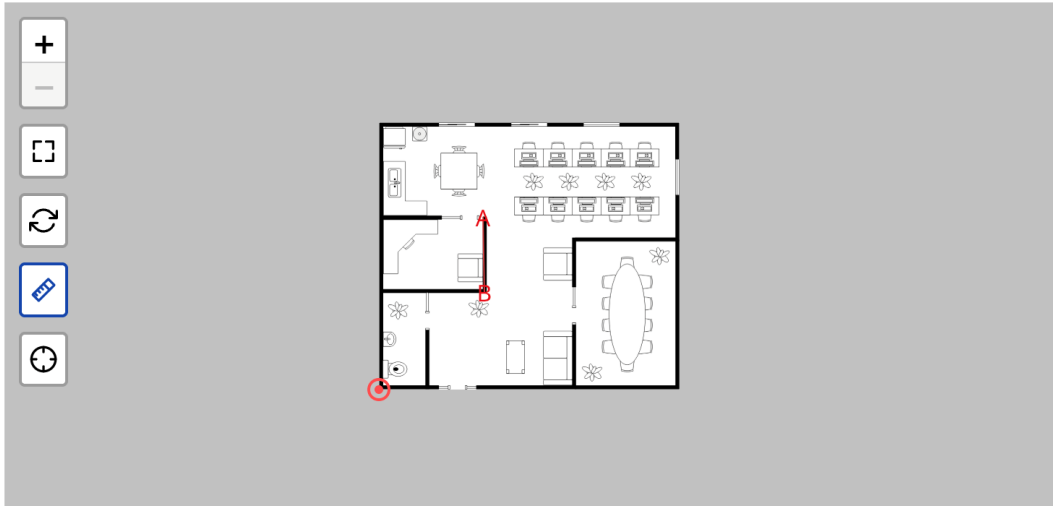
-

📏

↻

✍️

🕒



Actual Distance (meter)*

Scale (m/px)

Cancel
Update

Figure 116: Edit Site Map

Delete Site ✕

This action is irreversible. Do you confirm to delete this Office?

Cancel
Confirm

Figure 117: Delete Site Modal

View Site



Name: Office



Figure 118: Preview Site

12.1.3 Adding a Building

1. Click **"Add"** button in the Buildings box.
2. Enter the Building Name.
3. Click on the image to generate at least 3 points.
4. Click **"Save"** to add the Building.

Add New Building



Building Name*

Office A

Building Map *



Cancel

Save

Figure 119: Add Building Modal

12.1.4 Adding a Floor

1. Click **"Add"** button in the Floors box.
2. Enter the Floor Name.
3. Upload a Site Map.
4. Click **"Save"** to add a Floor.
5. Click on 2 separate points to mark A and B
6. Enter the Actual Distance in meters.

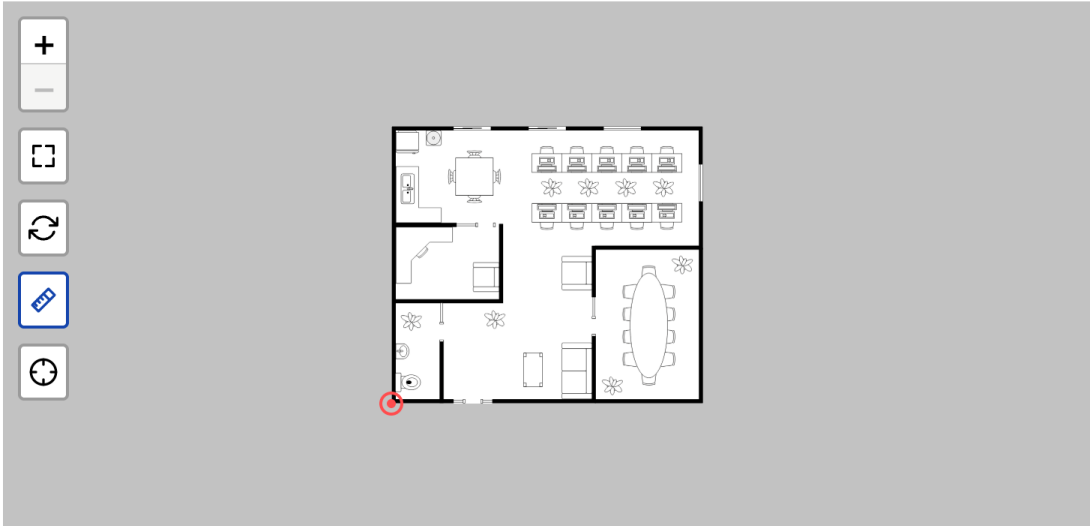
Add New Floor
✕

Name*

Floor Map ⓘ

+ Upload

Please mark points AB on the map



Actual Distance (meter)*

Scale (m/px)

Cancel

Save

Figure 120: Add Floor Modal

12.1.5 Adding a Room

1. Click **"Add"** button in the Rooms box.
2. Enter Room Name and Room Color.
3. Click on the image to generate at least 3 points.
4. Click **"Save"** to add a Room.

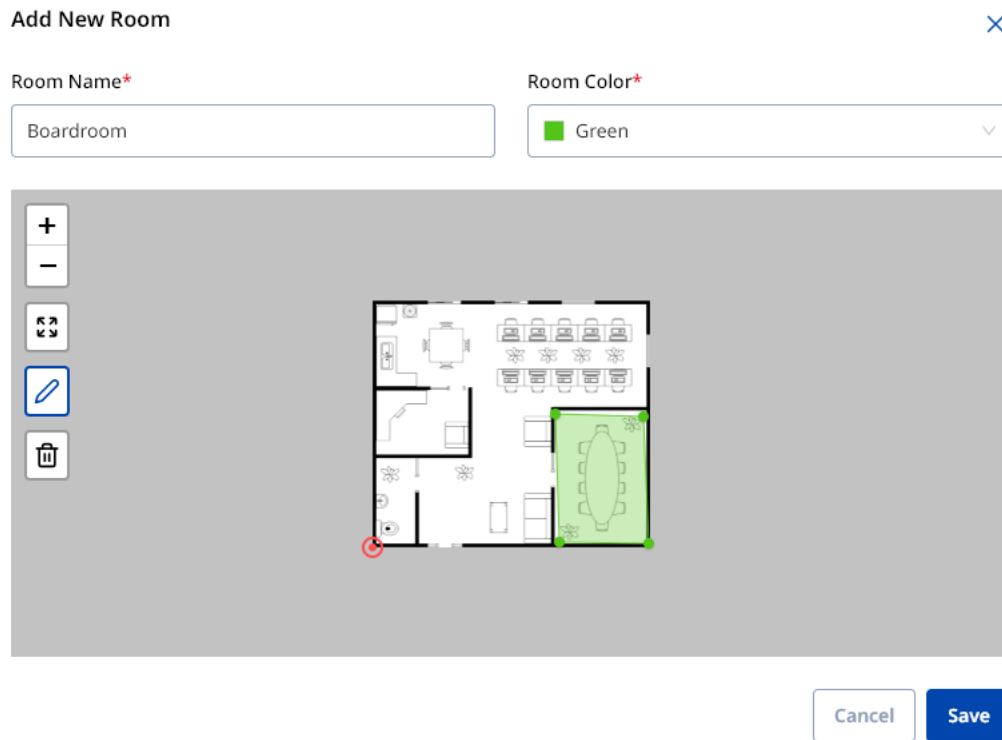


Figure 121: Add Room Modal

12.1.6 Map Toolbar

Use the Map Toolbar to interactively manage the layout:

- **Zoom** – Zoom in/out of the map
- **Reset** – Reset map to default view
- **Scaling (AB points)** – Set scale reference points
- **Origin adjustment** – Adjust map origin
- **Layout reset** – Reset layout to default

12.2 Manage Asset DB / Asset Types

Navigate to **Settings > Manage Asset DB > Asset type** to view and configure asset types.

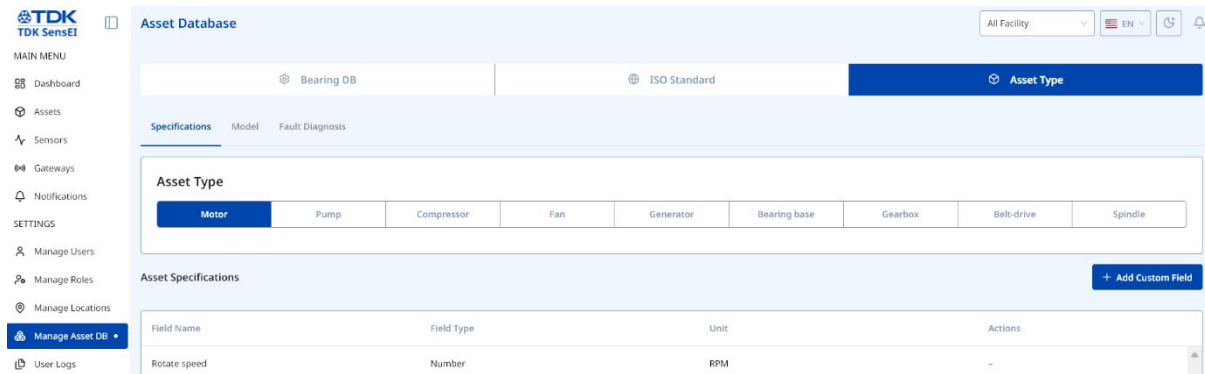


Figure 122: Manage Asset Type

12.2.1 Adding a Custom Field

1. Click the **"+ Add Custom Field"** button.
2. Enter the following details:

Field	Description
Field Name	Name of the custom field
Field Type	Data type (text, number, etc.)
Unit	Unit of measurement (if applicable)

Figure 123: Custom Field

3. Click **"Add"** to create the custom field.

12.2.2 Adding an Asset Model

1. Click **"Add Model"** to input specifications for a selected asset type.
2. Enter the following:

Field	Description
Asset Model Name	Name of the model
Rotate Speed (RPM)	Rotational speed in RPM
DE Bearing	Drive-end bearing specification
Num of Impeller	Number of impellers
Voltage (V)	Operating voltage
Current (A)	Operating current

The screenshot shows the 'Asset Database' interface. At the top, there are navigation tabs for 'Bearing DB', 'ISO Standard', and 'Asset Type', with 'Asset Type' being the active tab. Below the tabs, there are sub-tabs for 'Specifications', 'Model', and 'Fault Diagnosis', with 'Model' selected. The 'Asset Type' section contains a row of buttons: 'Motor', 'Pump', 'Compressor', 'Fan', 'Generator', 'Bearing base', 'Gearbox', 'Belt-drive', and 'Spindle', with 'Motor' highlighted. Below this is the 'Asset Model' section, which includes an 'Add Model' button and a table with the following data:

Asset Model	Updated On	User	Actions
QE-10	2026-03-03 19:05:16	Ekin-admin	[Edit] [Delete]

At the bottom right of the table, there is a pagination control showing '1' of '10 / page'.

Figure 124: Asset DB Asset Type

×

Add Model

Asset Model Name*

Rotate speed (RPM)

Power (kW)

DE bearing*

Line Frequency (Hz)

Num of poles

Voltage (V)

Current (A)

Figure 125: Add Asset Modal

3. Click **"Confirm"** to add the Model.

12.2.3 Managing Asset Models

You can view all models under each type and use the **Edit** or **Delete** links to manage them.

Sensor location values can also be added, edited, or deleted dynamically to define exact placement points.

12.3 Bearing DB

Navigate to **Settings > Bearing DB** to view, add, edit, or delete fault entries.

Bearing type	Number of balls	FTF_60RPM	BSF_60RPM	BPFO_60RPM	BPFI_60RPM	Actions
N206	12	0.419	2.988	5.023	6.977	[Edit] [Delete]
1111	9	0.402	2.461	3.621	5.379	[Edit] [Delete]
N214	16	0.433	3.683	6.933	9.067	[Edit] [Delete]
N210	15	0.429	3.429	6.429	8.571	[Edit] [Delete]

Figure 126: Asset DB Bearing

12.3.1 Adding Bearing Fault Data

1. Click **"Add"** to input new bearing fault frequency.
2. Enter the following:

Field	Description
Bearing type	Type/model of bearing
Number of balls	Number of rolling elements
FTF_60RPM	Fundamental Train Frequency at 60 RPM
BSF_60RPM	Ball Spin Frequency at 60 RPM
BPFO_60RPM	Ball Pass Frequency Outer race at 60 RPM
BPFI_60RPM	Ball Pass Frequency Inner race at 60 RPM

Add Bearing Fault Frequency ×

Bearing type*

Number of balls*

FTF_60RPM*

BSF_60RPM*

BPFO_60RPM*

BPFI_60RPM*

Figure 127: Add Bearing Modal

3. Click **"Save"** to add the bearing fault data.

12.3.2 Editing Bearing Fault Data

1. Click the **"Edit"** icon from the actions column.
2. Update the fault frequency values.
3. Click **"Confirm"** to save changes.
4. Clicking **"Cancel"** will terminate the edit action.

12.3.3 Deleting Bearing Fault Data

1. Click the **"Delete"** icon from the actions column.
2. Click **"Confirm"** to delete the bearing.
3. Clicking **"Cancel"** will terminate the delete action.

12.3.4 Bulk Upload Bearing Faults

To bulk upload bearing faults:

1. Click the **"Import"** button.
2. Download the template file.
3. Complete the template offline with your bearing data.
4. Upload the completed file back into the system.

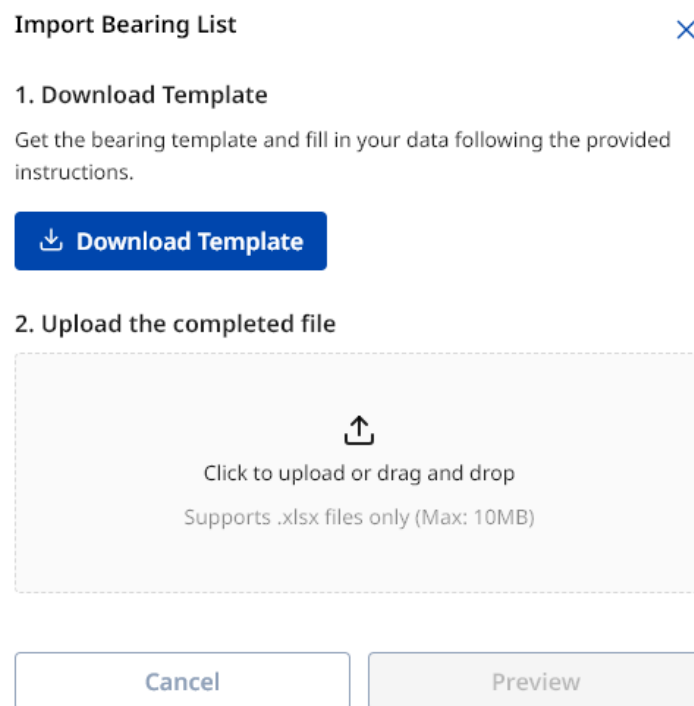


Figure 128: Bearing List Upload

12.4 ISO Standards

Navigate to **Settings > ISO Standards** to view and configure vibration thresholds.

ISO Standard	Description	Warning threshold	Alarm threshold	Actions
ISO10816-3/Group 1/Rigid	300KW-50MW,rigid mounted	4.5 mm/s	7.1 mm/s	-
ISO10816-3/Group 1/Flexible	300KW-50MW,flexible mounted	7.1 mm/s	11 mm/s	-
ISO10816-3/Group 2/Flexible	15KW-300MW,flexible mounted	4.5 mm/s	7.1 mm/s	-
ISO10816-3/Group 2/Rigid	15KW-300MW,rigid mounted	2.8 mm/s	4.5 mm/s	-

Figure 129: ISO Standards

12.4.1 Adding an ISO Standard

1. Click **"Add"** to add an ISO standard.
2. Enter the following:

Field	Description
ISO Standard	ISO standard name/number
Description	Description of the standard
Warning Threshold	Vibration level that triggers warning
Alarm Threshold	Vibration level that triggers alarm

Add ISO standard
×

ISO Standard*

Description*

Warning Threshold (mm/s)*

 mm/s

Alarm Threshold (mm/s)*

 mm/s

Figure 130: ISO Standard Modal

3. Click **"Save"** to add the ISO standard.

12.4.2 Editing an ISO Standard

1. Click the **"Edit"** icon from the actions column.
2. Update the standard details.
3. Click **"Confirm"** to save the edited changes.
4. Clicking **"Cancel"** will terminate the edit action.

12.4.3 Deleting an ISO Standard

1. Click the **"Delete"** icon from the actions column.
2. Click **"Confirm"** to delete the ISO standard.

12.5 Fault Diagnosis

Navigate to **Settings > Manage Asset DB > Asset Type > Fault Diagnosis** to view a list of predefined fault types for this asset model.

The screenshot shows the 'Asset Database' interface. At the top, there are tabs for 'Bearing DB', 'ISO Standard', and 'Asset Type', with 'Asset Type' selected. Below the tabs, there are sub-tabs for 'Specifications', 'Model', and 'Fault Diagnosis', with 'Fault Diagnosis' selected. Under 'Asset Type', there is a row of buttons for different asset types: 'Motor', 'Pump', 'Compressor', 'Fan', 'Generator', 'Bearing base', 'Gearbox', 'Belt-drive', and 'Spindle', with 'Motor' selected. Below this, the 'Fault Diagnosis' section contains a table with the following data:

No.	Fault Name	Data Type	Parameter	Description
1	Imbalance	Spectra/Velocity	RPM	Imbalance occurs when the mass distribution of a rotating component is not uniform, causing it to generate centrifugal forces that lead to excessive vibration.
2	Angular misalignment	Spectra/Velocity	RPM	Angular misalignment occurs when shaft centerlines intersect at an incorrect angle, causing axial force vectors and moment loading that accelerate coupling wear.
3	Parallel misalignment	Spectra/Velocity	RPM	Parallel misalignment occurs when shaft centerlines develop offset parallelism, causing radial forces proportional to displacement distance that induce bearing overload.
4	Rolling bearing wear	Spectra/Envelope	Bearing type	Bearing wear occurs when rolling elements experience progressive material loss, causing characteristic vibration patterns and thermal elevation that reduce load capacity.
5	Structural looseness	Spectra/Envelope	RPM	Structural looseness occurs when mechanical joints lose design stiffness, causing characteristic vibration patterns that increase over time.

Figure 131: Fault Diagnosis

This section displays the fault diagnosis categories configured in the system for asset condition monitoring.

13. Troubleshooting

13.1 Sensor Issues

13.1.1 Sensor Appears Offline on Dashboard

If a sensor shows as offline in the dashboard:

1. **Ensure sensor was turned on** by checking the on/off switch found in the sensor.
2. **Ensure that the sensor MAC ID was entered successfully** when adding the sensor to the dashboard.
3. **Ensure that the sensor was successfully bound** to the gateway and the asset.

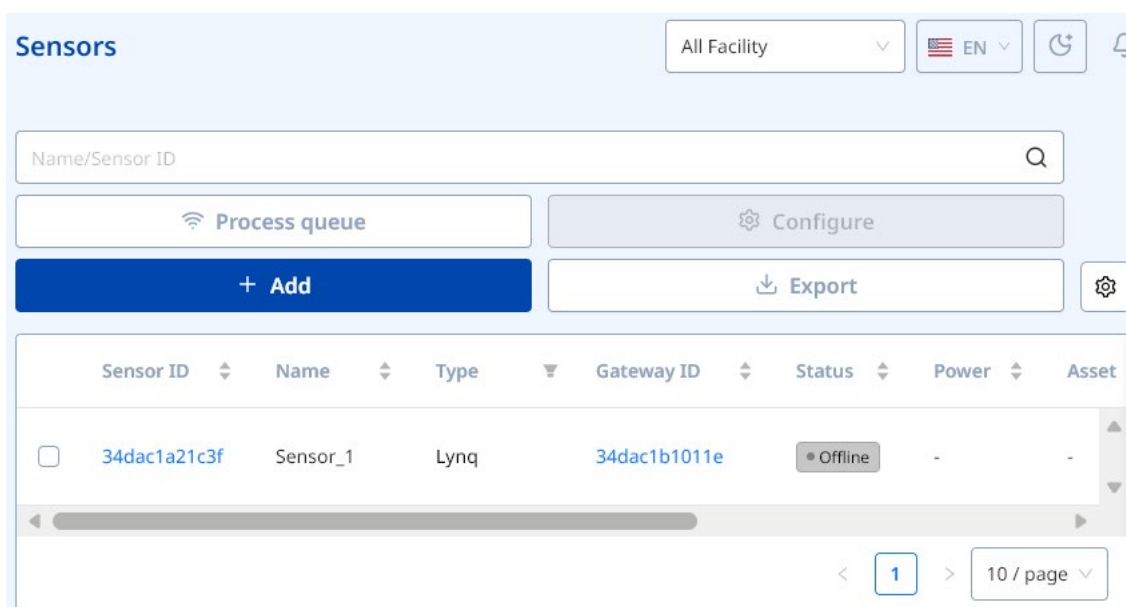


Figure 132: Sensor Offline

If the issue persists after these checks, contact your TDK SensEI representative for assistance.

13.2 Gateway Issues

13.2.1 Gateway Appears Offline on Dashboard

If a gateway shows as offline in the dashboard:

1. **Ensure that gateway power supply was attached properly** – Check all power connections.
2. **Ensure that gateway was added to a location successfully** on the dashboard.

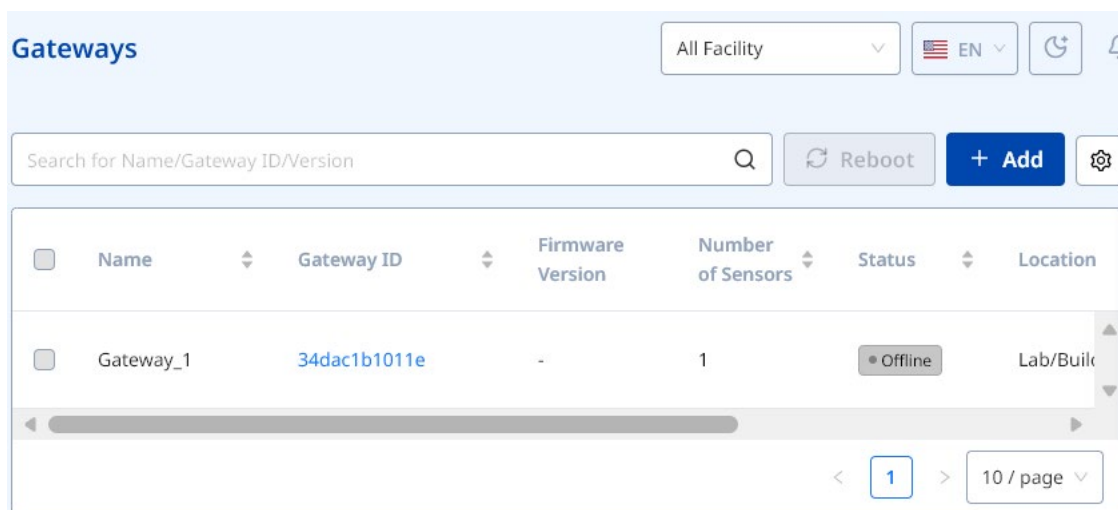


Figure 133: Gateway Offline

If the issue persists after these checks, contact your TDK SensEI representative for assistance.

13.3 Dashboard Issues

13.3.1 No Data Appearing on Dashboard

If sensor data is not appearing on the dashboard:

1. Verify that sensors are online (see [Section 12.1.1](#)).
2. Verify that gateways are online (see [Section 12.2.1](#)).
3. Check that sensors are properly bound to assets (see Section 6.4).
4. Refresh your browser page.

13.3.2 Widget Appears Inactive or Blank

If widgets on the homepage dashboard appear inactive or blank:

1. Confirm that your gateways and sensors are online.
2. Check your network connection.
3. Verify that you have proper permissions to view the data (see Section 3).
4. Try switching to a different location using the location selector (if available).

13.4 Contacting Support

If any issues persist after following the troubleshooting steps, please contact your local TDK SensEI representative.

When contacting for support, please provide the following:

- User account information
- Description of the issue
- Screenshots (if applicable)
- Steps taken to troubleshoot

Appendix

A. Glossary of Terms

Term	Definition
Asset	A piece of equipment or machinery being monitored by the edgeRX™ system
edgeRX™	TDK SensEI's end-to-end platform for real-time equipment health monitoring
Gateway	Hardware device that collects sensor data and transmits it to the cloud
KPI	Key Performance Indicator – measurable values used to evaluate asset health
ML	Machine Learning – AI algorithms used to analyze sensor data
MFA	Multi-Factor Authentication – security feature requiring multiple verification methods
Sensor	Hardware device that collects vibration and temperature data from assets
ISO	International Organization for Standardization – defines vibration standards
RSSI	Received Signal Strength Indicator – measures wireless signal strength
RPM	Revolutions Per Minute – rotational speed measurement
RMS	Root Mean Square – statistical measure of vibration magnitude
FFT	Fast Fourier Transform – algorithm for frequency analysis