TDK SensEI

edgeRX™ Platform User Guide

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TDK In Everything, Better

TDK SensEI edgeRx™ Dashboard User Guide

Version 3.1.1 – 27 April 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

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).

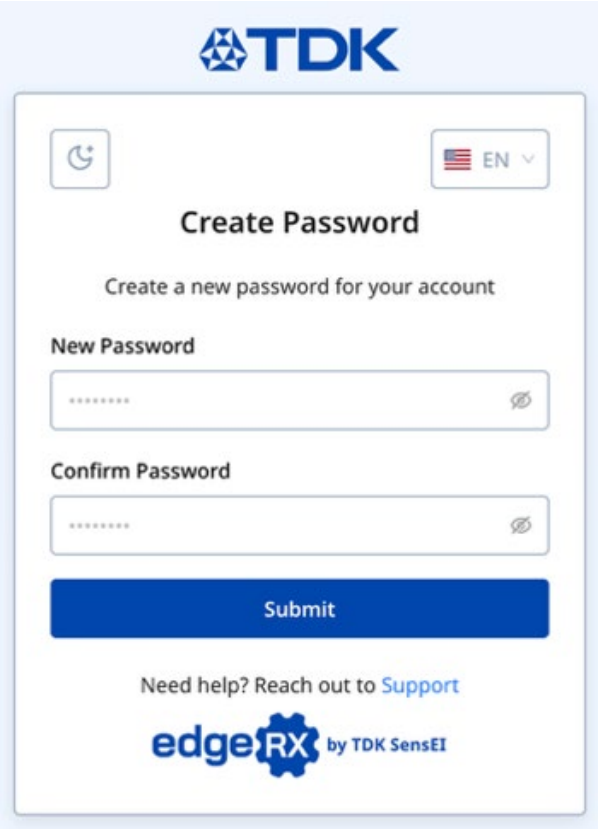


Figure 1: Create Password Page

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.

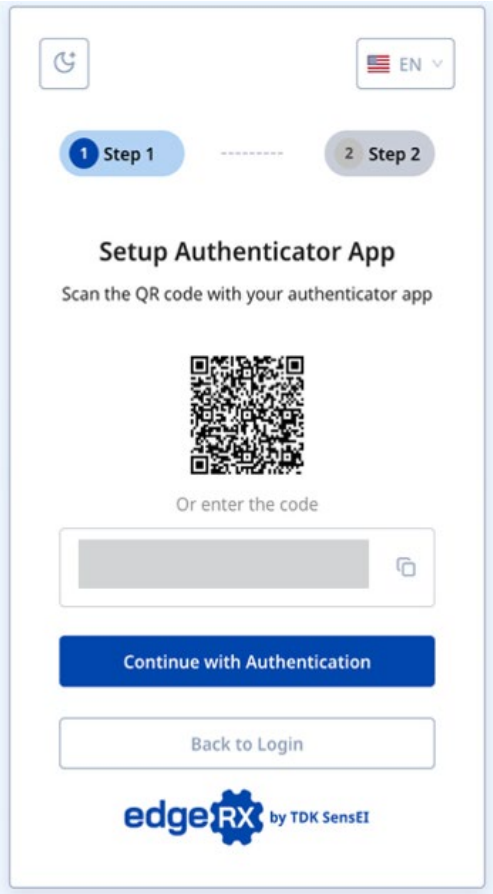


Figure 2: MFA Setup Page

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

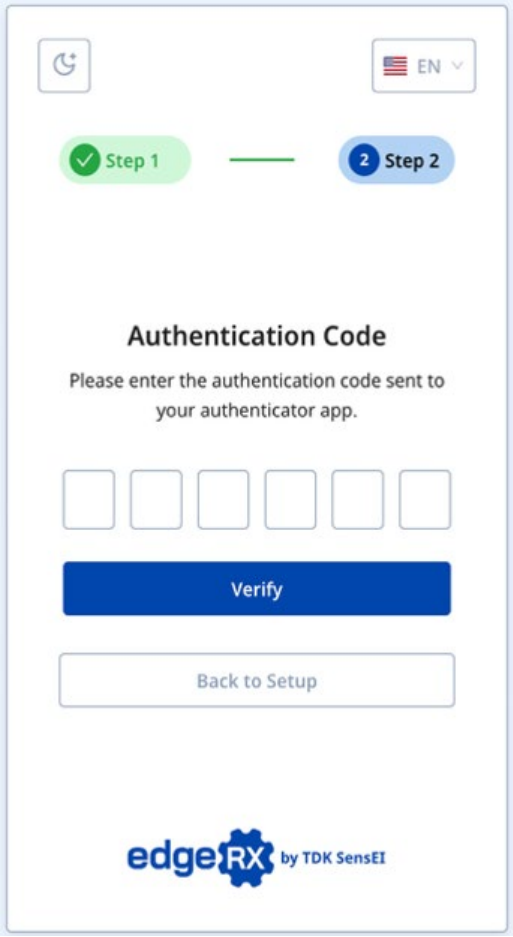


Figure 3: Authentication Code Entry

⚠️ **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).

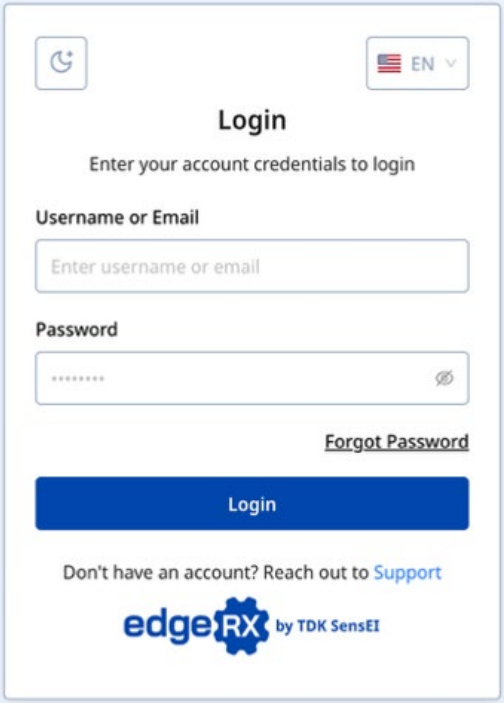


Figure 4: Login Page

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.

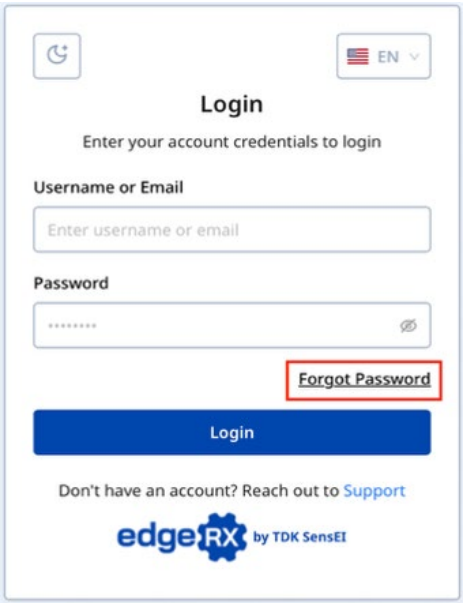


Figure 5: Forgot Password Highlighted

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.

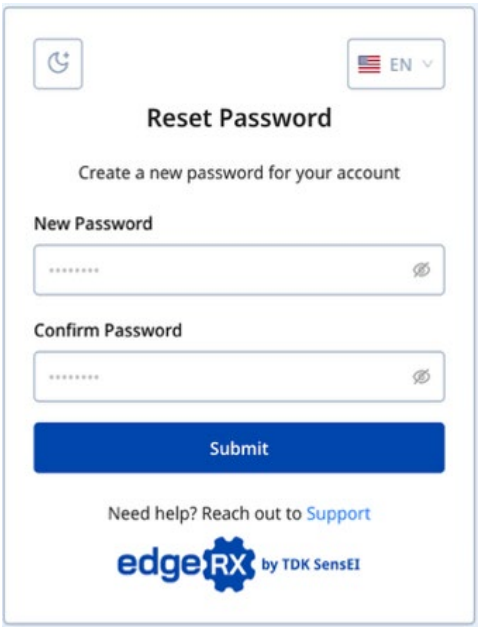


Figure 6: Password Reset Flow

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"**.

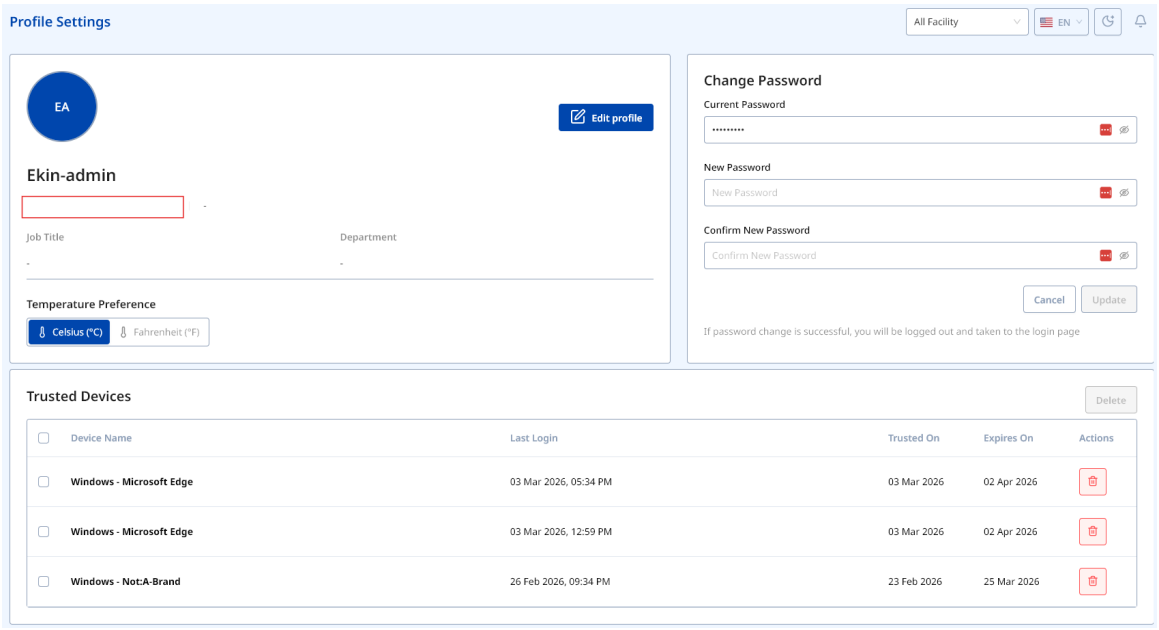


Figure 7: Profile Page

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:

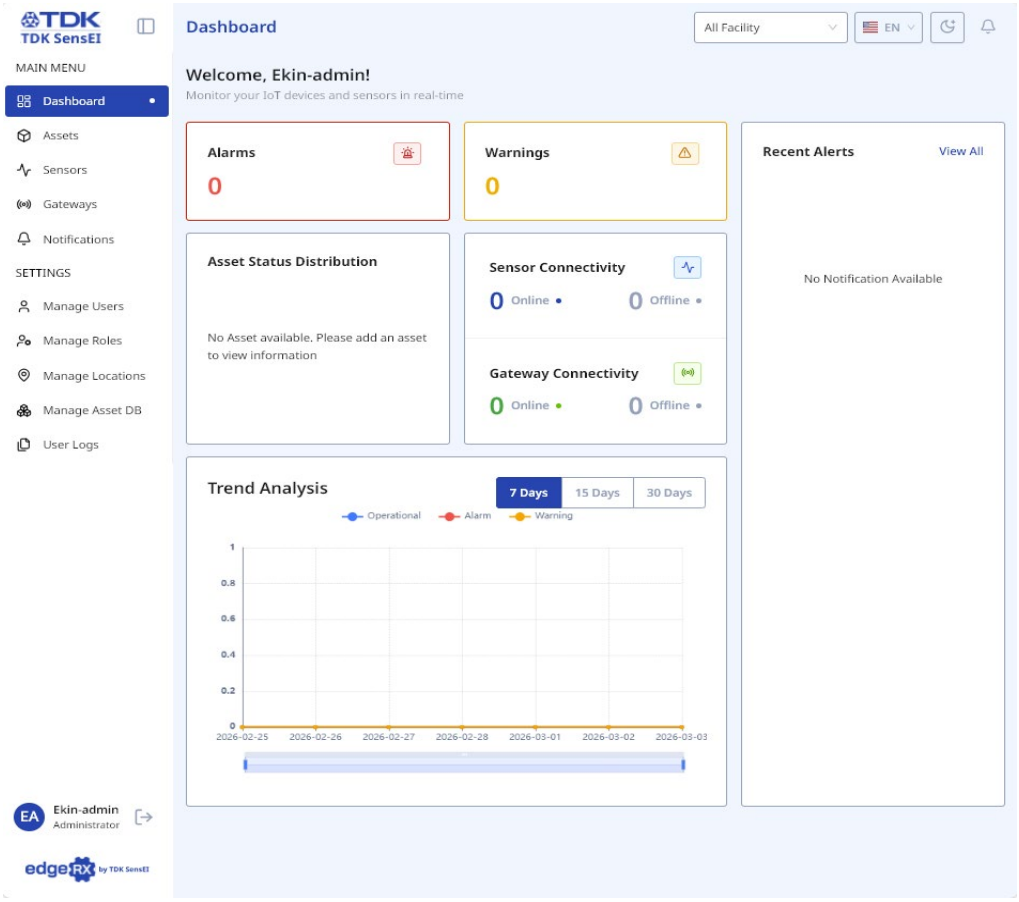


Figure 8: Dashboard Homepage

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.

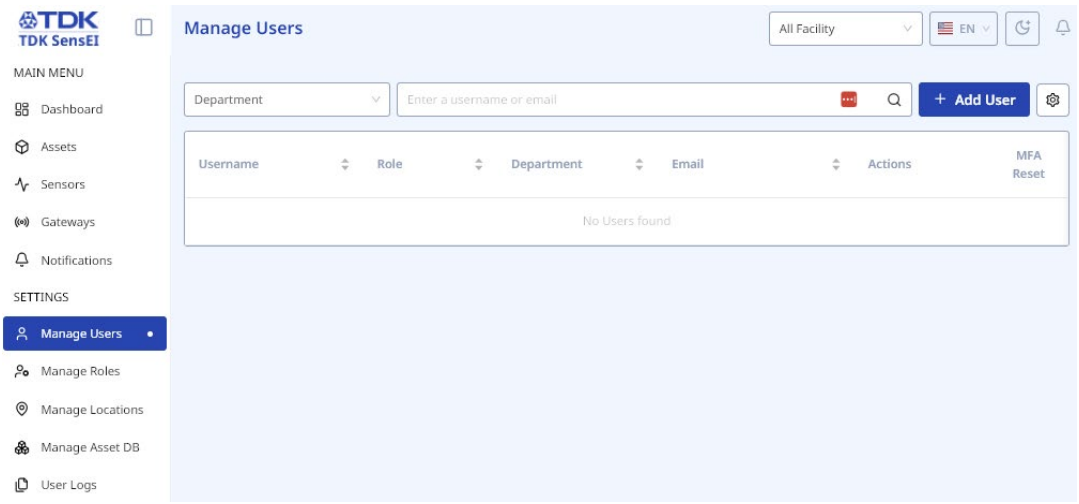


Figure 9: Manage Users

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:

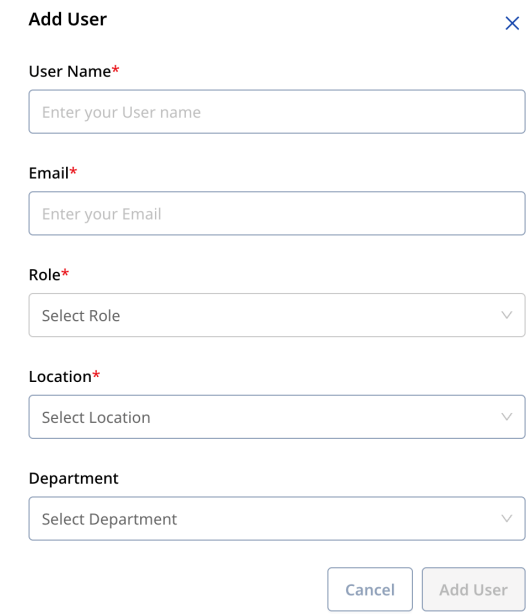


Figure 10: Add User Modal

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 or security concern
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

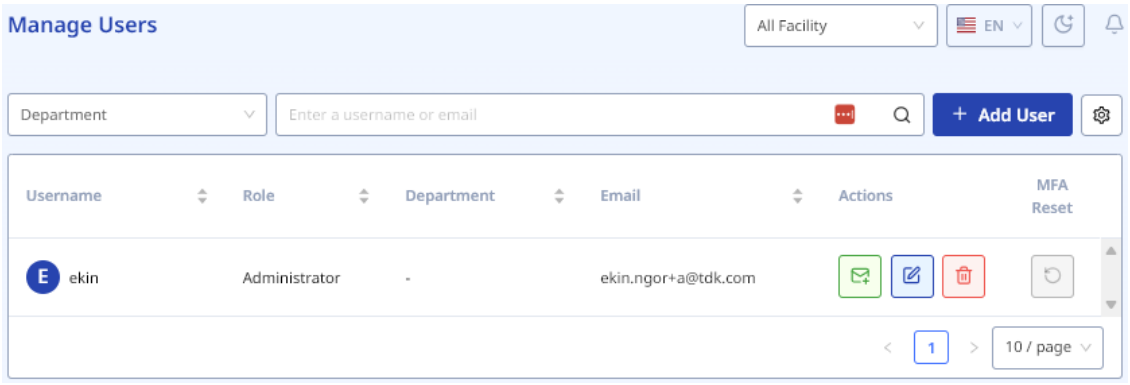


Figure 11: Members List

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

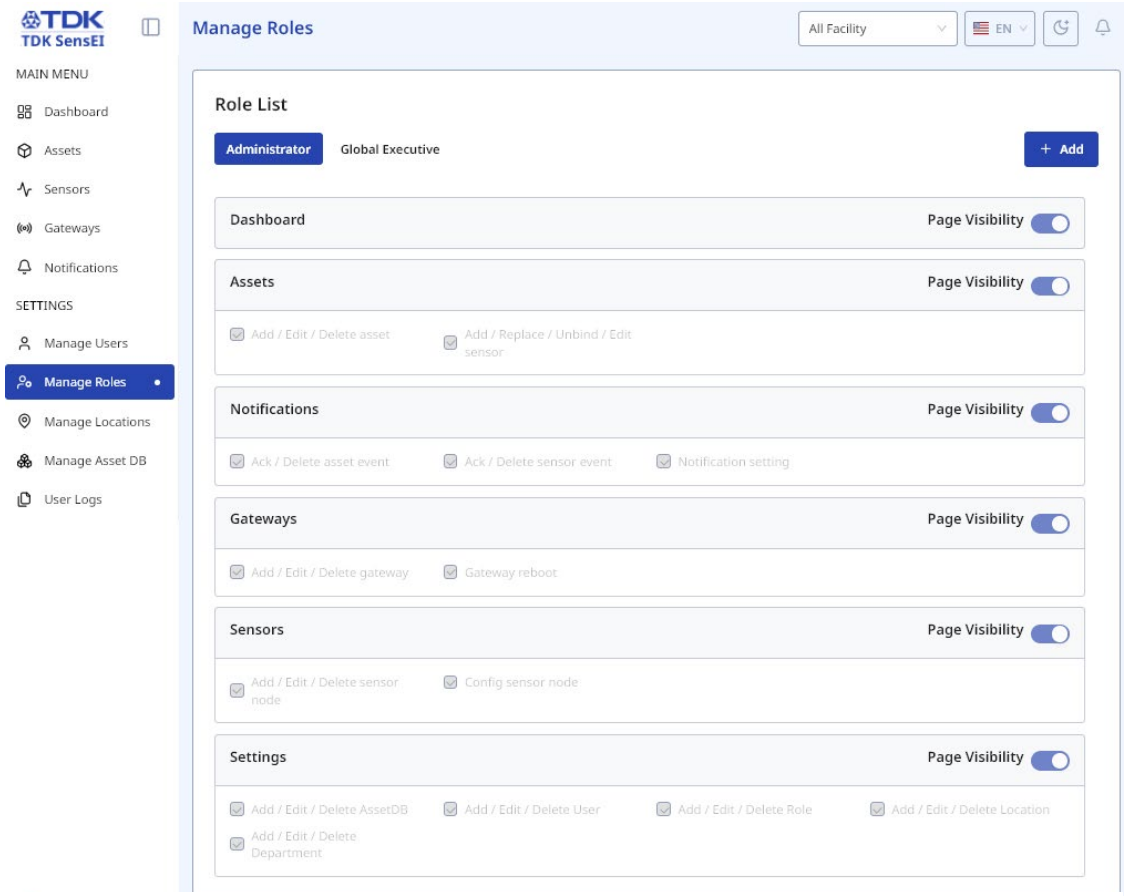


Figure 12: Manage roles

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.

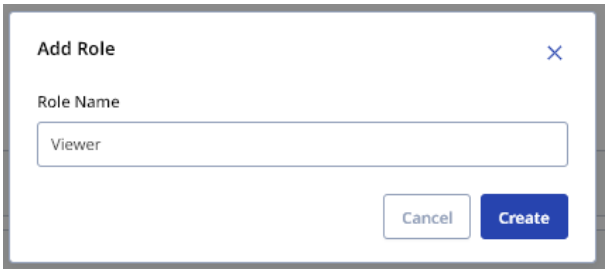


Figure 13: Add Role Viewer

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)

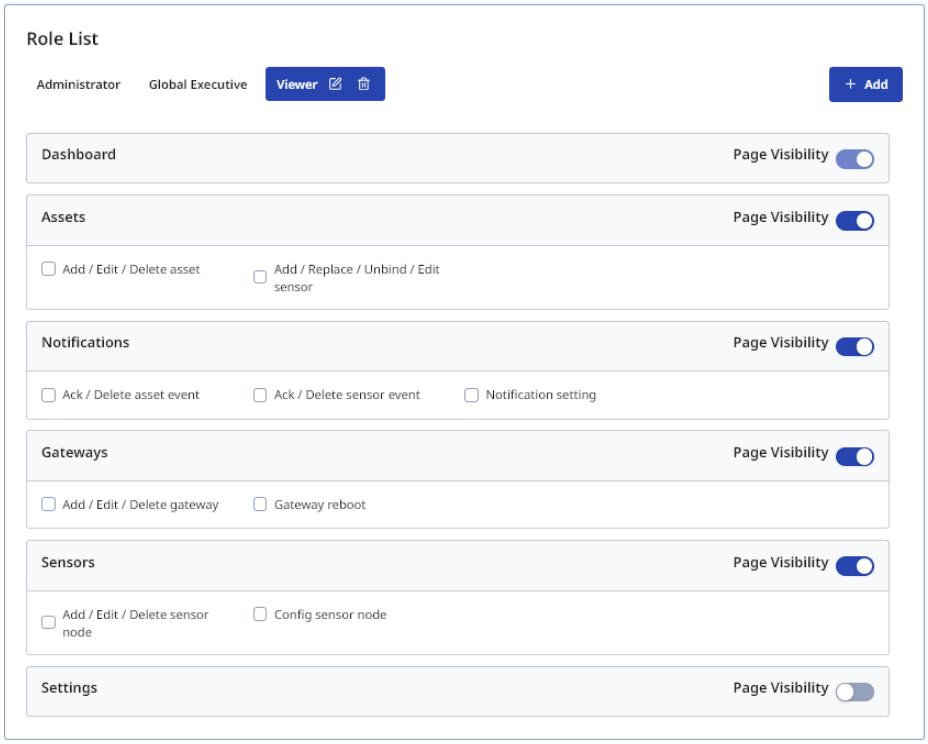


Figure 14: Role Permissions

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.

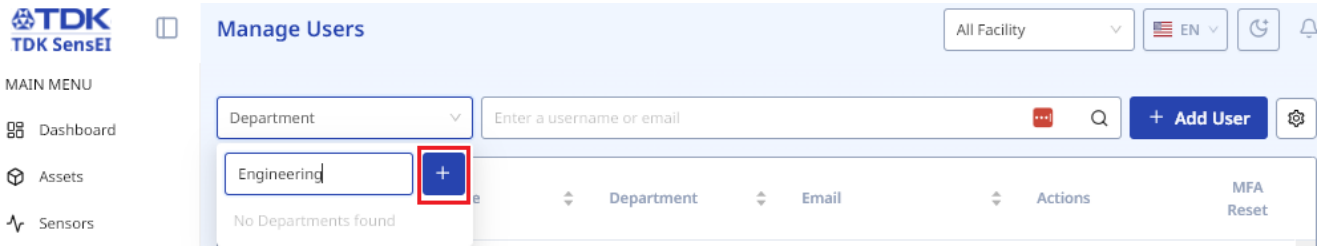


Figure 15: Adding a Department

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.

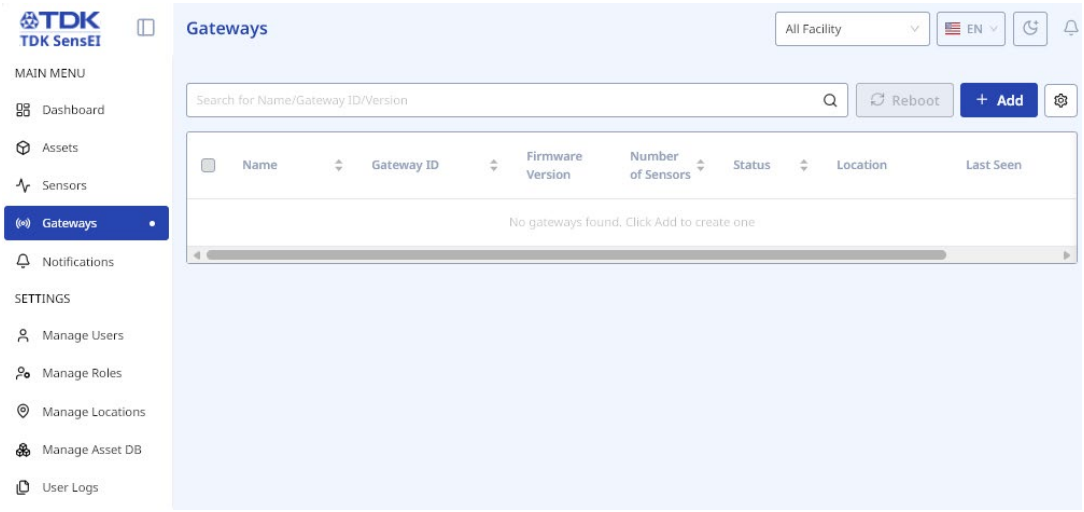


Figure 16: Gateway Summary

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

Field	Description
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

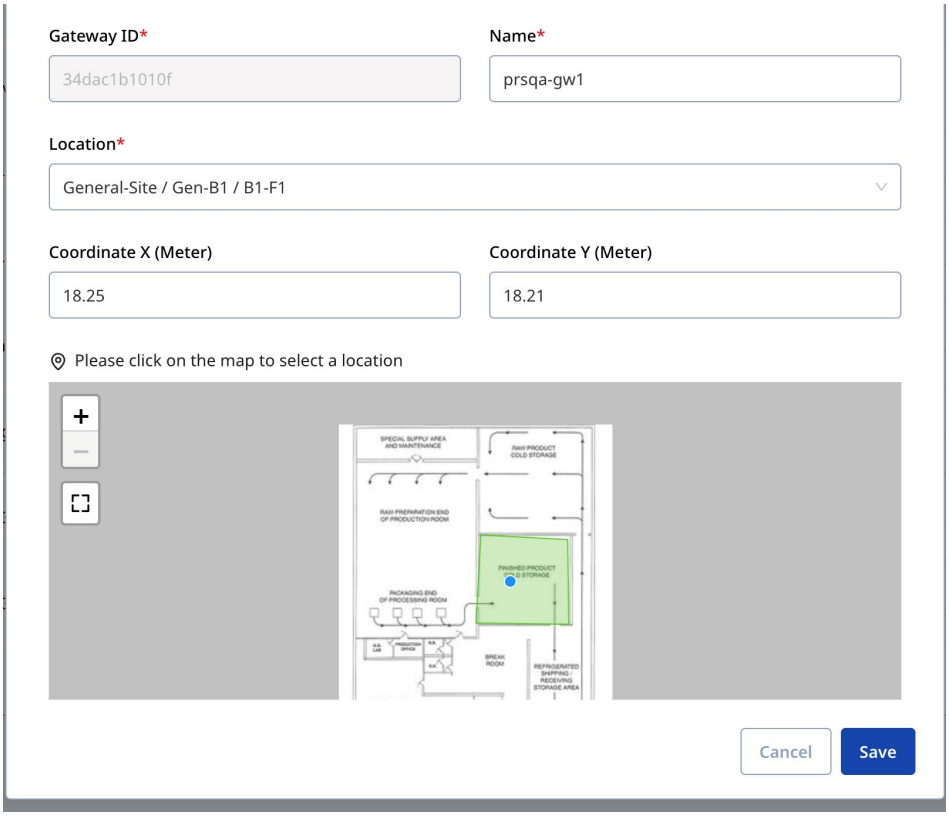


Figure 18: Add Gateway Details

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)

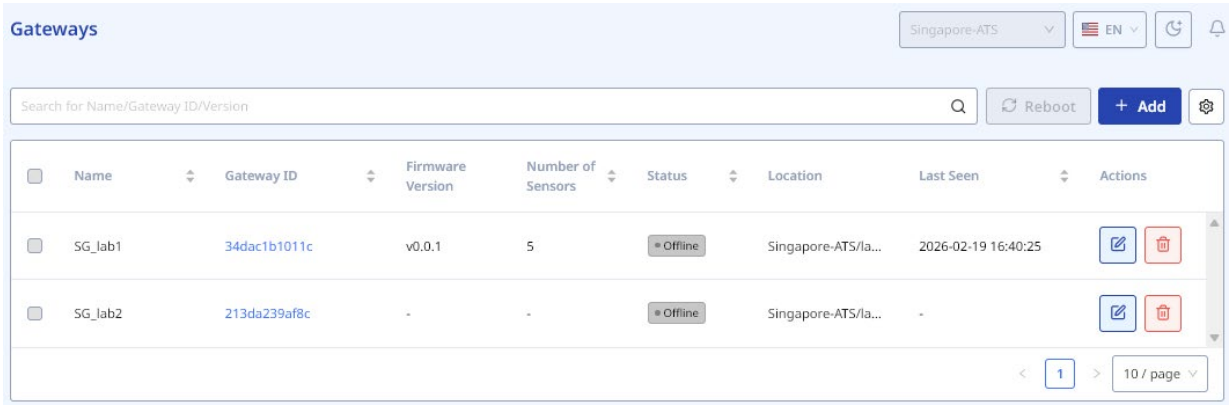


Figure 19: Gateway Table

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:

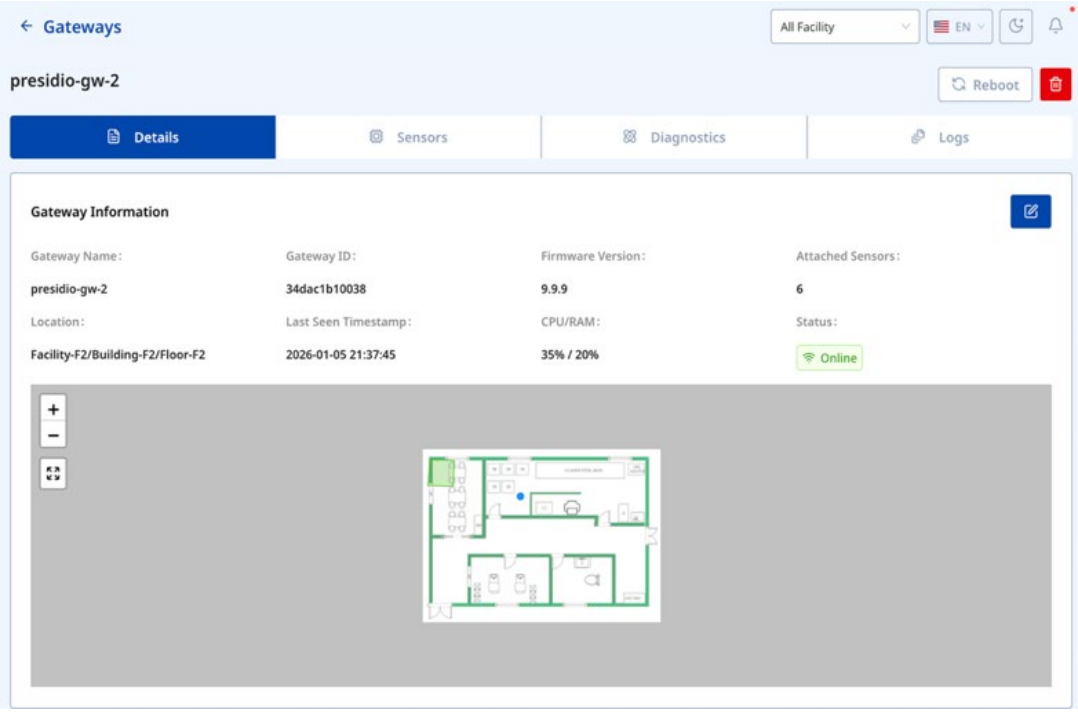


Figure 20: Gateway Detail View

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)

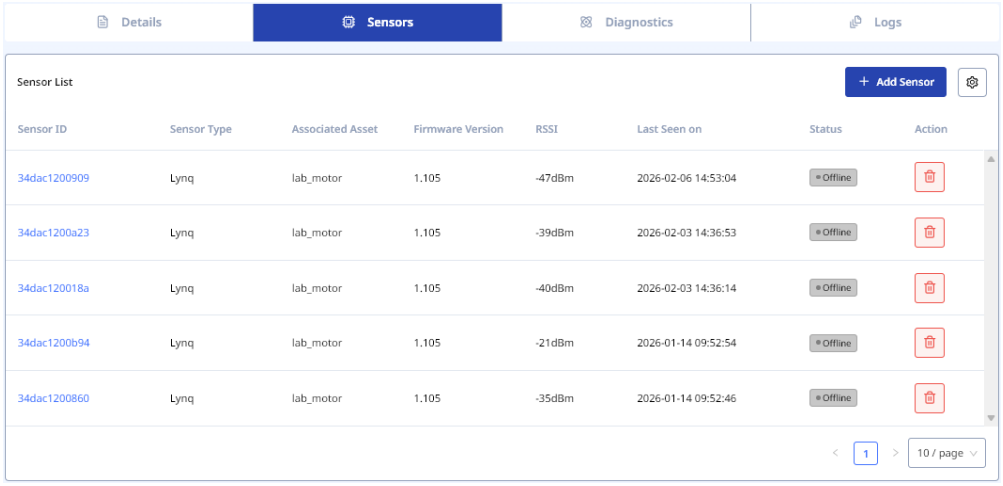


Figure 21: Attached Sensors

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

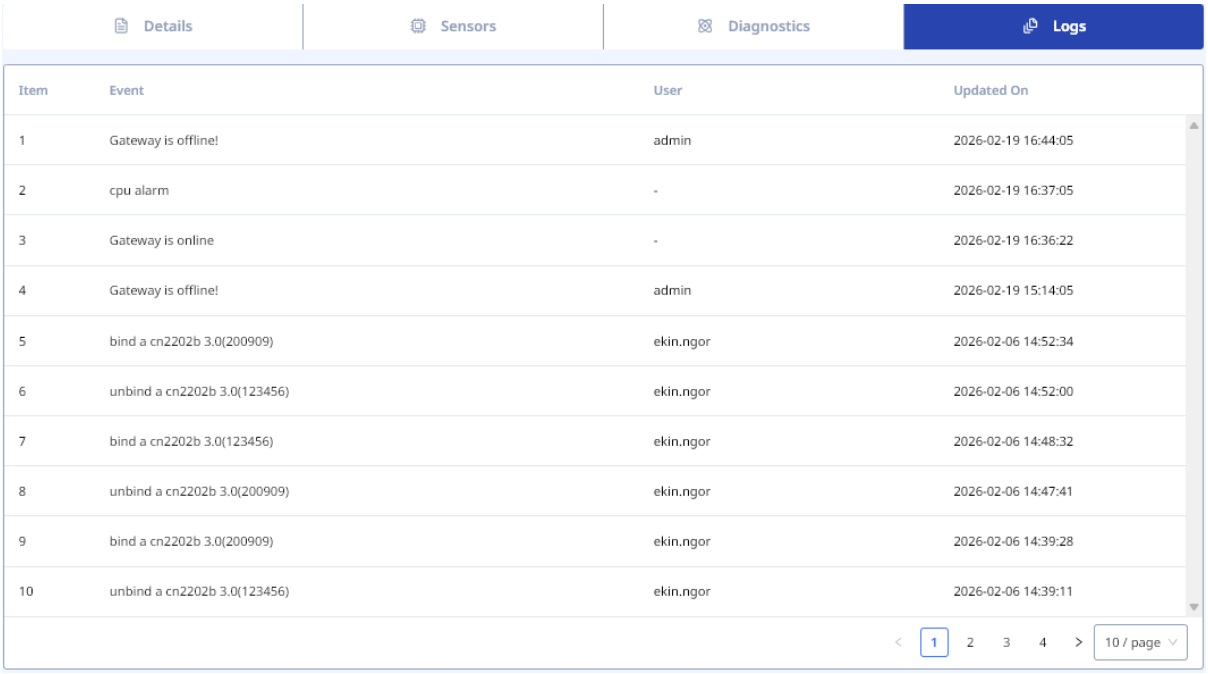


Figure 24: Gateway Logs

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.

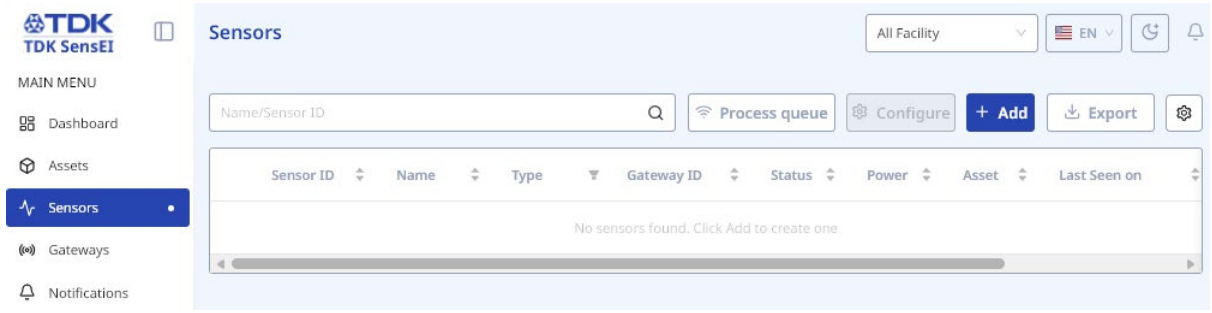


Figure 25: Sensor Summary

Steps to Add a Sensor

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

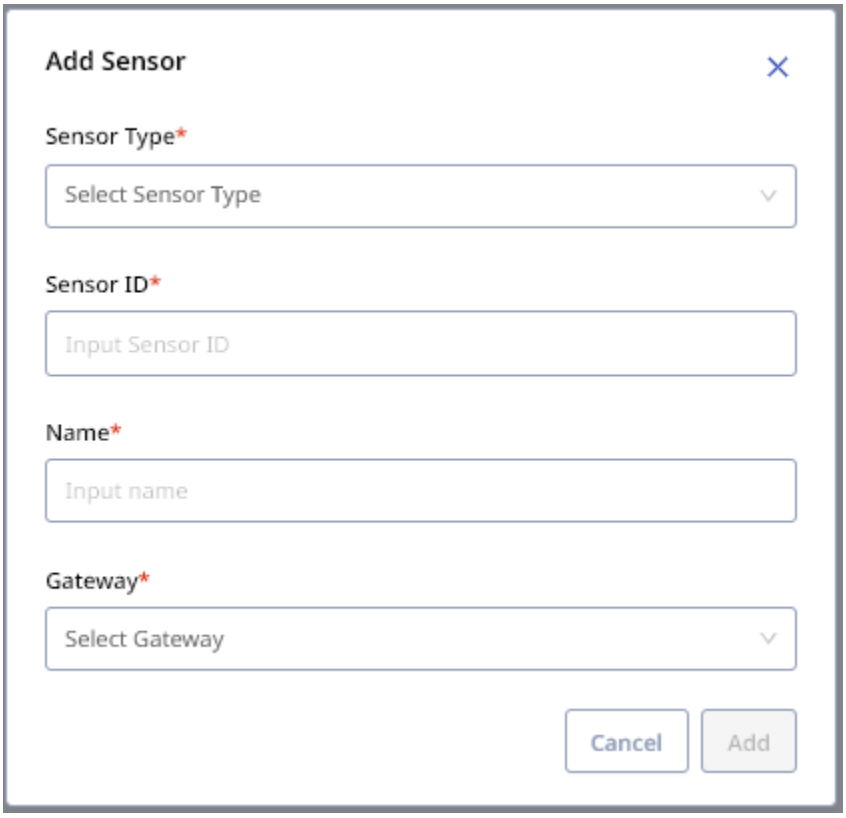


Figure 26: Add Sensor Modal

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.

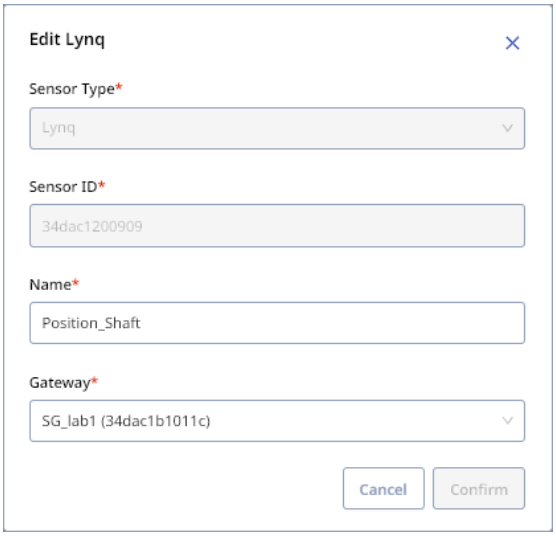


Figure 27: Edit Sensor

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.

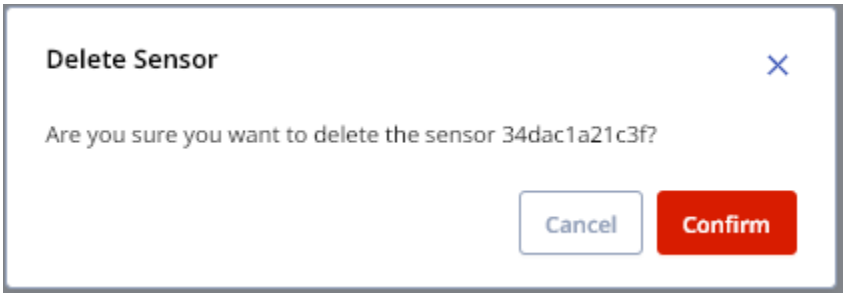


Figure 28: Delete Sensor Modal

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.

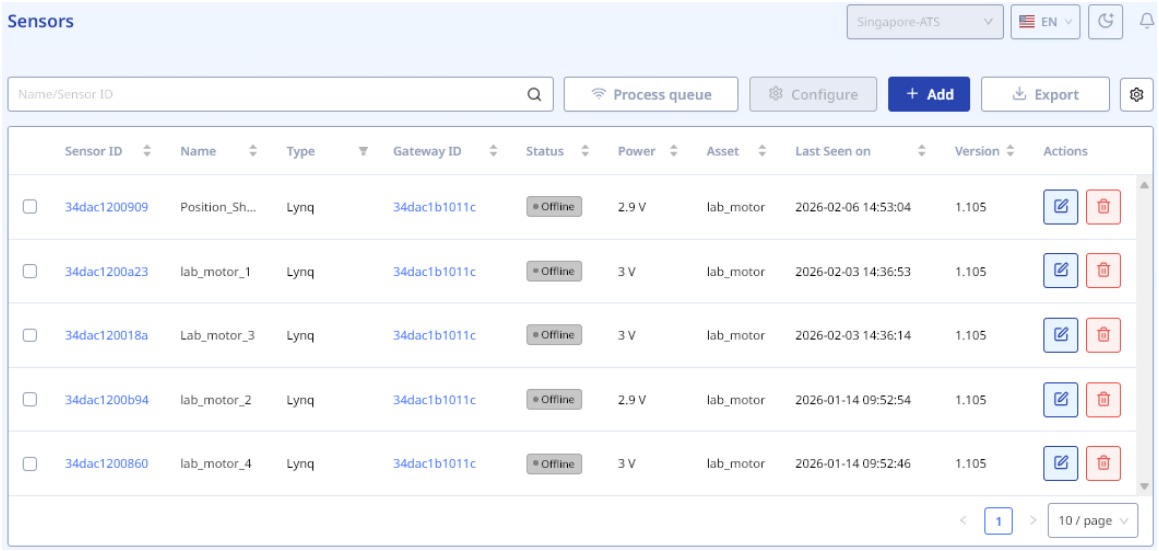


Figure 29: Sensor Table

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.

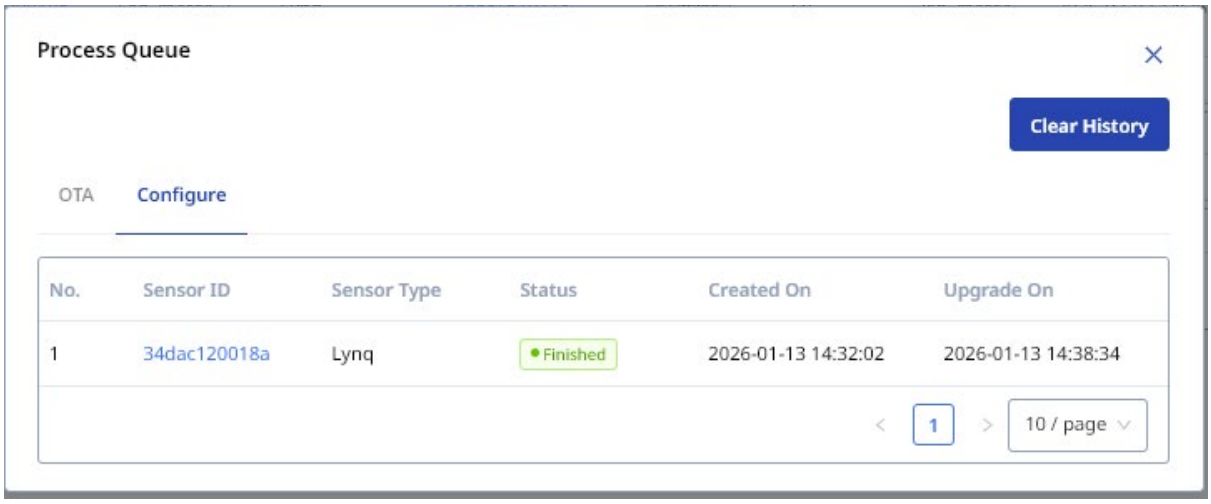


Figure 30: Process Queue Modal

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.

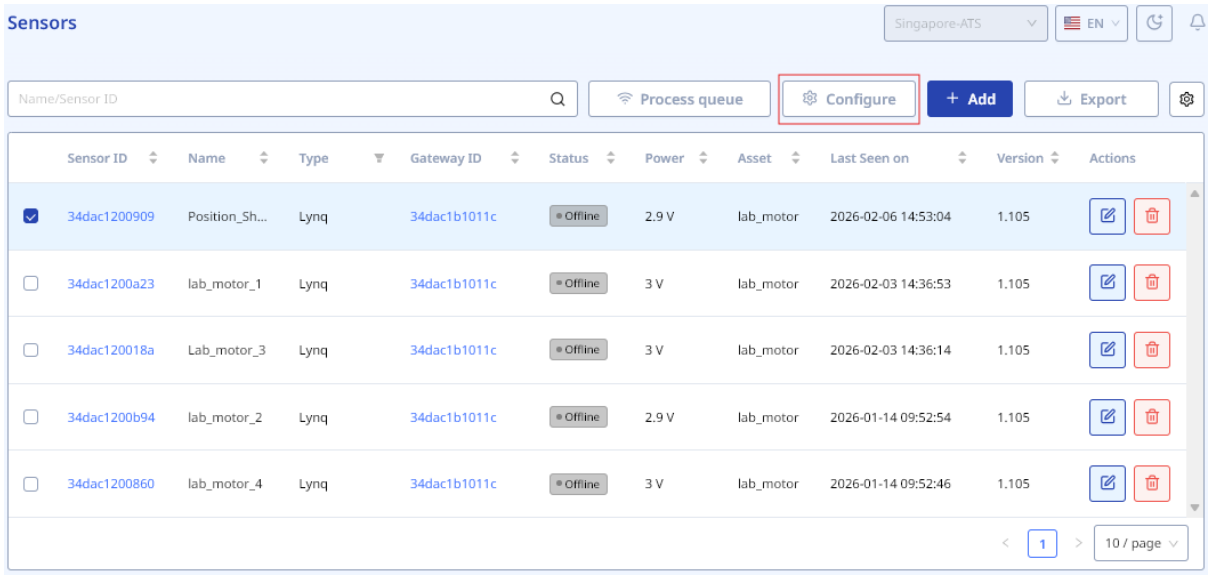


Figure 31: Configure Sensor

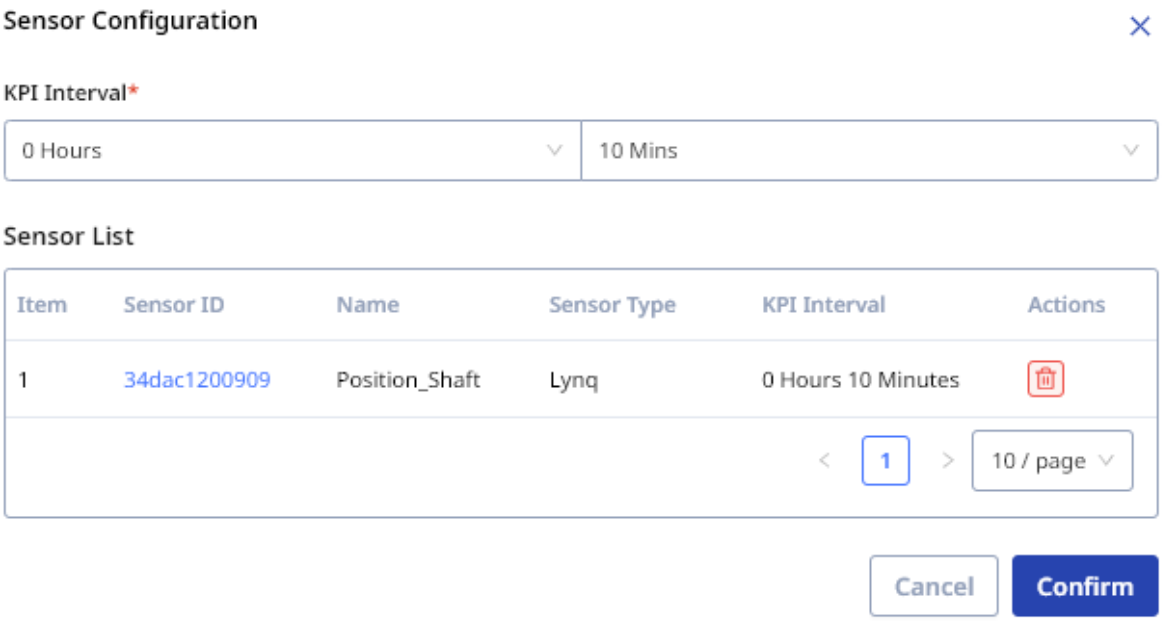


Figure 32: Configuration Modal

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.

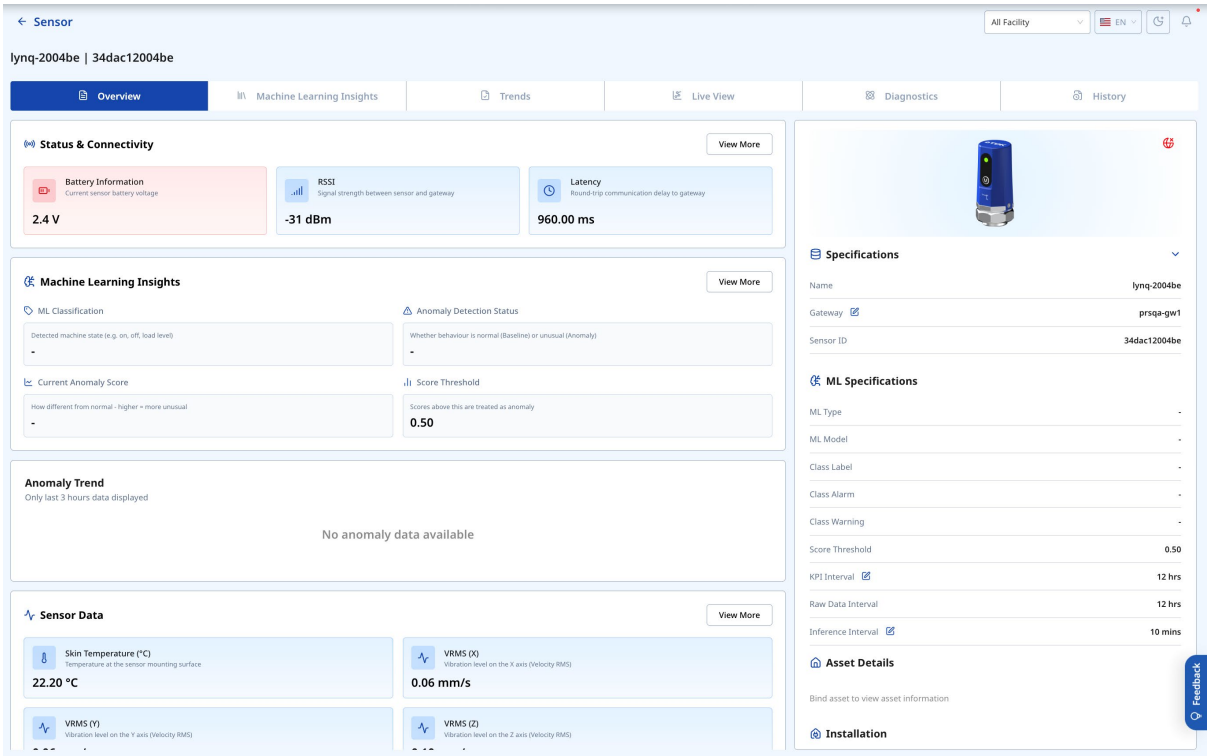


Figure 33: Sensor Detail View

5.5.1 Overview Tab

Displays the following information:

Visual Sensor Placement

- Shows where the sensor is mounted

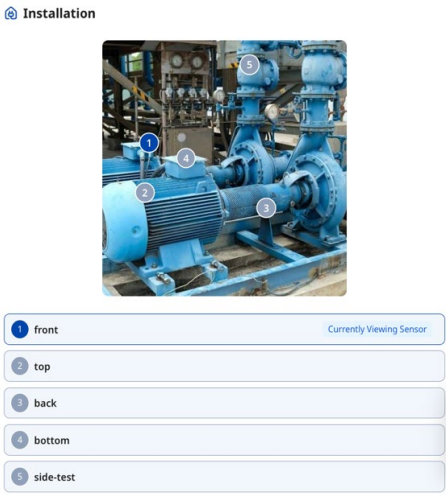


Figure 34: Bind Sensor Visual Guide

⚠ **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

ML Specification:

Figure 36: Sensor Specifications

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

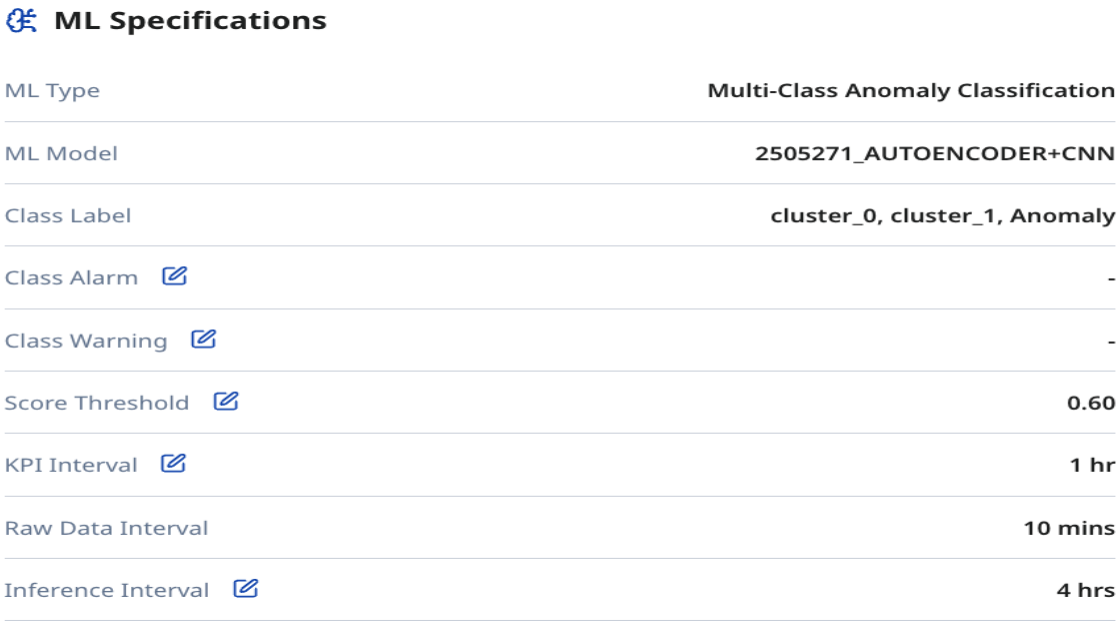


Figure 37: Machine Learning Page

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.

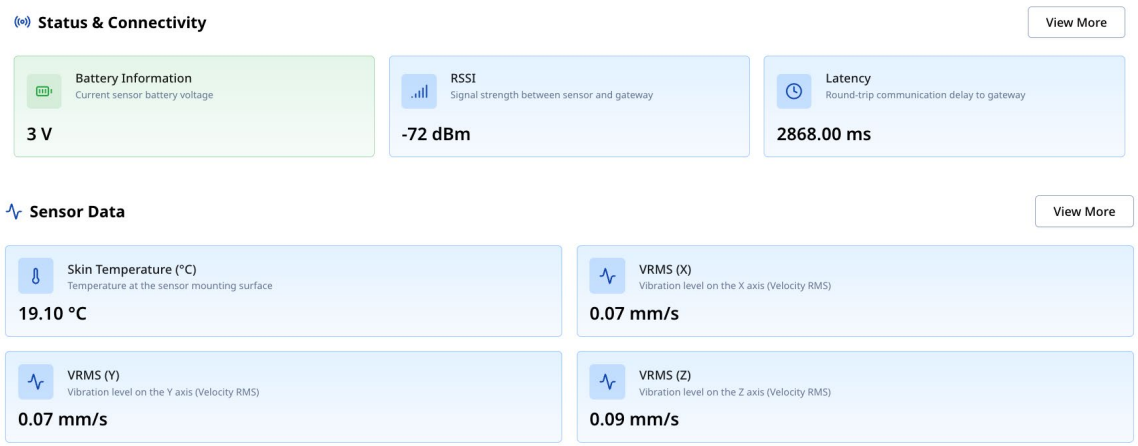


Figure 38: Sensor Data

Asset Details:

- Asset Type
- Asset Model
- Asset Name

- Location

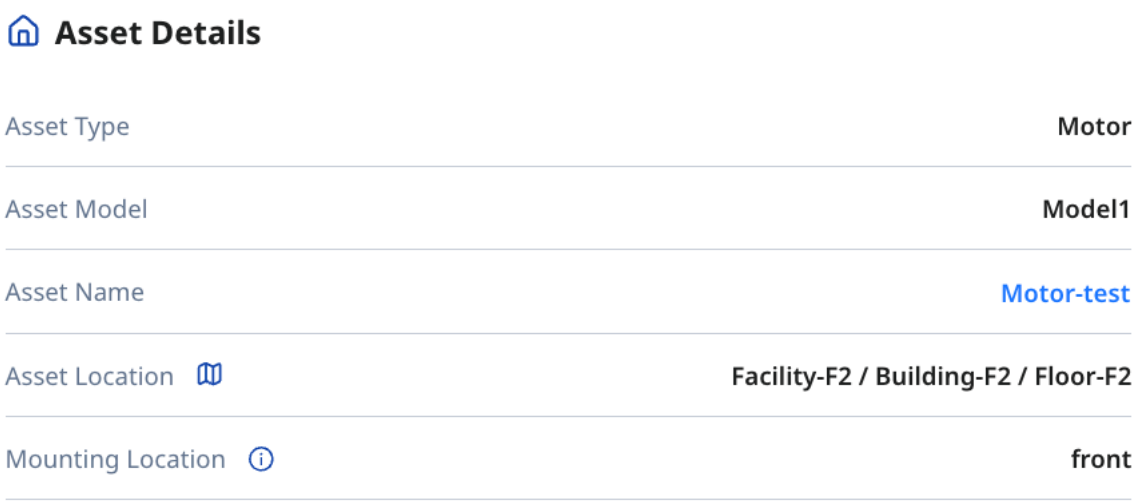
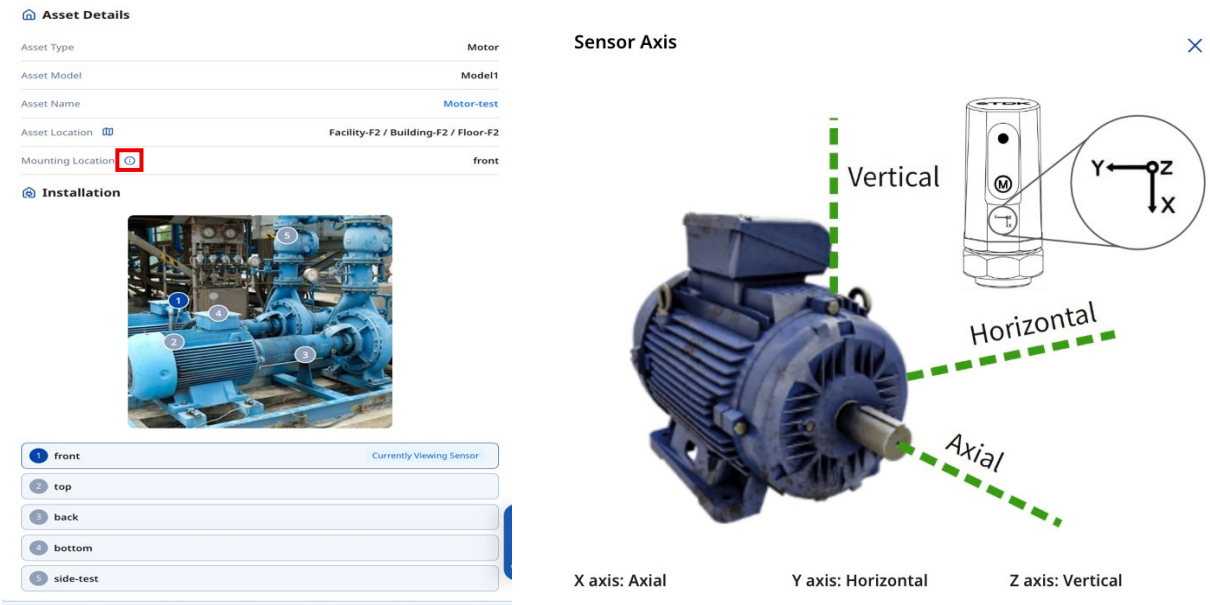


Figure 39: Asset Details

Click on the Info button, to view the Mounting Location



Select a time range to view historical data including:

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

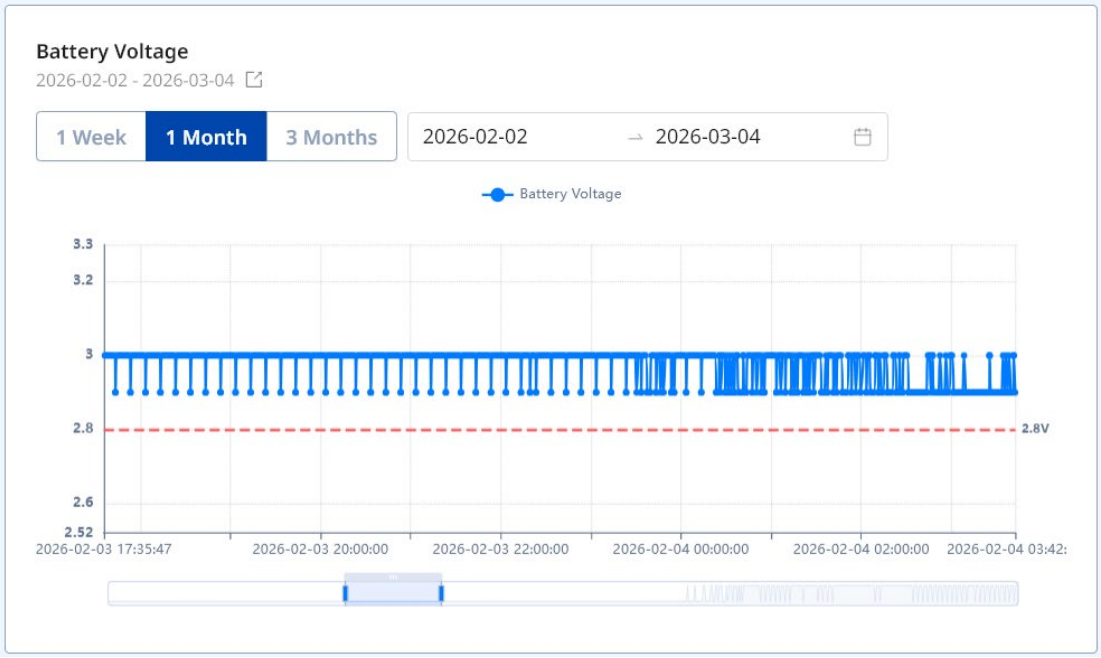


Figure 41: Battery Voltage

Figure 42: RSSI Graph

Figure 43: Packet Statistics

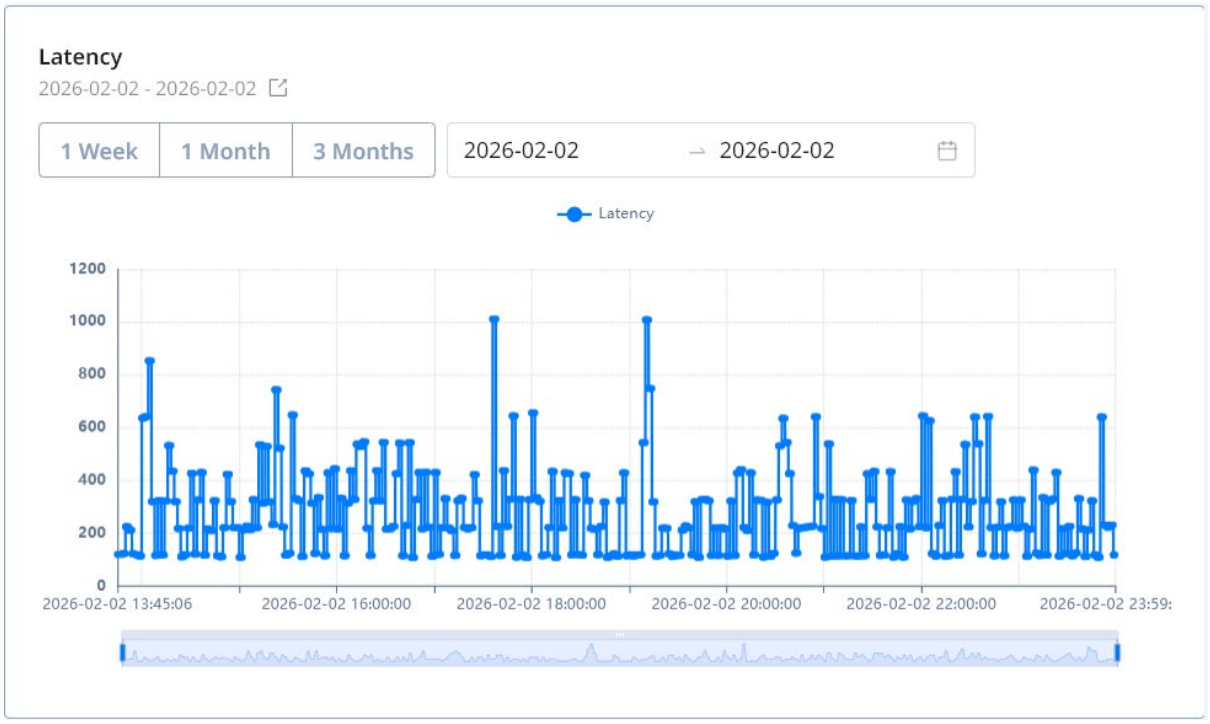


Figure 44: Latency

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

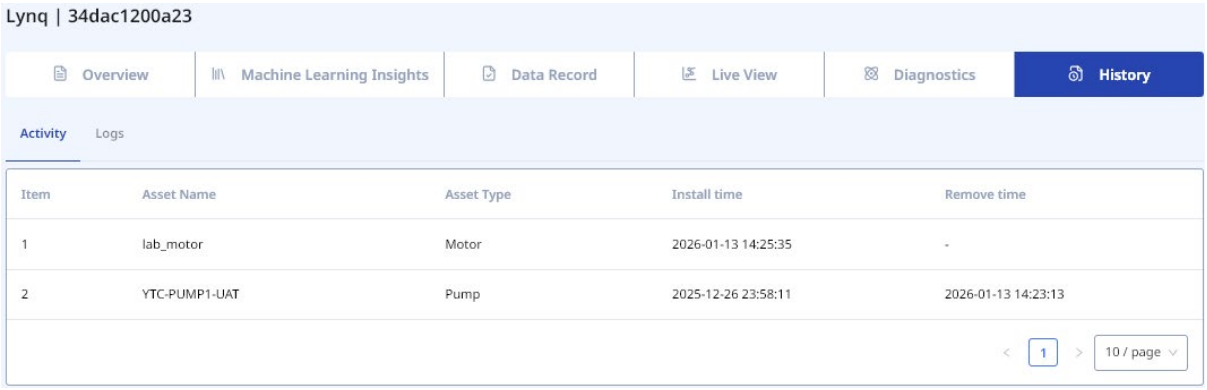


Figure 45: Sensor Event

5.5.4 Sensor History Tab

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

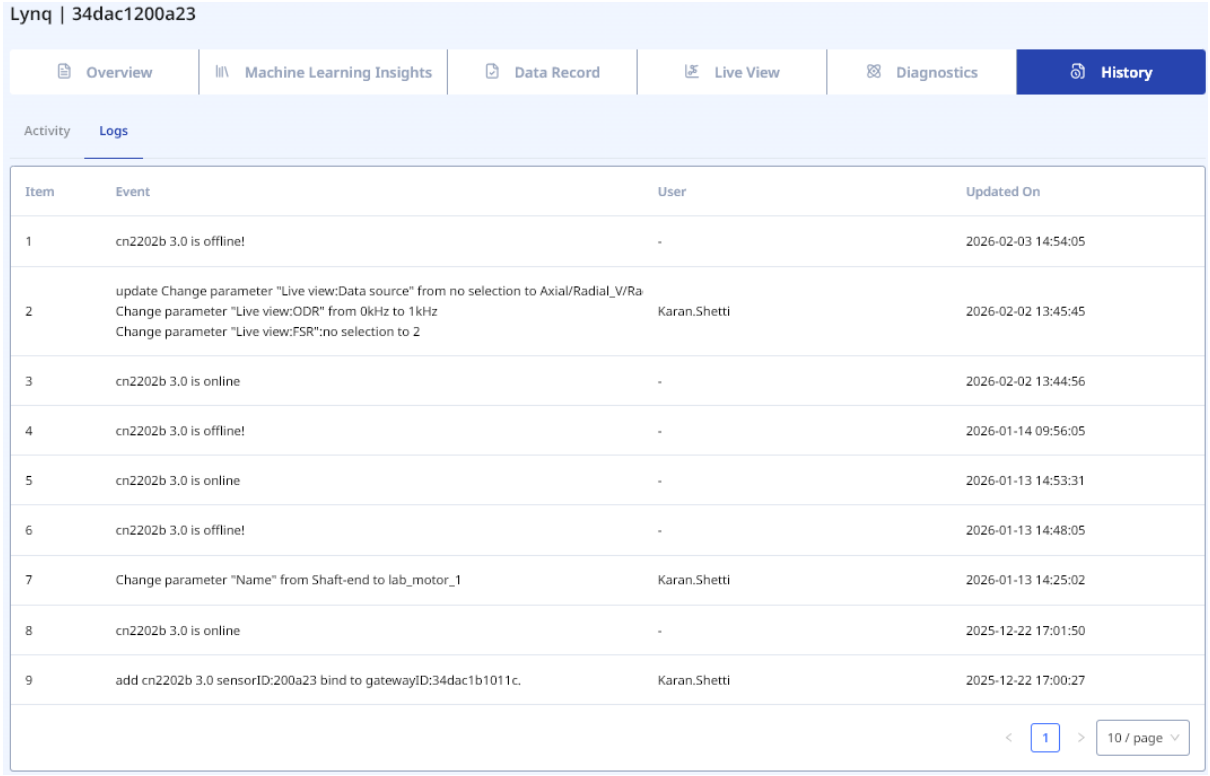


Figure 46: Sensor History

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.

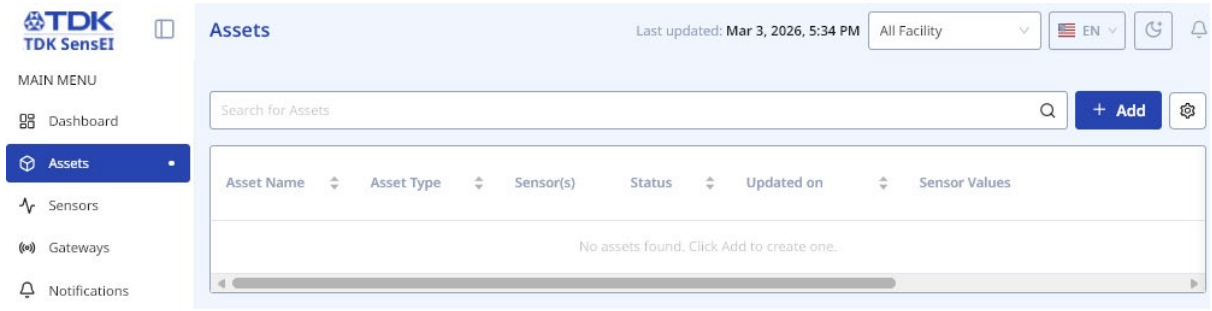


Figure 47: Asset Table

Steps to Add a New Asset

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

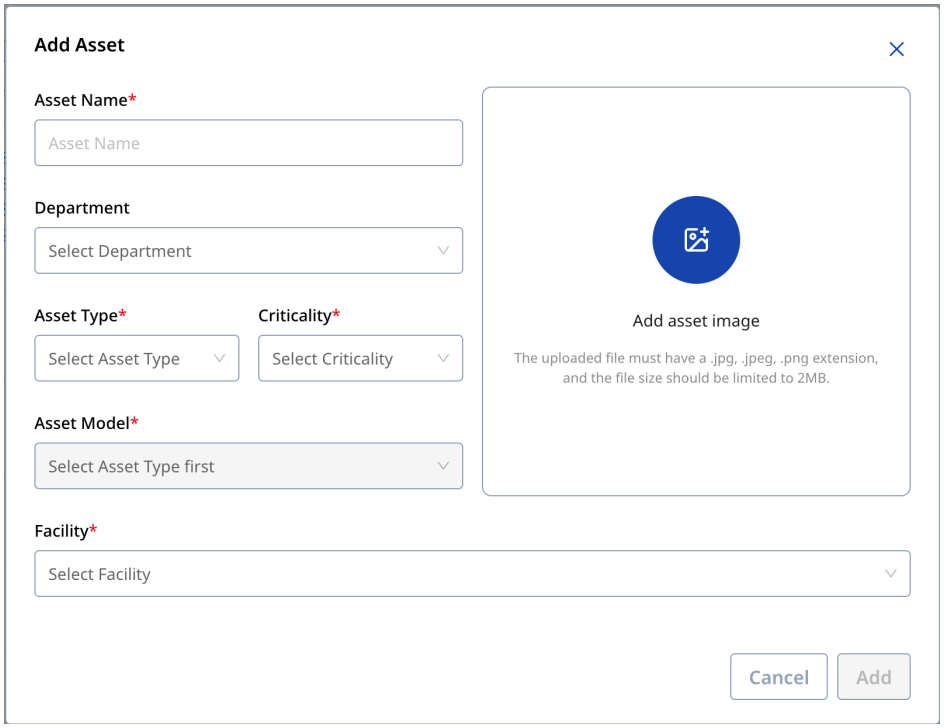


Figure 48: Add Asset Model

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.

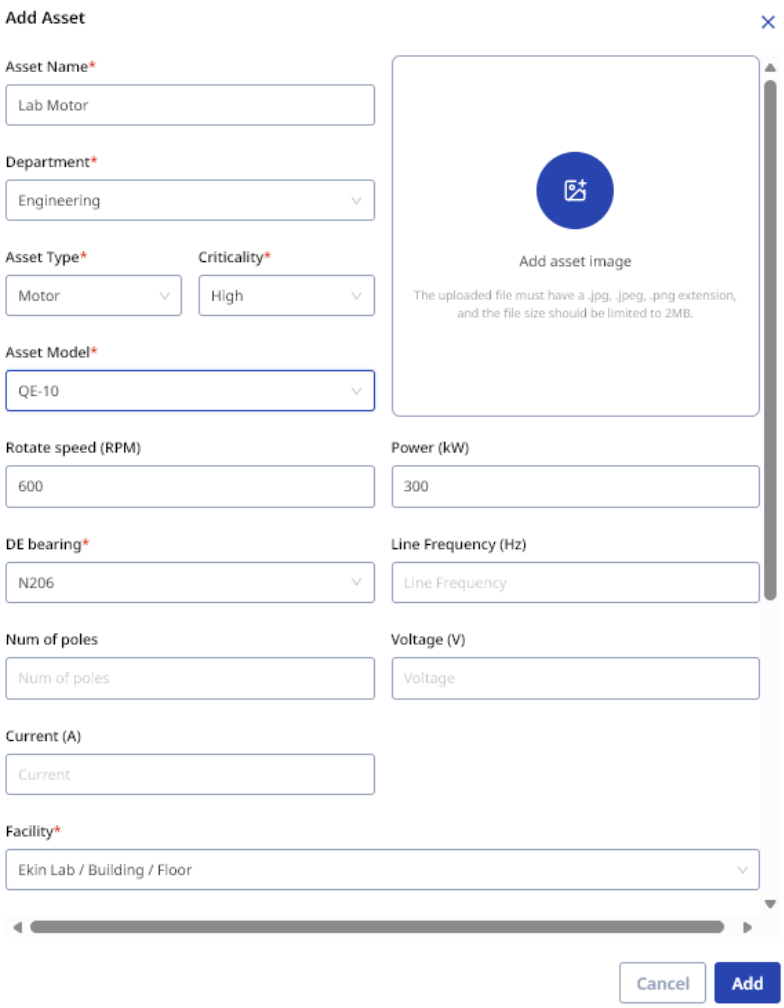


Figure 49: Creating New Asset Model

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.

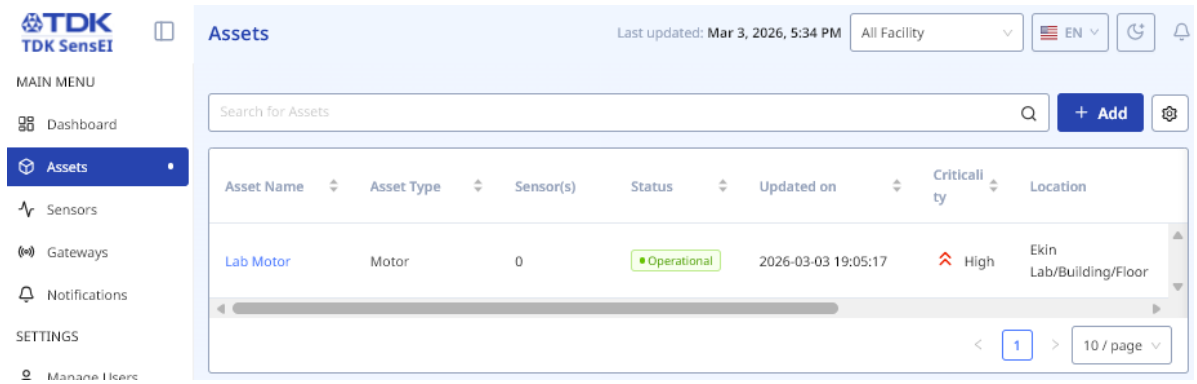


Figure 50: Asset Table

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.

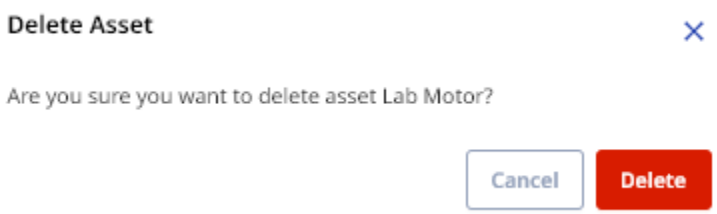


Figure 51: Delete Asset Model

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.

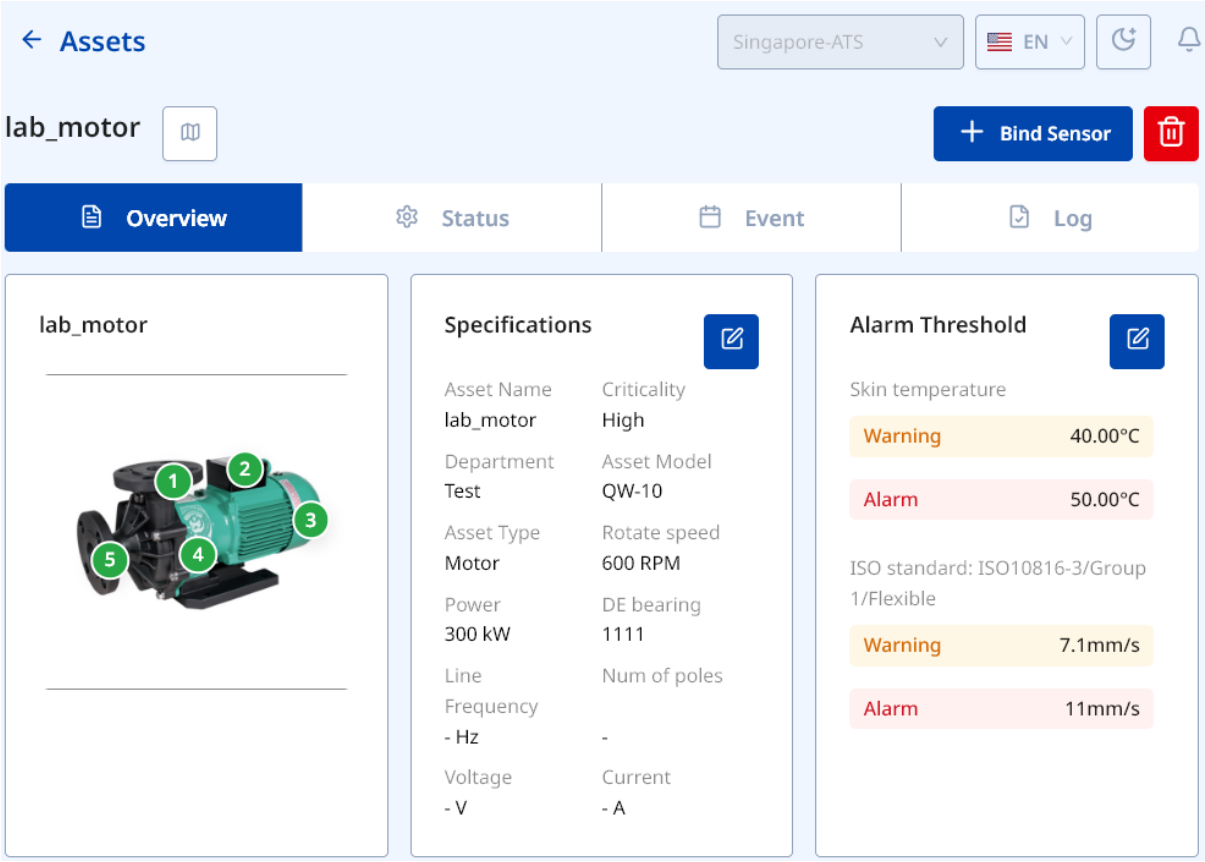


Figure 52: Asset Details

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

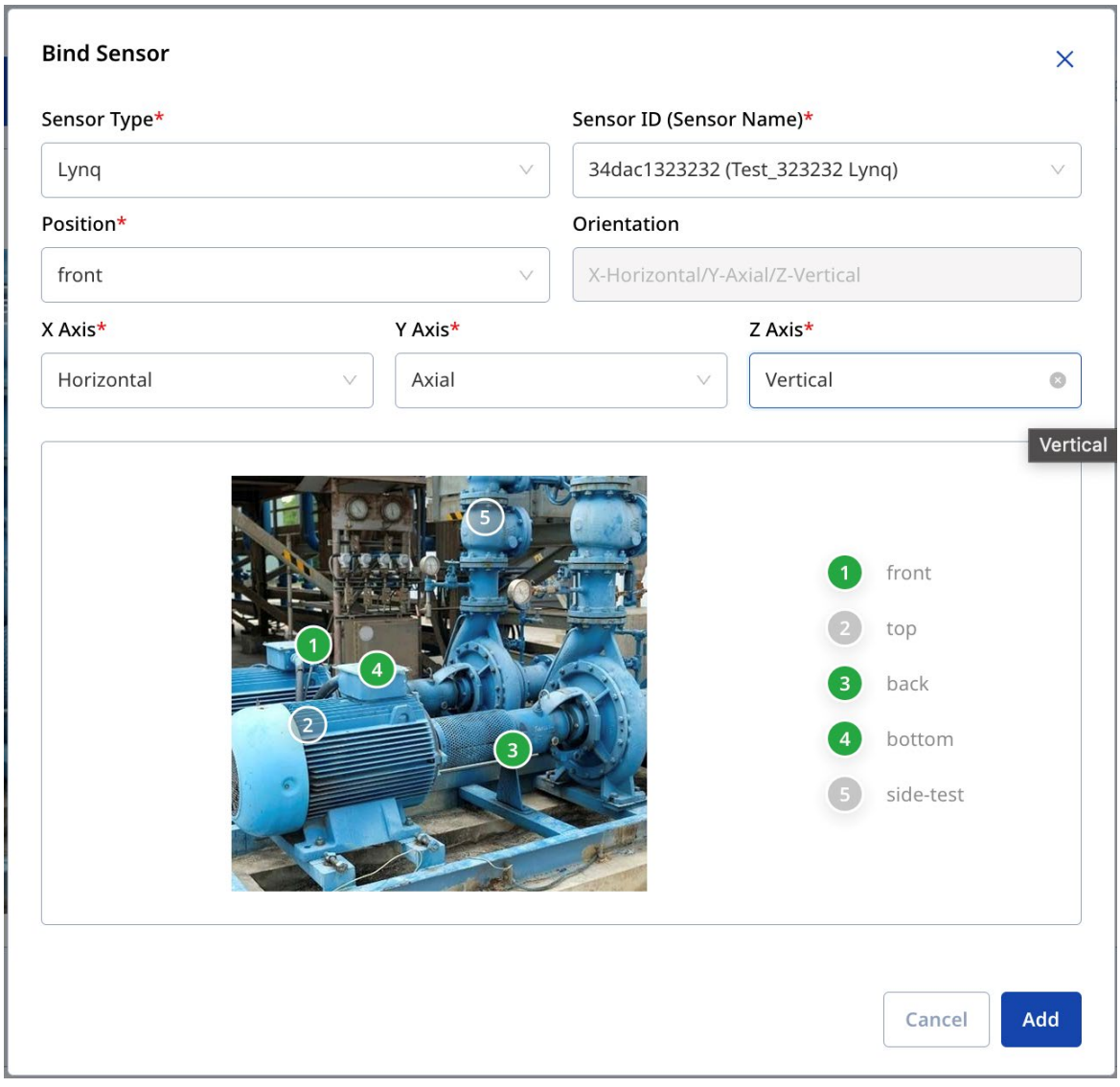


Figure 53: Bind Sensor

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.

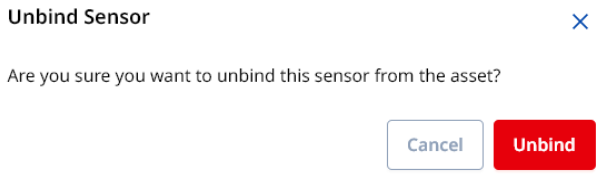


Figure 54: Unbind sensor

6.5 Asset Location Management

To update the asset location:

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

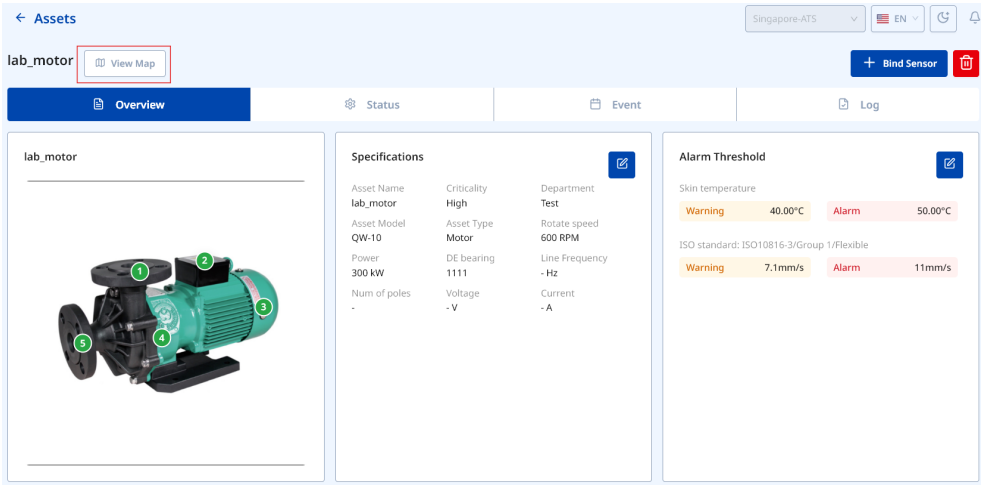


Figure 55: Asset Detail View Map

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

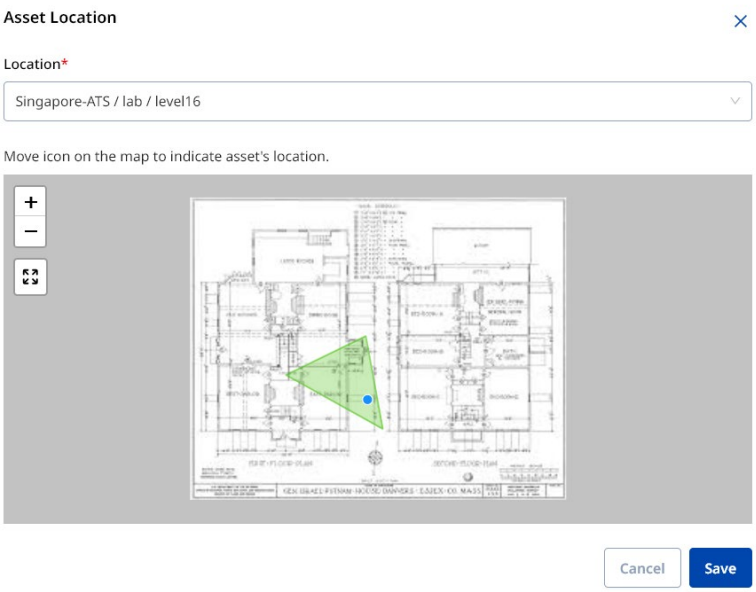


Figure 56: Asset Detail Edit Location

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.

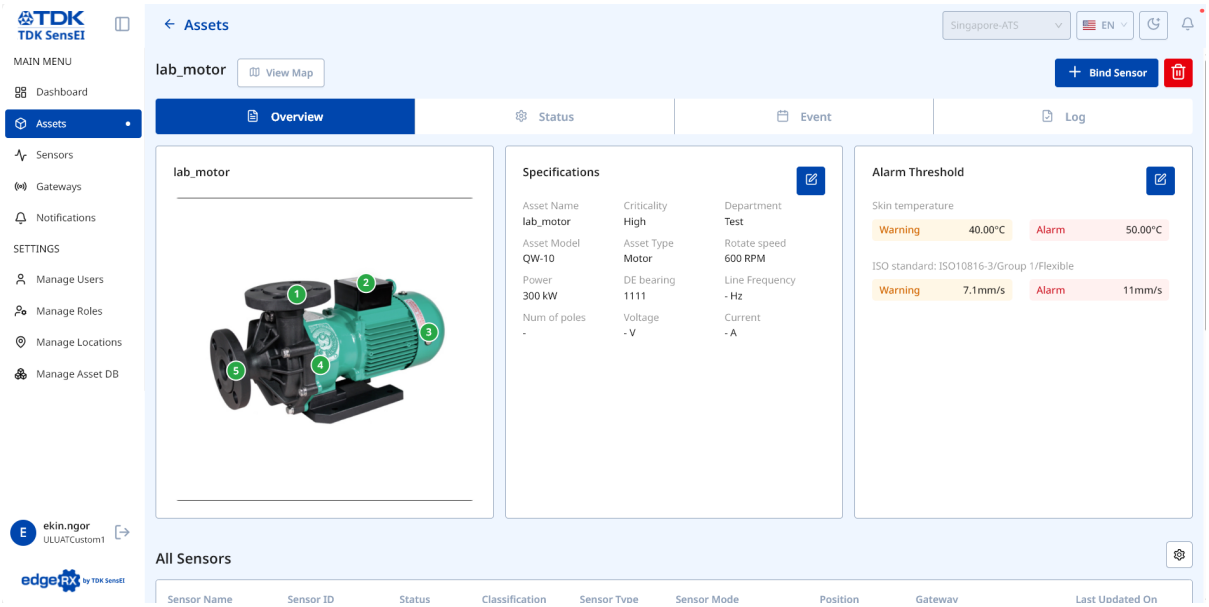


Figure 57: Asset Detail View

6.6.1 Overview Tab

Displays:

- Asset Specifications
- Linked Sensor Information

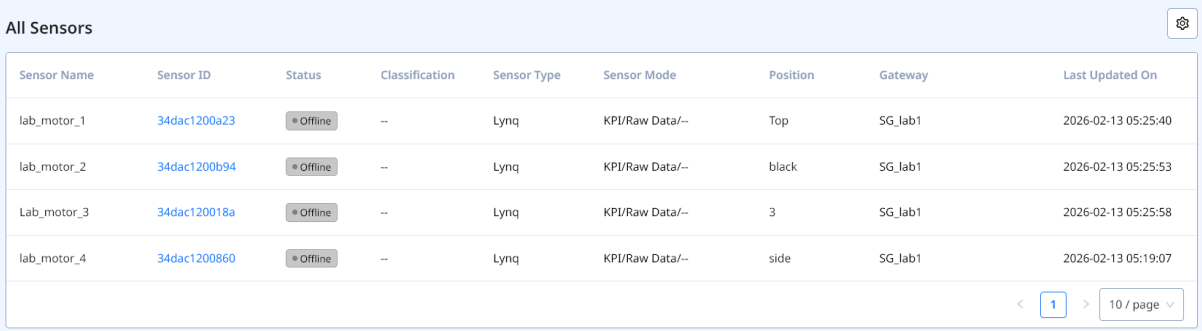


Figure 58: Asset Detail Linked Sensors

- 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

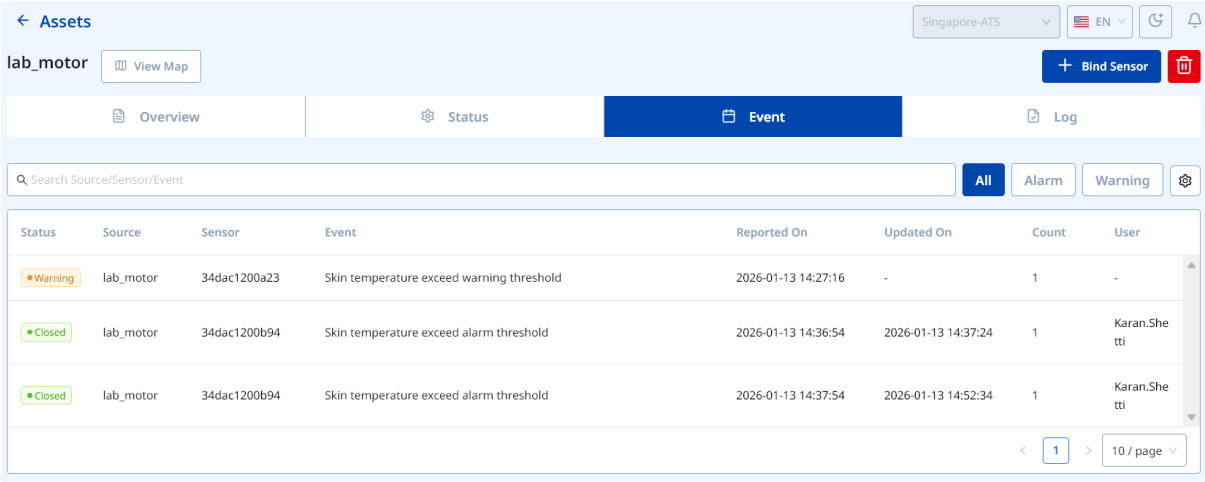


Figure 60: Asset Detail Event

6.6.4 Asset Logs Tab

Shows:

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

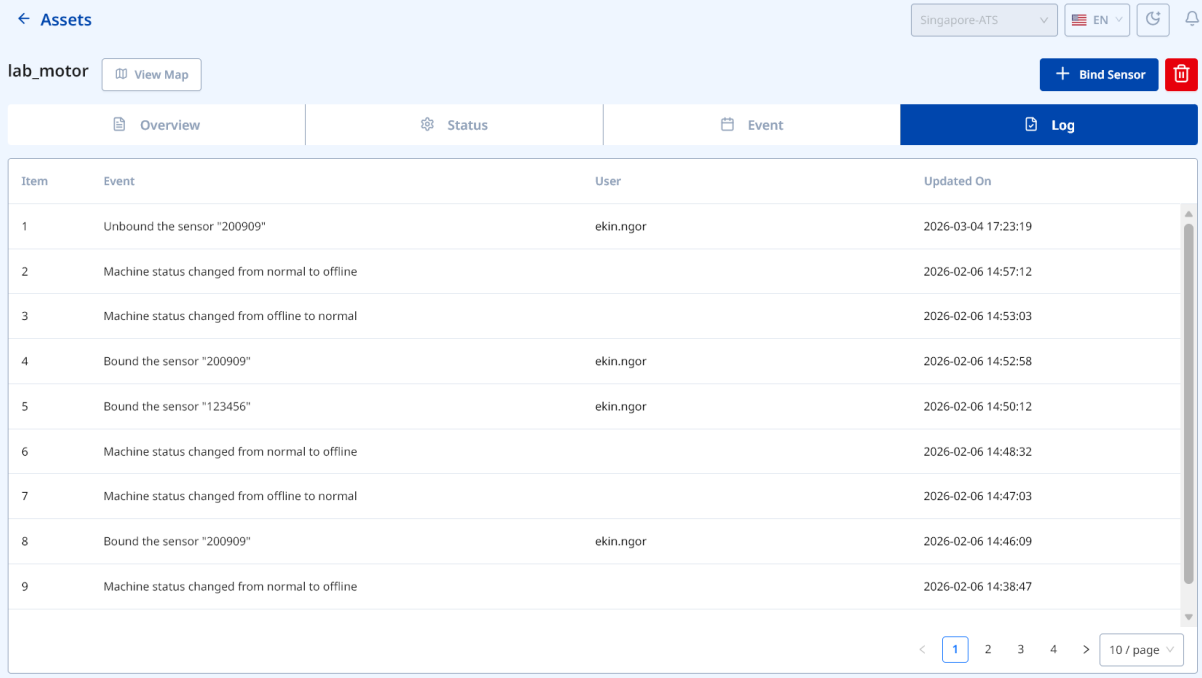


Figure 61: Asset Detail Logs

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).

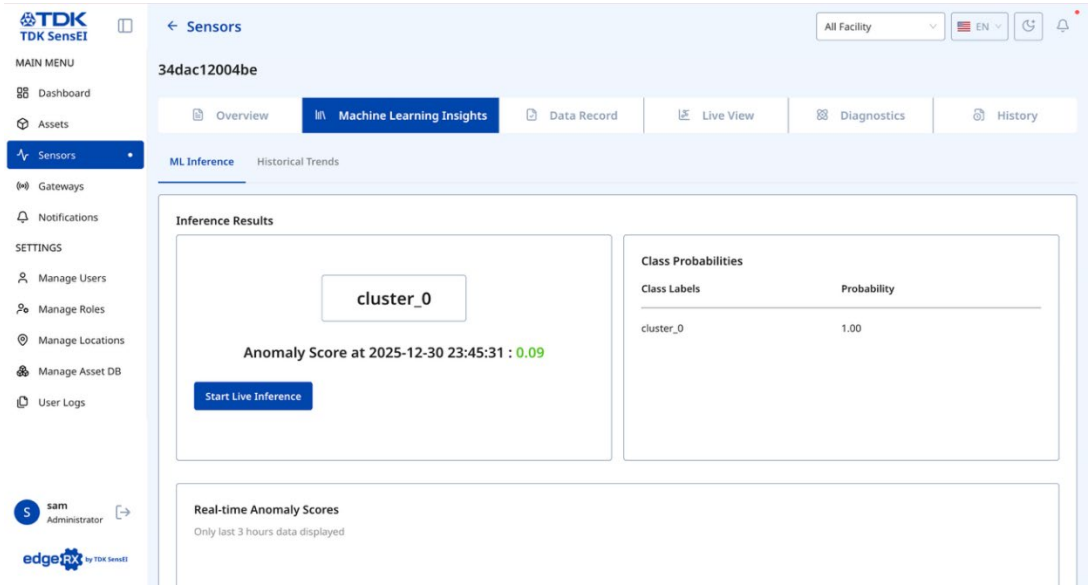


Figure 62: Sensor Machine Learning

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**.

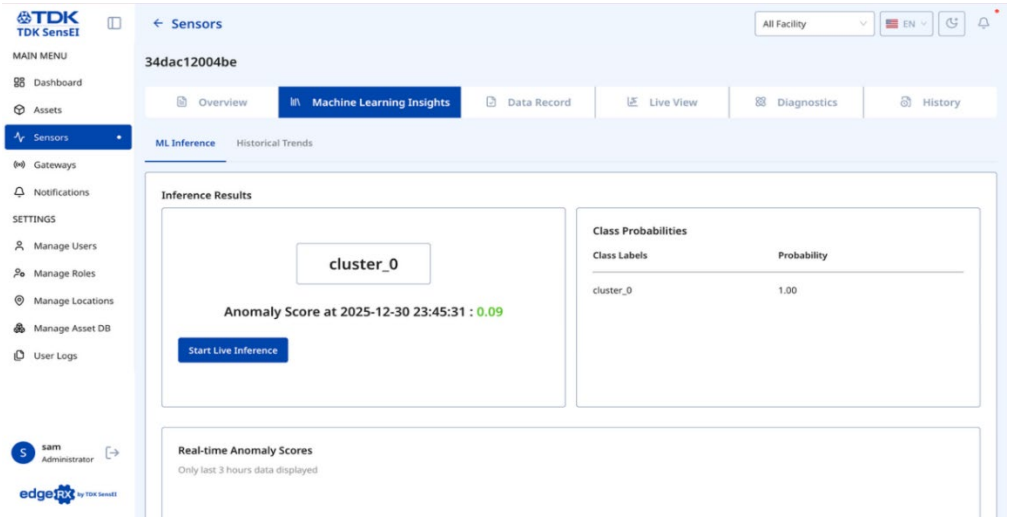


Figure 63: Sensor ML Class

8.2 Live Diagnostics

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

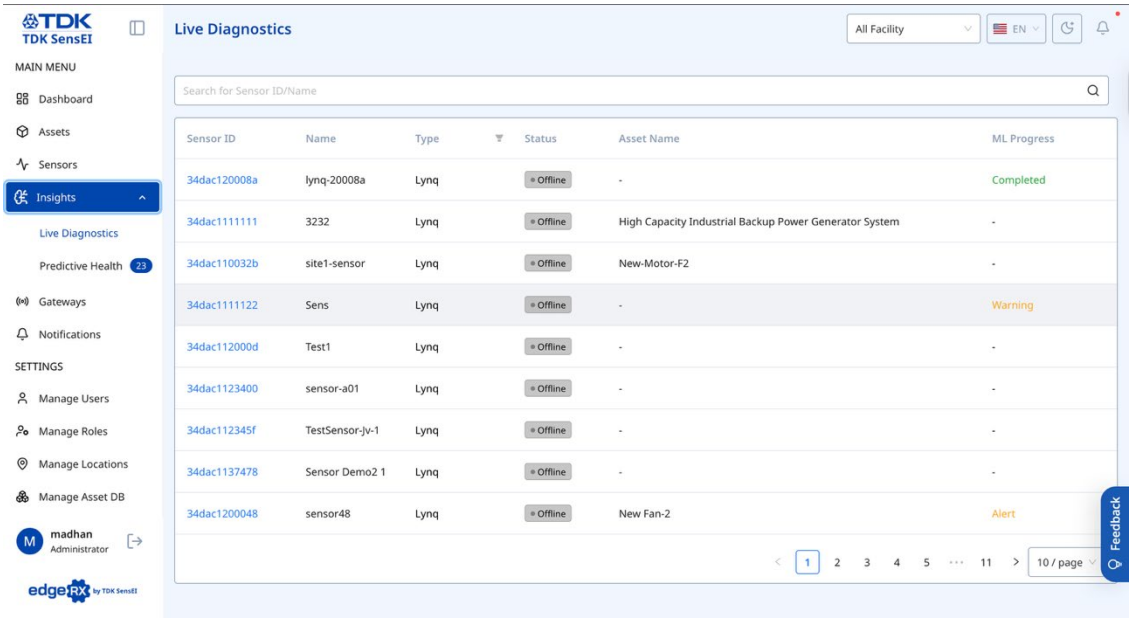


Figure 64: Live Diagnostics Listing

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 “-”

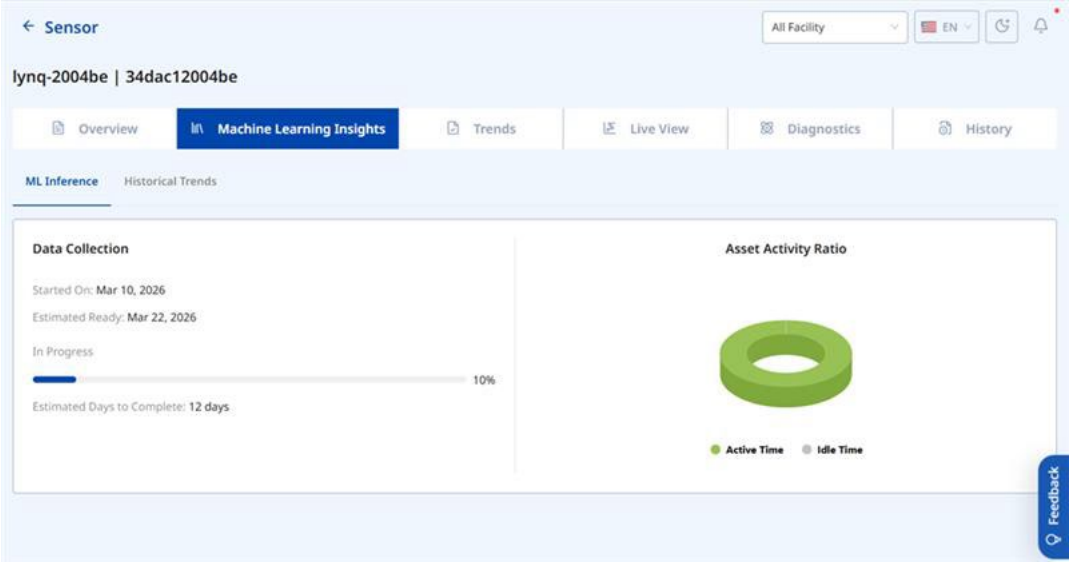


Figure 65: In Progress State

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.

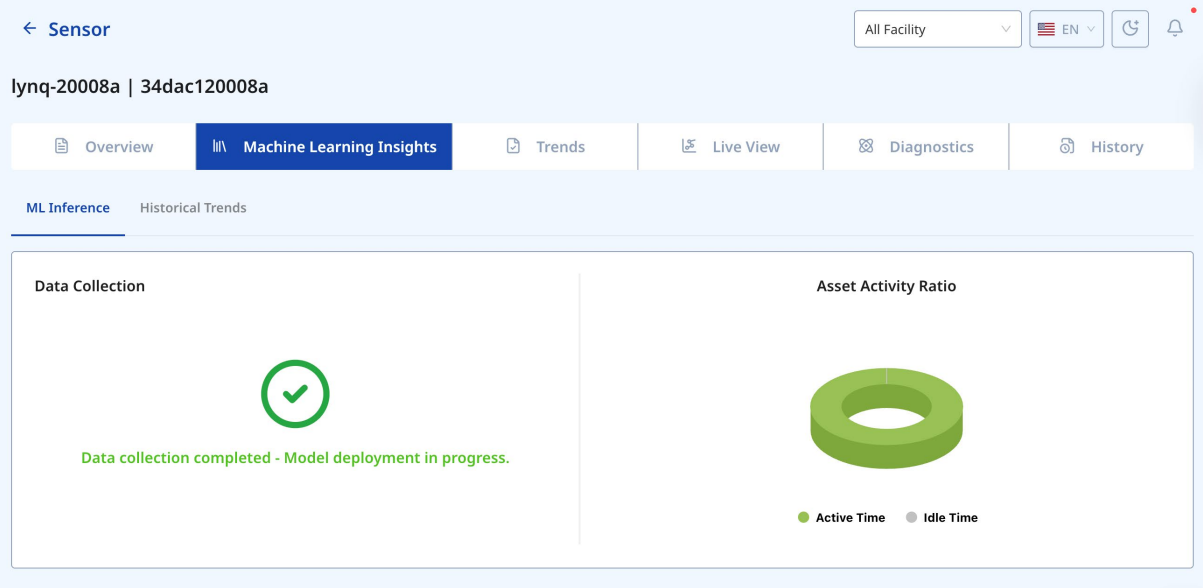


Figure 66: Completed State

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.

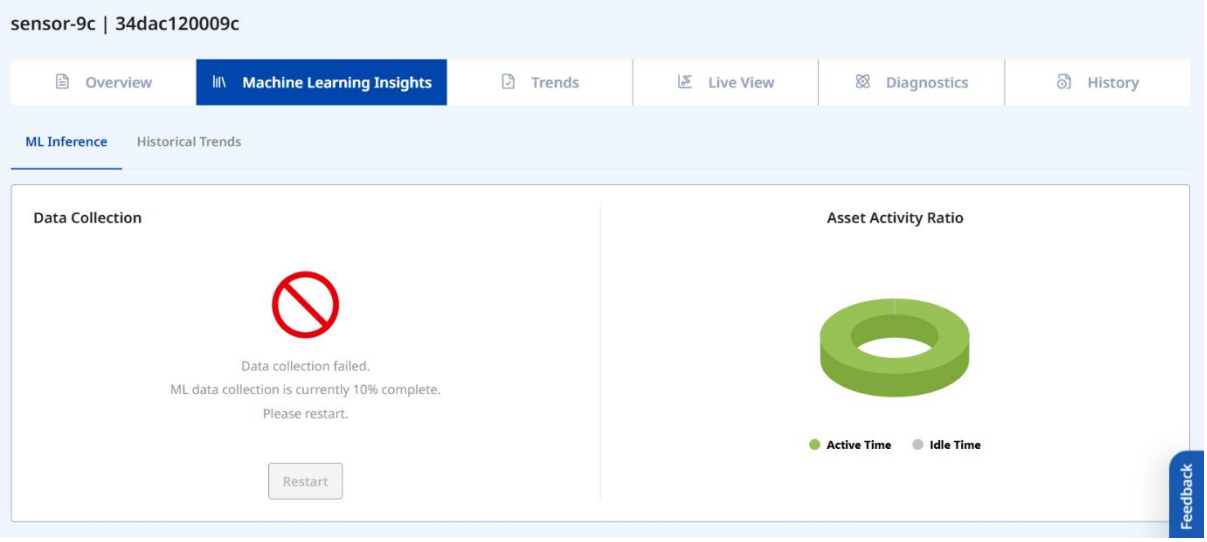


Figure 67: Failure State

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.

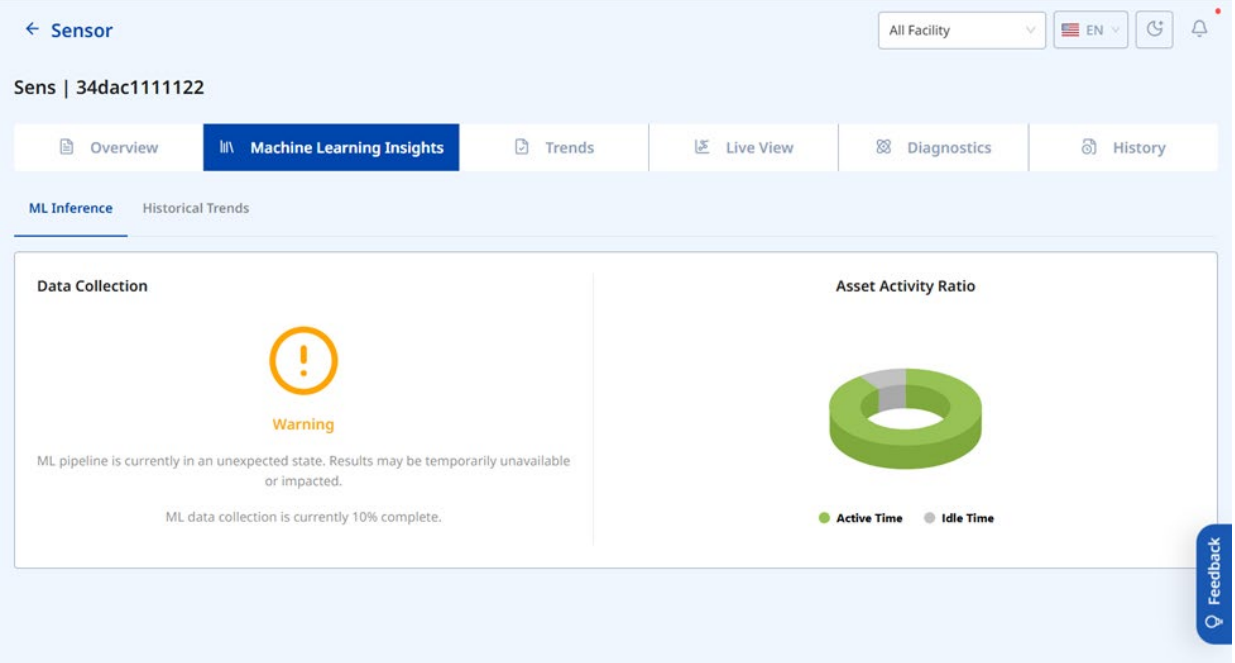


Figure 68: Warning/Generic State

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.

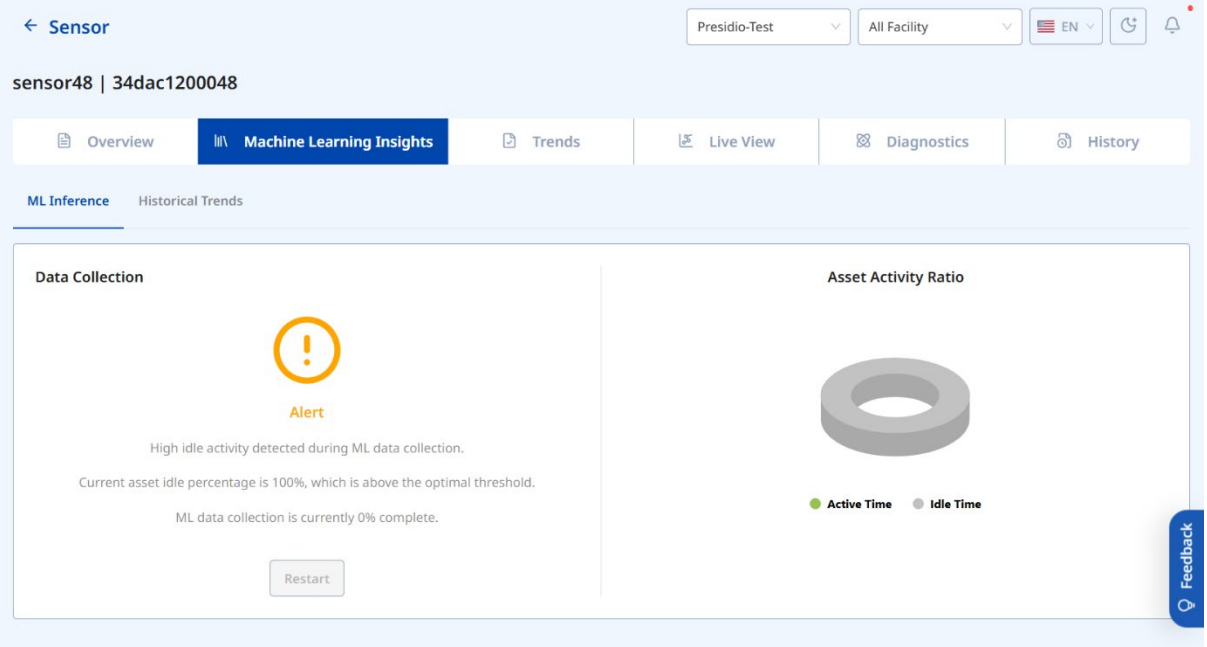


Figure 69: Alert State

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

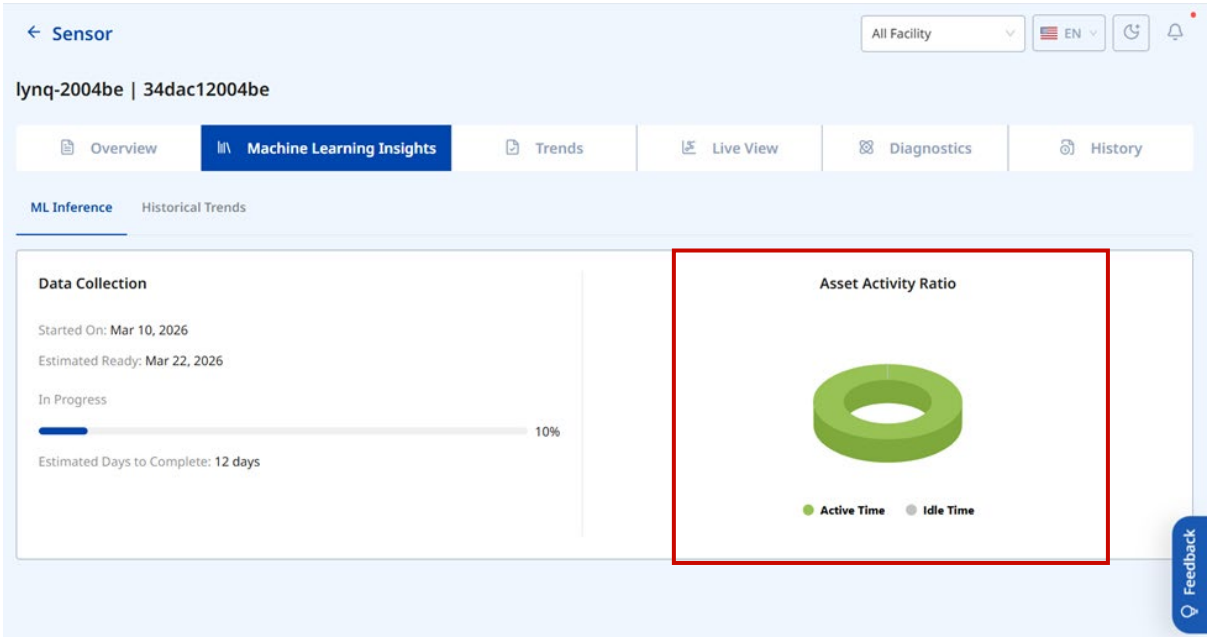


Figure 70: Asset Activity Ratio

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.

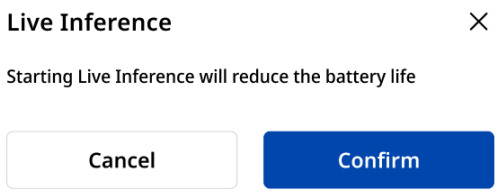


Figure 71: ML Live Inference Confirmation

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

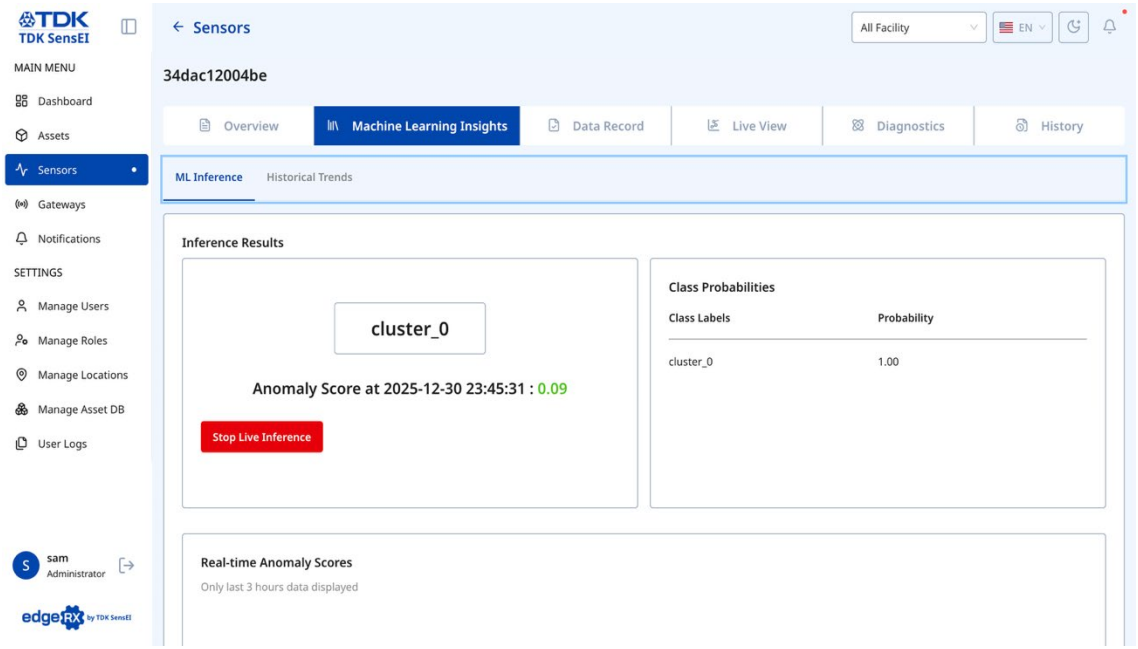


Figure 72: Sensor ML Live Inference

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

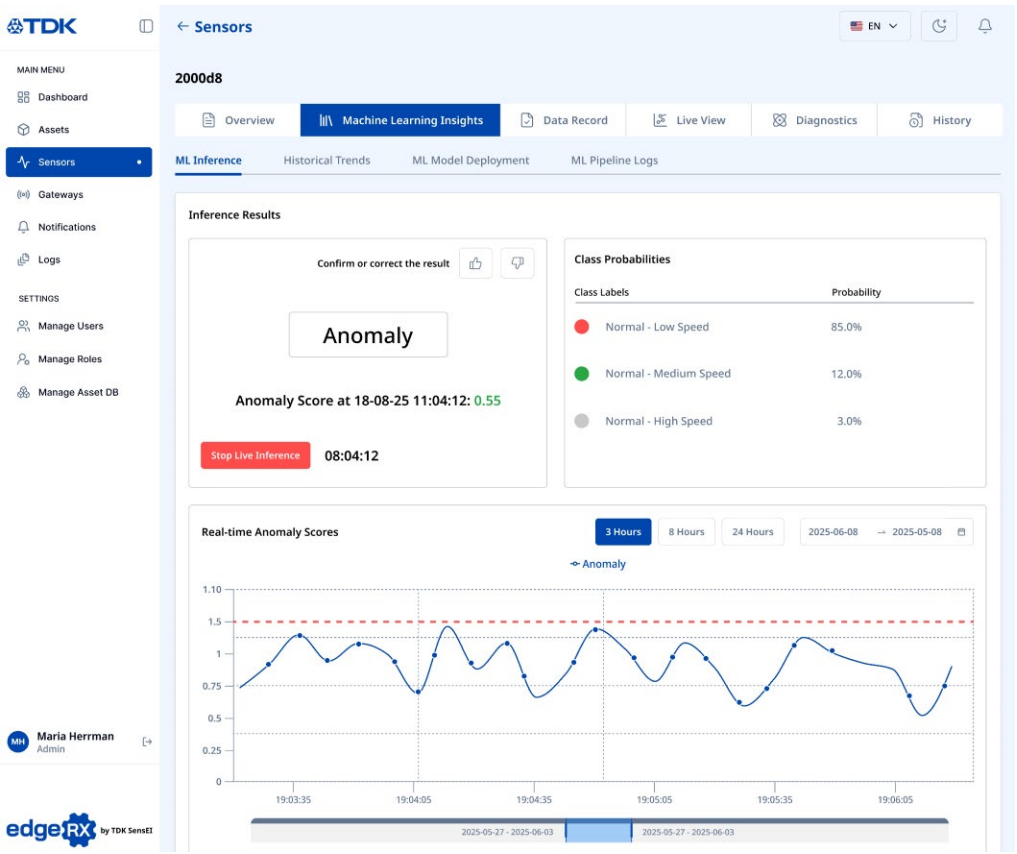


Figure 73: ML Real Time Chart

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

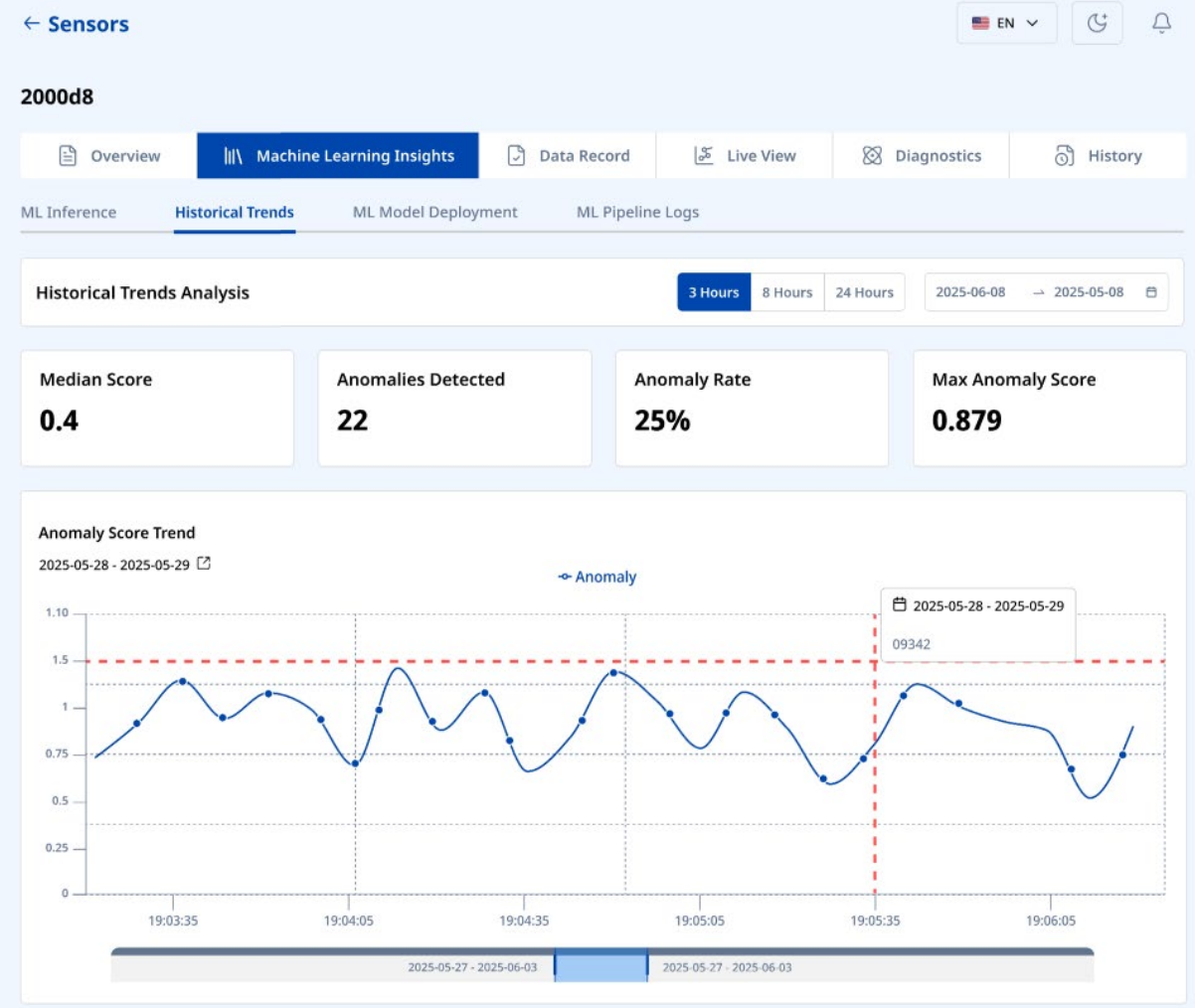


Figure 74: ML Historical Trends

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.

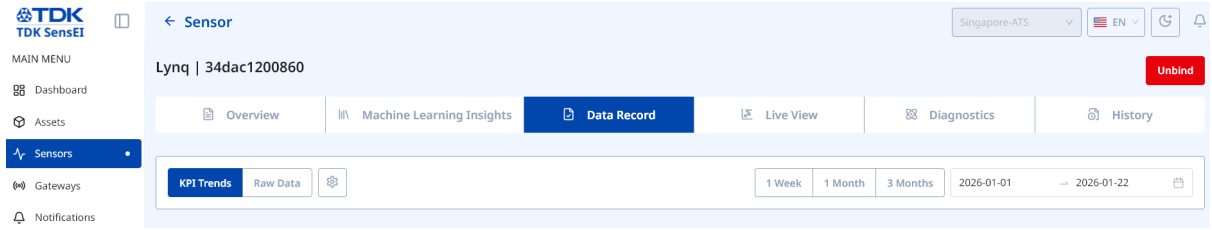


Figure 75: Sensor Data Records

9.1.1 KPI Trend

The KPI Trend tab includes two sub-tabs:

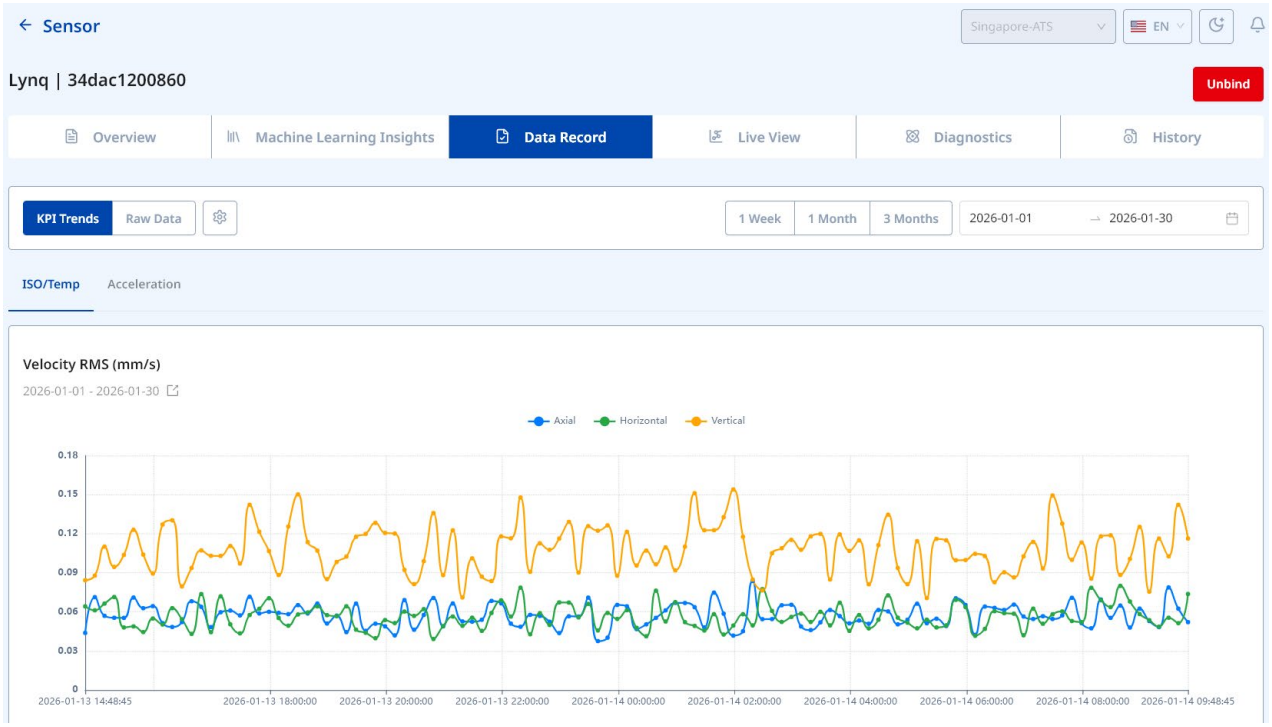


Figure 76: Sensor KPI Trend

ISO/Temp Sub-tab

- Velocity RMS
- Rotating Speed
- Skin Temperature

Acceleration Sub-tab

- Acceleration Peak
- Acceleration RMS
- Crest Factor

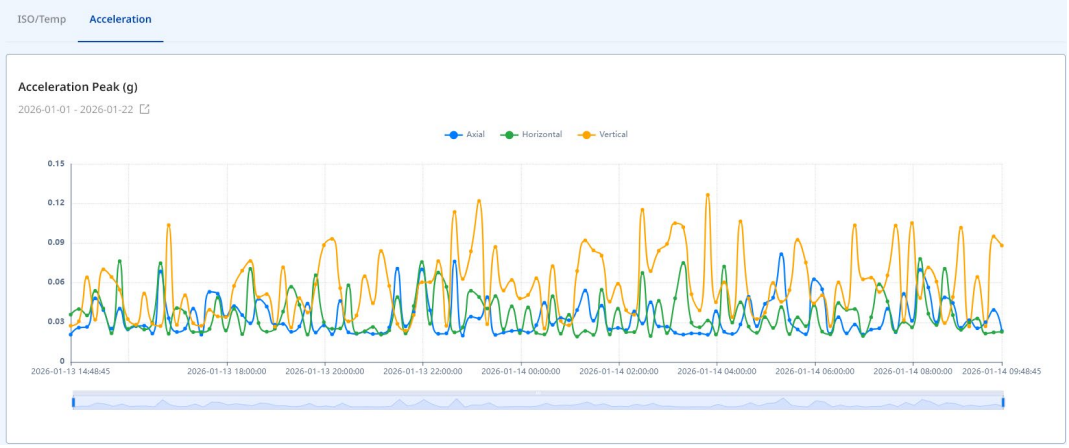


Figure 77: Sensor Acceleration Chart

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.

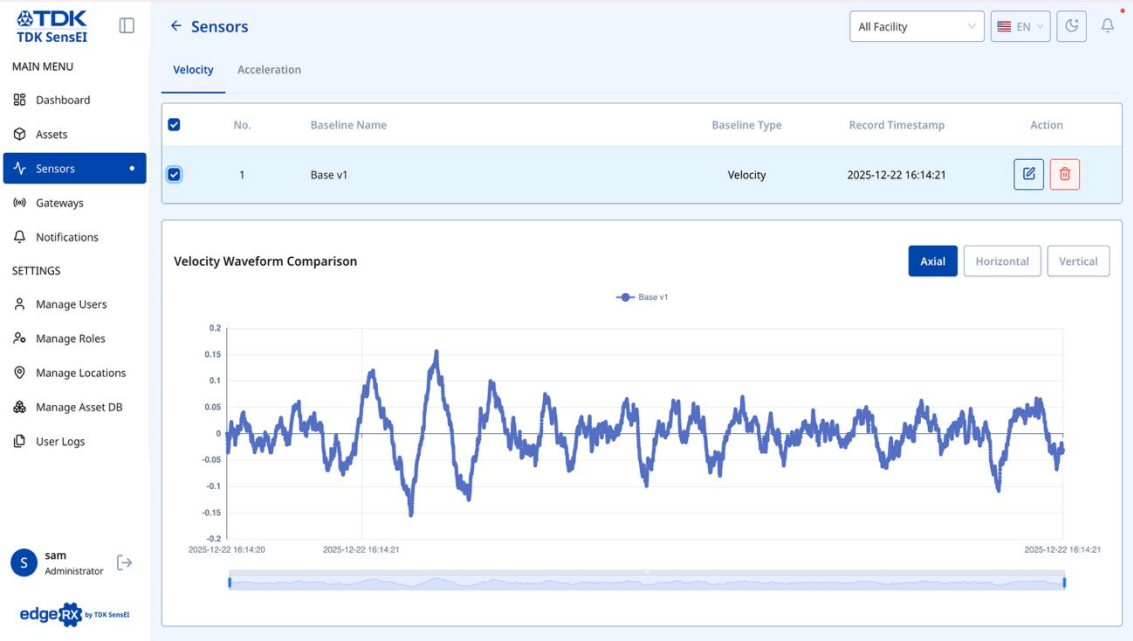


Figure 79: Sensor View Baseline

Velocity Sub-tab

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

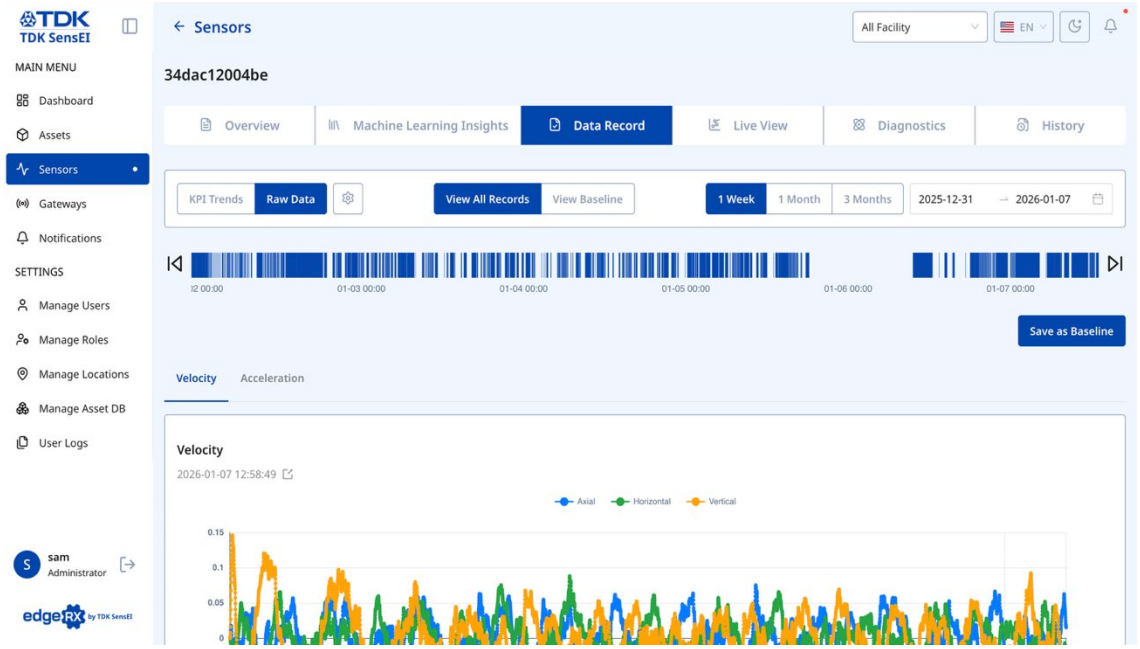


Figure 80: Sensor Raw Data Velocity

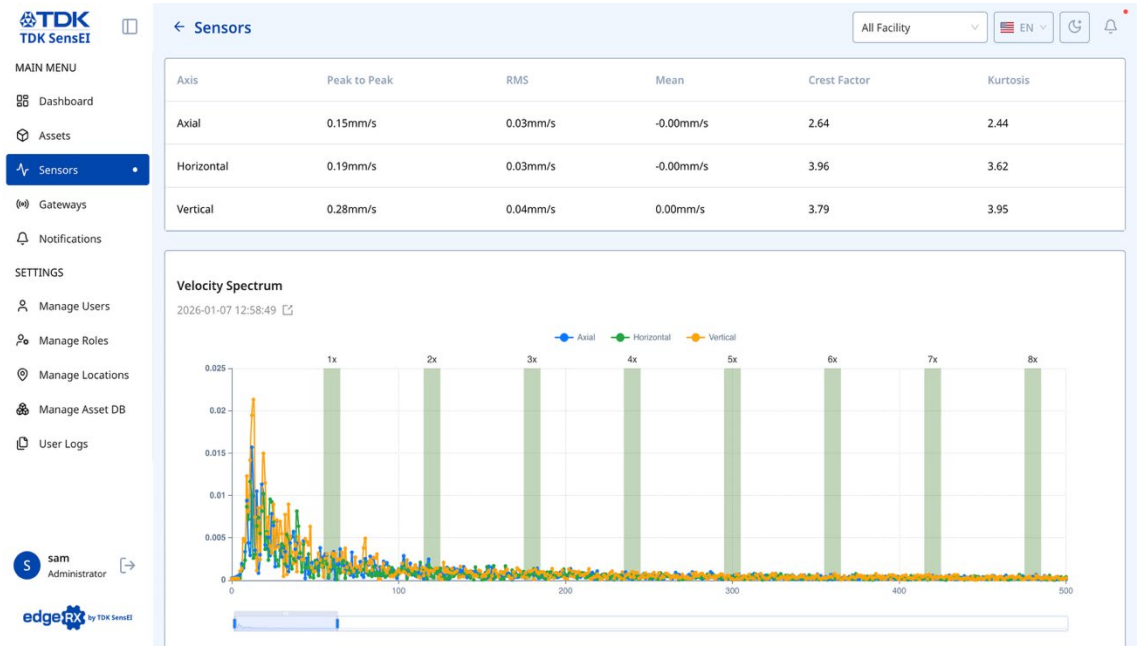


Figure 81: Sensor Raw Data Velocity Spectrum

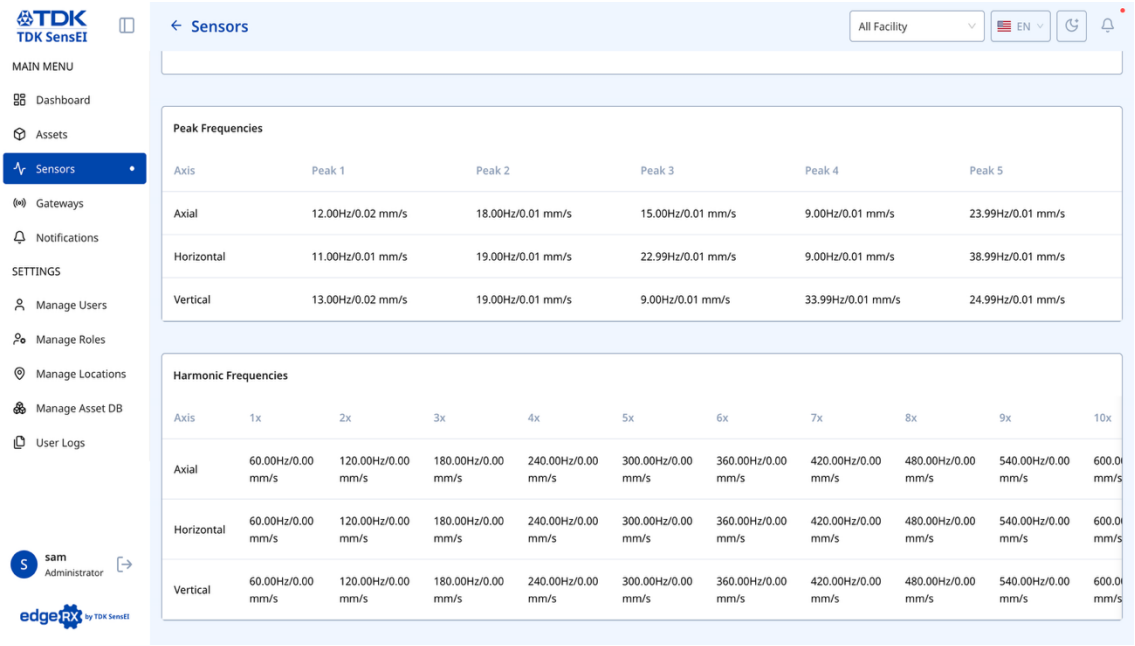


Figure 82: Sensor Raw Data Peak and Harmonic Frequencies

Acceleration Sub-tab

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

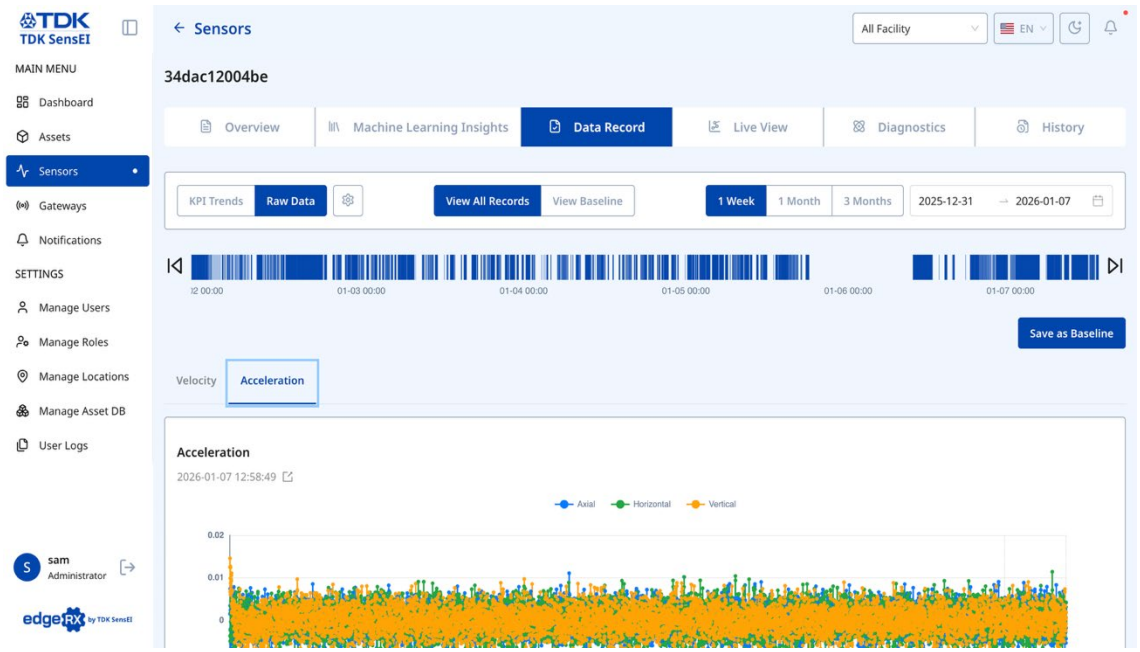


Figure 83: Sensor Raw Data Acceleration

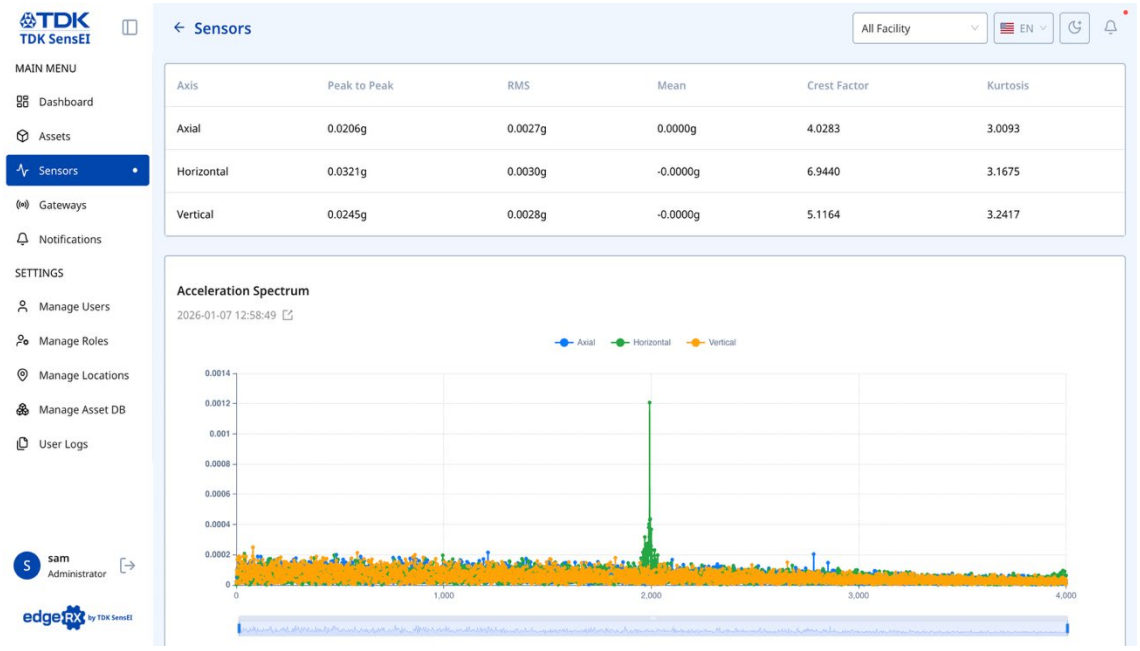


Figure 84: Sensor Raw Data Acceleration Spectrum

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.

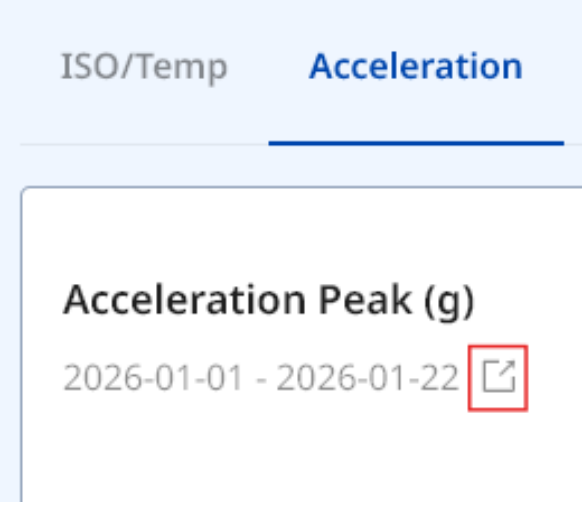


Figure 87: Graph Export Button

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.

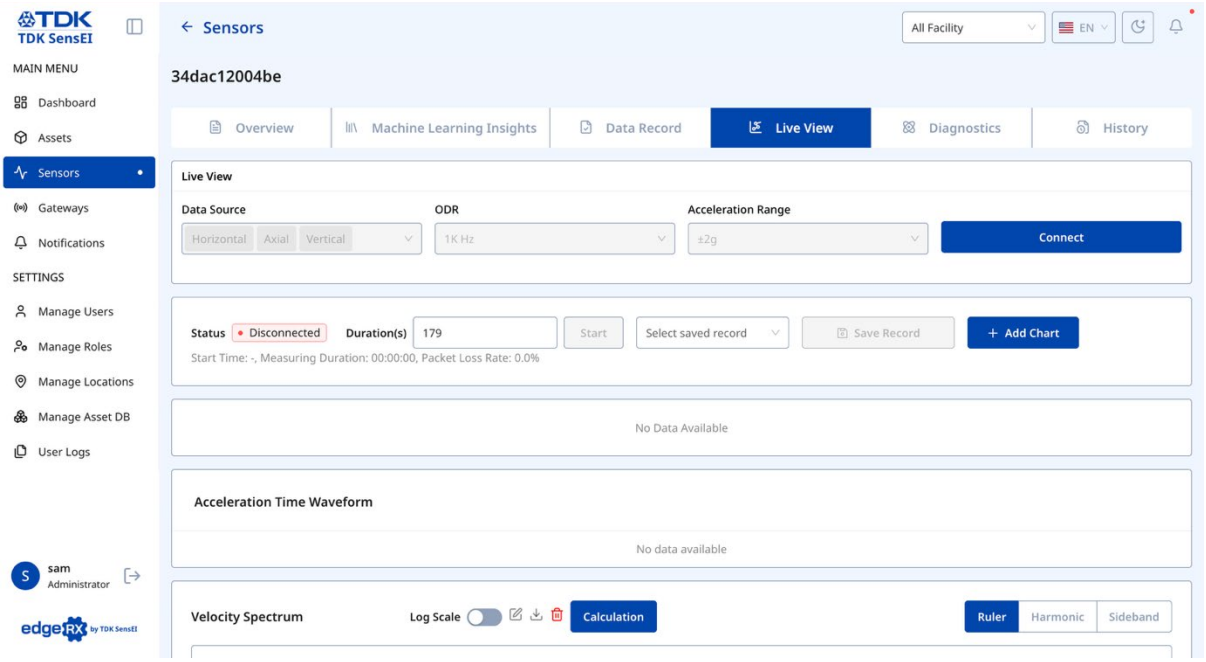


Figure 88: Sensor Live View

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

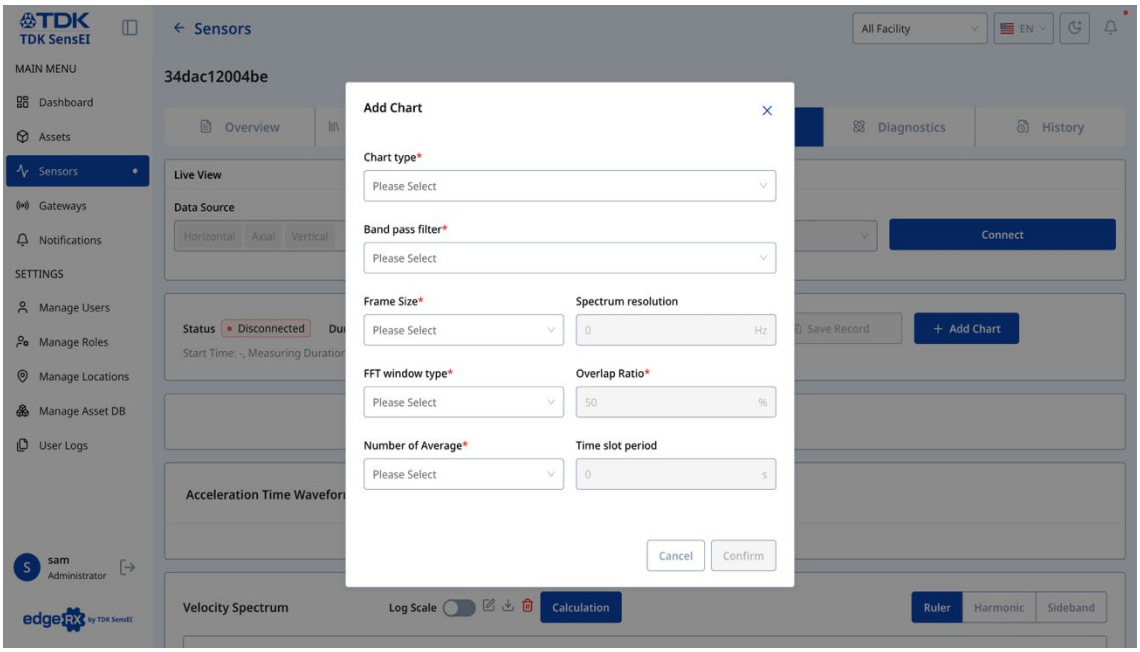


Figure 89: Live View Add Chart

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. Notifications & Alerts

10.1 Notification Types

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

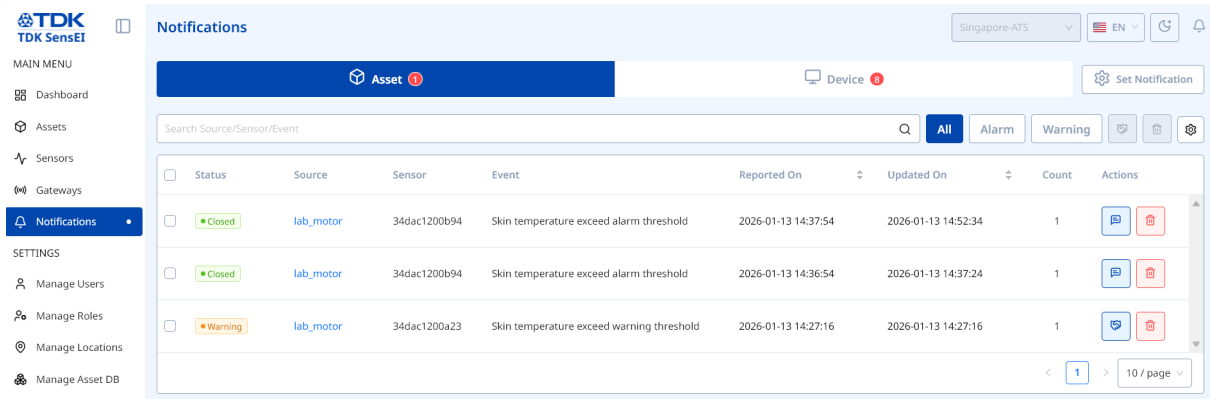


Figure 90: Notifications Tab

The Notifications page has two tabs:

10.1.1 Asset Tab

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

Search Capabilities:

- Source
- Sensor
- Event

10.1.2 Device Tab

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

Search Capabilities:

- Device ID
- Event

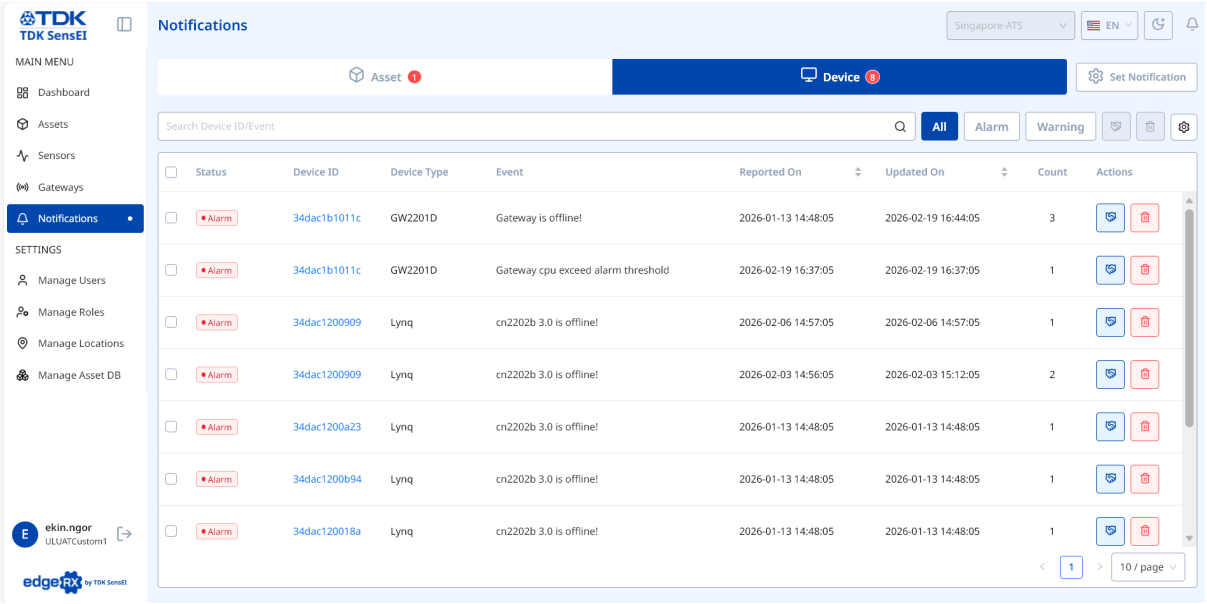


Figure 91: Notifications Tab Device

10.2 Managing Notifications

10.2.1 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.

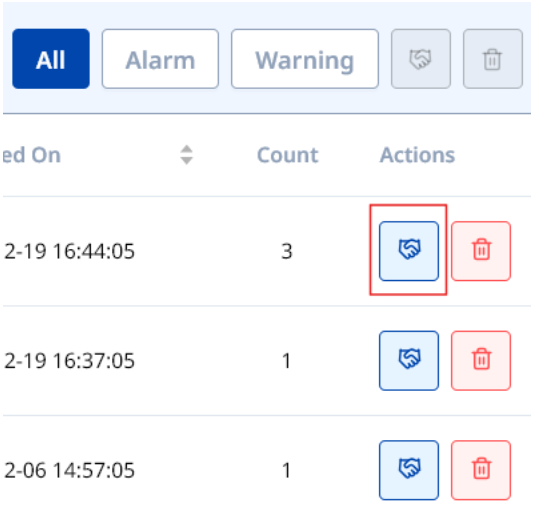


Figure 92: Acknowledge Icon

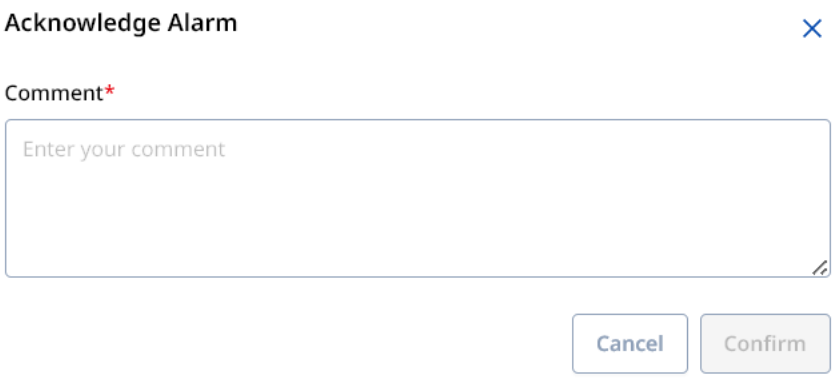


Figure 93: Acknowledging Alarm Modal

10.2.2 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.

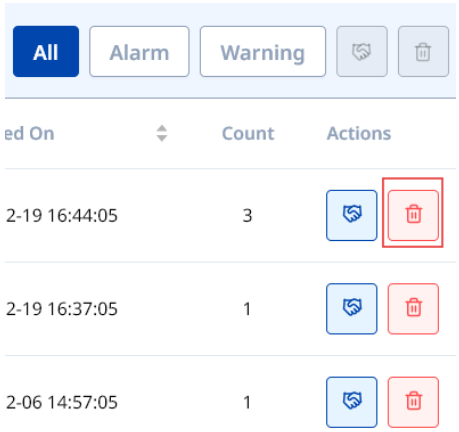


Figure 94: Delete Icon

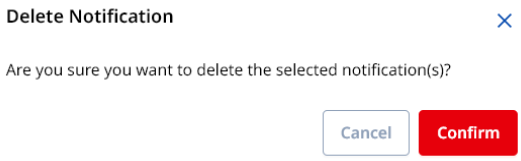


Figure 95: Deleting Alert Modal

10.2.3 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.

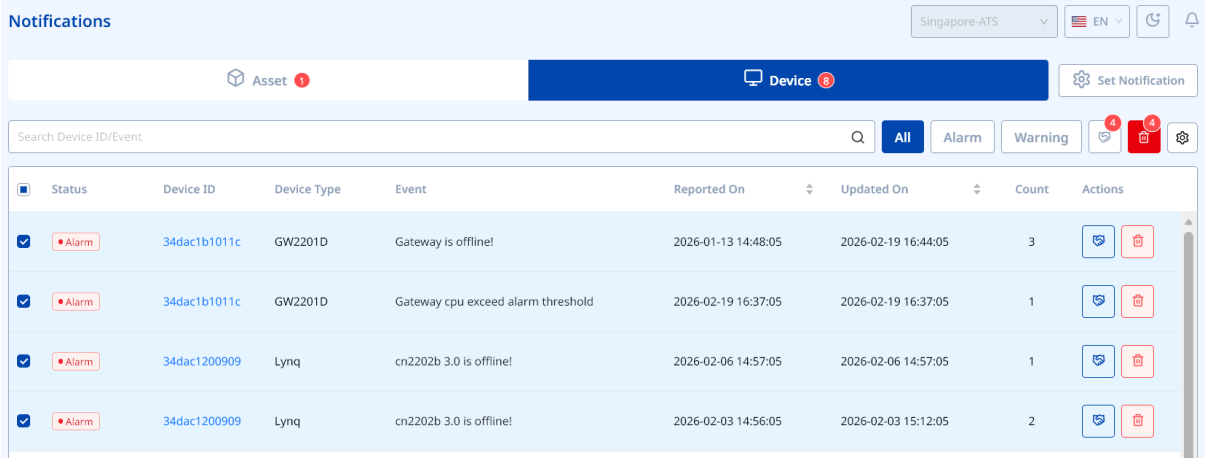


Figure 96: Batch Selection

10.3 Notification Filters

Notifications can be toggled between the following filters:

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

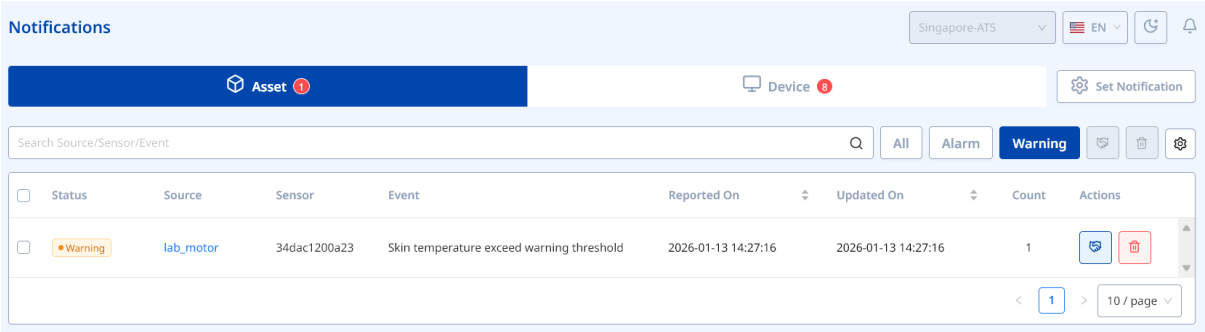


Figure 97: Filter Selection

10.4 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

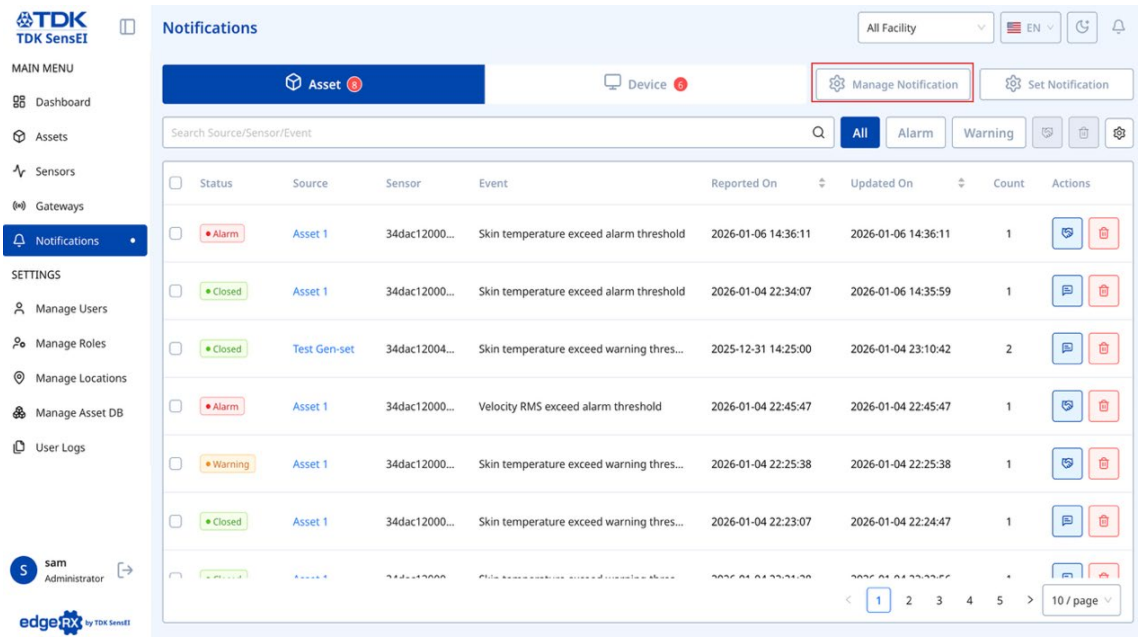


Figure 98: Manage Notifications Entry Point

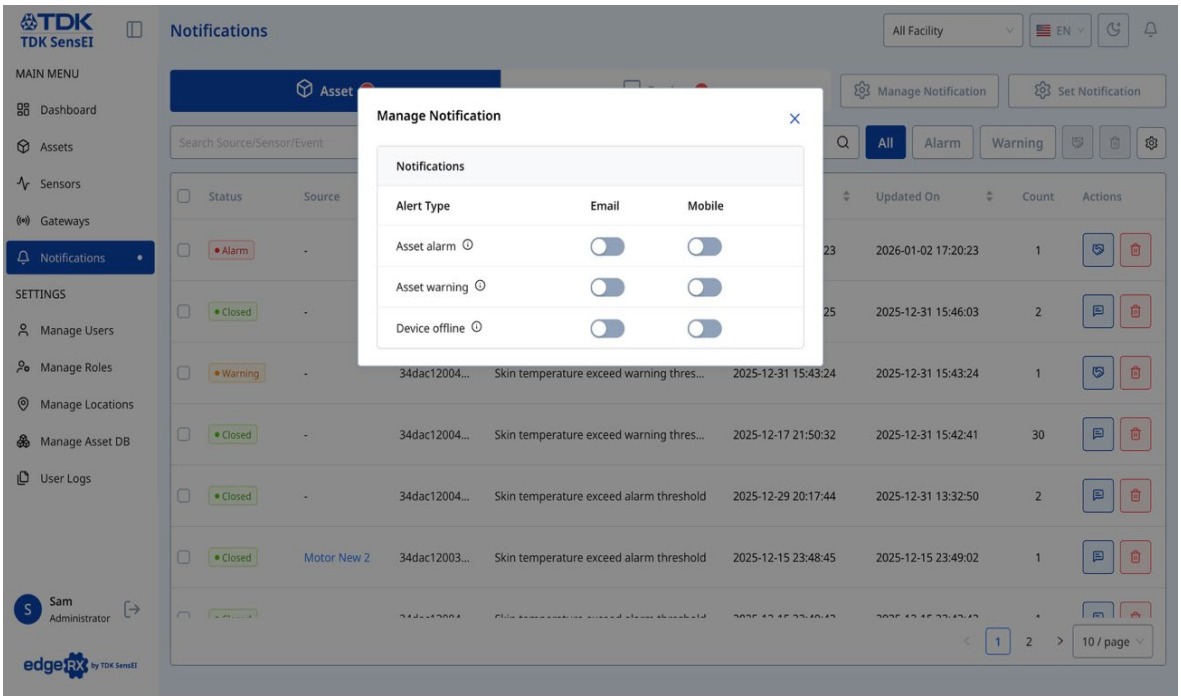


Figure 99: Manage Notifications Modal

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

10.5 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.

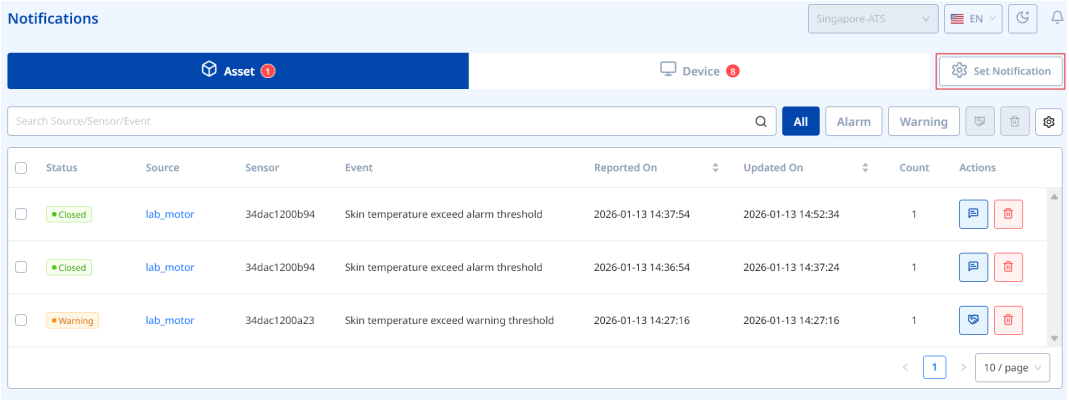


Figure 100: Set Notifications Entry Point

Figure 101: Set Notifications Modal

10.6 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)

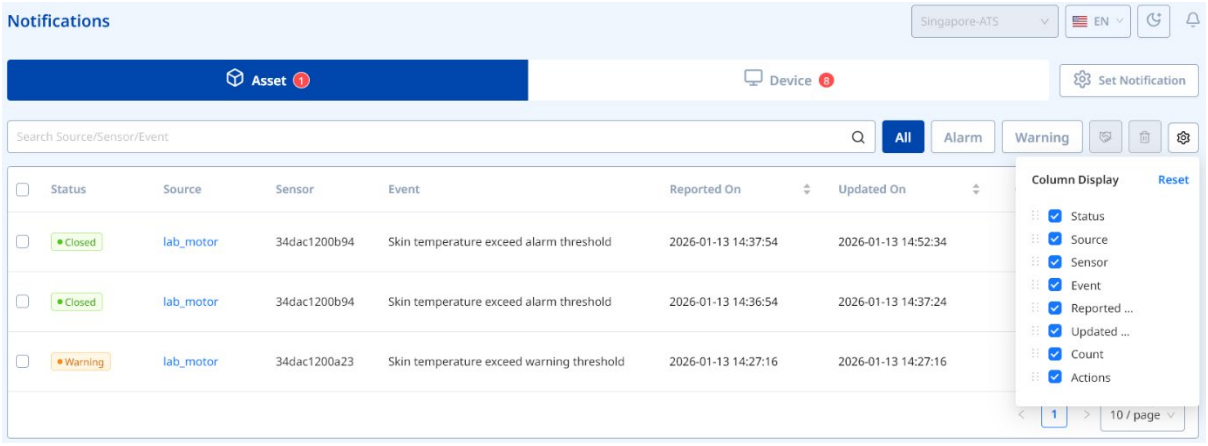


Figure 102: Notifications Column Display

11. 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.

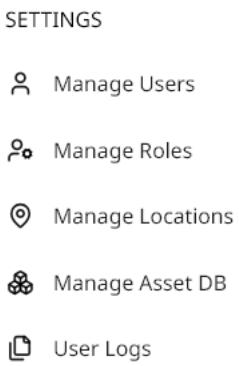


Figure 103: Menu Bar

11.1 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.

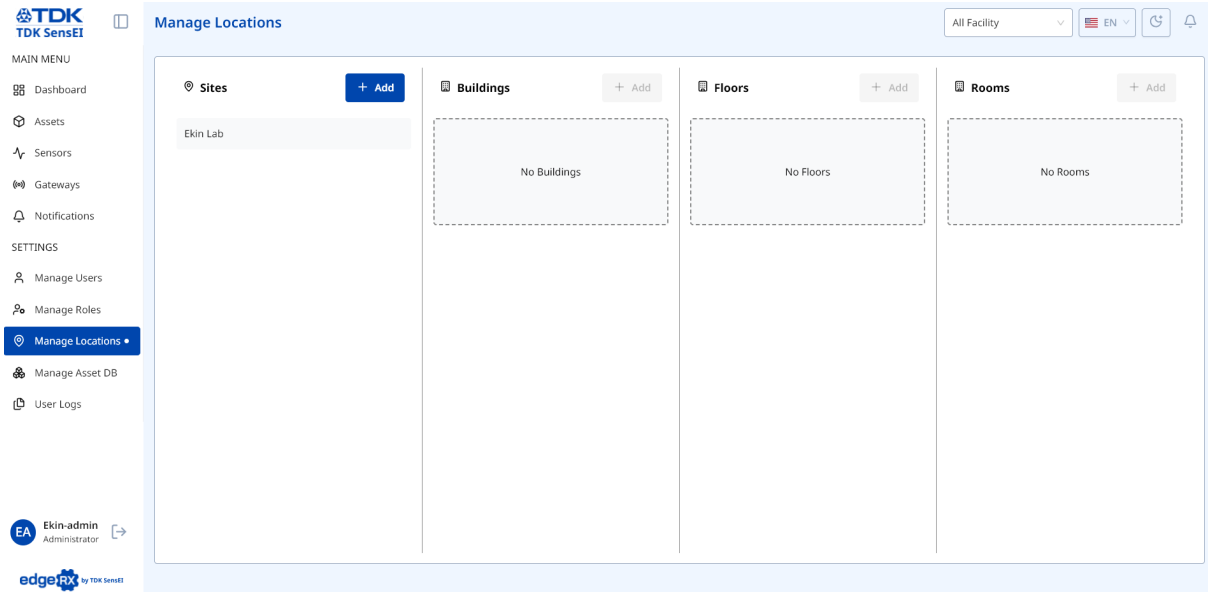


Figure 104: Manage Locations

Hierarchy Structure:

Site → Building → Floor → Room

Boxes labelled with names will be visible on the screen.

11.1.1 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

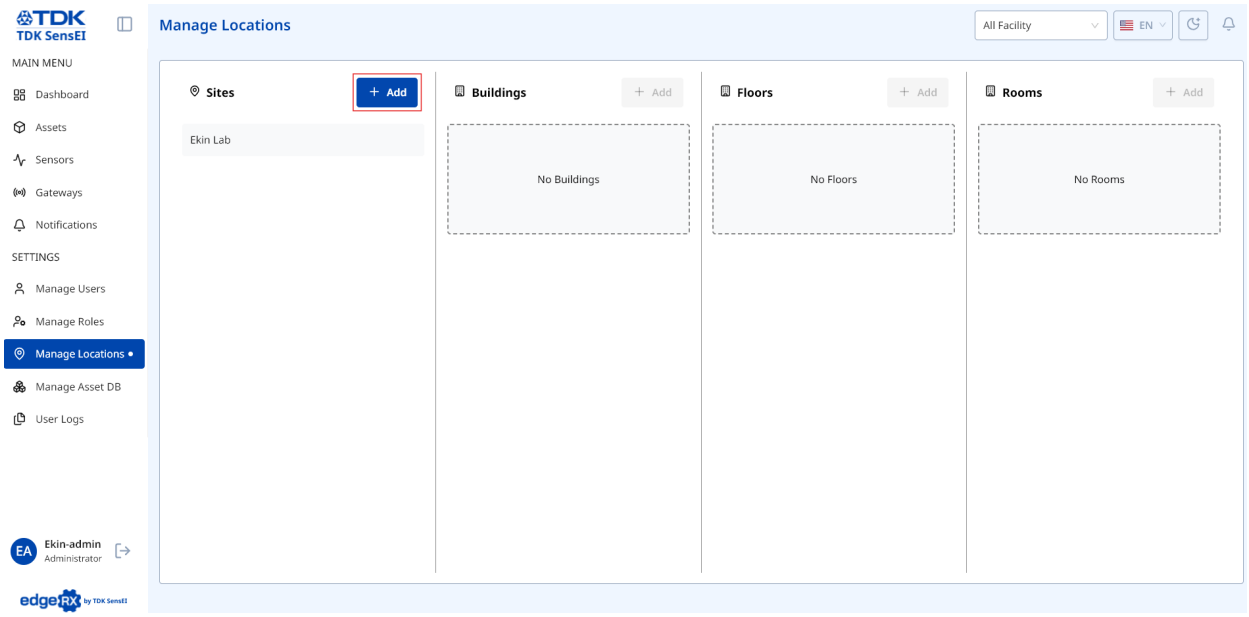


Figure 105: Add Site

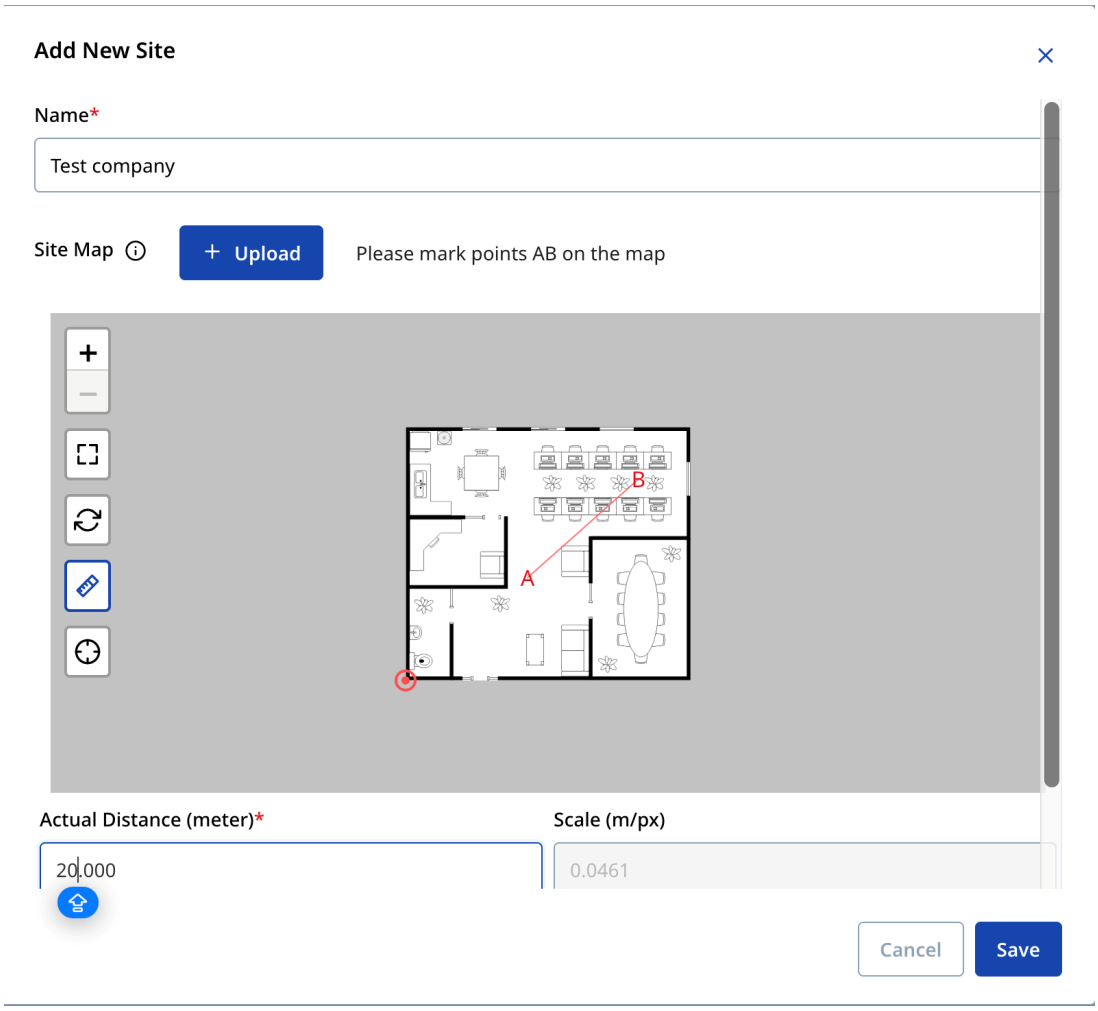


Figure 106: Add Site Modal

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.

11.1.2 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

Control	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.

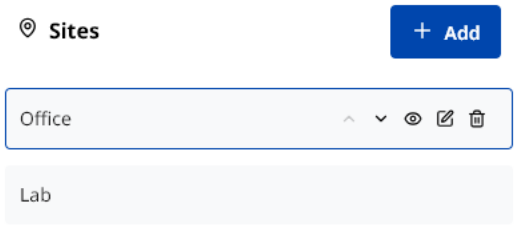


Figure 107: Site Controls

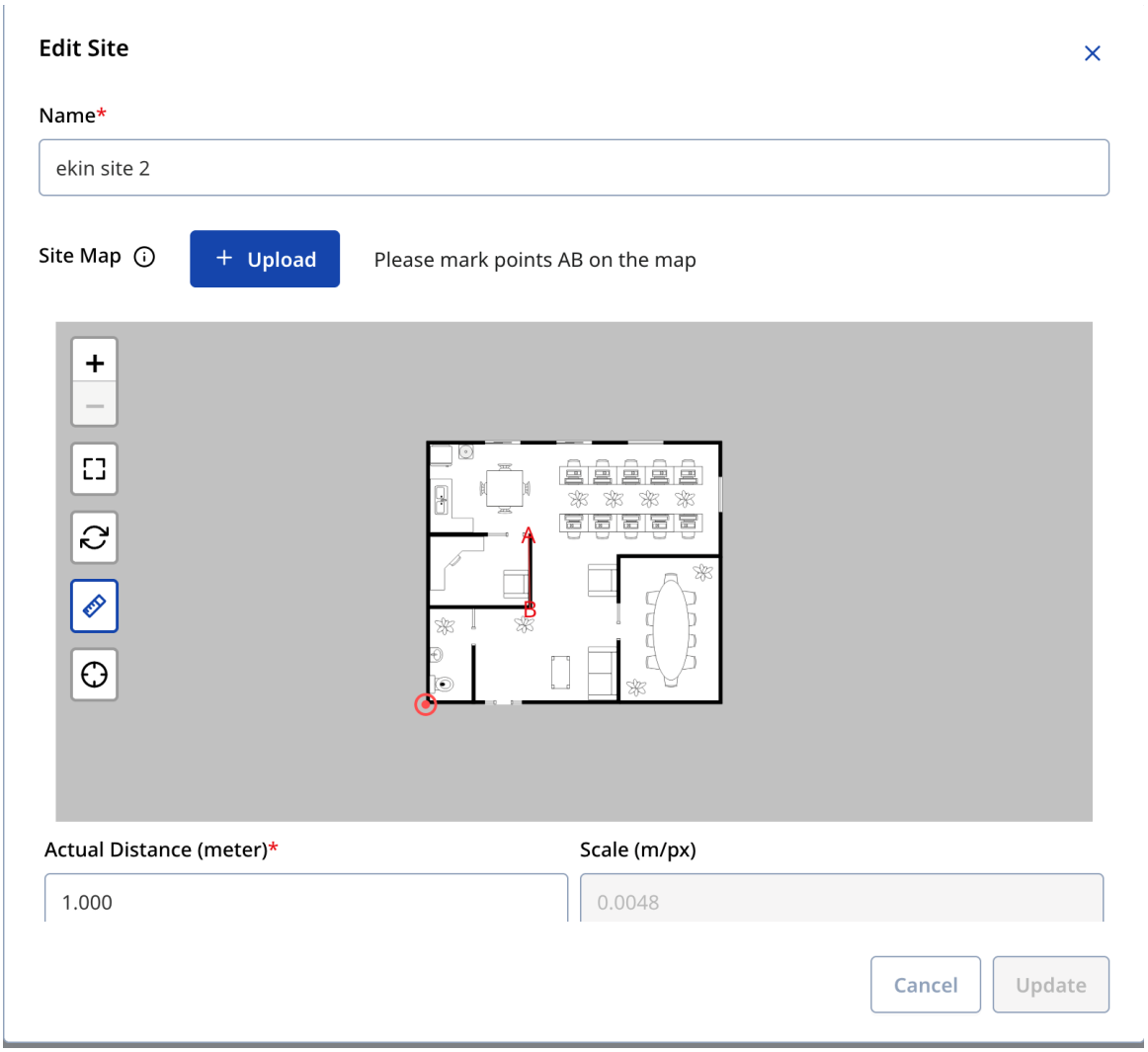


Figure 108: Edit Site Map

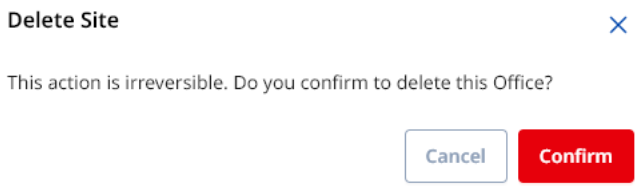


Figure 109: Delete Site Modal

Figure 110: Preview Site

11.1.3 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.

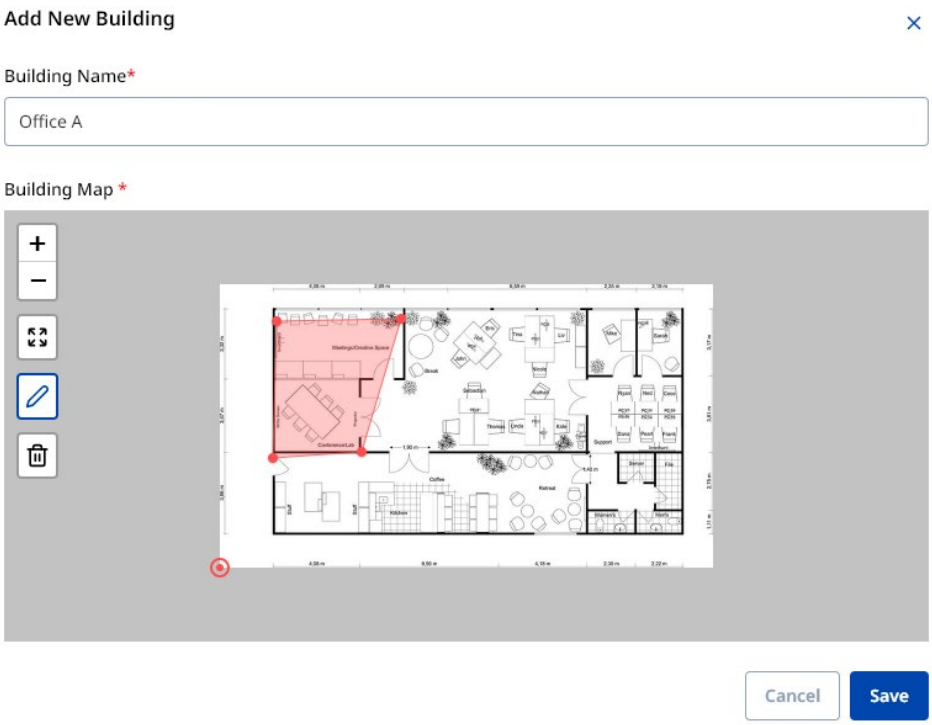


Figure 111: Add Building Modal

11.1.4 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.

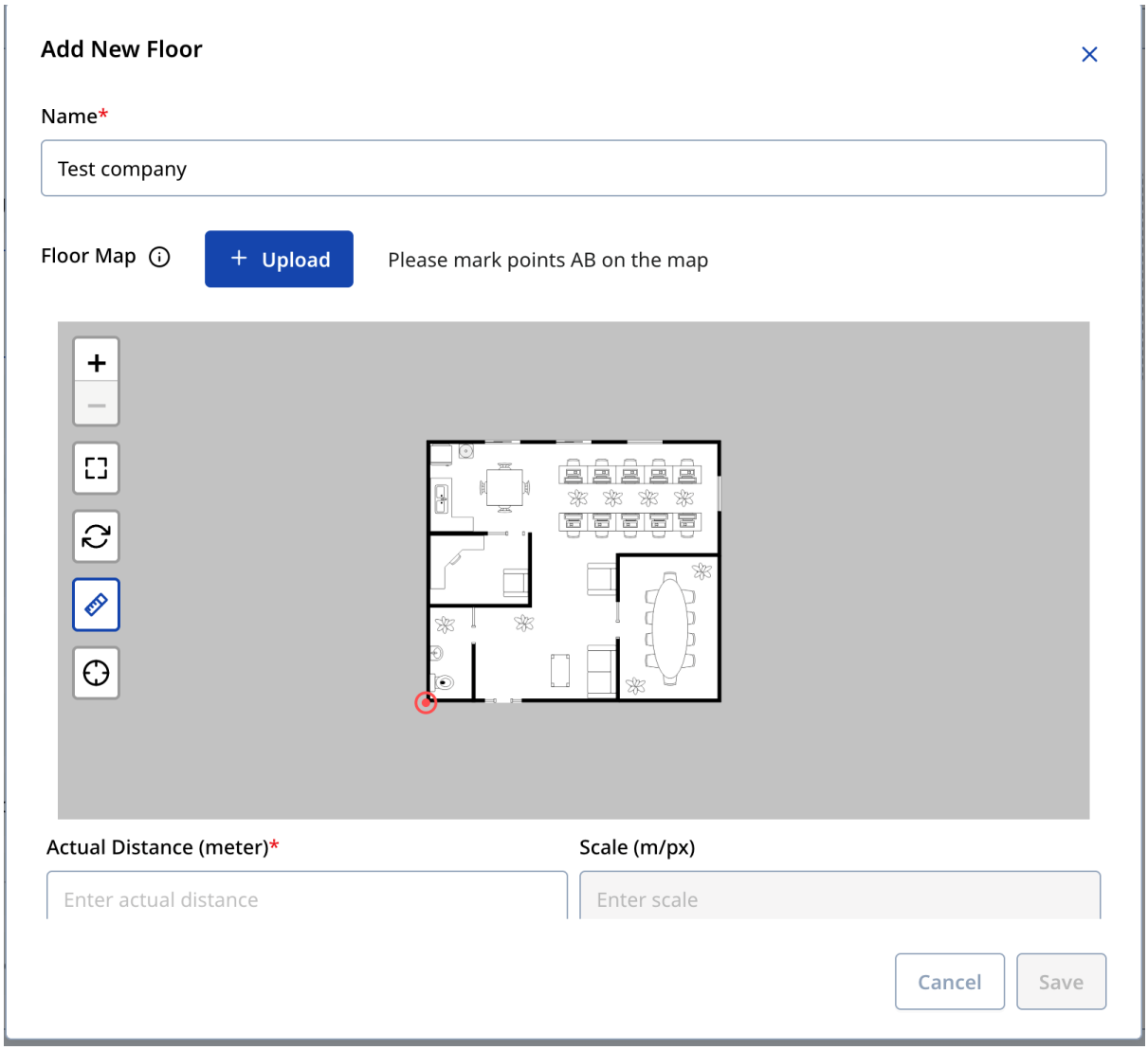


Figure 112: Add Floor Modal

11.1.5 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.

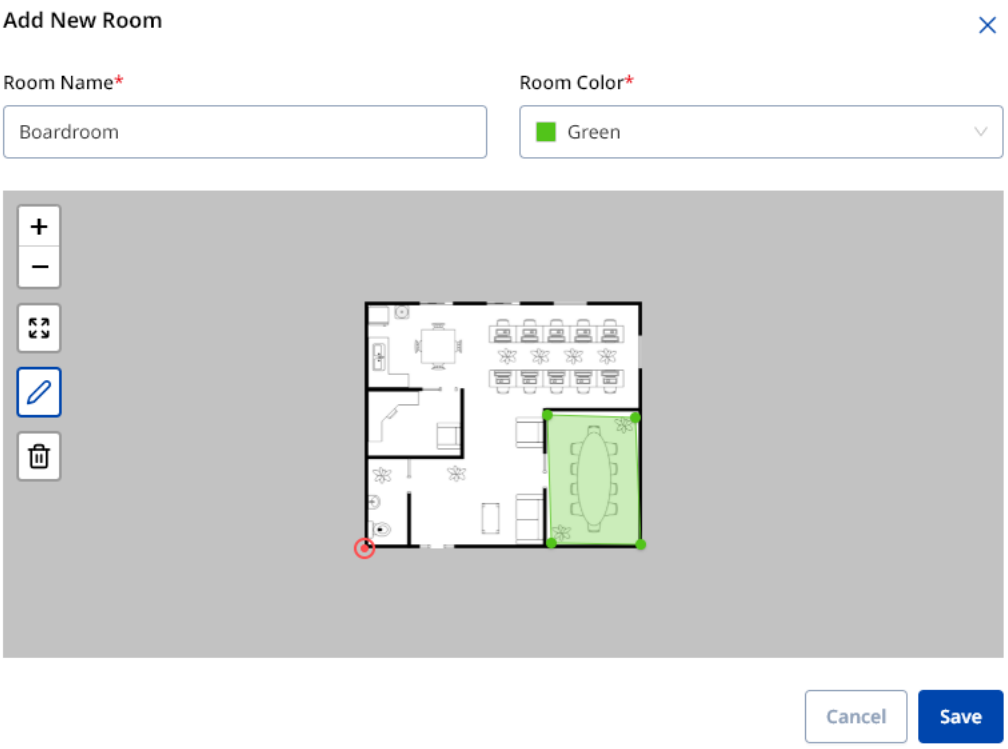


Figure 113: Add Room Modal

11.1.6 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

11.2 Manage Asset DB / Asset Types

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

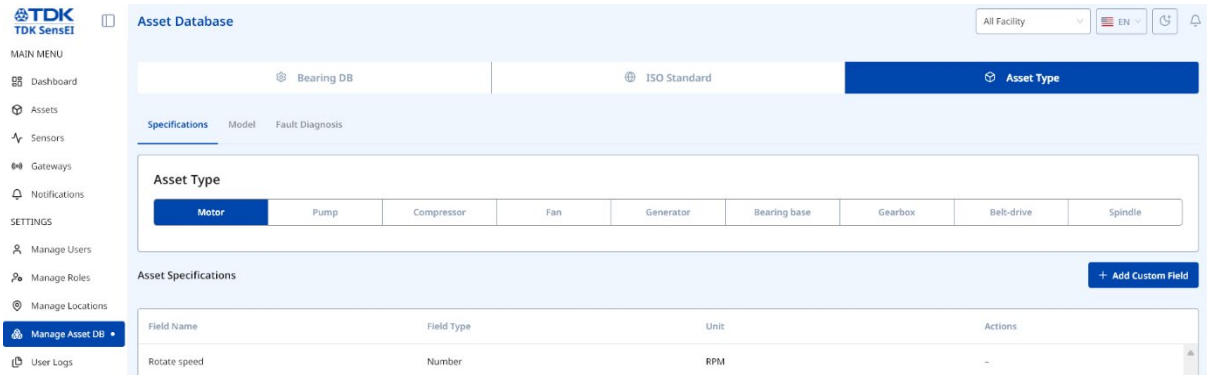


Figure 114: Manage Asset Type

11.2.1 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)

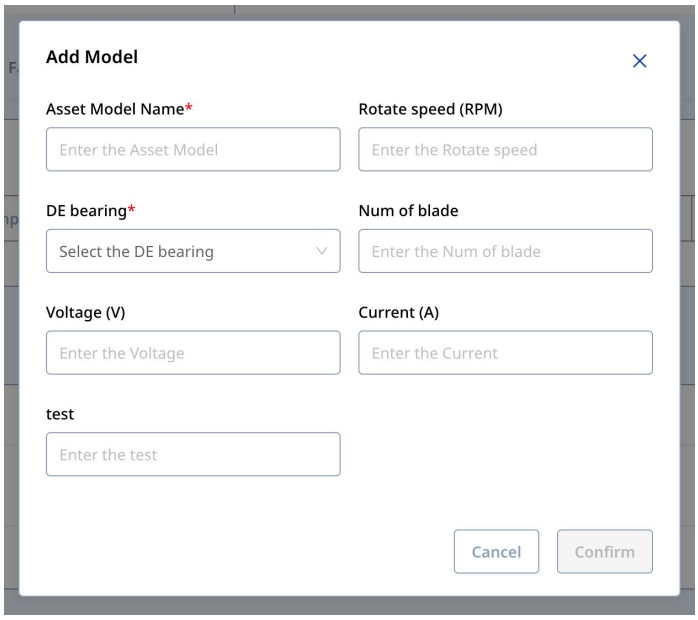


Figure 115: Custom Field

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

11.2.2 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

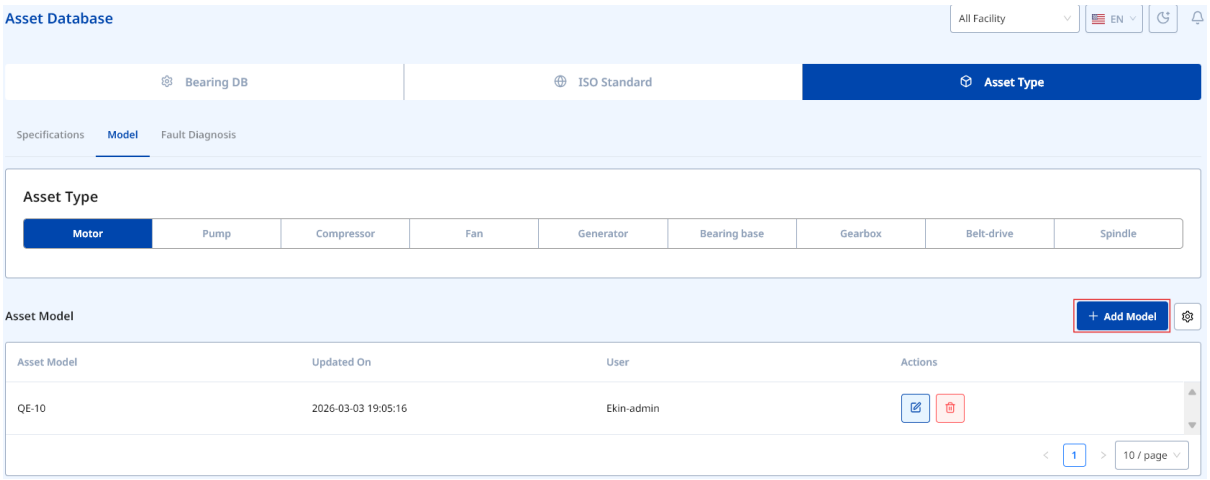


Figure 116: Asset DB Asset Type

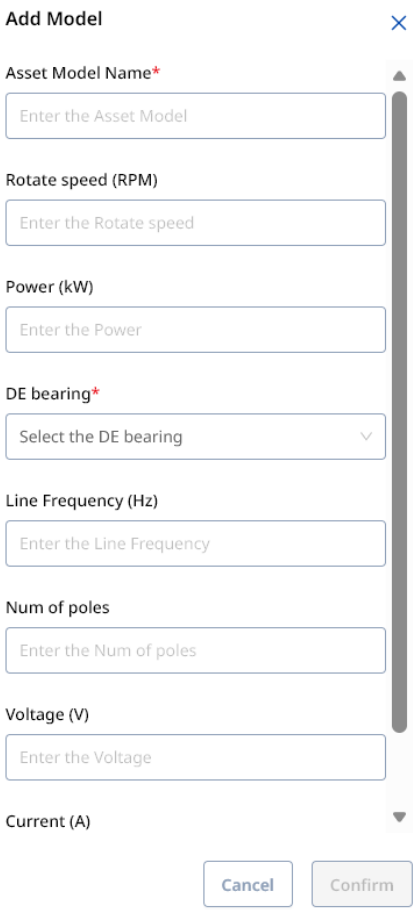


Figure 117: Add Asset Modal

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

11.2.3 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.

11.3 Bearing DB

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

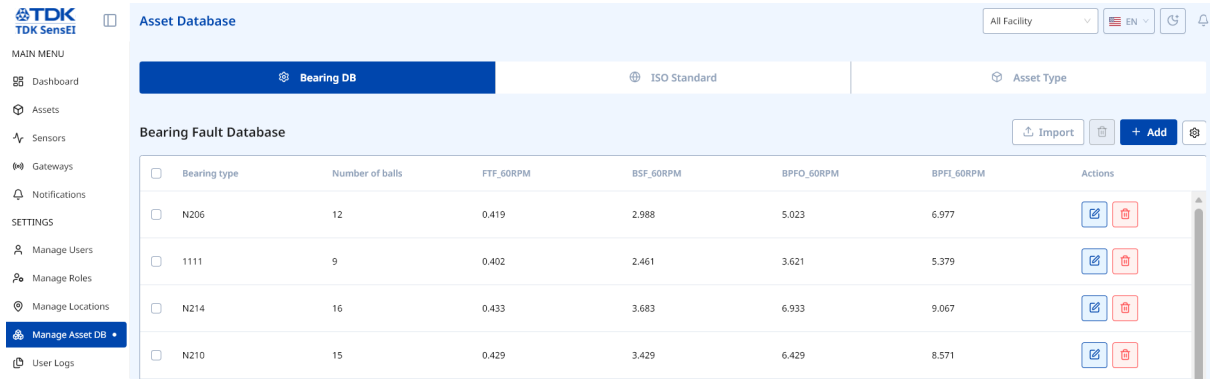


Figure 118: Asset DB Bearing

11.3.1 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

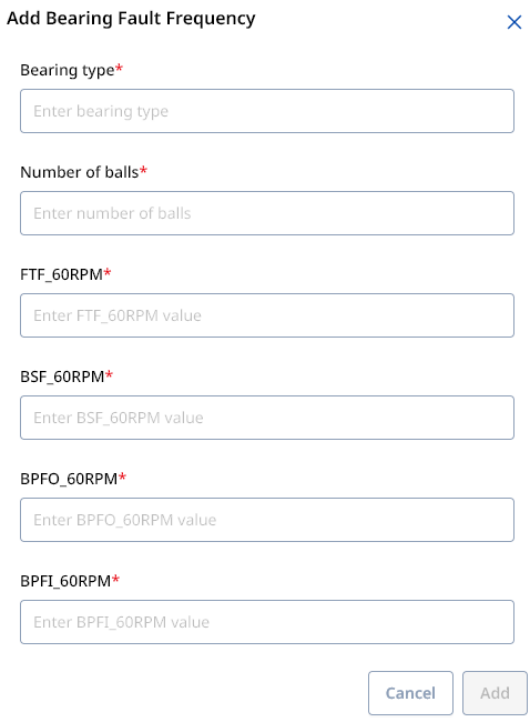


Figure 119: Add Bearing Modal

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

11.3.2 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.

11.3.3 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.

11.3.4 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.

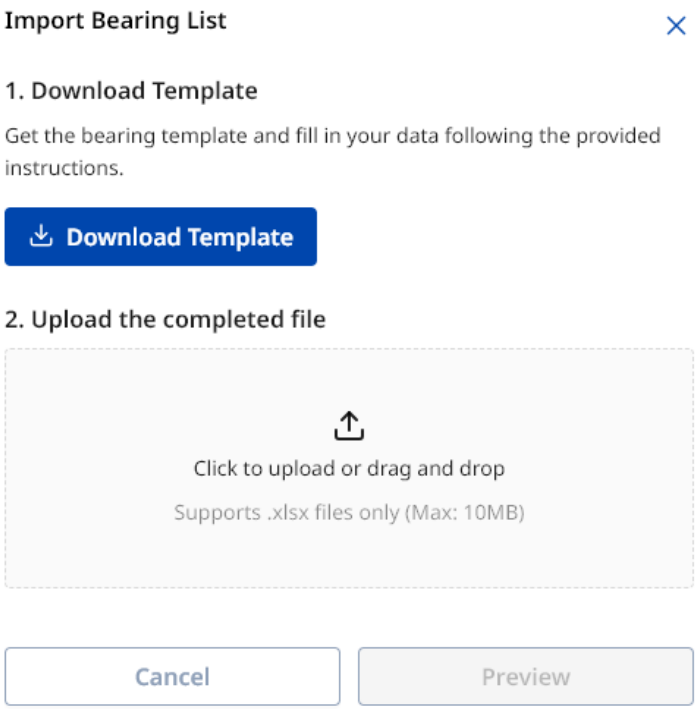


Figure 120: Bearing List Upload

11.4 ISO Standards

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

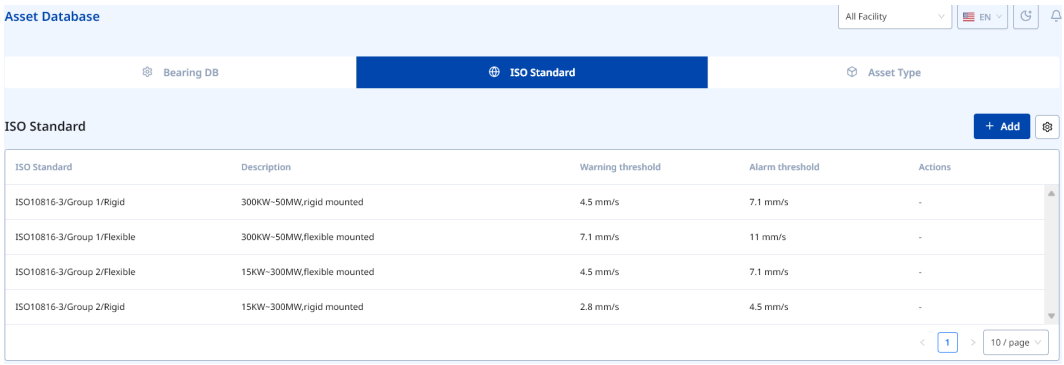


Figure 121: ISO Standards

11.4.1 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

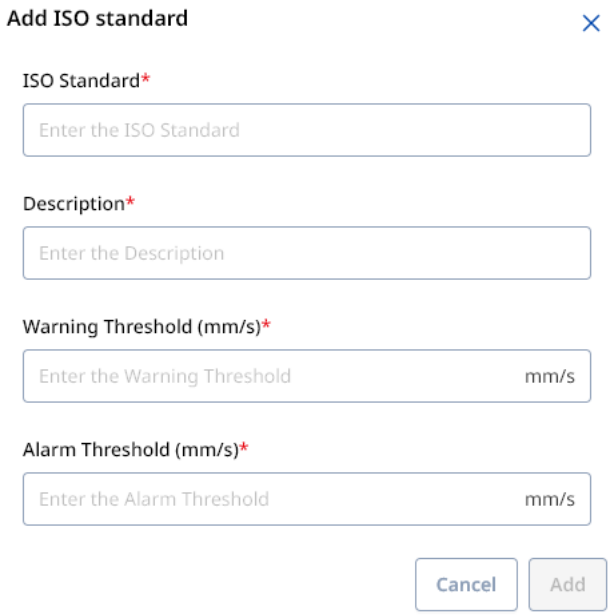


Figure 122: ISO Standard Modal

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

11.4.2 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.

11.4.3 Deleting an ISO Standard

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

11.5 Fault Diagnosis

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

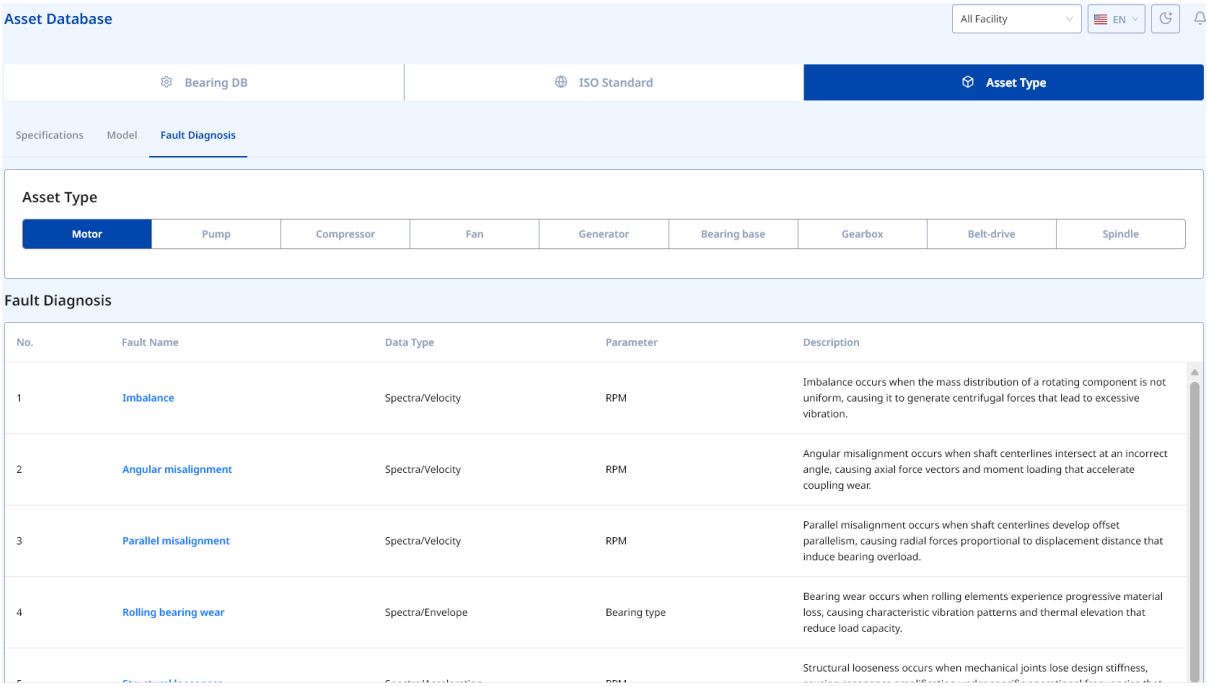


Figure 123: Fault Diagnosis

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

12. Troubleshooting

12.1 Sensor Issues

12.1.1 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.

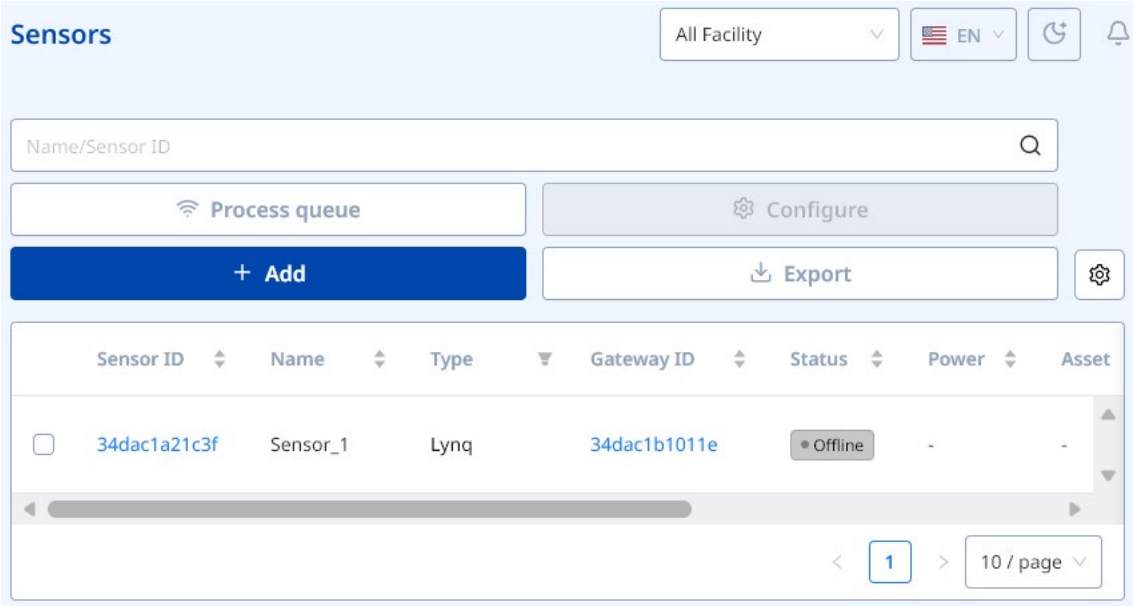


Figure 124: Sensor Offline

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

12.2 Gateway Issues

12.2.1 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.

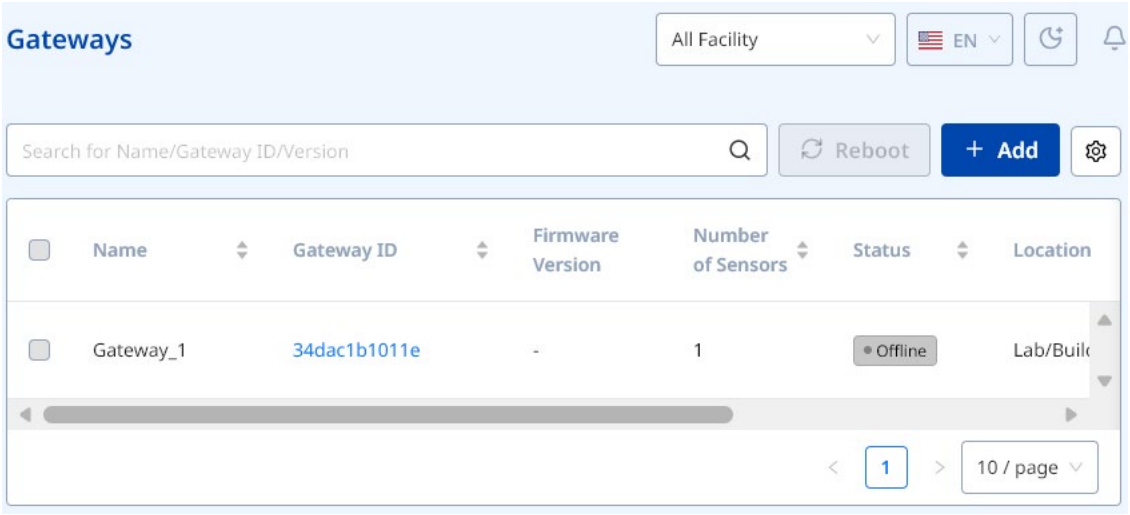


Figure 125: Gateway Offline

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

12.3 Dashboard Issues

12.3.1 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.

12.3.2 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).

12.4 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