GoodLinker Cloud Field View (Web) User Manual

Chapter 1 | Overview

1.1 Service Name and Applicable Versions

Name: **GoodLinker Cloud Field View** (the GoodLinker cloud platform) Interface: Web Models: `GFV-S series`, `GFV-P series` System version: Web `v.3.11.2`

1.2 Service Positioning and Functional Overview

GoodLinker Cloud Field View (hereinafter referred to as **Cloud Field View**) is a real-time factory data monitoring and anomaly analysis platform designed for small and medium manufacturers. It integrates field sensor data with cloud services, helping managers grasp production status in real time, resolve anomalies, and improve operational efficiency.

The core function modules include:

- **Sensor data visualization** (General Chart)
- **Alarm statistics and tracking** (Alarm Analysis)
- **Custom report export** (Excel Template)
- **Smart weekly report push** (AI Weekly Report)
- **Device status and data connection monitoring**
- **User and permission management**

1.3 System Highlights

- **Modular design**: enable different modules by role and need (e.g., charts, alarms, weekly reports)
- **Automated push**: AI automatically sends an anomaly report weekly, reducing manual aggregation work
- **Strong data integration**: supports multiple sensor protocols and flexible group settings
- **Stable cloud architecture**: real-time data upload, supporting cross-device queries
- **Clear permission tiers**: supports group management and role distinction (Owner / Administrator / User)
- **Flexible documents and reports**: supports custom Excel templates, time ranges, and format settings

1.4 Application Scenarios

- **Process anomaly investigation**: use the Alarm Analysis module to observe anomaly trends of specific equipment and quickly pinpoint root causes.
- **Pre-production-review preparation**: use the AI Weekly Report to organize recent anomaly trigger data and improvement suggestions.
- **ISO quality audit**: use the AI Weekly Report and custom Excel reports as quality management evidence.
- **Multi-site synchronized monitoring**: use device status and General Chart to view real-time data across sites.

1.5 Interface Comparison

Item	Cloud Field View (Web)	Cloud Field View (Mobile APP)
Usage scenario	Control room, manager's desk	On-site inspection, first response to anomalies
Information scope	AI weekly report, historical data, report analysis, device settings	Real-time status, key sensors, alarm notifications
Operating role	Senior managers, IT engineers	Inspection personnel, line supervisors, QA staff
Interaction	Multi-module navigation, large-screen operation	One-handed swiping, simplified visual focus

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Chapter 2 | Login & Account Activation

2.1 Login Entry

Log in to the system via the following URL: `https://warroom.goodlinker.io/login`

2.2 Account Registration Flow

1. Click `Register`
2. Fill in basic information:
    - User email
    - Password (8 characters, alphanumeric mix)

- Confirm password (8 characters, alphanumeric mix)
- Last name
- First name

3. Read and check the "Personal Data Use Notification Statement"
4. Receive and enter the verification code to complete registration

> **NOTE:** If you do not receive the verification code, click `Resend`, or email customer service for assistance.

2.3 Account Activation and Permissions

A. First Login Prompt

After registration, on first login, if you have not joined a company organization, the system shows a prompt; please select the company to log in to.

B. Account Types and Activation

Owner

Must contact the manufacturer's service staff for back-end activation. Please provide:

- Email / username
- Company name
- Tax ID
- Time zone and address
- Contact phone
- Contact email
- The **GoodLinker IIoT Gateway** factory code (ThingName / device serial number) owned by the organization

> **NOTE:** After activation is complete, the manufacturer will notify you by email.

User

You can join a company in the following ways:

- The Owner provides an "organization invitation code"; enter it after logging in to join
- The Owner directly adds your email under `Settings → Company Info`

2.4 Permission and Role Mapping

Role	Visible functions	Invisible functions
System administrator	All	—
General user	Dashboard, reports	System settings

> **NOTE:** If an account has not joined a company organization, no function modules will be available.

Chapter 3 | Home & Dashboard Overview

3.1 Home Screen Description

After logging in to **GoodLinker Cloud Field View (hereinafter Cloud Field View)**, the home interface comprises three areas:

A. Left Function Menu

- **Boards**
  - `Custom Home` (Chapter 4)
  - `Dashboard` (Chapter 3)
- **Data**
  - `Data Center` (Chapter 5)
- **Reports**
  - `General Chart` (Chapter 6)
  - `Alarm Analysis` (Chapter 7)
  - `Excel Template` (Chapter 8)
- **Settings**
  - `Device Info` (Chapter 9)
  - `Tag Setting` (Chapter 10)
  - `Company Info` (Chapter 11)
  - `User Info` (Chapter 12)

B. Top Information Bar

- Organization name (e.g., ABC Co., Ltd., based on the Gateway setting)
- Current account status (e.g., Premium, based on subscription permissions)
- System time display (default time zone **UTC+8**)

C. Top-Right Function Bar (Left to Right)

- `Operation guide link`
- `Switch Company` (for accounts with multi-organization permissions)
- `Full-screen mode`
- `Language switch` (supports: Chinese / English / Vietnamese)
- `Logout`

3.2 Dashboard

The home screen displays the `Dashboard` function page by default, used to monitor in real time the sensor data received by all Gateways.

A. Data Presentation

- **Top-left function bar**
  - `Functional View`: classifies by sensor type (e.g., light, analog, status)
  - `Group View`: classifies and sorts by group settings
- **Update frequency**: the browser updates automatically every minute; the interface shows the time since the last update
- **Top-right settings**
  - Number of cards displayed per page (adjustable)
  - `Wrap by count`: when enabled, the screen auto-arranges

> **NOTE:** `Wrap by count` avoids card crowding, suitable for large screens or data-dense scenarios.

B. Sensor Display Types

Dashboard cards display in different formats by sensor type. Supported types:

Type	Example content	Unit / format	Description
Lamp	Utilization rate, run rate	% (0–100)	Shows the proportion of a specific status (e.g., equipment on) via lights
Detector	Start status, completion trigger	ON / OFF	Shows switch-type sensor status, e.g., whether a process completed
Counter	Count	times	Counts cumulative discrete events, e.g., packaging count, finished-product count
Timer	Process time	seconds, minutes	Shows duration data, can auto-reset or accumulate
Analog	Voltage, frequency, temperature, humidity, power	V, Hz, °C, RH%, kWh, etc.	Shows continuous sensor values, for monitoring physical/chemical quantities

> **NOTE:** Each sensor format corresponds to a physical equipment type and data format; select the appropriate sensor type in the Gateway Engineering Mode based on the actual application.

C. Display Logic and Operation Notes

- Each card corresponds to one sensor data point
- The sensor name and unit are displayed automatically based on the Gateway settings
- Anomalous data is marked with a flashing red card to help users identify it quickly

> **NOTE:** A **yellow card** means the value has exceeded the pre-alert threshold; check the sensor or field equipment immediately. **NOTE:** A **red card** means the value has exceeded the alarm threshold; handle the sensor or field equipment anomaly immediately.

> **NOTE:** The **Dashboard** is a real-time data display function. To query historical trends, use `Data Center` or the `report tools`.

Chapter 4 | Custom Dashboard & Carousel Mode

4.1 Scenarios and Function Description

The `Custom Home` function builds a dedicated visualization dashboard page, freely arranging modules, pages, and carousels based on enterprise field needs. Common scenarios:

- Displaying real-time data and charts on large screens (e.g., meeting rooms, control rooms)
- Defining the sensor information shown on each page by process or department
- Building dedicated data pages for different roles (e.g., management, engineers)

Each account owner can create multiple data display pages, supporting carousels, and can export config files to share with other users in the same organization.

4.2 Interface and Functions

The top-right function bar of Custom Home (left to right) includes:

- `Carousel mode toggle`
- `Upload / download config file`
- `Add page`
- `Page management` (edit / delete)

4.3 Editing Flow

A. Enter the Custom Home Function

Click `Custom Home` in the left menu. If there are no pages, the system shows a "No pages" prompt. Click `Add page` to start.

B. Add a Page

- Click the `Add page` button to create a new page.
- The maximum number of pages per account:

Plan version	Max. pages
Basic	3 pages
Premium	10 pages

C. Add a Section (Area)

- Click `Add area`; the system generates a resizable blank section.
- Drag with the mouse to adjust size and arrangement.
- Each page can freely configure one or more sections to host data modules.

D. Add Modules (Data Display Components)

Each section can contain one or more modules to display real-time data or statistical charts.

Click `Add module` at the top right of a section; three module categories appear on the right:

Power Module

Shows power-related information, e.g.:

- Real-time voltage and current
- Total power consumption
- Demand changes and three-tier electricity-price usage status

Duty Module

Shows real-time sensor data, e.g., temperature, weight, speed, rotation speed, humidity.

Today's Change Module

Presents trend charts of sensor data, supporting the following visualization formats:

- Line chart (continuous value trends)
- Bar chart (statistical values)
- Stacked chart (comparison of multiple data series)

> **NOTE:** After inserting a module, select the sensor and display format per the system prompt. The system provides a preview to confirm the content meets expectations.

4.4 Carousel Setting

Enable carousel mode as follows:

- Turn on the `Carousel mode` switch in the top menu.
- Set the display time per page (e.g., switch every 15 seconds).
- The system automatically cycles through the pages in order.

> **TIP:** Carousel mode is often used on large monitoring screens; separate pages by department or production line to improve readability.

> **NOTE:** A **yellow card** means the value has exceeded the pre-alert threshold; check the sensor or field equipment immediately. **NOTE:** A **red card** means the value has exceeded the alarm threshold; handle the anomaly immediately and notify maintenance personnel.

4.5 Config File Import and Sharing

The system supports exporting and uploading `.txt` config files, for scenarios such as:

- Shared layout settings among multiple users
- Quickly copying to a new device
- Periodically backing up the layout

A. How to Use

- Click `Download config file`: saves the current page and module configuration as a `.txt` file.
- Click `Upload config file`: imports an existing config file to quickly apply to other accounts.

> **TIP:** Before building multi-page layouts, plan sensor naming and tag settings to speed up module selection and classification.

Chapter 5 | Data Center

5.1 Scenarios and Function Description

`Data Center` is the core module in Cloud Field View for querying, browsing, and downloading historical sensor data. Applicable scenarios include:

- Reviewing historical equipment operation data and trends
- Analyzing the correlation between anomalous data and equipment status
- Exporting Excel reports for organization and internal reporting

Users can view data by "tag classification" or "device classification," and customize the query time range and data granularity (3 min / 30 min / 1 hour). Alarm statistics viewing and chart upper/lower limit settings are also supported.

5.2 Interface and Functions

The overall screen is divided into four areas:

A. Data Block Selection (Top Left)

- By default, grouped by "sensor tag"
- Each tag group shows summary statistics of its corresponding sensors

B. Sensor List Table (Middle)

Each row corresponds to one sensor; the columns are:

Column	Description
Type	Sensor data type (five sensor types)
Sensor name	User-defined name
Value 1–6	Shows the corresponding field content for different sensors ` ` e.g., Lamp type shows 6 color values; Analog type shows statistics (AVG, MAX, MIN, SD, MED)
Alarm	Number of alarm triggers that day
Chart	Click the icon to expand the sensor trend chart

> **NOTE:** Five sensor types are supported: `Lamp` (indicator-light status), `Detector` (switch status), `Counter` (counter), `Timer` (timer), `Analog` (numeric); each presents a different value format based on its data nature.

C. Query and Download Area (Right)

- `Data time`: select single-day, multi-day, or yearly data
- `Search sensor`: supports fuzzy search
- `Excel download`: export `.xlsx` files by `tag` or `device`

5.3 Historical Data Query Flow

A. Select Time Range

Click the `Data time` field at the top right to switch among three modes:

- Single-day data (default: the previous day)

- Multi-day data (up to 70 days)
- Yearly aggregated data

B. Select a Block or Tag

- The blue buttons at the top are tag groups (e.g., "Printing Area," "Machine No.6")
- After clicking, all sensor statistics under that group are shown below

C. View Sensor Data

Sensor statistics columns:

- `AVG` (Average): the average value within the time range
- `MAX` (Maximum): the maximum observed value
- `MIN` (Minimum): the minimum observed value
- `SD` (Standard Deviation): the dispersion of the data
- `MED` (Median): the median within the time range

> **NOTE:** For switch-type sensors, statistics such as max/min do not apply, and the system automatically skips their display.

5.4 Chart Display and Upper/Lower Limit Settings

How to Use

1. Click the `View chart` icon (magnifier) to the right of a sensor to expand its trend chart page
2. The top area shows the day's statistics (AVG / MAX / MIN / SD / MED)
3. The line chart below: the horizontal axis is time, the vertical axis is value
4. Click `Chart Settings` at the top right to manually enter the minimum and maximum display values

> **TIP:** If a sensor's value range is small (e.g., fluctuating only within ±2%), adjust the upper/lower limits to scale the chart range for clearer identification of anomalies or small changes.

> **NOTE:** Setting upper/lower limits prevents the chart from being flattened due to an overly large default scale, which is especially useful for observing precision process parameters (e.g., pressure, voltage, flow rate).

5.5 Alarm Records and Analysis Overview

A. Individual Sensor Alarm Details

- Click the `Alarm field` in a sensor's row to open its alarm record window
- Items shown include:
  - Time of occurrence
  - Detected value
  - Duration

B. Block Statistics Overview

- Click `Total Alarm Statistics` at the top right to enter the block analysis page
- The system presents the alarm event distribution of all sensors by time interval (e.g., hourly)

> **NOTE:** Alarm naming and trigger logic follow the built-in setting rules of the Gateway.

5.6 Excel Data Download

A. How to Use

1. Click the export function at the bottom right and select one of the following:
   - `Download by tag`: downloads sensor data by tag classification
   - `Download by device`: exports data by Gateway classification
2. Select the time range to download; the system automatically generates an `.xlsx` file in the following format:
   - Each sensor shows up to `480 records` per day (one every 3 minutes)
   - Sheet 1: daily sensor statistics (AVG / MAX / MIN / SD / MED)
   - Sheet 2: alarm event details (time of occurrence, trigger value, duration)

> **TIP:** After downloading, use the company's internal Excel template for statistics or charting analysis.

Chapter 6 | General Chart View

6.1 Scenarios and Function Description

`General Chart` is an advanced visualization analysis module that compares the trends of multiple sensors across different time periods and observes correlations, suitable for scenarios needing horizontal comparison or cross-day tracking.

Common scenarios:

- Comparing the data trends of multiple sensors (e.g., front vs. rear temperature/humidity sensor differences)
- Viewing the value fluctuation of the same sensor on different dates
- Analyzing sensor value changes and percentage differences for precise comparison
- After enabling AI analysis, automatically generating trend summaries and anomaly detection reports for quick reporting and tracking

> **NOTE:** `AI Analysis` is a feature limited to premium-licensed users and requires a valid AI credit quota.

6.2 Interface Description

Top Control Bar (Left to Right)

- `Edit`: each chart can include up to 5 sensors
- `Time range`: select `1 day`, `7 days`, `30 days`, `1 year`, or `custom days` to query data
- `Link dates`: controls whether multiple sensor charts display the same date range synchronously
- `Split display / Merge display`: toggles whether sensors share the coordinate axis
- `Dark chart / Light chart`: switches the background style for easier reading and display in different environments

Top-Right Controls (Left to Right)

- `Add chart`: creates a new chart and selects the sensor source
- `Edit chart name`: customizes the chart title (recommended to include purpose, area, or equipment identifier)
- `Delete chart`: removes the current chart component

> ✅ **Recommendation:** When naming an analysis chart, include the area/equipment name (e.g., "Environment | Area A Front-Rear Temp/Humidity Analysis") to aid data tracking and consistent team communication.

> **NOTE:** The General Chart is especially suited for cross-sensor horizontal analysis, effectively helping to judge correlations and anomaly sources. It is recommended to create observation charts weekly as a trend record.

6.3 Operation Flow and Application

A. Create a New Chart

1. Click the `+` button at the top right to add a chart
2. Enter a chart name (recommended to include the site or analysis purpose)
3. Select the sensors to add (up to 5, can span `tags` or `device groups`)

> **NOTE:** Each chart can be used for one-time analysis or periodic tracking; name by purpose for easy identification.

B. Edit Chart Content

- Browse from the sensor list on the left, or type a sensor name to search quickly
- After adding sensors, drag to reorder or click `Delete` in the right area
- Each sensor can independently set the statistic type to display (e.g., average, median, max, standard deviation)

> **TIP:** When observing sensor data of different natures (e.g., current and temperature), use the corresponding statistic items to improve interpretation efficiency.

C. Adjust Dates and Display

- Click the `Date field` to the right of each sensor to set its data source date individually
- After checking `Link dates`, all sensor data updates synchronously to the same date range

> **NOTE:**
>
> - To observe the **change trend of the same sensor on different days**, it is recommended to **uncheck** `Link dates`

> - To compare the **behavior differences of different sensors in the same period**, it is recommended to **enable** `Link dates`

D. Chart Display Control

- `Split display`: each sensor shows on an independent Y-axis, suitable for data with large differences in unit or magnitude (e.g., pressure vs. temperature)
- `Merge display`: all sensors share a Y-axis, suitable for same-unit data trend comparison (e.g., 3 current sensors)
- `Dark chart / Light chart`: switch the chart background color to choose the reading mode suited to the actual environment

> **TIP:** For report previews or projection, dark mode helps reduce glare and improve visibility.

E. Display Adjustment and Chart Settings

Click `Show chart settings` at the top right to expand advanced options, including:

- Assign each sensor a statistic type to display (e.g., average, median, max, standard deviation)
- Set the query date range of each sensor individually (can span days)
- Manually enter the Y-axis upper/lower limits for each sensor to focus on a target value range
- Click a sensor name to toggle whether its curve is shown/hidden in the chart (supports real-time comparison and reduces visual clutter)

> **NOTE:** This settings area is especially suited for:
>
> - **Cross-day trend comparison**: e.g., whether the same sensor's anomalous behavior is consistent on different dates
> - **Anomaly magnification**: narrow the Y-axis display range to magnify small changes
> - **Visual noise filtering**: temporarily hide some sensors to focus on key curves

6.4 Real-Time Statistics Comparison

The right area automatically shows real-time statistics of each sensor in the current chart, including:

- The average value of each sensor (auto-updated by the selected statistic type)
- The value change (increase or decrease) and variance percentage compared with the previous day's data

- A pie chart showing each sensor's proportion of the total, to quickly grasp the main influencing source

> **NOTE:** When the user changes the date range or switches sensors, the right-side statistics update in real time without manual refresh. This helps quickly identify anomalous fluctuations, track trend changes, and interpret primary/secondary variance factors.

> **TIP:** Add the main sensors of the same area to the chart for synchronized observation, combined with statistics comparison to judge whether there are stage anomalies or trend turning points.

6.5 AI Analysis (GenAIoT Module)

A. Function Overview

`AI Analysis (GenAIoT)` is the advanced data-intelligence interpretation module provided by GoodLinker Cloud Field View. Integrating the AWS Bedrock large language model, it helps users interpret data trends, detect anomalies, and generate easy-to-read reports via natural-language prompts.

Main functions include:

- **Trend explanation**: automatically analyzes time periods of rising/falling data and turning points
- **Anomaly detection**: identifies anomalous events such as spikes, delayed responses, and irregular fluctuations
- **Semantic report**: users can input custom analysis questions, e.g., "Was there any abnormal power fluctuation during this period?"

> **NOTE:** Natural-language prompts are supported; enter keywords (sensor name, time period, specific question) as the focus of the analysis.

B. Operation Flow

1. Click the `Generate Analysis` button at the bottom right to open the AI analysis window
2. Select the date to analyze (single day only)
3. Enter the question to explore (optional; can be left blank to use the default analysis)
4. Click `Analyze`; the system begins processing and produces results within a few seconds

> **NOTE:** The analysis target is the sensor data selected in the chart; it is recommended to set up

> the sensor combination in `General Chart` before running the analysis.

C. Result Presentation

The AI analysis results appear in the `Data Report` area on the right, presented in sections by topic:

1. **Trend analysis**: summarizes the main change periods, turning-point times, and trend direction
2. **Anomaly summary**: lists the time points of anomalous values, deviation, and possible causes
3. **Recommendation section**: provides specific operational suggestions or improvement directions based on observations
4. **Summary section**: consolidates the overall analysis focus and anomalous trends to watch

> **TIP:** When using with `General Chart`, observe key sensors first, then use the AI function for summary analysis to improve report accuracy and practical value.

D. Additional Notes

- If no prompt question is entered, the system runs the default analysis flow and produces the standard report with the four sections above
- Analysis is by day (one report per day); a cross-day range cannot be aggregated
- The sensor data interval is one record every 30 minutes, for 48 records analyzed per day

> **NOTE:** Using the AI analysis function consumes credits. Premium accounts have a fixed monthly credit quota; the credit balance is shown at the bottom right—watch the remaining quota to avoid affecting use.

6.6 AI Weekly Report (GenAIoT Module)

A. Function Overview

`AI Weekly Report` is an automatic push function provided by the GenAIoT module. Premium-licensed account users automatically receive a platform-generated "AI Weekly Anomaly Analysis Report" every Monday morning.

This report consolidates the past 7 days of alarm trigger statistics, sensor behavior, and AI model analysis results, helping factory managers quickly grasp site anomaly trends, potential risks, and maintenance priorities.

> **NOTE:** This function requires no manual activation; once the account has a "premium license" and "notification permission," the system sends the weekly report automatically.

B. Delivery

Item	Description
Delivery time	Every Monday 06:00–07:00 (automatically sent by the system)
Recipients	Users with a "premium account" and "notification permission" (e.g., managers)
Sender email	`contact.web@goodlinker.io`
Email subject format	`[Warroom] 每週 sensor alarm 統計報`

C. Weekly Report Structure

The report uses a fixed template format for unified cross-site reading and comparison. It is divided into three parts:

1. **Period and Site Title**
   - Shows the data statistics period (e.g., 2025/05/26–2025/06/01) and the source factory site name
2. **Anomalous Sensor Summary Table**
   - Consolidates the sensor `ID`, `alias`, `group`, `triggered rule name`, and `trigger count`
   - Quickly identifies the sensors with the most anomalies and the main anomaly types
3. **AI Auto-Analysis Sections (8 items)**
   - Most common alarm type
   - Time pattern (if the data includes timestamps)
   - Group correlation analysis
   - Most frequently triggered rule
   - Sensor type proportion statistics
   - Possible production efficiency impact analysis
   - Week-over-week anomaly change trend
   - AI improvement suggestions (presented as bullet points)

> **NOTE:** The AI section content is automatically inferred by a statistical model and is for reference only. For in-depth diagnosis, use the `Alarm Analysis` function to compare against the raw data.

D. Usage Recommendations

User role	Application	Action recommendation
Factory owner	Review the overall alarm trend weekly and grasp major anomalies	Schedule weekly-meeting maintenance focuses and anomaly-tracking topics
Engineering supervisor	Prioritize sensor and equipment anomaly investigation by alarm hotspots	Cross-reference the weekly report with maintenance records
QA / audit staff	Track the correlation between anomalies and quality	Include the weekly report in ISO documents and internal audit evidence
Smart manufacturing team	Use as an anomaly input source for AI/automation projects	Compare with alarm-logic design to optimize classification and trigger conditions

E. Notes

> **NOTE:**
>
> - The weekly report content is generated only from the current site settings and data, and **does not include cross-company integrated content**
> - If the account has not enabled "AI license" or "notification permission," the report will not be received
> - All report content is auto-inferred by the system; to confirm anomaly causes, use the `Alarm Analysis` module to query manually

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Chapter 7 | Alarm Analysis

7.1 Scenarios and Function Description

The `Alarm Analysis` module provides statistics of sensor anomaly events across date ranges, helping users quickly review anomaly distribution and analyze trigger frequency and clustering. Common scenarios:

- Quickly finding the sensors and types with the most alarm triggers over the past week
- Analyzing whether anomalies relate to equipment settings, field conditions, or operating behavior
- Serving as anomaly-record evidence for maintenance inspections and quality audits

- Combining color and group classification to judge whether anomalies cluster in a specific area or stage

> **NOTE:** Only sensors with a set "alarm condition" (e.g., upper/lower limit triggers) are counted; those without conditions are not included.

7.2 Interface Description

A. Top Control Bar

- `Alarm time`: select the query date range (default: the last 7 days), with custom start/end dates
- `Submit`: submits the query conditions and refreshes the alarm statistics
- `Data time zone`: the system time base (usually UTC+8)

B. Main Screen Layout

Block	Description
Left | Single-day statistics	Lists sensor alarm records by each day (expandable for daily reports)
Right | Multi-day statistics	Counts the total alarm count and types of sensors over the entire range, with a pie chart and sortable table

> **NOTE:** The bottom of the screen shows the color markers mapped to sensor names, helping to quickly identify each data item on the chart.

7.3 Operation Flow

This module's flow is designed as "filter time range first → review overview → then detailed classification and chart interpretation," helping to clarify when anomalies occurred and their distribution trends.

A. Select Query Range

- Click `Alarm time` to open the date picker, supporting manual start/end dates
- Click `Submit` to apply the range; the system automatically loads new statistics

> **TIP:** To observe anomaly trends, choose a range of "the last 7–14 days."

B. Review the Statistics List

Each sensor statistics item includes:

- `ID / sensor name`: equipment code and custom name
- `Group`: the sensor's area or process tag
- `Trigger`: the anomaly condition description (e.g., temperature too high, completion real-time report)
- `Alarm count`: the number of triggers in the selected range (clickable to sort)

C. Filtering and Focusing

- The top filter can filter by "group" and "trigger type"
- Applicable scenarios:
  - Analyzing only the anomalies in Printing Area B
  - Observing whether the "depth too high" anomaly type clusters in specific equipment

> **TIP:** Combine with the physical area layout diagram to quickly compare anomaly hotspots.

D. View Pie Chart Visualization

The pie chart at the bottom right shows the top 10 sensors with the most anomaly triggers in the selected range:

- Different colors represent different sensor names, mapped to the legend below
- The number is the total anomaly trigger count of that sensor in the selected range
- The proportion size indicates how concentrated the anomaly distribution is, quickly identifying key equipment to watch

> **NOTE:** Click the legend or hover over a pie segment to show detailed name and count information.

E. Additional Notes

- Single-day and multi-day statistics can be referenced together to help discover anomaly trends
- Sensors without alarm conditions do not appear in this module
- It is recommended to combine the `General Chart` module to verify the anomaly time periods and curve behavior changes graphically
- It is recommended to review the multi-day statistics weekly, combined with the `AI Weekly Report` to interpret differences and strengthen correlation analysis

Chapter 8 | Excel Template

8.1 Scenarios and Function Description

The `Excel Template` function helps enterprise users automatically export internal sensor data in their own format and produce standardized reports. Common scenarios:

- Periodically extracting specific sensor statistics (e.g., monthly averages, alarm counts)
- Exporting data forms matching the company's internal format
- Submitting customized reports (e.g., ISO audits, energy reviews)
- Interfacing with the format of ERP / BI systems

> **NOTE:** Templates use variable tags such as `{val-0}` and `{val-1}` to automatically map data fields; the system fills in the corresponding values based on the selected time and sensors, eliminating manual copy-paste and formatting.

8.2 Interface Description

- `Add template`: creates a new blank template (nameable)
- Each template in the list shows the following operations:
  - `Edit`: enters the Google Sheet editor for configuration
  - `Download`: selects time and sensor data for export
  - `Delete`: permanently removes the template

> **TIP:** Avoid special symbols (e.g., `#`, `/`, `@`) in template names; the system automatically blocks names that violate the naming rules.

8.3 Template Creation and Editing Flow

A. Create a New Template

1. Click `Add template` at the top right
2. Enter a template name (special symbols prohibited)
3. Click `Add` to create a blank template

B. Edit Template Content

On the template editing page, customize the export style and field layout:

- The central area is the Excel interface, where you can enter titles, field names, and data formats
- Fields can contain system-supported variable tags, e.g., `{val-0}`, `{val-1}`, substituted in time-series order

C. Insert Sensor Data Fields

Settings in the right toolbar:

- **Select source sensor**: select data sources across devices
- **Component type**: select `continuous data` or `statistic value`
- **Data range**: single-day / multi-day
- **Data type**: e.g., red-light / white-light / blue-light data
- **Data interval**: 3 minutes, 30 minutes, 1 hour
- **Insert direction**: supports `vertical insert` or `horizontal insert`
- **Whether time is included in the table**: choose whether to insert a data-time column

After configuring, click `Show insert range` at the bottom right to preview the fields to be substituted and confirm the format.

8.4 Export and Preview Download

On the "Download" page, the right fields show the sensor and time bound to each variable:

1. Select the corresponding date range
2. Confirm the field mapping is correct
3. Click `Download` to generate the custom Excel report

> **TIP:** During download, the actual values are filled in automatically while retaining the original format and layout design.

8.5 Notes and Recommendations

- To insert multiple sensor data points, reserve appropriate column space to avoid overlap
- Keep template naming and table layout consistent and clear for easy team sharing

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Chapter 9 | Device Info & Disconnection Log

9.1 Function Description

The `Device Info` page lets users view the communication status and disconnection records of each Gateway and its connected field equipment (such as PLCs and sensors), helping to grasp connection stability and troubleshoot anomalies.

Common scenarios:

- Confirming whether the anomaly source is "Gateway offline" or "equipment communication interruption"
- Tracking the time of communication interruptions and whether they auto-recovered
- Analyzing interruption frequency to judge whether it relates to network or equipment faults

> **NOTE:** This page only presents communication status and records; it does not provide reconnect or remote control. To verify data integrity, use the "Data Center" module.

9.2 Interface Description

The screen is divided into two areas:

A. Device Connection Status Area (Home Screen)

- Shows each Gateway's **name** and **factory code (serial number)**
- The current communication status is shown to the left of the icon:
  - `Online` (green circle icon): currently connected normally
  - `Disconnected` (red circle icon): currently lost connection with the system
- Click the `Disconnection Log` button to enter that Gateway's history page

> **NOTE:** The legend at the top right marks the meaning of the status icons, consistent with the system display.

B. Gateway and Equipment Disconnection Details

After entering "Disconnection Log," the screen is divided into left and right columns:

Left | Gateway Disconnection Records

- Lists each connection-status change by time

- Field descriptions:
  - `Status`: connected (green) / disconnected (red)
  - `Time`: time of occurrence (with date, hour, minute, second)
- The system retains records for the last 30 days, supporting paging

> **NOTE:** During a disconnection, the device pauses data upload but continues internal storage. Upon reconnection, it automatically uploads the un-uploaded data.

Right | Field Equipment (PLC / Sensor) Disconnection Records

- Shows the communication anomalies of equipment connected to this Gateway
- Field descriptions:
  - `Protocol`: communication protocol (e.g., TCP)
  - `Alias`: the equipment's IP or identifier
  - `Disconnection time`: the last interruption time (precise to the second)
- No data means there were no communication anomalies in the last 30 days

> **NOTE:** If equipment disconnects frequently, further check wiring, IP configuration, or communication settings.

9.3 Usage Reminders

- It is recommended to review the Device Info page periodically to grasp communication stability and field data collection status
- If the same equipment disconnects repeatedly, prioritize checking:
  - Whether the network cable connectors are loose or interfered with
  - Factors affecting power quality, such as unstable power or temporary restarts
  - Whether there have been recent environment changes (e.g., router replacement, subnet changes)

Chapter 10 | Tag Setting

> **NOTE:** This chapter will be completed in the next version (in planning).

Chapter 11 | Company Info

11.1 Scenarios and Function Description

`Company Info` is a settings page for enterprise management, providing centralized management of company account members, role permissions, tag groups, subscription plans, and AI credit quotas.

Common scenarios:

- Adding or removing internal organization accounts
- Setting each account's role and visible tag groups
- Reviewing the company's current subscription plan and expiration date
- Checking accounts' AI credit usage
- Auditing the distribution of member account roles and permissions

11.2 Member Management

On the `Member Management` tab, you can view the current account list and add members and set roles and tags.

A. Function Description

- Click `Add member` to add a registered email account to the current company organization.
- Each account can have the following fields set:
  - **Tag group**: specifies the data sites the user can see (e.g., "Default," "Printing Line," "Energy Group")
  - **Role permission**: limits the operable function scope (see the table below)
- A `Remove` button to the right of the member list immediately revokes that account's access.

B. Account Role Types

Role	Permission
`Owner`	Highest permission; can perform all operations (including removing other members and adjusting the subscription plan)
`Administrator`	Can add/remove members, download reports, and adjust permission settings
`User`	Can only view authorized data and dashboards; cannot perform any settings or management

> **NOTE:** Each subscription plan includes a "base number of users"; to expand the account quota, contact the manufacturer to purchase additional licenses. **NOTE:** This module is limited to `Owner` and `Administrator` accounts; `User` accounts cannot edit or enter this page.

11.3 Subscription Plan

On the `Subscription Plan` tab, you can view the current subscription content and account license information.

Item	Description
Company name	The registered enterprise name
Current plan	The currently applied plan type (e.g., Standard, Premium)
Base seats	The default number of accounts the plan can use (e.g., 3)
Added seats	The number of additional purchased accounts
Plan start/end date	The subscription start and end dates, shown in Taipei time zone (UTC+8)

11.4 Personal AI Credit Usage

This information is also in the lower area of the `Subscription Plan` tab, showing the current account's AI credit usage.

Description:

- Each account receives `30` AI analysis credits by default per month
- Credits automatically reset to the original quota on the 1st of each month
- Credits are for the account holder only and cannot be transferred, shared, or borrowed

> **NOTE:** For additional usage needs, contact the project window to apply for additional credits.

Chapter 12 | User Info

12.1 Function Description

The `User Info` page lets each logged-in user query their own account activity records, serving as a basis for daily security checks and abnormal-login identification.

Common scenarios:

- Querying recent login times and device information
- Checking for suspicious logins not performed by oneself
- Serving as reference for account security audits or troubleshooting

> **NOTE:** This page only shows records of the **currently logged-in account**, not other company members' information.

12.2 Interface Description

The screen shows a login history table, sorted by login time from newest to oldest. Field descriptions:

Field	Description
Login IP	The source IP address of that login
Login time	The actual system login time (shown in Taipei time zone UTC+8)
Platform	The OS platform used at login (e.g., `OS X`, `Windows 10.0`, `unknown`)
Browser and version	The browser type and version used at login (e.g., `Chrome 136.0.0.0`)

> **TIP:** If abnormal behavior is found, contact the administrator or change the password as soon as possible to ensure account security.

Chapter 13 | Related Documents

This chapter lists other operation guides related to this manual, recommended for reference to fully understand the overall system architecture and operation logic.

- **GoodLinker IIoT Gateway User Manual**
  - For detailed setup and functional description of the Gateway hardware (Device Configuration Manual)
- **GoodLinker Cloud Field View (Web) User Manual**
  - For the back-end cloud management platform, including dashboard, alarm, and reporting operations (Cloud Dashboard Web Manual)
- **GoodLinker Cloud Field View (Mobile APP) User Manual**

- For phone and tablet operation, supporting real-time queries and anomaly notifications (Mobile App Operation Guide)

Chapter 14 | History of Specification

This chapter lists the version evolution of this service's user manual and related functions, helping users understand the product update history.

Version	Release date	Author / Reviewer	Update notes
v1.0.0	2019/11/20	Bruce King	Initial release
v2.0.0	2025/06/03	Bruce King	Full revision: new user manual, chapter restructuring
v3.0.0	2026/06/01	Bruce King	Content update and revision

Chapter 15 | ISV Information

This service is developed by GoodLinker Co., LTD. If you encounter any issues during installation, setup, or use, please contact us through the following:

Item	Information
Company	GoodLinker Co., LTD.
Website	https://goodlinker.io/
Product page	https://www.goodlinker.io/product/bcs-m100
Email	info@goodlinker.io
Phone	+886-2-2599-7987
Address	GoodLinker Co., Ltd. No. 40, Sec. 3, Zhongshan N. Rd., Zhongshan Dist., Taipei City 104327, Taiwan (R.O.C.)

> **TIP:** For more detailed operation instructions, return to the corresponding chapter of this manual, or contact our technical support team for assistance.