



ERM ELECTRONIC SYSTEMS LTD
16 Hasar Shapira st. Rishon Lezion
Israel, 7570418
Email: info@ermtelematics.com
Tel: +972-3-9413313

Wiliot Monitor

User manual

Table of Contents

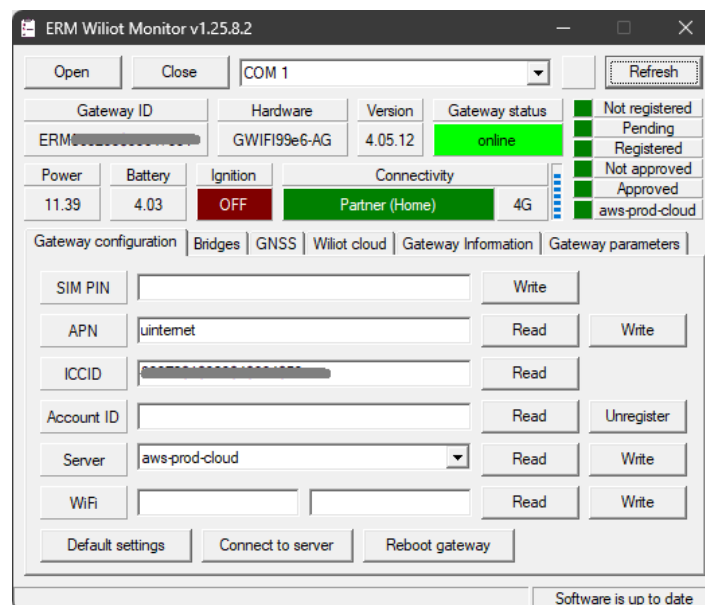
1. Overview.....	4
2. Getting Started.....	5
2.1. Step 1: Connect the Gateway.....	5
2.2. Step 2: Establish Connection.....	5
2.3. Step 3: View Gateway Information.....	5
2.4. Step 4: Configure SIM PIN (If Required).....	5
2.5. Step 5: Configure APN (If Required).....	6
2.6. Step 6: Verify Online Status.....	6
3. Gateway Configuration.....	7
3.1. Configuration Parameters.....	7
3.1.1. SIM PIN.....	7
3.1.2. APN (Access Point Name).....	7
3.1.3. ICCID.....	7
3.1.4. Account ID.....	7
3.1.5. Server.....	7
3.1.6. WiFi (TagLINK Combo Models Only).....	8
3.2. Action Buttons.....	9
3.2.1. Unregister.....	9
3.2.2. Default Settings.....	9
3.2.3. Connect to Server.....	9
3.2.4. Reboot Gateway.....	9
3.3. Gateway Status Reference.....	10
3.3.1. Registration Flow.....	10
3.3.2. Status Descriptions.....	11
3.4. Troubleshooting Registration Issues.....	12
3.4.1. Gateway Shows “Not Approved” or “Not Registered”	12
4. Best Practices.....	13
4.1. Standard Operation.....	13
4.2. Configuration Guidelines.....	13
4.3. Replacing a gateway.....	13
5. Advanced Features.....	14
5.1. Bridges Tab.....	14
5.1.1. Overview.....	14
5.1.2. Features.....	14
Monitor Bridges.....	14
Bridge List Information.....	14
Distance Controls.....	14
Blink Function.....	14
5.2. GNSS Tab.....	15
5.2.1. Overview.....	15
5.2.2. Features.....	15
Monitor GNSS.....	15
Display Information.....	15
5.3. Wiliot Cloud Tab.....	16
5.3.1. Overview.....	16
5.3.2. Account Management.....	16
Current Account Display.....	16
Available Actions.....	16
5.3.3. Adding a New Account.....	16

1. Overview

The **ERM Wiliot Monitor** is a configuration / diagnostic tool for ERM's **TagLINK Gateway**.

These gateways collect data from nearby **TagLINK Bridge** devices and transmit it to the Wiliot cloud.

This software allows you to configure gateway settings, monitor status, and troubleshoot registration issues.



2. Getting Started

2.1. Step 1: Connect the Gateway

1. Connect the gateway to your computer using the provided USB adapter

Note: The USB adapter is not designed to power the gateway for long periods of time, it should only be used for configuration. If continuous power is needed, a 12V power supply must be connected in parallel.

2. Launch the **ERM Wiliot Monitor** software

2.2. Step 2: Establish Connection

1. Select the gateway's COM port from the dropdown menu at the top
2. Click "**Open**" to connect

2.3. Step 3: View Gateway Information

Once connected, the gateway details will appear on the right side:

- Gateway ID
- Hardware model
- Software version
- Current status
- Power, Battery, Ignition, and Connectivity indicators

2.4. Step 4: Configure SIM PIN (If Required)

Only needed if your SIM card is PIN-protected:

1. Go to the Gateway configuration tab
2. Enter your PIN code in the **SIM PIN** field
3. Click "**Write**"

Note: The PIN field is write-only for security purposes

2.5. Step 5: Configure APN (If Required)

This is usually automatically detected. Manual configuration only needed for virtual carriers or when the detected APN is incorrect.

1. In the APN field, click “**Read**” to check if the APN is already configured
2. If the APN is missing or incorrect:
 - Enter the correct APN value
 - Click “**Write**”

2.6. Step 6: Verify Online Status

Monitor the gateway status as it progresses:

Not registered → Reg. pending → Registered → Approved → Online

When status displays “**Online**”, the gateway is fully operational.

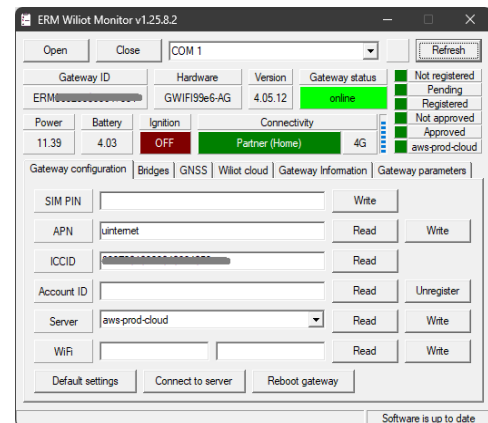
3. Gateway Configuration

3.1. Configuration Parameters

3.1.1. SIM PIN

Enter the PIN code if your SIM card requires PIN authentication. This field is write-only for security - the PIN cannot be read back after saving.

Enter the PIN and click **“Write”** to save.



3.1.2. APN (Access Point Name)

Configures cellular network access for the gateway. In most cases, the gateway automatically detects the correct APN. Manual configuration is only required when using carriers where auto-detection fails (typically virtual MVNOs).

Usage:

- Click **“Read”** to view the current APN
- Enter the APN manually and click **“Write”** if needed

3.1.3. ICCID

Displays the SIM card identifier. Click **“Read”** to retrieve the ICCID.

3.1.4. Account ID

Shows which Wiliot cloud account this gateway is registered to. Click **“Read”** to view the current account association.

3.1.5. Server

Selects which Wiliot server the gateway connects to. The default is the production server (**aws-prod-cloud**). Only change this setting when directed to use a test server for specific purposes.

Usage:

- Click **“Read”** to view the current server
- Select from the dropdown and click **“Write”** to change

3.1.6. WiFi (TagLINK Combo Models Only)

Configures WiFi connectivity for gateway models that use WiFi instead of cellular. The SSID can be read and modified, while the password is write-only for security.

Usage:

- Click “**Read**” to view the current SSID
- Enter both SSID and password, then click “**Write**” to configure

3.2. Action Buttons

3.2.1. Unregister

Clears the current registration and restarts the registration process. Use this when the gateway shows “**Not approved**” status or when registration fails.

Note: The gateway automatically attempts re-registrations. This process is needed only when manual interventions is required.

3.2.2. Default Settings

Restores all configuration to factory defaults and resets registration status.

Use this when moving the gateway to a new installation or customer.

3.2.3. Connect to Server

Forces an immediate connection attempt.

Use this when the gateway is in power save mode and you need immediate connectivity.

3.2.4. Reboot Gateway

Restarts the gateway. Use for diagnostic or testing purposes.

3.3. Gateway Status Reference

3.3.1. Registration Flow

The gateway follows this registration sequence:

1. **Not registered** → Initial state
2. **Reg. pending** → Registration in progress
3. **Registered** → Successfully registered
4. **Approved** → Cloud has approved the gateway

Note: In some cases, specifically when the gateway was already registered but its token expired, or it was reset to defaults while the cloud account was still active, the gateway will not be approved by the cloud (will show **Not approved**). In these cases, the gateway must be re-registered on the cloud before re-registration will be successful.

5. **Online** → Gateway is connected and operational

3.3.2. Status Descriptions

- Normal registration:
 - **Not registered:** Gateway has not been registered or registration was cleared
 - **Reg. pending:** Registration process is currently in progress
 - **Registered:** Gateway is registered and awaiting cloud approval
 - **Approved:** Gateway has been approved by the cloud
 - **Online:** Gateway is fully operational and connected
- Special cases:
 - **Not approved:** Registration failed, typically due to token expiration or cloud-side issues
 - **Refresh token:** Authentication token refresh in progress
 - **Token expired:** Authentication token has expired
 - **Unknown time:** The gateway's clock is not set
Note: The gateway attempts to automatically configure its clock by various methods. This state will resolve itself automatically, unless the cellular network is not available.
 - **Bad network:** Network connectivity issues detected

3.4. Troubleshooting Registration Issues

3.4.1. Gateway Shows “Not Approved” or “Not Registered”

Common Cause: Token expiration or cloud-side registration issues

Resolution Steps:

1. Re-register the gateway on the cloud side first
2. Allow the gateway to attempt automatic re-registration
3. If you do not want to wait for automatic re-registration, click the “Unregister” button, this clears the current registration and restarts the registration flow

4. Best Practices

4.1. *Standard Operation*

In most cases, no configuration is required. The gateway auto-configures upon connection. Simply connect, open, and verify the status shows “**Online**”.

4.2. *Configuration Guidelines*

- **SIM PIN:** Only configure if your SIM cards require PIN authentication
- **APN:** Only configure manually when using carriers that require it
- **Server:** Only change when specifically directed for testing purposes

4.3. *Replacing a gateway*

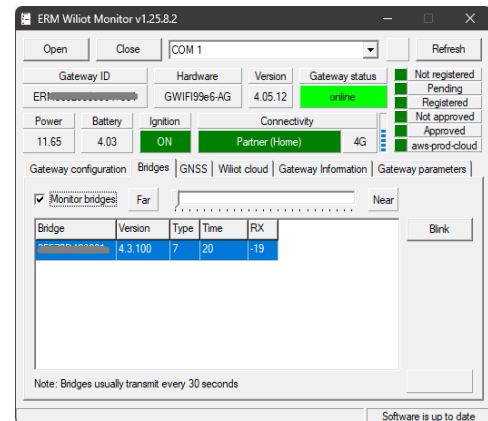
Use “**Default settings**” to clear all configuration before moving a gateway to a new location. This ensures a clean setup at the new installation.

5. Advanced Features

5.1. Bridges Tab

5.1.1. Overview

This tab monitors **TagLINK Bridge** devices near the connected gateway.



5.1.2. Features

Monitor Bridges

Enable this checkbox to activate bridge monitoring. The list displays all bridges detected within range.

Bridge List Information

- **Bridge:** Bridge identifier
- **Version:** Firmware version
- **Type:** Bridge model type
- **Time:** Number of seconds since last reception
- **RX:** Reception signal level

Distance Controls

Use the Far/Near slider to adjust the detection range for bridge monitoring.

Blink Function

Select a bridge from the list and click “**Blink**” to make the device’s indicator lights flash. This helps physically identify specific bridge devices.

Note: Bridges typically transmit every 30 seconds.

5.2. GNSS Tab

5.2.1. Overview

This tab monitors GPS/GNSS location data. The gateway automatically attaches this location information to all transmitted data, enabling location-based tracking and analytics.

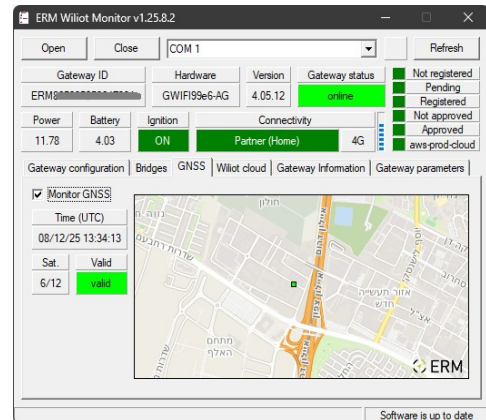
5.2.2. Features

Monitor GNSS

Enable this checkbox to view GNSS data.

Display Information

- **Time:** Current time in UTC
- **Sat.:** Number of satellites in view
- **Valid:** GPS fix status
- **Map:** Visual display of gateway location



5.3. Wiliot Cloud Tab

5.3.1. Overview

This tab manages cloud account associations and gateway registrations.

5.3.2. Account Management

Current Account Display

Shows the currently associated Wiliot cloud account with connection status indicator (green when active).

Available Actions

- **Auto Register:** Enable automatic registration of new gateways when connected to the Wiliot Monitor software
- **Register GW Manually:** Register the gateway to the selected account
- **Delete GW:** Remove the gateway from the cloud account
- **Get Summary:** Retrieves account statistics, used to verify the credentials work
- **Remove:** Remove account association from local configuration

5.3.3. Adding a New Account

Located in the “**Add account**” section:

1. **Account:** Enter your Wiliot Account ID (e.g., **123456789**)
2. **Name:** Optional, enter a descriptive name for the account (e.g., “**My account**”)
3. **Key:** Enter an **Edge Management** security key (from Wiliot platform, go to Account Management, Security, click on Add New).
4. Click “**Add / Update**” to save

