

# Instruction Manual of RUGON

Version 1.4 (25 March 2026)



## What is RUGON?

RUGON stands for **Real-time Ubiquitous Ground-shaking Observation Network**, and the pronunciation in Thai is “รู๊ก่อน”.

RUGON is an acceleration sensor tightly integrated with an onboard processor and a 4G module, providing nine years of IoT cellular data. It works as a standalone device or can be nested with other RUGON units to measure ground and structural vibrations.

RUGON Co.,Ltd. is establishing an infrastructure of approximately 100 sensors deployed across Thailand to detect earthquakes and provide earthquake early warning.

## Motto

“Sense then Share” reflects RUGON's design concept. The hardware and firmware are designed to sense and process data, and then transmit it to the cloud server as soon as possible. Then users will be alerted.

## Features

- Earthquake Early Warning based on approximately 100 ground stations
- Live ShakeMap to track earthquake intensity from source to site in real-time
- Standalone or nested for structural monitoring to assess structural safety right after shaking.
- Able to automate alarm or shutdown systems.
- Based on sensitive low-noise sensor
- Calibrated by National Institute of Metrology (Thailand)
- 4G IoT data plan (9 years) is included.
- Wi-Fi access for configuration and monitoring
- App-centric: notifications and information are linked from a single app, supporting both Android and iOS.

## **Terms and Conditions**

- Data from the sensor installed on the ground floor is shared anonymously for ShakeMap and Earthquake Early Warning. The cell tower location will be used. This feature will benefit the community overall. The shared data includes the maximum acceleration and the acceleration at alert thresholds. The waveform data will not be shared.
- 4G IoT data is included. No further payment for communication or cloud services is required by the end user. RUGON Co., Ltd. covers the communication and cloud service costs for 9 years.
- The SIM card is locked to each device. It shall not be used outside the device.

If Terms and Conditions are unacceptable, the user shall return the device for a full refund within two weeks after the purchase.

## **Warranty**

The product's warranty period is 2 years. The device will be replaced or repaired free of charge if it is damaged by normal use during the warranty period. The included power supply shall be used at all times. The warranty does not cover damage caused by the use of other power supply units.

## **Registration**

Registration is required to provide continuous updates to the user. Follow the link for registration.



## Installation

The sensor comes with a bracket that can be mounted on the wall or the floor slab. For the wall mount, the sensor should be mounted on a masonry wall within 0.50 m from the floor. See the following figures for a typical installation.



## Configuration and Use

### 1. App and notifications

#### 1.1 Install ntfy from this link.



#### 1.2. Subscribe to Topic: S2XXXXX

See S/N on the side of RUGON

#### 1.3. Power on RUGON

You will receive a notification when the device boots up. When the device detects vibration, it sends a notification. See the following screenshots.

### Notifications

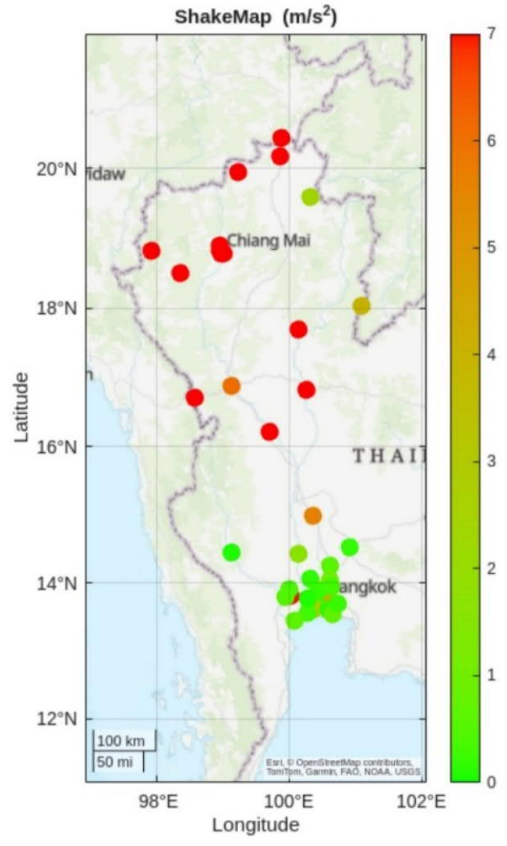
ShakeTest2

12/8/25 11:11 AM  
Waveform data from 3F (S250003) is available now.  
สามารถดูข้อมูลการสั่นสะเทือนของ 3F (S250003) ได้แล้ว  
[VIEW](#) [DOWNLOAD](#) [EMAIL](#) ✓

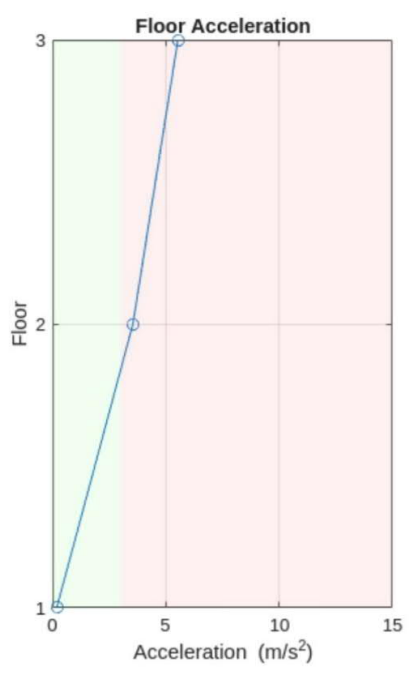
12/8/25 11:10 AM  
Max horizontal acceleration at 3F was 7.40 m/s<sup>2</sup>. No further shaking was detected in the past minute.  
การสั่นสะเทือนได้สิ้นสุดแล้ว เกิดความเร่งสูงสุด 7.40 m/s<sup>2</sup> ที่ 3F  
[SUMMARY](#)

12/8/25 11:10 AM  
⚠ Strong shaking was detected at 3F. Seek shelter around you.  
ตรวจพบการสั่นสะเทือนที่ 3F โปรดหาที่หลบภัยใกล้ตัว  
[LIVE SHAKEMAP](#)

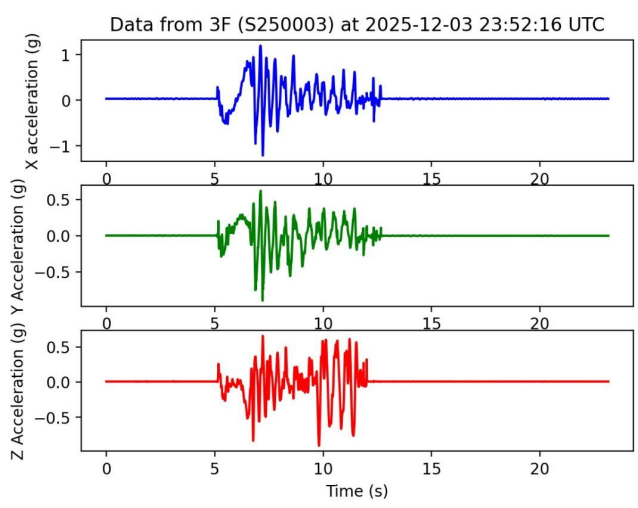
### Live ShakeMap



### Floor Acceleration



### Waveform Plot

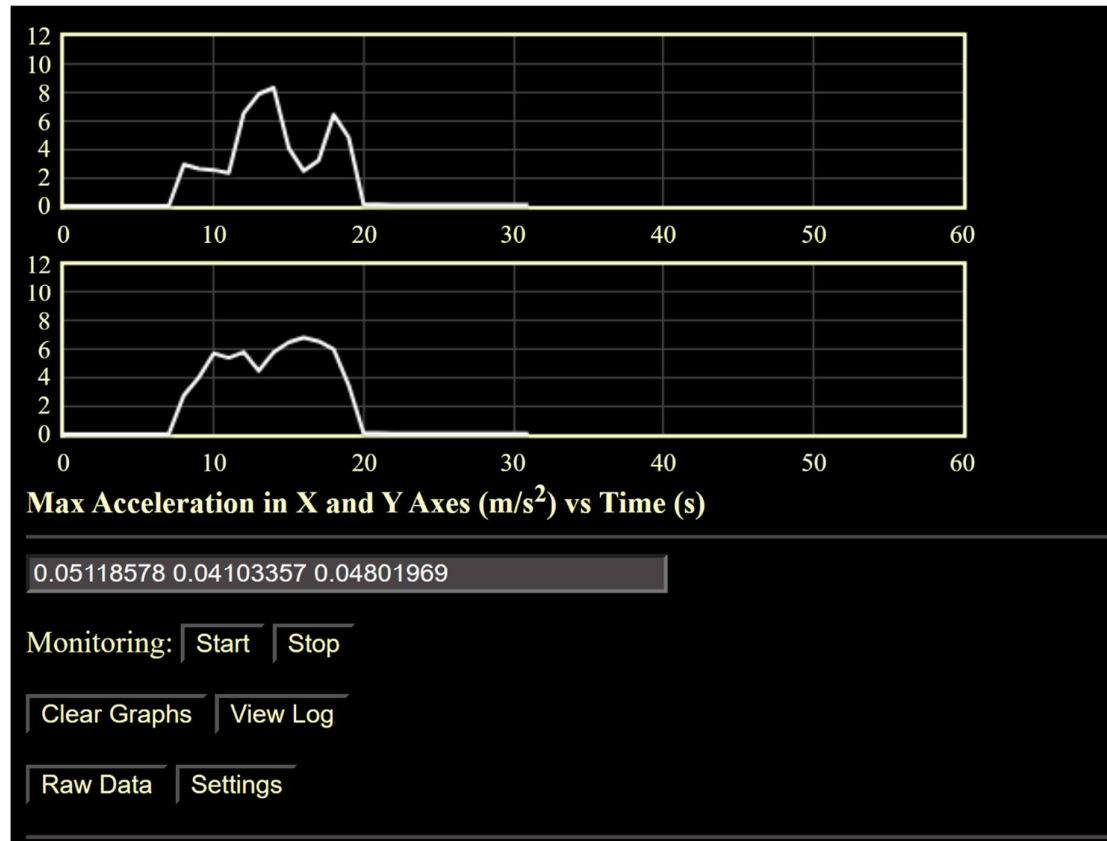


## 2. Web server

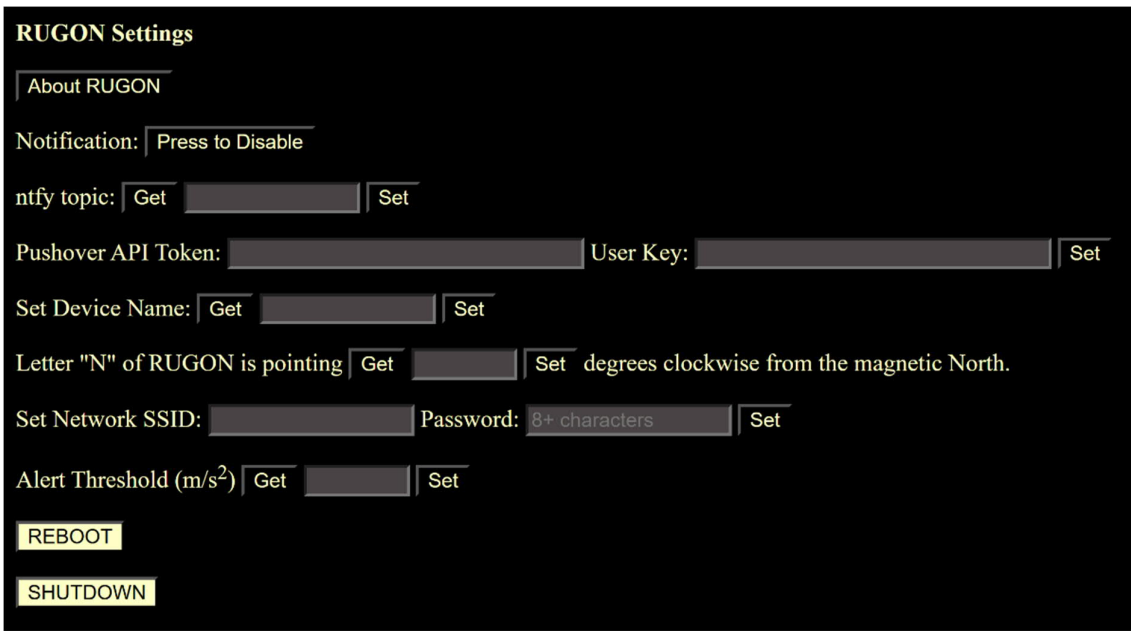
The device broadcasts a Wi-Fi access point for local connection. This is used to

- see live data
- download waveform data
- configure some parameters, for example, device name, alert threshold, etc.

The Wi-Fi SSID is RUGON, and the password is provided on the device.



Command	Description
Monitoring: Start	To see the live monitoring from RUGON The graph updates every second.
Monitoring: Stop	To stop the live monitoring from RUGON
Clear Graphs	Clear the graphs
View Log	To view the raw values of the graphs
Raw Data	To access recorded waveform files and plots that are kept on the device
Settings	To open the setting page. See below



Command	Description
Notification	Press this button to disable or enable notification
ntfy topic	Get: to see the current subscribed topic Set: after filling in the new topic, press this button to set the new subscribed topic.
Pushover API Token and User Key	RUGON supports notifications via Pushover, available on iOS, Android, and PC. Pushover can pass through DO NOT DISTURB. This app is handy if the user needs a higher level of notification.
Set Device Name	Get: to see the current device name Set: to set the new device name
Azimuth setting	Get: to see the azimuth value Set: to set the new azimuth value
Network SSID and Password	Set the new SSID and Password. The default SSID is RUGON and the password is rugon.alert
Alert threshold	Get: to see the current alert threshold in m/s <sup>2</sup> Set: to set the new alert threshold in m/s <sup>2</sup>
Reboot	To reboot the device after changing the above parameters.
Shutdown	To shut down the device

**Technical Support**

Feel free to contact us if you have any questions or comments:

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