

Service description

Vaisala Cast™ Sensors with Wx Horizon Pro

Vaisala Cast Sensors complement the Vaisala Wx Horizon Pro weather hazard information system with accurate observations from critical locations. With a single Wx Horizon Pro subscription with predictable costs and continuous warranty, users can access both in-situ observations and road weather point forecasts from sensor locations. The Cast Sensors wirelessly collect environmental data from key locations and provide this for Wx Horizon to generate actionable information to help plan road winter maintenance operations.

1. Features

Vaisala Wx Horizon Pro weather hazard information system for road condition situational awareness

- Leverages Vaisala industry-leading sensors and world-class forecasting capabilities
- Provides road weather condition forecasts using Vaisala proprietary road weather model
- Provides access to data through a web user interface optimized for providing support for winter maintenance decisions, and through a REST API

Vaisala Cast Sensors

- Utilize Vaisala leading technology to measure key environmental parameters
- Wirelessly connect to Vaisala cloud
- Are fully autonomous with built-in power and communication
- Have minimum 3-year battery lifetime with no maintenance needs

Vaisala Cast Connect mobile application for sensor activation

- Is available free of charge from Google Play Store and vaisala.com
- Intuitively guides the user through the sensor activation process
- Ensures adequate cellular field strength at the installation location

2. Communication

- Cast Sensors are delivered together with a SIM-card for 24/7 connectivity
- Connectivity is subject to activating the sensors using the Cast Connect mobile application to ensure adequate cellular field strength at installation location
- Cellular communication costs are included in the subscription fee
- Data availability is subject to the availability of cellular service

Note: choosing a location with good cellular field strength will increase the battery lifetime of the sensors and make replacement need less frequent. The Cast Connect mobile application will assist by providing a visual indication of field strength before the activation.

3. Data license, access, and security

Vaisala grants the customer a non-exclusive license to use the sensor and the forecast data during the contract term for internal business purposes. A more complete description of the legal terms and conditions governing the subscription service is in the General Conditions of Subscription Services of Vaisala Group:

<https://www.vaisala.com/sites/default/files/documents/DOC250754-A-General-Conditions-of-Subscription-Services.pdf>.

A 3-year history dataset is stored at Vaisala and is available for the customer through the user interface and API.

The API is a cloud-hosted REST API deployed to multiple service regions for performance and resilience.

Data security is ensured in all parts of the data chain:

- Public key infrastructure (PKI) is used for managing device certificates
- TLS/DTLS secure protocols are used for data transmission
- Security audited SW components are used in cloud system software

4. Sensor shipping, installation, and replacement

- Upon reception and confirmation of a subscription order, Vaisala will ship the Cast Sensor hardware to the customer. The sensor will remain the property of Vaisala.
- The customer is responsible for installing the sensor according to the instructions and using the tools provided by Vaisala. Vaisala has no responsibility for incorrectly installed sensors and the effects thereof. The customer is responsible for ensuring that all laws and local regulations related to safety, environmental compliance, road closures, and site installation procedures are followed.
- Vaisala will monitor the sensors 24/7/365 and will proceed to ship replacement sensors in case of data loss due to non-functional sensor hardware, for example loss of battery power.
- Before shipping a replacement unit, Vaisala will contact the customer for a confirmation.
- Replacements included in the subscription fee only apply to sensors with no physical damage beyond normal wear and tear. In the event there is physical damage, a fee may apply for the sensor replacement.
- De-installation of old sensors and installation of replacement sensors are not included in the subscription fee. Please contact Vaisala sales to discuss and get a quote for the installation work.
- The customer is responsible for the removal of sensors after their lifetime and recycling them according to local regulations and instructions provided by Vaisala. Failing to do this, the customer accepts full liability for any environmental or hazard-related issues. The customer will also have an option to ship the sensors at their own cost to Vaisala for recycling.

5. Invoicing

The invoicing period for the Wx Horizon Pro subscriptions is 12 months, unless otherwise specified in purchase documentation. Invoicing period starts 30 days after the shipment of the Vaisala Cast Sensors associated with the subscription.

6. Technical support

Vaisala support team is available 365 days a year to receive service requests through MyVaisala support channel. See the local contact details at www.vaisala.com/en/support.

The official language of the technical support is English.

7. Service availability

Vaisala strives to keep the service available 24/7, excluding necessary maintenance breaks or downtime caused by interruptions in services beyond Vaisala control, such as cloud or cellular service provider. For a more complete description, refer to the General Conditions of Subscription Services of Vaisala Group.

8. Maintenance and service breaks

We generally provide scheduled maintenance and updates of the Wx Horizon service without breaks to service availability or data measurement collected from Vaisala products. If maintenance or updates cannot be carried out without a break to the service availability, we will notify customer of such breaks through email and/or the Wx Horizon service itself. In case there are unexpected service breaks, we shall within normal office hours attempt to recover the service as soon as possible.

9. Summary of responsibilities

Vaisala responsibility	Customer's responsibility
<ul style="list-style-type: none"> • Delivers sensor units upon start of the subscription and in case of data loss due to faulty sensor hardware • Provides a SIM card and cellular data communication • Provides an account and credentials for cloud hosted Wx Horizon software, with the Wx Horizon Pro feature set • Monitors sensors and proactively reacts to data interruptions • Provides observation and point forecast data for sensor locations through an API and on the Wx Horizon cloud user interface 	<ul style="list-style-type: none"> • Adopts and pays periodic subscription fees, in accordance with the applicable terms and conditions • Installs sensors based on instructions and tools provided by Vaisala, observing laws and local regulations • Removes and recycles sensors according to local regulations