

Vaisala GroundCast

Provides key road weather measurements from any location, easily and affordably



Key benefits

Densify your observation network

The easy way to get measurements from critical network locations that have not been practical or affordable to cover. Target treatments, avoid unnecessary material use, validate treatment success, and gain insight into protection levels on your network.

Install anywhere quickly

No cables or powering required with built-in wireless communication and battery. Get up and running in 30 minutes and operate maintenance free up to 4 years.

Accurate observations for better pavement forecasts

Road surface temperatures can vary across a network, and local observations are critical for improving pavement forecasts. The embedded sensor measures real surface temperature plus road temperatures from different depths.

Hassle-free subscription service

Vaisala provides the sensors, monitors the network and handles data communications, leaving you free to focus on other tasks.

Easily access data, your way

Use with Wx Horizon or bring the data into your own system with the Wx Horizon API.

Winter road maintenance professionals need to monitor road conditions and predict surface freezing risk across the road network to make proactive treatment decisions. These decisions should be data-driven and based on local weather observations.

Whether you are just getting started or looking to cover some of the blind spots in your current observation network, the Vaisala GroundCast provides the road weather measurements that matter the most.

GroundCast measures road surface temperature and the amount of residual treatment material, providing you with reference grade observations and location-specific forecasts. This helps you proactively keep roads safe by targeting treatments and validating effectiveness in real time. With no power or other infrastructure required, you can install it virtually anywhere with NB IoT connectivity. Automatically get access to GroundCast observations through Vaisala Wx Horizon or integrate the Wx Horizon API with your own system.



Why Vaisala?

Vaisala's weather and environmental technologies enable unrivaled road network awareness — keeping roadways safe and efficient in any season.

As the gold standard for precision and reliability, Vaisala's holistic approach provides customers with end-to-end simplicity, valuable partnership, and a comprehensive portfolio of solutions that are constantly evolving. Our 85+ years of innovation are reflected in our guiding principles for roads:

1. Move ahead

Only Vaisala provides data of unrivaled depth and breadth while synthesizing it into objective decision support — so everyone can keep moving toward better, more insightful ways of operating.

2. Mobility and beyond

We deliver the right insights to the right people at the right time, enabling a wide range of stakeholders to act with confidence and achieve a comprehensive understanding of their road networks and the vehicles on them — creating better, safer outcomes for all.

3. The innovators

As a recognized industry expert, we continuously apply our knowledge and experience to create next-generation solutions that advance the industry; enabling stakeholders to innovate and optimize road networks like never before.

4. See, understand, decide

Vaisala gives users rich data intelligence that improves real-time decision-making as well as observation enhanced forecasting to enable strategic planning. With a better, fuller understanding of their road network, users can do their jobs more decisively and effectively than ever.

Multilevel temperature measurement:

Road temperature measurement from 0cm, -6cm and -30cm in the ground. Specifically designed to improve pavement forecasts.

Treatment material measurement:

Measure the residual treatment amount to facilitate targeted treatments and to validate the effectiveness, avoiding unnecessary use of materials.

Simple installation:

No infrastructure or cables needed thanks to a built-in battery and wireless NB-IoT communications.

Accurate data:

Road surface temperature accuracy of $\pm 0.2^\circ$

Observations and enhanced point forecasts:

Combines two industry-leading modeling systems and provides point forecasts enhanced with local observations.



Vaisala Wx Horizon Pro is a weather hazard impact portal that delivers insights to current and future road conditions. The fusion of accurate measurements with industry-leading weather forecasting and best-in-class road weather model delivers actionable information for specific use in transportation.



VAISALA

vaisala.com/groundcast



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