

X-band Weather Radar WRS400

Accurate localized and storm tracking precipitation reporting for effective road safety and maintenance.



Key benefits

Complete localized coverage

WRS400 radar provides a detailed picture of what's happening locally without gaps in coverage or blind spots with improved short-term forecasting.

Detailed precipitation data

Modern solid-state weather radars deliver excellent accuracy and sensitivity for more precise, higher-resolution weather information that even differentiates between snow, hail, sleet, graupel, and rain.

Improved decision-making

Filling in the data other parts of your monitoring system misses ensures your maintenance and surface treatment decisions are based on a more complete picture of actual road and weather conditions.

Outstanding performance and reliability

WRS400 radar is built to work 24/7 in high altitude, structural icing, dust, wind, power outages, and other demanding conditions. It delivers highly accurate, comprehensive measurement data for extremely effective local storm tracking that leads to better road maintenance and safety decisions.

Lower investment and lifecycle costs

Rugged design, easy deployment, and minimal maintenance requirements make the WRS400 a highly affordable solution for accurate, short-range weather monitoring.

When it comes to making the decisions that keep our roads drivable and drivers safe, a one-size-fits-all approach to weather monitoring simply doesn't work. You need to know what's happening in your coverage area so you can take proper action. X-band Weather Radar WRS400 provides a reliable source of precipitation and wind data across a wider area — such as a city or county.

WRS400 radar delivers highly accurate, real-time measurements for your maintenance area with unparalleled resolution from almost ground level. It delivers detailed storm system data that includes the exact path, precipitation levels, precipitation type, and ground-level amounts. It also identifies areas where conditions are perfect for ground-level disturbances, such as tornadoes. It is a great source for the critical, localized information needed to prepare the roads and drivers for potentially hazardous driving conditions.

WRS400 radar can also be integrated with other road condition measurement tools, such as Vaisala's Mobile Detector MD30, Road Weather Station RWS200, and Wx Horizon decision support system to expand the coverage and increase the overall accuracy of your road condition forecasts.

X-band Weather Radar WRS400 at a glance

Applications

- Enabling city- or county-scale storm monitoring and dangerous road condition warnings.
- Localizing short-term weather nowcasting across a range of phenomena: rain, snow, hail, thunderstorms, and more.
- Improving road safety and maintenance efficiency with accurate detection and forecasting of large precipitation events.
- Increasing the efficiency and accuracy of flood forecasting and rainfall management planning.
- Providing detection of snow, rain, and other weather activity in mountainous areas and other tough terrain.
- Filling in the gaps and improving coverage of C-band and S-band radar networks.

Key features

Compact design combined with solid-state transmitters reduces overall complexity and improves the maintainability and reliability of the system.

Independent solid-state transmitters provide redundancy and reliability while requiring minimal maintenance.

Dual-polarization radar captures more accurate precipitation and location data, which includes differentiating between rain, sleet, snow, hail, and mixed precipitation.

Remote operation and diagnostics reduce the need for site visits and improve decision-making with high-quality data, 24/7 availability, and improved sensitivity.

Automatic and continuous calibration measures each transmitted output pulse and adjusts levels accordingly, which increases data reliability while minimizing downtime.

Attenuation correction algorithm corrects for signal variances associated with heavy rainfall and strong storm cells.

Why Vaisala?

The industry's most dependable technology

Vaisala solutions are built on more than half a century of industry leadership with units deployed in more than 110 countries. Our technology's precision and reliability under varying conditions have been validated time and time again, and our professional ground transportation solutions are trusted by leading municipal, state, and regional agencies all over the world. Vaisala has delivered more than 100 radar systems to customers across the globe.

Support to count on

Look to Vaisala for dependable support, project capabilities, and training so you can get the most from your system. With decades of experience providing the best technologies and the finest support, Vaisala's philosophy of partnership is unmatched in the industry.

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