

## X-band Weather Radar WRS400

Accurate, real-time weather and storm data for port and harbor operations



### Key benefits

#### Complete localized coverage

WRS400 radar provides a detailed picture of local weather events within 100 kilometers, with improved nowcasting (predictions for the next two hours) and no gaps in coverage or blind spots.

#### Detailed precipitation data

Modern, dual-polarization, solid-state WRS400 radar delivers excellent accuracy and sensitivity for more precise, higher-resolution weather information. It reliably differentiates between snow, hail, sleet, graupel, and rain.

#### Improved decision-making

Filling in the data that other monitoring systems miss ensures your operations and safety decisions are based on a more complete picture of onshore and near-offshore conditions.

#### Outstanding performance and reliability

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

#### Lower investment and lifecycle costs

Rugged design, easy deployment, and minimal maintenance requirements make the WRS400 a cost-effective solution that ports can depend on over a long service life.

Today's maritime operations frequently demand reliable, actionable weather data across a wide area. Vaisala X-band Weather Radar WRS400 provides enhanced onshore and near-offshore weather observations that allow you to make informed operational decisions, maintain safety, and confidently manage route planning and port closures.

WRS400 X-band radar can be used to complement a port or coastal area's existing weather monitoring system in order to cover larger areas or give more precise data to support critical decisions. It closes the knowledge gap between the forecast and current seaport and coastal area weather conditions through high-resolution weather sensing with short lead times.

The result is that ports and VTS providers can anticipate where and how the weather will change in the near future, improving operational continuity, keeping cargo moving, and protecting the port's commodities and workers.

## X-band Weather Radar WRS400 at a glance

### Applications

- Port-wide weather monitoring and alerting for dangerous operating conditions
- Optimized nowcasting across a range of phenomena including rain, snow, hail, thunderstorms, and more
- Reducing frequency and length of storm-related shutdowns to maximize operational efficiency
- Improved operational efficiency and safety for ports and shipping through accurate measurement of current and upcoming weather conditions
- Guidance to help arriving and departing sea traffic operate safely and efficiently
- Filling in data 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 and 24/7 availability.

**Automatic, 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 radar technology

Vaisala, the trusted leader for the maritime industry, delivers weather observation solutions that drive safe, productive port and terminal operations. Vaisala solutions are built on almost a half-century of industry leadership, with thousands of units deployed in more than 110 countries. Our technology's precision and reliability under varying conditions have created trust and widespread use by leading national meteorology and maritime agencies around the world.

### Support you can 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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