

X-band Weather Radar WRS400

VAISALA

Product Spotlight

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

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.



Key benefits

Compact design combined with solid-state transmitters reduces complexity and improves maintainability

Independent solid-state transmitters provide redundancy

Dual-polarization radar captures more accurate precipitation and location data

Remote operation and diagnostics reduce the need for site visits

Automatic and continuous calibration increases data reliability while minimizing downtime.

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

Why Vaisala?

Weather and environmental insights are the greatest catalysts for successful maritime operations— from sensors to systems and digital services, Vaisala provides actionable insights that empower stakeholders to confidently meet challenges and harness new opportunities.

Our globally trusted maritime weather solutions enable remarkable efficiency gains, digital transformation, the protection of people and investments while supporting sustainable and responsible operations.

We are scientists and explorers driven by passion, relentless curiosity, and the desire to create a better world. Backed by 85+ years of unmatched scientific leadership, our solutions increase maritime weather awareness and drive innovation.

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.

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

