Sagrada Família

Developing a system to monitor wind conditions and ensure the safety of workers and visitors of the temple, which construction began in 1882 and will be completed in 2026, the centenary of Gaudí's death.

The Challenge

The Sagrada Família is a large Roman Catholic church in Barcelona, designed by renowned architect Antoni Gaudí. It was declared World Heritage Site in 2005 and is the maximum exponent of Catalan modernism.

The construction work continues at the same time as millions of tourists from around the world visit the site, a fact that further increases the complexity of the project. The challenge was to develop a system for monitoring wind conditions at the top of the building from the control center located at street level.

The Solution

The temple was fitted with a high performance ultrasonic anemometer. The sensor features an uninterruptible power supply system that ensures the availability of wind speed and direction data in the event of a power outage.

The wind data is monitored in real time using a Weathercloud ventOS server. The system allows the technical personnel to set 2 alarm thresholds for wind speed values, which is key when taking timely safety measures against hazardous wind gusts.

Weathercloud ventOS is a rack-mounted server providing real-time wind monitoring and data storage.

Overview

Weathercloud ventOS is an extremely robust Linux-based server that efficiently combines sensor data retrieval with accurate real-time wind monitoring and SQL data storage.

The server can be fitted with unlimited anemometers of any type, and is fully customizable to suit even the most demanding requirements.

Built-in Features

- Fully customizable and expandable system.
- Wide range of compatible sensors and protocols.
- Clean and stylish browser-based user interface.
- Responsive design for easy mobile monitoring.
- Automatic data transfer to FTP server and email.
- Quick data export to most spreadsheet formats.
- Low noise and power consumption.

Optional Features

- Configurable warnings and alarms.
- Open database for remote data extraction.
- METAR, SPECI and SYNOP ready.
- RAID-ready for local backups and data protection.
- Cloud service for remote data backups.
- Local touch screen and rack keyboard.
- Dual power supply for critical applications.