

Vaisala AviMet® AWOS Automated Weather Observing System

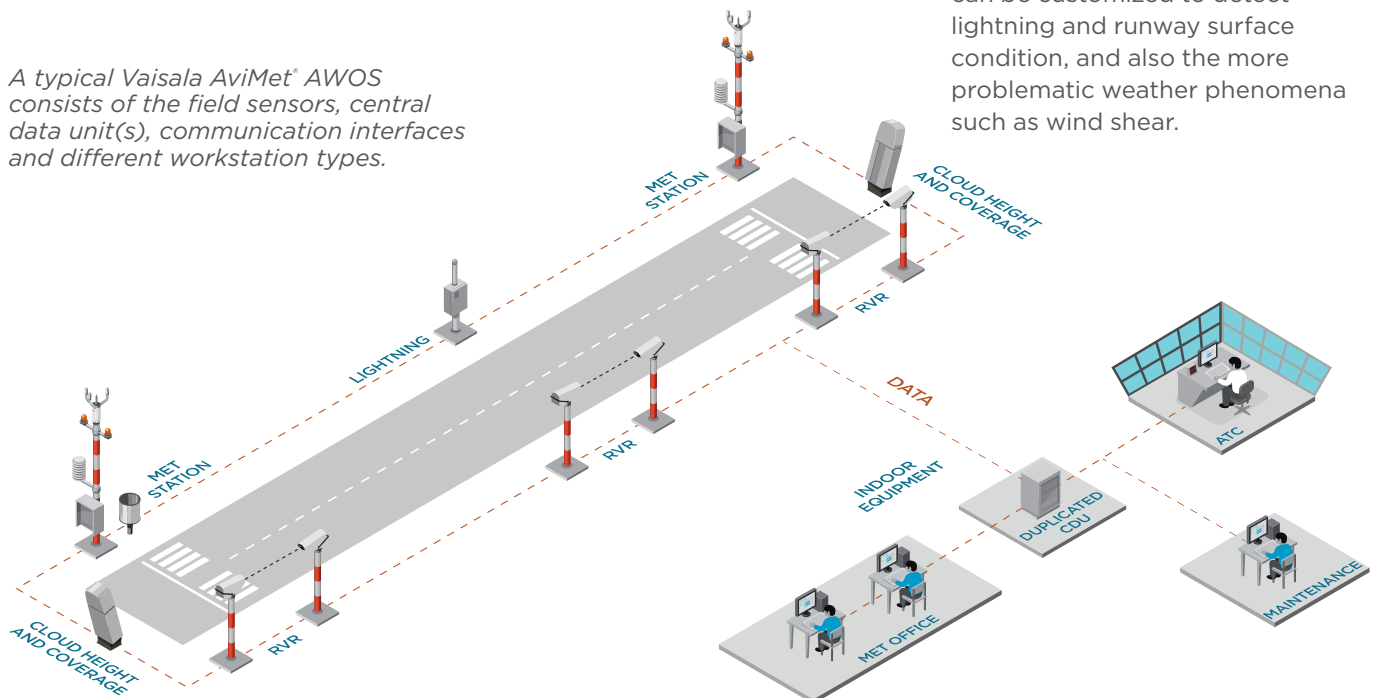
Vaisala AviMet® AWOS Automated Weather Observing System is a fully configurable airport weather system that collects, processes, and visually displays meteorological data.

The AWOS helps pilots and aviation personnel make critical decisions by providing continuous, real time reports on airport weather conditions.

The weather reports are availed to airport personnel via workstation displays and various interfaces to the other airport systems.

In addition to measuring basic weather parameters, the AWOS can be customized to detect lightning and runway surface condition, and also the more problematic weather phenomena such as wind shear.

A typical Vaisala AviMet® AWOS consists of the field sensors, central data unit(s), communication interfaces and different workstation types.



Features and Benefits

- Compliant with ICAO and WMO requirements up to CAT III
- Supports the following ICAO and WMO defined reports:
 - METAR and SPECI (incl. AUTO)
 - MET REPORT and SPECIAL (incl. AUTO)
 - TAF
 - SIGMET
 - AIRMET
 - GAMET
 - AD WRNG
 - WS WRNG
 - SYNOP
 - CLIMAT
- Basic set of parameters observed: wind speed and direction, barometric pressure, temperature, cloud coverage, visibility
- Type and amount of sensors can be adjusted based the airport's needs
- Seamless integration to other airport systems using AMHS and IWXXM
- Customized user interfaces
- Based on the AviMet® technology platform
- Scalable, fully configurable and modular
- Superior data accuracy and consistency
- Guaranteed maximum data availability and reliability by duplicated central data units
- Runs on Windows® and Linux® environments



System Overview

A minimum installation of Vaisala AviMet® AWOS consists of sensors, communications equipment, and single computer Central Data Unit (CDU) which works also as a workstation and runs the end user applications. The minimum system can be expanded without any limits to the system size.

Components of a typical AWOS:

- Central Data Unit with duplicated computers
- Communications equipment
- User workstations
- Remote control and maintenance workstations
- Digital displays
- Printers for data and alarms
- Field sensors, associated power and signal cabling, and installation accessories
- UPS for critical system components

All critical functions of the system can be duplicated to ensure uninterrupted flow of data.

Central Data Unit

The CDU collects data from the sensors and performs meteorological calculations, generates ICAO defined aviation reports, and continuously carries out diagnostics of the incoming data and the entire system itself. The CDU also stores the measured and calculated data as well as the transmitted reports.

Workstations and Displays

The number of workstations depends on the system configuration. Each workstation has a preconfigured workstation environment. Workstations can be used by any authorized user, but the set of applications are determined by the user rights, which are managed by a user policy.

The commonly used workstation set-ups are: Observer workstation, Forecaster workstation, Weather View workstation, and Remote Control and Maintenance workstation. Several display options are available and they can be configured to each user's preference and needs.

Seamless Integration

The AviMet® system architecture ensure smooth integration of meteorological data into any ATC, airport-wide service and maintenance systems, and other meteorological systems an airport may have. Vaisala AviMet® AWOS is designed to interface by various output communication formats and to meet various communication standards and conventions. Latest ICAO defined information exchange methods, such as AMHS and IWXXM, are supported.

Database

The Vaisala AviMet® AWOS system can contain a relational database for data storing. This enables the generation of SYNOP and CLIMAT reports. Additionally the users can interrogate the data using SQL queries, and generate numerical reports and graphs.

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