Vaisala AviMet®
Automated Weather Observing System

Solutions to meet your challenges

Our mission:
to help you operate succesfully

Safe, economical, reliable and flexible operation of your airport is ensured when you choose the Vaisala AviMet® Automated Weather Observing System (AWOS) for your aviation weather support. And when the technology platform is designed by the world's most experienced and trusted provider, the AWOS will stay as modern as the day it was installed.

We concentrate on supporting you

As the market leader we currently deliver around a hundred aviation customer projects every year. What really makes the difference for you, is our comprehensive, continuous client support, which gives excellent life-cycle and life-cycle-cost performance to your airport's AWOS through maintenance, upgrades and updates. Whether you manage a small regional airport or a category IIIB hub airport,

you will have the peace of mind to concentrate on your core activities when you choose Vaisala AviMet® AWOS for your aviation weather support.

Grows with your airport easily and economically

When your airport grows the AviMet® AWOS can be easily expanded along with it because of its modular architecture. The AviMet® AWOS is designed so it can be installed at

any level of complexity. The choice is yours: a basic AWOS for regional airports to a fully-featured and multi-user system for large international airports including ICAO categories up to CAT IIIB and everything in between. The AviMet® AWOS is easy and economical to upgrade and update with more, or newer sensors, workstations and software. Obtaining the hardware and software will be no problem for you either, because all these can be provided from one source: Vaisala.
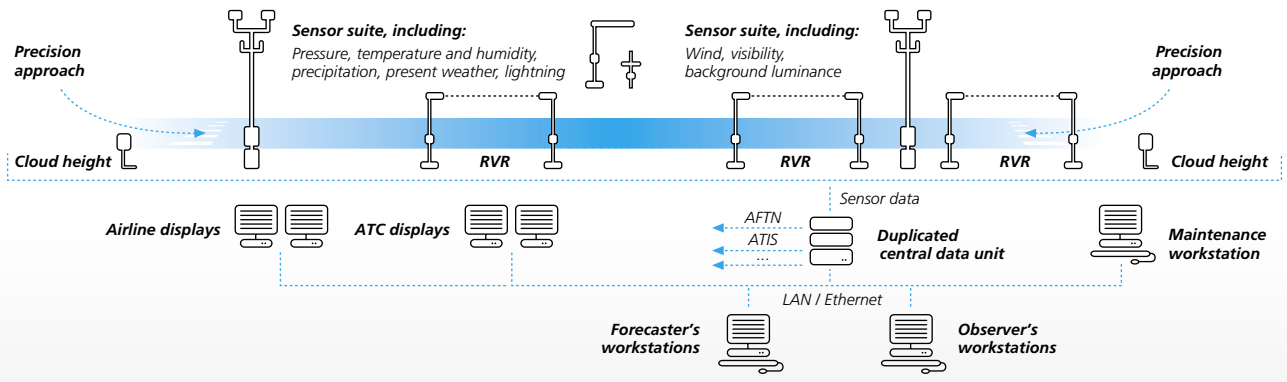
A typical Vaisala AviMet® AWOS consists of the field sensors, central data unit(s), communication interfaces and different workstation types.

Keeping your operations compliant

Vaisala has continuous active and close co-operation with the aviation and weather authorities. As part of our client support offering, we can fully optimize your AWOS performance by planned and scheduled updating. This guarantees your airport always operates safely at the peak of efficiency. But at the same time your airport's operations are always kept in line with the latest changes in ICAO standards and recommendations as well as compliant with WMO regulations.

Seamless integration

The AviMet® system's open software and system architecture ensure smooth integration of meteorological data into any ATC, airport-wide service and maintenance systems, and other meteorological systems your airport may have. The AviMet software can be run on the Windows® and Linux environments to optimally support and comply with the existing airport IT infrastructure.

We designed the AviMet AWOS to interface by various output communication formats and also to meet various communication standards and conventions. These data outputs need to be transmitted accurately via different communication media. The most common communication methods of AviMet AWOS are illustrated below.

Data availability ensured

Risks to your airport's operations are minimized by several unique features, which guarantee maximum data availability and reliability in any situation. For example, sensor locations can be installed with multiple sensors and data transmission lines.

Vaisala AviMet® AWOS supports the following ICAO and WMO defined reports:

METAR and SPECI
MET REPORT and SPECIAL
TAF
SIGMET
AIRMET
GAMET
AD WRNG
WS WRNG
SNOWTAM
SYNOP
CLIMAT

You can send other reports to AFTN or GTS using the generic report templates.
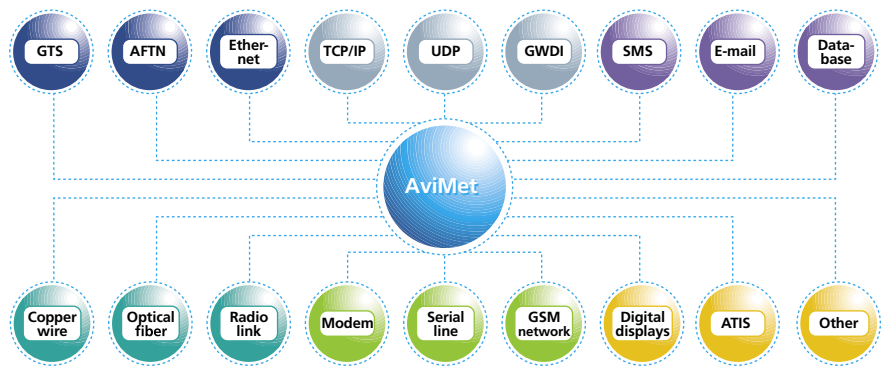
Communication standards are always met through multiple communication outputs.

We can duplicate the central data units (CDUs) so that the software runs on both units, in parallel with each other. A hot-stand-by CDU immediately takes over the tasks of a malfunctioning or failed unit or even a single process. Failure of a sensor, data processor, or any other critical component will not affect the output data, or its quality or continuity.

Functional roles of workstations are interchangeable, which adds to their adaptability and ensures reliability in the event of failure. The software contains a large number of self-diagnostic and validation tools. They are designed so that your system operates reliably and your airport keeps running smoothly.

Critical weather information at-a-glance

In addition to measuring basic weather parameters, the Vaisala AviMet® AWOS can be customized to detect runway condition and also the more problematic weather phenomena such as windshear and lightning.

Combining the low-level windshear information and vertical windprofiles gives a more complete picture of the airport's wind conditions.

Information on runway conditions allow the ATC to better plan the traffic flow. It also helps pilots to make safe and smooth landings and makes it easier for runway operators to minimize any disruption due to bad weather. Accurate information on approaching thunderstorms is also provided by the AviMet AWOS allowing ATC and other operators to prepare and plan for thunderstorm activity.

Vaisala AviMet® technology platform

Vaisala AviMet® is a total aviation weather management solution that bridges the gap between weather and aviation operations. It brings weather information to those who need it, when they need it and in the optimal format for their specific use.

Vaisala AviMet comprises of the technology platform, services, and a growing set of end-user applications ranging from ATC to de-icing applications. In addition to Vaisala AviMet AWOS, other major systems based on the platform are: Vaisala AviMet® Low-Level Windshear Alert System (LLWAS) and Vaisala AviMet® Runway Visual Range System (RVR).

CASE | Dubai
Dubai International Airport (DIA) first installed the Vaisala Automated Weather Observing System in 1999. In 2003 the airport authorities decided to update the existing system software to meet the latest ICAO specifications. These updates were carried out during 2004 and 2005. The Dubai system is a large running combination of two central data units that provide maximum reliability. The airport stayed operational throughout the whole update project and is ready for any future upgrades or updates.

The LLWAS and RVR systems can be easily upgraded to a full-scale Vaisala AviMet AWOS system. They can also be fully integrated into an existing AviMet AWOS.

The Vaisala AviMet® software application sets can be defined separately for each user in your airport, whether they be observer or air traffic controller, or involved in any other aviation support function. The system has an operator interface that can be used intuitively and is easy to learn.

Customer support from start-to-finish

Vaisala Aviation Weather Customer Support offer you various levels of service, from a day-to-day business relationship to full partnership, in order to better serve your business. Our Customer Support teams deliver a comprehensive set of services that extend further than mere delivery and installation. These include operational support, performance optimization and modernization. In this way your weather observation system keeps working productively, delivering the performance you require over the entire lifecycle.

With a service agreement, your system's effective lifespan can be significantly extended and maintenance costs kept under control. In addition to parts supply and daily assistance: upgrade and modernization agreements can bring older weather observation systems up to current technical standards. This can include everything from an initial pre-study to full modernization of the measurements, data processing, or even the complete systems.

These services cover all sensors, systems and solutions, and are delivered worldwide either directly or through your local Vaisala Aviation Weather outlet. With Vaisala Aviation Weather taking care of your weather related requirements you are free to concentrate on your core business.

CASE | **Kuwait**

Vaisala supplied a fully customized automated weather observing system to the DGCA of Kuwait in 2004. For the duration of this turnkey project, Vaisala established a local site-office in Kuwait. This was to conduct operations in Kuwait to ensure that the system would be compliant with the local codes, rules and regulations. The new system was successfully incorporated into the existing systems and infrastructure and initially began operational use in parallel with the old systems without disrupting airport operations. Since its commissioning the new system has been maintained by a resident Vaisala engineer.

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