VAISALA

Vaisala AviMet®

PC-based Runway Visual Range System (RVR)

The Vaisala AviMet® Runway Visual Range System (RVR) is an integrated, PC-based system that provides fully automated runway visual range assessment and reporting for airports. The Vaisala AviMet RVR system offers a calculated estimation of the distance a pilot can see down a runway. Prevailing weather conditions (e.g., fog, rain, snow, etc.) have the most impact on RVR, but ambient light levels and runway light settings are also an important part of the equation.

System overview

The RVR Data Processing Unit (DPU) collects the data from the visibility and background luminance sensors and the runway light setting data from a dedicated interface unit. The DPU calculates the RVR values on the basis of this data, and distributes the RVR information to dedicated Controller Displays (CDs), located throughout the airport.

Visibility Sensor FS11 for RVR applications

The Vaisala Visibility Sensor FS11 provides accurate and reliable measurements in all weather conditions, using forward scatter measurements made with a near infrared LED light source. As a result of cooperation between the FAA and Vaisala, the FS11s performance has been optimized for RVR applications.

The FS11 incorporates extensive internal diagnostics and comes equipped with high-power heaters to prevent snow accumulation and dew formation, and also includes a proven window contamination compensation algorithm.

Ambient Light Sensor

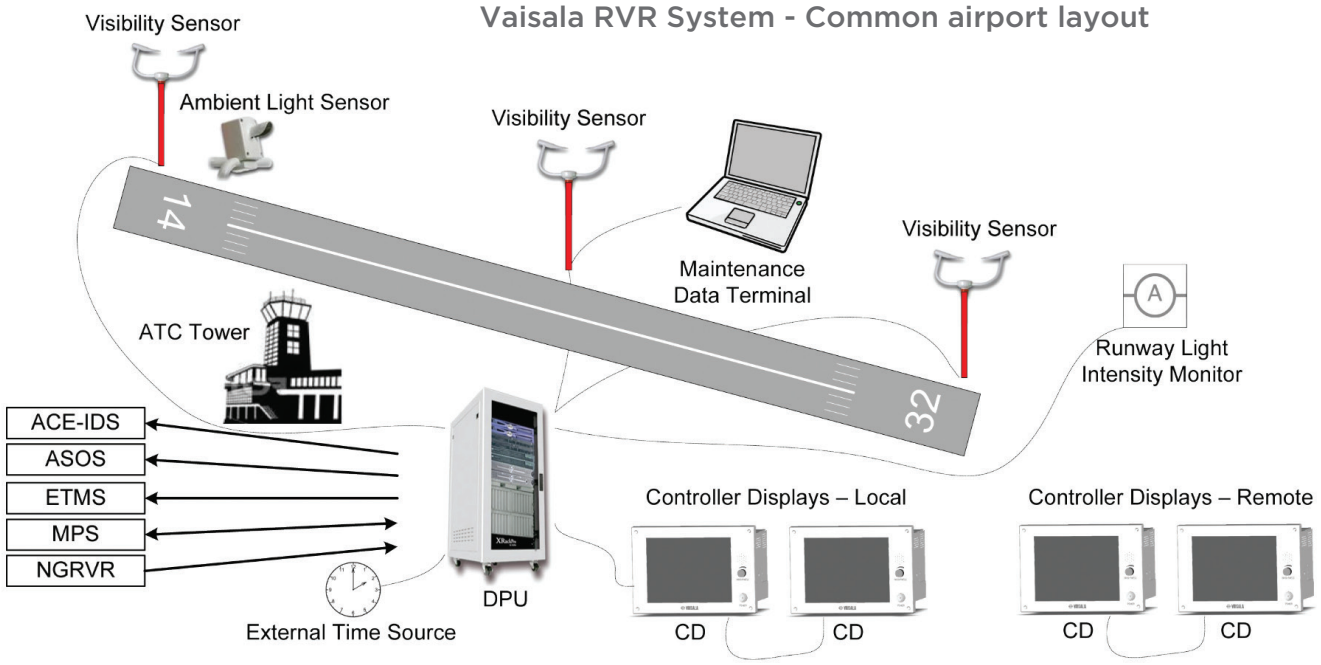
The Vaisala Ambient Light Sensor LM21 accurately measures total ambient light and raises background luminance measurement to a new level of reliability. It comes equipped with intelligent monitoring and contamination compensation features. Window, hood and electronic heaters ensure reliable measurements in all weather conditions.

Data Processing Unit

The Data Processing Unit (DPU) accepts and integrates data from up to 30 Visibility Sensors, two Ambient Light Sensors, 10 Runway Light Intensity Monitors and supports hundreds of Controller Displays. The high reliability of the DPU is achieved by using redundant server-grade computers and mirrored data storage.

Features/Benefits

- The only FAA-approved, PC-based RVR system for U.S. airports
- Conforms to all FAA RVR specifications and requirements
- Compatible with CAT I, II or III airports
- May be co-located with an existing NG RVR system
- Intelligent LRU design and diagnostics offers high MTBF and low MTTR
- Multiple sensor interface alternatives such as modem, fiber optic or radio data links
- Flexible and scalable to meet any airports configuration needs
- Provides cost savings over currently installed systems
- Low periodic maintenance requirements
- Part of Vaisala AviMet® technology platform



Runway Light Intensity Monitor

The Runway Light Intensity Monitor (RLIM) is an essential part of the RVR system. It accurately measures and determines the current flowing through the runway edge and centerline light circuits.

This information is used to determine the intensity settings of the runway lights.

Each Vaisala RLIM unit can accept input from up to eight current sensors.

Controller Displays

The Controller Display (CD) is designed to exceed FAA's extensive human engineering requirements in a busy ATCT environment.

The display is a touch screen design with easy user configuration and diagnostics tools.

The displays report touchdown, midpoint and rollout zone RVR, and edge and centerline runway light step settings for up to three user-selected runways. LVAT limits for each zone can be selected from a touch screen menu.

Controller Display - Main View

Increased capacity and facility traffic — even in the most challenging of weather conditions

The Vaisala PC-Based RVR System is part of the Vaisala AviMet total aviation weather management solution that bridges the gap between weather and aviation operations. Vaisala AviMet comprises of the technology platform, services and a growing set of end-user applications ranging from ATC to de-icing applications.

The Vaisala AviMet solution means airports are better-equipped during poor weather and can stay open longer under diminishing weather conditions, which results in increased capacity.

VAISALA

www.vaisala.com