

# Vaisala viewLinc Monitoring System

Temperature, Relative Humidity, Door Switches,  
Differential Pressure, CO<sub>2</sub>, & Other Variables



 **ProvenSmart**  
by PVSR Corporation  
Metrology • Thermal Studies & Monitoring • C&Q

# VAISALA

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# Reliable Monitoring for Multiple Parameters and Applications

The Vaisala viewLinc Monitoring System features the viewLinc Enterprise Server software\* and monitoring devices that provide alarming, real-time trends, and customizable reporting. Ideal for both light and heavy industrial environments, as well as GxP-regulated applications, the system integrates a wide selection of Vaisala data loggers, transmitters and connectivity options to monitor temperature, relative humidity, dew point temperature, CO<sub>2</sub>, differential pressure, door switches, and more.

The system scales easily—from one or two measurement points to thousands of monitored areas. With eleven language versions the software is ideal for multi-site use and global monitoring. The viewLinc Enterprise Server makes it easy to network data loggers via any combination of connectivity options, including: Ethernet, PoE, Wi-Fi, and Vaisala's proprietary wireless technology: VaiNet.

## The Vaisala viewLinc Monitoring System provides:

- Real-time monitoring and alarming, with customizable reporting
- Gap-free monitoring even during power and network outages
- Easy network connectivity via Ethernet, Wi-Fi, or Vaisala's proprietary wireless technology: VaiNet
- Simple installation and validation, with optional IQOQ protocols
- Optional on-site installation/validation services for easy and compliant implementation
- User friendly software with on-screen guidance and embedded help
- Alarm notifications by email, SMS, voice call, lights and sirens
- Reports comply with 21 CFR Part 11 and EU GMP Annex 11, delivered automatically by email
- Monitoring data can be shared with other systems via OPC UA & API
- Integrate unlimited parameters with Modbus and analog devices

**The viewLinc Enterprise Server includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. ([openssl.org](https://www.openssl.org))**



# Industries and Applications

"[The] system is easily scalable without extra costs, increases our efficiency with its remote reading abilities and ease of use, and the measurements are very accurate."

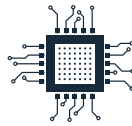
**Mats Andersson,**  
Project Manager,  
AstraZeneca



Pharma/Biotech  
Healthcare



Biorepositories/  
Blood/Tissue



Semiconductor



Museums & Archives



Calibration Labs



Aerospace



Data Centers / IT



Food & Beverage



Distribution



Chart Recorder  
Replacement

**Although viewLinc was designed for use in pharmaceutical and other regulated environments, the system can be used to monitor conditions in a variety of applications. Vaisala offers an unmatched selection of devices, probes, calibration, and services.**

"It was important to us that the system could be deployed internationally and Vaisala was the only company we found that could support us throughout our other regions..."

**Gary Swanson,**  
Senior Vice President of Quality for Herbalife  
International

## Ideal for Regulated Applications:

- Validatable software
- Environmental mapping qualification software
- Encrypted data and audit trail
- IQOQ protocols & GxP documentation
- ICH-compliant calibration options

# viewLinc Enterprise Server: Simple & Intuitive



Live data showing the conditions overlaid on actual environment photo



Live data showing the conditions overlaid on floor schematic



Tours show how to use the software: Set up viewLinc, Create a Zone, Create a Location, Add a User, and more



Comparative analysis graph of current and historical conditions.

For nearly two decades viewLinc has been continuously developed based on user feedback. viewLinc is designed to meet the needs of GxP-regulated and other demanding applications, with easy to use software and reliable, accurate devices.



On-Screen Guidance



User Guides & Online Help



eLearning On-Demand



Technical Support

### Features and Benefits:

- Tours introduce common tasks, making viewLinc easy to learn.
- Onscreen guidance and tooltips provide immediate user assistance.
- Users and administrators have 24/7 access to multiple support options (with support plan).
- Supported Web browsers include Google Chrome™ and Microsoft Edge™.

# System Features



## DATA INTEGRITY ASSURED

viewLinc has several features that ensure data integrity. These include: unmodifiable data, audit trail, system access controls, authority levels that fulfil regulatory requirements for segregation of duties, device checks that verify the origin of data, and validation alarms to guarantee the data validity.

"Of all the monitoring systems we looked at, the viewLinc monitoring system provided the best value... hands down!"

**Dorraine Reynolds, Pharmacy Director of US-based National Research Hospital**

"When you need to show compliance to multiple governmental and regulatory agencies for 2,273 temperature or humidity channels, quick reporting is a necessity."

**Joe Cwierniewicz, McKesson Facilities Manager**

"After years of working with the system, generating the kind of reports that make auditors happy, we've found Vaisala's viewLinc Monitoring System to be bullet-proof."

**Timothy Phelps, Facilities Engineering Manager  
McKesson Specialty Distribution**

## REAL-TIME DATA TRENDING

Users can view a real-time trend and a graphical overview of controlled areas to monitor all measured points in one interface. Drill down into monitored points on the dashboard to view trend data for any time period.

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## COMPLETE DATA PROTECTION

Months of data can be retained in the memory of each data logger. Automatic data backfill to the server and client PCs ensures gap-free data during network or power outages.

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## FLEXIBLE ALARMING

Remote and local alerts of out-of-tolerance conditions are sent via email, SMS, voice call, lights and buzzers. Alarms can be acknowledged on mobile phones via voice call, SMS, and email.

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## AUTOMATED REPORTING

Create custom reports on demand. Frequently run reports can be automatically generated and delivered by email on a pre-set schedule.

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## BROWSER-BASED ACCESS

No software needs to be installed on client PCs.

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## GLOBAL ENVIRONMENTAL MANAGEMENT

Global installations can be run from a single server and managed from anywhere. Users see their local time in viewLinc and can operate the software in their own language.

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# VaiNet: Long-range Wireless

**VaiNet<sup>®</sup> wireless technology is the proprietary wireless option of the viewLinc Monitoring System.**

VaiNet operates autonomously from other wireless devices and networks, eliminating the need for dedicated Ethernet connectivity for each monitored location. Each VaiNet AP10 access point can support 32 wireless RFL-series data loggers. Data loggers are ideal for high-traffic and hard-to-reach areas and can easily be moved as monitoring needs change. Once powered on, VaiNet data loggers automatically establish communication with viewLinc software, simplifying installation and making the system easy to deploy with no previous experience setting up networked monitoring systems. The RFL-series data loggers are available in temperature and humidity, temperature-only models with up to two channels for ambient or fridge/freezer monitoring, or CO<sub>2</sub> models for incubators.

## Features and Benefits:

- Long-range indoor, interference resistant connectivity, superior signal strength  $\geq 100$  meters.

- A proprietary network that maintains integrity around other wireless devices and networks.

- Self-healing device-to-software connection with automatic recovery and data backfill.

- Superior signal strength and penetration – no repeaters or signal amplifiers needed.

- Secure autonomous operation parallel to other wireless equipment and systems.

- Industrial, Scientific, and Medical (ISM) wireless frequencies (868MHz, 915MHz, or 920MHz depending on region) that remove the signal load of monitoring devices from other existing networks.

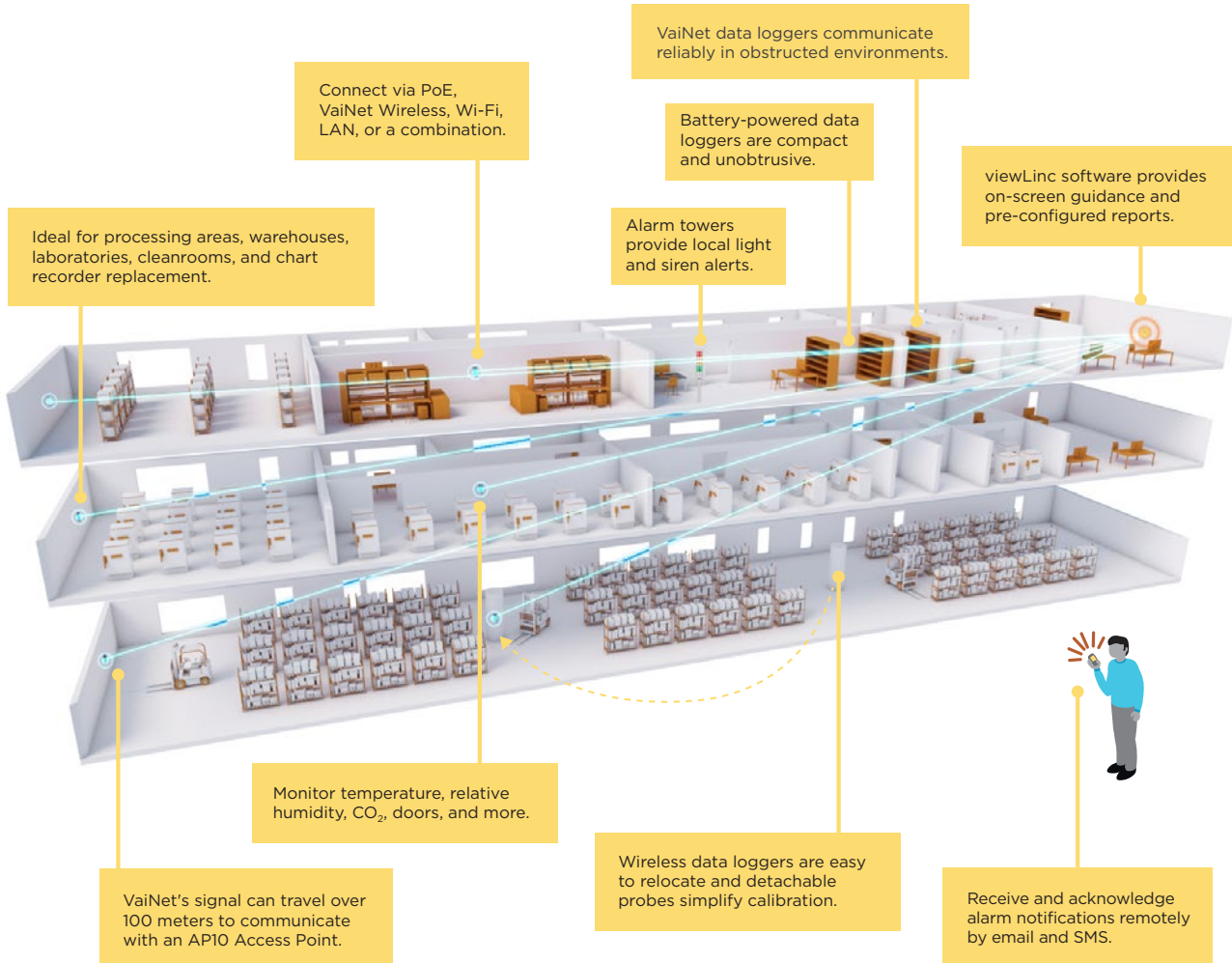
- RFL-series data loggers are available in temperature and humidity, temperature-only, and CO<sub>2</sub> models.

- Easy setup with fast data logger configuration. No network administration expertise required.



**VaiNet devices are available in selected regions globally. Other regions will require alternate Vaisala solutions to support wireless monitoring with the viewLinc system. Please contact your local Vaisala representative to learn what wireless data loggers are available in your region.**

# Quickly Installed, Easily Networked, Ready-to-Use Devices



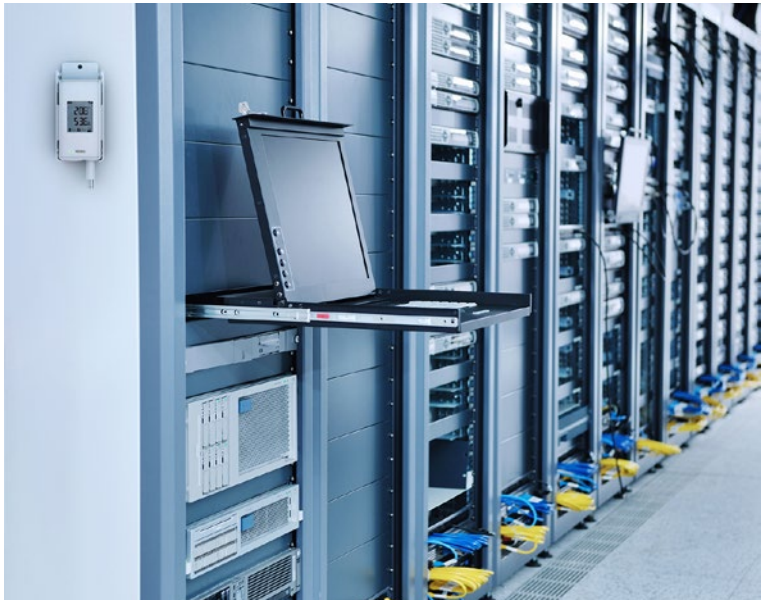
"Before installing viewLinc, we spent eight to ten hours per week checking chart recorders. Now we check all locations in realtime from a Web browser and generate reports in minutes."

**Mark Kashef**  
Teledyne Technologies Inc.

# Device Options: Unmatched Flexibility, Superior Reliability

## Features and Benefits:

- Choose from a wide selection of Vaisala transmitters, data loggers, and probes.
- Wall, duct and remote probe mounting capabilities with wired or wireless connectivity.
- Temperature measurements from -240 °C to 1760 °C and humidity measurements to 100%RH.
- Dew point measurements from vacuum to 100 bars; ambient to -80°C dew point.
- Differential pressure sensors for single-point monitoring and multiple zone applications using customized panels.
- CO<sub>2</sub> measurement for incubators can include temperature, or temperature and humidity.
- Intrinsically safe options for hazardous/explosive areas. Compliant with VTT (CENELEC, Europe), FM (USA), CSA (Canada), TIIS (Japan), and PCEC (China), VTT (IECEx).



The system can monitor almost any parameter by integrating devices that communicate over Modbus or analog outputs (4...20mA, 0...5V, 0...10V). Other options include thermocouples or dry contacts. This range of sensing hardware results in an unmatched variety of options in industrial monitoring. We offer prefabricated cabinets (CAB100) that incorporate Vaisala instruments with other hardware for customized solutions.

**Easy to install, monitoring devices self-identify within the viewLinc software and come with simple configuration templates.**



# Data Loggers, Instruments, Transmitters



## RFL100

The RFL100 data logger signal travels over 100 m indoors without amplifiers or repeaters. The RFL data loggers combine with viewLinc Enterprise Server software, version 5.0 and later. Most models are battery-powered with two standard AA batteries and have approximately 30 days of on-board memory. RFL100 measurement options include: temperature only (up to two channels), temperature and relative humidity, or CO<sub>2</sub>, with or without temperature and humidity. Other RFL100 options include integrated or cabled probes, mounting accessories, and heat resistant cables.

## RFL100 CO<sub>2</sub>

Ideal for incubator monitoring, the RFL100 data loggers communicate securely with viewLinc to provide alarming, real-time trend data, and reports for compliance with GxP regulations. RFL100 CO<sub>2</sub> data loggers use an external power supply with lithium battery backup. RFL100 data loggers combine with GMP251 CO<sub>2</sub> probes, which feature a wide operating temperature range, high accuracy, and superior stability. RFL100 data loggers include local display of conditions. Probe mounting accessories for incubator interiors simplify installation. Optional heat resistant cables withstand heat sterilization cycles.



## AP10

The Vaisala VaiNet AP10 access point is required to connect RFL100 wireless data loggers to the viewLinc Enterprise Server. In a typical system, the AP10 is installed within 100 meters of an RFL100 data logger. In large systems with over eight AP10s, access points that share channels must be placed  $\geq 50$  m apart. Installation is easy with each data logger automatically identified by an AP10 when turned on. Access points, along with the viewLinc Enterprise Server, verify all data and store it in a secure database where it is protected from tampering and loss.

## CAB100 INDUSTRIAL CABINET FOR CLEANROOMS AND INDUSTRIAL SETTINGS

The CAB100 is designed for continuous monitoring and alarming of cleanroom and industrial areas. The cabinets provide centralized integration of transmitters with the Vaisala viewLinc Continuous Monitoring System. The Vaisala CAB100 is an instrument panel that integrates Vaisala's world-class sensors for monitoring humidity, temperature, differential pressure and many other parameters into a simple, pre-configured cabinet.



# Data Loggers, Instruments, Transmitters

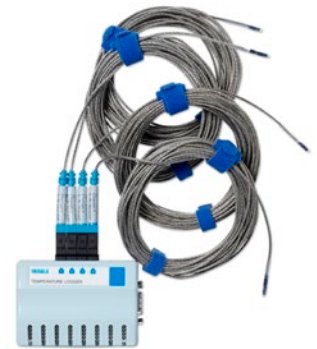
## DL2000



Vaisala DL2000 precision temperature and humidity data loggers are compact, easy-to-use devices for monitoring critical and humidity-sensitive products and processes. With internal temperature and humidity sensors, the DL2000 features an optional external channel with current or voltage inputs to record other parameters. An optional Boolean channel connects to door switches or alarm contacts. Each data logger has an internal battery and onboard memory to ensure no data is ever lost to power outage or network downtime.

## DL1016/1416

These temperature data loggers can monitor up to four applications across a wide range of temperatures – from ultra-low temperature freezers, freezer/refrigerators, and test chambers to incubators. The DL1016 and DL1416 loggers eliminate the need to install additional hardware; no extra loggers or added network access points are required to simultaneously monitor up to four environments.



## DL4000



The DL4000 universal input data loggers are a simple solution for monitoring pressure, flow, level, pH, electrical properties and gas concentrations. Ideal for standalone or networked monitoring applications, this data logger connects to a PC via USB or installs to your existing network via Ethernet, vNet PoE, or Wi-Fi. Each DL4000 data logger contains onboard memory for recording a wide range of variables at the point of measurement.

## INDIGO SERIES TRANSMITTERS

Vaisala Indigo Series host devices are part of Vaisala Indigo product family and intended for Vaisala's intelligent, stand-alone humidity probes, CO<sub>2</sub> probes, and vaporized hydrogen peroxide probes.





**VAISALA**

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