

CENTRALISED MONITORING SOLUTIONS FOR SMART BUILDINGS

Discover a complete and customized solution for intelligent, connected building management by integrating real-time monitoring, remote access, and centralized analytics. Whether it's optimizing energy use, tracking equipment performance, or streamlining maintenance, we provide the tools to transform your building into a smarter, more efficient, and responsive environment.



Customer Challenges

System Visibility



Our system provides centralized visibility, giving every stakeholder access to relevant data in real time. This transparency enhances collaboration and decision-making, allowing quicker alignment on maintenance, energy savings, and budgeting goals. It reduces dependency on manual reporting or word-of-mouth updates, increasing operational efficiency.

Actionable Insight



The system provides contextual, action-based alarm generation based on the nature of the fault. It helps less experienced staff respond appropriately without needing to escalate every issue. Reduces downtime and minimizes the risk of human error in emergencies.

Timely Alerts and Notifications



We offer real-time, intelligent alerting across multiple platforms (email, SMS, app), ensuring the right people are notified instantly. It supports escalation protocols—if one person doesn't respond, the alert is passed on, ensuring accountability. Hence it helps prevent small issues from becoming major failures, saving time and money.

Remote Monitoring and Visualization



Our system allows full remote access to dashboards, live data, and alarms, enabling 24/7 oversight from anywhere. It ensures continuity of operations even during weekends, holidays, or emergencies, facilitating faster decision-making and reducing the need to wait for on-site inspections.

Remote Data Acquisition and Analysis for Alerting and Reporting



Automates data collection from all connected equipment, reducing manual workload and error. Enables trend analysis, predictive maintenance, and energy optimization through advanced analytics. Generates custom reports for compliance, management review, or energy audits—saving countless hours in reporting efforts.

Value Proposition

PLATFORM- MONITORING & VISUALIZATION

- **Visually Appealing Dashboards:**
 - Intuitive, customizable dashboards allow users to monitor all building systems—energy meters, HVAC, water systems, lighting, occupancy, etc.—in one place.
 - Use graphs, gauges, KPIs, and floorplan-based layouts to simplify complex data.

Designed for all user levels, from technicians to management.
- **Real-Time System Overview:**
 - Live status of critical systems: temperatures, energy use, flow rates, and equipment states.
 - Detect inefficiencies, overconsumption, or anomalies instantly.
- **Drill-Down Analysis:**
 - From a bird's-eye view to individual sensor-level data, users can investigate issues deeply without switching systems.
 - Equipment trend history (temperature, load, cycles) helps understand performance over time.
- **Cross-Site Visibility:**
 - Manage and compare multiple buildings or zones from a single interface.
 - Benchmark buildings against each other to identify outliers.

ALERTS & ALARMS: REAL-TIME NOTIFICATIONS

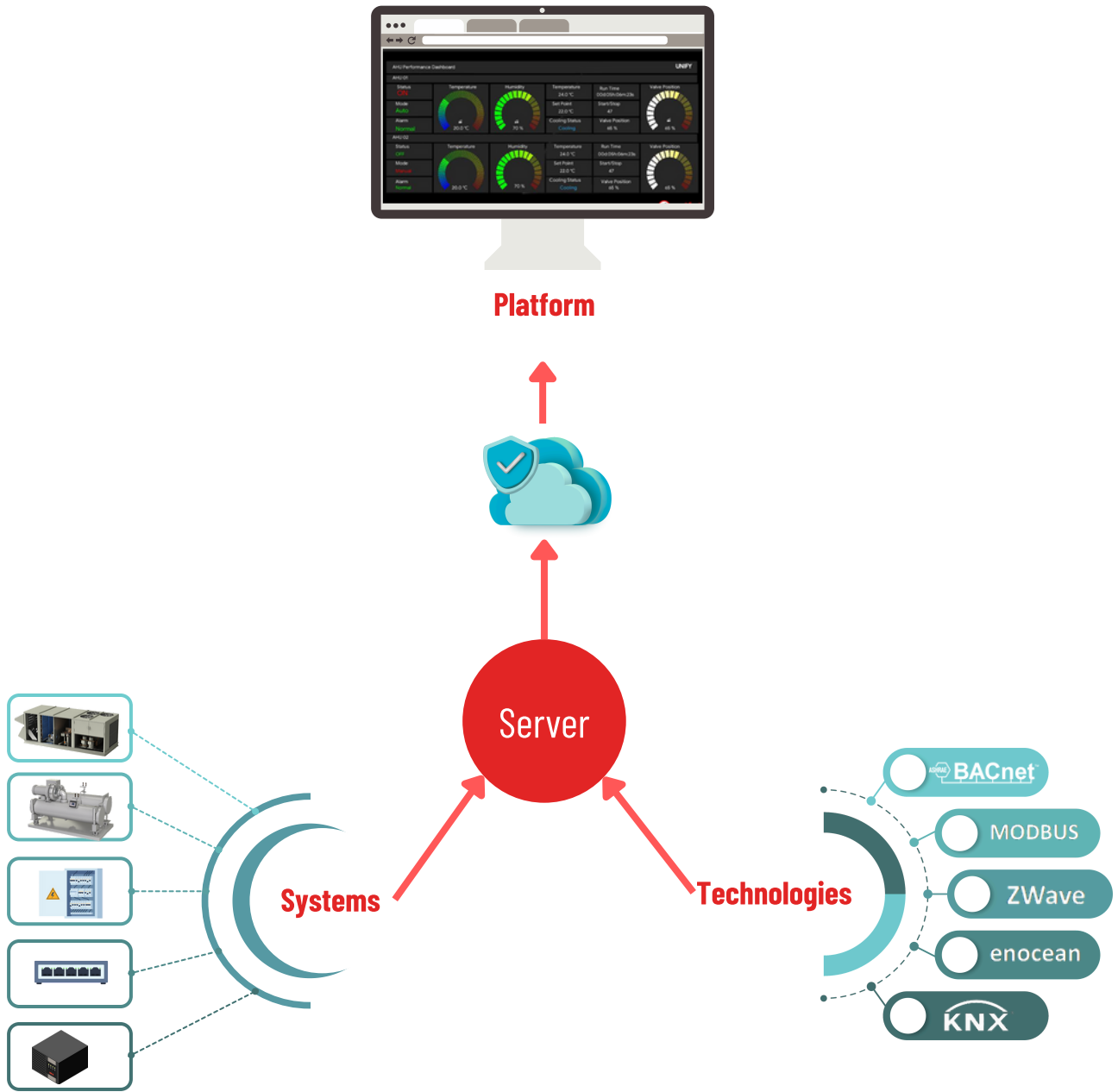
- **Smart Alarm Engine:**
 - Define alarm thresholds for any measurable parameter (temperature, pressure, flow, energy).
 - Group alarms by severity, equipment, or location for structured responses.
- **Multi-Channel Notifications:**
 - Instantly notify responsible teams via:
 - Email — for detailed logs and tracking.
 - SMS — for urgent alerts to any phone.
 - WhatsApp — for real-time team communication and response.
- **Escalation Logic:**
 - If an alert isn't acknowledged within a certain time, the system escalates to a higher authority or backup contact.
 - Ensures no critical alert is ignored.
- **Event Logging:**
 - Every alert is timestamped, logged, and stored for future audits or analysis.

REPORTS - OPERATIONAL, MAINTENANCE & ENERGY ANALYTICS

- **Equipment Performance Reports:**
 - Analyze how each asset (pumps, chillers, fans, compressors, etc.) performs over time.
 - Identify underperforming or energy-hungry equipment for targeted maintenance or replacement.
- **Run-Hour-Based Maintenance:**
 - Automatically track run hours of equipment.
 - Trigger maintenance reminders based on actual usage—not just calendar dates—leading to smarter servicing.
- **Energy Reporting:**
 - Daily, weekly, or monthly reports on energy consumption by equipment, floor, or building.
 - Includes cost estimation, CO₂ emission estimates, and peak load analysis.
- **Custom Report Builder:**
 - Users can generate tailored reports for operations, sustainability goals, management reviews, or compliance.

Export reports to Excel, PDF, or integrate with enterprise platform

Architecture



Overview

A centralized platform (cloud or on-premises) for portfolio-level management of buildings and infrastructure.

Provides off-site access to monitor, troubleshoot, and plan maintenance without needing to be physically present.

On-site system for real-time control, automation, and monitoring of building infrastructure.

Central Operation

Monitoring



Alarm & Notification

History	Active	Unacked	Current	Shelved	Disabled
	Time	Area	Event	Application St	
	2016-01-26 11:26:41	1	Active	1M (Pre-M)	
	2016-01-26 11:26:41	3	Active	System	
	2016-01-26 11:26:41	3	Active	System	
	2016-01-26 11:26:41		Commission	System	
	2016-01-26 11:26:41		Commission	System	

Energy Report



Remote – Field Engineer



Local – On Site



Multi-Site Monitoring: Oversee multiple buildings or locations from a single control center.

Performance Benchmarking: Compare similar assets across different sites (e.g., chiller performance at Site A vs Site B).

Analytics Engine: Detect anomalies, predict faults, and analyze trends across large datasets.

Fleetwide Reporting: Consolidated energy usage, water consumption, equipment status, alarms, and compliance reporting.

Integration with Business Systems: Export insights to CAFM, ERP, or sustainability dashboards (like Power BI, SAP).

For Field Engineers:

Live Data Access: View real-time status of systems (temperatures, energy loads, fault logs).

Guided Diagnostics: Quickly identify what's wrong and what needs to be tested or replaced.

Maintenance Alerts: Receive alerts based on run hours, failure trends, or predictive analytics.

Remote Testing: Trigger test sequences or simulations (if enabled by hardware) to verify system responses.

For Customers:

Transparency: See how their building systems are performing, energy consumption, and fault events.

Informed Oversight: Understand what maintenance is being done, why it's needed, and what actions are pending.

Usage Reports: Gain visibility into energy bills, asset uptime, and areas of inefficiency.

Real-Time Equipment Control: Directly manage HVAC, lighting, pumps, elevators, fire systems, etc.

Data Logging at Source: Captures live data from meters, sensors, and devices at the local controller level.

Alarms & Trends: Immediate fault detection and logging of historical trends for quick diagnosis.

User Access: Facility staff and technicians can interact with a user-friendly local interface.

Dashboards

AHU MONITORING

Asset Name	: AHU-C1-01
Make	: N/A
Supply Fan	: VFD Driven
VFD Make	: ABB
Model No	: ACS-480
Rating	: 11 KW
Return Fan	: VFD Driven
VFD Make	: ABB
Model No	: ACS-480
Rating	: 7.5 KW

Status: ON
 Mode: AUTO
 Valve Position: 60 %
 VFD Status: ON
 VFD Freq: 40 Hz

Temperature: 22.3 °C
 Temperature SP: 22 °C

Control:
 Unit CMD: ON
 VFD Control: 40 Hz
 Valve Control: 60 %

Filter: CLEAN
 Trip: NORMAL
 Temperature: NORMAL
 VFD Fault: NORMAL

Analytics: COOLING
 Cooling Status: COOLING
 Non-Cooling hrs: 12 hrs
 Run Time: 52 hrs
 Start/Stop: 30

AHU Performance Dashboard

UNIFY

AHU-01	AHU-02
Status: ON	Status: ON
Mode: AUTO	Mode: AUTO
Valve Position: 60 %	Valve Position: 60 %
VFD Status: ON	VFD Status: ON
VFD Freq: 40 Hz	VFD Freq: 40 Hz
Temperature: 24.0 °C	Temperature: 24.0 °C
Humidity: 70 %	Humidity: 70 %
Run Time: 00:05:00:00:23h	Run Time: 00:05:00:00:23h
Set Point: 22.0 °C	Set Point: 22.0 °C
Start/Stop: 47	Start/Stop: 47
Cooling Status: Cooling	Cooling Status: Cooling
Value Position: 65 %	Value Position: 65 %

CHILLER MONITORING

Status: ON	Start/Stop: 9:00h
Operating Type: Remote	Header Supply Temperature: 9.0 °C
Circuit A	Circuit B
% Total Capacity: 60 %	% Total Capacity: 60 %
Comp Suction Temperature: 8.3 °C	Comp Suction Temperature: 8 °C
Set Suction Temperature: 34.1 °F	Set Suction Temperature: 8 °C
Set Condensing Temperature: 128 °F	Set Condensing Temperature: 8 °C
Suction Press: 25 PSI	Suction Press: 25 PSI
Discharge Press: 135 PSI	Discharge Press: 35 PSI
Run hrs: 25	Run hrs: 25
EXV Position: 25	EXV Position: 25

Alarms: CH LWT Alarm: ALARM

Analytics: COOLING
 Non-Cooling hrs: 12 hrs
 Operating Hours: 52 hrs
 Number of Starts: 30
 % Total Capacity: 50 %

CHILLER MONITORING

LOCAL - ON | CUT OUT | ALARM - NO FAILURE

P/SP Ratio: 1.63

Compressor Power: 271 W

Head Compressor Energy Consumed: 13.0 kWh

1183 ppsd | 27.9... | 1183 ppsd | 27.9...

VFD MONITORING

40 Hz	12.3 kWh	3 kW	9.59 A	292 Volt	646 Volt
2.000 rpm	2104 kWh	25%	25%	25%	25%

SPACE CONDITION MONITORING

648	719	719	648
648	719	719	648

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