



# Smart Air Handler from GE Digital

## Decrease energy and maintenance costs with advanced analytics

### Air Handling Units Reasoner Pack

Performing checks manually on your air handling units is costly and typically results in drifts in performance over time. Unfortunately, the energy savings are often short-lived. These manual checks are also time consuming, involving every module that interacts and makes up the full airflow system.

Save up to 25% in energy and maintenance costs by transforming your system into GE Digital's Smart Air Handler with the Air Handling Units (AHU) Reasoner Pack. This advanced analytics software identifies potential problems, alerts you of issues, and recommends the right corrective actions—reducing time and money.

#### Outcomes

- Decrease energy and maintenance costs up to 25%
- Improve uptime and comfort
- Increase operational efficiency up to 40% with faster resolution
- Enhance decision making and collaboration with Notes, KPIs, and Tasks—for the right actions

### 01 Management 24x7

With monitoring and advanced analytics, you have real-time operational intelligence for unprecedented asset performance management (APM).

The AHU Reasoner Pack brings sophisticated analytics to detect faults, improve efficiency, identify energy savings opportunities, and prevent maintenance problems in single- and multi-zone interior air handlers, roof top units, make-up air units, H&V units, and airside heat recovery systems.

### 02 On-the-go convenience

Whether you're on-the-go or at your desk, you'll always have the right information at your fingertips—through your smartphones, tablets, and PCs.

Not only are you armed with the right performance and status information, you also have system interaction data and can trend information on demand to help you collaborate on solutions. With advanced notifications and condition-based actions, your operators can take the right actions on state, probable cause, and alarm severity, which is automatically prioritized to indicate processes or equipment in trouble.

### 03 Earlier failure detection

Our Advanced Fault Detection and Diagnostics watch each component in your AHU and each AHU in your system. Examples include:

- |  |  |   |
|--|--|---|
| <b>Air dampers:</b> <ul style="list-style-type: none"> <li>• Signals</li> <li>• Modulation</li> <li>• Actuators</li> <li>• Damper banks</li> <li>• Outside airflow analysis</li> <li>• Advanced system coordination detection</li> </ul> | <b>Economizers:</b> <ul style="list-style-type: none"> <li>• Sequencing controls</li> <li>• Damper positions</li> <li>• Airflow rates</li> <li>• Air temperature</li> <li>• Sensors</li> </ul> | <b>Heating and cooling valves:</b> <ul style="list-style-type: none"> <li>• Mixed air</li> <li>• Discharge temperatures</li> </ul> <b>Coils and filters:</b> <ul style="list-style-type: none"> <li>• Static pressure analysis</li> <li>• Fan system</li> </ul> |
|--|--|---|

Smart AHU*		
Features	Solutions	Results
<ul style="list-style-type: none"> <li>• Airflow</li> <li>• Static pressure</li> <li>• Sequencing</li> <li>• De-/Humidification</li> <li>• Efficiency</li> <li>• Schedules</li> <li>• Actuator function</li> <li>• Economizer</li> <li>• Sensors</li> <li>• Advanced control</li> <li>• Valve performance</li> <li>• Damper</li> <li>• Heating and recovery</li> <li>• Fan and filter</li> <li>• Set-points</li> <li>• Overrides</li> </ul>	 <p><b>Identified reduced efficiency:</b> Outdoor air damper was not open 100% with the chilled water valve partially open and economizer active.</p> <p><b>Fault detected:</b> AHU chilled water and reheat valves are open simultaneously while the dehumidification sequence is disabled.</p> <p><b>Energy leakage detection:</b> Mechanical cooling used prior to outdoor air dampers fully opening while economizer is enabled.</p> <p><b>Configuration error:</b> The AHU discharge air temperature is lower than the mixed air temperature with the chilled water valve closed.</p> <p><b>Fault detected:</b> The outdoor air damper position is oscillating significantly or hunting to meet a mixed/discharge air temperature set-point.</p>	<ul style="list-style-type: none"> <li>• 25%–40% opportunity savings</li> <li>• Preventative maintenance</li> <li>• Comfort reliability</li> </ul>

\*50+ continuous detection and corrective actions

The Smart Air Handler analyzes your energy costs and alerts you of any non-optimal performance.



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## Features

- Smart monitoring and analysis of AHU components and controls
- Analytics identify probable causes and recommend corrective action
- No hardware or maintenance costs
- Decision support when you need it—on smartphones, tablets, and PCs
- Aggregated asset and fleet health displays

Find out how Smart Air Handler can help you drive reliable, efficient operations.

LEARN MORE

## Software requirements

- Application Server
  - Microsoft Windows Server 2008 R2 (64-bit), Server 2012 R2, Server 2012 (64-bit)
  - Microsoft SQL Server 2008 R2 SP2 Standard Edition, 2012 Standard Edition
- Clients
  - Microsoft Internet Explorer 11.0
- App
  - Available on iOS, Android™ and PC

Hardware and software requirements are representative and may vary by customer deployment. Please consult the product documentation for more details.

Smart Air Handler with the Air Handling Reasoner Pack helps you detect and predict issues based each component in your AHU and each AHU in your system.





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### Services

In the world of Industrial Internet of Things (IIoT), organizations are able to optimize productivity, reduce costs, and achieve Operational Excellence. While this is an exciting time for opportunity and growth, it can also bring on new challenges, questions, and uncertainty. No matter where you are on your IIoT journey, GE Digital has the right services offering for you.

[Advisory Services](#) We can help you plan and start your IIoT journey in a way that aligns to your specific business outcomes.

[Managed Services](#) We can help you maintain your critical machines from one of our remote locations around the world using model-based predictive-analytic technology.

[Implementation Services](#) Our experienced global Automation partners can implement a collaborative, multi-generational program that marries your existing investments to the right enhancements and technology.

[Education Services](#) We specialize in education services to ensure that you're leveraging our solutions to the fullest extent with our training and certificate programs.

[GlobalCare Support Services](#) Let us help by ensuring that your business continues to operate at its highest efficiency, all while mitigating risks to your investments.

[Wurldtech Security Services](#) Our solutions provide industrial-grade security for a wide range of OT network and application topologies.

### Related products

GE Digital's [HMI and SCADA](#) suite helps you precisely monitor, control, and visualize every aspect of your operations, enabling operators to make the best decisions faster.



#### [HMI and SCADA](#) →

Precisely monitor, control, and visualize every aspect of your operations for intelligent control, enabling operators to make the best decisions faster.



#### [Mobile](#) →

Take industrial automation to a new level, transforming operational data into actionable information, accessible anywhere, anytime.

#### [Predix](#) →

Innovate and transform your business with the cloud-based operating system for the Industrial Internet, purpose-built for industry.

# PREDIX

### Continue your IIoT journey

Transforming your business requires innovative foundational solutions that lay the groundwork for optimized performance.



#### [Cyber Security for OT](#) →

Take the right actions to increase resilience, help ensure safety, and maintain availability across your operational technology (OT) environment.



#### [Workflow](#) →

Guide operators with dynamic, interactive electronic work instructions and eSOPs for more consistent operations and optimized processes.



#### [Historian](#) →

Optimize asset and plant performance through time-series industrial data collection and aggregation, leveraging Predix IIoT connectivity.

#### About GE

GE (NYSE: GE) is the world's Digital Industrial Company, transforming industry with software-defined machines and solutions that are connected, responsive and predictive. GE is organized around a global exchange of knowledge, the "GE Store," through which each business shares and accesses the same technology, markets, structure and intellect. Each invention further fuels innovation and application across our industrial sectors. With people, services, technology and scale, GE delivers better outcomes for customers by speaking the language of industry.

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