



ICONICS Product Catalog



Microsoft
Partner

2017 Partner of the Year Winner
Application Development Award



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ICONICS visualization solutions offer intuitive monitoring and control to provide clear understanding, truly making the invisible visible.

ICONICS provides industry-leading solutions for robust, scalable, high-speed data collection, on-premises or in the cloud.



ICONICS mobile apps deliver consistent graphics, dashboards, trends, and reports that scale responsively to any mobile device.

ICONICS offers the most advanced analytical software solutions for every industry at every scale, unleashing the hidden value of data.



ICONICS is leading the way in cloud-based solutions to help its customers embrace the Internet of Things (IoT).

Designed for Use in Many Industries

Now in its fourth decade, ICONICS has developed leading-edge software tools for manufacturing, industrial, and building automation. ICONICS has shipped over 350,000 systems that are installed in applications spanning the globe in various industries:



Automotive



Building Automation



Food & Beverage



Government & Military



Manufacturing



Oil & Gas



Materials & Mining



Pharmaceutical



Sustainability



Transportation



Utilities & Energy



Water & Wastewater

ICONICS Cross-product Features

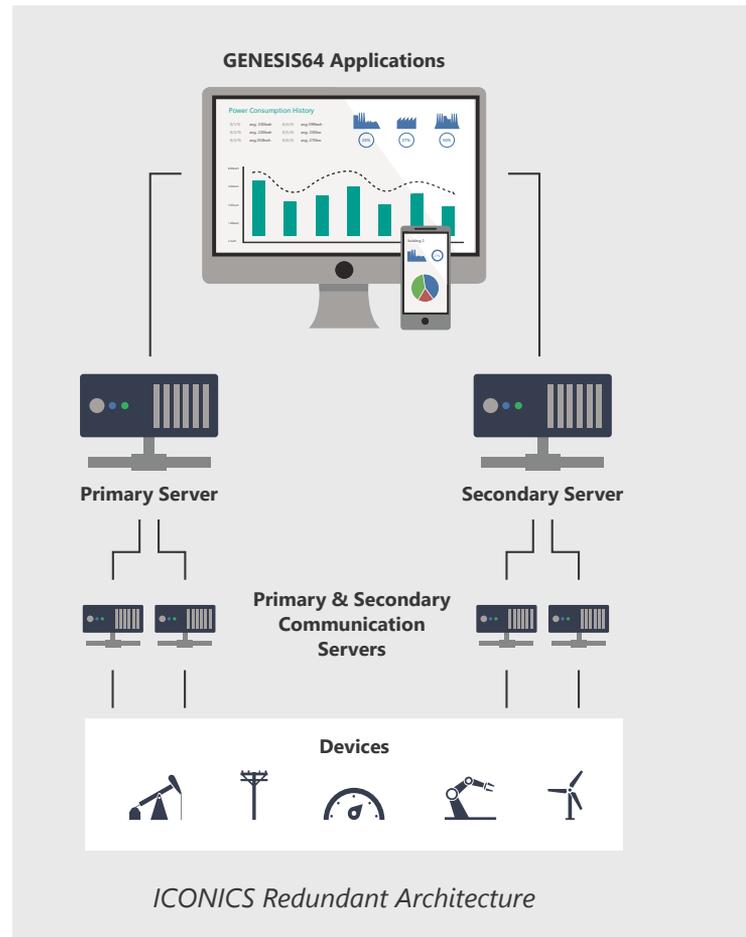


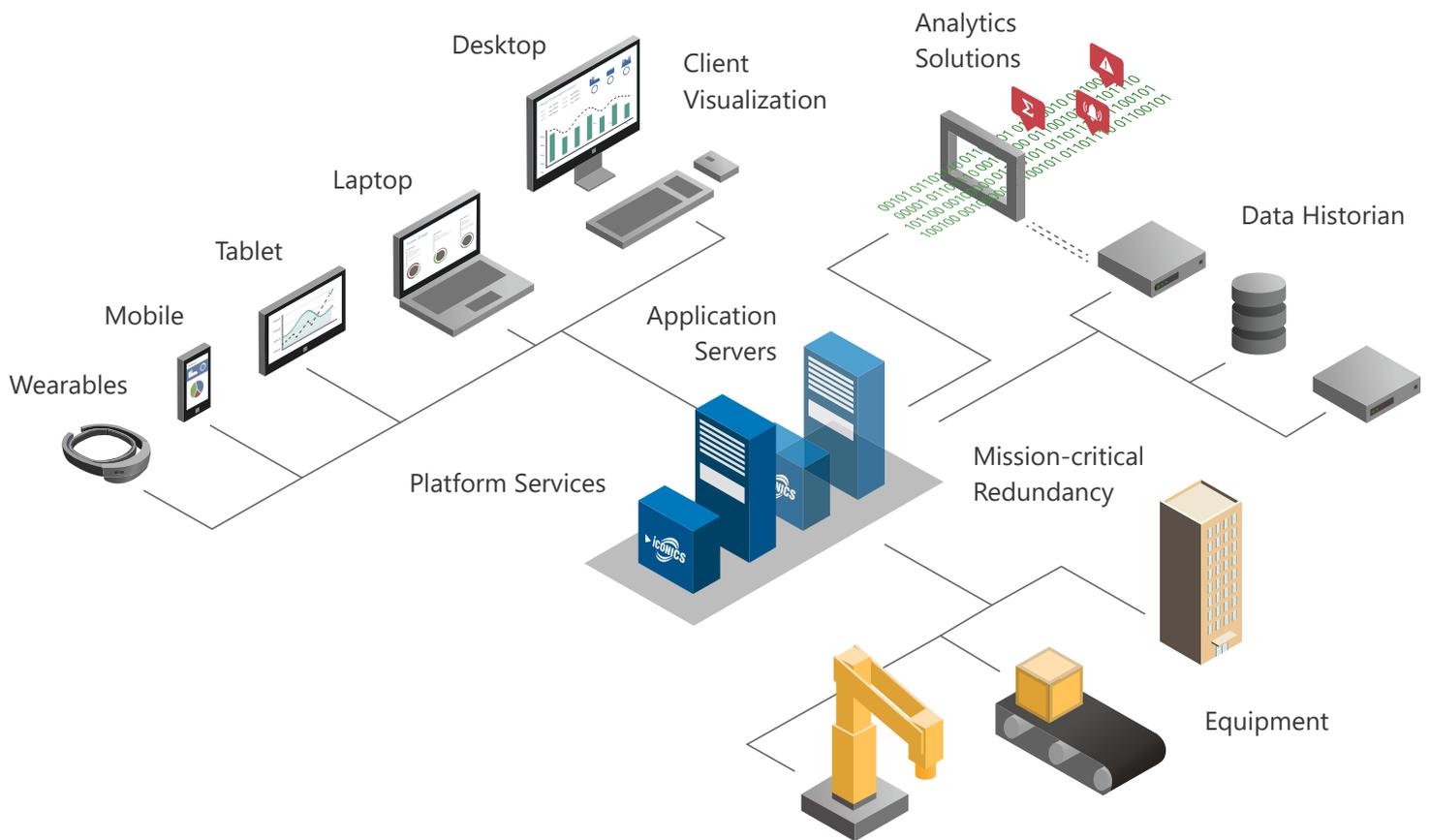
Advanced Visualization on Any Device

Bring the visualization of ICONICS to any device. Create displays on the desktop that can responsively scale to run on any mobile client. Leverage native apps to provide a consistent user experience on any smartphone or tablet. Access HMI/SCADA applications on any HTML5 or WPF compliant web browser. Deliver self-service executive dashboards to any desktop or mobile device utilizing preconfigured widgets for business intelligence. ICONICS' responsive UI technology flawlessly transitions between clients to provide a consistent user experience.

Mission-critical Redundancy

ICONICS ensures the safety of any critical data by offering high availability redundancy for communication reliability. Redundant collectors and loggers serve as a backup in case of a system failure. With automatic fault detection and store-and-forward technology, ICONICS users can be assured that mission-critical real-time data, historical data, and alarm information are always available. ICONICS redundancy solutions are simple to configure, install, and deploy.





ICONICS System Architecture

Powerful Centralized Configuration

The Workbench is the multi-functional, centralized desktop or web-based environment for all back-end configurations making development more efficient and minimizing design time for any application. Offered in WPF, users can configure and manage their entire GENESIS64 application from anywhere.

Front-end user interfaces and dashboards are configured using the GraphWorX™64 visualization module. Design HMI and SCADA displays leveraging 2D and 3D graphics, preconfigured symbols, dynamic properties, animation, and flexible aliasing.

Universal Connectivity

ICONICS supports industry standard communications such as OPC, OPC UA, Modbus, BACnet, web services, and databases. As the first 64-bit Advanced Workstation (B-AWS), ICONICS Platform Services are certified by the BACnet Testing Laboratories, ensuring maximum integration with BACnet protocols such as BACnet objects, trends, and alarms. ICONICS is certified for OPC UA compliance by the OPC Foundation. Simple device discovery on the network makes integration seamless and efficient.

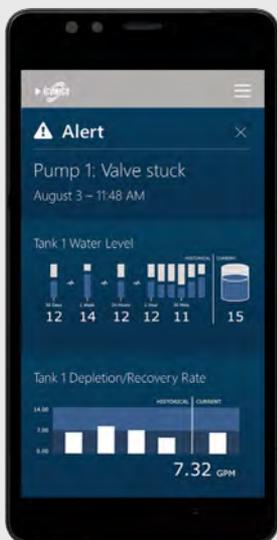
GENESIS64™

GENESIS64™ is an advanced 64-bit multi-core, multi-processor HMI/SCADA solution suite designed for Microsoft operating systems. ICONICS GENESIS64 suite is a native .NET application that delivers unparalleled performance with OPC, BACnet, Modbus, and open standard database connectivity.

The GENESIS64 suite provides connectivity from plant floor and building facilities to corporate business systems. Designed to leverage 64-bit, .NET managed code, and OPC UA technologies, GENESIS64 allows operators, executives, and IT professionals to integrate real-time manufacturing, energy, and business information into a secure and unified web-enabled visualization dashboard.

GENESIS64 Key Features

- Visualize assets with 2D and 3D graphics
- Utilize object-oriented distributed alarm management
- Customize asset and tag organization
- Configure and develop in a web-based environment
- Command countless tools for visualizing data
- Save and export updated configurations

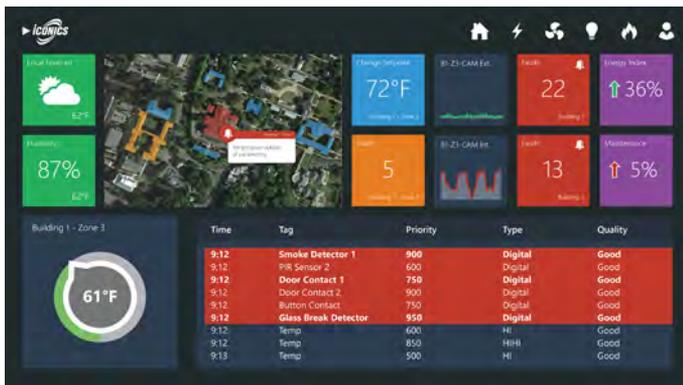


Minimize Design Time

The largest cost of any automation project is in engineering the application. For an average project, this can be well over 60 percent of the total expenditure. GENESIS64 greatly reduces configuration effort and minimizes design time, resulting in enormous cost savings and drastically reduced configuration time. As an award-winning Microsoft Gold Partner, ICONICS is able to consistently deliver software solutions based on the latest 64-bit Microsoft operating systems, including the latest versions of Windows Client, Windows Server, and Microsoft Azure. Key features of Windows can be leveraged within GENESIS64 and provide users with the greatest application performance, reliability, and flexibility.

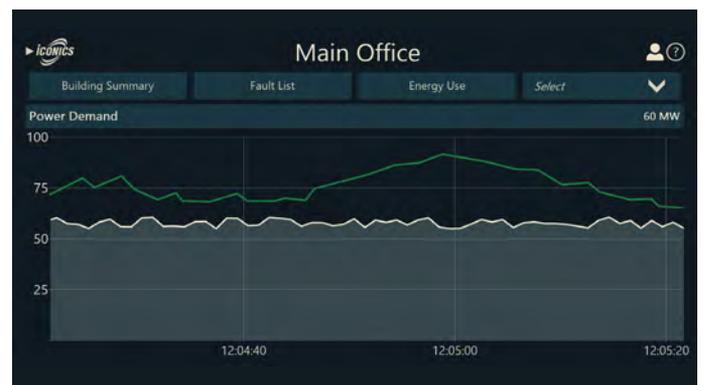
Distributed Alarm Management

Enterprise-wide distributed alarm management is provided through AlarmWorX™64, ICONICS native alarming module. AlarmWorX64 offers the tools to deliver real-time alarm management throughout a system, with ISA 18.2 compliance features. Manage alarms with a preconfigured AlarmWorX64 Viewer to integrate into any SCADA or HMI display.



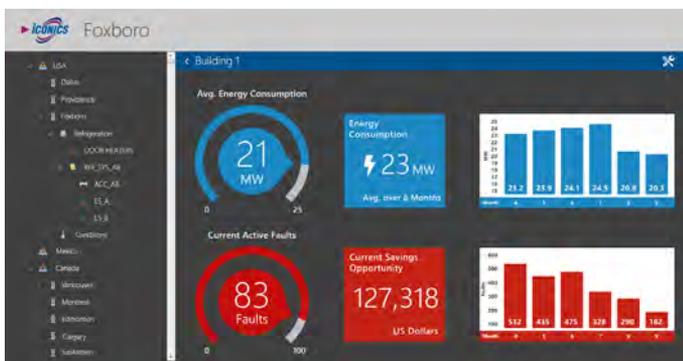
Real-time and Historical Trends

Visualize enterprise-wide data into trends, logs, charts, and reports with the GENESIS64 trending module, TrendWorX™64. Chart real-time and historical data from any relational database to provide users with actionable data. Customize trends with colors, multiple data sources, multiple cursors, and animation. Interact with trends in runtime with multiple playback and filtering functions.



Asset Management

GENESIS64 includes an ISA-95 compliant asset management module called AssetWorX™. Assets can be organized and configured in the Workbench with a runtime component critical for scaling large projects while providing intuitive navigation. These hierarchies can optionally include alarms, customizable colors, icons, names, and drag-and-drop functionalities.



Native Geo-SCADA

ICONICS' GIS mapping module, EarthWorX™, provides visualization for widely dispersed assets. Create a geographical overview to monitor multiple locations while maintaining the ability to locate and drill into specific assets. Users can integrate with Bing Maps, Google Maps, and Esri to include additional GIS mapping features and data layers.

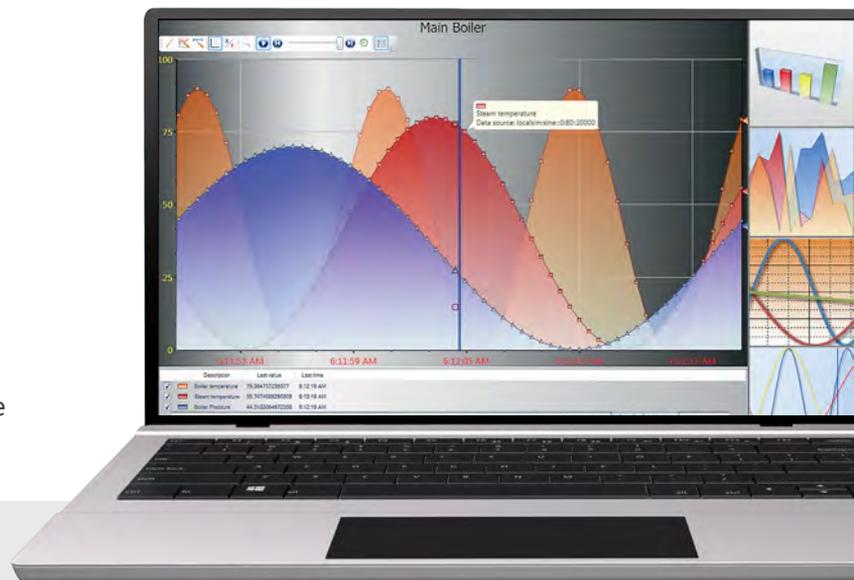


Hyper Historian™

ICONICS' Hyper Historian™ is an advanced 64-bit high-speed, reliable, and robust historian. Designed for the most mission-critical applications, Hyper Historian delivers unparalleled performance with very efficient use of resources. Hyper Historian leverages the latest Microsoft platforms and includes integration with SQL Server. This technology makes Hyper Historian the most efficient, real-time plant historian for any Microsoft operating system. Combining a high compression, advanced algorithm, and designed to leverage 64-bit hardware and software architectures, Hyper Historian can access more CPU power and memory than traditional 32-bit based historians, providing the highest performance possible on all standard PC-based platforms.

Hyper Historian Key Features

- Integrate performance calculations
- Archive data from unattended operations
- Replay real-time and historical data
- Customize trends and charts
- Store and forward critical data
- Trace diagnostic data with event logs
- Leverage rapid collection for enterprise-wide storage



Charts, Data Analysis, and Reporting

Choose from a multitude of chart and trend styles to best represent and accentuate real-time and historical data. Use configuration options to customize trends to make data analysis concise and intuitive. Drag and drop data sources during runtime and view multiple trends simultaneously. Enter operator comments as well as manage lab data and audit trails.

Hyper Historian includes an industry standard SQL Query Engine for reporting and bulk data editing, enabling tight integration with any SQL compatible database such as Microsoft SQL Server, Oracle, and any open database.



Data Merging

Hyper Historian includes a module for automatic or manual insertion of data, empowering users to import historical or log data from databases, other historians, or intermittently connected field devices and equipment. This also provides for greatly increased reliability in capturing all data, even when network disruptions occur.

Performance Calculations

Customize calculations that can be triggered periodically or on any event, using flexible date/time, mathematical, string, and historical data retrieval functions within the expression editor.

Hyper-to-Hyper

Merge data collected by distributed servers, while maintaining full system interconnectivity for metrics and analytics. Hyper-to-Hyper connectivity can also automatically detect changes in the source data and propagate those to the central Hyper Historian server, maintaining a unified historical database.

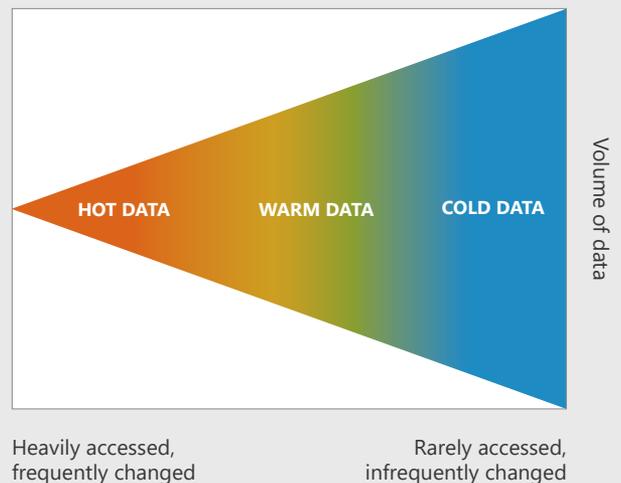
Remote Collectors

Architected as a distributed, enterprise-wide historian, Hyper Historian remote collectors allow for historical data collection from dispersed locations. Remote collectors ascribe by ICONICS' universal connectivity capability including OPC-UA, BACnet, and SNMP protocols.



Hot, Warm, and Cold Big Data Solutions

Hyper Historian is designed for all scenarios of data access and storage with the flexibility to handle "hot", "warm", and "cold" data. Hot data is information that needs to be accessed regularly, such as real-time KPIs or analytics, critical to daily decisions and procedures. Warm data balances between long-term storage and ease of access but is not constantly being changed or required for daily operations. This includes information such as weekly statistics, monthly reports, or quarterly analytics. Cold data includes archived data, high volumes of raw information for long-term analysis, and data required for audits. Each type of data requires specific handling with various accessibility and storage needs. Hyper Historian includes features to help users prioritize access of hot data while maintaining the integrity of secured, cold data.



MobileHMI™

MobileHMI™ is an enterprise mobile application that runs on hundreds of different phones and tablets and can scale to thousands of devices. MobileHMI delivers real-time rich visualization, historical trends, and alarm notifications without compromising security. MobileHMI addresses the growing need for connectivity away from operator stations, allowing personnel to monitor and control from anywhere. The consistent user experience across any device enables teams to mobilize without requiring any upfront investment in device standardization.

MobileHMI Key Features

- Access HMI and SCADA on any mobile device
- Leverage augmented reality with location services
- Navigate mobile displays with the AppHub
- Create self-service dashboards with KPIWorX™
- Scale applications with IoTWorX™ integration
- Visualize with innovative 3D graphics capabilities



Notifications

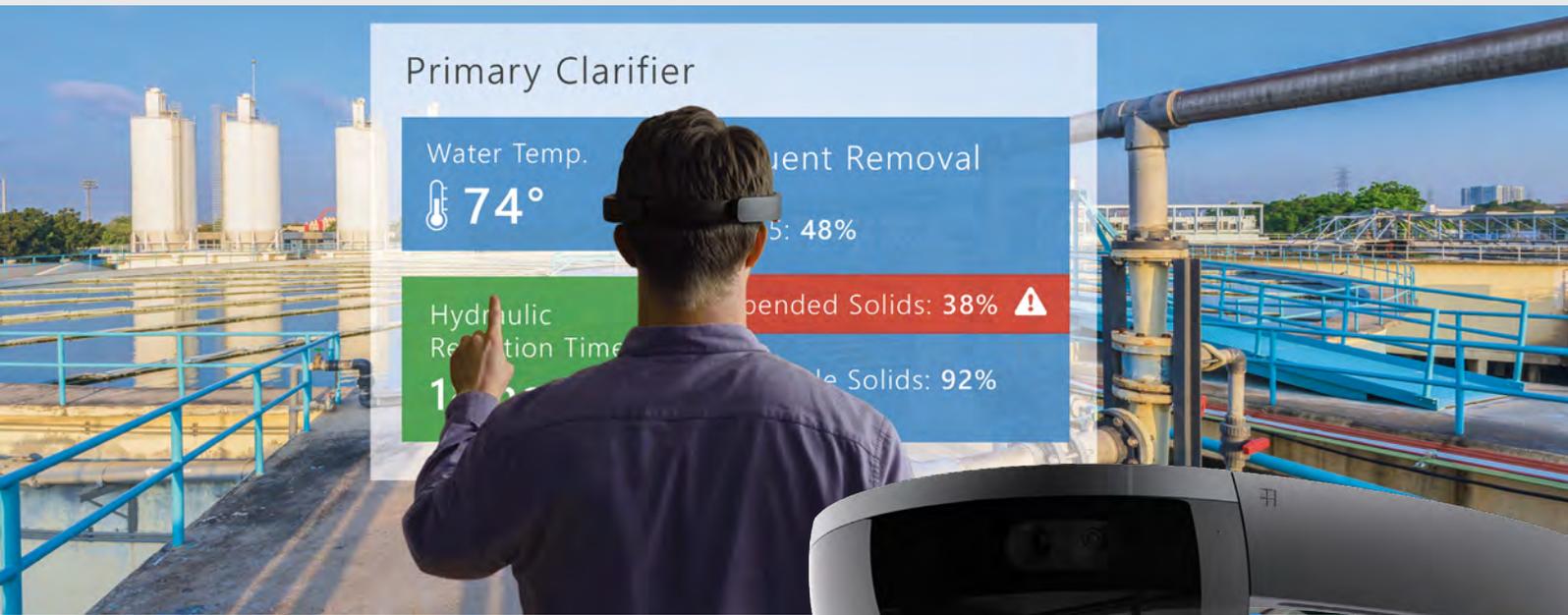
React rapidly to critical alarm conditions with any mobile smart device. View and sort alarms and take immediate action by acknowledging critical alerts via phone or SMS messaging. Integrated support for operator commands helps record operator actions to provide complete audit trails and regulatory reporting.

Analytics and Trends

View and analyze KPIs such as OEE, downtime, C_{pk} , energy consumption, faults, and product quality using intuitive role-based and interactive analytics and charts. KPIWorX BI technology empowers users to compare real-time and historical data from any device and instantly make informed decisions.

Responsive UI

ICONICS responsive design ensures that all user-created applications migrate seamlessly to any client. Flexible design tools in GraphWorX64 and the Workbench assist users in designing displays for both desktop and mobile applications. Application images and controls automatically resize and reformat, allowing users to truly access all of their applications on any device without having to compromise on user experience.



Enhanced User Experience

The next generation of user interaction has arrived with the emergence of wearable devices and augmented reality. ICONICS is at the forefront of this exciting trend with cutting-edge solutions for devices including Microsoft HoloLens. Streamline user experience by increasing ease of access while also minimizing intrusiveness and barriers to information. Just as touch and voice input provided useful supplements to traditional user interface technologies, this innovation with wearable devices will enhance interaction and collaboration, enhance situational awareness, and maximize operator efficiency.

Augmented and Mixed Reality Key Features

- Interact with mixed reality holograms
- Conduct operations hands-free
- Leverage native gesture-based interactions
- Improve collaboration and cooperation
- Maximize maintenance efficiency



IoTWorX™

IoTWorX™ combines ICONICS' new IoT gateway technology with its proven HMI/SCADA, analytics, and mobile solutions running in the cloud. ICONICS offers manufacturers and facility managers several key IoT technologies, including rich connectivity to things, secure cloud communications, and built-in real-time visualization and analytics. Connect to virtually any automation equipment through supported industry protocols such as BACnet, SNMP, Modbus, OPC UA, and classic OPC tunneling.

IoTWorX Key Features

- Publish data securely to the cloud
- Visualize on any device, anywhere
- Remotely monitor and control assets
- Drill down into enterprise-wide KPIs
- Integrate with existing equipment
- Streamline user experience



IoTWorX Features

IoT Cloud Connector – Publishes real-time data from field devices to the Azure IoT Hub or other popular cloud platforms.

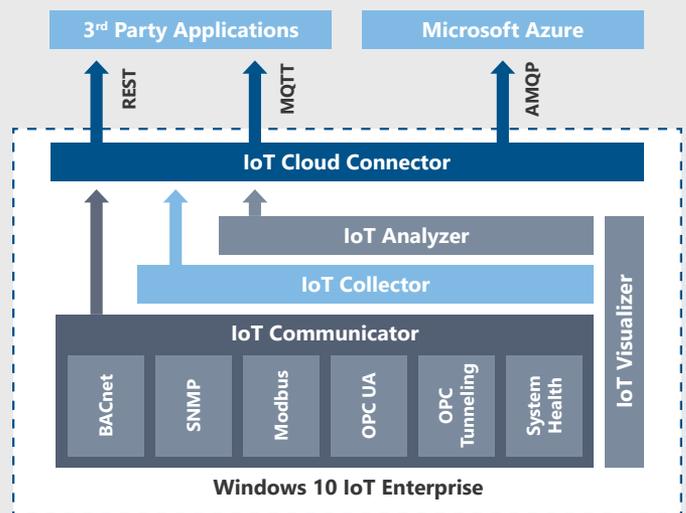
IoT Communicator – Enables bidirectional real-time communication to sensors and other field devices via popular standard protocols.

IoT Collector – Stores and buffers historical data and automatically merges it with Hyper Historian in the cloud.

IoT Analyzer – Provides edge analytics with built-in fault rules and workflow technology.

IoT Visualizer – Allows for on-premises visualization of IoTWorX data using ICONICS KPIWorX app.

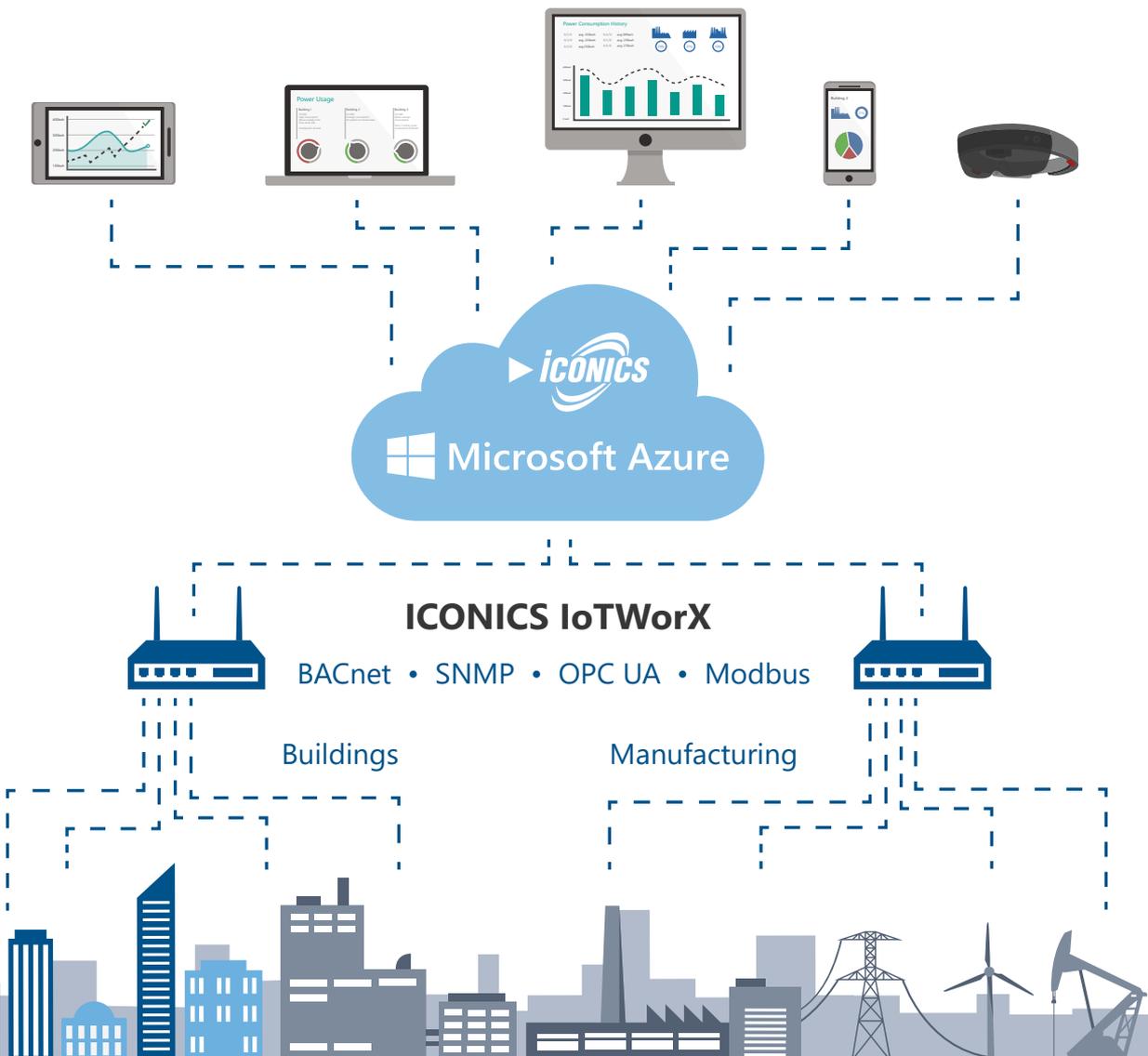
IoT System Health – Provides built-in remote monitoring and diagnostics via an intuitive dashboard.





ICONICS IoTWorX Integration

ICONICS' IoT solution takes maximum advantage of the Azure cloud to provide global visibility, scalability, and reliability. Leverage standard ICONICS apps in the cloud such as GENESIS64, Hyper Historian, AnalytiX®, and more. Optionally integrate Microsoft Azure services such as Power BI and Machine Learning to provide greater depth of analysis.



Energy AnalytiX[®]

Energy AnalytiX[®] is an energy monitoring, analysis, and management system that delivers rich, real-time visualization providing open universal data connectivity and data integration to a wide variety of BMS, SCADA, ERP, and control systems. Managers of any building or plant have a revolutionary smart energy software solution that is intuitive to configure, customize, and operate. Energy AnalytiX includes built-in calculations, analytics, data historian, reporting, and the visualization needed to take decisive action to reduce and manage utility costs and consumption.

Energy AnalytiX Key Features

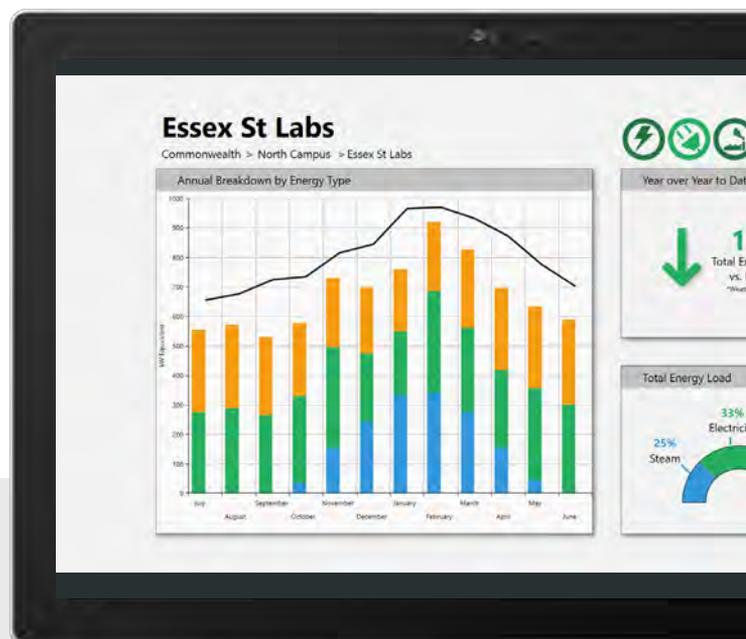
- Visualize cost savings from energy management
- Generate standard cost, consumption, and carbon reports
- Drill down into causes of abnormal energy use
- Scale across a single building or entire campus
- Reduce engineering time with preconfigured charts
- Integrate and interact with historical data

Intuitive Configuration

Energy AnalytiX employs web-based configuration capabilities, including asset navigation that provides intuitive setup and configuration to any level of aggregation. Drill down to specific sources of energy inefficiencies and locate suspected consumption offenders. Easily cross-compare consumers within the same metrics using roll-up calculations.

Actionable Information

Energy AnalytiX connects, analyzes, logs, and visualizes information in a way that is intuitive and accessible. A Site Summary Overview provides instant information on energy consumption, financials, and the environmental impact.



Facility AnalytiX®

Facility AnalytiX® is a complete, continuous commissioning software solution based on ICONICS' advanced Fault Detection and Diagnostics (FDD) technology that significantly reduces costs and improves operational efficiency. Facility AnalytiX incorporates user customizable fault rules to report faults and failures and weighs the probability of equipment failure and advise personnel of immediate preventative actions that can be taken, improving safety, and optimizing energy savings. An extensive library of standard HVAC and process equipment diagnostic models minimizes configuration, while a rules-based editor enables intuitive customization and new equipment diagnostic modeling.

Facility AnalytiX Key Features

- Leverage hundreds of fault rules for building equipment
- Minimize equipment downtime with actionable alarms
- Monitor fault state with enhanced analysis
- Optimize the efficiency of facility operations
- Scale across a single building or entire campus



Fault State Tracking

Provide better clarity into the lifecycle of faults for maintenance and operations leveraging fault state tracking. Log entries are made for each state of a fault's lifecycle when it becomes active or inactive and when faults are resolved by technicians or engineers. Fault state tracking provides the ability to enter comments for the root cause of each fault, enabling maintenance and commissioning personnel to communicate actions taken during a fault's lifecycle and easily track, sort, and filter on every state using the powerful Facility AnalytiX Viewer. This feature also empowers users to calculate relevant analytical metrics such as average fault duration and response time.

Quality AnalytiX[®]

Quality AnalytiX[®] enables operators, quality personnel, manufacturing engineers, and management to view quality SPC data and other production parameters impacting product quality. Apply any of the extensive set of built-in SPC calculations to any process variable and integrate SPC data into expressions and logic to drive corrective actions based on process trends. Quality AnalytiX leverages ICONICS Hyper Historian technology for data collection and calculations. The architecture supports large enterprise-wide SPC quality programs as well as applications requiring rapid sample rates.

Quality AnalytiX Key Features

- Customize rule-based alarms
- Combine SQC and process monitoring
- Universally connect to all new and existing equipment
- Unify control processes from dashboards
- Utilize preconfigured calculations to optimize conditions
- Minimize overfills, scrap, and inefficiencies



Ensure Product Quality

Spot trends and make decisions based on real-time SPC data with Quality AnalytiX. Reduce scrap and increase production yields using built-in charts, graphs, and alarm views. Powerful workflow technology initiates control actions based on quality conditions or alarm violations, providing changes to process equipment such as PLCs, temperature controllers, and DCS systems. Utilize preconfigured charts to calculate optimum conditions and determine saving per unit or batch.

KPIWorX™

KPIWorX™ delivers a powerful visualization and analysis tool directly to executives, managers, and industry personnel. Connect all devices to KPIWorX to effortlessly manage and navigate assets with real-time data. Configure self-service dashboards that meet specific industry needs while interacting with displays in runtime. Visualize the most important performance indicators of any system or business from any desktop or mobile client and transfer dashboards seamlessly. KPIWorX's advanced user experience features automatically adjust using KPIWorX responsive UI while also providing a vast library of preconfigured industry and interface symbols.

KPIWorX Key Features

- Seamlessly transition from a desktop to any mobile device
- Configure self-service dashboards
- Customize dynamics and symbols in any display
- Choose from a wide variety of industry specific symbol libraries
- Simplify configuration with drag and drop interactions
- Leverage powerful analytical tools with business intelligence
- Create and distribute reports



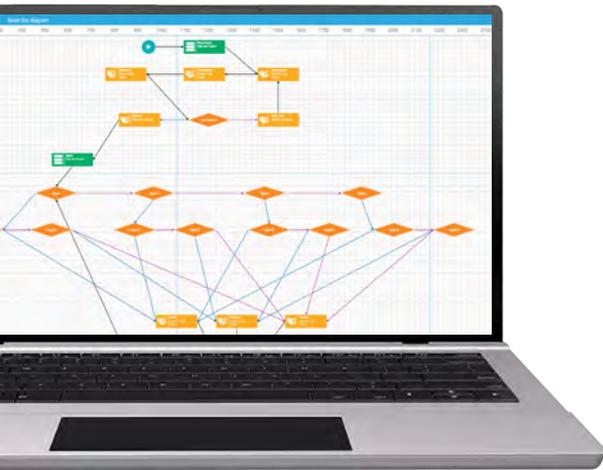
Self-service Business Intelligence

KPIWorX self-service dashboards continue to leverage the most intuitive, user-friendly features to reduce time spent creating and configuring. In addition to enhanced user experience and interface, an additional aspect of customization and analysis has been added with new BI elements. New elements include filters, maps, tables, treemap charts, funnel charts, pie charts, donut charts, and categorical charts.

Additional ICONICS Tools and Add-ons

AlarmWorX™64 mmx

AlarmWorX™64 Multimedia (MMX) is a complete and comprehensive OPC-based alarm management application with a distributed, enterprise-wide alarm notification system that delivers real-time alarm information directly to the user. Leverage email, pager, fax, voice, text-to-speech, and phone to alert users subscribed to an application.



BridgeWorX™64

The BridgeWorX™64 service provides the latest 64-bit data bridging technology for ICONICS products. Graphical data bridging enables users to rapidly implement data orchestration and integration tasks that adhere to business logic without requiring programming. BridgeWorX64 can access Microsoft SQL Server, Oracle, Microsoft Access, SAP, and virtually any real-time or archived manufacturing or business data source.

ReportWorX™64

ReportWorX™64 is a powerful reporting tool that turns volumes of data into manufacturing intelligence. ReportWorX64 empowers users to create reports using data integrated from any source within any system. Connect to data from the plant floor, corporate databases, and everywhere in between via OPC, OPC UA, BACnet, Modbus, and SNMP. ReportWorX64 can also retrieve data from Hyper Historian, AlarmWorX64, TrendWorX64, and other ICONICS data sources. Based on scalable Microsoft .NET technology, ReportWorX64 pushes data into report spreadsheets using the power of Microsoft Excel. Its advanced scheduling engine delivers reports automatically via the web, from an HMI screen, or based on user-specified criteria.



OPC Server Suite

ICONICS provides OPC-to-the-Core™ solutions ranging from a suite of OPC servers and clients to a toolkit for developing OPC Servers. ICONICS is a charter member of the OPC Foundation and has assisted over the years with creation of OPC standards, development of the OPC Foundation sample code, and participating and hosting OPC Interop testing. Currently ICONICS serves on the board of directors for the foundation.

Additionally, ICONICS offers several free OPC development tools. For OPC specifications, please go to www.opcfoundation.org.

Free OPC tools include:

- OPC Modbus Server
- OPC Simulator Server
- Several OPC Enabled ActiveX Controls

To download these OPC tools, visit www.iconics.com/Products/OPCTools.

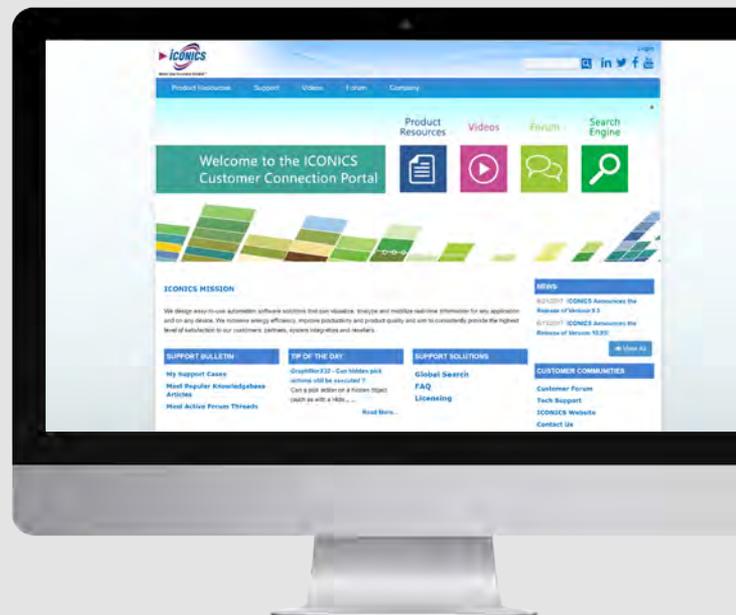


Support and Services

Get connected with ICONICS by visiting the Customer Connection Portal for general support, product downloads, product updates, customer collaboration, and product tips from ICONICS' engineers and support team. The Customer Connection Portal also features Support Solutions, a Support Bulletin, product videos, app notes, and whitepapers, enabling users to find answers quickly and easily.

A new feature of the Customer Connection Portal is the in-depth training videos highlighting many ICONICS products. These videos help users configure their systems and get the best results. Starting with a Quick Start series introducing each module in GENESIS64, these videos provide brief overviews and demonstrations of how to use ICONICS products. Send us your suggestions for additional topics to cover!

Visit the ICONICS Customer Connection Portal today at getconnected.iconics.com.





Founded in 1986, ICONICS is an award-winning independent software provider offering real-time visualization, HMI/SCADA, energy management, fault detection, manufacturing intelligence, MES, and a suite of analytics solutions for operational excellence. ICONICS solutions are installed in 70 percent of the Global 500 companies around the world, helping customers to be more profitable, agile and efficient, to improve quality, and to be more sustainable.

ICONICS is leading the way in cloud-based solutions with its HMI/SCADA, analytics, mobile and data historian to help its customers embrace the Internet of Things (IoT). ICONICS products are used in manufacturing, building automation, oil and gas, renewable energy, utilities, water and wastewater, pharmaceuticals, automotive, and many other industries. ICONICS' advanced visualization, productivity, and sustainability solutions are built on its flagship products: GENESIS64™ HMI/SCADA, Hyper Historian™ plant historian, AnalytiX® solution suite, and MobileHMI™ mobile apps. Delivering information anytime, anywhere, ICONICS' solutions scale from the smallest standalone embedded projects to the largest enterprise applications.

ICONICS promotes an international culture of innovation, creativity, and excellence in product design, development, technical support, training, sales, and consulting services for end users, systems integrators, OEMs, and channel partners. ICONICS has over 350,000 applications installed in multiple industries worldwide.



World Headquarters

100 Foxborough Blvd.
Foxborough, MA, USA, 02035
☎ +1 508 543 8600
✉ us@iconics.com



European Headquarters

Netherlands
☎ +31 252 228 588
✉ holland@iconics.com

Australia

☎ +61 2 9605 1333
✉ australia@iconics.com

Canada

☎ +1 647 544 1150
✉ canada@iconics.com

China

☎ +86 10 8494 2570
✉ china@iconics.com

Czech Republic

☎ +420 377 183 420
✉ czech@iconics.com

France

☎ +33 4 50 19 11 80
✉ france@iconics.com

Germany

☎ +49 2241 16 508 0
✉ germany@iconics.com

India

☎ +91 265 6700821
✉ india@iconics.com

Italy

☎ +39 010 46 0626
✉ italy@iconics.com

Middle East

☎ +966 540 881 264
✉ middleeast@iconics.com

Singapore

☎ +65 6667 8295
✉ singapore@iconics.com

UK

☎ +44 1384 246 700
✉ uk@iconics.com

For more, visit www.iconics.com

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