GENESIS64™

Next Generation in Automation Software

A suite of 64-bit HMI/SCADA software solutions

Microsoft Partner
Gold Application Development

2013 Microsoft Partner of the Year Award Finalist
Application Development

Compatible with Windows 7

Windows 8 Compatible

Windows Server 2012 Certified

BACnet BTL Testing Laboratories

Certified OPC Foundation

vmware READY

ICONICS

Visualize Your Enterprise™

The Next Generation in HMI/SCADA

Advanced 64-bit multi-core, multi-processor computing on 64-bit Microsoft operating systems is here today. ICONICS GENESIS64 suite is a native .NET application that delivers unparalleled HMI/SCADA performance with OPC and BACnet open-standard connectivity.

The GENESIS64 suite includes solutions that allow for connectivity from plant floor and building facilities to corporate business systems. Designed from the ground up to take advantage of 64-bit, OPC UA, .NET managed code and SharePoint® technology, GENESIS64 allows plant operators and IT professionals to integrate real-time manufacturing and business information into a secure and common Web-enabled visualization dashboard.

Workbench Multi-application Layout

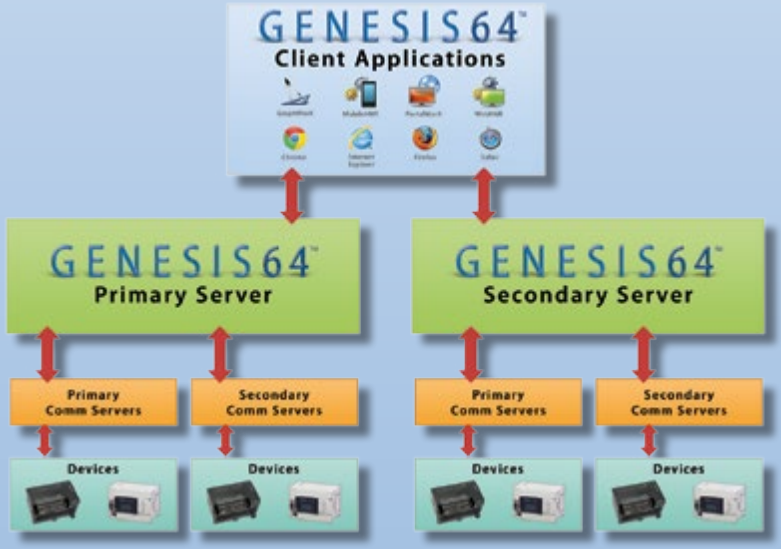
Powerful Web-based Workbench Configuration

Workbench is the multi-functional, centralized desktop or Web-based environment for all GENESIS64 product configurations and is the core of the GENESIS64 suite. All GENESIS64 and integrated third-party applications can be configured from the unified Workbench, allowing faster development and cost savings in designing any application. Offered in Windows Presentation Foundation (WPF) or Silverlight technology, users have the option to configure from anywhere or operate an application from Workbench Classic (WPF) or PortalWorX-SL (Workbench Silverlight's Runtime).

- **Integrated Project Management**
  Workbench provides complete and secure project management capability for your application. The Workbench project management features include:
  - Pack-and-Go Deployment
  - Versioning and Change Management
  - Global Search, Organize, Find and Replace
  - Project Statistics and Audit Trails

Mission Critical Redundancy

For applications that need to run around the clock and be fail-safe, GENESIS64 offers high availability redundancy for the best communication reliability. With automatic failure detection and store-and-forward technology, GENESIS64 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. Tested on Hyper-V and certified for VMware, GENESIS64 software redundancy covers all major aspects of data redundancy such as data access, alarms, historical data and security. Expansion to fault-tolerant hardware such as Stratus machines can further secure applications from downtime. In GENESIS64, OPC software redundancy provides full automatic switchover for OPC data access (DA), Alarms & Events (A&E), Historical Data Access (HDA) and Security.



Redundancy Architecture

Universal Connectivity with BACnet and OPC UA

GENESIS64 is the first 64-bit Advanced Workstation (B-AWS) certified by the BACnet Testing Laboratories ensuring maximum integration with the BACnet protocol including BACnet Objects, Trends, Alarms and more. GENESIS64 is certified for OPC Unified Architecture (OPC UA) compliance by the OPC Foundation. OPC UA is based on secure, robust and scalable Web services, taking advantage of Windows Communications Foundation (WCF). GENESIS64 is truly "OPC-to-the-Core™", exemplifying the next generation of standards-based communications.

Unsurpassed Visualization on Any Device, Anytime, Anywhere

GENESIS64 takes advantage of state-of-the-art graphic hardware acceleration through DirectX10, powered by Microsoft Windows 8 and Windows Server 2012. GraphWorX™64, integrated with Windows Presentation Foundation and Silverlight, provides users with a dazzling 2D and 3D view of their operations in real time with live data. Imagine the ability to view how equipment is running from any 3D angle and perspective. It's a whole new powerful approach and a first in HMI/SCADA visualization. Targeting mobile smart devices has never been easier with MobileHMI™, which provides a consistent experience across browsers, tablets and smartphones via Microsoft WinRT and HTML5.

Cloud-ready Distributed Architecture

The **Cloud Connector** for Azure allows ICONICS customers to combine on premise solutions with cloud solutions or fully embrace the virtualized scalability afforded by the cloud while benefiting from the security of IT and firewall friendly communications. With the GENESIS64 distributed and modular architecture customers can create hybrid solutions that maintain data integrity and security while delivering KPI dashboards on the cloud.

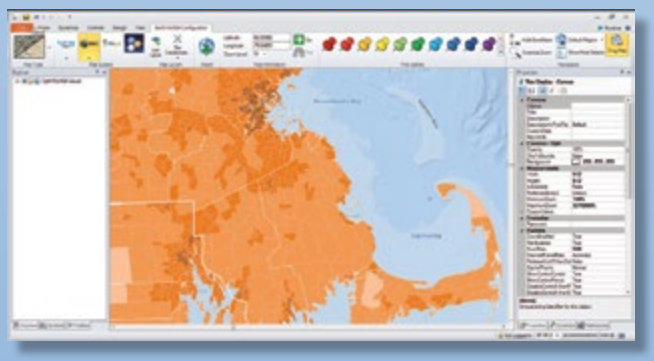
Take Visualization and SCADA to New Levels

GraphWorX™64 takes maximum advantage of WPF and Silverlight for rich 2D and 3D HMI and SCADA visualization. Users can build scalable, XAML vector-based graphics that retain details when zoomed. Users can create stunning vector objects or use preconfigured symbols with dynamic properties of rotation or animation. Elegant Smart Tiles to display key metrics as well as referenced and dynamic colors take just a few simple clicks. GENESIS64 supports the ability to import 3D models created in Autodesk and other 3D modeling software allowing for reuse of existing 3D content.

3D Visualization in GraphWorX64

Quickly View Assets with GEO-SCADA

EarthWorX™, GENESIS64's geographical information SCADA technology, provides real-time visualization to widely dispersed assets. ICONICS' unique SmartPin™ technology allows for an intuitive drill-down capability to quickly view alarm conditions and status for any location around the world. GENESIS64 is integrated with Bing, Google and Esri maps or maps conforming to the Web Map Service (WMS) format. Embedded in GraphWorX64, EarthWorX can be layered into existing HMI screens and include multiple maps through EarthWorX layering.

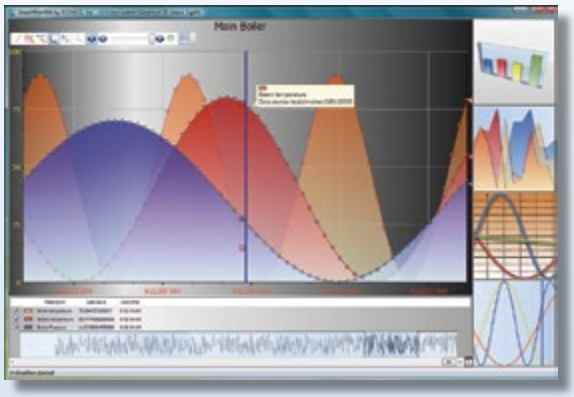


Esri Population Map with Smart Pin Technology

"ICONICS gives you a 360° view of your entire enterprise"

Real-time and Historical 3D Charts and Analysis

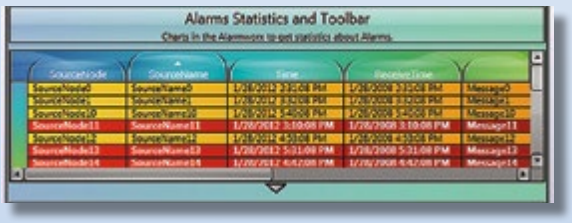
TrendWorX™64 is a plant-wide data collection, logging, charting, reporting and analysis solution. Designed to log data to any OLEDB database (e.g. Microsoft SQL Server, Oracle, MySQL and others), TrendWorX64 offers the tools you need to trend real-time and historical data from any relational database. TrendWorX64 is an OPC HDA-compliant application and provides open connectivity to any OPC DA and OPC UA data source.



TrendWorX64 Real-time & Historical Trending

Distributed Alarm Management

AlarmWorX™64 is a distributed, enterprise-wide alarm and events management system capable of handling the most demanding applications. The alarm system offers extensive tools to deliver and view real-time and historical alarm information. AlarmWorX64 includes an OPC Server, Logger and Alarm Viewer that is compliant with OPC A/E and OPC UA/AE industry standards.



AlarmWorX Display

Powerful Real-Time Dashboards for all Roles

PortalWorX™-SL enables the design of user screens as framed dashboards, for ease of use and consistency. Dashboards can be designed for each role in the organization and contain any combination of application views. Powerful commanding provides intuitive, single-click and drag and drop operation between applications windows.

S95 Compliant Asset Management

AssetWorX™ is an additional architectural layer within GENESIS64 that enables the system to be engineered and operated based on an intelligent asset model configured to represent a customer's enterprise. Distributed assets can be defined according to the S95 standard. The advantages of using AssetWorX include greatly reduced engineering time, operator consistency and easy navigation through the AssetWorX Navigator tree.

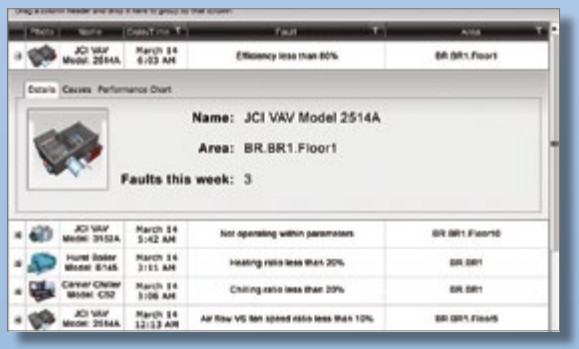
PortalWorX-SL Dashboard featuring AssetWorX

HMI Integrated Database Access and Control

GridWorX™ allows spreadsheet visualization of information with full read/write support to any database. Use GridWorX to access Web services and databases (e.g. Microsoft SQL Server, Oracle, MySQL and many others) and to sort, group and filter results.

Fault Detection and Diagnostics

FDDWorX™ represents the inclusion of a predictive equipment diagnostic solution that uses ICONICS' advanced Fault Detection and Diagnostics (FDD) technology within GENESIS64 for users to analyze information to detect and predict faults in equipment and energy efficiency. It incorporates algorithms that weigh the probability of faults and advises personnel of actions to prevent equipment failures.



FDDWorX Details View

Real-time Control Event Scheduling

ScheduleWorX™64 is a scheduling tool for real-time control and event management based on hourly, daily, monthly, seasonal and yearly calendars. Sequencing events through action sets can handle day-to-day control or non-recurring events such as Holidays. Scheduling is simple and easy with an intuitive interface that allows creation and reuse of events and multiple schedules.

On-demand Microsoft Excel Reporting

ReportWorX™ Express is an Excel plug-in that allows the user to pull in data from a variety of sources. Integrating with GENESIS64 Security and including support for data types including OPC, OPC UA, TrendWorX Logger Databases, Hyper Historian, AlarmWorX Logger Databases, Energy Star and Quality AnalytiX, ReportWorX Express will satisfy many reporting needs.

GENESIS64™

"The Next Generation in Automation Software... Has Arrived!"

Improve Your Productivity!

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. Taking advantage of 64-bit computing can greatly reduce this effort and shorten the design time, resulting in enormous cost savings and improvement in the bottom line. As an award-winning Microsoft Gold Certified Partner, ICONICS is able to constantly deliver software solutions based on the latest Microsoft operating systems. GENESIS64 is certified on the latest 64-bit operating systems, including Windows 8 and Windows Server 2012. Key features of Windows 8 come to life within GENESIS64 and provide users with the greatest application performance, reliability and flexibility.

Windows 8 Compatible

Compatible with Windows 7

Windows Server 2012 Certified

Key Features

- Universal Connectivity - OPC UA, BACnet, SNMP and Databases
- Intuitive 2D and 3D XAML, WPF & Silverlight Visualization
- Support for Asset and Tag-based Organization
- Object-oriented Distributed Alarm Management
- Customizable Frame or Canvas Based Visualization
- Silverlight Cross-browser, Cross-platform Visibility
- Hardware-accelerated 3D User Experience
- Native Touch Device Support through Windows Multitouch
- Web-based Development & Configuration
- Compatible with Microsoft Windows 8, 7 and Server 2012
- International Language Support and Extensible API

Ideal for Many Industries

For over two decades, ICONICS industrial automation software solutions have met real customer needs in multiple industries, including:

- Automotive
- Oil, Gas & Petrochemical
- Building Automation
- Pipelines
- Chemical
- Postal & Airport
- Consumer Products
- Power & Energy
- Discrete Manufacturing
- Process Industries
- Entertainment
- Wind & Renewable Energy
- Food & Pharmaceutical
- Robotic Control
- Government
- Transportation
- Logistics
- Water & Wastewater
- Machine Builders & OEMs
- Energy Management

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

ICONICS products are used in building automation, oil & gas, renewable energy, utilities, water/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 300,000 applications installed in multiple industries worldwide.

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Gold Application Development

2013 Microsoft Partner of the Year Award Finalist
Application Development

Microsoft Partner Network

2012 PARTNER OF THE YEAR
Sustainability
Winner

Further information:

www.iconics.com/genesis64

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