

# GENESIS64<sup>™</sup>

Next Generation in HMI/SCADA Automation Software



# **ICONICS HMI/SCADA Solution**

Real-Time Insight for Operational Excellence

#### Distributed Alarm Management View real-time and historical alarm information





Browse to Any Information Anytime, Anywhere Cross-browser, cross-platform access on any device GENESIS64<sup>™</sup> is an advanced HMI SCADA solution designed for Microsoft operating systems that delivers unparalleled performance with OPC, BACnet, Modbus, and open standard database connectivity.

ICONICS GENESIS64 provides connectivity from plant floor to shop floor and building facilities to corporate business systems. This allows operators, maintenance engineers, executives, and IT professionals to better understand what is occurring in their plant. GENESIS64 integrates real-time manufacturing, energy, asset, and business information into a secure and unified web-enabled visualization dashboard.

#### **GENESIS64** Key Features

00

鳳

\*

Visualize rich graphics on desktop or browser

Boost deployment time with equipment classes and smart symbols

Leverage distributed alarm management

Utilize ISA-95 asset management

Configure once and deploy anywhere

Zero-code command and control

Mitsubishi Electric Solution Accelerators

ReportWorX<sup>™</sup> Express is an Excel add-in that enables users to pull in data from a variety of sources. Integrating with GENESIS64 security, coupled with support for ICONICS data sources, ReportWorX Express satisfies many reporting needs.

#### Advanced Visualization on Any Device, Any Time, Anywhere

GraphWorX<sup>™</sup>64 delivers stunning 2D and 3D HMI and SCADA visualization that empowers customers to view their entire system operations from their desktop or mobile device. Users can build scalable, XAML vector-based graphics or use preconfigured symbols with dynamic properties, referenced colors, and flexible animations. Smart Tiles<sup>™</sup> are seamlessly integrated to display key performance metrics within operational dashboards. GENESIS64 also supports the ability to create 3D graphics or import 3D models from Autodesk or



other third-party design software.

GENESIS64 offers expansive advanced visualization for any system, empowering users to view equipment and assets through intuitive, high performance graphics. Client options range from fully interactive HTML5 or WPF web clients to a powerful mobile app that can downloaded from your favorite app store, to an executive self-service dashboard that utilizes drag & drop widgets and symbols for ad-hoc analysis on any mobile device. GENESIS64's responsive UI flawlessly transitions between clients to provide consistent cross-platform viewing capabilities.

#### Real-Time and Historical Charts and Analysis

ICONICS offers scalable solutions for historical data logging and analysis, encompassing everything from a simple data logger to a distributed, redundant, cloud-ready enterprise historian. The powerful TrendWorX™64 Viewer is an interactive OPC HDA-compliant control that provides open connectivity to OPC UA, OPC DA, SQL Server, Oracle, MySQL, or data logged using Hyper Historian<sup>™</sup>, ICONICS' high-speed, robust plant historian.



#### Customizable Dashboards

Customize trends with varying data replay rates, colors, data sources, and cursors. Interact with trends in runtime with multiple playback and filtering functions.

### Mission-Critical Redundancy

GENESIS64 ensures the safety of any critical data by offering high availability redundancy for maximum resiliency and system reliability. Redundant collectors and loggers serve as a backup in case of a system failure. With automatic fault 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. GENESIS64 software redundancy covers all major aspects of data redundancy such as data access, historical data, alarms, and security, and has been tested on Hyper-V virtual machines to ensure compatibility.



#### **Universal Connectivity**

GENESIS64 supports industry standard communications such as OPC, OPC UA, Modbus, BACnet, web services, and databases. The first 64-bit Advanced Workstation (B-AWS), GENESIS64 is certified by the BACnet Testing Laboratories, ensuring maximum integration with BACnet protocols. GENESIS64 is certified for OPC UA compliance by the OPC Foundation. Simple device discovery on the network makes integration seamless and efficient.

#### Native Geo-SCADA

ICONICS' geographic information system (GIS) mapping module, EarthWorX<sup>™</sup>, provides visualization for widely dispersed assets. Create a geographical overview to monitor multiple locations while maintaining the ability to pinpoint issues and drill into specific assets. Users can integrate with Google Maps, Bing Maps, and Esri to include additional GIS mapping features and data layers.



FDDWorX<sup>™</sup> offers real-time Fault Detection and Diagnostics (FDD) technology that triggers recommendations for improvement on asset anomalies and facilitates commissioning processes. Proactively identify energy offenders and predict equipment failures to continuously improve system efficiency.

## Service State Stat

|         |  | . •                   |             | 0              |                      |           |    |                  |      |                 |   |          |
|---------|--|-----------------------|-------------|----------------|----------------------|-----------|----|------------------|------|-----------------|---|----------|
| Plant   | Productiv                              | vity Dash             | board       | 1              |                      |           |    |                  | 2    |                 |   |          |
| Asset F | Path 🔺 🗘                               | Fault Name            | \$          | Count          | {⊙} Se               | verity    | إ  | Timeline         |      | Activation Time | أ | Duration |
|         |  |                       |             |                |                      |           |    | 11:30 AM 3:3     | 0 PM |                 |   |          |
| Compa   | iny/                                   | Fault Ramp (S         | ilow)       | 67             | 50                   |           |    |                  |      | 10/24 3:29:19   |   | 0:20:11  |
| Compa   | iny/                                   | Fault Ramp (N         | vormal)     | 194            | 50                   | 5         |    |                  |      | 10/24 3:30:39   |   | 0:25:39  |
| Compa   | any/Foxboro ba                         | Sine(Slow)            |             | 66             | 50                   | 5         |    |                  |      | 10/24 3:29:16   |   | 1:30:24  |
| Compa   | any/Foxboro ba                         | Random                |             | 339            | 50                   | 5         |    |                  |      | 10/24 3:29:34   |   | 0:03:11  |
| Compa   | ny/Mansfield b                         | Sine(Fast)            |             | 198            | 50                   |           |    |                  |      | 10/24 3:30:42   |   | 0:01:18  |
| OEE     | ntime Report                           |                       | vailability |                |                      | Performan |    | Quality          |      |                 |   |          |
| Rank    | Cause Name                             | Duration              | Count       | Description    | age Cost             |           | 19 | THE SEA          |      |                 |   |          |
| 1       | Out of Tape                            | 5:32:33               | 284         | 15.89%         | \$ 345,1             | 43        | 0  |                  |      |                 |   |          |
| 2       | Retooling                              | 4:23:24               | 256         | 13.34%         | \$ 337,2             |           | -  |                  |      |                 |   |          |
| 3       | Waiting for Boxes<br>Out of Glue       | 4:14:16<br>4:03:12    | 186<br>156  | 12.24%         | \$ 316,9<br>\$ 289,4 |           | 4  |                  |      |                 |   |          |
| 5       | Box Blockage                           | 3:59:25               | 145         | 10.35%         | \$ 284,2             |           | 5  | -0               |      |                 |   |          |
| 6       | General Maintenand<br>Reject Arm Fault | ce 3:35:23<br>2:25:46 | 104<br>82   | 9.49%<br>7.87% | \$ 262,1<br>\$ 217,7 |           | -  | The Themation in | α.   |                 |   |          |
| 8       | Equipment Fault                        | 2:25:40               | 21          | 3.67%          | \$ 217,7             |           | 10 |                  | -    |                 |   |          |

## Industry Challenges and Opportunities

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. Powerful aliasing, templates, and bulk configuration features greatly reduce this effort, resulting in enormous cost savings and drastic improvements. ICONICS is able to consistently deliver software solutions that run on the latest 64-bit Microsoft operating systems, affordable IoT devices, and Microsoft Azure. Leverage key features of Windows within GENESIS64 and provide users with the greatest application performance, reliability, and flexibility.

#### Ideal for Any Industry

For over three and a half decades, ICONICS' industrial automation software solutions have met and exceeded real customer needs in multiple industries, including:



#### For more, visit iconics.com/GENESIS64

#### © 2022 ICONICS, Inc.

All rights reserved. Specifications are subject to change without notice. AnalytiX and its respective modules are registered trademarks of ICONICS, Inc. GENESIS64, GENESIS32, Hyper Historian, IoTWorX, KPIWorX, CFSWorX, MobileHMI, WebHMI and their respective modules, OPC-to-the-Core, Make the Invisible Visible, and ICONICS company logo are trademarks of ICONICS, Inc. Other product and company names mentioned herein may be trademarks of their respective owners.





ICONICS, Inc. | 100 Foxborough Blvd. Foxborough, MA 02035 | (508) 543 8600 | iconics.com