# ICONICS GENESIS Version 11 Boldly Goes Where No Automation Software Has Gone Before

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In line with the well-known motto of the beloved Star Trek® TV series “To boldly go where no man has gone before,” ICONICS boldly takes its latest version of GENESIS – version 11 – where no automation software has gone before. With version 11, ICONICS bravely sets a new standard for SCADA software. You’ll understand why this is true as you read on. But to set the stage, let’s look at how the ICONICS product management team feels about this version.

## How ICONICS Describes GENESIS Version 11

As part of the preparation for this blog, I met with Kyle Reissner, ICONICS Vice President, Product Management, and a few of his team members. I wanted to learn more about version 11 and to know how they feel about it and hear how they describe it. Here are some of the adjectives they used:

**"bold, brave, re-defining the segment, user-oriented, flexible, unified, robust, more advanced and comprehensive yet simplified, even more reliable, and bar-setting standard for security"**

Nice! I like it, and I think you would agree too, especially once you understand how these adjectives depict version 11 and its design. But first, I'll give you the history and design behind GENESIS.

## The History & Design Behind GENESIS

GENESIS is a versatile software platform that consists of a suite of automation tools, and so naturally, it can be configured to achieve a wide range of use cases and solutions across different industries. GENESIS has been around for nearly four decades, and furthermore has been built on top of over 1000 years of people's expertise and development in the automation space.

The problems that our software platform solves are proven and mature in nature, but GENESIS is far from an old piece of software. Rather, GENESIS has evolved to solve increasingly complex problems with ongoing investments and refinements that have made it reliable, robust, modern, and above all super feature-rich.

Along the way, the entire suite has been progressively re-factored, revamped, and in some cases, significantly reworked to keep up with technologies, industrial environments, regulatory requirements, and operating systems. The platform has undergone significant shifts four times:

- Once when it went from DOS to Windows.
- Once when it went from 16 bit to 32 bit.
- Again, when it went to 64 bit.
- And now with version 11 being a fully native .NET 8 codebase.

This evolutionary approach, with some major leaps, speaks to ICONICS' commitment to ongoing investments in our technology and core functions, all the while making it possible for customers to keep moving forward.

This is good for customers, extremely good in fact since GENESIS has always been designed with a commitment to quality, has the nuanced features customers need and expect, and uses the latest frameworks and technologies. It is a tough feat to orchestrate the convergence of all these elements in such a major release. It is special in the industry, especially when compared to our competitors, to have such an ongoing commitment to adopting new technologies and meeting increasingly sophisticated customer requirements.

Additionally, GENESIS has the features and functions that make it highly robust. ICONICS didn't reinvent the wheel; on the contrary, we used our proven wheel and modernized it along the way. And because of GENESIS' long history, customers in all industrial/infrastructure processes use it.

You'll find ICONICS software in many diverse industries, including discrete and process manufacturing (automotive/EV, food & beverage, consumer packaged goods, life sciences, machine tool), public infrastructure, water & wastewater, oil & gas, data centers, smart buildings, logistics, materials & mining, and others.

For sure, what we know about manufacturing/infrastructure organizations is that if they are looking to invest in automation software, then they:

- Have data, whether in a PLC (programmable logic controller), an RTU (remote terminal unit), in a database, on a web server, in a spreadsheet, or on a clipboard.
- Want to use this data for valuable insight to affect improved operational efficiency and optimization, whether that be to historize it for traceability; display it on screens to give users operational overviews; analyze it; monitor it for problem conditions; put it into a report; or pass it along to other business/organizational systems.
- Want to accurately control their processes and systems with the best, most reliable and maintainable controls system and architecture available.

And GENESIS can make this happen. To understand how, let's take a look at the aspects we considered for revolutionizing our GENESIS software into version 11.

## GENESIS Version 11 – The Aspects ICONICS Considered for Its Design

### A Data-Centric Platform

ICONICS understands that when organizations operate in a supervisory control scenario, it's rare that the system will make control decisions based only on real-time data. And quite frequently, organizations will want to incorporate some type of calculation based on the historical values into the logic. Most times that calculation is simple, like a moving average, but sometimes it is QUITE complicated, something that could require a multi-variate computation, and for that, with many other SCADA systems, this requires custom scripting and SQL data loggers.

But now in version 11, we have made the bold move of including an industrial grade historian as a core component. This isn't some watered-down version or feature-limited historian. It is a full historian with so many capabilities that it goes far beyond loggers and scripting. Consequently, this makes it easier for customers to integrate much more historical data into their projects and daringly brings more horsepower with respect to performance and feature capability.

What this means is that organizations will have access to their historical data within their SCADA project and the necessary tools to easily make such calculations. This software design is extremely effective for operators and will enable them to make better decisions, faster.

## The Best Technologies for Now and Beyond

Today's automation software customers are experienced and expect frequent updates with more functionality. These market conditions have changed the software into a combination of new value-added IP and third-party libraries and frameworks. These conditions along with the ever-increasing focus on software security make it critical to stay current with the latest versions of that code combination. For this reason, GENESIS version 11 has been updated and makes use of the benefits of Microsoft's latest .NET 8. This helps version 11 to improve performance and resource management. Additionally, the core and extension libraries will thereby make it easy for ICONICS' customers to stay up to date.

## An Eye on User Experience

Ease of use was a vital goal for GENESIS version 11, as we understand that the efficiency and ease with which a project can be deployed are key factors in the overall success of any project. The design of the product suite has consistently centered on addressing user tasks, from installation and configuration to deployment and runtime operation. This emphasis remains a focus to ensure an exceptional user experience.

## Improved System-Wide Redundancy

Mission-critical systems deployed with GENESIS often seek to have system redundancy across all aspects of the operation, and the software is no exception. In version 11, we have greatly simplified and unified the redundancy model to make it simple and hassle-free for the user to implement. Version 11's enhanced redundancy is designed to provide organizations with peace of mind by ensuring their systems can recover from unforeseen events.

## Redoubled Commitment to Core Capabilities

Robust alarming and historization are crucial components of many projects built with GENESIS. Version 11 ensures that its technology is modern, future-proof, and capable of fulfilling the needs of the new projects of today. Since the general trend is often that SCADA systems will be required to access more data, be responsible for more functions, and be more advanced than ever before, we ensured that the core system functions are efficient and scalable enough to tackle those challenges.

## Growth of Interoperability/Connectivity within the Mitsubishi Electric Product Family and with Third Parties

In version 11, we've expanded the scope of the native communication enabled with Mitsubishi Electric's broad portfolio of equipment. Prior versions have already established steady and reliable communication with Mitsubishi Electric's PLCs and GOTs, but now this list has expanded to include their robots and VFDs (variable-frequency drives) as well.

These new connections broaden the horizon of project integration and allow for direct connection with fewer data hops to achieve projects. Furthermore, asset builder models allow for out-of-the-box configuration of standard configurations and object models for these new equipment types thereby assisting with rapid deployment.

ICONICS also continues to improve our vast array of 3rd party connectivity, which is important to many SCADA systems. With each version of our software, ICONICS has been steadfast in supporting any connectivity using OPC whether that be natively or through our partners, Takebishi and others. When it comes to improvements in version 11, we added enhancements to the OPC and BACnet connectivity.

### Long Term Support

For automation software organizations to be innovative and pioneering and therefore maintain their position at the leading edge of the industry, they need to be committed to anticipating the future of the industry. This means that it is imperative to have a vision of what applications the software will need to support in the coming years.

ICONICS understands this. We also know that SCADA systems will be deployed with the expectation of being supported for many years. For these reasons, we have improved the supportability of version 11, both by the technology we choose to use in the product and by our long-term support strategies.

## GENESIS Version 11 – Enabling Industrial Digital Transformation Now and in the Future

We put our hearts and souls into designing this new version of our proven automation software and aspired to have the courage to take it in a pioneering direction. And for every step of the way, we had the user in mind, putting GENESIS version 11 in a league of its own for world-class automation software.

Organizations will be able to deploy a diverse array of digitalization project solutions quickly and efficiently. Whether it is enterprise-wide intelligent control systems and data historization, situational/operational awareness and notification platforms, or enterprise analytics, the GENESIS suite makes it all possible.

Yes, it’s possible because GENESIS version 11 is built on the robust underpinnings of previous software versions and the 38 years of experience we’ve had developing automation software. And we’ve made some bold moves to take GENESIS to the next level.

Yes, it’s possible because ICONICS has bravely taken GENESIS version 11 where no automation software has gone before. As the Star Trek® of automation software, GENESIS version 11 charts the course for automation software technology to enable industrial digital transformation and operational optimization now and in the future.

## So, Now What? Follow Us to Stay Informed About GENESIS Version 11

This is just the beginning so if you're interested in hearing more, subscribe to our **"Version 11 Updates" mailing list**. And keep an eye out for version 11 updates on LinkedIn, both by **ICONICS** and **Kyle Reissner**. You can also follow Kyle on X at **@Ryzner** or email him directly if you have a question: **kyle@iconics.com**.

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