

Mitsubishi SCADA Software

## MC Works64 Getting Started Guide

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
# SAFETY PRECAUTIONS

(Read these precautions before using this product.)

Before using this product, please read this manual and the relevant manuals carefully and pay full attention to safety to handle the product correctly.


In this manual, the safety precautions are classified into two levels: "WARNING" and "CAUTION".


 <b>WARNING</b>	Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.
 <b>CAUTION</b>	Indicates that incorrect handling may cause hazardous conditions, resulting in minor or moderate injury or property damage.

Under some circumstances, failure to observe the precautions given under "CAUTION" may lead to serious consequences.

Make sure that the end users read this manual and then keep the manual in a safe place for future reference.

## [Design Instructions]

 <b>WARNING</b>
<ul style="list-style-type: none"><li>• When data change, program change, or status control is performed from a personal computer to a running programmable controller, create an interlock circuit outside the programmable controller to ensure that the whole system always operates safely. Furthermore, for the online operations performed from a personal computer to a programmable controller CPU, the corrective actions against a communication error due to such as a cable connection fault should be predetermined as a system.</li></ul>

 <b>CAUTION</b>
<ul style="list-style-type: none"><li>• The online operations performed from a personal computer to a running programmable controller CPU (forced output and operating status changes) must be executed after the manual has been carefully read and the safety has been ensured. The operation failure may cause the injury or machine damage.</li></ul>

# CONDITIONS OF USE FOR THE PRODUCT

- (1) Mitsubishi programmable controller ("the PRODUCT") shall be used in conditions;
  - i) where any problem, fault or failure occurring in the PRODUCT, if any, shall not lead to any major or serious accident; and
  - ii) where the backup and fail-safe function are systematically or automatically provided outside of the PRODUCT for the case of any problem, fault or failure occurring in the PRODUCT.

- (2) The PRODUCT has been designed and manufactured for the purpose of being used in general industries.

MITSUBISHI SHALL HAVE NO RESPONSIBILITY OR LIABILITY (INCLUDING, BUT NOT LIMITED TO ANY AND ALL RESPONSIBILITY OR LIABILITY BASED ON CONTRACT, WARRANTY, TORT, PRODUCT LIABILITY) FOR ANY INJURY OR DEATH TO PERSONS OR LOSS OR DAMAGE TO PROPERTY CAUSED BY the PRODUCT THAT ARE OPERATED OR USED IN APPLICATION NOT INTENDED OR EXCLUDED BY INSTRUCTIONS, PRECAUTIONS, OR WARNING CONTAINED IN MITSUBISHI'S USER, INSTRUCTION AND/OR SAFETY MANUALS, TECHNICAL BULLETINS AND GUIDELINES FOR the PRODUCT.

("Prohibited Application")

Prohibited Applications include, but not limited to, the use of the PRODUCT in;

- Nuclear Power Plants and any other power plants operated by Power companies, and/or any other cases in which the public could be affected if any problem or fault occurs in the PRODUCT.
- Railway companies or Public service purposes, and/or any other cases in which establishment of a special quality assurance system is required by the Purchaser or End User.
- Aircraft or Aerospace, Medical applications, Train equipment, transport equipment such as Elevator and Escalator, Incineration and Fuel devices, Vehicles, Manned transportation, Equipment for Recreation and Amusement, and Safety devices, handling of Nuclear or Hazardous Materials or Chemicals, Mining and Drilling, and/or other applications where there is a significant risk of injury to the public or property.

Notwithstanding the above, restrictions Mitsubishi may in its sole discretion, authorize use

of the PRODUCT in one or more of the Prohibited Applications, provided that the usage of the PRODUCT is limited only for the specific applications agreed to by Mitsubishi and provided further that no special quality assurance or fail-safe, redundant or other safety features which exceed the general specifications of the PRODUCTS are required. For details, please contact the Mitsubishi representative in your region.

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## REVISIONS

# 1 MC Works64 Overview

## 1.1 Introduction

Welcome to MC Works64™, a powerful, 64-bit, Web-enabled, OPC HMI/SCADA suite. MC Works64 takes full advantage of the convergence of 64-bit-based computing machinery, the release of new Microsoft operating systems and the growing customer demand for engaging three-dimensional graphic visualization of business processes.

MC Works64, which is compatible with Windows 10, as well as certified for both Windows Vista and Windows Server 2014, includes several solutions that allow for connectivity from the plant floor to corporate business systems to provide a 360-degree view of an entire organization. It was designed from the ground up to utilize new Microsoft technologies including:

- Microsoft .NET 4.5
- Windows Presentation Foundation (WPF)
- 3D Hardware-accelerated Visualization
- Windows Communication Foundation (WCF)
- OPC Unified Architecture (OPC UA)
- Windows User Access Control (UAC) Persistence
- Windows Search and Organize
- Windows Multitouch
- Microsoft Bing™ Maps

MC Works64 suite is comprised of the following products:

- GraphWorX64™
- AlarmWorX64™
- TrendWorX64™
- EarthWorX™
- AssetWorX™
- GridWorX™
- FDDWorX™
- ScheduleWorX64™
- Workbench™
- WebHMI
- ReportWorX
- ReportWorX Express
- ReportWorX 365
- RecipeWorX
- AlertWorX
- KPIWorX
- System Health
- Data Explorer

This *Getting Started* manual explains how you can:

- Install the MC Works64 software.
- Familiarize yourself with and start using the Workbench multi-functional, centralized Web-based environment
- Access online help and technical support.

**Note:** This manual is an abbreviated version of the full MC Works64 Help documentation, which is available in the MC Works64 Product help.

## 1.2 What Is MC Works64?

MC Works64 is a suite of tools that you can use to create state display and control software for equipment, machinery, or devices that use the OPC open process control standards of the OPC Foundation. OPC standards exist for both real time data, alarms, and events, as well as for historical data that can be logged and replayed at a later date.



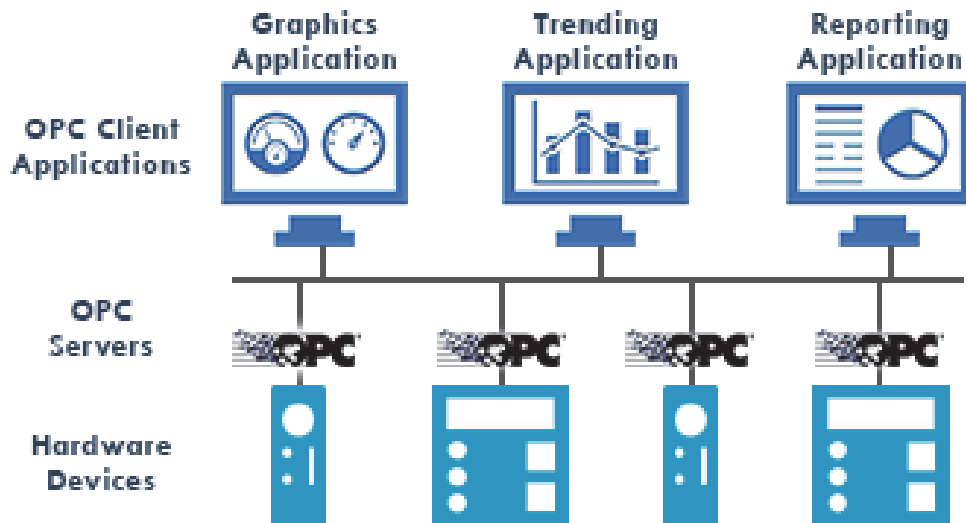
## 1.3 What Is OPC-UA?

OLE™ for Process Control (OPC) is a standards-based approach for connecting data sources (e.g., PLCs, controllers, I/O devices, databases, etc.) with HMI client applications (graphics, trending, alarming, etc.). It enhances the interface between client and server applications by providing a universally supported and well-documented mechanism to communicate data from a data source to any client application. Included are not only a detailed guide on how to pass the data, but also specific information on other attributes to supplement those data, such as range information, data type, quality flags, and date and time information.

OPC-UA or "Unified Architecture" unites legacy OPC standards such as OPC-AE (Alarm & Events), OPC-DA (Data Access), and OPC-HDA (Historical Data Access) into one complete specification.

The MC Works64 automation suite supports these legacy protocols transparently, which incorporates newer communication standards while retaining backwards compatibility.

**Figure 1.1** shows the OPC Architecture, which was introduced by the OPC Foundation. By following the OPC Architecture, a device needs only one standard driver, which is an OPC-compliant server. All OPC-compliant client applications can then be connected to that device, either locally or over a network. Furthermore, connections can be made to more than one OPC server at the same time.



**Figure 1.1. OPC-Based Client-Server Architecture**

Any OPC client application can connect to any OPC server. In other words, OPC offers true Plug-and-Play capability in the fields of HMI and industrial automation. OPC server types include OPC Data Access (DA), OPC Alarm and Events (AE), and OPC Historical Data Access (HDA).

The AlarmWorX64 application, which has both client and server components, is an example of a real-time data display where the focus is on alarm and event type data that is specified by the OPC-AE standard. You can configure AlarmWorX64 to display real time alarm events inside a viewer application that originates on an alarm server application that is monitoring alarm-based OPC-AE devices.

## 2 *System Requirements*

MC Works64 has the following minimum system requirements. Your systems must meet the minimum requirement before you can install MC Works64.

### **CPU:**

Dual Core 64-bit processors

(e.g., AMD Athlon 64 X2, Intel Xeon, or AMD Phenom)

### **Memory:**

*Minimum:* 4 GB of RAM

*Recommended:* 8 GB of RAM

**Note:** It is recommended that the system page file size be a minimum of four (4) times the size of installed (physical) RAM.

### **Hard Disk:**

*Minimum:* 4.0 GB free hard disk space on system drive

*Recommended:* 10 GB free hard disk space

### **Drive:**

DVD

### **Video Card:**

*Display Resolution Minimum:* 1024x768, 32-bit color

*Recommended:* Onboard Video Memory (256MB), DirectX 9 or 10 Video Card or better

### **Operating System:**

The following Windows 64-bit operating systems are supported, including:

- Windows 10 (Enterprise or Pro Edition)
- Windows 8.1 x64 (Enterprise or Pro Edition)
- Windows 8 x64 (Enterprise or Pro Edition)
- Windows 7 x64 (Professional, Ultimate, or Enterprise Edition)
- Windows Server 2012 R2 x64
- Windows Server 2012 x64
- Windows Server 2008 R2 x64
- Windows Vista x64 SP2 (Business, Ultimate, or Enterprise Edition)
- Windows Server 2008 x64

### **.NET Framework:**

Microsoft .NET Framework 4.5

### **Web Server:**

Microsoft Internet Information Services (IIS) 7.0 or higher

### **SQL Server:**

- Microsoft SQL Server 2014
- Microsoft SQL Server 2012
- Microsoft SQL Server 2008 R2 SP1

### **Notes:**

1. The connection to a SQL Server data source may be either local or remote.
2. Mitsubishi Electric supports SQL databases with encryption.

**Internet Explorer :**

Internet Explorer 8 and up

**Note:** The connection to a SQL Server data source may be either local or remote.

**Note:** There is a compatibility issue between the WebHelp Help file format and Microsoft Internet Explorer 10. Upon first access of the Help file, some Help-related mechanisms embedded in the file may not initially work correctly. Such issues can be corrected by clicking on the Compatibility View icon (the 'broken in half' document image) in the right side of the browser address bar. You can also add your machine name or 'localhost' to the list of websites that will be shown in Compatibility View. Right-click in the top of the browser [away from the browser bar or tabs] to enable the 'Menu bar'. Once the Menu bar appears, click 'Tools', then 'Compatibility View settings'. Add your machine name or 'localhost' and close the window. Either method should now allow you to access MELSOFT's WebHelp content as it was intended to be used.

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### **3 Installing MC Works64**

The following steps detail the MC Works64 system installation.

MC Works64's installation uses a standard InstallShield installer to provide you with options for installing components, adding new or existing users, configuring the database engine that you use and the size of the tables that are created, and more.

**Warning.** Prior to installation, verify that the system meets minimum hardware and software requirements, as described in the System Requirements section. Installation will abort if the minimum requirements are not met.

**Note:** You cannot install any 10.9x product from Remote Desktop when using a shared drive. In such instances, it is suggested that you copy the installation's sources to a local drive or share the drive via Windows networking rather than via Remote Desktop

**Important Note: Uninstall previous versions of MC Works64 before installing the latest version of MC Works64.**

## 3.1 Starting the Install

### To Install MC Works64:

1. Insert the installation DVD into your optical drive and the installer will open if autostart is operating correctly. If not, open the DVD drive window and double-click the **Default.hta** file icon. Select “MC Works64 Installation”.
2. When the Prerequisites Installer Dialog appears, choose 'Install'. This will install everything needed for running MC Works64. If you don't have installed SQL Server 2014 locally, you will be prompted to install it. You can choose **No** if you use older version of SQL Server, or you are going to use remote SQL Server)
3. In the Welcome Dialog, click the **Next** button to view the License Agreement step.
4. Read the License Agreement and if you agree, click the “I accept the terms of the license agreement” radio button. Then click the **Next** button to continue.
5. In the Setup Type Dialog that appears, select the type of setup you wish to perform, either Typical or Custom.

**Typical** installation installs most of the components of MC Works64 and will, as an option, overwrite the supporting SQL database files or include sample displays via MCDemo.

**Custom** installation allows you to pick the components to be installed. Since the Setup procedure varies slightly depending on the installation type you choose, the installation of each is described fully in the two sections that follow. Refer to “Typical Installation” below or “Custom Installation” on page 3-7.



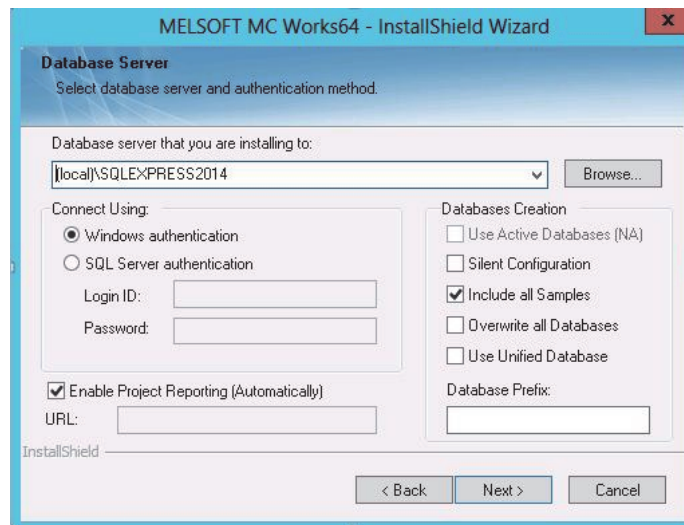
## 3.2 Typical Installation

Typical installation is meant to install all of the MC Works64 applications and tools and will create, if necessary, all of the supporting databases. You will need to provide the correct database connection and logon information, but once those steps are completed the installation is largely unattended.

If you are installing MC Works64 on a system that has a previous version of MC Works64 products already installed, uninstall the older version before installing MC Works64. If you have uninstalled a previous version, Setup leaves the database files intact on your system for you to use at a future date. Typical installation will ask you if you want to overwrite or leave the supporting database files.

### To perform a typical installation:

1. Click the Typical radio button in the Setup Type dialog box described above. Setup evaluates your system for compliance with the requirements, and then posts a confirmation dialog box.
2. The Typical installation will now ask you if you'd like to install the MCDemo, which includes sample displays, examples and tutorials to get you up and running. Select this option, if desired and click Next.
3. In the Logon Information Dialog, you can choose to use either a local machine account or a domain security account, as well as create a new user or use an existing user account.
4. Clicking the **Next** button will bring up the Database Server Dialog. Here you can select local or remote database together with database settings and authentication that is the database server secured under. Click Next. At this time additional components will be installed automatically.



**Use Active Databases** – Databases from previous installation of Genesis64 will be attached to this installation

**Silent Configuration** – Databases will be installed with selected setting and there won't be additional dialog with advanced database setting

**Include all Samples** – Install sample data that you can experiment with

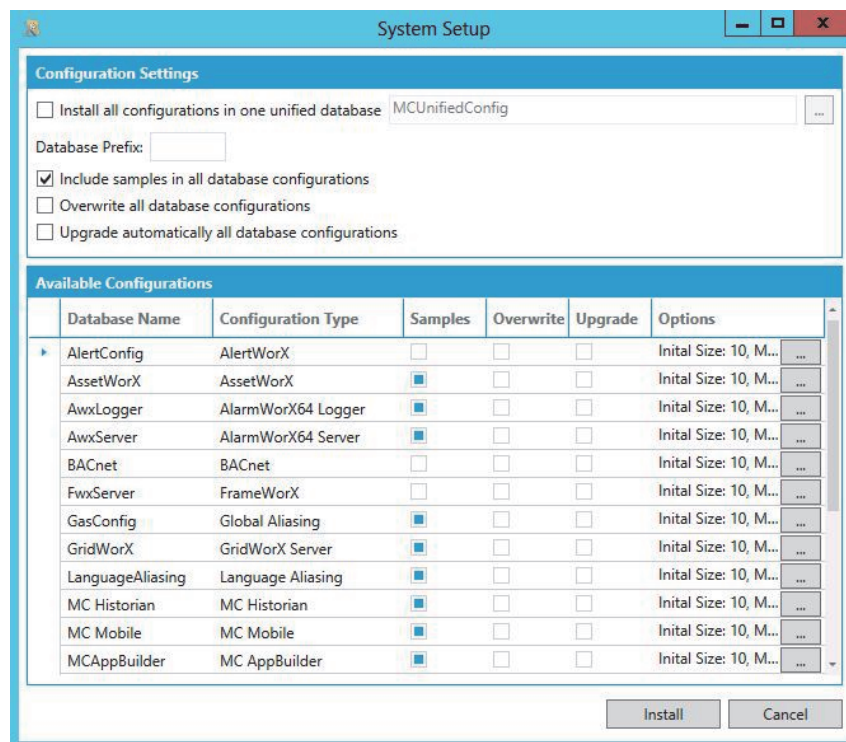
**Overwrite all Databases** – Overwrite older Databases

**Use Unified Database** – Install all configuration in one unified database

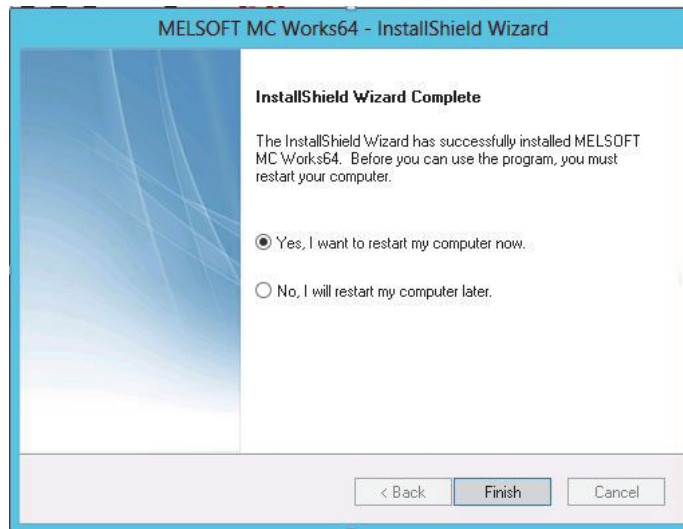
**Enable Project Reporting** – Enable and setup Project Reporting on SQL server if possible (Project Reporting is supported on SQL 2008 R2 or higher)

- The **System Setup** Dialog will now appear. You can either leave the **Include all samples** checkbox enabled (in order to install sample data that you can experiment with) or disable this checkbox to install blank tables. Advanced configuration will allow settings for additional sizing options on the database and log files. You can enable Use Unified Database (one database that contains all the configurations) and also you can enable Overwrite all (overwrite all existing databases), or you can use Upgrade automatically all database configurations (existing databases will be automatically upgraded to the newest version).

**Note:** Please note that all the configuration data of MC Works64 is in databases. If you overwrite databases, your configuration data might be lost. It is strongly recommended not to overwrite databases.



- Click the **Install** button to continue the installation.
- After completing the installation, the Wizard Completed dialog box appears. Click the **Finish** button.

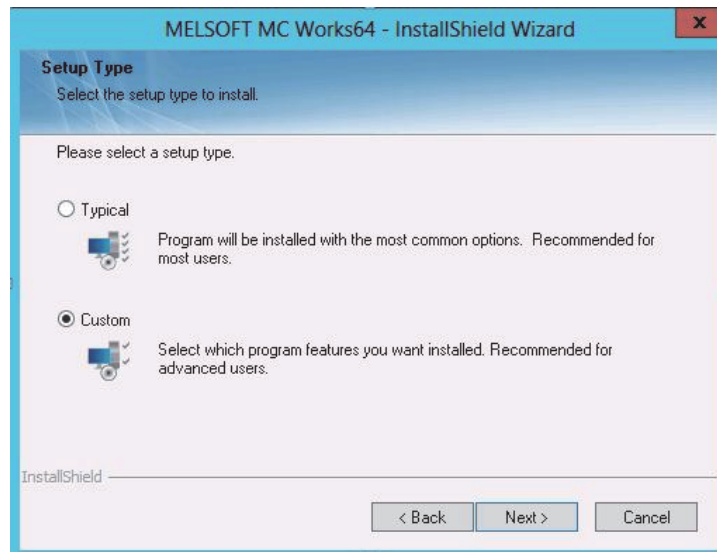


**Note:** It's generally a good idea to restart your system, although the installation doesn't require that you do so. If the installation seems to hang, check to see that there aren't any alert boxes posted that require dismissal prior to completing the installation.

### 3.3 Custom Installation

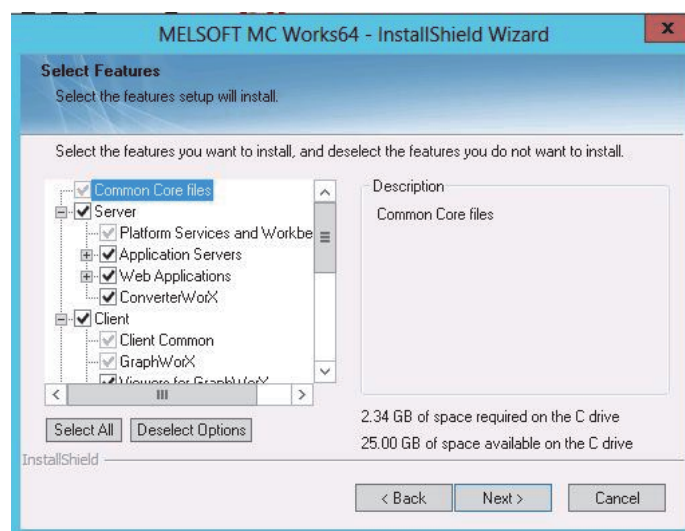
Custom installation varies slightly from the Typical/Custom installation in that you select the components you wish to install.

Select the **Custom** installation Setup Type.

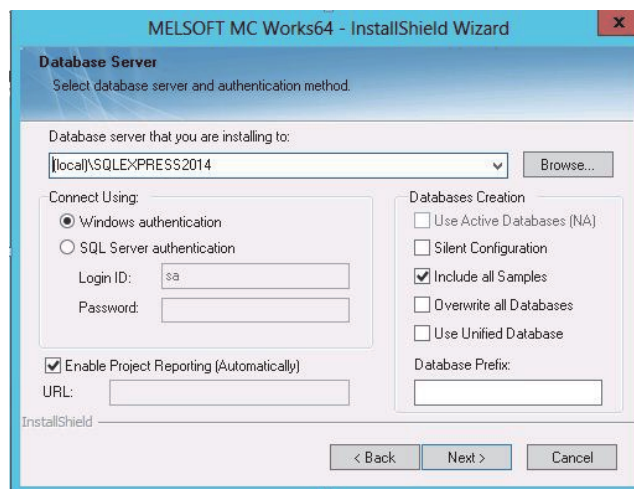


You will then be prompted to select the Destination Location. Specify the destination by selecting Browse, or select Next if the Default location is correct.

Click the checkboxes to install your selected components.



- Click **Next** and specify the user account to be used by this application.
- Click the **Next** button to continue the installation.
- In the Database Server Dialog you can select local or remote database together with database settings and authentication that is the database server secured under.



**Use Active Databases** – Databases from previous installation of Genesis64 will be attached to this installation

**Silent Configuration** – Databases will be installed with selected setting and there won't be additional dialog with advanced database setting

**Include all Samples** – Install sample data that you can experiment with

**Overwrite all Databases** – Overwrite older Databases

**Use Unified Database** – Install all configuration in one unified database

**Enable Project Reporting** – Enable and setup Project Reporting on SQL server if possible (Project Reporting is supported on SQL 2008 R2 or higher)

- The **Database and Services Setup** Dialog will now appear. You can either leave the **Include all samples**

checkbox enabled (in order to install sample data that you can experiment with) or disable this checkbox to install blank tables. Advanced configuration will allow settings for additional sizing options on the database and log files. You can enable Unified database (one database that contains all the configurations) and also you can enable Overwrite all (overwrite all existing databases).

- After completing the installation, the Wizard Completed dialog box appears. Click the Finish button.

### 3.4 Uninstalling MC Works64

The MC Works64 software can be uninstalled (removed) from the system. It is recommended that you back up all of your project-related files before uninstalling. If your operating system requires a login, you must log in with administrator capability to uninstall. Uninstalling MC Works64 Software (or its components) will *not* uninstall the Licensing software. Your valid license will remain activated on your PC.

To uninstall MC Works64: From the Windows **Start** menu, select **Settings > Control Panel**. Double-click **Add/Remove Programs**. From the list of programs that you can remove, select **MC Works64**. Click **Change/Remove** to remove MC Works64 and all of its components. Select **Remove**, and then click the **Next** button. When the files are removed, the uninstall program will indicate that the process is complete.

**Note:** Do not delete the files and directories manually; doing so will leave the Registry entries intact and interfere with future installations. Please use the uninstall feature of the operating system!



# 4 *Software Licensing*

## 4.1 Software and Hardware Keys

MC Works64 licensing is handled by a *software key license registration system* that does not require a hardware protection key. However, Mitsubishi Electric co. does offer an optional *hardware key* which you can purchase.

### 4.1.1 Software Licensing

The software key is a licensing key that resides on the hard drive of a computer. Each software key is used on a single, specific computer and is used only once. It is activated using a Site Key (license file) that is tied to the computer that is being licensed.

An activated license is required to use the software in full production mode. This license designates which products may be used, as well as the I/O point-count limit that controls the number of active data points (tags) that can be used by a system.

For important details about registering and activating software licenses for your MC Works64 installations, refer to the **MC Works64 .NET Licensing Readme.htm** file, which is available on your MC Works64 installation DVD.

### 4.1.2 Hardware Key

The optional hardware key is a USB thumb drive (or flash drive) that you can move from system to system. MC Works64 recognizes the hardware key on the system you have the key attached to. A hardware key is easier and is a more reliable way of moving a license from one machine to another than a software key.

Upon insertion of the USB key into an available USB port, the necessary drivers are automatically loaded.



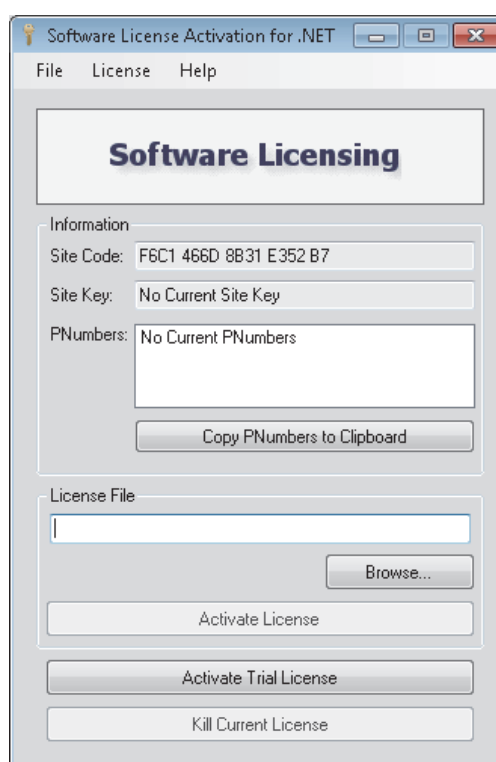
A green status light will illuminate upon successful connection. Should the USB key be missing or unplugged during operation of MC Works64 software, plug the USB key back in either within an hour of removal or upon system reboot; otherwise the hardware-based license will not be immediately recognized.

## 4.2 Licensing Utility

The Software Licensing Utility provides full authorization for use to any purchased MC Works64 product and its available options.

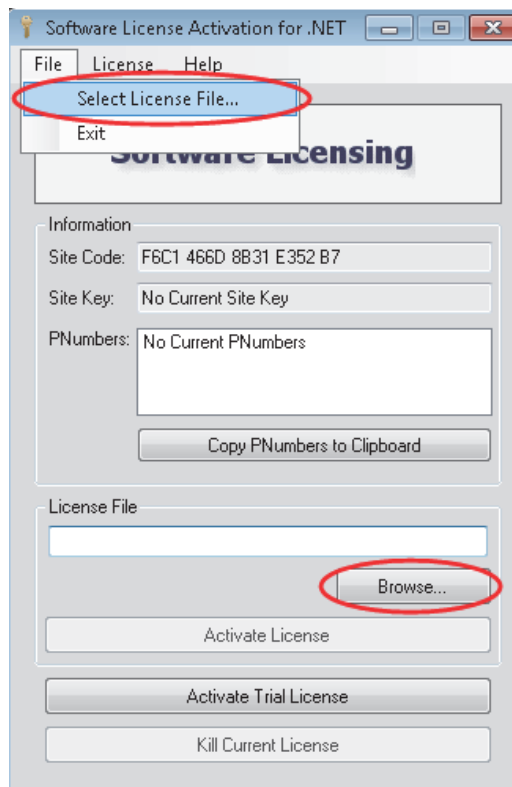
### 4.2.1 Running the Licensing Utility

To launch the License Utility from the Windows **Start** menu, select **Programs > MELSOFT > MC Works64 > .NET Licensing > License Utility**



#### 4.2.2 License File

Once you have opened the Software Licensing Utility, you can browse for the Site Key (License File) itself. Either click on the **Browse...** button in the License File section of the window **OR** click on **File** in the top menu, then **Select License File...**

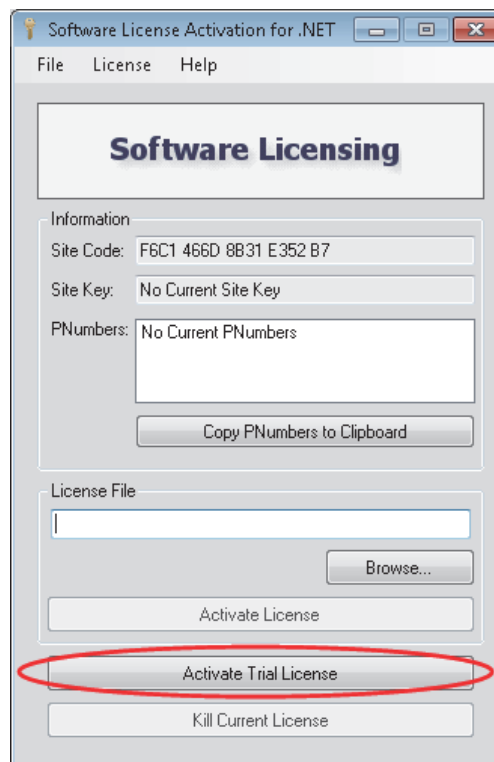


This brings up the Windows Explorer so that you may browse for the License File itself. Once you have located the file, double-click it or click **Open** to proceed.

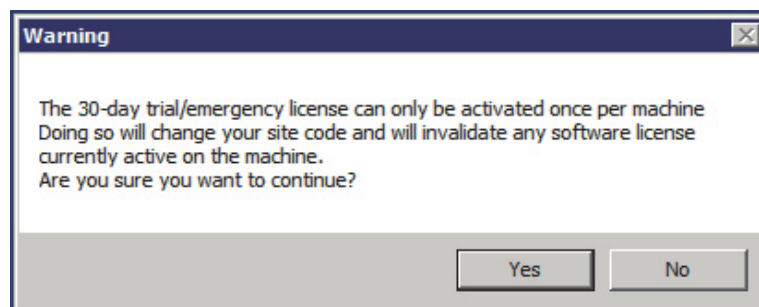
### 4.2.3 Activating the 30-day Trial/Emergency License

Within the Licensing Utility (Software License Activation for .NET) dialog box, you can click on the **Activate Trial/Emerg. License** box to initiate a 30-day trial/emergency license.

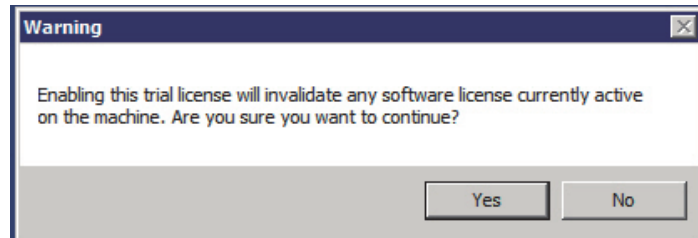
**Note:** This license can be activated only once per machine.



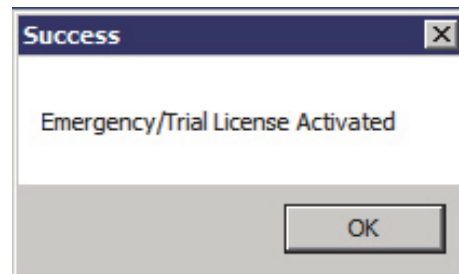
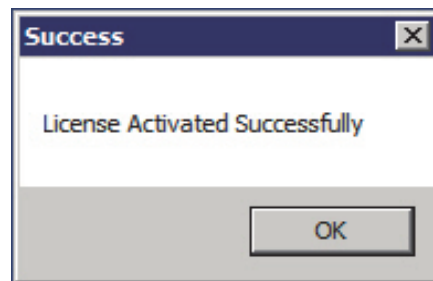
You will then see a warning about proceeding with activating the 30-day trial/emergency license. Click **Yes**, should you wish to proceed.



You will then see an additional warning confirming that you understand that enabling the trial license will invalidate any other software license that is currently active on the machine. Click **Yes** should you wish to proceed.



Once the 30-day trial/emergency license has been enabled, you will see the following messages:



The PC will then be authorized to run for a one-time only, 30-day backup period. The PC can be fully authorized at any time during or at the conclusion of this temporary backup period. Clicking **No** in the initial windows returns you to the Licensing Utility (Software License Activation for .NET) dialog box and preserves the existing license.

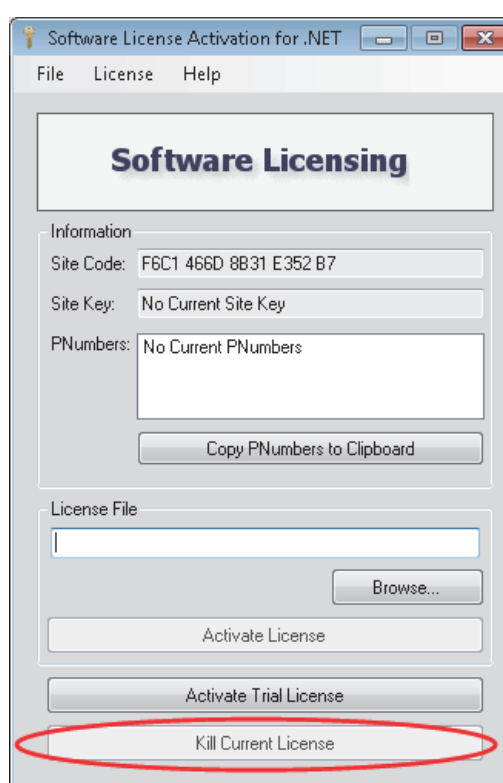
**Note:** Temporary backup license authorization is intended for urgent backup situations only. Clicking OK invalidates the existing license and activates a temporary backup authorization, permanently overwriting any existing license. Thus, please use caution when activating a temporary backup license authorization.

## 4.2.4 Killing a Software Key License

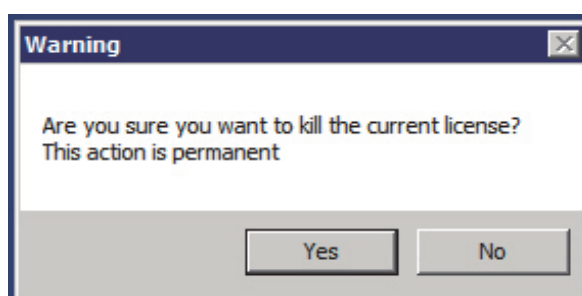
Killing a software key license deletes it and removes the current software license from the machine.

### To Kill or Delete the Existing Software License:

1. Select **Kill Current License** within the Licensing Utility (Software License Activation for .NET) dialog box. Using this option, you can remove the current software license from the current machine.



A warning message appears on the screen as shown in the figure below.



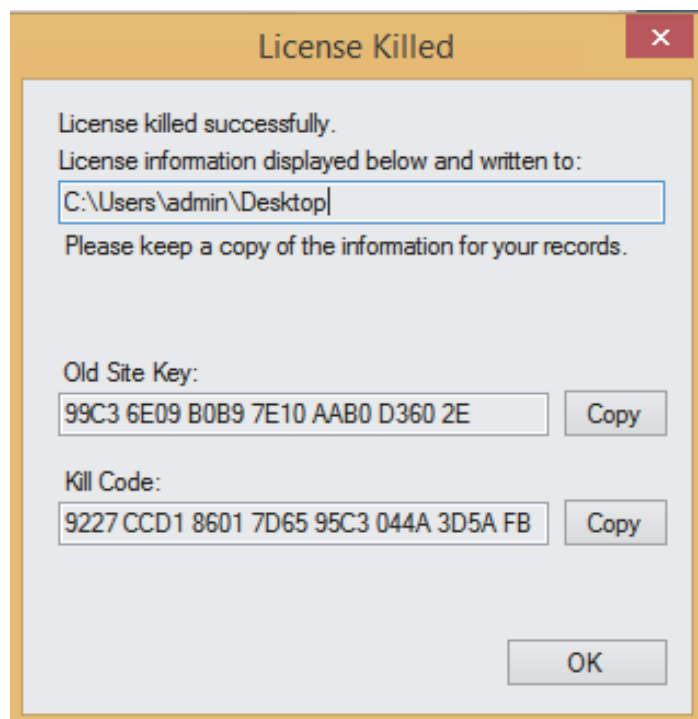
**IMPORTANT:** If you kill your license, you need to get a new license from Mitsubishi Electric to restart your MC Works64 product.

2. Click **Yes** to continue, or click **No** to exit. Clicking **Yes** displays one of the following warning messages.

If you are killing a *trial* or *emergency* license, once you click **Yes** you are done.

**Note:** A trial or emergency license cannot be credited back to the Web-based License Generator using the Kill Code.

If you are killing a *permanent, registered* license, after you click **Yes**, the following warning message appears. Notice that the message lists the old Site Key, and a Kill Code. It also lists a .TXT file that has been written to the PC's desktop; the file name begins with "Kill Code". This file contains the old Site Key and Kill Code that are listed in the message.





3. Click **Copy** to copy the Kill Code to the Windows Clipboard so that you can paste it elsewhere, such as on the Mitsubishi Web Licensing Utility.
4. Look on the desktop for the Kill Code\*.TXT file. **Keep this file, and copy it to a safe location!** You will have to use the information it contains to confirm that you have killed your license (via the Mitsubishi Web Licensing Utility).
5. Proceed with the online steps described in 4.4.3.1 “Killing a License via the Mitsubishi Electric Web Licensing Utility”

**Note:** If you uninstall the Software License Utility, the KillCode\*.TXT file will be deleted. For this reason, make sure you copy the KillCode\*.TXT file to a safe location or be sure to note or print its content before uninstalling the Software License Utility on the PC. [\* = **Site Key that was killed.**]

### 4.3 License Viewer

When you purchase licenses, the licenses are measured in a point count that determines the number of OPC tags that you can use in your application. One point count is used for most MC Works64 applications. There are two different modes for using tags in point counts:

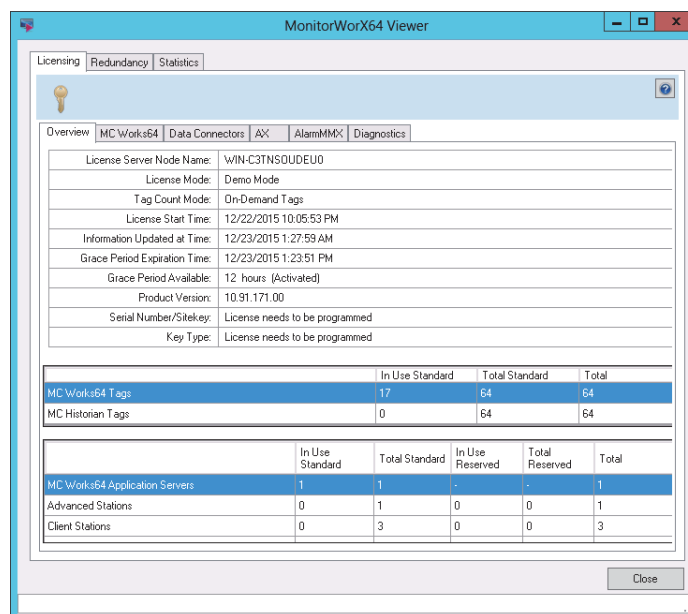
- On-demand mode. A system for dynamically using licensed points, and then reusing the points as needed. The count at any instance includes only active points in use.
- Configure mode. A system in which all points are statically configured in a static central location, inside the Unified Data Manager. All configured points are counted against the point count.

The two mode types are not interchangeable and require you to buy a new license to upgrade your existing license status.

At any time, you can use the License Viewer to review the license status of products installed on that computer. You

can access the License Viewer in either of the following ways:

- From the Windows desktop: click **Start > All Programs > MELSOFT > MC Works64 > .NET Licensing > MonitorWorX Viewer**.
- From the Workbench: from the **Tools** ribbon click the **Licensing** button. Or from the **File** menu, select **Tools**, and then **Licensing**. The License Viewer displays as shown below.



The tab that displays initially is the **Overview** tab, where you can see general information about the license for the server that the node points to. You can view license information for **MC Works64**, **AX Application**, **Data Connectors**, and **AlarmWorX Multimedia** product features by using the tabs for those products. To locate the nodes where individual product features are consuming the server's license counts, use the **Diagnostics** tab.

## 4.4 Web Licensing

You can use the Mitsubishi Electric Web Licensing Utility to generate a new license, kill a license and transfer a license. One function of the Mitsubishi Electric Web Licensing Utility is to use it to upgrade your license.

Supported operating systems for using the Mitsubishi Electric Web Licensing Utility to upgrade your license include Windows 8 x64 (Pro or Enterprise Edition), Windows 7 x64 (Professional, Ultimate, or Enterprise Edition), Windows Server 2008 R2 x64, Windows Vista x64 SP2 (Business, Ultimate, or Enterprise Edition), Windows Server 2008 x64 or Windows Server 2003 x64. Using the utility will require Internet access and a Web browser (e.g. Internet Explorer 6.0 and up).

### 4.4.1 Acquiring a New Software License

Users of Mitsubishi Electric software can use the Mitsubishi Electric Web Licensing Utility to acquire a new software key license.

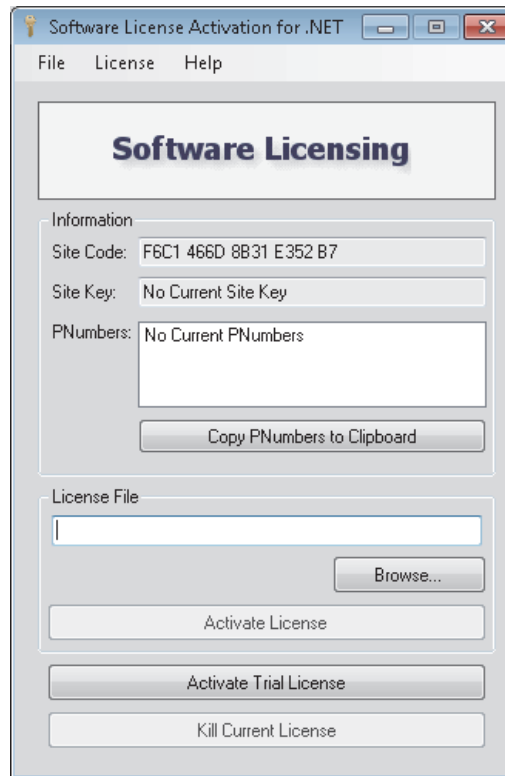
#### 4.4.1.1 Issuing a New Software License

1. On the machine where you want the MC Works64 license to reside, open the License Utility by going to **Start -> Programs -> MELSOFT -> MC Works64 -> .NET Licensing -> License Utility**. This should open the Software License Activation for .NET window.

## Software Licensing

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2. You will see a dialog come up with a Site Code and “No Current Site Key” within the Site Key text box. Leave this window open.



3. Go to <http://www.mcworkslicensing.com/>
4. The main page of the Web Licensing Utility will load. Click on the “Software” button to access the Software License Options.



5. You will be required to log in to access the Software License Options. Enter your email address and password and click on the “LOGIN” button. If you do not yet have an account, you can create one by clicking on the “Create New Account” link near the bottom of the page.



6. Once you have logged into the Web site, click on the “New License” link in the top navigation bar.

7. Enter your Product Registration Numbers and Customer Keys for the products to license, then click “Next”.

**Note:** Your Product Registration Number and Customer Key are usually inside the DVD package that Mitsubishi Electric co. sent to you.



Home > Software Licenses > New License

### New License

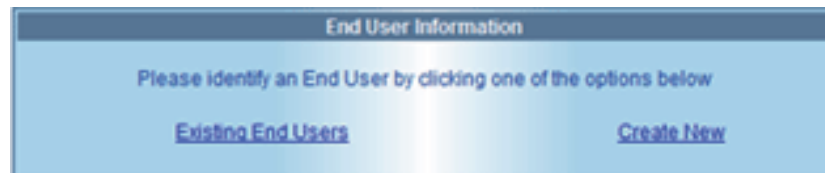
Use this New License option if you do not currently have a permanent license on your computer. To issue a New license, do the following:

1. In the Product Registration column enter the registration number(s) and the associated Customer Key on the right. Product Registration Number(s) and Customer Key(s) can be found on the back of the ICONICS CD/DVD case(s).
2. For multiple registrations enter each on a separate row.
3. Click the Next button to continue.

Product Registration #	Customer Key
G795665919	CUS0226E

[Add Row](#) [Remove Row](#) [Next](#)

8. In the next screen, you will be requested to identify the end user for whom the license is being issued. You can look up a list of users that have been previously entered by clicking on the “Existing End Users” link or can enter a new one by clicking on the “Create New” link.



### End User Information

Please identify an End User by clicking one of the options below

[Existing End Users](#) [Create New](#)

9. Clicking the Existing End Users link will open a new window with a list of previously entered end users (either entered by you or tied to the product registration numbers entered in the previous screen). Select an end user from the list and click “Select” or double-click the selected end user.

If you, yourself, are the end user and you are not listed in the grid, you can click on the “I am the End User” link to enter your data as the new end user. After identifying the end user, click on “Next”.



10. In the next screen, you will see a list of the products that are available for you to license. Check all the products that you would like to license. Copy the Site Code from the license utility of the destination machine and paste it into the Site Code box of the current Web page, then click on “Next”.



11. Review the license information before proceeding. Click on “Generate Key” to issue the new Site Key.

Home > Software License > New License

**New License**

You requested to have the products below be registered to the following Site Code:  
**54B3 AE27 40AD ADE7 D5**

Product Key	Product Description	PRegNo	GRegNo
GEN64-v10.5 TEST LAB	v10.5 LICENSE	PN8881113111111543	GNDE6805A83AB65F45

Total BizViz/GEN32 Point Counts :0  
Total GEN64 Point Count: 100000  
Total Hyper Historian Point Count: 100000  
License Days:30

[Previous](#) [Generate Key](#)

12. The next page will show you a summary of what will be your license, as well as your Site Key and License File.

Home > Software License > New License

The following License File has been assigned to your system for use in license activation.  
Use the License File inside the ICONICS Software Licensing Utility.  
Please keep the Site Key for future reference purposes.

**Site Code: 54B3 AE27 40AD ADE7 D5**  
**Site Key: 1B44 954F E61A 79ED 5FFA 6610 7C**

Download the following **LICENSE FILE** to authorize your license  
[Click here to download](#)

**Registered Products**

Product Key	Product Description	Order Date	Order #	PRegNo	GRegNo	Customer Key
GEN64-v10.5 TEST LAB	v10.5 LICENSE	12/February/2010	29549HQ	PN8881113111111543	GNDE6805A83AB65F45	CUS02266

We recommend that you print this screen for your records. Use the print friendly button on the left.  
An email has been sent to your email account with the above information.

Thank you for choosing ICONICS.

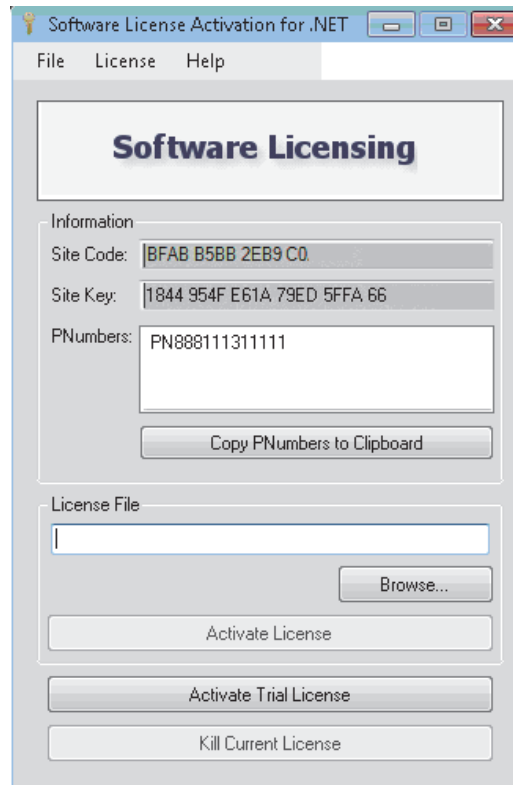
13. Download the license file (\*.glic) by clicking on the link. You will need this file to license the machine.

**Note:** If you misplace the file after receiving it, you can use the View License link with your Product Registration Number to download it again.

14. In the Software License Activation Utility, click on the “Browse” button and look for the license file that you downloaded.
15. Once you have selected the file and the License File textbox shows the file path, click on the “Activate License” button.



16. You should then receive a popup message indicating the status of the license activation. You can click on “OK” to close the dialog.
17. The Software License Activation Utility should now show the current license information, similar to the image below.



18. Notice that the Site Code may change, as expected, but the Site Key should be the same one you saw on the Web site.

### 4.4.2 Adding to an Existing Software License

1. Go to <http://www.mcworkslicensing.com/> .
2. Once you have logged into the Web site and accessed the Software License main page, click on the “Add to License” link in the top navigation bar.
3. Enter your Existing Site Key, Product Registration Numbers and Customer Keys, then click “Next”.

Home > Software License > Add To License

### Add To License

Use the Add To License option below to modify an existing license to include products you have purchased. To add to a license, do the following:

1. Enter your assigned Site Key into the Existing Site Key text box. The Site Key should be identical to the one found in the ICONICS License Utility on your system. Use the View License command on the Actions menu to display this information.
2. In the Product Registration column enter the registration number(s) and the associated Customer Key on the right. Product Registration Number(s) and Customer Key(s) can be found on the back of the ICONICS CD/DVD case(s).
3. For multiple registrations enter each on a separate row...
4. Click the Next button to continue.

Existing Site Key: 400A 27DD AA32 ACA0 0D94 5567 0F30 EA03 40AD EA

Product Registration #	Customer Key
P148418844	CUS00051

Add Row Remove Row

Next

4. In the next screen, you will see a summary of the current license and a list of products that are available for you to add to the existing license. Check all the products that you would like to license. Copy the Site Code from the License Utility of the destination machine and paste it into the Site Code text box of the current Web page, then click “Next”.

Home > Software License > Add To License

### Add To License

Current License Summary

Product Type	Product Description	Registration #	Customer Key
...	...	...	...

Product(s) to Add

Product Type	Product Description	Registration #	Customer Key
...	...	...	...

Next

- Review the license information before proceeding. Select “Generate Key” as shown in the following image.

The screenshot shows a web interface titled "Add To License" with a breadcrumb trail "Home > Software Licenses > Add To License". The main heading is "Add To License" and the sub-heading is "Current License Summary".

Site Key: 400A 27DD AA32 ACA0 0D94 5567 0F30 EA03 40AD EA

Product Key	Product Description	RegNo	ICUs
GENERS32-SP V9 C3	3 MONTH CONSIGNMENT LICENSE FOR V9	P535919368	1065

Pocket Genesis Users :2  
Total ICUs :1065  
Total Point Counts :128000

**Product(s) to Add**

You requested to have the products below registered to the following Site Code:  
**5BA7 45AE E5F2 D208 9439 A040 CA09 6F**

Product Key	Product Description	RegNo	ICUs
BREV2-SP V9 C12	12 MONTH CONSIGNMENT LICENSE FOR V9 BREV2	P146418844	210

Mobile Users :32  
Total ICUs :210  
Total Point Counts :128000

**Total Values**

Pocket Genesis Users :2  
Mobile Users :32  
Total ICUs :1275  
Total Point Counts :128000

Buttons: Previous, Generate Key

- The next screen will display the new Site Key and the link to your license file. Follow steps 13 to 18 from 4.4.1.1 “Issuing a New Software License” to complete the licensing process.

#### 4.4.3 Upgrading a Software License Key

There are four basic steps when it comes to upgrading a license via the Web Licensing Utility:

- Step 1: Kill the older version license and credit it on our Web site
- Step 2: Upgrade the license on our Web site
- Step 3: Uninstall the older version of software and install the newer version
- Step 4: License the newer version

The order in which you do Step 2 and Step 3 does not matter.

#### 4.4.3.1 Killing a License via the Mitsubishi Electric Web Licensing Utility

See Section 4.2.4 “Killing a Software Key License” for the initial steps on how to kill a license within the Licensing Utility (Software License Activation for .NET) provided on the MC Works64 DVD. Be sure to take note of the Site Key and Kill Confirmation Code. This information is necessary to put the license back on the Mitsubishi Electric Web site.

**Note:** This information is also in the KillCode\*.TXT file.

[\* = Site Key that was killed.]

Once you have the Kill Code, follow these additional steps:

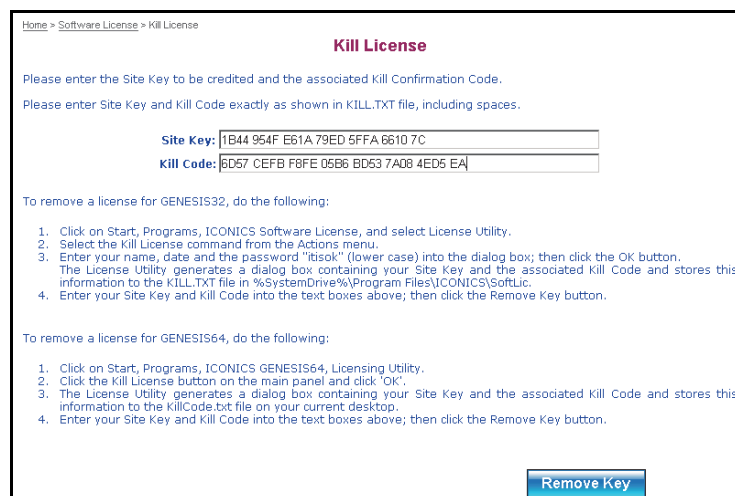
1. Go to <http://www.mcworkslicensing.com/>
2. The main page of the Web Licensing Utility will load. Click on the “Software” button to access the Software License Options.



- You will be required to log in to access the Software License Options. Enter your email address and password and click on the “LOGIN” button. If you do not yet have an account, you can create one by clicking on the “Create New Account” link near the bottom of the page.



- Click on the “Kill License” link in the top navigation bar.
- Copy the Site Key from the KillCode\*.TXT file into the Site Key field on the Web page, then copy the Kill Confirmation Code into the Kill Code field on the Web page. Next, click on the “Remove Key” button on the Web page.



- You will get a message confirming that the Site Key has been successfully deleted as shown in the image below. The products associated with the deleted Site Key will now be available to be re-licensed.

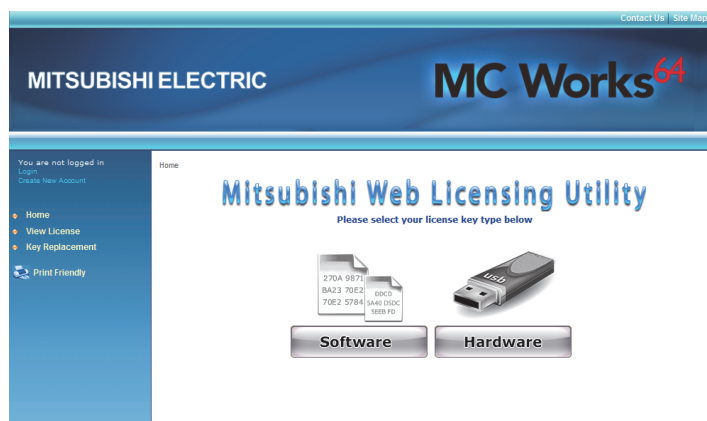


### 4.4.3.2 Upgrading the License on Mitsubishi's Web Site

See Section 4.2.4 “Killing a Software Key License” for the initial steps on how to kill a license within the Licensing Utility (Software License Activation for .NET) provided on the MC Works64 DVD. Be sure to take note of the Site Key and Kill Confirmation Code. This information is necessary to put the license back on the Mitsubishi's Web site.

**Note:** This information is also in the KillCode\*.TXT file.  
[\* = Site Key that was killed.]

- After you have copied your Site Key and Kill Confirmation Code in the previous step (either physically or electronically), you can now visit <http://www.mcworkslicensing.com/>



2. Click on the “Software” button to proceed. You will then be required to enter your email address and password for the site, as shown below. If you do not already have a login for this page, click on the “Create New Account” link near the bottom of the page.



3. Once you have logged in, click on the “Kill License” link in the top navigation bar.
4. Next, fill in your Site Key and Kill Code information that you copied while killing your previous license (see 4.2.4 “Killing a Software Key License”).

**Kill License**

Please enter the Site Key to be credited and the associated Kill Confirmation Code.

Please enter Site Key and Kill Code exactly as shown in KILL.TXT file, including spaces.

**Site Key:**

**Kill Code:**

To remove a license for GENESIS32, do the following:

1. Click on Start, Programs, ICONICS Software License, and select License Utility.
2. Select the Kill License command from the Actions menu.
3. Enter your name, date and the password "itisk" (lower case) into the dialog box; then click the OK button. The License Utility generates a dialog box containing your Site Key and the associated Kill Code and stores this information to the KILL.TXT file in %SystemDrive%\Program Files\ICONICS\SoftLic.
4. Enter your Site Key and Kill Code into the text boxes above; then click the Remove Key button.

To remove a license for GENESIS64, do the following:

1. Click on Start, Programs, ICONICS GENESIS64, Licensing Utility.
2. Click the Kill License button on the main panel and click 'OK'.
3. The License Utility generates a dialog box containing your Site Key and the associated Kill Code and stores this information to the KillCode.txt file on your current desktop.
4. Enter your Site Key and Kill Code into the text boxes above; then click the Remove Key button.

- Once you kill the license on Mitsubishi's Web site, you will receive an email containing the following information:
  - Site Key
  - Kill Code
  - Product for which you have killed the license

The Web page itself should now look similar to the figure below.

Home > Software License > Kill License

### Kill License

Site Key successfully deleted

**Site Key: 250C 3CDD 0524 B282 2DB3 456F D438 85C5 B799 0B**  
**Kill Code: CB1E B52F 8984 0B87 F679 6767 89A3 DDEF 01C0 24B0 28EF 99**

If products in this license are eligible, they may be upgraded to the latest version [here](#).

The following products are again available to you for registration:

#### Available Products

Product Key	Product Description	Order Date	Order #	PRegNo	GRegNo	Customer Key
GEN32V8-5000	V8 GEN32 RUNTIME 5000 PT - 1 USER	12/February/2010	29549HQ	PN21111111111111111111	GND123456789123456	CUS02286

We recommend that you print this screen for your records. Use the print friendly button on the left.  
An email has been sent to your email account with the above information.

Thank you for choosing ICONICS.

- At this point, you have completed killing the license. Notice that in the final “Kill License” page, as shown above, it states that if the license is eligible, it can be upgraded to the latest version and it provides a link for availability.



### 4.4.3.3 Checking License Upgrade Availability

The easiest way to check if your license is available for an upgrade is by clicking the link on the page immediately after you kill the license. Clicking the link brings you to the Upgrade License page. You can also get to this page by clicking on the “Upgrade License” link in the tree control (third item).

Follow these steps to upgrade your license.

1. On the Upgrade License page, fill in your Product Registration Number and Customer Key. This is the same information you received in the Web page and in your email after you have killed the license on our Web site.
2. Click on “Next” when you have filled in the necessary information.
3. If the license is available for an upgrade, you will see the available license on the page.

**Upgrade License**

Below are the product(s) that you have purchased that are available for upgrade.

To upgrade product(s), do the following:

1. Enable the check box(es) next to the product name(s) that you would like to upgrade.
2. Click the Next button to continue.

Available Licenses

Select	Product Key	Product Description	PRegNo	GRegNo	Status
<input checked="" type="checkbox"/>	GEN32V8-5000	V8 GEN32 RUNTIME 5000 PT - 1 USER	PN21111111111111111111	GND123456789123456	Available

4. Notice that the Product Description here shows a different product with an earlier version license (Version 8). Yours should reflect the license you have for your product. Check the available product that you would like to upgrade and click on “Next”.
5. The next page is a confirmation page. Check that the information shown is correct and click on the “Upgrade” button to proceed.

6. On the new page that loads next, you can see a list of upgraded products. Notice that the Product Description shows a license for a later version product (Version 9.2) instead of the earlier one (Version 8).

Home > General Information > Upgrade License

The following products have been successfully upgraded:

**Upgraded Products**

Product Key	Product Description	Order Date	Order #	PRegNo	GRegNo	Customer Key
GEN32V92-5000	V9.2 GEN32 RUNTIME 5000 PT - 1 USER	12/February/2010	29549HO	PN21111111111111111111	GND123456789123456	CUS02266

We recommend that you print this screen for your records. Use the print friendly button on the left.  
An email has been sent to your email account with the above information.

Thank you for choosing ICONICS.

7. You should also receive an email with the license upgrade information.

#### 4.4.4 Upgrading a Hardware Key License

Upgrading a hardware key license is similar to upgrading the software key license. You would follow the exact same procedure as upgrading a software license. In the case of a Hardware key License though, you will need the USB dongle in order to kill the license from it and put the new one onto the key.

#### 4.4.5 Licensing the New Version

Now that you have upgraded the license, you can follow the regular procedure to license your machine with the new version. When it asks you for the Product Registration Number and the Customer Key, you can provide the same one. This information was sent to you in the last step of upgrading your license via email.

#### **4.4.6 Software Key Replacement**

Please fill in the online “Key Replacement Form” at "<http://www.mcworkslicensing.com/>" to start the replacement process of the original license if your license has been lost. Once your license has been recovered, follow the steps in the section titled, “4.4.1.1 Issuing a New Software License” to activate the new license.

### **4.5 Demo Mode**

Without a valid license installed in your PC, it is still possible to use MC Works64 in Runtime mode. The software will check for a valid hardware or software license key on initialization. If none is found, MC Works64 runs in Demo Mode, which limits you to:

- Twelve hours of runtime
- Only 64 OPC tag connections (points) can be updated

Running MC Works64 longer than the 12-hour limit generates a message stating that the demo time has been exceeded. You must then exit MC Works64 and reboot the PC. On restarting MC Works64, you will get another 12-hour block of time in which to run. If there are more than 64 tags on a particular screen, gray keys (or whatever is configured as the Point Failure character) will appear in place of the actual I/O data.

# MEMO

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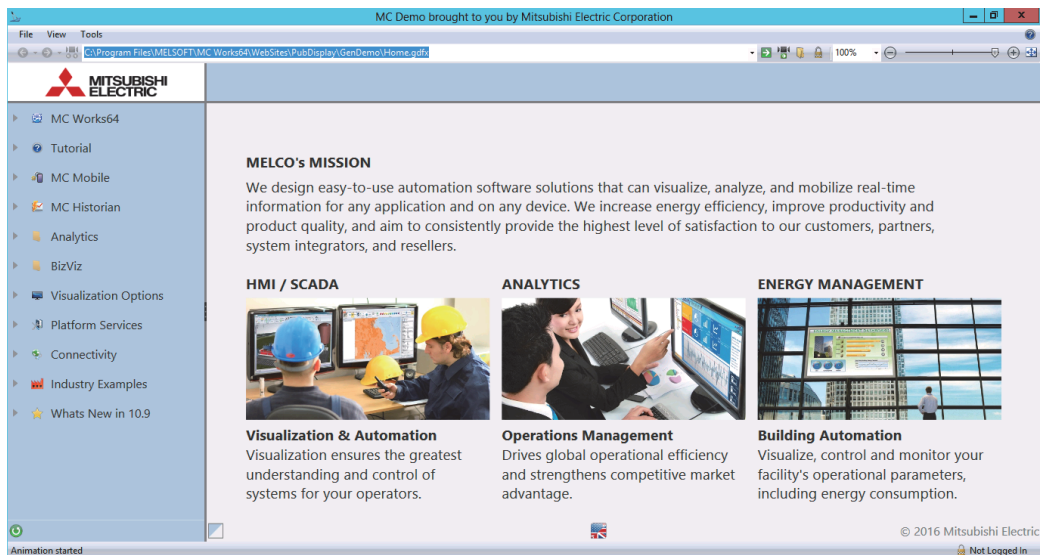
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# 5 MCDemo

## 5.1 Introduction

You can get a sense of the rich applications that can be created by using Mitsubishi Electric' MCDemo. MCDemo is a set of GraphWorX64 display files installed with your system to help you explore and learn about the features of MC Works64, AX Application, MC Mobile, MC Historian and BizViz, as well as to find out how Mitsubishi Electric applications are adaptable to different industries.



To launch MCDemo, from the Windows **Start** menu, select **Programs > MELSOFT > MC Works64 > MCDemo**. This opens the MCDemo home page, shown above.

## 5.2 MCDemo Options

There are several configurable options that are located along the bottom of the MCDemo screen, which may be useful when navigating. They are:



**Run in Carousel Mode** - This button opens the Carousel display and enables the Carousel mode, which automatically advances through a set of displays according to the selected playlist. The Carousel display also allows you to open the Carousel control panel for more granular control over playlists.



**Select Color Scheme** - This button allows you to select from a variety of different color themes for your MCDemo application.



**Select Language** - This button allows you to change the language of your MCDemo application.

## 5.3 Industry Case Studies and Examples

As stated earlier, MCDemo contains a large number of example projects, many of which have been used by real customers. You may find specific examples related to a particular topic in the respective topic's menu, or you may open the complete list of demos separately. The list of demos can be found from the menu under the **Industries > Customer Examples** section. This will open up a display containing all of the MC Works64 examples that come with MCDemo. You are encouraged to look through these and see how the graphics have been developed. If you would like to learn more about how any of the examples function, you are encouraged to open the files themselves, in configuration mode, from the **MCDemo > Examples** directory where you installed MC Works6

# 6 MC Works64 Quick Start

## 6.1 Introduction

This chapter provides a brief overview of the following MC Works64 products and tools:

- GraphWorX64
- AlarmWorX64
- TrendWorX64
- EarthWorX
- GridWorX
- Workbench
- Additional tools and utilities

**Note:** For complete information about any MC Works64 product, please refer to the MC Works64 Help, which you can launch from any MC Works64 product.

## 6.2 GraphWorX64

GraphWorX64 is the MC Works64 product you use to create graphical human-machine interfaces (HMIs). GraphWorX64 has dozens of tools with hundreds of parameters and combinations to create powerful, dynamic, and interactive images in two or three dimensions. Use the interactive tutorials in the MCDemo Learning Center to explore the tools that are available to you in GraphWorX64.

To launch GraphWorX64 from the Windows **Start** menu, select **Programs > MELSOFT > MC Works64 > Product Suite > GraphWorX64**.

GraphWorX64 has a number of examples available to you. To use them, while in GraphWorX64, select **Open** from the **File** menu and browse to the following directory: **Program Files > MELSOFT > MC Works64 > WebSites > PubDisplay > MCDemo**. In this folder you will find subfolders with a name prefix of **GWX\_**. Explore the folders and open example files to see what they offer.

## 6.3 AlarmWorX64

AlarmWorX64 is the alarm monitoring, logging, and reporting module in MC Works64. AlarmWorX64 consists of:

- AlarmWorX64 Viewer – Which you use to configure real-time alarms and attach them to alarm sources; display alarm notifications; make it easier to notice, respond, and acknowledge alarm conditions; and view historical alarms.
- AlarmWorX64 Server – Receives data from OPC-compliant Data Access servers and performs alarm detection and reporting.
- AlarmWorX64 Logger – Stores alarm data to a SQL database, which you can use for later replay.

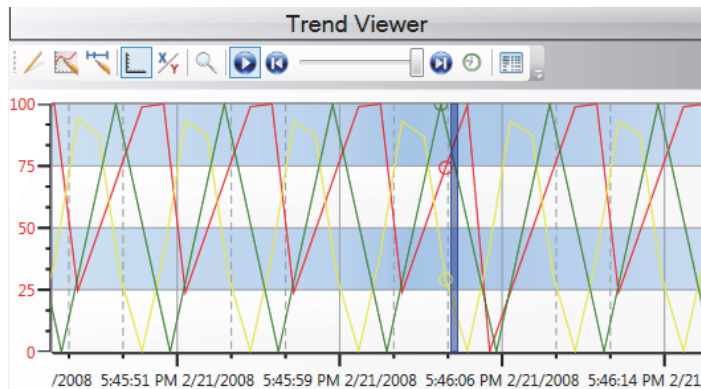
To launch AlarmWorX64 from the Windows **Start** menu, select **Programs > MELSOFT > MC Works64 > Product Suite > Workbench**. AlarmWorX64 opens inside the Workbench.

A presentation in MCDemo provides an overview of AlarmWorX64. For a complete understanding of AlarmWorX64, access MC Works64 online Help while in AlarmWorX64.



## 6.4 TrendWorX64

Use TrendWorX64 to plot real-time and historical OPC data into charts and graphs of all kinds, which you can then use as multifunctional HMI graphic displays. TrendWorX64 has a number of tools you can use to satisfy a wide range of applications.

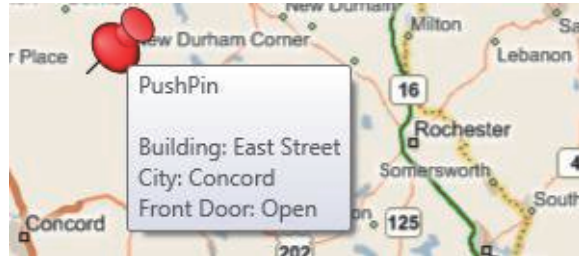


To launch TrendWorX64 from the Windows **Start** menu, select **Programs > MELSOFT > MC Works64 > Product Suite > Workbench**. TrendWorX64 opens inside the Workbench.

A presentation in MCDemo provides an overview of TrendWorX64. For a complete understanding of TrendWorX64, access MC Works64 online Help while in TrendWorX64.

## 6.5 EarthWorX

Use EarthWorX to incorporate drill-down technology to quickly view alarm conditions for any location around the world, using maps available with Microsoft Bing. EarthWorX helps you to visualize geographically-dispersed assets (such as factories, facilities, or job sites) and track movable objects using GPS coordinates.



EarthWorX helps you to visualize geographically-dispersed assets (such as factories, facilities, or job sites) and track movable objects using GPS coordinates.

A presentation in MCDemo provides an overview of EarthWorX. Instructions for using EarthWorX are available in MC Works64 online Help.

## 6.6 GridWorX

GridWorX allows users to visualize, edit and update database tables through MC Works64. Built in two parts the GridWorX Server can be found within Workbench, while the GridWorX Viewer can be added to GraphWorX64 HMI screens through the Controls tab of the GraphWorX64 Ribbon.

A screenshot of a data table interface. The table has a header row with columns: FailureCode, ProblemCode, FailDescription, ProblemDescription, Reporting/Status, and TenantServiceCategory. Below the header, there are several rows of data. The first row is expanded to show a single item for FailureCode: F39. The second row is expanded to show 80 items for FailureCode: F27. The data rows show various problem codes (P140, P107, P106) and descriptions related to mechanical repairs and room temperature/comfort issues.

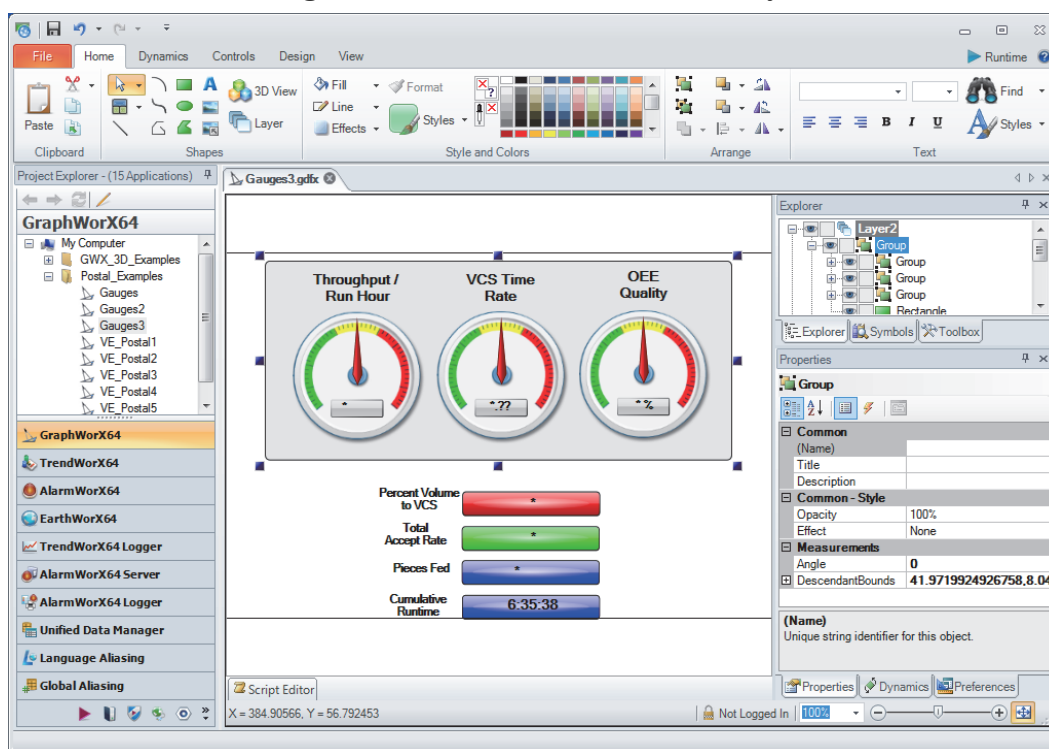
FailureCode	ProblemCode	FailDescription	ProblemDescription	Reporting/Status	TenantServiceCategory
FailureCode: F39 (1 item)					
F39	P140	Mechanical Repair	HVAC Repair	Mechanical Requests	Co
FailureCode: F27 (80 items)					
F27	P107	Room temperature/Comfort	Too hot	Room Temperature/Comfor...	Co
F27	P107	Room temperature/Comfort	Too hot	Room Temperature/Comfor...	Co
F27	P107	Room temperature/Comfort	Too hot	Room Temperature/Comfor...	Co
F27	P106	Room temperature/Comfort	Too cold	Room Temperature/Comfor...	Co

## 6.7 Workbench

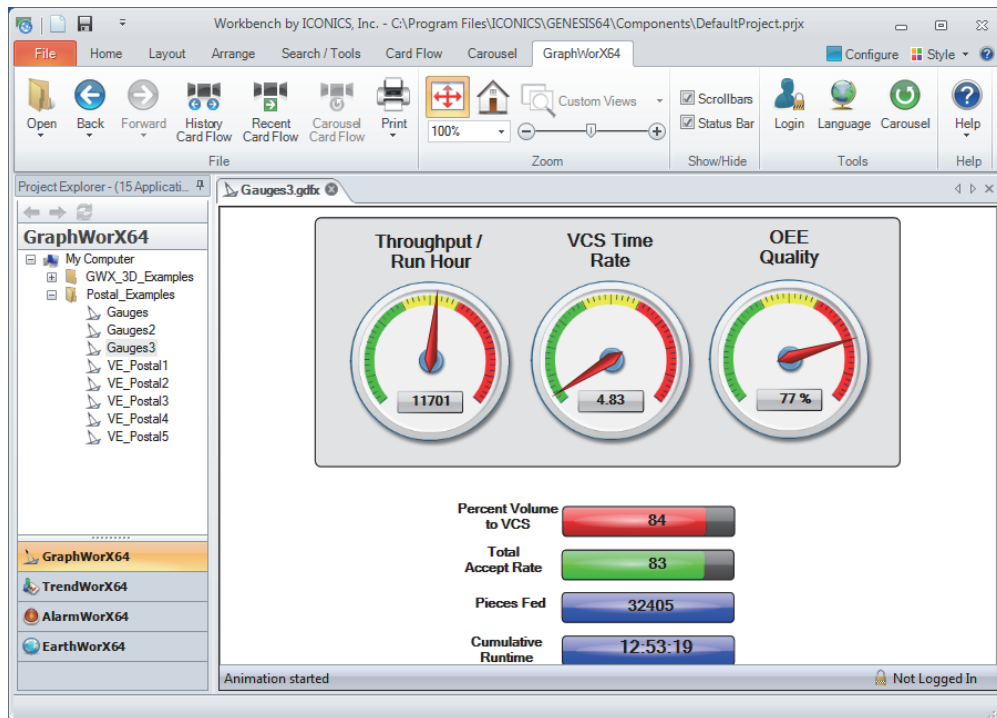
The Workbench is the centralized Web-based interface in which you open MC Works64 products and configure MC Works64 components, runtime, and security. Every MC Works64 component can be loaded, worked with, and run inside the Workbench. Projects can be packaged and deployed from inside the Workbench, too.

When you select the Workbench command from the Windows **Start** menu the Workbench loads with all of the applications showing in the Project Explorer. It swaps in functions with each MC Works64 product that you load in it.

In **Configuration** mode, tools are easy to access:

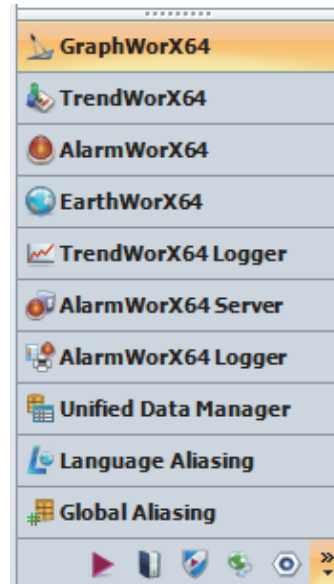


In **Runtime** mode, you can navigate with ease:



MC Works64 providers can be opened from within the Project Explorer in the Workbench.

To launch the Workbench from the Windows **Start** menu, select **Programs > MELSOFT > MC Works64 > Product Suite > Workbench**. A presentation in MCDemo provides an overview of the Workbench. For a complete understanding of the Workbench, access MC Works64 online Help while in the Workbench.



## 6.8 Additional Tools and Utilities

In addition to the many products and tools already described in this guide, there are additional tools and utilities are installed with MC Works64. A brief description of each is described below. For more information about a tool or feature, refer to MC Works64 online Help, which you can access from any MC Works64 product or tool.

- Use **License Viewer** (MELSOFT > MC Works64 > .NET Licensing > MonitorWorX Viewer) to review the status of your ICONICS licenses. See page 4-1 for additional information.
- Use **McBroker64** to set up network communications to legacy OPC servers residing on other machines in the same network or the internet. (You don't need GenBroker if you are talking to OPC-UA servers.) You configure GenBroker properties from the FrameWorX Configurator, which you can launch by clicking Start > Programs > MELSOFT > MC Works64 > Product Suite > Workbench and choose the FrameWorX Server Provider. Once the FrameWorX Configurator is open, expand the tree for the host and, below the "Classic OPC" item, double-click MCBroker.
- Use **Global Aliasing** to set up aliases for use across MC Works64 products. To work with the Global Aliasing, click its button or icon in the Project Explorer in the Workbench.
- Use **Security** to restrict operator and workstation runtime access. Privileges can be granted by a number of means, including application action, points, alarms, files, stations, and custom strings. To work with the Security, click its button or icon in the Project Explorer in the Workbench.

- **TraceWorX** provides online diagnostics and tuning of applications running in MC Works64. TraceWorX is intended for use by systems integrators, OEMs and customers who want to have tools for doing their own troubleshooting and diagnostics. To work with TraceWorX, click **Start > Programs > MELSOFT > MC Works64 > Tools > TraceWorX**.
- Save implementation and development time by using the **Unified Data Manager (UDM)** to create libraries of reusable expressions, value sets, tag groups, alarm subscriptions, alarm filters, recipes, and event triggers across ICONICS products. To work with the UDM, click its button or icon in the Project Explorer in the Workbench.
- Use the **SNMP Connector** to create, monitor, and manage your own Network Management Systems through MC Works64, giving Network Managers access to information from nearly every device connected to the network, all from one application. To work with the SNMP Connector, click its button or icon in the Project Explorer in the Workbench.


Use the **BACnet Connector** to integrate BACnet communications into the MC Works64 and MC Works product families. To work with the BACnet Connector, click its button or icon in the Project Explorer in the Workbench.

# 7 *Help and Technical Support*

## 7.1 Online Help

MC Works64 provides online help with descriptions and explanations of each application. Help is available throughout MC Works64. You can access help in the following ways:



- Click the Help  icon in the Workbench. This opens the help file for that application. To search for a topic in the help file, click the Index tab or the Search tab. Type or select the term you want to find, and then click the topic you want to read.
- Press the **F1** key to display context-sensitive help.
- Click the **Help** button in any dialog box to display context-sensitive help for that dialog box.
- Move the mouse pointer over an icon and pause for a moment to display pop-up ToolTips for quick help.

MEMO

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## **8 Notes**

- Depending on the application settings, operation of the application may be unstable because the memory allocated by the operating system has been consumed up to the upper limit. Please configure the setting properly to prevent it.

Notes

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# MEMO

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# REVISIONS

\*The manual number is given on the bottom left of the back cover.

Print date	*Manual number	Revision
October 2012	BCN(NA)-P5999-0010-A	First edition
March 2013	BCN(NA)-P5999-0010-B	<u>Correction</u> Chapter 2
October 2013	BCN(NA)-P5999-0010-C	<u>Addition</u> Chapter 3 <u>Correction</u> • Change due to review the start menu configuration Chapter 2, Section 4.4
August 2014	BCN(NA)-P5999-0010-D	<u>Addition</u> Chapter 7 <u>Correction</u> Chapter 2, Section 4.4
April 2015	BCN(NA)-P5999-0010-E	<u>Addition</u> Section 5.6 <u>Correction</u> Section 1.1, Chapter 2, Section 3.1, Section 3.2, Section 3.3, Section 5.1
May 2016	BCN(NA)-P5999-0010-F	<u>Addition</u> Chapter 5, Section 5.1, Section 5.2 <u>Correction</u> Section 1.1, Section 1.3, Chapter 2, Section 3, Section 3.2, Section 3.3, Section 4.2.1, Section 4.2.4, Section 4.3, Section 4.4.1.1, Section 6.2, Section 6.3, Section 6.4, Section 6.7, Section 6.8

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BCN-P5999-0010-F(1605)KWIX

MODEL: IQPLANTSUITE-W64-O-E

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