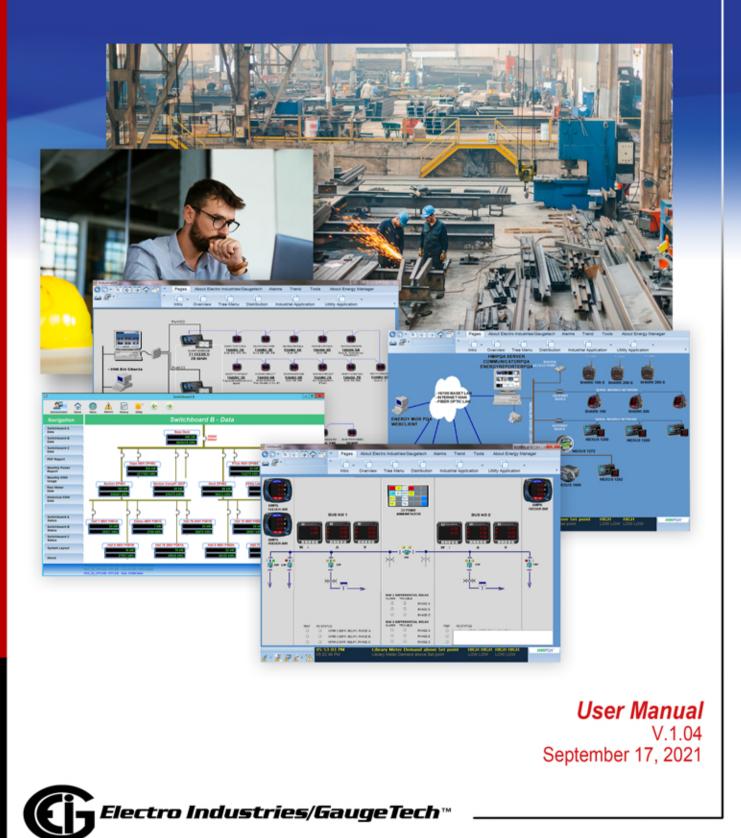


Powerful, Real Time, Power Monitoring SCADA System



1800 Shames Drive, Westbury, NY 11590 Tel: (516) 334-0870 Fax: (516) 338-4741 Email: sales@electroind.com

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HMIPQA<sup>™</sup> Application Installation and Operation Manual Version 1.04

### Published by:

Electro Industries/GaugeTech

1800 Shames Drive

Westbury, NY 11590

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# **Customer Service and Support**

Customer support is available 8:00 am to 8:00 pm, Eastern Standard Time, Monday through Friday. Please have the serial number and a detailed problem description available. When returning any merchandise to EIG, a return materials authorization number is required. For customer or technical assistance, phone 516-334-0870 or fax 516-338-4741.

## **Disclaimer**

The information presented in this publication has been carefully checked for reliability; however, no responsibility is assumed for inaccuracies. The information contained in this document is subject to change without notice.

# **Our Focus at Electro Industries/GaugeTech (EIG)**

EIG exclusively delivers integrated energy and power quality monitoring solutions utilizing AI and deep industry expertise to improve reliability, efficiency, and sustainability. With over 50 years' experience in the electrical industry, EIG has developed extensive energy management and power quality expertise to help customers find ideal solutions to complex challenges. Our corporate culture promotes being cutting edge and investing in R&D to continually improve our customer experience.

Our solutions are designed to deliver results in days, not years. Known for our reputation as being a dependable provider and for exemplary service and support, EIG is committed to customer satisfaction.



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# **1: Introduction to the HMIPQA<sup>TM</sup> Application**

The HMIPQA<sup>™</sup> application is one of the components of EIG's software application suite.

# **1.1: The EnergyPQA.Com™ Application Suite**

Energy ManagerPQA<sup>™</sup> is a powerful software application suite that offers you a complete and comprehensive energy management solution for even the most demanding applications. The system is based on a modular concept in which each module can be adapted at any time, allowing you to begin with a simple solution and expand to a more sophisticated enterprise-wide solution as need arises. In this way, Energy ManagerPQA<sup>™</sup> suite can grow with you as your need for better and more advanced monitoring increases. The EnergyManagerPQA<sup>™</sup> suite supports applications from a small 10-point architecture to a comprehensive enterprise-wide energy management system with costing and power quality features.

Following are the components of the EnergyManagerPQA<sup>™</sup> application suite:

- The CommunicatorPQA® application lets you view real-time readings, configure meters, download stored logs, and analyze waveforms. The MeterManagerPQA® application is the automation component of the CommunicatorPQA® application. It allows you to organize meters and automated log retrieval, among other features. See the CommunicatorPQA®, MeterManagerPQA®, and EnergyPQA.com<sup>™</sup> Software User Manual for details of this application.
- The EnergyPQA.com<sup>™</sup> application is the cloud-based application that lets you view your facilities' meter data over the web.
- The EnergyReporterPQA<sup>™</sup> application offers an Enterprise-wide fully customizable billing solution. The application lets you set up multiple customer facilities, creating individualized rate structures for each, including local tariffs, and automatically import billing data and generate bills for all customers, for a particular customer, or for all meters at a location. The application also lets you analyze usage and Peak Demand data across meters and billing dates.
- The HMIPQA<sup>™</sup> application allows you to connect a graphical HMI interface to the EnergyManagerPQA<sup>™</sup> software applications. Using the HMIPQA<sup>™</sup> application, you



can easily create and manage your metering project. Once you have set up the HMIPQA<sup>™</sup> application interface for your project, you will be able to use it to view your EIG meters and related I/O devices, poll your meters, view alarms and trending, control electrical distribution points, compile energy usage reports, and perform other operations through a Local Area Network (LAN) or the Internet, easily and quickly. The HMIPQA<sup>™</sup> application runs in conjunction with the other Energy-ManagerPQA<sup>™</sup> applications.

# **1.2: An Explanation of Terms**

#### **SCADA Systems**

SCADA stands for Supervisory Control and Data Acquisition. SCADA refers to a largescale distributed measurement and control system. The HMIPQA<sup>™</sup> application lets you create a SCADA system for your metering project.

#### HMI

HMI stands for Human Machine Interface. HMI components allow SCADA systems to present easy access and understandability to their measurements and controls. The HMIPQA<sup>™</sup> application lets you set up and use this interface.

## **1.3: HMIPQA™ Application Components**

The HMIPQA<sup>™</sup> application has two modes: Explorer and Runtime. Explorer is the part of the application you use to set up and modify your HMIPQA<sup>™</sup> project. Runtime is the mode in which you use the project(s) you have created.

# **1.3.1: HMIPQA™ Application Explorer Help Files**

The HMIPQA<sup>™</sup> application's Explorer has an extensive Help library. Click the Help button from any of the HMIPQA<sup>™</sup> Explorer screens to open the Help menu, shown on the next page.

**NOTE:** Depending on which HMIPQA<sup>™</sup> Explorer screen you are in, you may not see all of the options shown in the figure.



 $\odot$ 

🔞 ExtBase - Citect E	xplorer
File View Tools	Help
ExtBase	Web-based Help
Project List	PC-based Help
My Projects	Driver Help
Example	Scheduler Help
🕀 🛅 Graphics	Explorer Help
<b>I</b> Tags <b>I</b> Alarms	Key Update
System 	About

You can also access context-sensitive Help files from most of the HMIPQA<sup>™</sup> application windows. For example, as shown in the following figures, when you click the Help button from the Variable Tags window, a Help file opens, giving you instructions concerning the window's input fields.

**NOTE:** You can also click the **Help Topics** icon in the Title Bar to open the PC-based Help screen.



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# **2: Installing the HMIPQA™ Application**

The HMIPQA<sup>™</sup> application comes with a product CD, the hardware key, and a Quickstart guide. Follow either the instructions here or in the Quickstart guide to install the application.

# 2.1: Installing from CD

1. Place the HMIPQA<sup>™</sup> application's CD in your CD drive.

• You will see the screen shown below. (If the screen doesn't open after a minute, use My Computer to open the files on your PC's CD drive. Double- click the auto-

run application icon to open the screen: Sautorun .)

• The buttons on the right side of the screen let you install the HMIPQA<sup>™</sup> and CommunicatorPQA® applications.

51	
Modular Enterprise-Wide Energy Man Simply Powerful, Simply Scalable	0,
	Install HmiExt
	HmiExt License Agreement
G	Install Communicator Ext
Introduces our single most powerful software application suite. This system provides a complete and comprehensive energy management solution for the most demanding applications. The system is based on a modular concept in which each module can be adapted at any time to the system, allowing you to begin with a simple solution and	Communicator Ext License Agreement
any units our expetition, allowing you to begin with a single solution and migrate to a sophisticated enterprise-wide solution as the need arises. Energy Manager EXT grows with you as your need for better and more advanced monitoring increases. This system scales from a small 10-point	Browse CD
architecture to a comprehensive enterprise-wide energy management system with costing and power quality.	Exit

2. Click the **Install HMIPQA<sup>™</sup> Application** button.

**NOTE:** During installation a Command screen opens that tells you the status of the HMIPQA application installation. You do not need to respond to this window at all. This is the first Command screen you'll see after you click the Install HmiPQA<sup>TM</sup>



Application button. As the installation continues, this screen will be updated to display additional items. It will automatically close once installation is complete.

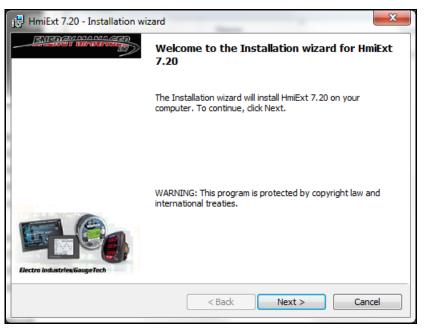
C:\Windows\system32\cmd.exe	-		23
. ELECTRO INDUSTRIES ∕ GAUGETECH LLC			* III
. 1. Installing Components 1			
			*

3. You will see this screen after you click the Install HmiPQA<sup>™</sup> Application button. You do not need to respond to this screen. It is just telling you the status of installation.

G Energy Manger	Ext Installer		X
	Extracting files to temporary folder		
	Extracting ProjectDBFAddIn		
	Installation progress	1	
	Install	Cance	el



4. Depending on your PC's system, you may see additional message screens. You do not need to respond to them. Then you will see the screen shown below.



5. Click the **Next** button. You will see the screen shown below. This screen lets you choose which HMIPQA<sup>™</sup> software components to install.

谩 HmiExt 7.20 - Installation wizard	×
Custom Setup Select the program features you want installed.	ĆĠ
Click on an icon in the list below to change how a feature is in	nstalled.
HimiExt     Runtime Environment     Configuration and Development Envir	Feature Description This feature requires 668KB on your hard drive. It has 2 of 2 sub features selected. The sub features require 332MB on your hard drive.
InstallShield	Next > Cancel

• Runtime Environment is the Client which connects to the HMI Server. It allows you to run a project which is already developed. The project cannot be developed using Runtime only.



**NOTE:** The Runtime Clients' feature must be included in the purchased license key.

 Configuration and Development Environment includes HMIPQA<sup>™</sup> Explorer, HMIPQA<sup>™</sup> Graphic Builder, and Project Editor. You use these components to develop and configure new projects.

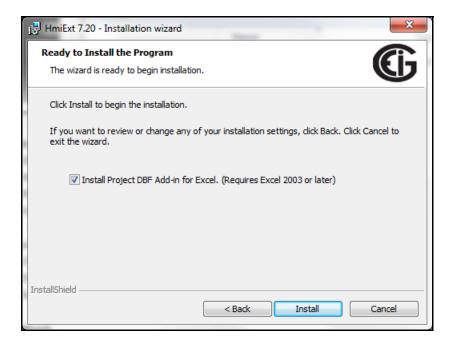
**NOTE:** If you purchased the Basic License, install both components.

 Click the Next button. You will see the screen shown below. This screen shows the destination folders (the folders on your PC where the HMIPQA<sup>™</sup> application files will be stored).

😸 HmiExt	7.20 - Installation wizard
	ion Folders xt to install to these folders, or click Change to install to different folders.
Þ	Install HmiExt 7.20 to: C:\Program Files (x86)\Electro Industries\HmiExt\
D	User and Data Directory location: C:\ProgramData\Electroind\HmiExt
InstallShield -	< Back Next > Cancel

 Click the Next button. You will see the screen shown on the next page. This screen lets you choose the DBF Add-on which helps you change project parameters using Excel (Excel 2003 or later is required).





8. Click the **Install** button. The HMIPQA<sup>™</sup> application is installed on your PC. You will see the screen shown below as the application is installed. The message shown on it and the progress bar will change as the installation progresses.

i	🛃 HmiExt 7.	20 - Installation wizard
	-	HmiExt 7.20 ram features you selected are being installed.
	P	Please wait while the Installation wizard installs HmiExt 7.20. This may take several minutes.
1		Status: Registering product
1		
1		
1		
	InstallShield —	< Back Next > Canve
l		

9. During installation, you will see the screen on the next page. This screen lets you choose which communication protocol drivers you want to install.

 $\ensuremath{\text{NOTE:}}\xspace$  and  $\ensuremath{\text{Shark}}\xspace$  meters have Modbus as their default communication



protocol. You can select additional protocol drivers or click the **Select All** button to choose all of the protocol drivers.

Citect Driver - InstallShield Wizard	×
Select Drivers Select the communication drivers you want to install.	22
Select the drivers you want to install, and clear the drivers you do not want to instal	l.
<ul> <li>✓ ASCII RELEASE Driver v2.00.09.001</li> <li>□ DDEDRV RELEASE Driver v2.01.17.001</li> <li>□ DNPR RELEASE Driver v4.02.52.000</li> <li>✓ MBSLAVE RELEASE Driver v2.06.107.000</li> <li>✓ MODBUS RELEASE Driver v2.06.19.000</li> <li>✓ MODBUSA RELEASE Driver v2.06.12.001</li> <li>✓ MODNET RELEASE Driver v2.06.29.003</li> <li>✓ OPC RELEASE Driver v2.03.28.000</li> <li>✓ SNMPII RELEASE Driver v2.07.16.002</li> </ul>	
InstallShield	Clear All
< Back Next >	Cancel

10.Click the Next button. You will see the screen below, which lets you review the drivers you selected. If you want to make a change, click the Back button and repeat step 9. If the selections are correct, click the Next button.

Citect Driver - InstallShield Wizard	×
Start Copying Files Review settings before copying files.	
Click 'Next' to begin installation (11779 KB required).	
Destination: C:\Program Files (x86)\Electro Industries\HmiExt\Bin	
Current Settings:	
ASCII RELEASE Driver v2.00.09.001 COMX RELEASE Driver v2.05.02.003 MBSLAVE RELEASE Driver v2.01.07.000 MODBUS RELEASE Driver v2.06.19.000 MODBUSA RELEASE Driver v2.06.12.001 MODNET RELEASE Driver v2.06.29.003 OPC RELEASE Driver v2.03.28.000 SNMPII RELEASE Driver v2.07.16.002 TCPIP RELEASE Driver v2.04.06.000	<u>^</u>
٠	•
InstallShield	
< Back Next >	Cancel



11. Once installation is complete, you will see the screen shown below.



12. Click the **Finish** button. You will see the screen shown below.

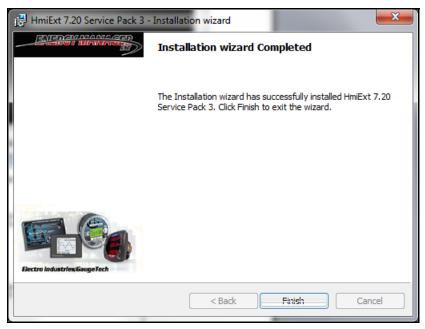


13. Click the **Update** button to install Service Pack 3. You will see the screen shown on the next page as the service pack is installed.



	🛃 HmiExt 7.	20 Service Pack 3 - Installation wizard
	-	HmiExt 7.20 Service Pack 3         ram features you selected are being installed.
	1	Please wait while the Installation wizard installs HmiExt 7.20 Service Pack 3. This may take several minutes.
1		Status:
l		Copying new files
l		
l	InstallShield –	
		< Back Next > Cancel
1		

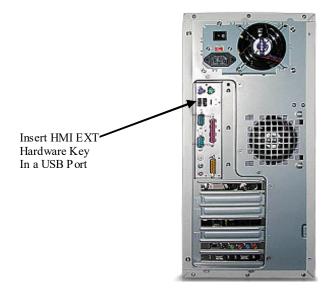
14. When the service pack has been installed on your PC, you will see the screen shown below. Click the **Finish** button to close the screen.





# 2.2: Installing the Hardware Key

Install the hardware key in one of your PC's USB ports. The HMIPQA<sup>™</sup> application auto-detects the presence of the hardware key - you do not need to configure it in the software.



**IMPORTANT!** The HMIPQA<sup>™</sup> application will not work properly unless the hardware key is installed.

# 2.3: Using the HMIPQA<sup>™</sup> Application

The HMIPQA<sup>™</sup> application has two modes: HMIPQA<sup>™</sup> Runtime and HMIPQA<sup>™</sup> Explorer. You access the application and its modes from the PC's Start menu:

#### Start>All Programs>Electro Industries>HmiPQA 7.20

#### **Runtime Mode**

Click **HMIPQA<sup>™</sup> Runtime**. Use Runtime Mode to manage a project that has already been created, and to set up your meters for a new or modified project. Chapter 4 contains detailed instructions.

#### **Explorer Mode**

Click **HMIPQA<sup>™</sup> Explorer**. Use Explorer Mode to set up your project. Chapter 3 contains detailed instructions.



# 2.4: Order of HMIPQA<sup>™</sup> Application Tasks

- 1. Create a project.
- 2. Set up communication variable tags, etc.
- 3. Program the Cicode files: functions such as alarms, where to get readings from for the display, etc.
- 4. Create the display pages for the project.
- 5. Compile the project.
- 6. Perform Computer Setup.
- 7. Run the project.



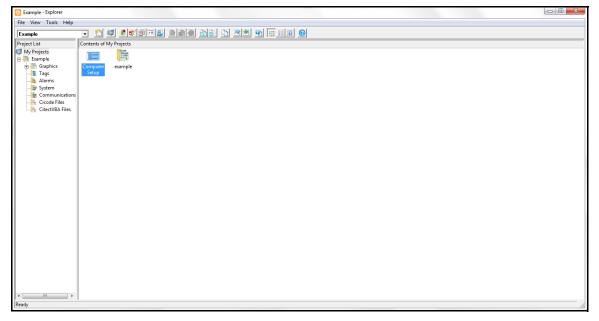
# **3: Working with HMIPQA<sup>TM</sup> Explorer**

HMIPQA<sup>TM</sup> Explorer is the part of the HMIPQA<sup>TM</sup> application that lets you set up a project.

# **3.1: Starting HMIPQA™ Explorer**

From your PC's Start menu, select Electro Industries>HmiExt 7.20>HmiExt

Explorer. You will see a screen similar to the one shown below.



Two other screens open when you open HMIPQA<sup>™</sup> Explorer: Graphics Builder and

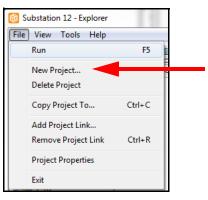


😻 Graphics Builder			
File Edit View Objects Text Arrange Tools Window Help			
	<b>—</b> •		
		10×0	CONTRACTOR OF CO
Project Editor [ Substation 12 ] - COMPILED			
Project Editor [Substation 12] - COMPILED     File Edit Tags Alarms System Communication Servers Tools Window Help			
Project Editor [ Substation 12 ] - COMPILED     File Edit Tags Alarms System Communication Servers Tools Window Help     []      []			
File Edit Tags Alarms System Communication Servers Tools Window Help		_	
File Edit Tags Alarms System Communication Servers Tools Window Help			
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File Edit Tags Alarms System Communication Servers Tools Window Help			



# **3.2: Creating a New Project**

1. To create a project using a starter project, click **File>New Project** in the Title Bar.



2. You will see the screen shown below.

New Project	X	
Name:	<u>I</u>	
Description:		
Location:	C:\ProgramData\Electroind\Hn Browse	
	Create project based on starter project	
Page Defau	lts	
Template st	yle: Tab_Style_1	
Template re	esolution: XGA (1024x768, 4:3)	
I Template designed for showing title bar		
Background	color:	
	OK Cancel Help	

Make the following settings for your new project.

- a. Enter a name and description for the project.
- b. Click **Browse** to select the location where the project files will be saved (the default location is under User in the HMIPQA<sup>TM</sup> application directory).
- c. Select one of the Template Styles from the pull-down menu: Top, Standard, Bottom, or Tab\_Style\_1. We recommend you select Tab\_Style\_1 as it is the easiest style to use.
- d. Select Template Resolution from the pull-down menu:



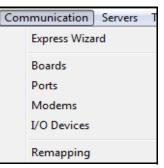
e. Leave the default Background color or choose another from the menu.

f. Click **OK**. Your project will be created and will be displayed in the Explorer screen.

## **3.3: Setting Up Communication for the Project**

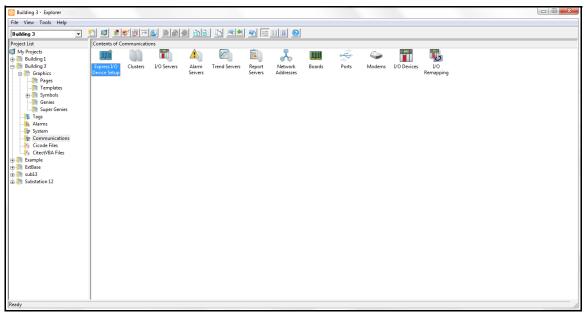
Once you have created a project you need to set up communication for it, including identifying the meters that will be used in the project.

- 1. Click the **Project Editor** icon in the Explorer Title Bar. The Project Editor screen opens.
- 2. Click **Communications** in the Title Bar. You will see the menu shown below.



- To set up an I/O Device, e.g., a Shark® 200 meter, use either the Express Wizard or the I/O Devices option. You will enter the communication information for the device, e.g., the protocol used to communicate with it and it's IP address.
   NOTE: You can also access the Communication settings from the Explorer screen:
  - a. Click Communication under your project. You will see the Communication settings in the right side of the screen.





b. Click an icon to access its settings, e.g., Express I/O Device Setup.

c. The setting window will open in the Project Editor screen.

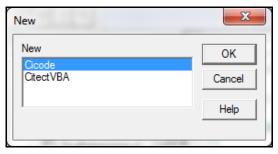


# **3.4: Creating Cicode Files**

1. Click the Cicode Editor icon in the Explorer Title Bar. You will see the screen shown below. You use this screen to program the files used by your project, e.g., Alarm functionality, display of meter readings, etc.

P Cicode Editor	
File View Debug Tools Help	
	<b>9788 94</b> %
薛建国里	
Files II A	
File Path	
Open Files Open Project All ( )	
X File L E	
File     L       E	
Ready	Line: Line

2. Click **File>New**. You will see the screen below.



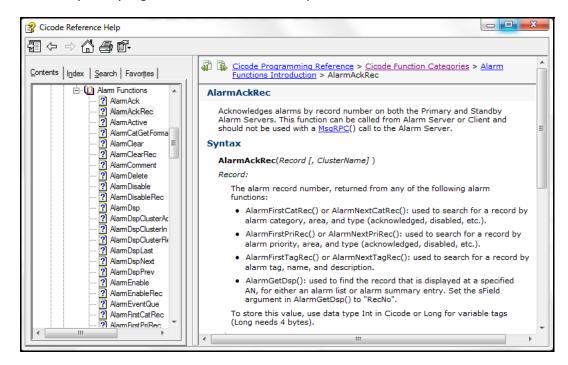
3. Make sure Cicode is highlighted and click **OK**. You will be able to enter code for your file.



4. Click **Help>Cicode Functions** or press the Alt+F1 keys to see a list of all of the available Cicode functions.

😰 Cicode Reference Help			X
\$8 ↔ ↔ ♣ ♣ ♠			
Contents Index Search Favorites	Cicode Programming Refere	nce > Cicode Function Categories	^
Cicode Programming Reference	Cicode Function Categories Cicode includes the following fur		
Using Cicode Commands     Using Cicode Expressions     Using Cicode Expressions     Using Cicode Functions     Working with Commonly Used Fun     Writing Functions     Using Variables     Using Cicode Macros     Converting and Formatting Cicode     Working with Operators     Working with Conditional Executor     Performing Advanced Tasks     Editing and Debugging Code     Using Cicode Programming Standa     Cicode Function Categories	Accumulator Functions ActiveX Functions Alarm Functions Clipboard Functions Cluster Functions Color Functions Communication Functions DDE Functions Device Functions Display Functions DL Functions Error Functions Event Functions File Functions	Mail Functions         Math/Trigonometry Functions         Menu Functions         Miscellaneous Functions         Page Functions         Plot Functions         Process Analyst Functions         Quality Functions         Report Functions         Security Functions         Server Functions         SPC Functions         SQL Functions         SQL Functions         String Functions	E
Cicode Errors	Form Functions Format Functions FTP Functions FuzzyTech Functions Group Functions	Super Genie Functions Table (Array) Functions Tag Functions Task Functions Time/Date Functions	Ţ

The topics listed on the side of the screen explain how to use the Cicode functions. If you click on the Cicode Function categories listed on the right of the screen, you will be able to see detailed information about the syntax of the function - how exactly it is programmed. See the example screen below.





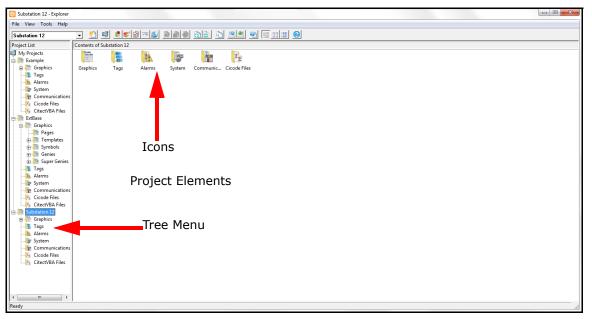
5. When you have finished creating a Cicode file, click File>Save from the Cicode Editor screen's Title Bar. When you have programmed all of the Cicode files you need, you can click X to close the screen.

**NOTE:** You can display the Cicode files fro a project by clicking the All Projects tab in the middle of the Cicode Editor screen and then clicking on the project. You can view the Cicode files for the Example project in this way if you wish.

# 3.5: Creating a Project's Display Pages

Once you have created all of the Cicode files you need, you can program the look of the display pages for your project.

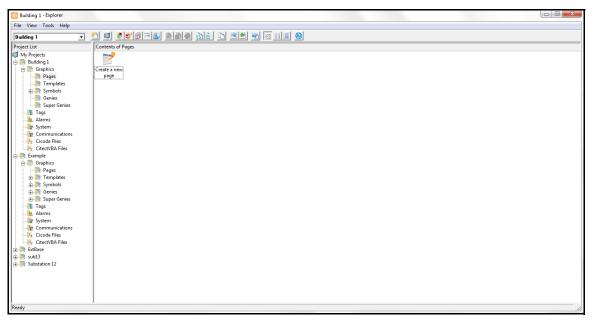
1. Click on your project on the left side of the Explorer screen. You will see the elements of the project both in the tree menu under the project and as icons in the middle of the screen.



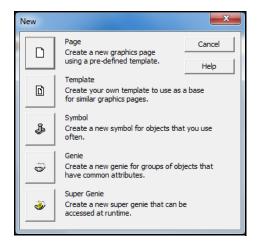
2. Click on the plus sign next to Graphics in the tree menu or double-click on the Graphics icon. You will see Pages, Templates, Symbols, Genies, and Super Genies in the list and as icons on the screen.



3. Click on Pages in the tree menu or double-click the Pages icon. You will see a screen like the one shown below.



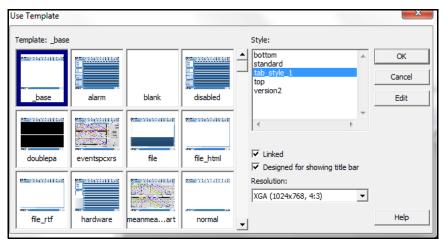
**NOTE:** If you click **File>New** you will see the following menu.



You can click the icons to create a new Page, Template, Symbol, Genie, or Sub-Genie.



 To make a new page, click either File>New>Page or click the Create a New Page icon. A blank page opens in the Graphics Builder screen and you see the Template screen.



- a. The Style should be tab\_style\_1. All of the associated page templates for tab\_style\_1 are displayed in the Template section of the screen. Select the template you want to use for the new page, e.g., Alarm for an alarm page; or \_Base for an Intro (Home) page.
- b. Leave the "Linked" checkbox and the "Designed for showing title bar" checkboxes as they are.
- c. Choose the resolution for the page from the pull-down menu.
- d. Click OK.



5. The template you selected is now displayed in the Graphics Builder screen. See the example below.

🐯 Graphics Builder - [Building 3 - Untitled6]		- 0 <u>- X</u>
The Edit View Objects Text Arrange Tools Window Help		- 8 ×
■ 1 C C C C C C C C C C C C C C C C C C		
	42 43	•
	55 59	20 20 20 20 20 20 20 20 20 20 20 20 20 2
		+244 4255 4280 4287 4288 4299 4290 4291 4291 4291 4291 4292 4293 4293
	[41] o×o [+] eso.3	+135 +430 4537 +438 +439 +440 +441 + 90 GUIDE GRID

6. Click Objects in the title bar to display the Objects menu. Use this to create images for your page, e.g., lines and boxes.

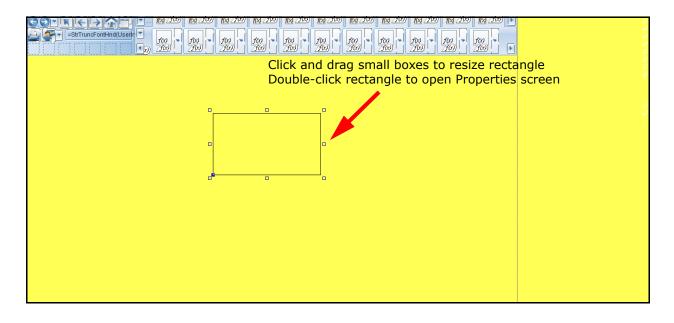
Objects Text	Arrange	Tools
Free Hand	Line	
Straight Li	ne	
Rectangle		
Ellipse		
Polygon		
Pipe		
Text		
Number		
Button		
Symbol Se	t	
Trend		
Cicode Ob	ject	
Pelco Cam	iera Viewer	
Scheduler		

7. When you click on one of the elements and place it on the page, e.g., a rectangle, a screen opens that lets you set the properties for it. See the example screen

Line Width: Style: Solid Color: Fill Fill Color: Color:	✓ Scaling       ✓ Fill       ✓ Input       ✓ Slider       ✓ Access       ✓ Metadata         Object type       Extra line       Border         Corner       O       •         Corner       O       •         Gradient       Gradient Fill       Color:         Direction:       ✓
--	--

This screen lets you set the appearance of the element, e.g., the color or width of a line. Click **OK** to save your selection.

8. The element will be on the page. You can click on it to resize it. to open the Properties window again, double-click on the element.





below.

9. To put in a command, click **Object>CiCode Object**. When you place it on the page, the screen shown below opens.

Cicode Object Properties	×
Cicode Cinput Cicode	
Command	Ceneral
Display as:	•
	Clear Property

- a. Click the Wand icon to select either Insert Tag (e.g., a meter) or Insert Function (e.g., AlarmClear). You will be able to select from a list of the tags you set up in the Communications settings (see Section 3.3) or a list of Cicode functions that are embedded in the application. Click **OK** to choose the tag or function. They will be listed in the command box.
- b. The placeholder for the command is shown in the "Display as" field. You can click Set to choose another symbol for the placeholder. Click Apply to process your selections.
- c. Click the Input tab to enter a sequence of commands.



Cicode Object Properties	×
Key sequence	Key sequence command       Keyboard Commands         Security       Image: Security         Security       Image: Security         Command area:       Call areas> Image: Command area
Add Delete Edit	Logging Log message: Clear Property
	OK Cancel Apply Help

d. Use the Key Sequence box to set a sequence of Keyboard actions.

- e. To enter a message that will be appended to any log, enter it in the Logging message field. Click Apply to process your selections.
- f. Click the Access tab to set up security for the page.

Cicode Object Properties	X
Cicode Ciput Cicode	
Identification	√ General
Description:	
Tool tip:	
Security: Same area as page Object Call areas> The privilege level: Constructions	
Log device:	
OK Cancel Apply Hel	p

10. Click **Object>Text** to add text boxes to the page. Once you add text a screen opens which lets you select font, etc. for the text. You can also select the text on the page and click **Text** in the Title Bar to reformat the text, e.g., applying bolding or italics.



11. Click **Arrange** in the Title Bar to open the menu shown below. It allows you to perform functions on the elements on the page, e.g., to move an object to the front or back, or grouping selected objects. You can also use icons on the top of the screen to perform some of these functions.

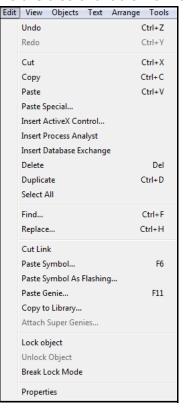
Arra	nge Tools Windov	v Help	
	Align Rotate	Ctrl+A Ctrl+R	<u> </u>
	Mirror Group Objects Ungroup Objects	Ctrl+M	Bring to Bring to Bring Bring Group Ungroup Front Back Forwards Backwards
	Bring to Front Send to Back Bring Forwards Send Backwards		

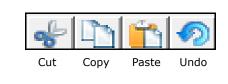
12. Click **Tools** from the Title Bar to open the menu shown below.





13. Click **Edit** in the Title Bar to open Edit menu, shown below. Some of the Edit menu options are also available from the icons on the top of the screen.



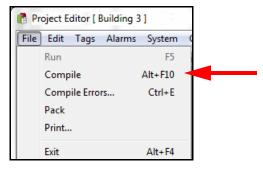


14. When you have finished making changes, click **File>Save** or the Save icon on the Title Bar.

### **3.6: Compile the Project**

Before you can run your project you must compile it. If there are any errors in the setup, compiling the project will cause the application to find them and alert you via message screens.

From the Project Editor screen, either click **File>Compile** or press Alt+F10.





You will see progress messages as the project is compiled and if there are errors message windows will open that tell you what the errors are. Once you have corrected the errors, perform the project compile again.

Once the project has compiled successfully it can be run (see Chapter 4).

#### 3.7: Run Computer Setup

After compiling your project, as the last step before running your project ,you must perform computer setup using the HMIPQA<sup>™</sup> application's Computer Setup Wizard. The Computer Setup Wizard lets you configure settings for the PC, including:

- The role the PC has in the system network
- The project being run on the PC
- The PC's CPU configuration
- The SCADA Events that are enabled for each component
- The Cicode run for each component on startup
- The cluster configuration
- Any security settings applied

**IMPORTANT!** The Computer Setup Wizard needs to be run on each computer in your system to appropriately configure the HMIPQA<sup>™</sup> application on each PC.

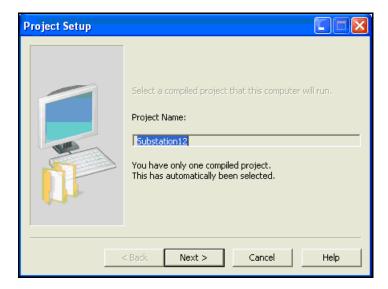
1. From the Explorer screen, click either **Tools>Computer Setup Wizard** or click the **Computer Setup Wizard** icon.



 You see the Computer Setup Wizard, shown below. Make sure the Custom Setup radio button is selected. (The HMIPQA<sup>™</sup> application does not support the Express Setup function.)



3. Click the **Next** button. A screen opens, letting you select the project you are setting up. Any open project is automatically displayed in the Project Name field. You can select another project from the pull-down menu. .



 Click the Next button. A screen opens, allowing you to specify the "role" of your computer. There are three options: Server and Control Client, Control Client, and View-Only Client.



- If the project will be run as well as viewed on this computer, select the Server and Control Client radio button. Select the Multi-Process checkbox if you want to separate your client and server components into individual processes. You can use this option to distribute the components across multiple CPUs. Leave the Multi-Process check box unselected to run the client and server components in one process.
- If this computer will be accessing the project through another server computer, but will be able to respond to requests and perform tasks, select the **Control Client** radio button. If this computer will be running the full license version of the HMIPQA<sup>™</sup> application, click the **Full License** checkbox.
- If this computer will be accessing the project through another server computer, and will **not** be able to respond to requests or perform tasks, select the **View-only Client** radio button.

Computer Role Setup	
	The minimum role of this computer is determined by matching its IP address with the server addresses configured in your project.
	Select the role of this computer.
	Server and Control Client
	Multi-Process
	C Control Client
	C View-only Client
	Note: If no servers match this computer, then this
	computer must be a client.
< Br	ack Next > Cancel Help



5. Click the **Next** button. A screen opens, allowing you to select the IO Server that you will use.

Network Setup	
	Select the primary networking model for this machine.    Stand alone (no other SCADA computers)  Networked (connect to other SCADA computers)
< Ba	ack Next > Cancel Help

- If you selected the Network computer option (see step number 4), you will see the Internet Server Setup screen. (If you selected the Stand-alone computer option, proceed to step number 8.)
- 7. Click the checkbox next to "This computer is an Internet Server."
  - a. Enter the IP Address or Hostname for this computer.
  - b. You may also enter an alternate IP Address or Hostname.
  - c. Click the Next button.

**IMPORTANT NOTE:** The Client computer(s) use the IP Address or Hostname you entered to connect with this computer via the Internet. To set up a Client computer, see Chapter 5.

- 8. Click the Next button. The Alarms Setup screen opens.
- 9. Click the Next button. The Advanced Alarms Setup screen opens.
- Default values are in the input fields. You can change these values if you want.
   The Help button opens a screen that explains the Alarm Server options.
- 11. Click the Next button. The Reports Setup screen opens.



- 12. Click the Next button. The Advanced Reports Setup screen opens. Any reports set up for your project are displayed.
- 13. Click the Next button. The Trends Setup screen opens.
- 14. Click the Next button. The Advanced Trends Setup screen opens.
- 15. The Help button opens a screen that explains the Trends Server options. You do not have to change anything on this screen, since HMIPQA<sup>™</sup> software already has trending options programmed into it.
- 16. Click the Next button. The Events Setup screen opens.
- 17. Any Events set up for your project are displayed. The Help button opens a screen that explains the Events options.
- 18. Click the Next button. The Security Setup Control Menu screen opens. The Help button opens a screen that explains the Control Menu security options. NOTE: When you are setting up your project, you should check the first three options. Once your project is running, for security purposes, we recommend you uncheck these options. For example, if you are running a SCADA system, you do not want the operator to be able to shutdown the project from the Menu Bar.
- 19. Click the Next button. The Security Setup Keyboard screen opens.The Help button opens a screen that explains the Keyboard Security options. NOTE:For security purposes, you may want to disable the Alt-Space shortcut.
- 20.(If the Alt-Space shortcut is disabled, the HMIPQA<sup>™</sup> program will be "locked" onto the monitor display.)
- Click the Next button. The Security Setup Miscellaneous screen opens.
   The Help button opens a screen that explains the security options on this screen.
- 22. Click the Next button. The General Options Setup screen opens. The Help button opens a screen that explains the general setup options. IMPORTANT! The Startup Cicode function entry must be: Start\_Sys() for HMIPQA<sup>™</sup> software to function properly.



- 23. Select the Startup page from the pull-down menu. This is the first screen you'll see when the project is run. Intro is the recommended choice.
- 24."You can enter a backup path if you are running a redundant system for your project.
- 25. Click the Next button. (Click the Cancel button to cancel the setup.) A screen opens telling you that setup is complete.
- 26. Click the Finish button to save your settings. (Click the Cancel button to exit without saving your settings; click the Help button for context-sensitive Help.) IMPORTANT NOTE: If you set up the computer as an Internet Server (see step numbers 4 and 7), refer to Chapter 5 for further instructions.



## 4: Running an HMIPQA<sup>™</sup> Project

You use Runtime mode to run your HMIPQA<sup>™</sup> project. Once you have created a projected and clicked File>Run from the Explorer Title Bar, the project is compiled and the Runtime page opens. If you want to run a project that is already compiled, do one of the following:

- Click on the project in the Tree menu of the Explorer screen and click **File>Run** or click the Run icon in the Title Bar.
- Click Start>Electro Industries>HmiExt 7.20>HmiExt Runtime.

The HMIPQA<sup>™</sup> application's Runtime Intro screen opens.



Then the first screen of your project opens. See the example screen on the next page.



Intro Overview Tree Menu Distribution Industrial Application Utility Application  Electro Industries/GaugeTech Powered by Innovation  Electrical ENERGY MANAGEMENT							
Utility Application	Single Trend	Active Alarm	Login	Features	About EIG		
ndustrial Application	Compare Trend	Alarm Summary	Energy Manager Utility		Shark Series Meters		
University Campus Application	Multiple Trend	Hardware Alarm	Email Configuration		Nexus Series Meters		
Tree Menu		Disabled Alarm	Alarm Threshold Configuration		Software Solutions		
		Z			Tech Support		
					Sales		

Click the **Login** button and enter the Name and Password.

Login Form				
Name				
Password				
ОК	Cancel			

Click on any of the buttons to view its page.



# 5. Connecting to HMIPQA<sup>™</sup> Application through the Internet

During an HMIPQA<sup>™</sup> Project's Computer Setup you had the option of configuring the computer as an Internet Server (see Chapter 4). This allows other computers to access the project stored on the computer. These Client computer(s) use the IP Address or Hostname you entered during Computer Setup to connect to the server-computer through the Internet.

This chapter explains how to set up a Client computer. It also contains additional instructions for configuring the Internet Server.

### 5.2: Setting up a Client Computer

- From the Client computer, open Internet Explorer and type the following in the address line: ftp://ip address of HMI Server/IDC.EXE For example: ftp://172.20.88.47/IDC.EXE
- 2. Download IDC.EXE (the Internet Display Client application). The AutoInstall Wizard will guide you through installing IDC on the computer.
- 3. After installation, verify that the following parameters are in the Citect.ini file, which is located in the bin directory of HmiExt IDC. Parameters marked with an asterisk \* must be manually entered into this file.

[lan] node=HMITEST disable=0 TCPIP=1

NetBIOS=0



[INTERNET]

Server=0

Client=1

IP Address=server ip address

Password=\* (default password is disppword)

Restart=0

Update Time=1\*

Refresh=1\*

[Page]

DynamicSizing=1

ScanTime=1000

Startup=Intro

[Animator]

FullScreen=0

[Internet Servers]

Server0=server ip address

Server1=

Server2=

Server3=

Server4=



Server5=

Server6=

Server7=

Server8=

Server9=

[Client]

Primary=client name

Display=1

[DNS]

Primary= server ip address

Standby=

IOServer= server ip address

Alarm= server ip address

Trend= server ip address

Report= server ip address

[GENERAL]

 ${\tt MSCryptSlowStartupFix=1}$ 

- 4. Run the IDC program by selecting: Start>Programs>Electro Industries>HMI EXT>IDC Runtime.
- 5. You will see the HMI Internet Client Setup screen. Enter:



- The IP Address of the Internet server.
- The Password for the Internet server.
- 6. Click the OK button to connect to the Internet server and access the HMIPQA<sup>™</sup> project from the Client computer. See Chapter 4 for instructions on running the HMIPQA<sup>™</sup> project.

### **5.3: Verifying Internet Server Parameters**

After you have finished Computer Setup on the computer that is the Internet Server, verify that the following parameters are in the Citect.ini file, located in C:\WINDOWS.



**IMPORTANT!** The fields marked with an asterisk must be manually entered into the Citect.ini file.

[LAN]

node=name assigned to computer during setup

disable=0

LanA=-1

TCPIP=1\*

NetBIOS=0\*

[Internet]

Server=1

Client=0

Display=\* (password for Internet Access; the default password is disppword)

RunFTP=1

```
LogFile=C:\IDC_Log.txt*
```

UpdateTime=1\*



Refresh=1\*

[DNS]

Primary=ip address entered during setup

Standby=

IOServer=ip address of Internet Server\*

Alarm=ip address of Internet Server \*

Trend=ip address of Internet Server \*

Report=ip address of Internet Server \*

[GENERAL]

 ${\tt MSCryptSlowStartupFix=1^*}$ 



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