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INTRODUCTION

NOTE: The three application charts on pages 2 and 3 contain terms, which are explained in this introduction.

NOTE: See also **KMC Niagara (Software) Products on page 6** for product descriptions and **KMC Setup Tools (Configuring, Programming, Designing) on page 9** for a summary of other available KMC tools.

What Is Niagara AX and N4?

Niagara AX is an open, Java-based framework that can connect almost any embedded device or system—regardless of manufacturer or communication protocol. It includes a graphical toolset that enables users to build applications in a drag-and-drop environment and easily manage assets using a standard Web browser.

Niagara 4 (or N4) is the latest implementation of the framework, with a newer HTML5 interface, enhanced security, and other features.

NOTE: Niagara AX is not recommended for new installations, and its end of life is 7/01/2021. To upgrade existing AX installations to N4, license upgrades are available by purchasing the corresponding SMA maintenance plan. The user must also run a migration utility, refactor all relevant modules, and make station programming changes. Not all existing AX installations will support N4.

What Is KMC Niagara Supervisor?

The KMC **AX** Supervisor was a flexible network server used in applications where multiple Niagara AX-based JACE controllers were networked together. The AX Supervisor served real-time graphical information to standard web-browser clients and also provided server-level functions such as centralized data logging, archiving, alarming, trending, master scheduling, system-wide database management, and integration with enterprise software applications. It could host KMC Workbench.

The KMC **N4** Supervisor is the current version that can communicate with JACE AX controllers as well as newer JACE 8000 controllers. It replaces the KMC **AX** Supervisor.

NOTE: A **maintenance plan** must also be purchased with all N4 supervisors (P/N SUP-xxx-SMA-xxx) and JACE 8000 controllers (P/N SMA-xxx-xxx).

What Is KMC Niagara Workbench?

This is the engineering tool from which the database is developed and various other engineering actions, such as controller configuration and programming, are conducted.

What Is KMC Converge?

KMC Converge adds functionality to Niagara for setting up BACnet controllers from KMC Controls. KMC Converge is a tool set that runs in Niagara Workbench. It is used to configure and deploy KMC's Application Library and customize programmable KMC BACnet controllers.

KMC Converge is installed via two modules: kmcBACnet (controller programming) and kmcConverge (deployment service).

NOTE: See also the [data sheet and other documentation for KMC Converge](#).

What Is KMC Converge GFX?

KMC Converge GFX is a tool set used to configure and generate responsive HTML5 graphics from KMC Converge or any other open brand of the Niagara Framework. GFX will automatically generate an HTML5 web interface for controllers that were deployed using KMC's Application Library. The interface may be further customized with additional points and navigation. GFX graphics are created in Workbench and hosted on a station. GFX is in addition to the standard graphics included with Niagara.

KMC Converge GFX is installed via one module: kmcConvergeGFX.



What Is KMC Converge Training?

KMC Controls offers training in using KMC Converge. To take a training class, see the Training section (after logging in) of the [KMC Controls web site](#) for a schedule of classes and additional information.

What Is -3P?

The “-3P” in a product part number means Third Party. The “-3P” products are licensable to open Niagara products that were sourced from Niagara vendors other than KMC.

What Is a Host ID and Win ID?

The Host ID for a JACE controller is determined at the factory, and a corresponding license file for that specific JACE is stored on a licensing server. The Win ID is the computer/server version of the JACE Host ID. The Win ID is generated by the Supervisor/Workbench software [at installation](#). All Supervisor/Workbench licenses are bound to that Win ID just like all JACE licenses are bound to the Host ID. (For more information, see Niagara documentation.)

What Is the Niagara NiCS?

The Niagara Compatibility Statement (NiCS) is a licensing model in Niagara that provides OEMs with the ability to define the various levels and types of Niagara interoperability their products will support. The statement can limit what tools can run on a station or what Workbench software can connect to a station. (For more information, see Niagara documentation.)

Where Are the KMC Software Downloads?

These software modules can be downloaded (after logging in) from the KMC web site:

- **KMC Converge and GFX** (contains Converge and GFX modules)
- **KMC Workbench Supervisor** (contains all KMC Niagara product modules)

Look in the Software section under Documents for the files. The modules require the appropriate licenses and certificates emailed from KMC Customer Service to operate.

What Is a JACE?



A JACE (Java Application Control Engine) is a compact, embedded controller/server device that provides connectivity to building automation systems via the Niagara framework. A JACE combines integrated control, supervision, data logging, alarming, scheduling, and network management functions with Internet connectivity and web-serving capabilities in a small, compact platform. A JACE makes it possible to control and manage external devices over the Internet and present real-time information to users in web-based graphical views.

The JACE 8000 series is the current version optimized to work with Niagara N4.

See [KMC JACE \(Hardware\) Products on page 8](#) for details.

APPLICATIONS (SOFTWARE)

PROJECT AND END USER APPLICATIONS			
You are...	You already have...	You want to be able to...	You should order...
Systems Integrator signed up to purchase Niagara products from KMC Controls.	End user computer/server.	Have the end user interface configure and program KMC or third-party open NiCS JACEs.	KMC Niagara Supervisor (for Windows) on page 7 (licensed to the end user's computer/server Win ID number).
	End user computer/server licensed for Supervisor software (see KMC Niagara Supervisor (for Windows) on page 7) and maintenance plan (SUP-xxx-SMA-xxx).	Use the Converge tool set with the end user's KMC supervisor software.	KMC Converge (Tool Set for KMC Workbench) on page 6 (P/N CONVERGE, licensed to the end user's computer/server Win ID number).
		Use the GFX tool set with the end user's KMC supervisor software.	KMC Converge GFX (KMC Supervisor-Hosted Graphics) on page 6 (P/N CONVERGE-GFX-SUP, licensed to the end user's computer/server Win ID number).
Systems Integrator NOT signed up to purchase Niagara products from KMC Controls.	End user computer/server licensed for third-party Supervisor software.	Use the Converge tool set with the end user's third-party Supervisor software.	KMC Converge (Tool Set for Third-Party Workbench) on page 6 (P/N: CONVERGE-3P, licensed to the end user's computer/server Win ID number).
		Use the GFX tool set with the end user's third-party supervisor software.	KMC Converge GFX (Third-Party Supervisor Hosted) on page 7 (P/N CONVERGE-GFX-SUP-3P, licensed to the end user's computer/server Win ID number).

NOTE: For explanations of terms in the application charts, see [Introduction on page 1](#).

NOTE: See also [KMC Niagara \(Software\) Products on page 6](#) for product descriptions and [KMC Setup Tools \(Configuring, Programming, Designing\) on page 9](#) for a summary of other available KMC tools.

TECHNICIAN APPLICATIONS

You are...	You already have...	You want to be able to...	You should order...
Systems Integrator signed up to purchase Niagara products from KMC Controls.	Technician's laptop.	Configure and program KMC JACEs along with using Converge and GFX Workbench services.	KMC Niagara N4 Workbench with Converge (Office DEMO) on page 7 (P/N KMN-S-ENG-DEMO, licensed to your laptop Win ID number).
	Technician's laptop with KMC Office Demo Workbench (KMN-S-ENG-DEMO or discontinued KMN-S-ENG-AX-DEMO).	Add KMC BACnet controllers to a KMC JACE as KMC BACnet devices. Deploy applications to the KMC BACnet devices. Configure and program KMC BACnet devices. This will also allow KMC BACnet controller configuration with the JACE embedded Workbench. (You can't, however, compile Control Basic with the JACE embedded Workbench.)**	KMC Converge (Tool Set for KMC Workbench) on page 6 (P/N CONVERGE, licensed to your JACE Host ID number).
		Add KMC BACnet controllers to a third-party JACE with an open NiCS as KMC BACnet devices. Deploy applications to the KMC BACnet devices. Configure and program KMC BACnet devices. This will also allow KMC BACnet controller configuration with the JACE embedded Workbench. (You can't, however, compile Control Basic with the JACE embedded Workbench.)**	KMC Converge (Tool Set for Third-Party Workbench) on page 6 (P/N CONVERGE-3P, licensed to your JACE Host ID number).
		Add GFX graphics to a KMC JACE.	KMC Converge GFX (KMC JACE-Hosted Graphics) on page 6 (P/N CONVERGE-GFX, licensed to your JACE Host ID number).
		Add GFX Graphics to a third-party JACE with an open NiCS.	KMC Converge GFX (Third-Party JACE-Hosted Graphics) on page 6 (P/N CONVERGE-GFX-3P, licensed to your JACE Host ID number).
Systems Integrator NOT signed up to purchase Niagara products from KMC Controls	Technician's laptop with a third-party Workbench with an open NiCS.	Use the Converge tool set with your non-KMC or third-party Workbench.	KMC Converge (Tool Set for Third-Party Workbench) on page 6 (P/N CONVERGE-3P, licensed to your laptop Win ID number).
	Technician's laptop with a third-party Workbench licensed for CONVERGE-3P.	Add KMC BACnet controllers to a third-party JACE with an open NiCS as KMC BACnet devices. Deploy applications to the KMC BACnet devices. Configure and program KMC BACnet devices. This will also allow KMC BACnet controller configuration with the JACE embedded Workbench. (You can't, however, compile Control Basic with the JACE embedded Workbench.)**	KMC Converge (Tool Set for Third-Party Workbench) on page 6 (P/N CONVERGE-3P, licensed to your JACE Host ID number).
	Technician's laptop with a third-party Workbench licensed for CONVERGE-GFX-3P.	Add GFX Graphics to a third-party JACE with an open NiCS.	KMC Converge GFX (Third-Party JACE-Hosted Graphics) on page 6 (P/N CONVERGE-GFX-3P, licensed to your JACE Host ID number).

****NOTE:** Control Basic programs may be compiled in KMC controllers using KMC Connect or TotalControl. See documentation on the software and specific controllers for more information.

KMC NIAGARA (SOFTWARE) PRODUCTS

KMC Converge (Tool Set for KMC Workbench)

P/N: **CONVERGE**

Converge application only. Order to add to an existing **KMC Workbench**.

Requirements:

- Workbench.
- License requires Host ID or Win ID.

AFTER purchasing:

- Download **KMC Converge and GFX Modules** from the web site and install KMC BACnet and KMC Converge.jar files.
- KMC emails relevant licenses and certificates to you.

KMC Converge (Tool Set for Third-Party Workbench)

P/N: **CONVERGE-3P**

Converge application only. Order to add to an existing **Third-Party Workbench**.

Requirements:

- Workbench.
- License requires Host ID.

AFTER purchasing:

- Download **KMC Converge and GFX Modules** from the web site and install KMC BACnet and KMC Converge.jar files.
- KMC emails relevant licenses and certificates to you.

KMC Converge GFX (KMC JACE-Hosted Graphics)

P/N: **CONVERGE-GFX**

HTML5 graphics toolset for a **KMC JACE**, hosted on the JACE.

Requirements:

- Workbench.
- JACE hardware license requires Host ID or Serial Number.
- Soft JACE license requires Win ID.

AFTER purchasing:

- Download **KMC Converge and GFX Modules** from the web site and install KMC BACnet, Converge, and GFX .jar files.*
- KMC emails relevant licenses and certificates to you.

***NOTE:** Converge must be loaded into the station (but it does not need to be licensed) for GFX to run and function.

KMC Converge GFX (Third-Party JACE-Hosted Graphics)

P/N: **CONVERGE-GFX-3P**

HTML5 graphics toolset for a **Third-Party JACE**, hosted on the JACE.

Requirements:

- JACE hardware license requires Host ID or Serial Number.
- Soft JACE license requires Win ID.

AFTER purchasing:

- Download **KMC Converge and GFX Modules** from the web site and install KMC BACnet, Converge, and GFX .jar files.*
- KMC emails relevant licenses and certificates to you.

***NOTE:** Converge must be loaded into the station (but it does not need to be licensed) for GFX to run and function.

KMC Converge GFX (KMC Supervisor-Hosted Graphics)

P/N: **CONVERGE-GFX-SUP**

HTML5 graphics toolset for a **KMC Supervisor** (Workbench server), hosted on the Supervisor.

Requirements:

- Supervisor (such as KMN-S-AX-3, KMN-S-AX-100, KMN-S-AX-ENT, KMN-S-N4-1, KMN-S-N4-10, KMN-S-N4-100, KMN-S-N4-2, KMN-S-N4-3, or KMN-S-N4-UNL).
- Workbench.
- License requires Win ID.

AFTER purchasing:

- Download **KMC Converge and GFX Modules** from the web site and install KMC BACnet, Converge, and GFX .jar files.*
- KMC emails relevant licenses and certificates to you.

***NOTE:** Converge must be loaded into the station (but it does not need to be licensed) for GFX to run and function.

KMC Converge GFX (Third-Party Supervisor Hosted)

P/N: **CONVERGE-GFX-SUP-3P**

HTML5 graphics tool set for a **Third-Party Supervisor** (Workbench server), hosted on the Supervisor.

Requirements: License requires Win ID.

AFTER purchasing:

- Download **KMC Converge and GFX Modules** from the web site and install KMC BACnet, Converge, and GFX .jar files.*
- KMC emails relevant licenses and certificates to you.

***NOTE:** Converge must be loaded into the station (but it does not need to be licensed) for GFX to run and function.

KMC Niagara N4 Workbench with Converge (Office DEMO)

P/N: **KMN-S-ENG-DEMO**

Office Demo is a technician's Workbench tool. All Tridium and KMC drivers and services are licensed, including GFX. This should be purchased to install a JACE or Supervisor on projects.

NOTE: After the SI provides the N4 certification document, N4 functionality is turned on.

Requirements: License requires Win ID.

AFTER purchasing:

- Download the **KMC Workbench N4 Supervisor Module** from the web site and run the setup.
- KMC emails relevant licenses and certificates to you.

KMC Niagara Supervisor (for Windows)

P/N:

- **KMN-S-N4-0** N4 Supervisor for **0** Niagara devices
- **KMN-S-N4-1** N4 Supervisor for **1** Niagara devices
- **KMN-S-N4-2** N4 Supervisor for **2** Niagara devices
- **KMN-S-N4-3** N4 Supervisor for **3** Niagara devices
- **KMN-S-N4-10** N4 Supervisor for **10** Niagara devices
- **KMN-S-N4-100** N4 Supervisor for **100** Niagara devices
- **KMN-S-N4-UNL** N4 Supervisor for **unlimited** Niagara devices

Requirements: Licensed to end user computer/server Win ID number.

NOTE: A **maintenance plan** must also be purchased with all N4 supervisors (P/N **SUP-xxx-SMA-xxx**) and JACE 8000 controllers (P/N **SMA-xxx-xxx**).

Device Support: **SUP-DEVICE-xxx** N4 Supervisor Device Pack (options from 10 to 1,000 devices)

AFTER purchasing:

- Download the **KMC Workbench N4 Supervisor Module** from the web site and run the setup.
- KMC emails relevant licenses and certificates to you.

KMC JACE (HARDWARE) PRODUCTS

JACE 8000 Series

P/N:

- **KMN-J-8005:** JACE 8000 for up to 5 devices (250 points)
- **KMN-J-8010:** JACE 8000 for up to 10 devices (500 points)
- **KMN-J-8025:** JACE 8000 for up to 25 devices (1,250 points)
- **KMN-J-8100:** JACE 8000 for up to 100 devices (5,000 points)
- **KMN-J-8200:** JACE 8000 for up to 200 devices (10,000 points)

Requirements: Niagara N4

NOTE: A **maintenance plan** must **also be purchased** with all N4 supervisors (P/N **SUP-xxx-SMA-xxx**) and JACE 8000 controllers (P/N **SMA-xxx-xxx**).

Optional JACE 8000 device upgrades AT TIME OF purchase

(can be purchased during initial licensing):

- **DEVICE-10:** Up to 10 devices (500 points) upgrade
- **DEVICE-25:** Up to 25 devices (1,250 points) upgrade
- **DEVICE-50:** Up to 50 devices (2,500 points) upgrade

Optional upgrades AFTER purchase:

- **DEVICE-UP-10:** Up to 10 devices (500 points) upgrade
- **DEVICE-UP-25:** Up to 25 devices (1,250 points) upgrade
- **DEVICE-UP-50:** Up to 50 devices (2,500 points) upgrade

Popular JACE Accessories

- **WPM-8000:** Universal power supply for JACE 8000 controllers
- **JACE-8000-AX:** Enables JACE 8000 controllers to run Niagara AX 3.8u1 or later
- **NPB-8000-2X-485:** Add-on RS-485 dual-port module for JACE 8000 controllers
- **NPB-8000-LON:** Add-on LON single-port FTT10A module for JACE 8000 controllers
- **IO-R-16:** JACE 8000 16 point IO
- **IO-R-34:** JACE 8000 34 point IO

See the KMC Controls web site for many other accessories. See product data sheets for more information.



KMC SETUP TOOLS (CONFIGURING, PROGRAMMING, DESIGNING)

How the KMC Converge modules fit into the family of tools for configuring, programming, and creating web page graphics for KMC Conquest controllers is shown in the following table.

SETUP PROCESS			KMC CONTROLS TOOL
Configuration	Programming (Control Basic)	Web Page Graphics*	
✓			Conquest NetSensor
✓			Internal configuration web pages in Conquest Ethernet "E" models**
✓			KMC Connect Lite™ (NFC) app***
✓	✓		KMC Connect™ software
✓****	✓****	✓	TotalControl™ software
✓	✓		KMC Converge™ module for Niagara WorkBench
		✓	KMC Converge GFX module for Niagara WorkBench

*Custom graphical user-interface web pages can be hosted on a remote web server, but not in the controller.
 **Conquest Ethernet-enabled "E" models with the latest firmware can be configured with an HTML5 compatible web browser from pages served from within the controller. For information, see the [Conquest Ethernet Controller Configuration Web Pages Application Guide](#).
 ***Near Field Communication via enabled smart phone or tablet running the KMC Connect Lite app.
 ****Full configuration and programming of KMC Conquest controllers is supported starting with TotalControl ver. 4.0.

SUPPORT

For more information, see the data sheets and other support documents on the respective product series pages on the KMC Controls web site (www.kmccontrols.com).

