TotalControl Design Studio

Advanced Operator Workstation

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DESCRIPTION

TotalControl Design Studio is an Advanced Operator Workstation for configuring a building automation system. Built on the Microsoft® .NET Framework, Design Studio is part of a powerful suite of software tools from KMC Controls.

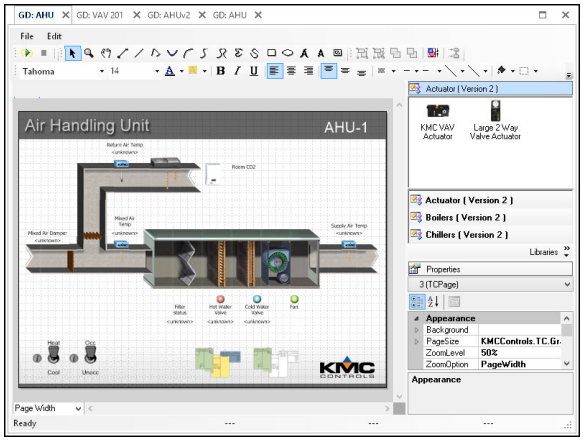
With TotalControl Design Studio, you can:

- Build and publish graphic pages for Internet browser access.
- View or change controller operation.
- Set up and manage alarms, trends, and schedules.
- Edit Control Basic programs.
- Build jobs offline and then deploy them on-site with a single click.
- Use wizards to quickly and easily configure alarms, schedules, and trends on native BACnet devices.
- Use the Audit application to find changes and restore settings.
- Use the VAV balancing tool to quickly balance VAV units.

Build custom graphic pages

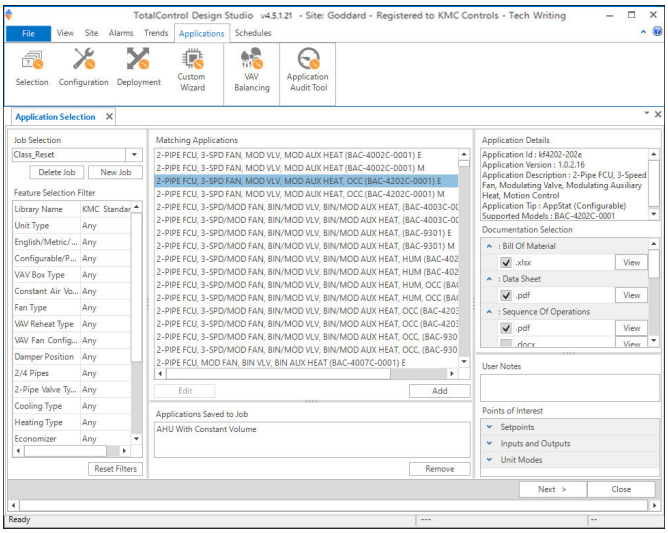
Design Studio includes an extensive graphics library of HVAC components with which you can build operator interface pages and then publish them for Internet browser access.

- Control the system with interactive controls from the graphics library.
- Display boiler operation, fan motion, damper position, gas heat, and electric reheat with standard library or custom animation elements.
- Display static components such as piping, duct work, and sensors or import elements in standard graphic format files.
- Display point values with dynamic text and gauges.
- Add links from site and floor plans to each piece of equipment.



TotalControl Graphics Designer

KMC TotalControl® Automation Software



Application Wizard

Wizards and applications

The TotalControl wizards and applications are time-saving setup tools for building automation systems.

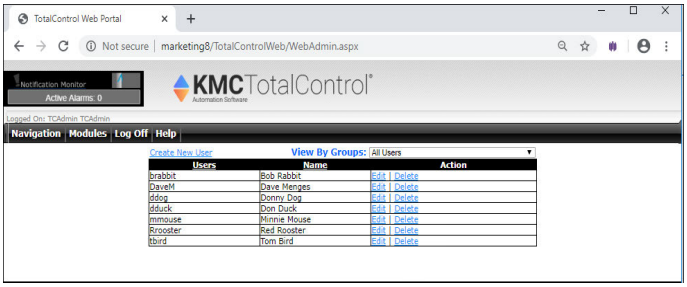
- **Application library**—Select, customize, and deploy roof top, VAV, air handler, fan coil unit, and heat pump applications to SimplyVAV and Conquest controllers.
- **Audit**—Capture a baseline of a controller configuration to detect subsequent changes to the configuration.
- **VAV balancing**—A software alternative to using a digital sensor to balance BAC-8000 or BAC-9000 series VAV controllers.
- **Alarm Wizard**—Set up alarms with custom email messages in one or multiple objects.
- **Trend Wizard**—Configure one or several trend logs with the Trend Wizard. Supports intrinsic-, algorithmic-, COV-, and PC-based trends.
- **Input Wizards**—Set up properties for analog and binary input objects in Conquest controllers.
- **Output Wizard**—Set up properties for analog output objects in Conquest controllers.
- **Touchscreen Designer**—Customize UI of touchscreen devices

Transfer data between protocols

The Protocol Gateway Service transfers values between different types of TotalControl supported BAS protocols with one or more defined processes. The processes are set up with the Protocol Gateway Manager in Design Studio.

Internet browser site access

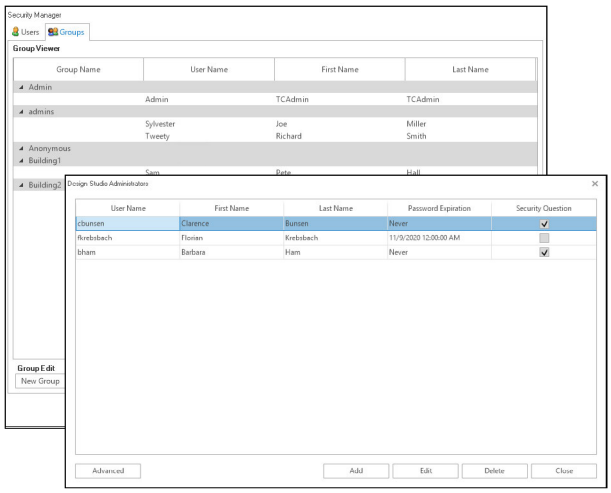
Once the site is configured and the graphic pages are constructed, operators manage the site with an Internet browser. Design Studio is not required for daily operation.



TotalControl Web Administrator Module

Security

TotalControl security locks out tampering and still allows authorized operators to make changes.



TotalControl Security Manager

Scheduling

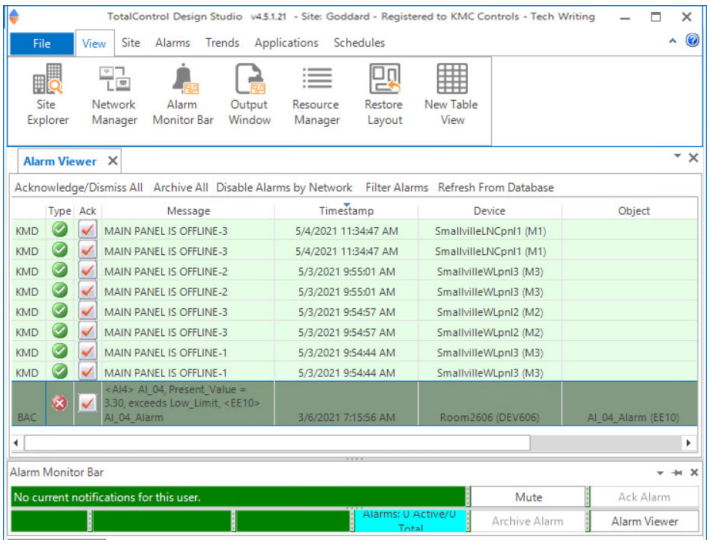
Schedule holidays, maintenance, and special days for up to a full year.

- Schedule recurring daily activities with weekly schedules.
- Use annual schedules to override weekly schedules during holidays and special events.
- Timed overrides allow operators to make immediate changes or set up scheduled changes through an Internet browser connected to the TotalControl Web Portal.

Alarm management

Use Design Studio to set up alarms to notify key operators of critical events.

- Configure for viewing and management with a browser.
- View and acknowledge alarms.
- Set up custom email notification for key operators. Notification includes custom messages in email text.

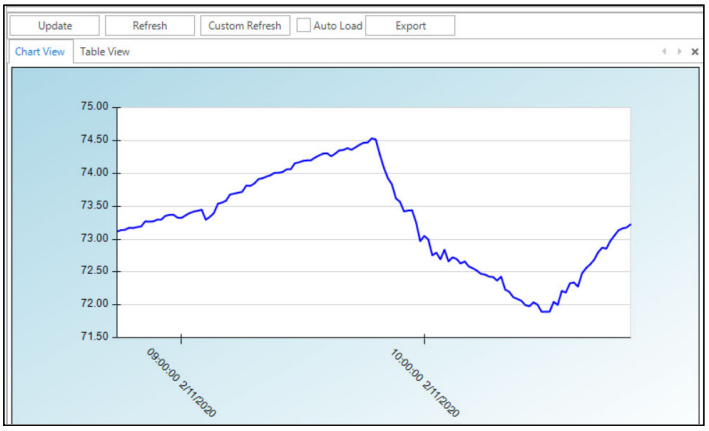


Design Studio Alarm Manager

Configure trends

Configure TotalControl to collect trend data either from controller-based trends or by directly polling a point and storing the data in the SQL database. TotalControl supports the following types of trends.

- Controller trends
- Database trends
- PC trends

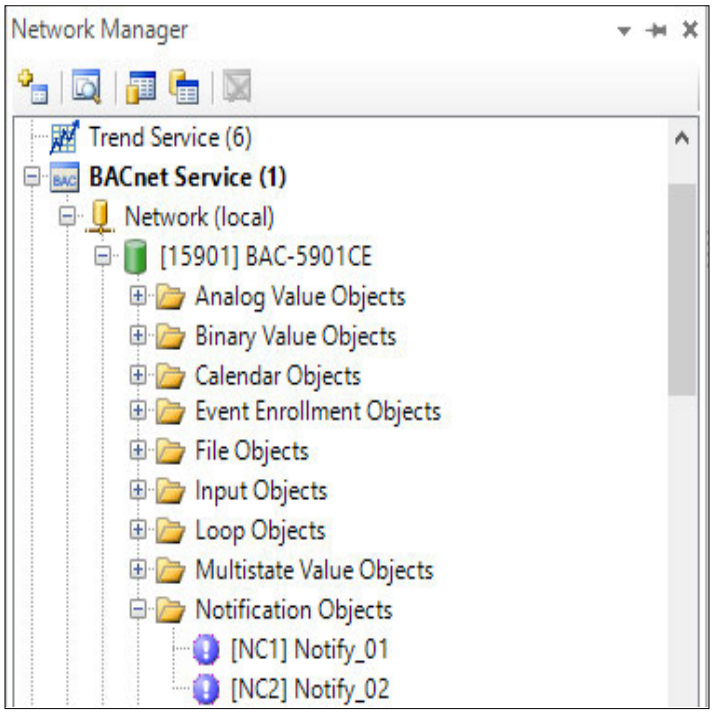


A controller trend display

Feedback? Give yours **here**.

Standard Microsoft Windows interface

Quickly locate controllers, objects, and points from a list of controllers and devices.



Objects and points in the Network Manager list

Site back up and restore

With TotalControl Design Studio, you can save a backup file of the entire site, archive operational data, or restore data to the site database.

- Back up the entire site including all configuration settings and web pages.
- During installation, use a backup file to transfer configuration settings and graphic pages from another site.
- Set up scheduled backup processes to periodically archive data in the site SQL database.
- Backup files are compatible with KMC Connect files.
- Alternatively, export to BNDx, a JSON-based, human-readable text format.

Supported protocols

Design Studio—through a connection to TotalControl Building Services—supports the configuration of controllers operating on the following building automation systems.

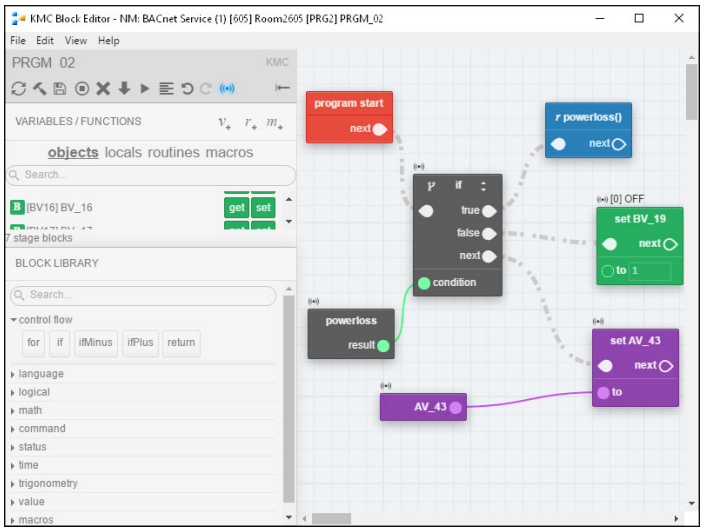
- BACnet–IP, 8802.3, Foreign Device, and BBMD
- KMDigital–Tier 1, Tier 2 connected to Tier 1 controllers, and Tier 2 direct serial connection

Block or line programming

With TotalControl, you have the option to use the Block Editor for a graphical programming interface or the traditional Line Editor to write Control Basic programs.

Block programming Block programming is fully supported in BAC-5901, BAC-9001, BAC-9021, BAC-9301, and BAC-9311 Conquest controllers.

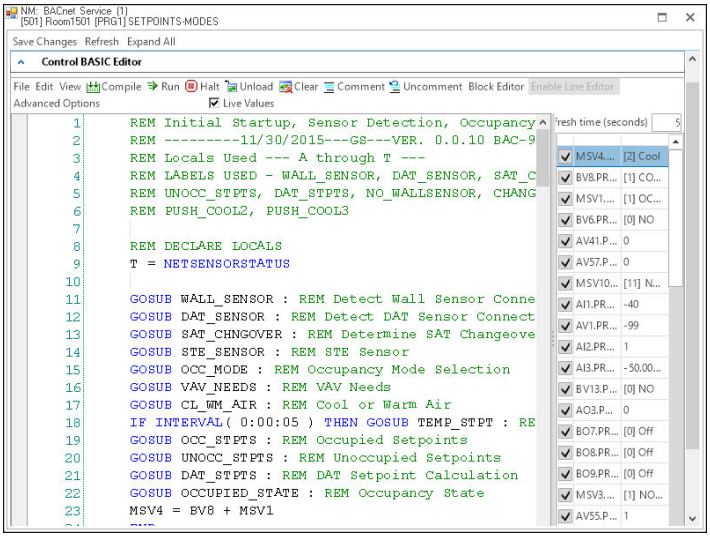
- Simple, graphical drag-and-drop programming
- Color-coded programming blocks
- Built-in macros for common functions such as reset and short cycling
- Global, user-definable macros



Block Editor

Line programming The Line Editor supports all versions of field programmable BACnet controllers from KMC Controls.

- Traditional programming with Control Basic, a language built on ANSI BASIC
- Color-coded text
- Automatic keyword display
- Full find-and-replace functions



Line Editor

Feedback? Give yours **here**.

Computer system requirements

TotalControl Design Studio runs only on the following operating systems:

- Windows 10 Professional
- Windows 11 Professional
- Windows Server 2016
- Windows Server 2019
- Windows Server 2022

TotalControl Design Studio will run on 32-bit or 64-bit versions of Windows. It can be installed on hot-swappable or replicated servers as long as the servers meet the operating system requirements of TotalControl.

For a complete list of computer requirements, refer to the document *Installing TotalControl* available on our **website**.

Browser requirements

Browser pages set up with Design Studio are accessible through an intranet or over the Internet with an HTML5 browser that meets the following requirements.

- Firefox version 71.0 or later
- Google Chrome version 78.0 or later
- Microsoft Internet Explorer 11 or later
- Microsoft Edge Chromium version 80.0 or later)
- Monitor size is 1280 x 1024 pixels (1024 x 768 minimum)

BTL Advanced Operator Workstation

TotalControl TC-BAC and TC-BACUNL, when used with TotalControl Design Studio, is a BACnet Testing Laboratories-listed Advanced Operator Workstation (B-AWS).

ORDERING INFORMATION

A job site name is required to place an order. All software is distributed through our web site at **www.kmccontrols.com**. A user name and password is required to download software.

DESCRIPTION	MODEL
TotalControl Design Studio, HW-KEY included	**TC-STUDIO**
TotalControl Design Studio. Additional copy when purchased with TC-STUDIO, HW-KEY included.	**TC-STUDIO-A**
KMC Controls USB Hardware License Key	HW-KEY

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SUPPORT

Additional resources for installation, configuration, application, operation, programming, upgrading, and much more are available on the web at **www.kmccontrols.com**. To see all available files, log-in to the KMC Partners site.

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