

### Description

TotalControl Building Services collect, store, and route data between a building automation network and an operator interface or workstation. Built on XML and the Microsoft® .NET Framework, these programs are one part of a powerful suite of software tools from KMC Controls. TotalControl Building Services includes the following components.

- ◆ Alarm management service
- ◆ Trend logging service
- ◆ Internet browser accessibility modules
- ◆ Transfer values between controllers on dissimilar protocols with Protocol Gateway
- ◆ An SQL database for centralized data storage
- ◆ A Protocol Driver Service (PDS) links TotalControl Building Services to a building automation protocol

### SQL server included

TotalControl Building Services stores data in a Structured Query Language (SQL) database. Microsoft SQL Server 2005 Express, a lightweight version of the Microsoft SQL Server family, is included with Building Services. KMC Controls recommends upgrading to Microsoft SQL Server Workgroup, Standard or Enterprise edition on sites with more than 300 controllers.

### Protocol Gateway

The Protocol Gateway service shares the values of setpoints, temperatures, occupancy status and other critical information among controllers regardless of protocol. The service contentiously monitors data in one or more controllers and then transfers that data to other controllers regardless of their protocol. The transfer takes place at intervals that can be set to be as frequent as every few seconds or as long as once a month. A license is required for each computer on which the gateway service is operating

### Supported protocols

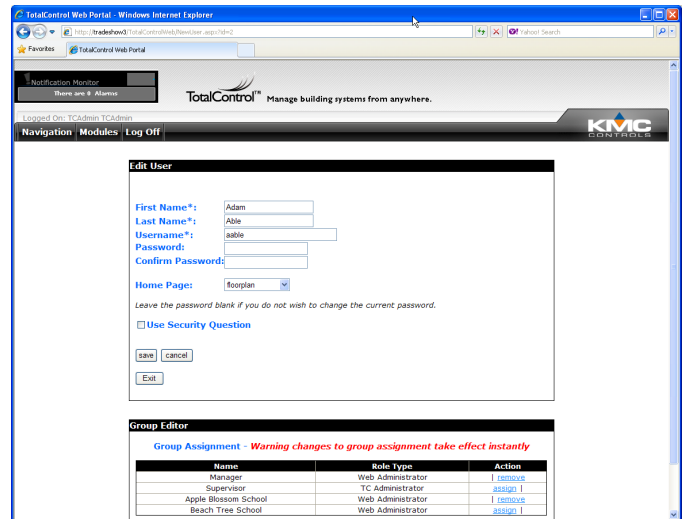
The TotalControl Building Services components support the following building automation systems.

- ◆ BACnet-IP, 8802.3, Foreign Device, BBMD
- ◆ KMDigital-Tier 1 and Tier 2 connected to Tier 1 controllers
- ◆ OPC as an OPC data acquisition client



### Internet browser site access

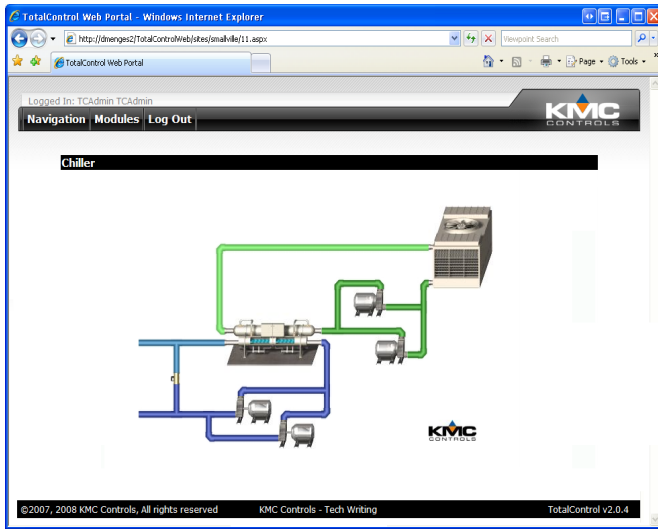
Once a TotalControl site is configured and the graphic pages are constructed with Design Studio, operators manage the site with an internet browser access. Design Studio is not required for daily operation.



*Add or delete users with the web administration module*

## Building Services components

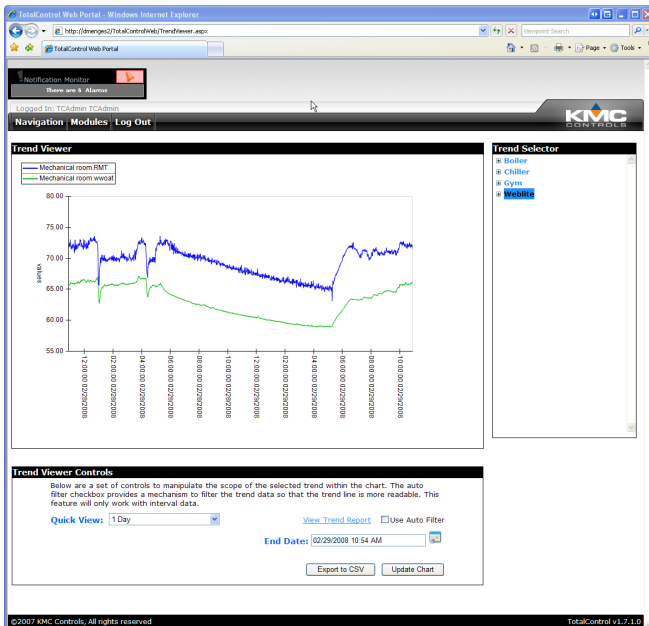
Trend Service, Notification Service, Protocol Gateway Service, System Monitor Engine, SQL Server 2005 Database, Web Monitor and Control and Protocol Driver Service



View custom web pages served from the TotalControl web portal.

## View historical trend data

Use the Trend Viewer to monitor system performance with the Trend Viewer. With the viewer you can choose which trend data to view, the period to display, and to apply an averaging filter.



View historical and performance data with the trend viewer

## View reports

Use TotalControl reports for site commissioning and recording system operation.

- ◆ An All Points report includes key objects and points in the connected system
- ◆ The Audit report is a journal of changes performed by operators
- ◆ Run-time report captures equipment start time, stop time and calculates the equipment run time
- ◆ The Override report lists all equipment in a manual override state
- ◆ The Out of Service report lists non-functioning objects and points
- ◆ Save reports in either Microsoft Excel© or Adobe Acrobat© format

## Alarm management

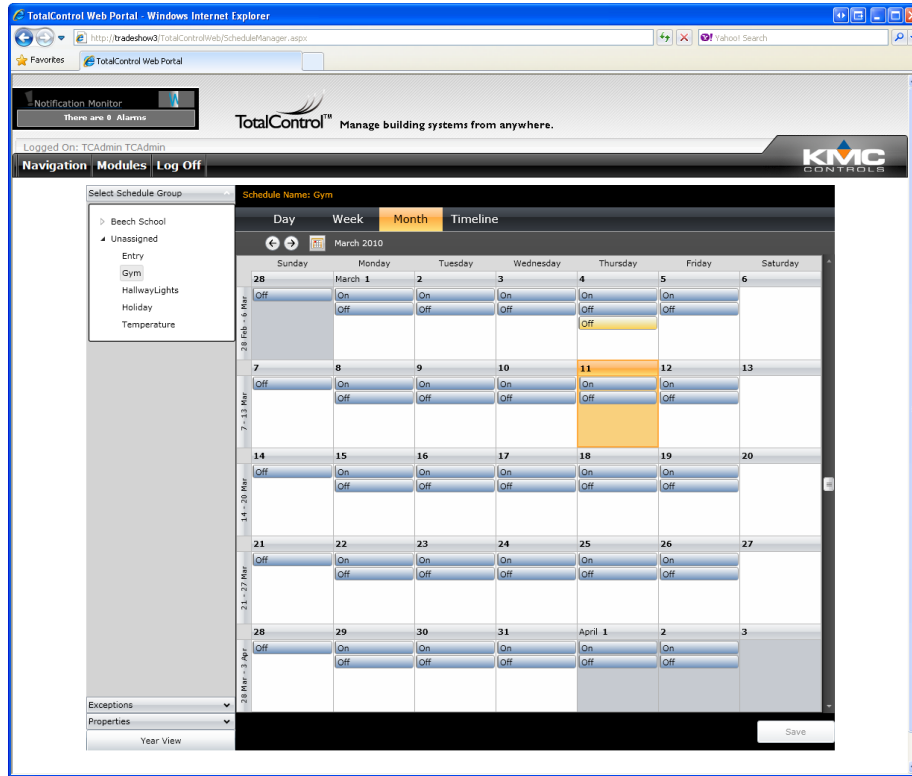
Use the TotalControl web portal to view and acknowledge alarms.

A screenshot of the TotalControl Web Portal showing the Alarm management interface. The top section is titled "Alarm Details" and displays information for a specific alarm: "Device ID: 131192", "Device Name: Trends", "Object ID: BV6", "Object Name: Freeze stat", "To State: Normal", and "From State: Off Normal". Below this is the "Alarm History" section, which includes a table with columns for "Message", "TimeStamp", "Device", "Object", and "Archive". The table shows several entries, including "Freeze stat\_New\_State = Off, is Normal" and "Freeze stat\_New\_State = Off, is Normal". The bottom section is titled "Alarms - Quick View" and displays a table with columns for "Ack", "Message", "TimeStamp", "Device", "Object", "Count", and "Archive". The table shows several entries, including "Freeze\_alarm", "Low\_Temperature\_alarm", "Temperature\_problem", and "VAR2\_Freeze\_alarm".

Review and acknowledge alarm using only a standard web browser.

# Scheduling

Control the schedule for holidays, maintenance schedules and special days.



*Change master schedules*

## Ordering information

Job site name required at time of order. See next page for computer system requirements.

Model number	Ordering description
TC-BAC	TotalControl OWS for BACnet, 50 controllers, 1 web seat, HW-KEY included.
TC-BACUNL	TotalControl OWS for BACnet, unlimited controllers and web seats (Requires TC-BAC)
TC-BACUNL-UPG	TotalControl OWS for BACnet; upgrade from 50 BACnet controllers and 1 web seat to unlimited controllers and web seats.
TC-KMD	TotalControl OWS for KMDigital, 50 controllers, 1 web seat, HW-KEY included.
TC-KMDUNL	TotalControl OWS for KMDigital, unlimited controllers and web seats (Requires TC-KMD)
TC-KMDUNL-UPG	TotalControl OWS for KMDigital; upgrade from 50 KMD controllers and 1 web seat to unlimited controllers and web seats.
TC-OPC	Building Services - OPC Data Acquisition Client (Requires HW-KEY)
TC-GATE	Building Services - Protocol Gateway Service (Requires HW-KEY)
TC-WEB1ADD	Additional Web Seat for TotalControl OWS
HW-KEY	KMC Controls Hardware License Key

## Computer system requirements

TotalControl Building Services require a computer that meets the following specifications.

### Windows® 7

Component	Requirements
Operating system	Windows 7 Professional or Windows 7 Ultimate
Processor speed	2 GHz or faster
RAM memory	2 GB
Graphics adaptor	DirectX 9 graphics processor

### Windows® Vista

Component	Requirements
Operating system	Windows Vista Business or Windows Vista Ultimate
Processor speed	2 GHz or faster
RAM memory	3 GB

### Windows® XP or Windows® Server

Component	Recommended	Minimum
Operating system	Windows Server 2003 SP2 Windows Server 2008	Windows XP Pro SP2
Processor	Pentium 4 or equivalent	Pentium III
Processor speed	2 GHz or faster	1 GHz
RAM memory	2 GB or greater	1 GB

### Platform

Component	Recommended	Minimum
Hard disk space	160 GB 5 GB free	80 GB 5 GB free
Monitor	SVGA 1280 x 1024	SVGA 1024 x 768
Optical drive	CD/DVD-RW	
Network connection	Ethernet 100BaseT	Ethernet 10BaseT
Web browser	Internet Explorer 7.0 or later. Flash and Silverlight required	
Internet connection	DSL, Cable modem or direct connection	
USB	USB port dedicated to hardware key	

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