SIEMENS

TALON® Building Automation System

Optimize your investment and achieve intelligent control

www.usa.siemens.com/talon

Maximize your building investment, optimize building performance.

HIGHLIGHTS

- Simplified operation of complex building controls and multi-building sites through a single, easy-to-use Graphical User Interface (GUI)
- Centralized, Web-based programmability throughout the system's architecture promotes lower labor installation costs
- Fast interpretation of control data for maximized system optimization and cost savings
- Anywhere system access and remote notification capabilities for fast diagnosis and response to alerts and alarms
- Seamless interoperability with industry standard protocols including BACnet, Modbus, LonTalk, using industry leading interfaces and technologies, including the Tridium Niagara Framework and the Siemens Desigo CC workstation
- Cost-efficient options for migration, retrofits, upgrades, or expansions within existing infrastructures or new construction

In an effort to help reduce costs, improve comfort and productivity, and lessen the impact on the environment, building owners are designing and creating "smart" buildings. Building Automation Systems (BAS) are helping owners minimize energy use, optimize HVAC equipment, and integrate fire, security, lighting and other systems throughout a single building or entire campus.

Installed in facilities large and small, and from simple to sophisticated, the open protocol, Web-based TALON® BAS is the "brains" behind many of today's smartest buildings, ensuring building owners are getting the most out of their buildings, today and in the future.

The Talon BAS system is ideal for offices, hospitals, K-12 schools and campuses, hotels, airports, museums, commercial buildings, single buildings or multibuilding campuses.

TALON seamlessly links industry standard protocols such as BACnet®, LonTalk®, and Modbus®, and incorporates the power of Tridium's Niagara® Framework, into a single, robust control system. Building operators are able to control everything through a single workstation with high-end graphics that create a superior user experience with sophisticated system equipment visualization. TALON Web-enabled controllers and mobile apps allow system access from anywhere, at any time.

Freedom from a proprietary system, adaptability for today and tomorrow

The system's open platform has industry–wide acceptance and provides the flexibility to integrate to systems and devices supporting many standard protocols and the Tridium Niagara Framework.

Known in the industry as the best choice for interoperable building automation systems, BACnet is relied upon to knit together a cohesive, tightly integrated system despite disparate technologies or vendor systems. BTL (BACnet Testing Laboratories) listed controllers provide assurance of interoperability in a complex world.

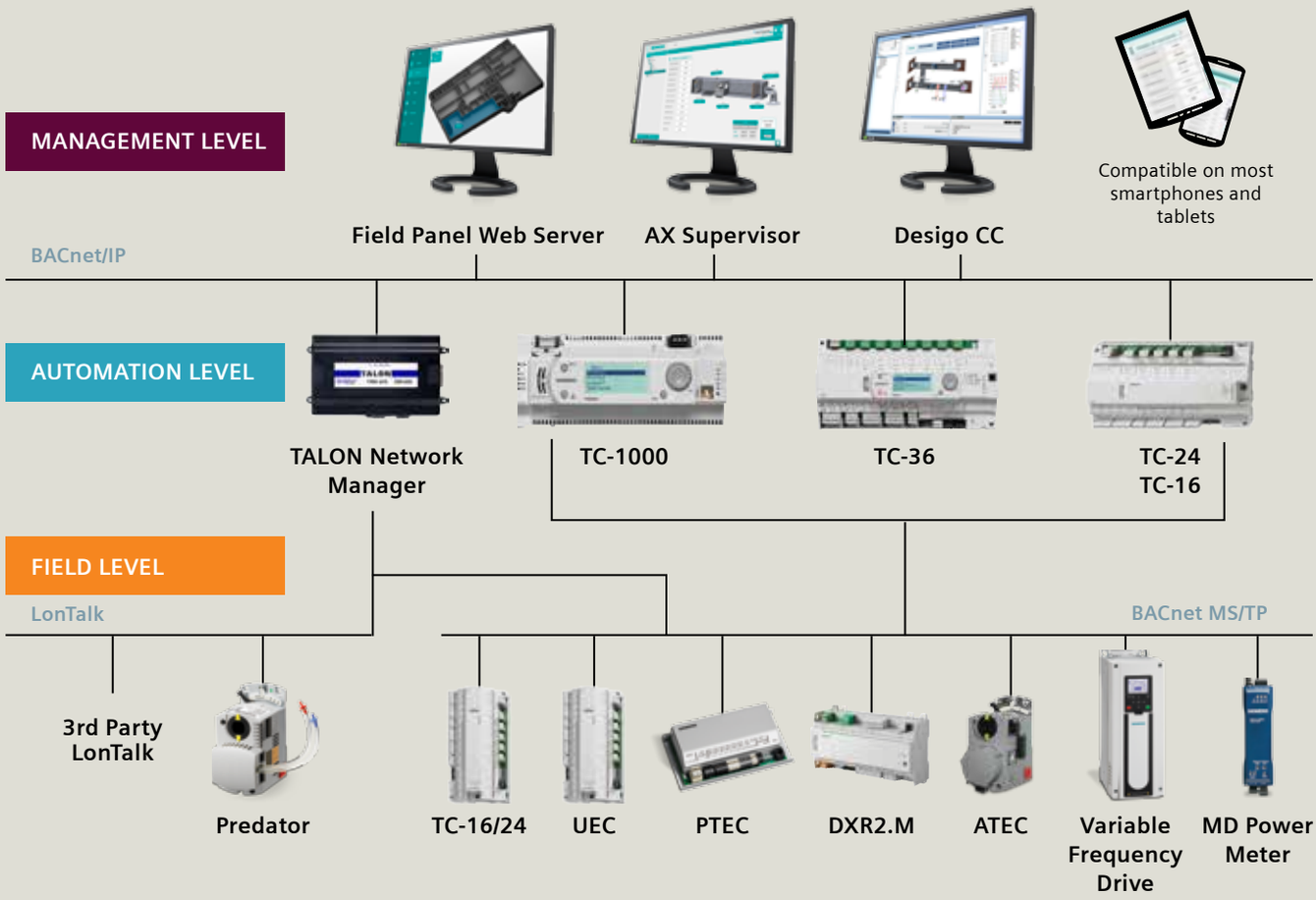
BACnet is incorporated into every level of the TALON system, from the workstation and primary controllers to the field level network devices. BACnet provides facility operators with a powerful system that brings together standard protocol interoperability with productivity boosting features and functions.

Scalable and fully programmable components allow the TALON BAS to be customized to meet your exact building needs. Through innovative software updates and powerful hardware components, your facility can make the most out of current technology and remain prepared for maximum efficiency well into the future. As new technologies emerge, TALON ensures a smooth migration, so your initial investment is preserved and your buildings remain up-to-date.

With its integration power, open architecture, Web-enabled programmability, and BACnet controllers at every level, TALON is an investment that will pay you back for years to come.

TALON® Building Automation

For simple to sophisticated facilities.



The TALON® system architecture offers unmatched configuration flexibility with a variety of user interfaces, network managers, and controllers. The open architecture gives you control of all systems and equipment, whether remotely or on site, and allows you to realize the full advantages of integrated systems. Centralize and streamline control of HVAC equipment, such as:

- Chillers
- Boilers
- Air Handling Units (AHUs)
- Roof-top Units (RTUs)
- Fan Coil Units (FCUs)
- Heat Pump Units (HPUs)
- Variable Air Volume boxes (VAVs)

Integrate other systems for a complete automation solution. With integration strategies from Siemens, all building systems and subsystems can be combined into a single interface, so they all speak the same language.

- Lighting
- Power monitoring
- Security
- Close circuit video (CCTV)
- Card and keypad access
- Fire & Life Safety
- Elevators/escalators
- Plumbing and water monitoring

Through integration, interaction and information sharing, disparate building functions, especially mission critical or life safety operations, can be monitored from anywhere.

MANAGEMENT LEVEL

The Management Level Network or MLN is where workstations, web-enabled user interfaces and tools reside, allowing you to monitor and control the entire system from virtually anywhere.

Field Panel Web Server | AX Supervisor | Desigo CC®

With the TALON system, building operators can choose a user interface, from simple to sophisticated, that meets the needs of the organization. Workstations, and other user interfaces and tools, enable monitoring and control of the entire system, whether you are in the office or on the road. Engineered and proven control applications with extensive libraries limit rework and uncertainty.

TALON® AX Workstation and TALON Network Manager

The AX Workstation is well suited for a wide range of facility types and customer needs. As a powerful tool for comprehensive database management, alarm management and messaging services, it makes integrated facility management easier than ever by providing an advanced, user-friendly and cost-effective solution for performing the daily operational tasks associated with any facility. It also provides a comprehensive engineering environment for easy creation and editing of system control programming and user interface graphics. The AX Workstation features:

- The Niagara AX Framework®, a suite of Java™-based products designed to integrate a variety of devices and protocols into a common distributed automation system
- The industry's first software technology that integrates LonWorks®, BACnet®, and various Internet standards in a common object model, embedded at the controller level, and supported by a standard web-browser interface.

Field Panel Web Server

For users with basic system interface and reporting needs, the BACnet® Field Panel Web Server provides a web-based Graphical User Interface compatible with BACnet® networks that is hosted directly from a TALON® TC Series Controller.

- Cost-effective HMI solution is perfect for small and medium size projects or for remote access to any number of isolated buildings
- Remote access for startup, database configuration and editing, and troubleshooting
- Redundant local control for distributed sites
- Complete online tool set
- Mobile phone access via Android smartphones and tablets enables true anytime, anywhere access to facility equipment and controls

Desigo® CC Workstation

The Desigo CC workstation is ideal for more complex facilities and facilities integrating diverse building systems because it provides an integrated, approach to managing and controlling multi-disciplines (HVAC, fire, security and lighting) from a flexible, easy-to-use interface.

Desigo CC provides facility-wide efficiencies, cost effective information sharing, and improved event management and decision making.

- Support for the leading open standards: BACnet, OPC, and Modbus
- The latest industry IT technologies, including Web Services and SNMP support
- Multiple client options for dedicated, browser-based, and Windows desktop app clients with the same user interface
- Built-in profiles for different types of users

AUTOMATION LEVEL

The Automation Level Network or ALN is where the field panels and primary system controllers reside and carryout system monitoring and control.

TC-24
TC-16

TC-36

TC-1000

TALON
Network
Manager

At the Automation Level Network, field panels and primary controllers execute system monitoring and control. Controllers are classified as either BACnet Building Controllers (B-BC) with support for BACnet/IP and/or BACnet MS/TP protocol, or BACnet Advanced Application Controller (B-AAC) with support for BACnet MS/TP protocol.

Siemens controllers feature integrated control, supervision, data logging, alarming, scheduling and network management functions, integrated I/O (input/output) with Internet connectivity and web-serving capabilities. External devices can be controlled and managed over the Internet to provide real-time information to users. Energy management applications and programmability features enable complete facility management that's scalable to your needs.

TALON Network Manager

These versatile network application servers provide system-level control of area or building functions as well as global applications such as alarming, trending, scheduling, and totalization information.

TC-1000 Modular, TC Compact (16, 24 and 36), and TC Compact Unitary Equipment Series Controllers

TC Modular and TC Compact controllers operate as standalone units or can be networked to perform complex control, monitoring, and energy management functions of Air Handling Units (AHUs). Modular I/O and on-board 16, 24 or 36 I/O point capacity models cost effectively match the needs of the application.

- Integration with web servers for anywhere access and system-wide control
- Comprehensive alarm management, historical data trend collection, operator control and monitoring functions
- Advanced customized applications to assist with LEED® or ENERGY STAR® programs
- Full programmability to meet new and emerging sustainability initiatives
- DIN-rail mounted controllers with removable terminal blocks simplify installation and servicing
- "Plug and play" functionality for ease of installation
- Native BACnet/IP communications over 10/100Mb Ethernet networks
- Native BACnet MS/TP network supervision on RS-485
- Integrated I/O based on state-of-the-art TX-I/O™ technology provides superior flexibility of point and signal types
- Optional on-board hot swappable user interfaces for local command, HOA (Hand-off-auto) operation and alarm management

FIELD LEVEL

The Field Level Network or FLN equipment controls at the floor, zone or room level.

Predator | UEC | PTEC | DXR2.E | ATEC | Variable Frequency Drive | MD Power Meter

TALON's BACnet protocol enabled and BTL Listed devices provide high performance Direct Digital Control (DDC) that can operate as stand-alone units or networked to perform complex HVAC control, monitoring and energy management functions at floor, zone or room levels.

Desigo DXR Controller and Total Room Automation

The Desigo DXR controllers are an innovative offering for room control with a variety of standard preloaded HVAC applications. The DXR controller is at the heart of the Total Room Automation (TRA) solution that combines room HVAC, lighting and/or shade control systems into one, seamless package. Instead of separate systems for HVAC, lighting, and shade control, each with its own network infrastructure, TRA controls all three functions in one cost-effective solution.

TRA constantly monitors the status of room temperature, lights, and shades. When room conditions deviate from the optimum pre-set state, the green leaf icon on the room's display changes to red. The icon is a visual indicator that the room is not in an energy-efficient mode. By using TRA's single-room display for all three applications, room occupants can return the room to an energy efficient level by simply tapping the red leaf icon.

As one solution instead of three, TRA offers:

- Preloaded configurable HVAC applications with optional control of lights and shades
- Reduced product and installation costs
- Reduced long-term operating costs
- Improved room energy efficiency
- Optimal comfort for room occupants

BACnet Programmable Terminal Equipment Controllers (TEC)

Control VAV, Heat Pump, Constant Volume, Unit Vent, and Fan coil equipment in the zone and space.

- Preloaded and tested applications make these controllers ready to use out of the box
- Field configurable and programmable using familiar PPCL programming language for superior application flexibility
- Custom programmability cost-effectively meets a customer's most unique job specification

BACnet VAV Actuator Terminal Equipment Controller (ATEC)

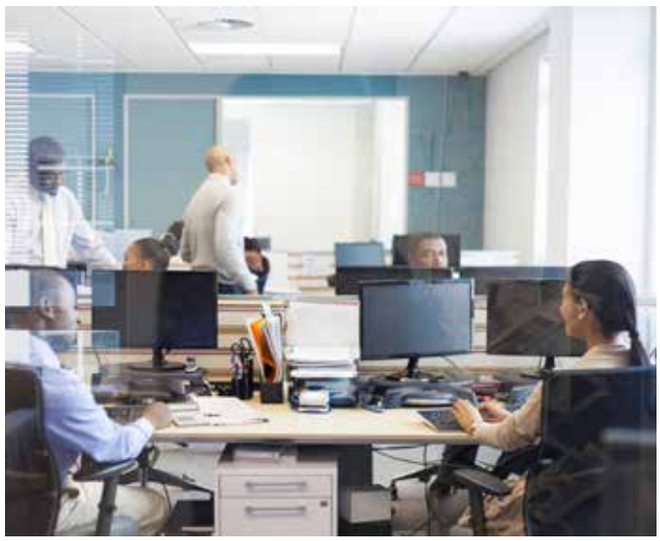
The ATEC's integrated controller and actuator combination delivers high performance direct digital control (DDC) of pressure independent and variable-air-volume zone level routines.

- Control equipment in a zone or space
- Preloaded standard applications for VAV equipment
- Cost effective and space saving controller and actuator combination

Predator LonTalk Controllers

LonMark certified and compliant controllers provide full-featured control of a wide variety of HVAC equipment. Flexible I/O makes them a great solution for a variety of applications.

- Multiple VAV zones
- IAQ, humidity, and CO2



COMPONENTS


Zone / Magnetic and Powermite Valves


OpenAir™ Damper Actuator


Humidity Sensor


IAQ Sensor


Communicating Room Thermostat


Variable Frequency Drive


MD Power Meter

Energy-saving and hard-performing Siemens devices, such as sensors, provide data to controllers, accurately monitoring temperature, humidity, CO2/VOC, air velocity, pressure, and more to ensure optimum occupant comfort. Siemens offers a broad array of:

- Sensors
- Power Meters
- BT300™ Variable Frequency Drives
- Valves & Valve Actuators
- OpenAir™ Damper Actuators

Facility to Go Mobile App

Quickly and securely monitor and command points while on-the-go using the free Facility To Go app for Android™ smartphones. This app utilizes the BACnet Web Server to connect directly to a Siemens field panel and provides the user with complete access to all points on the panel.

Touchscreen design provides an intuitive text based browser/command from a mobile device. Optional "favorites" lists can be created and saved on the local handheld device for even more targeted queries and faster system access/control. With a web-services license, Facility to Go requires no initial configuration or customized user interfaces.

EXPERTISE AND SUPPORT FROM YOUR LOCAL PARTNER

A Siemens Solution Partner is your best local resource for design, installation, commissioning, on-going maintenance, and technology upgrades. Siemens Solution Partners provide:

- Design for new construction
- Cost-efficient retrofits and expansion for existing infrastructure
- Fast job completion
- Assistance with gaining LEED credits for energy efficient and green building initiatives
- System performance that enhances energy efficiency, safety and productivity
- Components with built-in quality and lasting durability, backed by Siemens

Contact your Siemens Solution Partner today to discuss building automation solutions that build upon past investments, meet today's needs, and keep a building prepared for emerging technologies.

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