Niagara Security

Overview

Niagara Security by Tridium, is an open, web-based security management solution that allows you to manage and monitor your facility anytime, anywhere. Built on Tridium's Niagara^{AX} Framework®, Niagara Security integrates with any building automation system, enabling you to control lighting, HVAC equipment, and other building systems in response to access events and alarm conditions.

The heart of Niagara Security is the advanced IP-based controller that eliminates the need for on-site PCs or thick client software. Niagara Security enables authorized security administrators to manage credentials, access rights, access control, intrusion detection and alarm monitoring via a web browser interface from anywhere.

Niagara Security is built on the Niagara^{AX} Framework, the industry's leading automation infrastructure platform. This allows integration with your building control system via BACnet, Lonworks, and Modbus, as well as supports enterprise connectivity through XML, SNMP, oBIX and HTTP.

Features

- Alarm console supports simultaneous viewing of both live and recorded video when alarm events are selected

- Extensive support for threat management via hiearchically organized active threat level groups which can impact door lock down and access right assignment policies.

- Integrated management of access control, alarm monitoring, intrusion detection and credential database

- Pre-defined custom reports on screen or exported

- Custom graphic floor plans and equipment displays

- User-definable Wiegand card formats

- Elevator control

- Intrusion detection

- Advanced occupancy restrictions including multi-person and anti-passback utilizing Access Zones

- Monitor and alarm on non-security related events such as temperature, pressure and other analog sensor inputs

- Built on Tridium's highly successful Niagara^{AX} Framework, the industry's leading facility management software platform

- Integrated video solution with interfaces to many leading video manufacturers

- Web-based JACE® Security Controller – easily managed via a web browser anytime, anywhere

- Connectivity to any facility system via BACnet®, LonWorks®, Modbus®, and oBIX

- Seamlessly integrates to HVAC, Lighting, and Energy Management Applications

- IT connectivity via oBIX, SNMP and HTTP

Security Appliance
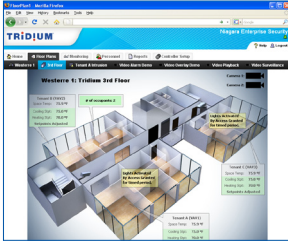
Completely Browser-Based System

Tridium's Niagara Security solution is built from the ground up on web enabled technologies. Complete system functionality, system configuration and monitoring are available anytime, anywhere from any standard browser interface removing the PC requirements present in traditional client/server architectures.
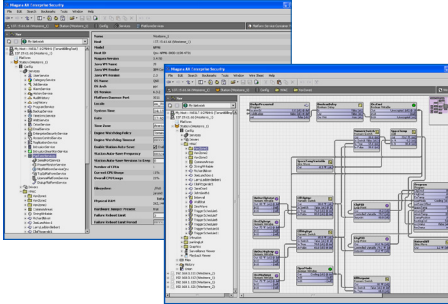
Powerful Integration Toolset

A comprehensive, integrated toolset is a fundamental part of the Niagara Security offering. The graphical toolset enables non-programmers (domain experts) to extend the capabilities of the standard product.

Using the toolset, integrators can integrate Building Automation, Energy Management, Lighting Control and a wide range of custom solutions tailored to end user's needs — all while working in a powerful drag-and-drop, graphical programming environment.

Security Family of Products

The Niagara Security product family consists of a Security JACE controller, reader modules, and I/O modules available in 3 different sized enclosures. The hardware modules support Wiegand style readers, supervised inputs, Form C relay-controlled outputs, and digital inputs. Enclosures are equipped with key lock, tamper switch, and the medium/large enclosures include a universal power supply. Knockouts are provided on top, bottom and sides for external connections. The enclosure interior has generous space for cable management.

Security JACE (T-SEC-602 or T-SEC-616)

Web-based, access control network controller that contains a web-server, embedded database, and Niagara Security application software. The controller includes connectivity for 2 card readers and additional I/O for door control or general purpose usage.

I/O Module (T-SEC-RIO)

Contains capacity for 8 supervised inputs and 8 Form C relay outputs. The I/O Module can be utilized for monitoring intrusion sensors, elevator controls, or controlling doors which do not require a card reader.

Reader Module (T-SEC-R2R)

Supports 2 Wiegand style card readers and required I/O to support 2 doors. The I/O supports a door sensor, request-to-exit device, and strike for each door.

Universal I/O Module (T-IO-16-485)

Supports 8 Universal Inputs, 4 Form A Relay Outputs, and 4 0-10 VDC Analog Outputs. The Universal I/O Modules can be utilized for monitoring analog inputs, providing analog control signals, and providing relay contacts when interfacing to non-security related equipment.
Note: Requires one port on the NPB-2X-485 option card not included with purchase.

Intrusion Arming Keypad (T-SEC-INT-KP)

LCD display and keypad for arming and disarming Intrusion Zones. Display also provides feedback to the user regarding arming status and status of individual intrusion points.
Note: Requires one port on the NPB-2X-485 option card not included with purchase.

Specifications

Part Number	Card Readers	Supervised Inputs	Digital Inputs	Universal Inputs	Relay Outputs	0-10 VDC Analog Outputs
T-SEC-602	2	6	3	—	4 Form C	—
T-SEC-616	2	6	3	—	4 Form C	—
T-SEC-R2R	2	4	2	—	2 Form C	—
T-SEC-RIO	—	8	2	—	8 Form C	—
T-IO-16-485	—	—	—	8	4 Form A	4

T-SEC-602 and T-SEC-616 Platforms

- PowerPC 440 524 MHz processor
- 256 MB DDR RAM & 128 MB Serial Flash
- Battery backup
- Real-time clock

JACE Communications

- 2 Ethernet Ports – 10/100 Mbps
- 1 RS 232 Port (9 pin D-shell connector)
- 1 RS 485 (6 pin screw terminal)

JACE Operating System

- QNX RTOS
- Sun Hotspot JVM (Java Virtual Machine)
- Niagara^{AX}

Power Supply

- NPB-PWR-UN: 100-240 VAC, 50/60 Hz, 15VDC power supply module, 30 Watt

I/O Module Communications

- 1 RS 485 (6 pin screw terminal)

Environment

- Operating temperature range: 0° to 50°C (32°F to 122°F)
- Storage temperature range: 0° to 60°C (32°F to 140°F)
- Relative humidity range: 5% to 95%, non-condensing

Agency Listings

- FCC part 15 Class A
- CE

Resource Capacities

	Security JACE®-602	Security JACE®-616
Reader Modules	up to 15[1]	up to 15[1]
I/O Modules	up to 15[1]	up to 15[1]
Total Readers	2 with option for 32 max[2]	16 with option for 32 max[2]
Universal I/O Module	4[1]	4[1]
Intrusion Arming Keypad	up to 6	up to 6
Total I/O	120[2]/120[2]	120[2]/120[2]
Personnel Records	20,000	20,000
Access History Records	50,000	50,000
Supports Optional Non-Security Drivers	No	Yes

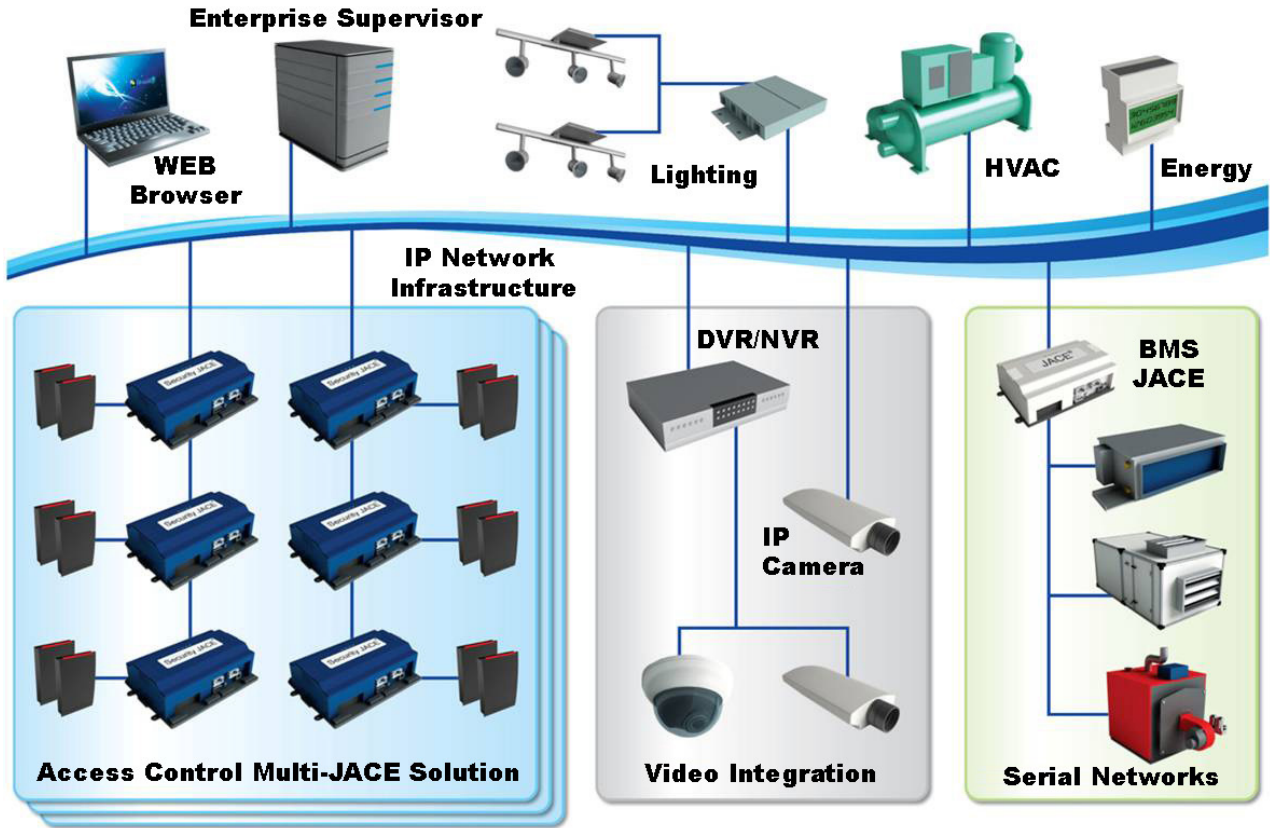[1] Max of 15 modules (combined reader and I/O) per T-SEC-602 or T-SEC-616

[2] Up to 32 readers or 120 I/O points, depending on module combination

General Note: For systems requiring multiple controllers or greater than 32 readers, use the Niagara Enterprise Security solution.

Ordering Information

Part Number	Description
T-SEC-602	Security JACE-602. Includes connections for 2 Card Readers, 6 Supervised Inputs, 4 Form C Relay Outputs, and 3 Digital Inputs. Includes 256MB RAM/126MB Flash, 2 10/100 Mb Ethernet ports, (1) RS-485 serial port, (1) RS-232 serial port, and 2 communication card option slots. Contains removable screw terminal connectors, and status indication LEDs. The Security JACE is designed for DIN rail mounting. Supports up to 2 card readers with option to expand to 32 card readers, 20,000 personnel records and 50,000 transactional history records. Includes Niagara Security application, Web UI and the following standard drivers: oBIX Client / Server, Niagara Network (Fox) Client/Server and BACnet IP Server.
T-SEC-616	Security JACE-616. Includes connections for 2 Card Readers, 6 Supervised Inputs, 4 Form C Relay Outputs, and 3 Digital Inputs. Includes 256 MB RAM/128 MB Flash, 2 10/100 Mb Ethernet ports, (1) RS-485 serial port, (1) RS-232 serial port, and 2 communication card option slots. Contains removable screw terminal connectors, and status indication LEDs. The Security JACE is designed for DIN rail mounting. Supports up to 16 card readers with options to expand to 32 card readers, 20,000 personnel records and 50,000 transactional history records. Includes Niagara Security application, Web UI and the following standard drivers: oBIX Client / Server, Niagara Network (Fox) Client / Server and BACnet IP Server. Supports optional BAS connectivity drivers for integration to building controls.
T-SEC-616-DEMO	Includes connections for 2 Card Readers, 6 Supervised Inputs, 4 Form C Relay Outputs, and 3 Digital Inputs. Includes 256 MB RAM/128 MB Flash, 2 10/100 Mb Ethernet ports, (1) RS-485 serial port, (1) RS-232 serial port, and 2 communication card option slots. Contains removable screw terminal connectors, and status indication LEDs. The Security JACE® is designed for DIN rail mounting. Includes Security Appliance and all drivers. Supports up to 16 card readers, 20,000 personnel records, 50,000 transactional history records and security / BAS from single controller. Includes BACnet, Lonworks, MODbus TCP and 16 cameras for each available video drivers at the time of purchase.
SEC-8-RDR	Niagara Security eight (8) reader expansion. Expands the maximum number of readers on a T-SEC-602 or T-SEC-616 by eight readers.
SEC-602-UP	Niagara Security T-SEC-602 controller upgrade. Upgrade the T-SEC-602 controller to a T-SEC-616 supporting a minimum of 16 card readers. Optional SEC-8-RDR reader upgrades previously applied to the T-SEC-602 will transfer to the upgraded T-SEC-616 as additional readers. Upgrade also enables support for BAS drivers on the security controller.
T-SEC-R2R	Reader Module. Includes connections for 2 Card Readers, 4 Supervised Inputs, 2 Form C Relay Outputs, and 2 Digital Inputs.
T-SEC-RIO	Remote I/O. Includes connections for 8 Supervised Inputs, 8 Form C Relay Outputs, and 2 Digital Inputs.
NPB-PWR-UN	Universal Power Supply. Universal 100-240 VAC IN, 15 VDC OUT 30 watt power supply.
NPB-2X-485	Dual RS-485 Option Card: Provide two (2) RS-485 ports to support the T-IO-16-485 or T-SEC-INT-KP
T-IO-16-485	Universal IO. Includes 8 Universal Inputs, 4 Analog Outputs, and 4 Form A Relay Outputs.
T-SEC-ENC-SML	Small-sized Security Enclosure. Enclosure with DIN rail, tamper switch and key lock. Single 2 reader module only option available for this enclosure.
T-SEC-ENC-MED	Medium-sized Security Enclosure. Enclosure with DIN rail, tamper switch, key lock, universal power supply, and capacity for user provided SLA batteries. Configurable options include 1 Security JACE, 2 reader modules or 1 I/O module.
T-SEC-ENC-LRG	Large-sized Security Enclosure. Enclosure with DIN rail, tamper switch, key lock, universal power supply, and capacity for user provided SLA batteries. Enclosure includes 2 DIN rails for additional module expansion. Configurable options include 1 Security JACE, 4 reader modules or 2 I/O modules.
T-SEC-INT-KP	Intrusion Alarming Keypad. LCD display and keypad for arming and disarming Intrusion Zones.

Architecture

Enterprise Supervisor

WEB Browser

Lighting

HVAC

Energy

IP Network Infrastructure

DVR/NVR

BMS JACE

IP Camera

Access Control Multi-JACE Solution

Video Integration

Serial Networks

NIAGARA SECURITY

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