

# ALER-9000 CONTROLLER

The Alerton ALER-9000 controller is a compact, embedded IoT (Internet of Things) controller and server platform for connecting multiple and diverse devices and sub-systems. With internet connectivity and web-serving capability, the ALER-9000 controller provides integrated control, supervision, data logging, alarming, scheduling and network management. It streams data and rich graphical displays to a standard web browser via an Ethernet or wireless LAN, or remotely over the internet.

The licensing model for the ALER-9000 controller is simplified and features standard drivers, along with optional IO and field bus expansion modules for ultimate flexibility and expandability. The ALER-9000 controller operates with Alki N4.13u2 supervisor, the latest version of the Niagara Framework®, for optimum performance. In larger facilities, multi-building applications and large-scale control system integrations, Alki N4 Supervisor can be used with ALER-9000 controllers to aggregate information, including alarms, and historical and real-time data, to create a single, unified application.



## FEATURES AND BENEFITS

### EFFICIENT GLOBAL DESIGN

- The modular design of the ALER-9000 controller makes it easy to install, integrate and deploy.
- Tool-less installation with expansion capability reduces installation complexity and improves flexibility.
- Systems integrators can focus on engineering solutions, not assembling components. And their lives will be simplified with a global power supply and improved access to standard enclosures.

### INCREASED PERFORMANCE

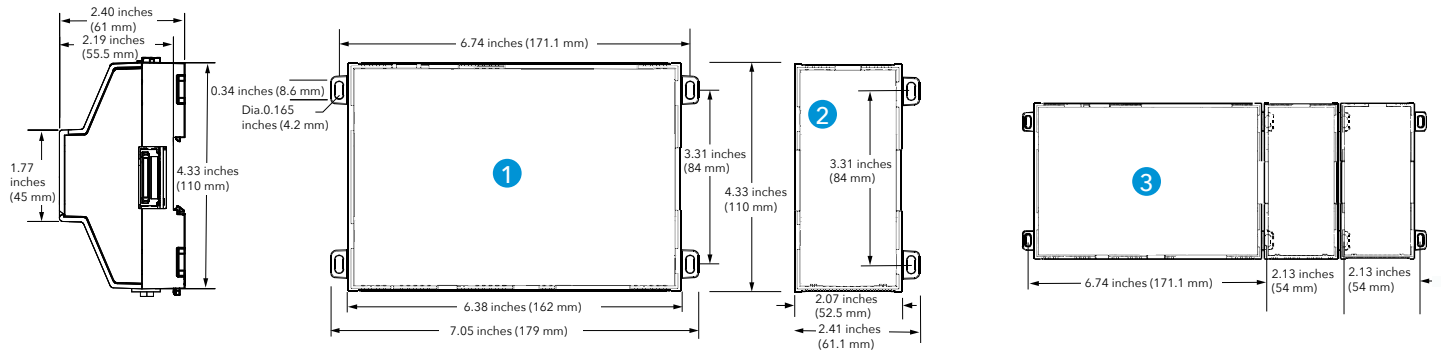
- With a Quad Core processor and double storage and RAM, the ALER-9000 controller offers increased performance and capacity with faster bootup and station load time.
- The ALER-9000 controller is fully compatible with existing expansion models and the same footprint as past models allows for seamless replacement for future updates.
- The ALER-9000 controller can also be ordered without the wireless interface if needed.
- Data analysis at the onsite controller level.
- Real-time on-premise analytic control

### OPTIMIZED FOR NIAGARA

- The ALER-9000 controller leverages the exciting features of Alki supervisor N4.13u2 and higher version.
- It adds to the enhanced user experience, maximizing Niagara 4's key advantages: pure Web interface based on HTML5 views, responsive UI, charting and data visualization, a common design language, better reporting, robust security and improved device management.

## ALER-9000 MOUNTING AND DIMENSIONS

- 1 Allow at least 1.5" (38mm) clearance around all sides of ALER-9000 and minimum 3" (76mm) at bottom for optional WiFi antenna.
- 2 Expansion module. Up to four (4) may be used. See "Expansion Module and IO Configurations"
- 3 Distances between center of tabs from one unit to another unit.



## PRODUCT SPECIFICATIONS

### HARDWARE SPECIFICATION

NXP iMX8M+ Quad Core CPU

2GB LPDDR4 RAM

Removable 8GB micro-SD card

WiFi (Client or WAP)

- WiFi 5 (802.11ac)
- 1x1 802.11 a/b/g/n/ac
- Configurable radio (Off, WAP, or Client)
- WPA2PSK/WPA2PSK supported
- Only available for wireless model.

USB type C connector

- Debug port

(2) isolated RS-485 with selectable bias and termination

(2) 10/100/1000MB Ethernet ports

Secure boot

\*Supply requirements: 24VAC rated at 24VA minimum, or 24VDC rated at 1A (24W) minimum

Runs Alki N4.13u2 or higher

Real-time clock

Batteryless

### ENVIRONMENT SPECIFICATION

#### PARAMETER SPECIFICATION

**Storage Temperature** -40 °F to 150 °F (-40 °C to 66 °C)

**Operation Temperature** -20 °C to 60 °C

**Humidity** 5 % to 95 % non-condensing

**Shipping & vibration** IASTM D4169, Assurance Level II

**MTTF** 10 years+

### STANDARDS AND APPROVALS

UL 916

CE EN 61326-1

RCM

UL/ULC 60730-1

FCC Part 15 Subpart B, Class B

FCC Part 15 Subpart C

1999/5/EC R&TTE Directive

CCC

SRRC

RSS

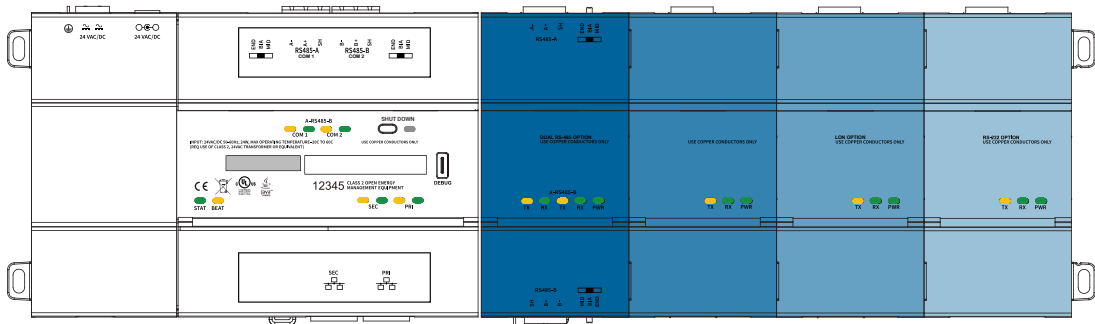
RoHS

C-UL listed to Canadian Standards Association (CSA)C22.2 No. 205-M1983"Signal Equipment"

EXPANSION MODULE AND IO CONFIGURATIONS

MAXIMIUM EXPANSION (MODULES SUPPORTED)	MAXIMIUM IO (MODULES SUPPORTED)
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- NPB-8000-LON (4)
  - NPB-8000-232 (4)
  - NPB-8000-2X-485 (2)
- IO-R-16 (16)
  - IO-R-34 (8)



EXPANSION 1	EXPANSION 2	EXPANSION 3	EXPANSION 4
232 or LON	232 or LON	232 or LON	232 or LON
485 485	232 or LON	232 or LON	232 or LON
485 485	485 485	232 or LON	



## ORDERING INFORMATION

ALER-9000 CONTROLLER PART NUMBERS	
PART NUMBER	DESCRIPTION
<b>ALER-9000</b>	Individual ALER-9000 Controller, microSD card, branding clip, two 10/100/1000 MB Ethernet ports, and two RS-485 serial ports. Requires NC-9XXX core software and SMA-9XXX software maintenance.
<b>ALER-9000-CSE-003</b>	Case (15) ALER-9000 - includes branding clip - microSD card not included. Price is for each unit. MOQ - 15 PO must be in quantities of 15. WLAN Disabled (No WLAN) Country Code.
<b>ALER-9000-DEMO</b>	Includes ALER-9000 controller, with Demo 500 device license microSD card, branding clip, two 10/100/1000 MB Ethernet ports, two RS-485 serial port and all available Optimizer drivers. License will renew annually with the receipt of the annual support fee. Requires Alki Supervisor N4.13u2 or higher. Hardware Accessories are not included. See Hardware Options for Wall Power supply and expansion modules.
<b>ALER-9000-BRAND</b>	Branding clips for ALER-9000. For purchase together with ALER-9000-CSE. Price is for each unit and MOQ is 15 pieces. PO must be in quantities of 15.
<b>ALER-9000-HW</b>	Replacement ALER-9000 Hardware only. Does not include microSD card or core software license. Does include branding clip when requested.
<b>ALER-9000-SD-HW</b>	Replacement 8 GB ALER-9000 microSD card only. Does not include software core or license.
<b>ALER-9000-USD-CSE</b>	Case (15) ALER-9000 microSD cards. Price is for each unit. MOQ - 15, PO must be in quantities of 15.
<b>NC-9000-EC</b>	ALER-9000 - Equipment Controller - (0) Device & (0) Points. Includes standard open drivers (Capacity must be added). Requires Alki Supervisor N4.13u2 or higher.
<b>NC-9005</b>	ALER-9000 - (5) Device Core Software Only & 250 Points. Includes standard open drivers. Supports up to 5 devices or 250 points. Requires Alki Supervisor N4.13u2 or higher.
<b>NC-9010</b>	ALER-9000 - (10) Device Core Software Only & 500 Points. Includes standard open drivers. Supports up to 10 devices or 500 points. Requires Alki Supervisor N4.13u2 or higher.
<b>NC-9025</b>	ALER-9000 - (25) Device Core Software Only & 1250 Points. Includes standard open drivers. Supports up to 25 devices or 1250 points. Requires Alki Supervisor N4.13u2 or higher.
<b>NC-9100</b>	ALER-9000 - (100) Device Core Software Only & 5000 Points. Includes standard open drivers. Supports up to 100 devices or 5000 points. Requires Alki Supervisor N4.13u2 or higher.
<b>NC-9200</b>	ALER-9000 - (200) Device Core Software Only & 10000 Points. Includes standard open drivers. Supports up to 200 devices or 10000 points. Requires Alki Supervisor N4.13u2 or higher.
<b>NC-9XXX-DEMO</b>	ALER-9000 Demo with 500 Device Core. Includes all available Optimizer Drivers. Requires Alki Supervisor N4.13u2 or higher. Available with Niagara Analytics (non-production only). License will renew annually with the receipt of the annual support fee.
<b>IO-R-16</b>	Optional 16-point IO RS-485 module designed for use with the WEB-8000 & ALER-9000 - Includes (8) Universal Inputs, (4) Form A Relay Outputs, and (4) 0-10 VDC Analog outputs.
<b>IO-R-34</b>	Optional 34-point IO RS-485 module designed for use with the WEB-8000 & ALER-9000 - Includes (16) Universal Inputs, (10) Form A Relay Outputs, and (8) 0-10 VDC Analog outputs.
<b>NPB-8000-2X-485</b>	WEB-8000 & ALER-9000 controllers – add on dual port RS-485 module.
<b>NPB-8000-232</b>	WEB-8000 & ALER-9000 controllers – add on single port RS-232 module.
<b>NPB-8000-LON</b>	WEB-8000 & ALER-9000 controllers – add on single port LON FTT10A module.
<b>SMA-9005-1YR</b>	ALER-9005 - 1 year maintenance
<b>SMA-9005-1YR-INIT</b>	ALER-9005 - Initial 18-month maintenance must be purchased in conjunction with initial Core software. Optional 3- or 5-year maintenance may be substituted.
<b>SMA-9005-3YR</b>	ALER-9005 - 3-year maintenance
<b>SMA-9005-5YR</b>	ALER-9005 - 5-year maintenance
<b>SMA-9010-1YR</b>	ALER-9010 - 1 year maintenance
<b>SMA-9010-1YR-INIT</b>	ALER-9025 - Initial 18-month maintenance must be purchased in conjunction with initial Core software. Optional 3- or 5-year maintenance may be substituted.
<b>SMA-9010-3YR</b>	ALER-9010 - 3-year maintenance

ALER-9000 CONTROLLER PART NUMBERS	
PART NUMBER	DESCRIPTION
SMA-9010-5YR	ALER-9010 - 5-year maintenance
SMA-9025-1YR	ALER-9025 - 1 year maintenance
SMA-9025-1YR-INIT	ALER-9025 - Initial 18-month maintenance must be purchased in conjunction with initial Core software. Optional 3- or 5-year maintenance may be substituted.
SMA-9025-3YR	ALER-9025 - 3-year maintenance
SMA-9025-5YR	ALER-9025 - 5-year maintenance
SMA-9100-1YR	ALER-9100 - 1 year maintenance
SMA-9100-1YR-INIT	ALER-9100 - Initial 18-month maintenance must be purchased in conjunction with initial Core software. Optional 3- or 5-year maintenance may be substituted.
SMA-9100-3YR	ALER-9100 - 3-year maintenance
SMA-9100-5YR	ALER-9100 - 5-year maintenance
SMA-9200-1YR	ALER-9200 - 1-year maintenance
SMA-9200-1YR-INIT	ALER-9200 - Initial 18-month maintenance must be purchased in conjunction with initial Core software. Optional 3- or 5-year maintenance may be substituted.
SMA-9200-3YR	ALER-9200 - 3-year maintenance
SMA-9200-5YR	ALER-9200 - 5-year maintenance
WPM-8000	WEB-8000 / ALER-9000 100-240 VAC, 50/60 Hz. Wall Adapter - Connects to the 0.1 inch (2.5 mm) barrel plug 24 V input on the WEB-8000 and includes US, EU, UK, and AU style plugs. Excluded from JACE agency listings.

## NIAGARA ANALYTICS ORDERING INFORMATION

Niagara Analytics is a data analytics extension to the Niagara Framework available on ALER-9000 controllers. 25 Niagara Analytic points are included with every ALER-9000 controller license. Niagara Analytics licenses are conveniently and cost-effectively based on the number of analytical points and do not expire. Your Software Maintenance Agreement covers all Niagara Analytics enhancements, adding to the value of the SMA.

NIAGARA ANALYTICS ORDERING PART NUMBER	
PARAMETER	DESCRIPTION
NA-EC-N4-100	Niagara Analytics Framework (Alerton Alki Supervisor N4.13u2 or higher) license for 100 analytic points for an Embedded Controller
NA-EC-N4-250	Niagara Analytics Framework (Alerton Alki Supervisor N4.13u2 or higher) license for 250 analytic points for an Embedded Controller
NA-EC-N4-500	Niagara Analytics Framework (Alerton Alki Supervisor N4.13u2 or higher) license for 500 analytic points for an Embedded Controller
NA-EC-N4-1000	Niagara Analytics Framework (Alerton Alki Supervisor N4.13u2 or higher) license for 1000 analytic points for an Embedded Controller

## SOFTWARE & SOFTWARE MAINTENANCE ORDERING INFORMATION

Every ALER-9000 controller is available with a Alerton Alki Supervisor N4.13u2 or higher software license and Alerton's standard drivers. Purchase of a software maintenance agreement (SMA) is required with initial licensing. The initial SMA is for 18 months, with extended agreements of 3 years and 5 years available for discounted rates.

Note: If a Software Maintenance Agreement is not in effect for any period, the price of maintenance for the next period for which it is purchased will be priced at a cost equal to the maintenance fee for the period(s) for which maintenance was not purchased, up to a maximum of 5 years, plus the maintenance fee for the next year.

### ALERTON

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