# ALER-8000 Controller

The ALER-8000 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-8000 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-8000 controller is simplified and features standard drivers along with optional IO and field bus expansion modules for ultimate flexibility and expandability. The ALER-8000 controller operates with Niagara 4, the latest version of the Niagara Framework®, for optimum performance. In larger facilities, multi-building applications and large-scale control system integrations, Niagara 4 Supervisors can be used with ALER-8000 controllers to aggregate information, including real-time data, history and alarms, to create a single, unified application.

HARDWARE SPECIFICATIONS

TI AM3352: 1000MHz ARM® Cortex™

1GB DDR3 SDRAM

Removable micro-
flash total stora

Wi-Fi (Client or WA
  IEEE802.11a/b
  IEEE802.11n H
  IEEE802.11n
  Configurab
  WPAPSI

USB type A
  Back-up an

(2) isolated RS-485

(2) 10/100MB Ethernet ports

Secure boot

24VAC/DC power supply

Runs Niagara 4.1 and later

Real time clock

Batteryless

niagara framework®

ALERTON
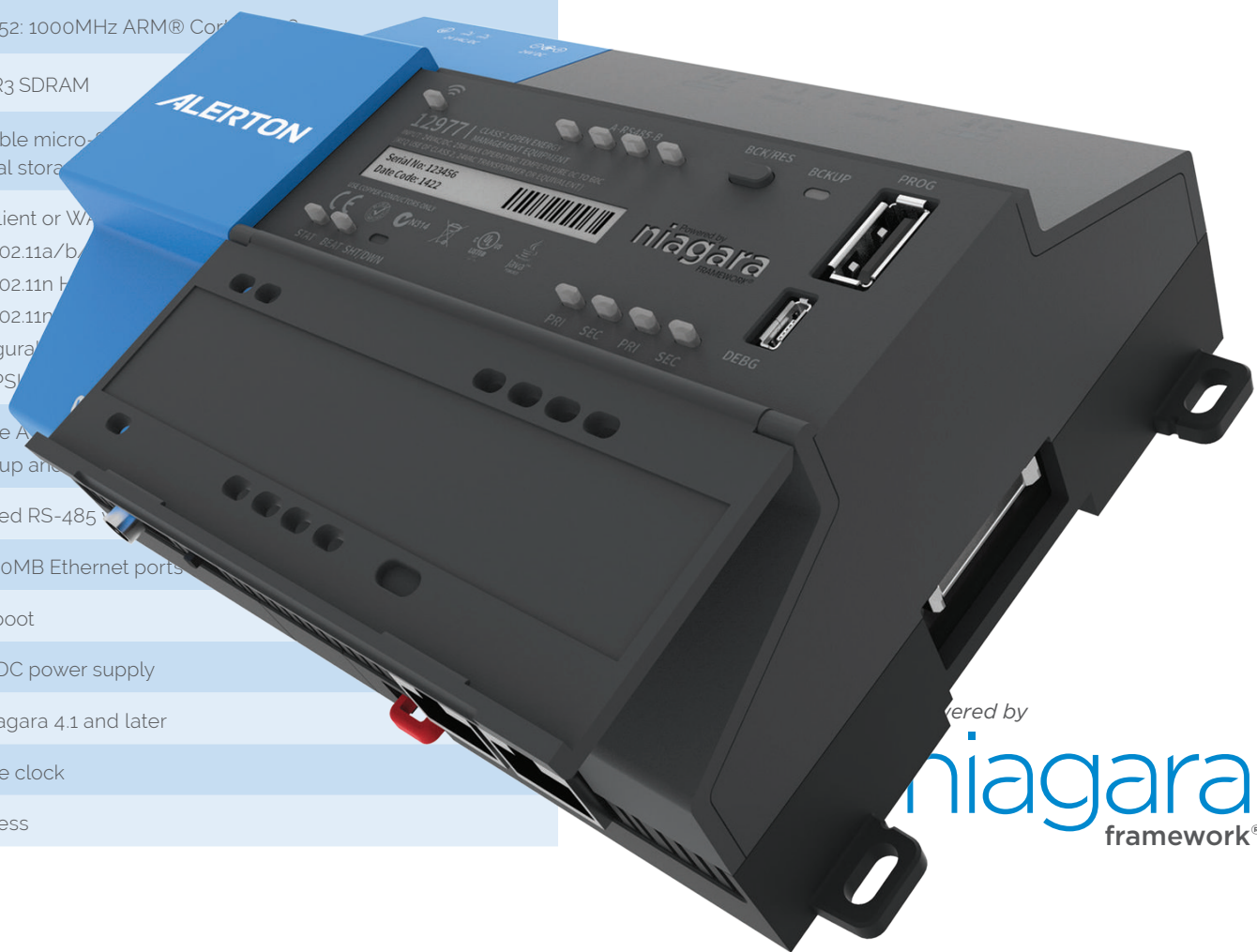
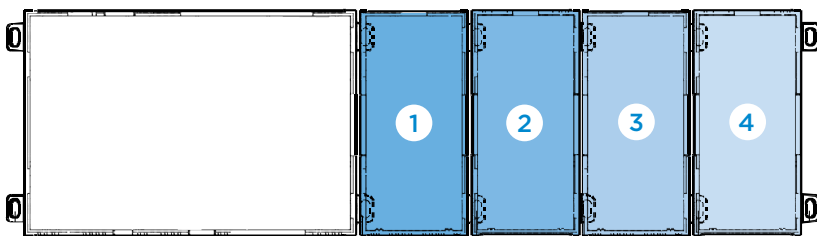# EXPANSION MODULE AND IO CONFIGURATIONS

**MAXIMUM EXPANSION
MODULES SUPPORTED**

NPB-8000-LON: 4
NPB-8000-232: 4
NPB-8000-2X-485: 2

**MAXIMUM IO
MODULES SUPPORTED**

T-IO-16-485: 16

MAXIMUM COMBINATIONS

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	
485 485	485 485		

ALER-8000 CONTROLLER MOUNTING & DIMENSIONS

1 ALER-8000 controller. Allow at least 1.5" (38mm) clearance around all sides and minimum 3" (76mm) at bottom for Wi-Fi 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

Compatible with (DIN43880) enclosures suitable for mounting to a panel or to an EN50022 standard 35mm rail
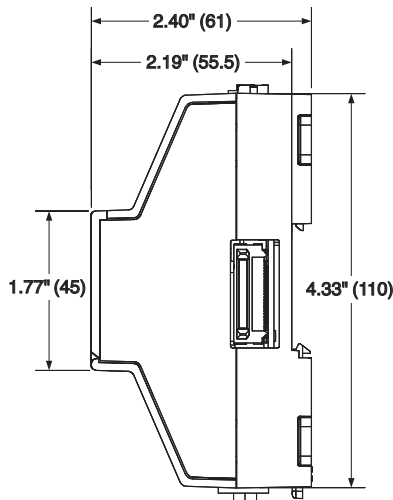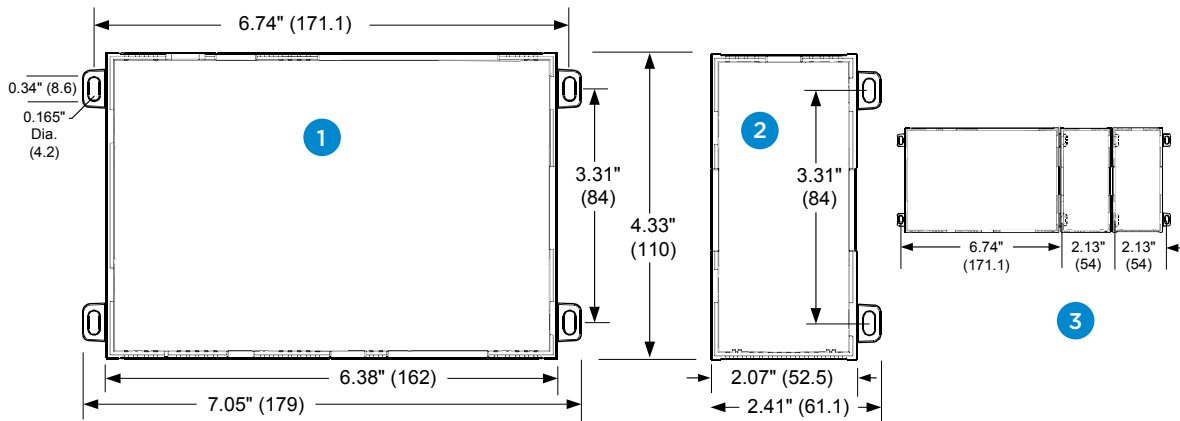
AGENCY CERTIFICATIONS

- UL 916
- CE EN 61326-1
- FCC Part 15 Subpart B, Class B
- FCC Part 15 Subpart C
- C-UL listed to Canadian Standards Association (CSA) C22.2 No. 205-M1983 "Signal Equipment"
- 1999/5/EC R&TTE Directive
- CCC
- SRRC
- RSS
- ROHS

ENVIRONMENTAL SPECIFICATIONS

- **Operating temperature**: -20–60˚C
- **Storage temperature**: -40–85˚C
- **Humidity**: 5%–95% — Non condensing
- **Shipping & vibration**: ASTM D4169, Assurance Level II
- **MTTF**: 10 years+

ALERTON

ORDERING INFORMATION

Part number	Description
ALER-8000	Base unit includes two isolated RS485 ports, two 10/100MB Ethernet ports, USB Backup & Restore and Wi-Fi connectivity
ALER-8000-DEMO	Base unit includes two isolated RS485 ports, two 10/100MB Ethernet ports, USB Backup & Restore, Wi-Fi connectivity, all available Alerton drivers and a 500 device license. Hardware Accessories purchased separately
NC-8005	Up to 5 devices/250 point core
NC-8010	Up to 10 devices/500 point core
NC-8025	Up to 25 devices/1,250 point core
NC-8100	Up to 100 devices/5,000 point core
NC-8200	Up to 200 devices/10,000 point core
DEVICE-10	Up to 10 devices/500 point upgrade (can be purchased during initial licensing)
DEVICE-25	Up to 25 devices/1,250 point upgrade (can be purchased during initial licensing)
DEVICE-50	Up to 50 devices/2,500 point upgrade (can be purchased during initial licensing)
DEVICE-UP-10	Up to 10 devices/500 point upgrade (can be purchased post initial licensing)
DEVICE-UP-25	Up to 25 devices/1,250 point upgrade (can be purchased post initial licensing)
DEVICE-UP-50	Up to 50 devices/2,500 point upgrade (can be purchased post initial licensing)
ALER-8000-AX	Enables JACE® 8000 controller to run Niagara AX (3.8U). 3.8U Build with ALER-8000 controller support
NPB-8000-2X-485	ALER-8000 controller — add on dual port RS-485 module
NPB-8000-LON	ALER-8000 controller — add on single port LON FTT10A module
NPB-8000-232	JACE 8000 controller — add on single port RS-232 module
WPM-8000	Universal power supply for ALER-8000 controller
T-IO-16-485	Remote IO module, compatible with the JACE 8000 controller. Communication using RS 485, maximum IO supported T-IO-16-485 modules: 16
T-NPB-PWR	24V power supply for T-IO-16-485
T-NPB-PWR-UN	Universal power supply for T-IO-16-485

All NC-8XXX parts include a Niagara 4 license and Alerton standard driver suite. Please see Alerton standard driver suite documentation for more details.

ALERTON   4