

Being open simply isn't enough. That's why American Auto-Matrix (AAM) has developed the Native Series product line, which includes the NB-ASC and NB-ASCe unitary controllers. The Native Series line of products comply with ANSI/ASHRAE Standard 135-2001, BACnet®.

The NB-ASC™ and NB-ASCe™ are application selectable digital controllers. The pre-configured heat pump, rooftop, and fan coil applications templates can be downloaded into the controller using AAM's remote flash updating technology.

FEATURES

- ▼ BACnet MS/TP network protocol over EIA-485
- ▼ Flash memory for easy updates and pre-configured applications
- ▼ Real-time clock module
- ▼ Zone temperature input with 15-bit resolution
- ▼ Time-of-day and holiday scheduling



NB-ASC(e)™

CONTROLLING CAPABILITIES

The NB-ASC(e) controllers can be flashed with firmware for use in heat pump, rooftop, and fan coil applications. The NB-ASC(e) unitary controllers can also be employed in some custom control applications.

End-users monitor and change system setpoints using AAM's commissioning software or a SAGE^{MAX} area controller (with BACnet MS/TP drivers installed).

Proportional +Integral +Derivative (PID) loops are provided for controlling up to four analog outputs. These PID loops are reset selectable from one of the universal inputs, the SBC-STAT input, or supply temperature. The measured variable is selectable from one of the analog inputs, the SBC-STAT input, or the supply temperature.

NETWORKING

The NB-ASC(e) interfaces with existing BACnet MS/TP systems through direct connection to AAM's SAGE^{MAX} area controller, or through third party area controllers configured for BACnet MS/TP.

- ▼ **Wiring:** shielded, twisted pair, 18-22 AWG
- ▼ **Network protection:** opto-isolated
- ▼ **Communications speed:** 9600, 19.2k, 38.4k, 57.6k, and 76.8k baud, programmable
- ▼ **Protocol:** BACnet MS/TP over EIA-485

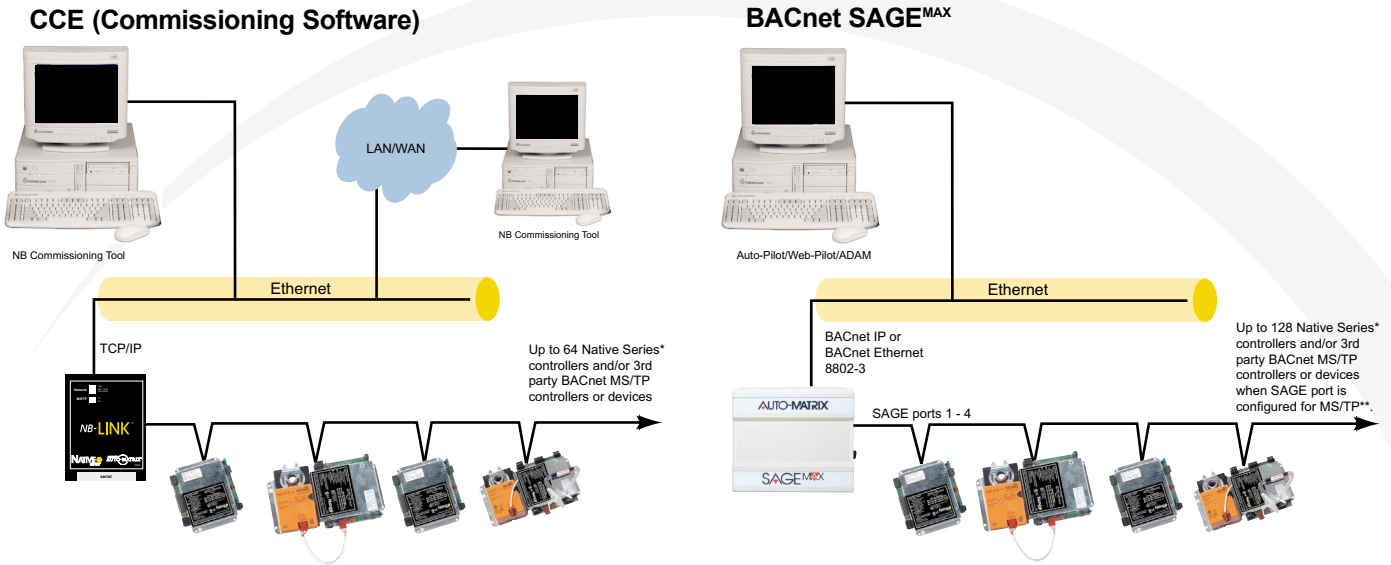
Connect an SBC-STAT3 to the NB-ASC(e) for zone temperature sensing, remote setpoint adjustment, and occupancy override. For applications where alarm detection, real-time data trending, or color graphics are desired, the NB-ASC—via the SAGE^{MAX} area controller—is networked to the Auto-Pilot™ software. Auto-Pilot enables a PC to provide a user-friendly interface with a Direct Digital Control (DDC) network.

Native Series NB-ASC Model Controllers							
Controller Type	Digital Outputs		Analog Outputs	Universal Inputs	Optically Isolated DI	SBC-Stat Bus	Real-time clock
	Triacs	Relays					
NB-ASC	None	5	2	2	None	Yes	Optional*
NB-ASCe	None	5	4	5	1	Yes	Installed

*The Real-time Clock must be purchased separately and installed by the customer.

NB-ASC(e)TM

SYSTEM ARCHITECTURE



*The Native Series Unitary Controllers include:

- ▼ NB-ASC
- ▼ NB-ASCe
- ▼ NB-VAVr
- ▼ NB-VAVra
- ▼ NB-VAVrf
- ▼ NB-VAVta
- ▼ NB-VAVtf
- ▼ NB-V3Tb
- ▼ NB-V3Td

Configure any or all SAGE^{MAX} ports for MS/TP or PUP. When configured for MS/TP, up to 128 MS/TP devices can be connected to **either Trunk A or Trunk B of any of the ports. When all four SAGE^{MAX} ports are configured for MS/TP, then the SAGE area controller can support up to 512 MS/TP devices.

Additional Note: Without the use of an EIA-485 repeater, only a maximum of 64 BACnet MS/TP devices can be connected to a SAGE^{MAX} port.

SPECIFICATIONS

Terminations

- ▼ Pluggable terminal blocks for inputs, outputs, power, and network connection

Input Supply

- ▼ NEC class 11 transformer
- ▼ 24VAC, 50/60 Hz, 10VA maximum, 5VA typical
- ▼ 5A fuse load protection

Operating Environment

- ▼ Temperature range: 32° to 122°F (0 to 50°C)
- ▼ Humidity range: 0 to 95% RH non-condensing

Dimensions

- ▼ Overall size: 5.55 x 3.75 x .9in. (14.1 x 9.5 x 2.3cm)
- ▼ Shipping weight: .84lb. (.38kg)

Agency Approvals

- ▼ UL listed 916, Management Equipment, Energy (PAZX)
- ▼ FCC rules Part 15, Class B Computing Device
- ▼ UL 873 listed, Component-temperature-indicating and regulating equipment (XAPX2)
- ▼ Complies with CE directives and standards

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