

## BAS SYSTEM SOFTWARE

### ADS and ADS-Lite

#### Application and Data Server

The Application and Data Server (ADS) is an optional component of the Metasys® system that manage the collection and presentation of large amounts of trend data, event messages, operator transactions, and system configuration data. As Site Director, the ADS provides secure communication to a network of Network Automation Engines (NAEs), Network Control Engines (NCEs) and Network Integration Engines (NIEs). The Site Management Portal User Interface (UI) of the ADS operates in a Web browser to provide flexible system navigation, user graphics, comprehensive alarm management, trend analysis and summary reporting capabilities. With the Site Management Portal UI, you can efficiently manage occupant comfort and energy usage, quickly respond to critical events, and optimize control strategies. The ADS includes an Open Database Connectivity (ODBC) compliant database package for secure storage of historical and configuration data.



	ADS	ADS-Lite
Concurrent Users	5	5
Operating System	Windows 7 (32-bit) or Windows XP SP3	Windows 7 (32-bit) only
ADS Software	Site Director For any NxE or ADS Server	Site Director For MS-NAE451L-2 only
No. of Engines	10 to 14 NCE25, NAE35, NAE45, NAE55, NAE85, NIE29, NIE39, NIE49, NIE55 or NIE85	Up to 3 NAE451L-2 + 1 NIE29,39 or 49

## BAS NETWORK AUTOMATION

### NAE

#### Network Automation Engine

Network Automation Engines (NAEs) enable Internet Protocol (IP) connectivity and web-based access to Metasys® Building Management Systems (BMSs). NAEs leverage standard building management communication technologies, including BACnet® protocol, LONWORKS® network, and N2 Bus protocol to monitor and supervise a wide variety of Heating, Ventilating and Air Conditioning (HVAC); lighting, security, fire and access control equipment.

NAEs provide comprehensive equipment monitoring and control, scheduling, alarm and event management, energy management, data exchange, data trending and data storage.

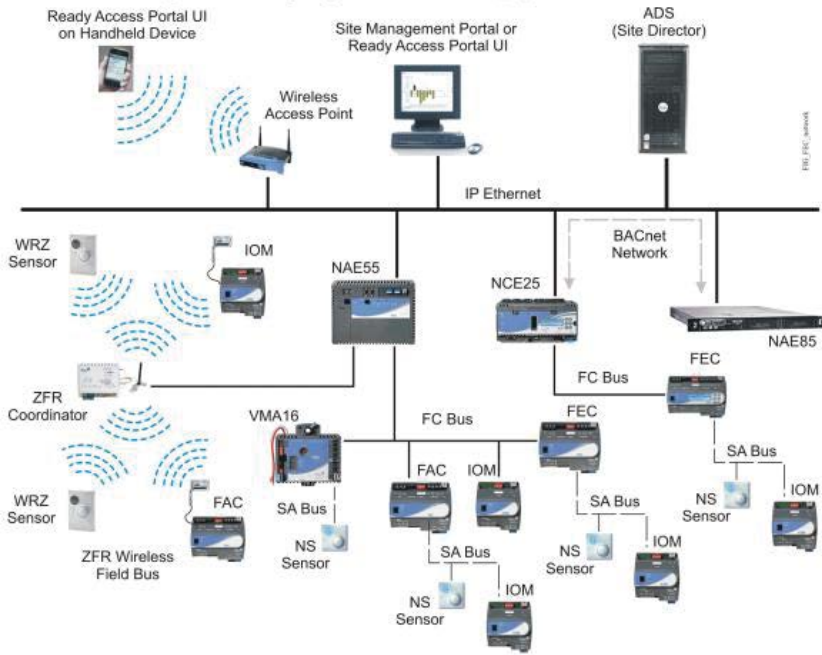


NAE45 Network Automation Engine

### Technical Specifications

NAE35 and NAE45	
<b>Power Requirement</b>	Dedicated nominal 24 VAC, Class 2 power supply (North America), Safety Extra- Low Voltage (SELV) power supply (Europe), at 50/60 Hz (20 VAC minimum to 30 VAC maximum)
<b>Power Consumption</b>	25 VA maximum
<b>Ambient Operating Conditions</b>	0–50°C (32–122°F); 10–90% RH, 30°C (86°F) maximum dew point
<b>Ambient Storage Conditions</b>	-40–70°C (-40–158°F); 5–95% RH, 30°C (86°F) maximum dew point
<b>Data Protection</b>	Supports data protection on power failure. Rechargeable NiMH battery: 3.6 VDC 500 mAh, with a typical life of 5 to 7 years at 21°C (70°F); Product Code Number: MS-BAT1020-0
<b>Processor</b>	192 MHz Renesas™ SH4 7760 RISC 32-bit processor
<b>Memory</b>	128 MB Flash nonvolatile memory for operating system, configuration data, and operations data storage and backup 128 MB Synchronous Dynamic Random Access Memory (DRAM) for operations data dynamic memory
<b>Operating System</b>	Microsoft® Windows® CE embedded
<b>Network and Serial Interfaces</b>	One Ethernet port; connects at 10 or 100 Mbps; 8-pin RJ-45 connector One optically isolated RS-485 port; 9.6k, 19.2k, 38.4k, or 76.8k baud (depending on protocol); with a pluggable and keyed 4-position terminal block (FC Bus available on NAE351x and NAE451x models only) One LONWORKS port; FTT10 78 Kbps; pluggable, keyed 3-position terminal block (LONWORKS port available on NAE352x-x and NAE452x models only) One RS-232-C serial port with standard 9-pin sub-D connector that supports standard baud rates. A second serial port, on models without an internal modem, that supports an optional, user-supplied external modem. One USB serial port with standard USB connector that supports an optional, user-supplied external modem. Option: One telephone port for internal modem; up to 56 Kbps; 6-pin modular connector (NAE models with an optional internal modem have one RS-232-C serial port only.)

**Figure 2: Metasys System with Field Equipment Controllers**



## Screenshots of ADS computer graphics



## FIRE ALARM SYSTEM

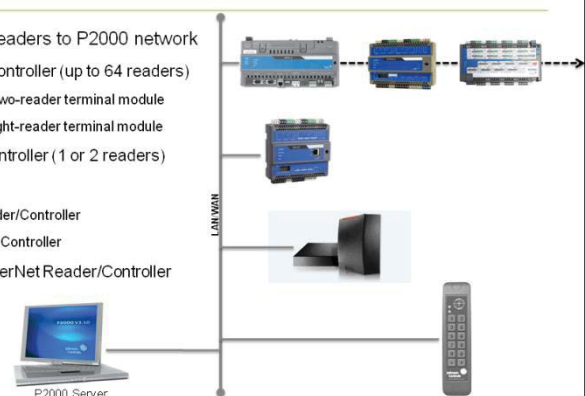


## ACCESS CONTROL

### P2000 Wired Access Control Architecture Options

Connecting readers to P2000 network

- CK721-A Controller (up to 64 readers)
  - RDR2SA two-reader terminal module
  - RDR8S eight-reader terminal module
- S321-IP Controller (1 or 2 readers)
- HID Edge
  - Edge Reader/Controller
  - Edge Plus Controller
- Isonas PowerNet Reader/Controller



**HVAC CONTROL PRODUCTS**

**SENSORS**

**TM-3100**

*Room Temperature Sensor*



**Features**

- Wall mount
- Built-in Sensing Element-Pt1000

**HT-1000**

*Room Humidity Transmitter*



**Features**

- Wall mount
- Humidity Range – 0 -100% RH
- Output – 0 - 10 VDC
- Accuracy – ±2%
- Supply Voltage – 15 Volts ±10%

**CD-W00-x0-1 Space CO2 Transmitter**

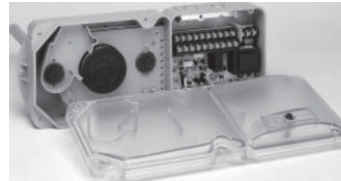


**Features**

- Wall mount
- Measuring Range– 0–2000 ppm CO2
- Output – 4-20mA or 0-10VDC
- Accuracy – ±50ppm ±3% of reading
- Supply Voltage – 20 to 30 VAC  
18 to 30 VDC

**DH100ACDCLP**

*Duct Smoke Detector*



**Features**

- 4-wire Photoelectric
- Voltage – 20-29 VDC / 24 VAC  
– 120 / 220 / 240 VAC
- Contact – 12A @ 30 VAC/DC

**TS-910x**

*Duct Temperature Sensor*



**Features**

- Duct mount
- Sensing Element – Pt1000
- Accuracy – EN 60751, Class A
- Option – mounting flange

**TS-910x**

*Pipe Temperature Sensor*



**Features**

- Pipe mount
- Sensing Element – Pt1000
- Accuracy – EN 60751, Class A

**F61**

*Liquid Flow Switch*



**Features**

- Switch – SPDT Contacts 15A 230 V
- Connection – ½” or ¾” NPTF
- 4 paddles : 1”,2”,3” & 6” AISI 301

**F62**

*Air Flow Switch*



**Features**

- Switch – SPDT Contacts 15A 230 V
- Max Air Velocity – 10 m/s
- Paddle : 55 mm mounted  
80 mm separate

**P233**

*Air Differential Pressure Switch*



**Features**

- Switch – SPDT Contacts 2A 250 V
- Range – 0.5 – 1000 Pa
- Standard PG11 nipple

**Setra 264**

*Air Differential Pressure Transducer*



**Features**

- Range – 0 – 100 in. W.C.
- Output – 4 to 20 mA 1000 Pa
- Overpressure – Up to 10 psi



# BAS





**FAS**

**ACS**

