

Application and Data Server (ADS) Lite-A System Catalog Page

MS-ADSLA5U-x, MS-NAE451L-2

Code No. LIT-1900691
Software Release 7.0
Issued May 12, 2015

Refer to the [QuickLIT website](#) for the most up-to-date version of this document.

The Application and Data Server (ADS) Lite-A system leverages the building control and data storage capabilities of an ADS with the scalability of the Metasys® engines to meet the needs of middle-sized buildings and campuses.

The **Application and Data Server (ADS) Lite-A** manages the collection and presentation of large amounts of trend data, event messages, operator transactions, and system configuration data. As Site Director, the ADS-Lite-A provides secure communication to a network of Network Automation Engine (NAE) 45-Lites and Network Integration Engines (NIEs).

The Site Management Portal UI of the ADS-Lite-A provides 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-Lite-A includes an Open Database Connectivity (ODBC) compliant database package for secure storage of historical and configuration data.

An optional interface called the Ready Access Portal UI provides an intuitive, task-based user experience designed for remote operations of your building.

Note: The Ready Access Portal UI is in the exit phase of its product life cycle. Ready Access Portal functionality will be available in the new mobile optimized Metasys UI.

The ADS-Lite-A supports virtual environments, including VMware® and Microsoft Hyper-V™. Refer to the *Network and IT Guidance for the BAS Professional Technical Bulletin (LIT-12011279)* for more information.

The Metasys system can communicate with cloud-based applications easily and securely. To make this connection, the Metasys system requires minor programming and setup by Johnson Controls. When you are connected, you can access multiple cloud-based applications and features. To learn more, please visit the [Building Management](#) page located on the Johnson Controls website.

Note: In this document, the term engine refers to all supported NAE45-Lites, and NIEs, unless otherwise noted. The ADS-Lite-A supports up to three NAE45-Lites and one NIE29/39/49.

The **Network Automation Engine (NAE) 45-Lite** enables IP connectivity and web-based access to Metasys® Building Management Systems (BMSs).

The NAE45-Lite leverages standard BACnet building management communication technologies, including BACnet® protocol, to monitor and supervise a wide variety of HVAC, lighting, security, fire, and access control equipment.

The NAE45-Lite provides comprehensive equipment monitoring and control, scheduling, alarm and event management, energy management, data exchange, data trending, and data storage.

The NAE45-Lite enables cost-effective connectivity and control in small to medium facilities.

Refer to the *Application and Data Server Application and Data Server (ADS) Lite-A System Product Bulletin (LIT-12011694)* for important product application information.

Features

- Communication Using Commonly Accepted IT Standards
- Web-Based User Interface
- UI Support for 5 Users
- Support for 4 Engines: 3 NAE45-Lites and 1 NIE29/NIE39/NIE49
- Support for MS/TP Bus, BACnet® Protocol, and Third-Party Communication
- Support for Language Installation Program (LIP)

Figure 1: ADS-Lite-A Site Management Portal UI

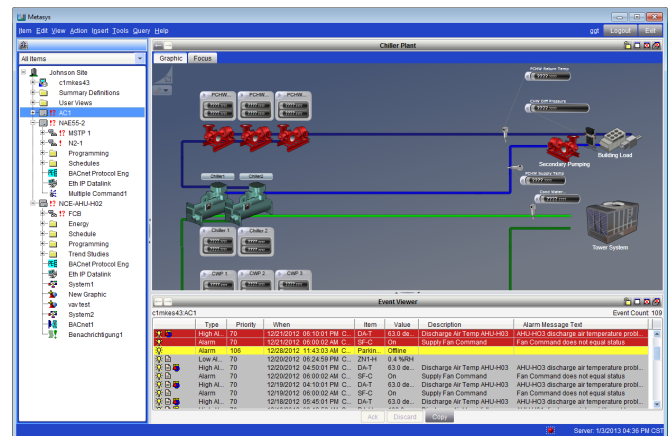


Figure 2: NAE45-Lite



Ordering Information

Table 1: ADS-Lite-A

Code Number	Description
MS-ADSLA5U-0	ADS-Lite-A New project software: for up to 5 users, on new sites
MS-ADSLA5U-6	ADS-Lite-A Upgrade project software: for up to 5 users, on sites with a previous version of the Metasys software

Table 2: NAE45-Lite

Code Number	Description
MS-NAE451L-2	One BACnet MS/TP (RS-485) trunk; an additional RS-232-C serial port for optional external modem; support for up to 100 FEC family MS/TP or 64 generic BACnet MS/TP devices (for example, non-FEC family, third-party vendor, or VND labeled devices including TEC Thermostat controllers). N2 Bus and LonWorks® field trunk are not supported.

Availability:

ADS-Lite-A and NAE45-Lite are available for purchase and use in the following counties only: Australia, China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, New Zealand, Philippines, Singapore, Taiwan, Thailand, and Vietnam.

For information on the NIE29, NIE39, and NIE49, refer to the Johnson Controls® Advanced Order Management System (AOMS).

Accessories

See [Table 3](#) for accessories available for the NAE45-Lite.

Table 3: NAE45-Lite Accessories Ordering Information

Product Code Number	Description
MS-BAT1020-0	Replacement data protection battery for NAE45-Lite. Rechargeable NiMH battery: 3.6 V 500 mAh, with a typical life of 5 to 7 years at 21°C (70°F)
AS-XFR100-1	Power transformer (Class 2, 24 VAC, 92 VA maximum output), with enclosure
AS-XFR010-1	Power transformer (Class 2, 24 VAC, 92 VA maximum output), no enclosure

Technical Specifications

The following table lists by operating system the Microsoft® SQL Server® software editions that have been fully qualified by Johnson Controls for Release 7.0. You can select other combinations, but we recommend that you select from the following pairings.

Table 4: Recommended Operating System and SQL Server Express Combinations

Operating System	Database Software			
	SQL Server 2014 Express (64-bit)	SQL Server 2012 Express SP2 (64-bit)	SQL Server 2008 Express R2 SP2 (64-bit)	SQL Server 2008 Express R2 SP2 (32-bit)
Windows® 8.1 Pro and Windows 8.1 Enterprise (64-bit)	x	x	x	
Windows 8 Pro and Windows 8 Enterprise (64-bit)	x	x	x	
Windows 7 Professional, Enterprise, and Ultimate Editions with SP1 (64-bit)	x	x	x	
Windows 7 Professional, Enterprise, and Ultimate Editions with SP1 (32-bit)				x

Note: To use SQL Server 2014 with Metasys products, you must install Microsoft cumulative package 3 (KB2984923) for SQL Server 2014. To download the update package, visit <http://support.microsoft.com/kb/2984923>.

Application and Data Server-Lite System Requirements

Table 5: Application and Data Server-Lite System Requirements

Recommended Computer Platform ¹	Intel Core i7 processor, 4th generation or later 2 x 320 GB hard disk (RAID 1) ² with 40 GB free space after installation of all prerequisite software and before installation of ADS-Lite software. Configure RAID 1 (mirroring) with disk write-caching turned on. Note: Prerequisite software includes the supported operating system, database software, .NET Framework, and any other software or service packs required for your ADS configuration. DVD drive Graphics adapter (1 GB RAM, ATI® Technologies or NVIDIA® Corporation, 64-bit compatible [for 64-bit operating systems], Small Form Factor [SFF] if required) ³
Recommended Memory	4 GB RAM minimum (32-bit systems) 8 GB RAM minimum (64-bit systems)

Table 5: Application and Data Server-Lite System Requirements

Supported Operating Systems⁴ and Database Software	Windows 8.1 Pro and Windows 8.1 Enterprise Editions (64-bit) Supports Microsoft SQL Server® 2014 Express (64-bit) ⁵ , Microsoft SQL Server 2012 Express with SP2 (64-bit), or Microsoft SQL Server 2008 R2 Express with SP2 (64-bit)	
	Windows® 8 Pro and Windows 8 Enterprise Editions (64-bit) Supports Microsoft SQL Server® 2014 Express (64-bit) ⁵ , Microsoft SQL Server 2012 Express with SP2 (64-bit), or Microsoft SQL Server 2008 R2 Express with SP2 (64-bit)	
	Windows 7 Professional, Enterprise, and Ultimate Editions with SP1 (32-bit or 64-bit) Supports Microsoft SQL Server 2014 Express (32-bit or 64-bit) ⁵ , Microsoft SQL Server 2012 Express with SP2 (64-bit), or Microsoft SQL Server 2008 R2 Express with SP2 (32-bit or 64-bit) Note: The OS and SQL software must both be 32-bit or 64-bit.	
Supported Operating Systems for Metasys Site Management Portal Client Computer	Windows 8.1 Pro or Windows 8.1 Enterprise Windows 8 Pro or Windows 8 Enterprise Windows 7 Professional, Enterprise, or Ultimate Edition with SP1 (32-bit or 64-bit) Windows XP® Professional with SP3 Apple® OS X® 10.9 Mavericks Apple OS X 10.8 Mountain Lion Note: In OS X, you cannot view Graphics+ graphics in the Site Management Portal UI. Note: Windows XP and Apple operating systems are supported for Metasys client computers only.	
Supported Web Browser Software for Metasys Site Management Portal Client Computers	Windows Internet Explorer® version 8, 9, 10, and 11 Note: In Internet Explorer 11, select the Use Microsoft compatibility lists option, found under Tools > Compatibility View Settings, to ensure that websites appear and function correctly. Apple Safari® version 6.0.5 and 7.0 Other browsers, such as Google® Chrome® and Mozilla® Firefox®, may also be used but are not fully supported. Note: You use the web browser to download the Launcher application. After you install the Launcher application, you use the Launcher, not the web browser, to log in to the Site Management Portal (SMP) user interface.	
Supported Virtual Environments	Microsoft Hyper-V™, VMware®	
Supported User Interfaces	Site Management Portal (SMP) Metasys UI Ready Access Portal	
Additional Software Included with the ADS-Lite	CCT software	Launcher software
	Export Utility software	Microsoft SQL Server 2012 Express software with SP2 (64-bit)
	Metasys Database Manager software	Microsoft SQL Server 2008 R2 Express software with SP2 (32-bit and 64-bit)
	Ready Access Portal software	Microsoft .NET Framework Version 3.5 SP1
	SCT software	Metasys UI ⁶
Optional Hardware	Any network or local printer supported by the qualified Windows operating system	
Optional Software	Graphic Generation Tool	

- 1 Our computer platform and memory recommendations are not meant to imply that older or slower machines are not usable. Refer to the *Network and IT Guidance for the BAS Professional Technical Bulletin (LIT-12011279)* for more information regarding computer/server recommendations.
- 2 For best performance, use Serial Attached SCSI (SAS) hard drives, not Small Computer System Interface (SCSI) hard drives.
- 3 For improved performance only when ADS and Ready Access Portal share the same computer.
- 4 Refer to the *Network and IT Guidance for the BAS Professional Technical Bulletin (LIT-12011279)* for specific Microsoft Windows operating system settings that may be required for your Metasys system configuration.
- 5 To use SQL Server 2014 with Metasys products, you must install Microsoft cumulative update package 3 (KB2984923) for SQL Server 2014. To download the update package, visit <http://support.microsoft.com/kb/2984923>.
- 6 For more information on the Metasys UI, refer to the *Metasys® UI Installation Instructions (LIT-12011952)*.

NAE45-Lite Specifications

Table 6: NAE45-Lite Specifications

Power Requirement	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)
Power Consumption	25 VA maximum
Ambient Operating Conditions	0 to 50°C (32 to 122°F); 10 to 90% RH, 30°C (86°F) maximum dew point
Ambient Storage Conditions	-40 to 70°C (-40 to 158°F); 5 to 95% RH, 30°C (86°F) maximum dew point
Data Protection Battery	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
Processor	192 MHz Renesas® SH4 7760 RISC processor
Memory	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
Operating System	Microsoft® Windows® CE embedded
Network and Serial Interfaces	One Ethernet port; 10/100 Mbps; 8-pin RJ-45 connector One optically isolated RS-485 port; 9600, 19.2k, 38.4k, or 76.8k baud (depending on protocol); with a pluggable and keyed 4-position terminal block 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.
Housing	Plastic housing material: ABS + polycarbonate UL94-5VB Protection: IP20 (IEC 60529)
Mounting	On flat surface with screws on three mounting clips or a single 35 mm DIN rail
Dimensions (Height x Width x Depth)	131 x 270 x 62 mm (5.2 x 10.6 x 2.5 in.) Minimum space for mounting NAE45-Lite: 210 x 350 x 110 mm (8.3 x 13.8 x 4.3 in.)
Shipping Weight	1.2 kg (2.7 lb)
Compliance	United States: UL Listed, File E107041, CCN PAZX, UL 916, Energy Management Equipment, FCC Compliant to CFR47, Part 15, Subpart B, Class A Canada: UL Listed, File E107041, CCN PAZX7, CAN/CSA C22.2 No. 205, Signal Equipment; Industry Canada Compliant, ICES-003 Europe: CE Mark - Johnson Controls, Inc., declares that the NAE45-Lite is in compliance with the essential requirements and other relevant provisions of the EMC Directive 2004/108/EC. Australia and New Zealand: C-Tick Mark, Australia/NZ Emissions Compliant

The performance specifications are nominal and conform to acceptable industry standard. For application at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products.



Building Efficiency
507 E. Michigan Street, Milwaukee, WI 53202

Metasys® and Johnson Controls® are registered trademarks of Johnson Controls, Inc. All other marks herein are the marks of their respective owners. © 2015 Johnson Controls, Inc.