

2 System Requirements

Each PC in your system must meet minimum software and hardware requirements to ensure successful installation and operation of AMS Device Manager. System interface networks may have additional requirements.

Hardware Requirements

PC Processing Speed, Memory, and Disk Space

The recommended *free hard disk space* specified below is the amount needed for AMS Device Manager installation, not the amount needed for daily operation (there are no recommended minimum amounts for daily operation). If you receive a message during installation that you do not have enough hard disk space, free up as much space as possible and then retry the installation.

Station Type	Minimum Requirements	Recommended
Server Plus Station	Pentium, 1 GHz 256 MB memory 500 MB free hard disk space	Pentium, 2 GHz or greater 512 MB memory or greater 1 GB free hard disk space
Client SC Station	Pentium, 600 MHz 128 MB memory 300 MB free hard disk space	Pentium, 800 MHz or greater 256 MB memory or greater 300 MB free hard disk space

Notes:

- Additional hard disk space is required for migrating the database if you are upgrading from an earlier version of AMS Device Manager. The amount of space required depends on the size of the existing database.
- Additional space may be required on the Server Plus Station for the database, depending on the size of your database.
- Additional hard disk space is required for SNAP-ON applications.
- Set virtual memory to 2–3 times the size of the physical memory.

Video Generator

- Minimum: 800 x 600, 256-color VGA
- Recommended: 1024 x 768, 256-color VGA

Serial Interfaces

- An RS-232 serial interface is required for a serial HART multiplexer network, Model 275 HART Communicator, or documenting calibrator.
- A serial HART modem requires a serial port with a dedicated interrupt.
- AMS Device Manager operation has been verified for a serial HART modem connected to the built-in serial port of a PC or to a Sealevel COM8 port board (installed on an ISA bus of the AMS Device Manager PC).

USB Interfaces

- A USB port and USB HART modem drivers are required to use a USB HART modem. See the Release Notes for a list of supported adapters.
- A USB port and drivers are required to connect a 375 Field Communicator using a USB Infrared Data Association (IrDA) adapter and IrDA drivers. See the Release Notes for a list of supported adapters.

Network Requirements

- AMS Device Manager is designed to operate on an Ethernet network running TCP/IP.
- For a distributed system, all stations must use the same network domain.
- The Microsoft Windows Server and Workstation services must be running on the PC during installation.

Software Requirements

Operating Systems

Operating System	Version
Windows XP	• Professional, Service Pack 1A or Service Pack 2 ¹
Windows Server 2003	• Standard Edition ²
Windows 2000	• Professional, Service Pack 4 ¹
Windows 2000 Server	• Service Pack 4 ²
¹ For Terminal Services, only Remote Administration mode is supported in these operating systems. ² For Terminal Services, both Remote Administration mode and Application mode are supported on these operating systems.	

Notes

- AMS Device Manager was tested on the English editions of these Windows operating systems.
- AMS Device Manager 7.0 will not install on Windows 95, Windows 98, Windows ME, Windows NT, or Windows NT Terminal/Server.
- A Server operating system (such as Windows 2000 Server or Windows Server 2003) and server-class PC are required if the database is expected to be greater than 2 GB; or if AMS Device Manager is installed on a DeltaV Professional *PLUS* or Application Station and Batch Historian, VCAT, or FF Device Audit Trail will be used. Contact your hardware vendor for recommendations on server-class PCs and server operating systems.
- The correct operating system service pack (SP) must be installed on your PC before installing AMS Device Manager. If your PC does not have the correct SP installed, or you are unsure, contact your network administrator.

Terminal Services (referred to as Remote Desktop in Windows XP) support:

- Terminal Services must be set up prior to AMS Device Manager installation.
- Only Remote Administration mode is supported on Windows XP and Windows 2000 Professional.
- Both Remote Administration and Application modes are supported on Windows 2000 Server and Windows Server 2003. For Application mode, only one AMS Device Manager session per server is allowed.
- If Terminal Services is licensed and installed on Windows Server 2003, you can have five remote connections plus the console session. You can see the AMS Device Manager system tray icon and server processes only in the console session. To connect remotely to the console session, open a command prompt on the remote station and enter "mstsc /v: <servername> /console" where <servername> is the name of the Windows Server 2003 station.

Contact Microsoft for Terminal Services licensing and additional information.

Other Software Requirements

Web Browser

AMS Device Manager requires Microsoft Internet Explorer (IE) Version 6.0, SP 1 or later. The AMS Device Manager installation program installs this version of IE if it or a later supported version is not already installed (except when using Windows XP and Windows Server 2003).

AMS Device Manager Web Services

Microsoft Internet Information Services (IIS) and AMS Device Manager 7.0 Server Plus software must be installed on your system before you can install AMS Device Manager Web Services. If you do not have IIS installed, contact your IT department for assistance.

Note: *Some control systems, such as DeltaV, do not allow IIS to be installed on the same PC. Check your control system documentation to determine IIS compatibility.*

Database—Microsoft SQL Server 2000

AMS Device Manager uses SQL Server 2000 for its database. The size of your database determines which edition of SQL Server you must use:

- *If your database is less than 2 GB, you can use SQL Server 2000 Desktop Engine. The installation program installs this version.*
- *If your database is greater than 2 GB or will be at some future time, you must install SQL Server 2000 Enterprise or Standard Edition, SP 3 before you install AMS Device Manager. (You must purchase this separately if you do not already have it.) These versions of SQL require server operating systems.*

The AMS Device Manager installation program installs or updates SQL Server on your PC as follows:

- If no SQL Server is installed, the AMS Device Manager installation program will install SQL Server 2000 Desktop Engine, SP 3.
- If SQL Server 7 is installed, depending on the installed edition, the AMS Device Manager installation program will do one of the following:
 - Prompt you to uninstall the current version of SQL Server.
 - Upgrade it to SQL Server 2000, SP 3.
- If SQL Server 7 or earlier is installed, the AMS Device Manager installation program will prompt you to uninstall the SQL Server software. After you have uninstalled the earlier version of SQL Server, the AMS Device Manager setup will install the correct version for AMS Device Manager.

Note: *Before uninstalling, confirm that no other applications on the PC use SQL Server. If AMS Device Manager is installed on the PC, back up your database before you uninstall SQL Server. See your SQL Server documentation for removal instructions.*

- If SQL Server 2000 SP 3 is already installed, the AMS Device Manager installation program will continue with the next part of the installation program. (Access to the SQL Server 'sa' account is required. If you don't have access, contact your network administrator for more information.)
- If SQL Server 2000 Desktop Engine is installed, but SP 3 is not, the AMS Device Manager installation program will install SP 3.
- If another edition of SQL Server 2000 is installed but SP 3 is not, the AMS Device Manager installation program will prompt you to install SP 3 for the edition of SQL Server that you have installed on your PC. You must install the correct SP before installing AMS Device Manager.

Note: *Do not try to install AMS Device Manager on a PC with SQL version 2005. AMS Device Manager will not properly complete installation.*

A Microsoft SQL Server 'sa' account password is not required for AMS Device Manager operation. Therefore, the AMS Device Manager setup leaves the password as the default (no password) rather than creating an 'sa' password. However, for security reasons, it is recommended that you configure your SQL Server to require a password. After installing AMS Device Manager, determine if your SQL Server should be password-protected (if you are unsure, ask your network administrator).

► To change an SQL Server 'sa' account password on your AMS Device Manager workstation:

1. Insert AMS Device Manager Installation **DISK 2—ACCESSORIES** in the CD-ROM drive of the target PC.
2. Select **Start | Run** from the Windows taskbar.
3. In the text box, type CMD and click **OK** to open a DOS command prompt.
4. At the DOS command prompt, type:
D:\TECH_SUPPORT_UTILITIES\CHANGE_SA_PASSWORD\SQLPASWD
<xxx> <newpassword>

Where:

D is the CD-ROM drive letter

<xxx> is the current SQL password (use *NULL* if there is no existing password)

<newpassword> is the password you want to use

5. Press ENTER. You should see the message "The SA password in SQL has been changed from xxx (*NULL*) to newpassword."
6. Close the DOS command prompt.

Software Supported for Drawings and Notes

- Microsoft Word 2000 and XP
- Microsoft Excel 2000 and XP
- WordPad

Windows Security Requirements

AMS Device Manager Installation

Installation of AMS Device Manager has these security requirements:

- Local or domain administrator rights for the PC(s) on which AMS Device Manager is to be installed.
- If you are installing AMS Device Manager on a PC that has the correct version of SQL Server (“Database—Microsoft SQL Server 2000” on page 22), you need to know the SQL Server ‘sa’ account password, if a password other than the default (no password) has been set.
- Before you can install AMS Device Manager, you must open the Windows XP Control Panel | Folder Options dialog box and, on the **View** tab, uncheck the **Use simple file sharing** option. If you do not do this, the AMS Device Manager installation will not complete. You must be a user with proper rights to effectively disable the **Use simple file sharing** option. (To avoid any AMS Device Manager operational issues, keep the **Use simple file sharing** option unchecked.)

Note: *There is a defect in Windows XP with regard to simple file sharing. After a user with proper rights unchecks the Use simple file sharing option, another user with less broad rights (such as a default Power User) will see the option checked (enabled) when it is still actually disabled.*

You can verify that the Use simple file sharing option is properly set by looking at your PC registry settings. The option is correctly set (disabled) if the “HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Lsa\forcequest” registry key is set to zero (0).

Other network security requirements may also apply to the installation. Contact your network administrator for more information.

Configuring Local Security Settings

The Local Security Setting needs to be modified on each AMS Device Manager Workstation and any remote AMS Device Manager Web Client Station 3.0 installation PCs. This is necessary for AMS Device Manager to function when all XP Professional stations are in a Workgroup.

► To configure Local Security settings on the PCs in a distributed system:

1. Go to **Start | Administrative Tools | Local Security Policy**.
2. When the Local Security Settings window opens, traverse to: **Security Settings | Local Policies | Security Options | Network access: Sharing and security model for local accounts**. Ensure that this is set to **Classic - local users authenticate as themselves**.

AMS Device Manager Use

Using AMS Device Manager on Windows 2000, Windows XP, and Windows Server 2003 requires you to be in the Power Users or Administrators group. Contact your network administrator for more information.

AmsServiceUser

A Windows user account called AmsServiceUser is automatically installed on each AMS Device Manager station. This user account runs the AMS Device Manager servers. If your AMS Device Manager system is located on a network that requires periodic changing of passwords, the AmsServiceUser account password can be changed using the AMSPasswordUtility.exe utility from the Ams\Bin folder on each AMS Device Manager station.

Note: *Do not use the Windows User Manager to change this password as AMS Device Manager will no longer launch.*

AMS Device Manager Web Client Station Requirements

- AMS Device Manager Web Client Station 3.0 is the only version supported by AMS Device Manager 7.0.
- For AMS Device Manager Web Client Station 3.0 system requirements, refer to the *AMS Device Manager Web Client Station Installation Guide* in the AMS Device Manager Web Client directory on AMS Device Manager 7.0 installation **DISK 2—ACCESSORIES**.

Requirements for System Interface Networks

Requirements for system interface networks are in addition to the hardware and software requirements for AMS Device Manager.

Ovation

An Ovation System Interface requires that:

- The Ovation System Software is version 2.3 or higher.
- The Ovation fieldbus tools be installed on an Ovation Engineer Workstation which also contains the AMS Device Manager Ovation interface.
- One or more Ovation controllers be configured with HART I/O modules. The HART I/O Modules may be on local or remote Ovation I/O.
- All FOUNDATION fieldbus devices communicate with an Ovation controller through an Ovation fieldbus gateway.
- The fieldbus device support be enabled for only one Ovation network on an AMS Device Manager workstation.
- No devices operate in burst mode.

You can install AMS Device Manager on an Ovation system as follows:

- For HART devices - If you want to access only HART devices on your Ovation system, AMS Device Manager can be installed on an Ovation 2.3 or 2.4 workstation.
- For HART devices - AMS Device Manager can be installed on a remote PC connected to the Ovation system through a LAN, provided the AMS Device Manager PC can communicate with the Ovation Database Server and the controllers through TCP/IP. Set the default gateway in the AMS Device Manager PC to the IP address of the primary network interface card in the Ovation Base station. See the Ovation documentation for information about communication settings required in the Ovation Engineer Workstation.
- For fieldbus devices - If you want to access fieldbus device information on your Ovation system, AMS Device Manager can be installed on the Ovation 2.3 or 2.4 station that also has the Fieldbus Engineering Tool (FET) server installed.
- For fieldbus devices - If you want to receive fieldbus alarms information on your Ovation system, AMS Device Manager must be installed on the Ovation 2.4 station that also has the FET server and the Alarm server installed.

- For HART and fieldbus devices - If you want to access HART and fieldbus device information on your Ovation system, AMS Device Manager can be installed on a Windows XP-based Ovation drop, which includes Ovation Engineer Workstations on 2.3 (or higher) Ovation systems.

Each Ovation controller uses a unique TCP/IP address. AMS Device Manager communicates with HART devices through I/O modules contained in the Ovation controller chassis, or in remote nodes connected to the Ovation controller.

Additional Ovation Requirements for Windows XP PCs

If AMS Device Manager is installed on a separate Windows XP PC, a registry setting must be changed on the Ovation server to enable TCP/IP forwarding.

— IMPORTANT —
If you use Registry Editor incorrectly, you may cause serious problems that may require you to reinstall your operating system.

► To change the default registry settings:

1. Select **Start | Run** from the Windows taskbar.
2. In the text box, type REGEDIT and click **OK**.
3. In the Registry Editor (Regedt32.exe), view the following registry key:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\
Parameters
4. Set the following registry values:
Value Name: IPEnableRouter
Value type: REG_DWORD
Value Data: 1
NOTE: A data value of 1 enables TCP/IP forwarding for all network connections installed and used by this computer.
5. Click **OK**.
6. Close the Registry Editor.

DeltaV

The DeltaV System Interface requires:

- Workstation software:
 - AMS Device Manager 7.0 can be installed on the following DeltaV 7.3 and later workstations:
 - o Application Station (Server Plus or Client SC)
 - o Professional *PLUS* (Server Plus or Client SC)
 - o Maintenance Station (Server Plus or Client SC)
 - o Professional Station (Client SC only)
 - o Remote Professional Station (Client SC only)

Note: If you install AMS Device Manager on a DeltaV workstation that is a domain controller, you must manually add the AmsServiceUser account to the DeltaV Group. If you need assistance, contact technical support.

- AMS Device Manager 7.0 software may also be installed on a separate PC connected to a DeltaV Professional *PLUS* station through a separate Ethernet connection.
- To use AMS Device Manager 7.0 with DeltaV 6.3 or 6.4, you must install AMS Device Manager and DeltaV on separate PCs. For more information, contact your Emerson Process Management Sales/Service Office.

Note: When installing AMS Device Manager on a workstation that has (or has had) Fieldbus Technician installed, the AMS Device Manager installation program may display messages and errors referring to DeltaV. In this case, AMS Device Manager will function, but the Fieldbus Technician application may be impacted.

- Controller hardware/software—DeltaV version 7.3 and later and AMS Device Manager 7.0 support the MD, M5, and M5+ controllers on the same PC.
- I/O hardware (the DeltaV I/O channel must be configured as a HART channel)—Analog Input HART Module V2 or higher and Analog Output HART Module V2 or higher.
- Operating system—DeltaV 7.3 and later require Windows XP or Windows Server 2003.
- Security—The DeltaV Server password must be entered in the AMS Network Configuration utility (see “Configuring AMS Device Manager for a DeltaV Interface” on page 76).

If you want to run additional system interfaces, HART modems, or HART multiplexers on AMS Device Manager while using the DeltaV System Interface, contact product support for compatibility information.

DeltaV supports fieldbus devices, Revision 5 and 6 HART devices, and devices connected to DeltaV Safety Instrumented System (SIS) logic solvers. Although AMS Device Manager recognizes additional revisions of HART devices when using other HART communication devices, it will not recognize them when they are connected to DeltaV.

DeltaV versions 7.2 and later can access devices connected to RS3 and PROVOX I/O systems through the DeltaV Interface for RS3 I/O and DeltaV Interface for PROVOX I/O, respectively. The devices are displayed in the DeltaV network hierarchy in AMS Device Manager. For installation and setup information, refer to the DeltaV Books Online.

The AMS ValveLink SNAP-ON application is supported for DeltaV and PROVOX I/O cards, but not for RS3 I/O cards. See “PROVOX” on page 29 for I/O requirements.

The DeltaV System Interface supports AMS ValveLink Diagnostics. Analog output modules configured for HART are required on the DeltaV substation for communication with HART FIELDVUE digital valve controllers. Fieldbus FIELDVUE digital valve controllers need only be commissioned and ports downloaded.

PROVOX

The PROVOX System Interface requires:

- I/O type (inputs)—CL6822, CL6825, or CL6827
- I/O type (outputs)—CL6826 (will only support standard HART messaging, it will not support AMS ValveLink Diagnostics); CL6828, P3.1 or greater (will support standard HART messaging and AMS ValveLink Diagnostics)
- Controller options—SR90 P5.4 with I/O Driver P5.5 or higher or SRx P5.5 or higher
- System software options—OWP with P1.2 or higher, PROVUE P5.5 or higher, and ENVOX 3.4 or higher (4.0 to support AMS ValveLink). I/O must be configured as “digital” or “hybrid”
- Dedicated HDL with Ethernet connection (TCP/IP) to AMS Device Manager PC

FF HSE

The FF HSE interface requires:

- One or more (up to 8) commissioned FF HSE Linking Devices that conform to the FOUNDATION Fieldbus HSE and H1 specifications (only the Rosemount 3420 Linking Device is currently supported).
- Commissioning is accomplished using the device manufacturer's commissioning/decommissioning utility.
- FF HSE Linking Devices must be configured with unique TCP/IP addresses.
- An AMS Device Manager station with 1 or 2 Ethernet network interface cards (NIC). Two NICs are recommended to configure a dedicated FF HSE segment, to reduce the amount of competing network communications.

— IMPORTANT —

If you have an Ovation network installed, use a different TCP/IP address for the FF HSE network.

ROC

AMS Device Manager connects to the ROC Interface using a polling engine that is installed separately from and not supplied with AMS Device Manager. The ROC field servers and ROCs must be added to the polling engine before AMS Device Manager can communicate with the ROCs. The ROC Interface requires one or more of the following controllers:

- ROC 809 with W68126, Version 1.40 firmware
- ROC 803 with W68126, Version 1.40 firmware
- Gateway version 1.00
- ROC 809L version 1.00

To use the controllers, the HART I/O module AI/AO Card (W38260) Rev. A with W68153, version 1.0 firmware is also required.

To obtain the required polling engine, contact your Emerson Process Management Sales/Service Office.

RS3

The RS3 System Interface requires:

- I/O hardware—FIC 4.8 or higher I/O cards with smart daughterboard and boot revision supplied with P1R1.4 or MAIO FIM with 2.6 or higher
- Controller hardware—MPC II Controller Processor or higher, CP-IV Coordinator Processor or higher
- System software—P1R1.4 or higher with controller image P1.10 or higher
- Dedicated RNI—recommended when ROS is fully loaded. You must have boot file R2.3 or higher. A single RNI will support multiple AMS Device Manager connections.

Note: *AMS Device Manager and RS3 Operator Station (ROS) cannot be installed on the same PC.*

STAHL

The STAHL HART interface requires:

- RS-232/RS-485 converter for each network (see the Release Notes for supported models)
- STAHL ICS Module—9148 Multiplexer Module installed on a 9161 Module Board with up to 16 HART Transmitter Supply Units (module 9103)
- I.S.1 System—Central Unit Module 9440, Multiplexer Module 9461 (HART analog input) or 9466 (HART analog output)
- IS PAC 9192 HART multiplexer

Note: *You may not be able to use AMS Device Manager to communicate with HART devices through a STAHL IS PAC multiplexer at the same time a handheld communicator is communicating with the device loop. See your STAHL representative for details.*

The ICS Module is a single HART multiplexer that supports HART transmitter supply units connected to field devices. The I.S.1 System routes messages to their multiplexers with attached HART field devices. For additional information on supported STAHL equipment, see the Release Notes and the manufacturer's documentation.

HART Multiplexer Network

A HART multiplexer network requires:

- One serial communication port for each HART multiplexer network.
- An RS-485 converter (see the Release Notes for supported models).
- One of the following types of multiplexers or I/O:
 - Arcom
 - Elcon
 - MTL
 - Pepperl+Fuchs
 - Spectrum Controls I/O (this is an I/O module that connects to an Allen-Bradley Programmable Logic Controller - displays as a multiplexer in AMS Device Manager)

See the Release Notes for additional requirements for specific types of multiplexers. For more information about multiplexer networks, refer to the “Configuring and Troubleshooting Multiplexer Networks” white paper found in the Technical Papers folder on **DISK 2—ACCESSORIES** of the AMS Device Manager program CD set.

MTL8000 Mark 2 BIM and eBIM

The physical connection between your AMS Device Manager PC and the MTL8000 Mark 2 BIM and eBIM system requires one of the following:

- A serial connection using an RS-485 converter (Mark 2 BIM)
- An Ethernet connection using TCP/IP addressing (eBIM)

Supported analog input modules:

- 8101-HI-TX – 4-20mA, 8 channel, Div. 2/2
- 8201-HI-IS – 4-20mA, 8 channel, Div. 2/1
- 8301-HI-IS – 4-20mA, 8 channel, Div. 1/1

Supported analog output modules:

- 8102-HO-IP – 4-20mA, 8 channel, Div. 2/2
- 8202-HO-IS – 4-20mA, 8 channel, Div. 2/1

HART Over PROFIBUS

The HART Over PROFIBUS System Interface requires that:

- AMS Device Manager is installed on a PC running Windows XP or Windows Server 2003.

Note: You can use Windows 2000 only if you give administrative privileges to the AmsServiceUser account.

- A control system that supports PROFIBUS DPV1 is configured and operational.
- At least one Trebing & Himstedt (T+H) PROFIBUS Gateway for communications is configured and T&H software installed.
- At least one PROFIBUS DP remote I/O subsystem that supports HART communications is connected to the control system. Contact T+H for a current list of supported I/O subsystems.
- At least one HART I/O module is installed in the remote I/O subsystem.
- At least one HART instrument is present on a module channel.

AMS Asset Portal Support for FOUNDATION Fieldbus Devices

AMS Device Manager Web Services supports both HART and FOUNDATION fieldbus devices for use in AMS Asset Portal. To support this functionality in AMS Asset Portal, FOUNDATION fieldbus devices must be attached to an Ovation system, DeltaV system, or FF HSE Linking Device and accessed through AMS Device Manager Web Services.

