

TECHNICAL BULLETIN

M3 Workstation Overview and Installation

Installing the M3 Workstation..... 2

*Introduction..... *2*

Key Concepts..... 3

M3 Workstation Overview3

Summary of Features *3

Configurations5

Installation and Commissioning Overview7

Installation/Upgrade Sequence..... *8

Detailed Procedures..... 9

Installing M3 Workstation Software..... *9

Installing the M3 Workstation

Introduction

The M3 Workstation provides a monitoring and command system for communication with supervisory control networks. Communication to the control networks is via local area network, direct serial connection, or multi-site dialup. For system software and hardware requirements, refer to the *Metasys Installation and Platform Requirements Technical Bulletin (LIT-12012)*.

This document presents an overview of the M3 Workstation and the M3 Workstation software installation.

Key Concepts

M3 Workstation Overview

The M3 Workstation represents a set of software components installed on the same machine and used in conjunction with one another to manage facility operations. The M3 Human-Computer Interface (HCI) application organizes the included software components, allows navigation between the components, and orchestrates their interactions.

The M3 HCI is the central point for user login, initiating Site connections (for remote applications), and selecting between software applications. These applications are used to view and manipulate the online data at the sites and the historical site data archived on the workstation. The M3 HCI also reports alarms from the sites and allows their acknowledgement. The M3 Workstation may be extended by the end user to provide quick access to additional tools via a configurable menu. One of the unique features of the M3 Workstation is its ability to manage or contain a number of other applications within an encompassing shell application. The M3 Workstation represents the included feature applications using a tabbed, or workspace, presentation style. These workspaces represent active documents that may be used standalone, as well as in the M3 Workstation container. As each workspace is selected, the M3 Workstation main menu changes appropriately to include the menus from the contained application.

Summary of Features

The following is a brief list of M3 Workstation features:

Note: The M3 Workstation software uses standard Microsoft® Windows® installation and operating characteristics. For this reason, the M3 Workstation should run on the most recent versions of the supported operating systems. Install the most recent service packs. The minimum, qualified service pack levels are listed in the *Metasys Installation and Platform Requirements Technical Bulletin (LIT-12012)*.

- Remote access to multiple sites. The ability to support multiple concurrent site connections is dependent on the capabilities of the OLE for Process Control (OPC) Data Access servers. For example, two N30 sites and one Companion™/Facilitator™ site can be connected simultaneously.
- dial-in alarms from the controller networks (Windows NT® only from N30 sites)

- alarm management workspace (includes M-Alarm Current Events Viewer and Alarm Panel)
- user access system (M-Password)
- trend collection into a historian database (M-Collector)
- dynamic graphics with animation capabilities (M-Graphics)
- graphical viewing of archived trend data (M-Trend)
- online object explorer (M-Explorer)
- online object inspector (M-Inspector, N30s only)
- VT100 Terminal Interface to currently connected Companion/Facilitator sites
- graphical scheduling for N30 sites

The M3 Workstation does not support the following with N30s:

- online generation (add/delete) of N30 database objects
- archive/restore of N30 databases

The Project Builder component of M-Tool may be installed on the M3 Workstation Personal Computer (PC) to provide these functions. For details, refer to the *Project Builder User's Guide (LIT-693200)*.

Configurations

Figure 1 shows an example of a Building Automation System (BAS) with M3 Workstations and Companion/Facilitator Panel units.

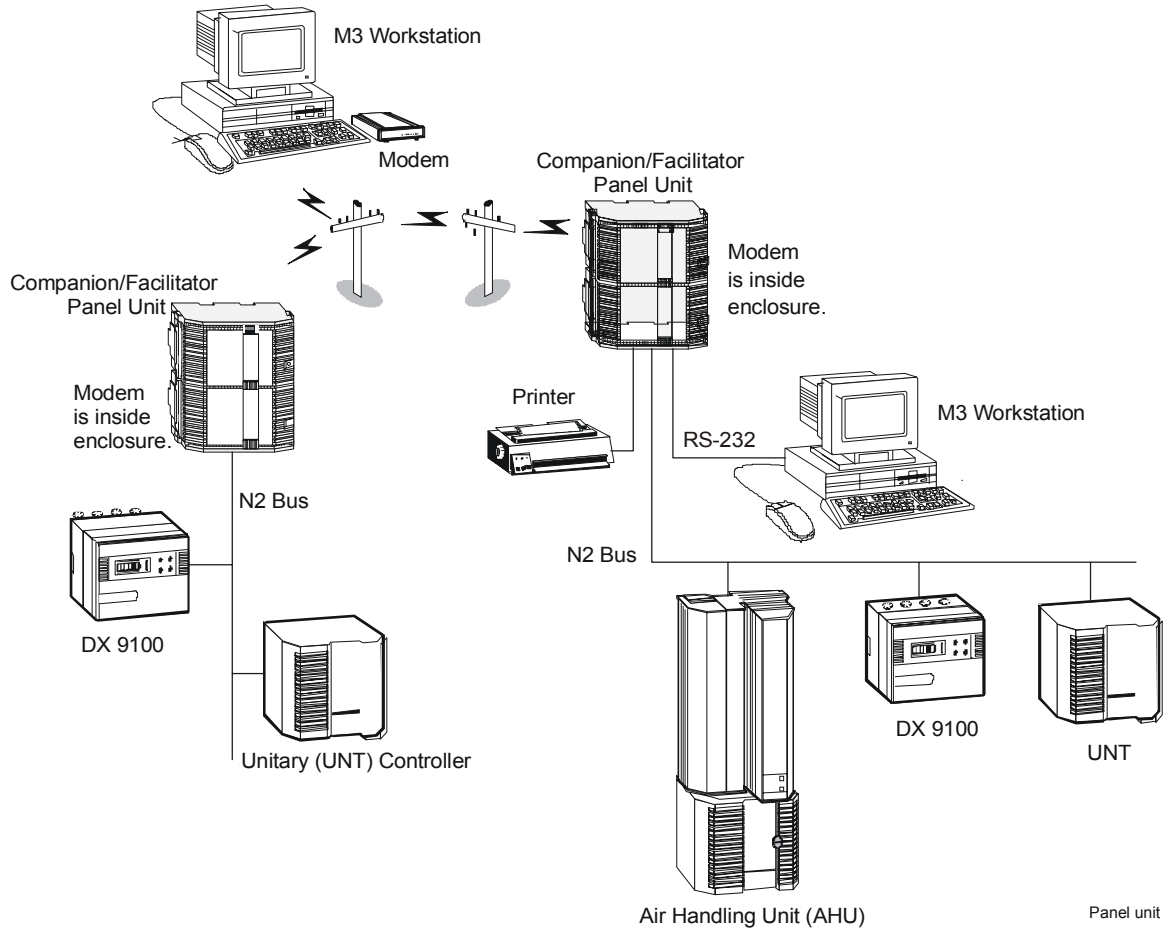


Figure 1: BAS with M3 Workstation and Companion/Facilitator Panel

Figure 2 shows an example of a BAS with M3 Workstations and N30 controllers.

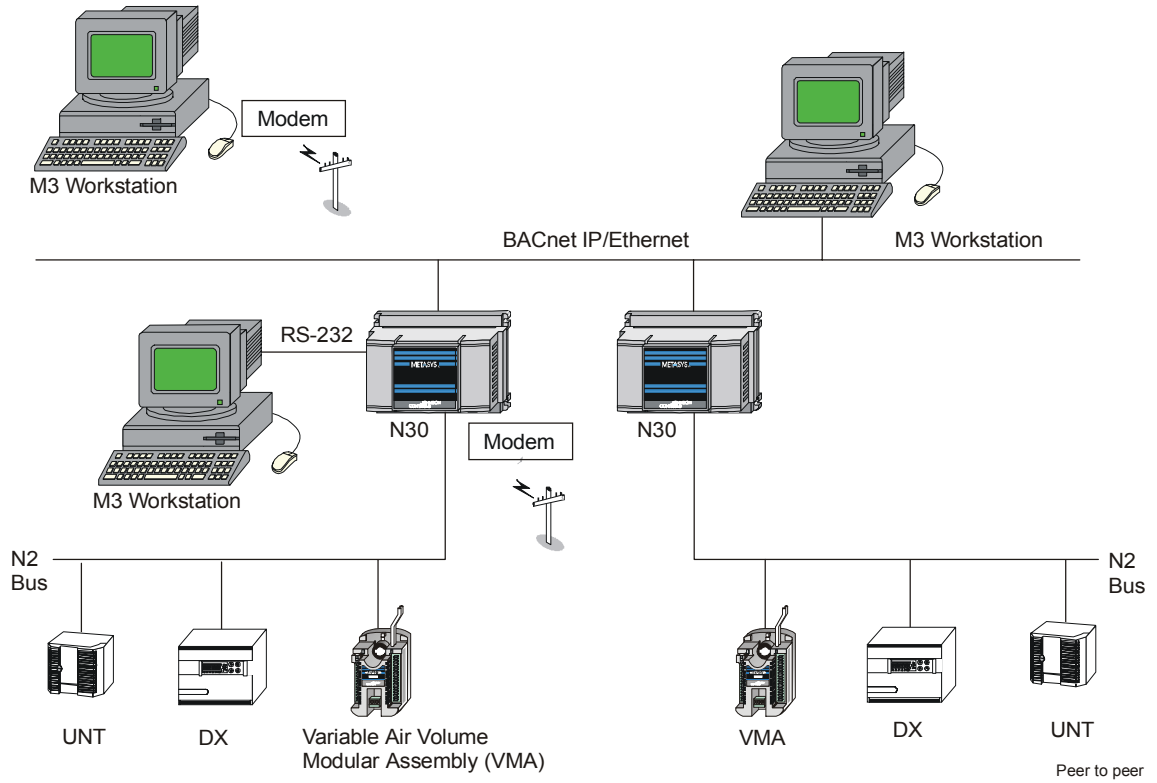


Figure 2: BAS with M3 Workstation and N30 Supervisory Controllers

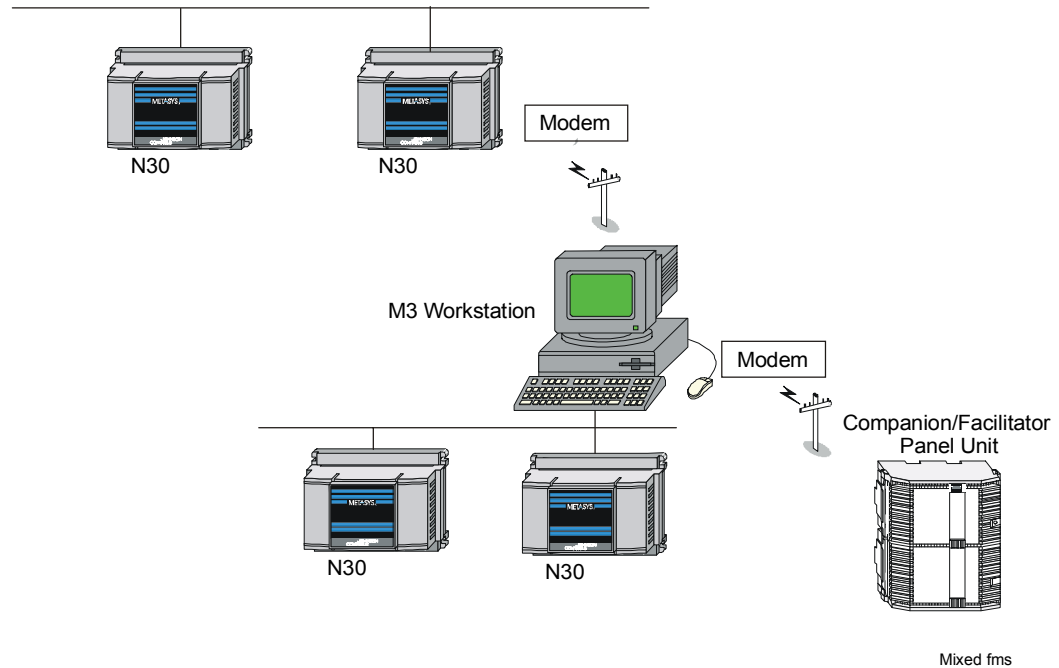


Figure 3: BAS with M3 Workstation, Companion/Facilitator Panel Units, and N30 Supervisory Controllers

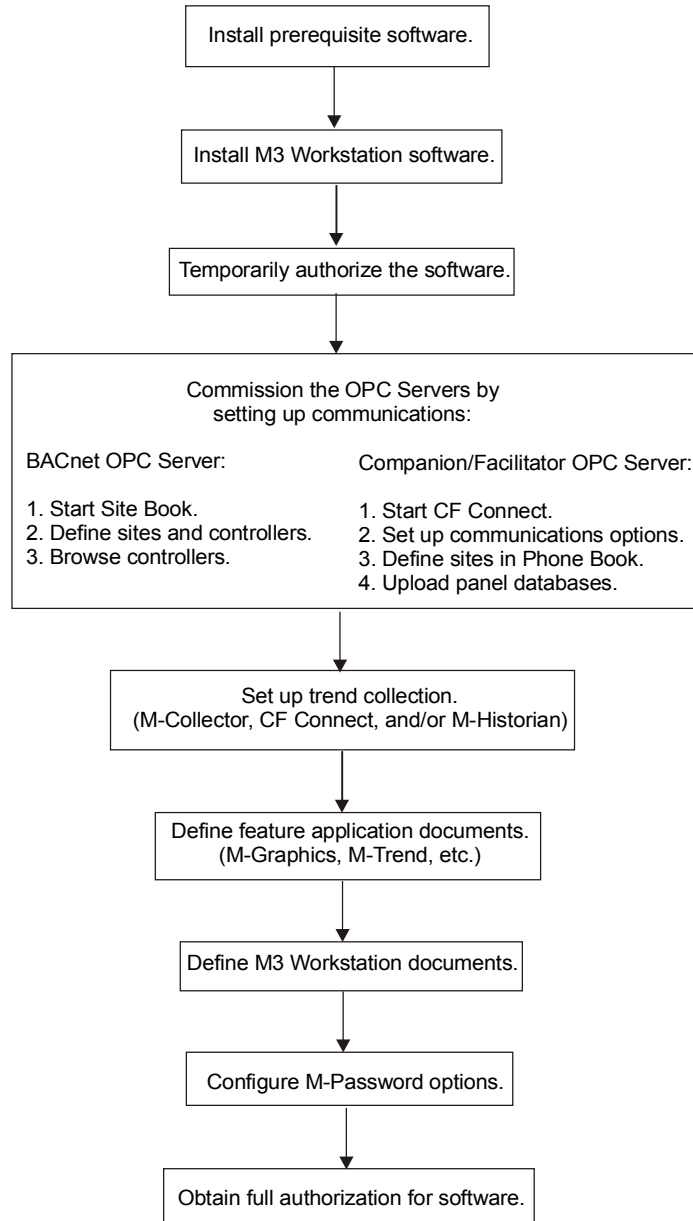
Note: Two N30 sites and one Companion/Facilitator site can be connected simultaneously.

Installation and Commissioning Overview

The M3 Workstation offers three system configurations: N30 (BACnet®) OLE for Process Control (OPC) Server only, Companion/Facilitator OPC Server only, or both. Figure 4 summarizes the installation and commissioning process for all three options.



WARNING: When installing two or more M3 Workstations, use unique network addresses. Do not use the default address of 100 on more than one workstation. If two M3 Workstations have the same network address, for example the default address 100, and are dialed simultaneously into the same N30 network, alarms, signup, and routing information are sent to only one of those workstations.



M3 overview

Figure 4: M3 Workstation Installation and Commissioning Overview

Installation/Upgrade Sequence

Refer to the *Metasys Installation and Platform Requirements Technical Bulletin (LIT-12012)* for information regarding platform and re-authorization requirements and installation sequence.


Detailed Procedures

Installing M3 Workstation Software

Prerequisites

Verify and install, if necessary, the prerequisite software listed in the *Metasys Installation and Platform Requirements Technical Bulletin, (LIT-12012)*. If necessary, obtain authorization. Refer to the Upgrade Authorization form shipped with the software and the *Using M-Authorize Technical Bulletin (LIT-6424400)*.

Note: The Windows 2000 installation program gives full access to everyone for the C:\Documents and Settings\All Users\Application Data\Johnson Controls\M-Data folder.

	WARNING: When installing two or more M3 Workstations, use unique network addresses. Do not use the default address of 100 on more than one workstation. If two M3 Workstations have the same network address, for example the default address 100 and are dialed simultaneously into the same N30 network, alarms, signup, and routing information are sent to only one of those workstations.
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Installation

To install M3 Workstation software:

1. Insert the M3 Workstation CD-ROM in the drive. The M3 Workstation Welcome screen appears. Follow the instructions on the screen.

Note: If the M3 Workstation installation screen does not appear, select the Windows Start menu > Run and type x:\setup.exe (x is the letter for the CD drive). Click OK.

2. When the Select Install Options window (Figure 5) appears, select the components to install. Selecting M3 Workstation requires that you install one or both servers: Companion/Facilitator OPC Server or N30 (BACnet) OPC Server. Click Next to continue.

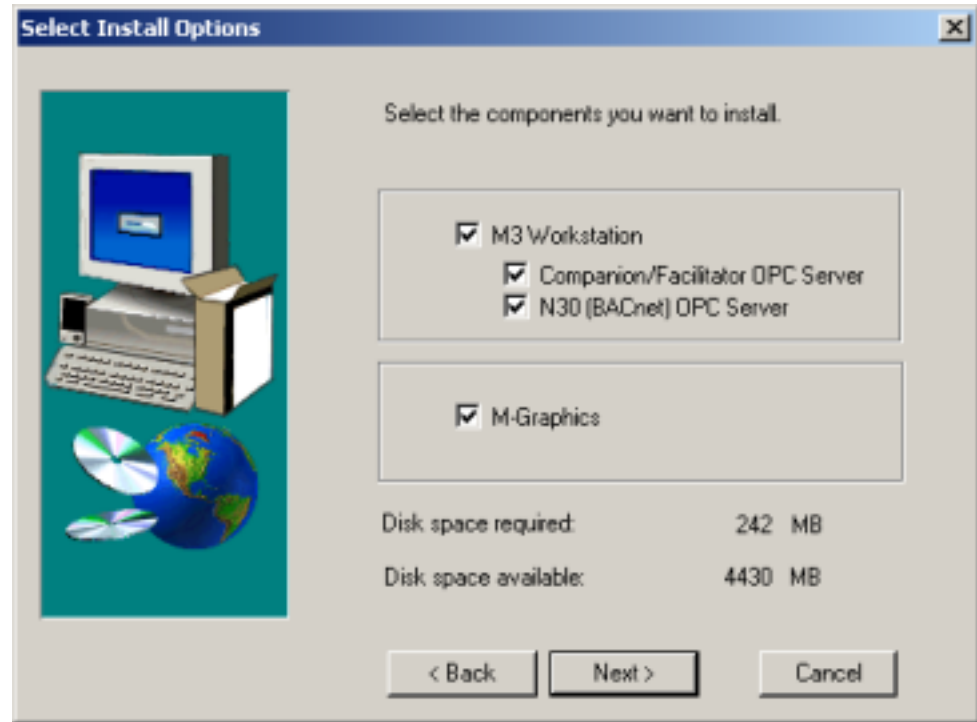


Figure 5: Select Install Options Dialog Box

3. The installation proceeds to install the following component software:
 - M-Authorize
 - M-Password
 - M-Explorer
 - M-Graphics (if selected)
 - M-Trend
 - M-Collector
 - BACnet OPC Data and Alarm/Event Server (if selected)
 - Companion OPC Server (if selected)
 - ModemPro
 - M-Alarm
4. Click Finish when installation is complete.