Purchasing Information

for

McIDAS-X, -XCD and -XSD

Workstations

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Introduction

This document provides software and hardware configuration information for purchasing new workstations to run:

- McIDAS-X (McIDAS applications)
- McIDAS-XCD (McIDAS Conventional Data decoders)
- McIDAS-XSD (McIDAS Satellite Data ingestors)

Standard performance measurements are listed for each workstation. It is assumed that workstations in a supported family with the same or higher performance marks will perform acceptably or better. Systems specified here are not a definitive list of models that will run the McIDAS packages.

Before purchasing a workstation, take the following issues into account:

- Operating systems and compilers are administered differently by each vendor. Your systems administrator will need time to learn the version of Unix and keep up with changes in operating system levels.
- In most cases, a CD-ROM, QIC tape drive, or 4mm DAT tape drive is required to install software on a workstation.
- Defect Support (reporting a bug in the vendor’s code) is free. For a fee, most vendors offer other software support, such as telephone support for operating system problems or compiler questions.
- HP, IBM, Sun, and SGI all offer at least one option for hardware maintenance beyond the warranty of the workstation.

This document is updated as product lines change and more is learned about the configurations. The date on the bottom of the page shows the last time the information was revised. Information older than three months should NOT be used. If you have questions, contact:

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Software and Operating System Requirements

Listed below are the current vendor supplied software packages needed to run, install and administer MoIDas-X, -XCD, or -XSD on Unix platforms. The indented items are bundled in the software package. For example, Motif is part of the AIXWindows software bundle from IBM. Although most vendors offer other applications in their bundles, only those required for MoIDas-X, -XCD or -XSD are listed here. When purchasing software, specify each item separately, even if it is bundled in the package.

Because some workstations are delivered from the manufacturer with the newest versions of the operating system and compilers, MoIDas-X, -XCD or -XSD may not be fully tested or supported on them. If you need more information on supported versions, contact your program manager or JT Young at (608)262-6314.

HP/Apollo 9000 series 700

- HP-UX
- HP FORTRAN
- HP C

IBM RISC System/6000

- AIX
- XLF
- XLC
- AIXWindow
- Motif

SGI

- IRAK
- IRAK Development Option (IDO)
  - ANSI C
  - Execution Only Environ. 2
  - X11 Execution Environment
  - Motif Execution Only Environment
  - Motif Development System

SGI FORTRAN 77

Sun SPARC

- Solaris
  - SunOS
  - OpenWindows; installed as full OpenWindows cluster
  - Sun Pro SPARCCompiler FORTRAN
  - Sun Pro SPARCCompiler C
  - ICS OSP Motif

(FORTRAN 77 Compiler)
(C Compiler)
(Motif) not available from Sun, purchase from: Integrated Computer Solutions 201 Broadway Cambridge, MA 02139 phone: (617) 621-0060

(Operating System, X Windows and Motif)
(FORTRAN 77 Compiler)
(C Compiler)
(Operating System)
(FORTRAN 77 Compiler)
(C Compiler)
(Motif)
(Motif)
(FORTRAN 77 Compiler)
MoDAS-X Workstation Information

The user's workstation runs MoDAS-X. The workstation configurations on the next page are single-user, minimum configurations. Each can accommodate two users by adding 8 MB RAM and an Xterminal configured with at least 16 MB RAM.

Although a 1.0 GB hard disk is recommended for each workstation, sites must determine the amount of data to be stored on the workstation and adjust the disk capacity accordingly.

MoDAS-X supports four frame sets; the MoDAS-X session can be configured for any one of them. To configure a user's workstation for more frames than are shown on the chart below, you must calculate the additional memory required. Frame size is 480x640 pixels.

<table>
<thead>
<tr>
<th>Frame Set</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>24 8-bit color MoDAS-X frames</td>
</tr>
<tr>
<td>B</td>
<td>12 8-bit color pseudo-independent graphics</td>
</tr>
<tr>
<td>C</td>
<td>6 24-bit true color MoDAS-X frames</td>
</tr>
<tr>
<td>D</td>
<td>3 24-bit true color pseudo-independent graphics</td>
</tr>
</tbody>
</table>

The MoDAS-X workstation configurations described on the next page can support, at most, one frame set; each additional frame set requires an additional 8 MB of memory, assuming a frame size of 480x640 pixels.

For example, to run MoDAS-X on a workstation using frame set B (8-bit color with pseudo-independent graphics), with a total of 72 frames, you must install 72 MB of memory:

72 MB Total

32 MB = base memory plus one frame set B (12 frames)
40 MB = additional memory for 60 more frames in frame set B (12 frames per 8 MB of memory)

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McIDAS-X Workstation Configurations

**HP**
- HP 715/33
- SPECint92: 24.2
- SPECfp92: 45.0
- 32 MB RAM
- 1 GB hard disk
- Ethernet
- Graphics: *24-bit graphics for frame set C or D* 
  *8-bit graphics for frame set A or B*
- 19" color monitor
- HP-UX workstation localization kit
- PC-style keyboard
- 3-button mouse

**IBM**
- IBM RS/6000 model 370
- SPECint92: 70.3
- SPECfp92: 121.1
- 32 MB RAM
- 1 GB hard disk
- Ethernet
- Graphics: *24-bit graphics for frame set C or D* 
  *8-bit graphics for frame set A or B*
- 19" color monitor
- AT-101 keyboard
- 3-button mouse

**SGI**
- SGI Indy R4600PC
- SPECint92: 52.8
- SPECfp92: 49.9
- 32 MB RAM
- 1 GB hard disk
- Ethernet
- Graphics: *24-bit graphics for frame set C or D* 
  *8-bit graphics for frame set A or B*
- 19" color monitor
- AT-101 keyboard
- 3-button mouse

**Sun**
- Sun SPARCstation 5 35-85
- SPECint92: 64.0
- SPECfp92: 54.6
- 32 MB RAM
- 1 GB hard disk
- Ethernet
- Graphics: *24-bit graphics for frame set C or D* 
  *8-bit graphics for frame set A or B*
- 19" color monitor
- Country Kit X3340U
- X3340U keyboard
- 3-button mouse

* SSEC recommends 24-bit graphics.
Decoder workstations run both the McIDAS-XCD and McIDAS-X packages.

To ingest one circuit (2400 baud or slower) per decoder workstation, no special hardware is necessary. However, to ingest more than one circuit, you should purchase special async hardware. SSEC recommends the ST1008+ SCSI Terminal Server from Central Data. While this model is an 8-port device, Central Data also offers solutions for 4-port and other options. Although the hardware requires a separate device driver for each platform, Central Data offers Lifetime Portability Insurance which allows you to purchase any supported device driver for a one-time cost. For more information or to purchase this hardware, contact:

Steve Britsky
Central Data
1602 Newton Dr.
Champaign, IL 61821-1098
1-800-482-0315 ext. 204

Each McIDAS-XCD workstation stores approximately 400 MB of data daily. This assumes the IDS, DDS, FFS, and HRS circuits are decoded with the current McIDAS decoder set. To store more than one full day's worth of data on the decoder/server, multiply 400 MB by the number of days of storage desired to determine your hard disk requirements.
## MoIDAS-XCD Workstation Configurations

<table>
<thead>
<tr>
<th>HP</th>
<th>IBM</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP 725/50</td>
<td>IBM RS/6000 model 370</td>
</tr>
<tr>
<td>SPECint92: 36.9</td>
<td>SPECint92: 70.3</td>
</tr>
<tr>
<td>SPECfp92: 70.0</td>
<td>SPECfp92: 121.1</td>
</tr>
<tr>
<td>64 MB RAM</td>
<td>64 MB RAM</td>
</tr>
<tr>
<td>Hard disk: 2.0 GB minimum; see previous page for data storage requirements</td>
<td>Hard disk: 2.0 GB minimum; see previous page for data storage requirements</td>
</tr>
</tbody>
</table>

**Ethernet**  
8-bit graphics  
17" color monitor  
HP-UX workstation localization kit  
PC-style keyboard  
3-button mouse  
Async hardware

**SGI** -- Under investigation  
Not supported

<table>
<thead>
<tr>
<th>Sun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sun SPARCstation 10 model 40</td>
</tr>
<tr>
<td>SPECint92: 50.2</td>
</tr>
<tr>
<td>64 MB RAM</td>
</tr>
<tr>
<td>Hard disk: 2.0 GB minimum; see previous page for data storage requirements</td>
</tr>
</tbody>
</table>

**Ethernet**  
8-bit graphics  
17" color monitor  
Country Kit X3540F  
X3540F keyboard  
3-button mouse  
Async hardware

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MoIDAS-XSD Workstation Information

Ingestor workstations run both the MoIDAS-XSD and MoIDAS-X packages.

The MoIDAS-XSD configurations assume each workstation ingests only one signal. The hardware that acquires the signal is called a Satellite-data Acquisition System (SAS). One SAS is required for each concurrent signal ingested. For more information on this hardware, contact your program manager or JT Young at (608)262-6314.

Adding a third Ethernet connection should allow a second signal to be ingested into the same workstation under most circumstances. The exceptions are:

- If access to the data on the ingester is heavy, there may not be disk time or CPU cycles left for a second signal type.
- Ingesting GVAR or the POES relay may be a heavy load, using too much disk time or CPU cycles.

As SSEC has not experimented with two signal combinations, this information is preliminary.

Each site must calculate the amount of hard disk space needed for:

- operating system
- MoIDAS-X
- MoIDAS-XSD
- amount of satellite image data to be stored on the workstation
## MoIDAS-XSD Workstation Configurations

<table>
<thead>
<tr>
<th>HP</th>
<th>IBM</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP 725/75</td>
<td>IBM RS/6000 model 370</td>
</tr>
<tr>
<td>SPECint92:  61.0</td>
<td>SPECint92: 70.3</td>
</tr>
<tr>
<td>SPECfp92:  113.0</td>
<td>SPECfp92: 121.1</td>
</tr>
<tr>
<td>96 MB RAM</td>
<td>96 MB RAM</td>
</tr>
<tr>
<td>Hard disk:  2.0 GB minimum</td>
<td>Hard disk: 2.0 GB minimum</td>
</tr>
<tr>
<td>Ethernet (LAN/9000 EISA Adapter)</td>
<td>Ethernet</td>
</tr>
<tr>
<td>8-bit graphics</td>
<td>8-bit graphics</td>
</tr>
<tr>
<td>17&quot; color monitor</td>
<td>17&quot; color monitor</td>
</tr>
<tr>
<td>HP-UX workstation localization kit</td>
<td>AT-101 keyboard</td>
</tr>
<tr>
<td>PC-style keyboard</td>
<td>3-button mouse</td>
</tr>
<tr>
<td>3-button mouse</td>
<td>1 additional Ethernet connection per ingest signal</td>
</tr>
<tr>
<td>1 additional Ethernet connection per ingest signal</td>
<td>SAS hardware (see previous page)</td>
</tr>
<tr>
<td>SAS hardware (see previous page)</td>
<td>SAS hardware (see previous page)</td>
</tr>
</tbody>
</table>

**SOI** -- Under investigation
Not supported

**Sun** -- Under investigation
Not supported

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