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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 McIDAS-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 McIDAS-X, -XCD and -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, McIDAS-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	(Operating System, X Windows and Motif)
HP FORTRAN	(FORTRAN 77 Compiler)
HP C	(C Compiler)

IBM RISC System/6000

AIX	(Operating System)
XLF	(FORTRAN 77 Compiler)
XLC	(C Compiler)
AIXwindows	(X Window System)
Motif	(Motif)

SGI

IRIX	(Operating System)
IRIS Development Option (IDO)	
ANSI C	(C Compiler)
Execution Only Environ. 2	(X Window System)
X11 Execution Environment	
Motif Execution Only Environment	(Motif)
Motif Development System	(Motif)
SGI FORTRAN 77	(FORTRAN 77 Compiler)

Sun SPARC

Solaris	
SunOS	(Operating System)
OpenWindows; installed as full OpenWindows cluster	(X Window System)
Sun Pro SPARCompiler FORTRAN	(FORTRAN 77 Compiler)
Sun Pro SPARCompiler C	(C Compiler)
ICS OSF Motif	(Motif) not available from Sun, purchase from: Integrated Computer Solutions 201 Broadway Cambridge, MA 02139 phone: (617)621-0060

McIDAS-X Workstation Information

The user's workstation runs McIDAS-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.

McIDAS-X supports four frame sets; the McIDAS-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.

Frame Set	Description
A	24 8-bit color McIDAS-X frames
B	12 8-bit color pseudo-independent graphics
C	6 24-bit true color McIDAS-X frames
D	3 24-bit true color pseudo-independent graphics

The McIDAS-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 McIDAS-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:

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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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72 MB Total
```

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 S5-85
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 X3540U
X3540U keyboard
3-button mouse

* SSEC recommends 24-bit graphics.

McIDAS-XCD Workstation Information

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, PPS, 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.

McIDAS-XCD Workstation Configurations

HP
HP 725/50
SPECint92: 36.9
SPECfp92: 70.0
64 MB RAM
Hard disk: 2.0 GB minimum; see previous page for data storage requirements
Ethernet
8-bit graphics
17" color monitor
HP-UX workstation localization kit
PC-style keyboard
3-button mouse
Async hardware

IBM
IBM RS/6000 model 370
SPECint92: 70.3
SPECfp92: 121.1
64 MB RAM
Hard disk: 2.0 GB minimum; see previous page for data storage requirements
Ethernet
8-bit graphics
17" color monitor
AT-101 keyboard
3-button mouse
Async hardware

SGI -- Under investigation
Not supported

Sun
Sun SPARCstation 10 model 40
SPECint92: 50.2
SPECfp92: 60.2
64 MB RAM
Hard disk: 2.0 GB minimum; see previous page for data storage requirements
Ethernet
8-bit graphics
17" color monitor
Country Kit X3540F
X3540F keyboard
3-button mouse
Async hardware

McIDAS-XSD Workstation Information

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

The McIDAS-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 ingestor 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
- McIDAS-X
- McIDAS-XSD
- amount of satellite image data to be stored on the workstation

McIDAS-XSD Workstation Configurations

HP
HP 725/75
SPECint92: 61.0
SPECfp92: 113.0
96 MB RAM
Hard disk: 2.0 GB minimum
Ethernet (LAN/9000 EISA Adapter)
8-bit graphics
17" color monitor
HP-UX workstation localization kit
PC-style keyboard
3-button mouse
1 additional Ethernet connection
per ingest signal
SAS hardware (see previous page)

IBM
IBM RS/6000 model 370
SPECint92: 70.3
SPECfp92: 121.1
96 MB RAM
Hard disk: 2.0 GB minimum
Ethernet
8-bit graphics
17" color monitor
AT-101 keyboard
3-button mouse
1 additional Ethernet connection
per ingest signal
SAS hardware (see previous page)

SGI -- Under investigation
Not supported

Sun -- Under investigation
Not supported

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