
HARDWARE CONFIGURATION

INTRODUCTION

This section of the System Administration Manual describes the hardware specifications for the MAP engine computers. It is divided into three parts: *Hardware Compatibility*, *Local Equipment*, and *Remote Equipment*. The *Hardware Compatibility* section identifies the types of cable pressurization monitoring systems, printers, and terminals that can be used with the MAP System. *Local Equipment* describes the specified hardware that is used with the MAP Engine computer. *Remote Equipment* explains the configuration requirements for setting up terminals and printers to receive MAP System reports and alarms via telephone modem connections.

Note: Beginning with PressureMAP Version 27, it is no longer a requirement to use only the SCO UNIX operating system on your PressureMAP computer. Version 27 now supports the CentOS 5.2 Linux operating system in addition to SCO UNIX.

Please note also that PressureMAP Version 27 systems purchased for use with the specified Linux operating system are not required to operate on a MAP Engine computer. This is due to the greater flexibility of the secure and scalable standards-based Linux operating system and the availability and support of hardware drivers for various hardware configurations.

PressureMAP Version 27 systems using the SCO UNIX operating system are required to use a System Studies-certified MAP Engine computer. Furthermore, in order to take advantage of the PressureWEB™ web browser user interface on a UNIX system, SCO UNIX Version 5.0.7 operating system is required.

HARDWARE COMPATIBILITY

The MAP Engine computer and associated software has been designed and tested to perform with a variety of automatic monitoring systems, printers and remote terminals. In order to achieve desired performance standards, only supported cable pressure monitoring equipment may be used with the MAP computer. This equipment is listed below.

Monitoring Equipment

PressureMAP and the associated Management Analysis Programs have been designed and tested to work with specific monitoring systems. The manufacturers and model types that are compatible with the Management Analysis Programs are listed below:

- **System Studies Incorporated**
Model Number: 289H LSS, 289H-M LSS, Dial-a-Ducer, uM260 Micro Monitor, Universal Stand-Alone Module (USAM)
- **Chatlos Systems, Inc., Technicom Systems, Inc., TX Industries**
Model Numbers: 600, 640 List 1, 640 List 2-CP1, 640 List 2-CP12, 640 List 2-CP20, 640 List 2-MPUZ, 640 List 3, Hercules 740, Hercules 940, Teleducer 50
- **Lancier**
Model Numbers: DW101 and DW1005

ADMINISTRATION

- **Nicotra**
Model Numbers: MINIDAS I and MINIDAS II (MINIDAS-2400)
- **Quest Controls, Inc.**
Model Numbers: TELSEC 1500 and TELSEC 2000
- **Sparton Technology, Incorporated**
Model Numbers: 5301A (including most software versions in existence prior to June 1, 1990), 5310 (only when used as a satellite to a Model 5301), 5335A, 5345A, 5301B, 5303B, 5304B, 5330B, 5335B, 5345B, 5318 MMU. (Please note that the old Sparton 5300A is no longer supported, effective with PressureMAP Version 21.)
- **TMACS**
Model Number: 1000
- **Puregas**
Model Number: PVD 800

Note: Please contact System Studies if you are using a Cable Pressurization Automatic Monitoring System (CPAMS) monitor that we do not currently support. Other types of CPAMS monitors may be added to the list in the future.

Printers and Terminals

The MAP System will operate with virtually any type of remote terminal or teletype printer. All remote terminals and printers used to access information from the MAP computer must have provisions for setting data bits, parity, and baudrate. In addition, they must also be able to print or display the ASCII character set.

The MAP System is compatible with most parallel printers. Serial printers, however, are not recommended for use with the MAP computer. If you have questions regarding the compatibility of the equipment you plan to use with the MAP System, please call System Studies Technical Support.

LOCAL EQUIPMENT

Due to PressureMAP's complex performance and communications requirements, only specified equipment can be used with the application. After extensively testing various computers and hardware combinations, the System Studies Software Engineers have assembled and certified the PressureMAP Engine computers listed below to use with PressureMAP. Systems running the SCO UNIX operating system MUST use a certified MAP Engine computer; conversely, most comparably equipped, user-selected computers can be used for PressureMAP Version 27 and higher systems which run the CentOS 5.2 Linux operating system.

Computer Components

PressureMAP Engine (version VIII)

- Processor—2.40 GHz (gigahertz) Intel® Xeon®
- Memory—1024 megabyte MEM DDR2
- Rackmount chassis (black) with industrial grade 600 watt power supply
- Hard disk—300 gigabyte, Serial Attached SCSI (SAS)
- Floppy disk drive—1.44 megabyte, 3.5-inch

- DVD—20x +/- RW
- 10/100 Ethernet port with Remote On-LAN Wakeup
- Onboard SCSI and Video
- Keyboard and mouse

PressureMAP Engine (version VII)

- Processor—2.66 GHz (gigahertz) Intel® Xeon®
- Memory—1 gigabyte MEM DDR2
- Rackmount chassis (black) with industrial grade 460 watt power supply
- Hard disk—73 gigabyte, SCSI
- Floppy disk drive—1.44 megabyte, 3.5-inch
- Tape drive—20/40 gigabyte, SCSI-3
- DVD—20x +/- RW
- 10/100 Ethernet port with Remote On-LAN Wakeup
- Onboard SCSI and Video
- Keyboard and mouse

The following is a list of hardware approved by System Studies Incorporated for use with PressureMAP operating on the MAP computers. FIGURE 3-1 illustrates a type of rack configuration commonly used for PressureMAP.

Serial Port Concentrator – One type of serial port concentrator is certified for use with MAP System computers: Digi PortServer® II—using a network connection rather than a dedicated controller card, PortServer provides 16 serial ports, and can be expanded to support up to 64 ports.

Please note that the Corollary communications card, long ago discontinued by the manufacturer, is no longer supported in PressureMAP Version 27 on computers which run the CentOS 5.2 Linux operating system. However, Version 27 systems running SCO UNIX still offer Corollary as a serial resource in addition to the Digi PortServer II.

External Modems – Currently, there are only two modems available for purchase from System Studies that have been certified by us to be compliant with the PressureMAP software and MAP Engine computer. This communication equipment is: 1) the Multi-Tech 56 Kbps stand-alone analog modem (Part No. 9800-5172) and 2) the Teltone T-311 DTMF modem (Part No. 9800-5150), which is used for communications with the System Studies Dial-a-Ducer™.

Additionally, there are several other previously certified modem models that can also be used with PressureMAP:

- Bocamodem V.34 DATA/FAX
- Hayes Smartmodem® 2400
- Hayes OPTIMA™ 288 V.34
- Hayes OPTIMA™ 336 V.34
- Hayes Century MR200 V.34 Rack Mounted
- USRobotics Courier® V.34 Modem
- MultiTech 2834MR3 Rack Mounted Three-Modem Card
- MultiTech 2834MR6 Rack Mounted Six-Modem Card
- Digi AccelePort® 8em 33.6 Kbps Module
- Digi AccelePort® 4em 33.6 Kbps Module

The following additional hardware is required to complete the standard system configuration:

- Eight telephone lines
 - At least five lines must be made accessible for incoming calls, three for user access and two dedicated to receive alarms.
 - The remaining three lines must use the dial out codes (for example, all must require "9" to dial out, or all must not use "9" to dial out)
- Eight modular serial modem cables
- Seven 1-gigabyte 1/4-inch backup tape cartridges
- One 6-foot RJ-45 cable

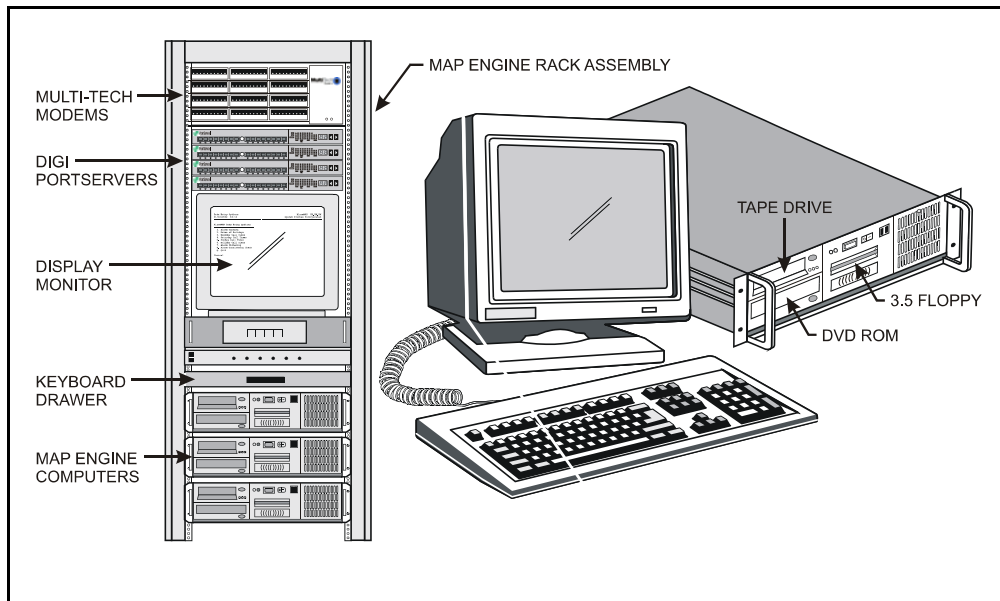


FIGURE 3-1: PRESSUREMAP COMPUTER EQUIPMENT

Parallel Printer

Any IBM compatible parallel printer may be used at the MAP computer to print reports, indexes and alarms. There are no special configuration requirements for most parallel printers. The MAP computer has a 25-pin female parallel port located at the back of the computer. To connect the parallel printer, merely insert the male end of the printer cable into the active parallel port. Turn on the printer and make sure the paper feeds properly through the printer.

REMOTE EQUIPMENT

There is a variety of remote terminals, alphanumeric pagers, printers and FAX equipment that can be used to receive reports and alarms generated by the MAP computer (see Appendix 1 for instructions on accessing PressureMAP from a remote terminal or printer). Each remote should be labeled to identify the type of terminal it emulates. For example, most teletypes will use "dumb" as the terminal type.

The issue of equipment compatibility centers primarily around modems. The baud rates for remote printers and terminals must be compatible with the corresponding modem at the MAP computer. The printers and terminals must also have provisions for making data bit and parity settings. All remote equipment must be set to **8 data bits** and **no parity**. In addition, the equipment used must support the

ASCII character set and have scrolling capabilities. It must also provide a way to turn the **CAPS LOCK** feature **ON or OFF**. These are the general requirements for remote equipment. If you have questions regarding other settings, please refer to the instruction manual that is supplied with your equipment.

Note: Xeon® is a registered trademark of Intel Corporation.
Courier® is a registered trademark of U.S. Robotics, Inc.
Smartmodem® is a registered trademark of Hayes Microcomputer Products, Inc.
PortServer II® and AccelePort® are registered trademarks of Digi International.

