

I/A Series® Hardware

PSS 21H-4U8 B4

Model P82 Solaris™ Based Workstation



The P82 Solaris™ Based Workstation provides a high performance, robust platform for I/A Series® application and workstation functions.

FEATURES

The Model P82 workstation, with available I/A Series S20 model-coded station software licenses, provides the following features:

- ▶ 64-bit RISC Processor
- ▶ RAM memory expandable to 8 GB
- ▶ Expandable SATA hard drives
- ▶ Great price/performance
- ▶ Support for SCSI/USB devices.

OVERVIEW

The I/A Series® Model P82 workstation is based on an UltraSPARC® IIIi processor with the Solaris™ 10 operating system. The Model P82 workstation, in conjunction with I/A Series model-coded station software licenses and peripherals, performs both application functions and workstation functions. Although the P82 Workstation must be installed in an I/A Series installation as an Application Workstation, through the appropriate selection of Model P82 hardware and software model code license selections, the Model P82 Workstation can be deployed as just an operator interface, an application station, or as a complete application workstation.

Application functions include:

- ▶ Execution of system application functions, such as those relating to:
 - Displays
 - Production control
 - User applications
 - Diagnostics
- ▶ Development and execution of a broad range of application functions (Invensys and third party) requiring extensive data processing and file serving capabilities
- ▶ Processing of bulk storage file requests from tasks either within the same application processor or from other stations.

Workstation functions include:

- ▶ Generation of video signals for graphic and textual displays on a video monitor
- ▶ User interface devices including a USB touchscreen, USB mouse or trackball, USB alphanumeric keyboard, and up to four annunciator or annunciator/numeric keyboards.

The Model P82 Workstation has an optional high-speed, ultra-wide Small Computer System Interface card (SCSI-3 per ANSI® Std. ANSC X3T9.2) available for the workstation, which provides an industry-standard bus to support peripherals having SCSI-compatible controllers. External RAID hard drives can be connected to the SCSI port on the optional PCI card⁽¹⁾. The SCSI interface card also contains dual 10/100 Mbps RJ-45 Ethernet ports. Additionally, the P82 workstation supports an external USB tape drive.

As indicated by the CE logo on the workstation, the Model P82 workstation conforms to the applicable European Union directives.

Connection to the I/A Series Mesh control network is accomplished via a choice of either twisted-pair or fiber-optic Ethernet interfaces.

The Model P82 workstation contains the following I/A Series system supported elements and options:

- ▶ One pre-installed XVR-300 graphics card for dual digital or analog video interfaces
- ▶ Two serial interface ports for a printer or GCIO
- ▶ USB ports for the keyboard, mouse or trackball, color printer, floppy drive, and external tape backup device
- ▶ External USB 3.5-inch 1.44 MB disk drive
- ▶ Dual ultra-wide SCSI-3 interface ports with dual 10/100 Mbps twisted pair Ethernet port cards⁽²⁾
- ▶ Optional 100 Mbps, MMF, MT-RJ fiber-optic Ethernet interface PCI card⁽²⁾
- ▶ Internal DVD-ROM /CD-RW
- ▶ Up to four internal hard drives
- ▶ Optional RAID 1 SCSI external hard drives
- ▶ Optional RAID 5 SCSI external hard drives
- ▶ Support for an external USB AIT-2 tape drive.

(1) Maximum effective cable length is 3 meters (10 feet).

(2) PCI card slot restrictions on the Ultra 25 workstation prevent the use of two fiber-optic Ethernet interface cards together with the dual ultra-wide SCSI/dual twisted-pair 10/100 Mbps Ethernet PCI card. To take advantage of SCSI devices and a redundant fiber connection to The Mesh network, install one fiber-optic Ethernet interface card, the dual ultra-wide SCSI/dual twisted-pair Ethernet card, and attach a copper-to-fiber media converter to one of the twisted-pair Ethernet ports for the second fiber connection to The Mesh control network.

FUNCTIONAL SPECIFICATIONS

Devices Served

SCSI PERIPHERALS

Up to two external devices per SCSI port (SCSI PCI card supports RAID drives)

DISK DRIVES

Removable

External 3.5-inch 1.44 MB USB floppy disk drive, internal DVD-ROM, external USB tape drive

System

One to four 160 GB or 250 GB SATA drives

VIDEO INTERFACE

Support for dual color video monitors (digital or analog)

HUMAN INTERFACES⁽³⁾

USB alphanumeric keyboard, USB mouse or trackball, serial annunciator or annunciator/numeric keyboard (up to two per GCIO), USB touchscreen (one per display), serial alarm printer, USB PostScript printer, USB color PCL3 printer

Processor Type

64-bit RISC processor

RAM Memory

1 GB, expandable to 8 GB

XVR-300 Video PCI Card

TWO DVI-I CONNECTORS

(supports analog or digital outputs)

VGA Analog Output (EIA RS-170)

Red, Blue, Green, H&V Syncs
Maximum Analog Cable Length
30 m (100 ft)

Digital Output

Maximum Digital Cable Length 15 ft

Internal Diagnostics

Self-checking performed at power-up. Run-time checks and watchdog timer function performed during operation.

Power Requirements (Processor Only)

INPUT VOLTAGE

100 to 120 V ac or 220 to 240 V ac at 47-63 Hz (auto-switching)

CONSUMPTION

200 W (typical) for 1 CPU with 3 hard disk drives

Regulatory Compliance

Safety: EN 60950

RFI/EMU: EN 61000-3-2

EN 61000-3-3

FCC Class B

Immunity: EN 55024

Screen Presentation

RESOLUTION (PIXELS)

1280 x 1024 (Default setting)
1152 horizontal, 900 vertical up to 1600 horizontal, 1200 vertical (LCD display).
(Other resolutions are supported; however, the resolutions listed above are used with the Model P82 workstation.)

REFRESH RATE

Up to 75 frames/s for 1600x1200 resolution

COLORS

32 for user displays, 8 for menu bar; selectable from a palette of over 16 million

MARKER SETS

4 sets, up to 255 markers in each set: 2 default sets supplied by Invensys® Foxboro; 2 sets can be created by user.

CHARACTER SETS

4 default sets supplied by Invensys Foxboro; additional third-party sets also supplied

Serial Interface Communications

TYPE

RS-232

Maximum Distance (Printer)

15 m (50 ft)

Maximum Distance (GCIO)

30 m (100 ft)

(3) The serial interface communication ports provide for peripheral communications: a printer or a group of serially connected input/output devices; up to four annunciator or annunciator/numeric keyboards.

FUNCTIONAL SPECIFICATIONS (CONTINUED)

Error Detection

COMMUNICATION ERRORS

Cyclic redundancy codes (CRC) and checksum codes

MEMORY ERRORS

Error checking and correcting (ECC)

DISK ERRORS

CRC and Reed-Solomon codes (used for error detection and correction)

SCSI ERRORS

Parity code

Optional PCI Cards

- ▶ Dual ultra-wide SCSI/dual twisted-pair 10/100 Mbps Ethernet PCI card ports with dual ultra-wide SCSI ports PCI card⁽⁴⁾
- ▶ 100 Mbps, MMF, fiber-optic Ethernet interface PCI card⁽⁴⁾.

ENVIRONMENTAL SPECIFICATIONS

Operating

TEMPERATURE

2 to 35° C (41 to 95° F)

RELATIVE HUMIDITY

7 to 93%, noncondensing

ALTITUDE

0 to 3000 m (0 to 10,000 ft)

Location

UL/UL-C listed as suitable for use in ordinary locations and meets ordinary safety standards for fire and shock hazards.

Contamination

Class G1 (Mild) as defined in ISA Standard S71.04

Storage

TEMPERATURE

-40 to +68° C (-40 to +158° F)

RELATIVE HUMIDITY

up to 93%, noncondensing

ALTITUDE

-300 to +12,000 m (-1,000 to +40,000 ft)

(4) A separate security router may be required in conjunction with these optional information network connections to isolate I/A Series systems from other unrelated network traffic. Invensys technical support can provide information network planning and recommendations. Additionally, a copper-to-fiber media converter may be required for P82 SCSI connections in conjunction with a dual fiber connection to The Mesh network.

PHYSICAL SPECIFICATIONS

Mounting

Tabletop or I/A Series Metal Enclosure (800x800 mm)
with 1 meter deep rack or Modular Industrial
Enclosure (MIC)

Mass (Maximum)

26.3 kg (58 lb)

Processor Dimensions

Height

445 mm (17.5 inches)

Width

205 mm (8.1 inches)

Depth

569 mm (22.4 inches)



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