

I/A Series® Hardware

PSS 21H-4R7 B4

Model P79 Workstation Solaris® 8 Operating System



The I/A Series® Model P79 workstation is based on an UltraSPARC® Ili processor with a Solaris® 8 operating system. The UNIX® based Model P79 workstation in conjunction with I/A Series model-coded station software licenses and peripherals performs both application functions and workstation functions. Although the P79 Workstation must be installed in an I/A Series installation as an Application Workstation, through the appropriate selection of Model P79 hardware and software model code license selections, the Model P79 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.
- ▶ Configuration, development, and execution of a broad range of application functions (Invensys Foxboro 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 touchscreen, mouse or trackball, alphanumeric keyboard and up to two annunciator or annunciator/numeric keyboards.

The Model P79 workstation can support an external high-speed, ultra-wide Small Computer System Interface (SCSI-3 per ANSI® Std. ANSC X3T9.2) when used with an optional SCSI-3 PCI card. This card provides an industry-standard bus which allows the workstation to support external peripherals having SCSI-compatible controllers, such as tape drives and RAID disk drives.

An Enhanced Internal Device Electronics (EIDE) interface supports an internal system disk and a CD-ROM drive.

As symbolized by the CE logo on the workstation, this workstation conforms to the applicable European Union Directives.

Direct interfacing with the I/A Series Redundant Control Network is enabled via a Redundant Control Network Interface (RCNI). Refer to PSS 21H-7B6 B4.

Optional PCI cards supplying MII Ethernet and twisted-pair Ethernet communications ports enable connection to other networks such as TCP/IP.

The Model P79 workstation has three optional PCI slots for use with control software and I/O devices:

- ▶ A serial interface card for RS-232-C connectivity to Modicon® or Allen-Bradley® programmable controllers
- ▶ An Ethernet card for connectivity to Allen-Bradley programmable controllers.

The Model P79 workstation has the following I/A Series system supported elements:

- ▶ On-board video graphics

- ▶ Serial ports used for printer, GCIO or RCNI interfaces
- ▶ Parallel port for color PCL3 or PostScript® printer
- ▶ 3.5-inch 1.44 MB floppy disk drive
- ▶ USB ports for the keyboard and mouse or trackball
- ▶ Enhanced Internal Device Electronics (EIDE) bus
 - Internal hard drive: 80 GB
 - Internal CD-ROM drive.

The Model P79 workstation has the following I/A Series system supported options:

- ▶ Optional external SCSI devices:
 - 12 or 20 GB 4 mm digital tape drives
 - 80/208 GB AIT-2 tape drive
 - RAID 1 or RAID 5 external hard drives
- ▶ Optional PCI cards:
 - MII connector plus 10/100 Mbps twisted-pair interface. MII Ethernet communications port provides AUI Ethernet interface when used in conjunction with MII-to-AUI adapter.
 - Ultra-wide SCSI-3 plus twisted-pair 10/100 Mbps Ethernet communications port
 - Serial controller card with 8-port external distribution box for printer, terminal port or GCIO
 - XVR-100 video card for dual-head video interface.

FUNCTIONAL SPECIFICATIONS

Devices Served

EIDE PERIPHERALS

One internal 80 GB hard disk drive and CD-ROM drive

SCSI PERIPHERALS

Up to two external SCSI-based drives⁽¹⁾

DISK DRIVE

1.44 MB 3.5-inch internal floppy disk drive

VIDEO INTERFACE

One integrated interface, and one optional PCI card interface, supporting up to two color video monitors

HUMAN INTERFACES

Alphanumeric keyboard (USB)

Mouse or trackball (USB)

Annunciator or annunciator/numeric keyboard (up to four)

Touchscreen (USB)

Alarm printer

Color PostScript printer

Color PCL3 printer

Processor Type

64-bit RISC® processor

RAM Memory

256 MB, expandable to 2 GB

Screen Presentation

REFRESH RATE

Up to 76 frames/s

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

RESOLUTION (PIXELS)

Up to 1600 horizontal, 1200 vertical
1152x900 (default)

Video Output

TYPE

Analog (EIA RS-170): Red, Blue, Green, Sync

Maximum Cable Length

30 m (100 ft) for 19/20-inch LCD

Power Requirements (Processor Only)

INPUT VOLTAGE

100 to 120 V ac or 200 to 240 V ac (auto-switching)

CONSUMPTION

300 VA

Regulatory Compliance

EUROPEAN DIRECTIVES

89/336/EEC Electromagnetic Compatibility

73/23/EEC Low Voltage

93/465/EEC CE Marking

FCC

FCC Part 15 Class B for radiated and conductive emissions

Redundant Control Network Interface Communications

TYPE

IEEE 802.3 data bus and
10/100Base-T plus EIA RS-423 control bus
[maximum distance 100 m (300 ft)]

Ethernet Interface Communications

TYPE

10/100Base-TX [maximum distance of 100 m (330 ft)] or MII

Parallel Interface Communications

TYPE

Centronics® parallel interface

(1) Up to two external SCSI devices can be used. Maximum cable length is 3 meters (10 feet).

FUNCTIONAL SPECIFICATIONS (CONTINUED)

Serial Interface Communications

TYPE

RS-232-C

Maximum Distance (RCNI)

100 m (330 ft)

Maximum Distance (Printer)

15 m (50 ft)

Maximum Distance (GCIO)

30 m (100 ft)

Error Detection

COMMUNICATION ERRORS

Cyclic redundancy codes (CRC) and checksum codes

MEMORY ERRORS

Error checking and correcting (ECC)

SCSI ERRORS

Parity code

Internal Diagnostics

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

Optional XVR-100 Video Card

Supports the second display in dual display configurations

Optional Twisted-Pair 10/100 Mbps Ethernet Interface with MII Connector Card (2)

When used in conjunction with MII-to-AUI Converter(3), supports AUI port for 10 Mbps Ethernet data bus. Also contains 10/100 Mbps Ethernet port

Optional Twisted-Pair 10/100 Mbps Ethernet Interface Card with Ultra Wide SCSI Port (2)

This card supports both ultra-wide SCSI-3 port and 10/100 Mbps Ethernet port.

Optional Serial Card with Controller Box Supplying Eight Communications Ports (2)

Serial controller card with 8-port external distribution box for printer, terminal port, GCIO or other RS-232-C compatible device

(2) A separate security router may be required in conjunction with these optional information network connections to isolate I/A Series system communication from other unrelated network traffic. Invensys technical support can provide information network planning and recommendations.

(3) The MII Connector card with MII-to-AUI Converter can function as an interface to the Allen-Bradley Data Highway.

ENVIRONMENTAL SPECIFICATIONS

Operating

TEMPERATURE

5 to 35° C (40 to 95° F)

RELATIVE HUMIDITY

10 to 90%, wet bulb of 27° C (81° F)

ALTITUDE

0 to 3,000 m (0 to 10,000 ft)

Storage

TEMPERATURE

-40 to +65° C (-40 to +150° F)

RELATIVE HUMIDITY

up to 93%, noncondensing

ALTITUDE

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

PHYSICAL SPECIFICATIONS

Mounting

I/A Series Industrial Enclosure, Metal Enclosure, Modular Industrial Workstation, Modular Industrial Console, tabletop mounting, or 19-inch rack mounting (using Invensys Foxboro designed dual height Modular Mounting Structure)

Dimensions

PROCESSOR

Height

118 mm (4.6 inches)

Width

445 mm (17.5 inches)

Depth

464 mm (18.3 inches)

Mass (Maximum)

15.5 kg (34.2 lb)



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