FOXBORO®

PSS 21H-4R5 B4

I/A Series® Hardware
50 Series Application Workstation Processor
AW51, Style C

The Application Workstation 51 (AW51) Style C Processor in conjunction with its peripherals performs both application functions and workstation functions. The AW51 Style C Processor provides a higher performance level than the AW51 Style B Processor as well as boot hosting and System Monitor support for up to 64 I/A Series stations.

Application functions performed 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 (Foxboro and other) requiring extensive data processing and file serving capabilities.
- Processing of bulk storage file requests from tasks within the Application Workstation 51 Style C Processor or from other stations.

Workstation functions performed by the Application Workstation 51 Style C Processor include:

- Generation of video signals to display graphic and textual display information on a video monitor, either 17-inch or 20-inch.

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Product Specifications

- Processing of signals for command and data entry, display option selection, and alarm management. The signals are received via connected input devices which may include a touchscreen, a mouse or trackball, an alpha-numeric keyboard, and up to two annunciator or annunciator/numeric keyboards.

A Small Computer System Interface (SCSI), designed into the Processor, provides an industry standard bus to support peripherals having SCSI compatible controllers. Connected hard disk drives may be configured mirrored (redundant) for maximum system security and data availability. Other SCSI devices connected may include a CD-ROM and tape drives.

Electrical interfacing with the I/A Series Nodebus is effected via a Dual Nodebus Interface Module or Dual Nodebus Interface Extender Module (refer to PSS 21H-7B2 B4).

An optional SBus IBM Token Ring, AUI or twisted pair Ethernet, fast Ethernet, and Asynchronous Transfer Mode (ATM) communications port provides for connection to other networks such as DECnet or TCP/IP.(1)

Electrical interfacing between the Application Workstation 51 with FoxBlock software and I/O devices is accomplished with(2):

- An I/A Fieldbus interface card for I/A Series Fieldbus Modules, Fieldbus Cards, Spectrum Migration Integrator.
- A Serial interface card for RS-232C connectivity to Modicon Programmable Controllers or Allen-Bradley PLCs
- An Ethernet card for connectivity to Allen-Bradley PLCs and Foxboro SCADA

The Application Workstation 51 Style C Processor contains the following elements:

- Processor logic
- Dynamic memory
- Nodebus interface port
- Video interface
- Serial interface port (printer or terminal port)
- Parallel interface for PostScript printer
- 3.5-inch 1.44 MB floppy diskSmall Computer System Interface (SCSI)
- Maximum of 4 hard drives per SCSI port:(3)
  - Internal system disk: 1.05 Gb or 2.1 Gb
  - Optional internal expansion disk: 1.05 Gb or 2.1 Gb
  - Optional external system disk: 2.1 Gb
  - Optional external expansion disks: 2.1 Gb
- Optional external drives for disk mirroring configuration: 2.1 Gb(4)
- Optional internal or external 644 MB CD-ROM drive
- Optional external 2.5 Gb Quarter-Inch Cartridge (QIC) tape drive
- Optional external 5.0 Gb 4 mm digital tape drive
- Up to 3 optional SBus cards(2):
  - IBM Token Ring communications port
  - AUI Ethernet communications port
  - TGX color buffer card for dual CRT configurations
  - Windows on I/A Series Systems for running MS-DOS and Microsoft Windows 3.1 applications in a separate local window
  - A second SCSI port for disk mirroring and twisted pair 10 Mbits/sec (slow) Ethernet communications port
  - A second SCSI port for disk mirroring and twisted pair 10/100 Mbits/sec (slow/fast) Ethernet communications port
  - ATM 155 Mbits/sec twisted pair communications port
  - ATM 155 Mbits/sec fiber cable communications port
  - An I/A Fieldbus port
  - Serial/Parallel interface ports

(1) A separate security router may be required in conjunction with these optional information network connections to isolate I/A from other unrelated network traffic. Foxboro Information Technology and Application Consulting can provide information network planning and recommendations.
(2) The AW51 Style C has up to three optional slots.
(3) A maximum of 2 internal drives and a total of 4 internal and/or external drives are supported on the primary SCSI port.
(4) The disk mirroring option is supported on systems with external system and external expansion disk drives only. The option is not supported on systems with internal drives. A second SCSI port supports the mirrored disks.

FUNCTIONAL SPECIFICATIONS

Devices Served

SCSI PERIPHERALS[A,B]
A maximum of seven (up to three internal; up to four external) devices connected to the primary SCSI port: Up to four hard disk drives, one CD-ROM drive, one digital tape drive, and one QIC tape drive

NON-SCSI PERIPHERALS
One 1.44 MB 3.5-inch Floppy Drive[c]

VIDEO INTERFACE
Color Video Monitor (up to two)

SERIAL INTERFACES[D]
Alphanumeric Keyboard
Mouse or Trackball
Annunciator or Annunciator/Numeric Keyboard (up to two per CRT)
Touchscreen (one per CRT)
Printer

PARALLEL INTERFACE
Postscript Printer

Processor Type

- Dual SPARC Processors (SMP) with Floating Point Unit
- Color Frame Buffer

ECC RAM Memory

64 MB (default)
Expandable to 512 MB (optional)

Screen Presentation

REFRESH RATE
76 frames/s

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

MARKER SETS
Four sets, up to 255 markers in each set. Two (default) sets supplied by Foxboro, two can be created by user.

CHARACTER SETS
Four sets. Four (default) sets supplied by Foxboro, additional non-Foxboro sets also supplied.

RESOLUTION (PIXELS)
1152 horizontal, 900 vertical

Video Output

TYPE
Analog (EIA RS–170): Red, Blue, Green, Sync.
Maximum Cable Length
30 m (100 ft)

Nodebus Interface Communications

TYPE
IEEE 802.3 data bus and
EIA RS-423 control bus[e]
Maximum Distance From Nodebus Using Dual Nodebus Interface Module
50 m (150 ft)
Maximum Distance From Nodebus Using Dual Nodebus Interface Extender Module
450 m (1500 ft)

Ethernet Interface Communications

TYPE
AUI Cable
Maximum Distance
50 m (150 ft)

TYPE
AUI Cable and RG-58 Coaxial Cable (ThinNet/10 Base 2)
Maximum Distance of AUI Cable on Either Side of RG-58 Cable
50 m (150 ft)
Maximum Distance of RG-58 Coaxial Cable
150 m (500 ft)

TYPE
RG-58 Coaxial Cable (ThinNet/10 Base 2)
Maximum Length
150 m (500 ft)

Serial Interface Communications

TYPE
EIA RS-423 (RS-232C compatible)
Distance
15 m (50 ft)

Parallel Interface Communications

Centronics Parallel Interface for Color Postscript Printer

(a) The maximum number of SCSI devices may be limited by maximum allowable equivalent cable length (6 meters).

(b) Small Computer System Interface (ANSI standard ANSC X3T9.2).

(c) Floppy drive is mounted internally or in the Modular Industrial Workstation wedge.

(d) One serial interface communication port provides for peripheral communications: a printer or a group of serially-connected input/output devices: Touchscreen and up to two Annunciator or Annunciator/Numeric Keyboards.

(e) Refer to PSS 21H-7B2 B4, Dual Nodebus Interface and Dual Nodebus Interface Extender, for information on how the control bus is used.

FUNCTIONAL SPECIFICATIONS (Continued)

Error Detection
COMMUNICATION ERRORS
Cyclic redundancy codes (CRC) and checksum codes
MEMORY ERRORS
Error checking and correcting (ECC)
FLOPPY DISK ERRORS
CRC and Reed-Solomon codes (used for error detection and correction)
SCSI ERRORS
Parity code

Internal Diagnostics
Self-checking performed at power-up. Runtime checks and watchdog timer function performed during operation.

Optional IBM Token Ring Communications Card(f)
Supports port for IBM Token Ring data bus

Optional AUI Ethernet Communications Card(f)
Supports port for AUI Ethernet data bus

Optional Fast SCSI Port Plus Twisted Pair 10/100 Ethernet Communications Port(f)
Supports both fast SCSI used for support of disk mirroring and 10 or 100 Mbits/sec (slow/fast) Ethernet twisted pair data bus communications port

Optional ATM 155 Mbits/sec Twisted Pair Ethernet Communications Port(f)
Supports port for ATM155 Mbits/sec network connection via twisted pair connections

Optional ATM 155 Mbits/sec Fiber Optic Communications Port
Supports port for ATM 155 Mbits/sec network connection via fiber optic connections

Optional TGX Color Buffer Card
Supports second monitor in a dual CRT configuration

Optional Windows on I/A Series Systems
HARDWARE
486DX Accelerator Card
SOFTWARE
SunPC software package for Solaris 2
MEMORY REQUIRMENTS
32 MB of RAM required; 48 MB recommended

Power Requirements
INPUT VOLTAGE
100-120 V ac or 200-240 V ac (auto-switching)
CONSUMPTION
110 W

(f) A separate security router may be required in conjunction with these optional information network connections to isolate I/A Series from other unrelated network traffic. Foxboro Information Technology and Applications Consulting can provide information network planning and recommendations.

ENVIRONMENTAL SPECIFICATIONS

Operating
TEMPERATURE
0 to 40°C (32 to 104°F)
RELATIVE HUMIDITY
5 to 95%, noncondensing
ALTITUDE
0 to +3,000 m (0 to +10,000 ft.)

Storage
TEMPERATURE
–40 to +75°C (–40 to +167°F)
RELATIVE HUMIDITY
5 to 95%, noncondensing
ALTITUDE
–300 to +12,000 m (–1,000 to +40,000 ft.)

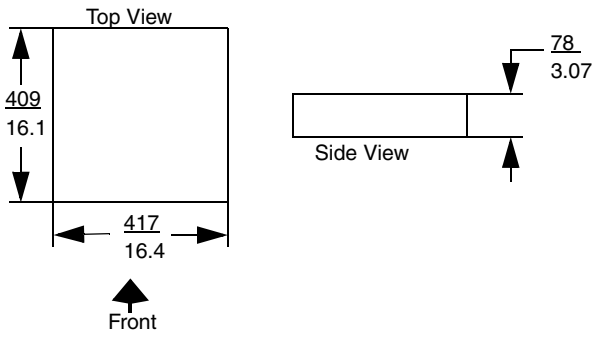
PHYSICAL SPECIFICATIONS

Configuration and Mounting
Consists of a single module having an C-Module form factor. May be mounted in an I/A Series Industrial Enclosure or Modular Industrial Workstation Bay, on a table-top, or in a 19-inch rack (using a Foxboro-designed modular mounting structure).

Mass (Maximum)
12.7 kg (27.0 lb)

DIMENSIONS—NOMINAL

mm
in



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