

## **I/A Series® Hardware**

### **50 Series Workstation Processor**

#### **WP51, Styles B and B1**



The full function Workstation Processor 51 (WP51) Style B or the WP51 Style B1, together with its connected peripheral devices, provides a link between the user and all system functions. Both WP51s have the same form factor and comparable performance. The WP51 Style B1 has reduced hardware configuration options in terms of memory, internal disks, and Sbus slots.

The WP51 receives graphic and textual information from application processors and other system stations and displays the information on a 20-inch or 17-inch video monitor. In addition to the video monitor, devices connected to the Workstation Processor 51 Style B or Style B1 may include:

- a touchscreen (for 20-inch CRT only)
- a mouse, trackball, or industrial pointing device
- an alphanumeric keyboard, and
- up to two annunciator or annunciator/numeric keyboards (per CRT with total of four per dual CRT configuration)

These optional devices provide a means for command and data entry, display option selection, and alarm management. Optional Small Computer System Interface (SCSI) devices connected to the Workstation Processor 51 may include a CD-ROM, a digital tape drive, and a Quarter-Inch Cartridge (QIC) tape drive.

The Workstation Processor 51 is fully compatible with existing display applications software. It takes advantage of 32-bit main processor and X Windows System technology for maximum display performance and applications expandability. The Workstation Processor 51 may be mounted in I/A Series Industrial Enclosures, Modular Workstations, on a tabletop, or within 19-inch Rack Mount equipment utilizing the Foxboro designed modular mounting structure.

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).

Optional AUI or twisted pair Ethernet, Fast Ethernet, SBus Token Ring, and Asynchronous Transfer Mode (ATM) communications ports provide for connection to other networks such as DECnet or TCP/IP.<sup>(1)</sup>

The Workstation Processor 51 Style B and Style B1 contain the following elements:

- Processor logic
- Dynamic memory
- Nodebus interface port
- Video interface
- Serial interface port
- Parallel interface port
- 3.5-inch 1.44 MB floppy disk
- Small Computer System Interface (SCSI)
- One internal system disk (*Style B*): 1.05 GB or 2.1 GB

- One internal system disk (*Style B1*): 1.05 GB
- 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
- Optional SBus Cards supported:  
(*Style B supports up to 2 optional SBus cards; Style B1 supports 1 optional SBus card*)
  - IBM Token Ring communications port
  - AUI 10 Mbits/sec Ethernet communications port
  - A fast SCSI port (not used) and a twisted pair 10 Mbits/sec Ethernet communications port
  - A second SCSI port (not used) and a twisted pair 10 or 100 Mbit/sec (slow or fast) Ethernet communications port
  - ATM 155 Mbits/sec network connection via twisted pair communications port
  - ATM 155 Mbits/sec network connection via fiber cable communications port

<sup>(1)</sup>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.

## FUNCTIONAL SPECIFICATIONS

### Devices Served

#### SCSI PERIPHERALS<sup>(a)</sup>

One internal disk drive and one each of the following drives connected to the primary SCSI port: CD-ROM Drive, QIC Tape Drive, and Digital Tape Drive

#### NON-SCSI PERIPHERALS

One 1.44 MB 3.5-inch Floppy Drive<sup>(b)</sup>

#### VIDEO INTERFACE

Color Video Monitor (up to two)

#### SERIAL INTERFACES<sup>(c)</sup>

One Alphanumeric Keyboard

Annunciator or Annunciator/Numeric Keyboard (up to two per CRT)

Touchscreen (one per 20-inch CRT)

Mouse, Trackball, or Industrial Pointing Device

#### PARALLEL INTERFACE

PostScript Printer

### Processor Type

- MicroSPARC II® RISC Processor with Floating Point Unit
- Color Frame Buffer

### Program Memory

Style B: 16 MB, expandable to 256 MB

Style B1: 16 MB, expandable to 160 MB

### 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 (default) I/A Series 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) for 20-inch monitor

1.8 m (6 ft) for 17-inch monitor

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

(b)Floppy drive is mounted internally.

(c)One serial interface communication port provides for peripheral communications: a group of serially-connected input/output devices -- optional Touchscreen (Style B, 20-inch CRT only) and up to two Annunciator or Annunciator/Numeric Keyboards.

## FUNCTIONAL SPECIFICATIONS (CONTINUED)

### Nodebus Interface Communications

#### TYPE

IEEE 802.3 data bus and

EIA RS-423 control bus<sup>(d)</sup>

*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 10 Base 2 Cable (ThinNet)

*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 10 Base 2 Cable (ThinNet)

*Maximum Length*

150 m (500 ft)

### Serial Interface Communications

#### TYPE

EIA RS-423 (RS-232C compatible)

#### MAXIMUM DISTANCE

15 m (50 ft)

### Parallel Interface Communications

Centronics Parallel Interface for Color Postscript Printer

### Power Requirements

#### INPUT VOLTAGE

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

#### NOMINAL POWER

60 W

### Internal Diagnostics

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

### Error Detection

#### COMMUNICATION ERRORS

Cyclic redundancy codes (CRC) and checksum codes

#### MEMORY ERRORS

Parity code

#### FLOPPY DISK ERRORS

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

#### SCSI ERRORS

Parity code

### Optional IBM Token Ring Communications Card<sup>(e)</sup>

Supports port for IBM Token Ring data bus

### Optional AUI Ethernet Communications Card<sup>(e)</sup>

Supports port for AUI 10 Mb/s/sec Ethernet data bus

### Optional Twisted Pair 10 Ethernet Communications Port<sup>(e)</sup>

Supports port for 10 Mb/s/sec twisted pair Ethernet data bus (second SCSI Port not used)

### Optional Fast SCSI Port Plus Twisted Pair 10/100 Ethernet Communications Port<sup>(e)</sup>

Supports port for 10 or 100 Mb/s/sec (slow/fast) Ethernet twisted pair data bus communications (Fast SCSI Port not used)

### Optional ATM 155 Mb/s/sec Twisted Pair Ethernet Communications Port<sup>(e)</sup>

Supports port for ATM155 Mb/s/sec network connection via twisted pair connections

### Optional ATM 155 Mb/s/sec Fiber Communications Port<sup>(e)</sup>

Supports port for ATM155 Mb/s/sec network connection via fiber optic connections

### Optional TGX Color Buffer Card

Supports second monitor in a dual CRT configuration

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

(e) 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 Application 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**

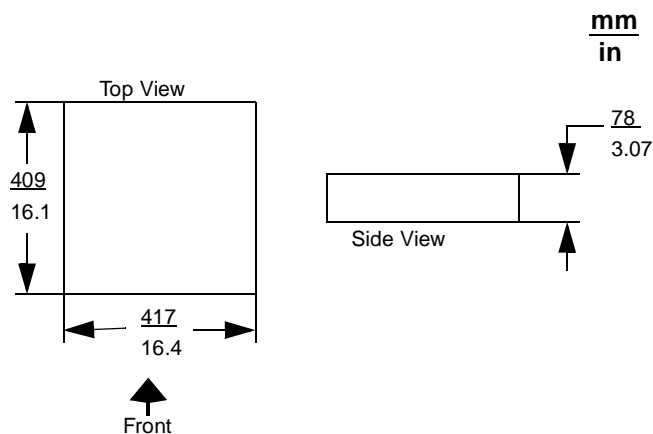
-300 to +12,000 m (-1,000 to +40,000 ft)

**PHYSICAL SPECIFICATIONS****Configuration and Mounting**

I/A Series Industrial Enclosure or Modular Industrial Workstation Bay, table-top mounting, or 19-inch rack mounting (using the Foxboro designed modular mounting structure).

**Mass (Maximum)**

12.7 kg (27.0 lb)

**DIMENSIONS—NOMINAL****The Foxboro Company**

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