

I/A Series® Hardware

50 Series Workstation Processor

WP51, Style D



The Workstation Processor 51 (WP51), Style D, together with its connected peripheral devices, provides a link between the user and all system functions. The WP51, Style D provides a higher performance level than the WP51, Style B processor.

The WP51 receives graphic and textual information from Application Processors and other system stations and displays the information on a video monitor. In addition to the video monitor, devices connected to the Workstation Processor 51, Style D may include:

- a touchscreen (for 21-inch monitor only)
- a mouse, trackball, or industrial pointing device
- an alphanumeric keyboard

- up to two annunciator or annunciator/numeric keyboards (per monitor with total of four per dual display configuration) via a GCIO interface module.

These optional devices provide a means for command and data entry, display option selection, and alarm management. The Workstation Processor has an Enhanced Internal Device Electronics (EIDE) interface to support an internal system disk and a CD-ROM drive. The Workstation Processor can support an external high speed, ultra-wide Small Computer System Interface (SCSI-3) when used with an optional SCSI-3 PCI card. This card provides an industry-standard bus which allows the workstation to support SCSI-compatible external tape drives.

The Workstation Processor 51, Style D is fully compatible with existing display applications software. It takes advantage of 64-bit processor technology for maximum display performance and applications expandability.

The Workstation Processor 51, Style D may be mounted on a tabletop, in I/A Series metal enclosures, hardened enclosures, Industrial Enclosures, Modular Industrial Workstations (MIWs), or Modular Industrial Consoles (MICs), and 19-inch rack mount equipment utilizing the Foxboro designed dual height modular mounting structure.

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

Data interfacing with the I/A Series Nodebus is effected via a Dual Nodebus 10BaseT Interface (DNBT) Module or Dual Nodebus Interface Extender (DNBX) Module (refer to PSS 21H-7B2 B4).

Optional PCI cards supplying IBM Token Ring, AUI Ethernet, twisted-pair Ethernet, and Asynchronous Transfer Mode (ATM) communications ports provide for connection to other networks such as TCP/IP.⁽¹⁾

The Workstation Processor 51, Style D contains the following elements:

- Processor logic
- Dynamic memory
- On-board video display function
- Serial interface port (used as either printer or terminal port)
- Parallel interface port
- 3.5-inch 1.44 MB disk drive
- Enhanced Internal Device Electronics (EIDE) bus
- Maximum of one internal hard drive: 8.4 GB
- Internal 644 MB CD-ROM drive
- Optional external 12.0 GB 4 mm digital tape drive
- Optional PCI cards supported:
 - IBM Token Ring communications port
 - 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 Converter
 - Ultra-Wide SCSI-3⁽²⁾ plus twisted-pair 10/100 Mb/s/sec (slow/fast) Ethernet communications port
 - ATM 155 Mb/s/sec network connection via twisted-pair communications port
 - ATM 155 Mb/s/sec network connection via fiber cable communications port
 - Optional PGX video card for dual head video interface

FUNCTIONAL SPECIFICATIONS

Devices Served

EIDE PERIPHERALS(a)

One internal hard disk drive and CD-ROM drive

SCSI PERIPHERALS(b)

Up to two SCSI-based devices(c)

DISK DRIVE PERIPHERAL

1.44 MB 3.5-inch disk drive(d)

VIDEO INTERFACE

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

HUMAN INTERFACES(e)

Alphanumeric Keyboard

Mouse or Trackball

Annunciator or Annunciator/Numeric Keyboard

(up to two per monitor)

Touchscreen (one per monitor)

Alarm Printer

PostScript Printer

Color PCL3 Printer

Processor Type

64-bit RISC Processor

(a) Enhanced Internal Device Electronics.

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

(c) An Application Processor, Style D can use only an internal EIDE-based hard drive.

(d) Disk drive is mounted internally.

(e) One serial interface communication port provides for peripheral communications: a group of serially connected input/output devices, optional touchscreen and up to two annunciator or annunciator/numeric keyboards.

(1) 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. Foxboro Information Technology and Applications Consulting can provide information about network planning and recommendations.

(2) SCSI devices (external) are supported when an optional SCSI-3 PCI card is installed. The maximum number of SCSI devices attached to the Workstation Processor, Style D is limited by the maximum allowable SCSI-3 equivalent cable length, which is 3 meters (10 feet). Up to two SCSI devices can be used externally with the workstation.

FUNCTIONAL SPECIFICATIONS (Cont.)

Program Memory

64 MB (default), expandable to 256 MB

Screen Presentation

REFRESH RATE

Up to 76 frames/sec

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 Foxboro, 2 can be created by user.

CHARACTER SETS

4 (default) I/A Series sets supplied by Foxboro; additional non Foxboro sets also supplied

RESOLUTION (PIXELS)

Up to 1280 horizontal, 1024 vertical
1152 x 900 (default)

Video Output

TYPE

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

Maximum Cable Length

30 m (100 ft) for 21-inch monitor

1.8 m (6 ft) for 17-inch monitor

Nodebus Interface Communications

TYPE

IEEE 802.3 data bus and EIA RS-423 control bus

Maximum Distance From Nodebus Using Dual

Nodebus 10BaseT Interface (DNBT) Module

91 m (300 ft)

Maximum Distance From Nodebus Using Dual

Nodebus Interface Extender (DNBX) Module

450 m (1500 ft)

Serial Interface Communications

TYPE

EIA RS-423 (RS-232-C compatible)

Maximum Distance (DNBX)

450 m (1500 ft)

Maximum Distance (Printer)

15 m (50 ft)

Parallel Interface Communications

Centronics Parallel Interface for Color PostScript Printer

Ethernet Interface Communications

TYPE (10BASET OR MII OUTPUTS AVAILABLE)

Maximum Distance of 10/100BaseT Cable

91 m (300 ft)

Internal Diagnostics

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

Error Detection

COMMUNICATION ERRORS

Cyclic redundancy codes (CRC) and checksum codes

MEMORY ERRORS

Parity code

SCSI ERRORS

Parity code

Optional IBM Token Ring Communications Card(a)

Supports port for IBM Token Ring data bus

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

When used in conjunction with MII-to-AUI Converter, this card supports an AUI port for 10 Mbits/sec Ethernet data bus. This card also contains 10/100 Mbits/sec (slow/fast) Ethernet twisted-pair data bus communications port.

Optional PGX Video Card

Supports additional display in dual display configurations

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

This card supports both ultra-wide SCSI-3 bus (used for providing external SCSI functions) and 10/100 Mbits/sec (slow/fast) Ethernet twisted-pair data bus communications port.

Optional ATM 155 Mbits/sec Twisted-Pair Ethernet Communications Port(a)

This card provides a port for ATM155 Mbits/sec network connection via twisted-pair connections.

Optional ATM 155 Mbits/sec Fiber Communications Port(a)

This card provides a port for ATM155 Mbits/sec network connection via fiber optic connections.

Power Requirements (Processor Only)

INPUT VOLTAGE

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

NOMINAL POWER

120 W

(a) 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. Foxboro Information Technology and Applications Consulting can provide information network planning and recommendations.

ENVIRONMENTAL SPECIFICATIONS

Operating	Storage
TEMPERATURE	TEMPERATURE
10 to 35°C (50 to 95°F)	–20 to +60°C (–4 to +140°F)
RELATIVE HUMIDITY	RELATIVE HUMIDITY
40 to 80%, wet bulb of 27°C (81°F)	30 to 90%, noncondensing
ALTITUDE	ALTITUDE
0 to +3,000 m (0 to 10,000 ft.)	–300 to +12,000 m (–1,000 to +40,000 ft)

PHYSICAL SPECIFICATIONS

Mounting	Mass (Maximum)
I/A Series Industrial Enclosure, metal enclosure, Modular Industrial Workstation, Modular Industrial Console, tabletop mounting, or 19-inch rack mounting (using Foxboro designed dual height modular mounting structure).	10.0 kg (22.0 lb)

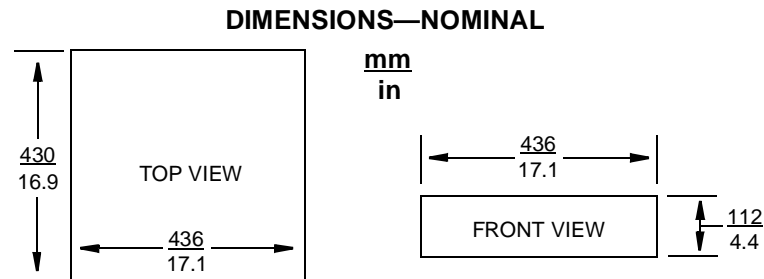


Figure 1. Workstation Processor, Style D Dimensions

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