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I/A Series[®] 50 Series Workstation Processor Model WP51



The Workstation Processor 51, together with its connected peripheral devices, provides a link between the user and all system functions. It receives graphic and textual information from application processors and other system stations and generates video signals to display the information on a video monitor.

In addition to the video monitor, devices connected to the Workstation Processor 51 may include a touchscreen, a mouse or trackball, an alphanumeric keyboard, and up to two annunciator or annunciator/numeric keyboards. 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 CDROM and a streaming 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 graphics technology for maximum display performance and applications expandability. The Workstation Processor 51 may be mounted in I/A Series Industrial Enclosures, Modular Workstations, on Tabletop, or within 19" Rack Mount equipment utilizing a Foxboro-designed modular mounting structure.



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Direct 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 Thinnet, AUI, or Twisted-Pair Ethernet® communications port provides for connection to other networks such as DECnet® or TCP/IP.

The Workstation Processor 51 contains the following elements:

- Processor
- Dynamic RAM Memory
- Nodebus Interface
- Video Interface
- · Serial Interface Ports
- 3.5" 1.44 Mb Floppy Disk
- 535 Mb Hard Disk
- Small Computer System Interface (SCSI)
- Optional Ethernet Communications Port

FUNCTIONAL SPECIFICATIONS

Devices Served by Workstation Processor 51

VIDEO INTERFACE

Color Video Monitor (up to 2)

SERIAL INTERFACES

Alphanumeric Keyboard (up to 1)

Annunciator or Annunciator/Numeric

Keyboard (up to 4)

Touchscreen (up to 2)

Mouse or Trackball (up to 1)

SCSI(a) INTERFACE

CDROM (up to 1)

Streaming Tape Drive (up to 1)

Processor Types

- MicroSPARC® RISC Processor @50 MHz and Floating Point Unit
- Color Frame Buffer

Program Memory

16 Mb, expandable to 48 Mb

Internal Bulk Storage

535 Mb Hard Disk

1.44 Mb Floppy Drive

Screen Presentation

NUMBER OF LINES AVAILABLE TO USER

(program selectable)

CHARACTERS PER LINE

(program selectable)

CHARACTER SIZE

(program selectable)

REFRESH RATE

66 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 128 markers in each set.

2 (default) sets supplied by Foxboro, 2 can be created by user.

CHARACTER SETS

4 sets. 3 (default) sets supplied by Foxboro.

1 can be created by user.

RESOLUTION (PIXELS)

1152 horizontal, 900 vertical

Serial Interface Communications(b)

TYPE

EIA RS-423/RS-232C

MAXIMUM DISTANCE

Port A to DNBX - 1500 ft

Port B to GC10 - 100 ft

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

⁽b) Two serial interface communication ports provide for peripheral communications: Port A services DNBI/DNBX; Port B services an optional Touchscreen and up to two Annunciator or Annunciator/Numeric Keyboards.

FUNCTIONAL SPECIFICATIONS (CONT.)

Nodebus Interface Communications

TYPE

IEEE 802.3 data bus and EIA RS-423 control bus (c)

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)

Optional Ethernet Communications Port

TYPE

Ethernet data bus MAXIMUM DISTANCE

A function of host computer network characteristics

Video Output

TYPE

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

Sync.

MAXIMUM CABLE LENGTH

30 m (100 ft)

Power Requirements

INPUT VOLTAGE

100-120 V ac or 200-240 V ac

CONSUMPTION

70 W

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

Internal Diagnostics

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

ENVIRONMENTAL SPECIFICATIONS

Operating

TEMPERATURE

0 to 40 °C (32 to 104 °F)

RELATIVE HUMIDITY

20 to 80%, noncondensing

ALTITUDE

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

Storage

TEMPERATURE

-20 to +60 °C (-4 to 140 °F)

RELATIVE HUMIDITY

5 to 95%, noncondensing

ALTITUDE

-300 to +12000 m (-1000 to +40000 ft)

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

PHYSICAL SPECIFICATIONS

Configuration and Mounting

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

Mass (Maximum) 5.45 Kg (12 lbs)

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