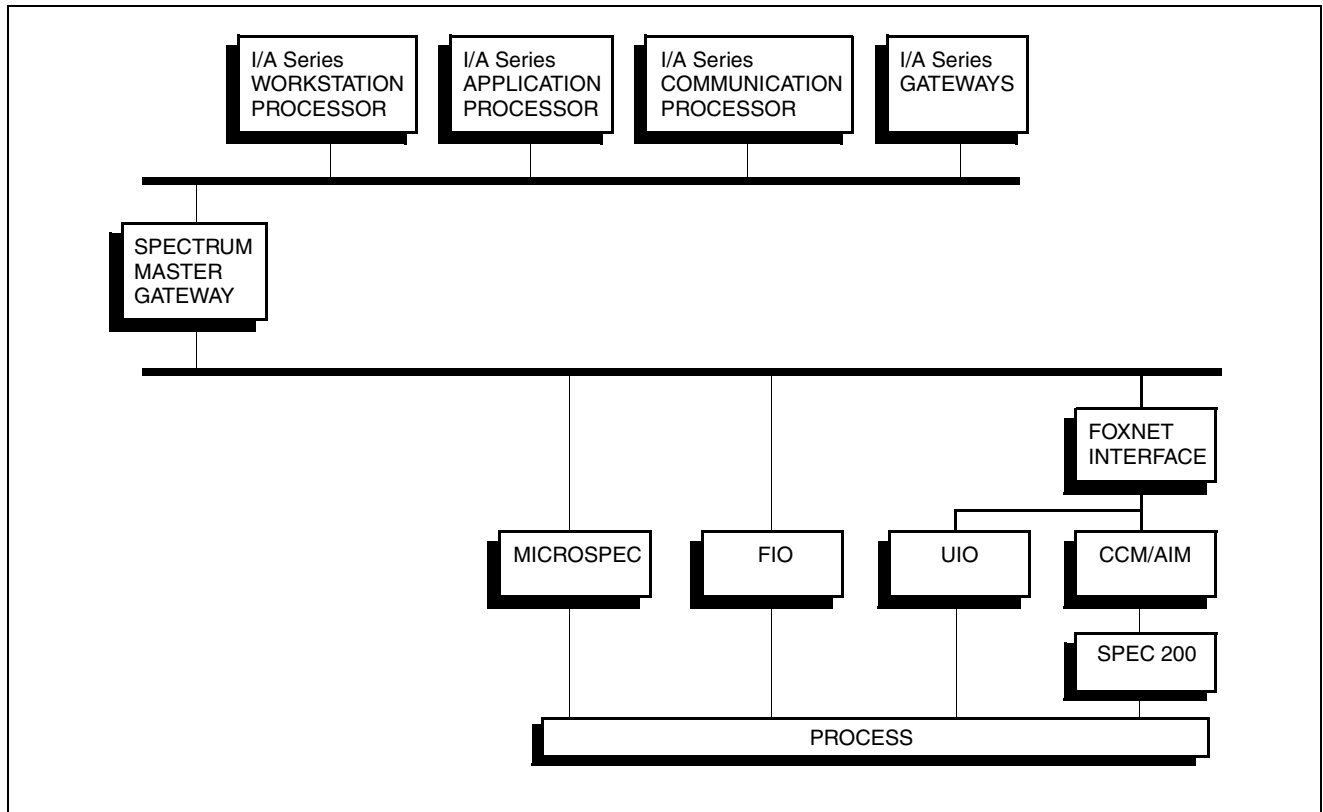


I/A Series® Hardware SPECTRUM Master Gateway



Use Gateway for Information Management only. User must adhere to Product Specifications.

The SPECTRUM Master Gateway (SMG) is a configurable intelligent interface that permits the integration of SPECTRUM systems and I/A Series systems, with the I/A Series system as the master supporting the following functions:

- Plant operations
- Data acquisition
- Process monitoring

The SMG consists of both SPECTRUM and I/A Series components.

The SPECTRUM Database Processor (SDP) on the SPECTRUM side of the interface is a SPECTRUM master station that is connected to FOXNET via a linkport.

The I/A Series side of the SMG consists of up to four (depending on capacity requirements) I/A Series SPECTRUM Interface Processors (SIPs) interfaced to the SDP via dedicated links and connected to the

same or separate I/A Series Nodebuses.

SPECTRUM DATABASE PROCESSOR (SDP) HARDWARE SPECIFICATIONS

FUNCTIONAL SPECIFICATIONS

Processor Type

80286; 80287 Math Coprocessor

Memory

Dynamic random access, dual ported

ERROR CORRECTION/CONTROL

Corrects single bit errors, detects double bit errors

CAPACITY

2 or 4 MB

I/A Series SIP Interface

Four channels at 19.2 Kbits/second

PROTOCOL

CCITT X.25

HARDWARE INTERFACE

RS-232-C

DISTANCE

15 m (50 ft) direct connect (without modems)

FOXNET Interface

TYPE

Byte parallel

DATA RATE

125K bytes/second

PORTS

1-4 per SDP

Local Person Computer Interface

TYPE

Serial RS-232-C

DATA RATE

9600 bits/second

PROTOCOL

Modified XMODEM

Serial Port

RS-232-C

Diskette Drive

TYPE

5.25-inch, 40 track, double-sided, double-density,

48 tracks/inch

FORMATTED CAPACITY

360 KB

DATA TRANSFER RATE

250 Kbits/second

ACCESS TIME

6 ms

Winchester Disk Drive

TYPE

5.25-inch

SECTOR LENGTH

512 bytes

ERROR CODE

32 bit ECC polynomial

FORMATTED CAPACITY

29 MB

DATA TRANSFER RATE

5 megabits/second (625 KB/second)

ACCESS TIME

40 ms

Streaming Tape Drive (for backing up Winchester Disk Drive data)

TYPE

0.25-inch streaming tape

CAPACITY

45 MB

DATA TRANSFER RATE

90 KB/second

ENVIRONMENTAL SPECIFICATIONS

Operating

TEMPERATURE

15 and 30° C (59 and 86° F)

RELATIVE HUMIDITY

20 and 80% relative humidity with maximum wet bulb temperature of 25° C (77° F), noncondensing

ATMOSPHERIC PRESSURE

70 and 108 kPa (21 and 31.9 inHg)

Storage

TEMPERATURE

-10 and +50° C (14 and 122° F)

RELATIVE HUMIDITY

10 and 90% relative humidity, noncondensing

ATMOSPHERIC PRESSURE

20 and 108 kPa (5.9 and 31.9 in Hg)

POWER REQUIREMENTS

Voltage

102 to 132 V ac, 187 to 242 V ac, or 204 to 264 V ac, as specified

Frequency

47 to 63 Hz

VA Rating

1157 VA Single

2314 VA Redundant

PHYSICAL SPECIFICATIONS**Outline**

Dimensions 1905 mm (75 in) high, 584 mm (23.0 in) wide, and 762 mm (30 in) deep; see Dimensions Nominal

Mass (approximate)

NONREDUNDANT UNIT

120 kg (264 lb)

REDUNDANT UNIT

200 kg (440 lb)

**SPECTRUM INTERFACE PROCESSOR (SIP) HARDWARE SPECIFICATIONS
FUNCTIONAL SPECIFICATIONS**

Processor Type

80C86 Microprocessor with 80C87 numeric coprocessor

Memory

32 KB EEPROM; 896 KB parity DRAM

Protocol Capability

Asynchronous 5 to 8 bit characters; odd, even, or no parity; 1 or 2 stop bits. Synchronous HDLC or SDLC

Ports

Four RS-232-C (asynchronous), one may be used RS-232-C (synchronous); one synchronous channel used with SMG configuration

Channel Performance

Four asynchronous I/O ports at combined speed of 9.6 Kbits/second; synchronous speeds up to 56.7 Kbits/second used on SMG configuration

Intra-System Communication

Redundant Nodebus

POWER REQUIREMENTS**Input Voltage**

(Redundant) 39 V dc

Consumption

15 W (maximum)

Isolation

All four channels of the RS-232-C are isolated from the system power source. All signals for the RS-232-C are isolated for 500 V.

Internal Diagnostics

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

ENVIRONMENTAL SPECIFICATIONS(a)**Operating****TEMPERATURE**

0 to 60° C (32 to 140° F)

RELATIVE HUMIDITY

5 to 95%, noncondensing

ALTITUDE

-300 to +3,000 m (-1,000 to +10,000 ft)

Storage**TEMPERATURE**

-40 to +70° C (-40 to +158° F)

RELATIVE HUMIDITY

5 to 95%, noncondensing

ALTITUDE

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

Contamination

Class G3 (harsh) as defined in ISA Standard S71.04

(a)The environmental specifications of this module may be enhanced by the type of enclosure containing the module. [Refer to applicable Product Specification Sheet (PSS) which describes the specific type of enclosure that is to be used.]

PHYSICAL SPECIFICATIONS**Mounting**

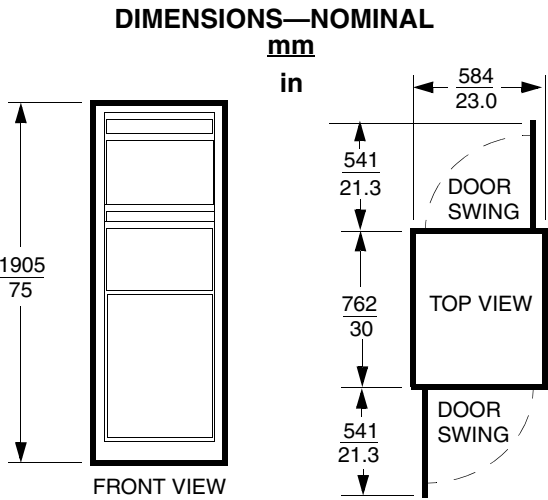
May be placed in any I/A Series system mounting structure

Mass (Maximum)

2.2 kg (4.9 lb)

Indicators

Red and green light emitting diodes (LEDs) indicate diagnostic status



The Foxboro Company

33 Commercial Street
Foxboro, Massachusetts 02035-2099
United States of America
Telephone 1-888-FOXBORO
(1-888-369-2676)

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