I/A Series A2™ Hardware
Nodebus/Control Network Interface (NCNI)

The I/A Series® Nodebus/Control Network Interface (NCNI) is a Z-Module form factor interface device designed to allow the connection of a 10 MB redundant I/A Series Nodebus to a 100 MB/1 GB I/A Series redundant Control Network. The NCNI allows connection to either copper or fiber network switches. It connects to a 100Base-FX Ethernet switch port using an MT-RJ fiber connector with a 62.5/125 micron multimode fiber for distances up to 2 km, or optionally to a 100Base-TX, 10/100 MB connection Ethernet switch port via Category 5, shielded twisted-pair cables (CAT5® STP) for up to 100 meters.

Two modules are required for the redundant Nodebus interface: one for the “A” bus and one for the “B” bus. The NCNI is packaged in a Z-Module form factor with a Cellbus connection for power and Nodebus interface.

Since the Nodebus operates at 10 MB, the NCNI contains an internal Ethernet switch function with local buffer storage to provide for a 100 MB network connection. The 10/100 MB copper port will auto-negotiate 10/100 MB data rate and half/full duplex, whereas the fiber connection is fixed at 100 MB, full duplex.

LEDs on the front of the module indicate link status and module status. Neither the stations on the I/A Series redundant Control Network nor the I/A Series Nodebus need special gateway software to communicate with each other. Standard Redundant Control Network software allows transparent communication across the two physical types of networks.

ARCHITECTURE BY ARCHESTRA™

invensys™ FOXBORO®

FUNCTIONAL SPECIFICATIONS

Power Requirements
INPUT VOLTAGE (REDUNDANT)
26 to 42 V dc (39 V dc typical)
CONSUMPTION (HEAT DISSIPATION)
8 W, maximum

Maximum Number of Nodebus Interfaces Allowed in a Single Node
Not limited

Communication Characteristics
Two modules are required to provide redundant connection to Nodebus.

Nodebus Interface Cabling Distance
Maximum cabling distance between NCNI and other NCNIs or Control Network switches
COPPER
CAT5 - STP cable: 100 meters
FIBER OPTIC
62.5/125 micron multimode fiber: 2 km

ENVIRONMENTAL SPECIFICATIONS

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)

PHYSICAL SPECIFICATIONS

Configuration[(a)]
Single-width Z-Module

Mass (Maximum)
1.0 kg (2.2 lb)

Mounting
May be placed in any I/A Series mounting structure slot

(a) Nodebus/Control Network Interfaces are used in pairs (two single-width modules).

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