NetLinx® NX Integrated Controller

NX-4200 (FG2106-04)

Overview

The NX-4200 / NetLinx® NX Integrated Controller is a programmable network appliance specifically designed to control AV and building technology using multiple analog and digital formats. The NX-4200 provides a scalable platform for the future by combining high performance, backward compatibility and extensive network security features. With its front panel display, built-in Ethernet switch and PoE capability, the NX-4200 is the ideal solution for demanding, technology-rich environments. The NX-4200's all-in-one architecture also delivers the lowest Total Cost of Ownership in the industry, thanks to ease of support, maintenance and configuration, as well as reduced hardware and cabling costs.

Common Applications

- NX Master Security firmware is ideal for enterprise, education, and government policies requiring secure communication over a computer network in line with security standards expected by the IT industry of any equipment running on an enterprise.
- The NX-4200 is geared to meet the high-end control and automation requirements of the most sophisticated and complex business, educational and residential installations. With its generous number of ports, security features and Ethernet switching options, the NX-4200 is ideal for any large installation requiring stringent security measures.
- With redundant power, built in Ethernet switch and enhanced security features like Dual NIC with POE, the NX-4200 provides versatility with the ability to integrate the largest number of devices in the NX Series of Integrated Controllers, including projectors, lighting, DVD and Blu-ray players, thermostats and other electronic equipment.

Features

- **Front Panel Display –** Features an LCD display on the front panel, making it easy to view status information, network settings, IP addresses & ICSLan Port status, among others
- **Redundant Power Source –** The NX-4200 can be powered either with a connection to mains AC power (110/220VAC) or from an external 12V DC power supply. If the AC input power is lost or if the internal power supply fails, the NX-4200 will immediately switch to the 12V DC power input without interruption except to PoE devices on the ICSLan
- **Dual NIC with Power –** Enables two discrete network interfaces for unrivaled security and includes a 4 Port switch with PoE allowing you to power PoE devices over a secure, isolated network. The LAN port is used to connect the master to an external network, and the ICSLAN ports connect to AMX or third-party A/V equipment isolated from the primary network
- **IPv6 –** Supports Internet Protocol version 6 (IPv6), the communications protocol that provides an identification and location system for computers on networks and routes traffic across the Internet

- **IEEE 802.1X** – Supports IEEE Standard for Port-based Network Access Control with the ability to grant or deny network access to devices wishing to attach to a LAN based on credentials tied to the device rather than to a user
- **X.509 Certificate Services** – NX supports customer-provided certificates for access to protected networks.
- **Full LDAP Integration** – Supports multiple user-defined login groups for accessing the master, as well as provides an AMX programmer the capability to require network login to access certain areas of the touch panel
- **High Performance Architecture, Flexible Programming Platform (RPM, NetLinx and Java)** – Easily scalable to support a wide range of applications for today and tomorrow
- **Full Line Compatible (Backwards and Cross-Compatibility)** – Standardized port numbers and new configuration import/export tools mean fewer coding changes
- **TLS / SSH Client** – Provides NetLinx programmers the ability to manage secure port TLS and SSH communications with a remote device or server
- **Cryptographic Support** – In accordance with FIPS 140-2, a U.S. government computer security standard used to accredit cryptographic modules for the protection of sensitive or valuable data
- **Network Syslog –** The Central Controller generates an audit record of events using syslog, a standard for message logging
- **Enhanced Diagnostics On Serial and IR Ports** – Provides real time error feedback when Serial and IR ports are disconnected or improperly wired
- **File Import / Export From USB Drive** – Backup and restore configuration data, program files, and update firmware from a standard USB flash drive

Additional Features
- **Ultra-Fast 1600 MIPS processor**
- **1 GB Onboard RAM**
- **1 M Non-Volatile Memory**
- **8 GB SDHC FLASH Memory**
- **1 RU Rack Space**
- **2 AXLink Interfaces**
- **1 10/100 LAN Interface**
- **4 10/100 ISCLan interfaces with PoE**
- **4 PoE Interfaces**
- **8 Digital I/O Ports**
- **2 RS-232/422/485 Ports**
- **6 RS-232-Only Ports**
- **8 IR/Serial Output Ports**
- **8 Relay Ports**

Specifications

GENERAL	
Enclosure	Metal with black matte finish
Dimensions (HWD)	1 4/5" x 17" x 9 1/8" (45.15 mm x 431.80 mm x 231.64 mm)
Weight	7.6 lb. (3.447 Kg)
Regulatory Compliance	FCC CFR Title 47 Part 15 CE EN 55022 CE EN 55024 CE EN 60950-1 IEC 60950-1 UL 60950-1 C-Tick CISPR 22 IC CISPR 22 VCCI CISPR 22 RoHS WEEE

Included Accessories	• 2-pin 3.5 mm mini-Phoenix (female) PWR connector (41-0002-SA) • 4-pin 3.5 mm mini-Phoenix (female) AxLink connector (41-5047) • (2) 10-pin 3.5mm mini-Phoenix female RS-232/422/485 connectors (41-5107) • (6) 5-pin 3.5mm mini-Phoenix female RS-232 connectors (41-0336) • (2) 6-pin 3.5 mm mini-Phoenix female I/O connectors (41-5063) • (2) 8-pin 3.5 mm mini-Phoenix female Relay connectors (41-5083) • (2) CC-NIRC IR Emitters • Removable rack ears
Optional Accessories	• PSN6.5, 6.5 A Power Supply (FG423-41) • PSR5.4, 12 VDC, 5.4 A Power Supply with 3.5 mm Phoenix Connector with Retention Screws (FG423-48) • PSN4.4, Power Supply, 4.5 A, 3.5 mm Phoenix, 13.5 VDC (Discontinued) (FG423-45) • CC-USB-NI, USB Programming Cable (FG10-2105) • CC-NIRC, IR Cables (FG10-000-11) • CBL-ETH-FL2, Cat6 Ethernet Cable (FG10-2194-16) • CBL-ETH-FL, Ethernet Cat5e Flat Cable (FG10-2182-16) • EXB-IRS4, ICSLan IR/S Interface, 4 IR/S and 4 Inputs (FG2100-23) • EXB-COM2, ICSLan Serial Interface, 2 Ports (FG2100-22) • EXB-REL8, ICSLan Relay Interface, 8 Channels (FG2100-20) • EXB-I/O8, ICSLan Input/Output Interface, 8 Channels (FG2100-21) • EXB-MP1, ICSLan Multi-Port, 1 COM, 1 IR/S, 2 I/O, 1 IR RX (FG2100-26)

ACTIVE POWER REQUIREMENTS	
Voltage, AC (Typical)	100-240 VAC 50/60 Hz
Voltage, DC (Typical)	12 VDC
DC Current Draw	450 mA @ 12 VDC
Voltage DC Range	9 - 18 VDC
Power Connector	IEC Power Cord Connector 100-240 VAC 3.5mm Phoenix with retaining screws

POWER CONSUMPTION	
Active Power Consumption	8.4 W

PoE	
Output Voltage	55 VDC
Maximum Output Power	Per port, 33 W Total for all ports, 70 W
Note	Supports four IEEE 802.3af PoE devices simultaneously Supports a maximum of two IEEE 802.3at PoE plus devices simultaneously

ENVIRONMENTAL	
Temperature (Operating)	32° F to 122° F (0° C to 50° C)
Temperature (Storage)	14° F to 140° F (-10° C to 60°C)
Humidity (Operating)	5% to 85% RH
Heat Dissipation (Typical)	28.7 BTU/hr

ONBOARD MASTER	
Processor	1600 MIPS
Program Port	(1) USB Standard B
Configuration Dip Switch	4-position
Status Indicator	Status LED (green) blinks to indicate that the system is programmed and communicating properly
Input Indicator	Input LED (yellow) blinks to indicate that the Controller is receiving data
Output Indicator	Output LED (red) blinks to indicate that the Controller is transmitting data
ID Pushbutton	Black ID pushbutton for setting IP mode and reverting to default configuration and firmware
USB Host Port	(2) USB Standard A, one on front and one on back, USB Host port supports Solid State drive for upgrading firmware, loading code files, copying configuration data and remote storage
Power Button	Front panel power button turns off the Controller when pushed and held for more than two seconds

MEMORY	
NVRAM	1
Memory Card	8 GB SD
DDRAM	1 GB
Note	Supports external USB Solid State Drives

ETHERNET	
Connection	(1) RJ-45
Description	10/100 Port RJ-45 connector provides TCP/IP communication. Auto MDI/MDI-X enabled. Supports IPv4 and IPv6 networks. Supports HTTP, HTTPS, Telnet, FTP
Link/Act Indicator	Link/Activity LED (green) blinks when receiving Ethernet data packets, one on Ethernet RJ-45 connector and one on the front panel
Speed Indicator	Speed LED (yellow) lights On when the connection speed is 100 Mbps Ethernet connection and turns OFF when the speed is 10 Mbps

ICSLan	
ICSLan Connection	(4) RJ-45, 10/100 Port RJ-45 connectors with PoE. Auto MDI/MDI-X enabled. Supports IPv4 and IPv6 networks. Supports HTTP, HTTPS, Telnet, FTP
ICSLan Link/Active Indicator	ICSLan LED (green) blinks when receiving Ethernet data packets, one on Ethernet RJ-45 connector and one on the front panel

ICSLan Speed Indicator	Speed LED (yellow) lights On when the connection speed is 100 Mbps Ethernet connection and turns OFF when the speed is 10 Mbps

CONTROL PORTS & INDICATORS	
AxLink Port	(2) 4-position 3.5mm Screw Terminal, provides data and power to external AxLink control devices
AxLink Indicator	(2) AxLink LED (green) indicates the state of the AxLink port
RS-232/422/485 Port	(2) 10-position 3.5mm Screw Terminal NetLinx Port 1 and 5 XON/XOFF (transmit on / transmit off) CTS/RTS (clear to send/ready to send) 300 - 115,200 baud
RS-232 Port	(6) 5-position 3.5mm Screw Terminal NetLinx Port 2-4 and 6-8 XON/XOFF (transmit on / transmit off) CTS/RTS (clear to send/ready to send) 300 - 115,200 baud
Serial Indicator	(8) sets of LEDs (red/yellow) indicate when serial Ports 1-8 are transmitting and receiving data
IR/Serial	(8) 2-position 3.5mm Screw Terminal 8 IR Transmit / 1-way Serial ports NetLinx Ports 11-18 Support high-frequency carriers up to 1.142 MHz 8 IR/Serial data signals can be generated simultaneously
IR/Serial Indicators	(2) LEDs (red) indicate when each of the IR/Serial ports (11-18) are transmitting control data
I/O Channels	(8) One 10-position 3.5mm Screw Terminal 8-channel binary I/O port for contact closure with each input being capable of voltage sensing NetLinx Port 22 Channels 1-8
I/O Indicator	(8) LEDs (yellow) indicate each of the I/O channels (1-8) are active
Relays	(8) Two 8-position 3.5 mm Screw Terminal, (8) single-pole, single-throw relays NetLinx Port 21 Channels 1-8 Each relay can switch up to 24 VDC or 28 VAC @ 1 A Each relay is independently controlled
Relay Indicators	(8) LEDs (red) indicate when each of the relay channels (1-8) are active (closed)

For front and back product photos please visit: http://www.amx.com/products/NX-4200.asp