Overview

The NetLinx NXC-ME260/64 Card (FG2010-64) supplies optimum control system performance. With the ability to respond 50 times faster than conventional control masters, the NXC-ME260/64 is propelled by the high-speed 257 MIPS ColdFire processor. The standard 32MB CompactFlash memory is expandable to 1G and beyond and Ethernet networking is built onboard. The NXC-ME260/64 also features enhanced Username and Password authentication, HTTPS and SSL certificate interaction, ICSP communication and encryption, and use of a pre-installed AMX SSL certificate.
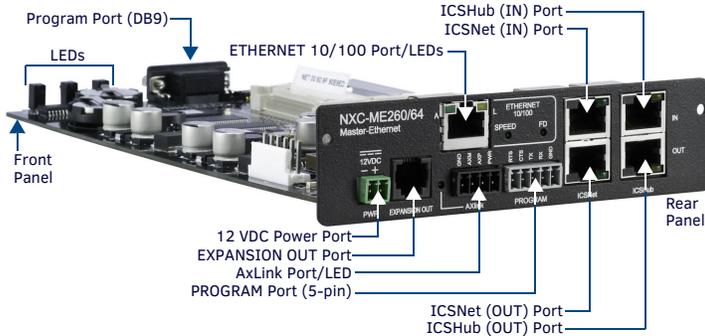

FIG. 1 NXC-ME260/64

ATTENTION!

Verify the Master is using the latest released firmware. Verify you are using the latest version of NetLinx Studio (available for download from www.amx.com).

Specifications

NXC-ME260/64 SPECIFICATIONS	
Dimensions (HWD):	• 1 5/16" x 5" x 8 13/16" (3.4 cm x 12.7 cm x 22.4 cm) • RU: 1
Power Requirement:	• 750 mA @ 12 VDC • Power requirements are usage dependant
Memory:	• Volatile: 64 MB (SDRAM) • Non-volatile: 1 MB • Refer to the NXC-ME260/64 Instruction Manual for more information.
Compact Flash:	2GB or greater (upgradeable to 4GB - see *Other AMX Equipment*). Note: AMX may increase Flash size at any time in response to market availability.
Microprocessor:	Coldfire 5407 (32-bit)
Weight:	• NXC-ME260/64 only: 0.55 lbs (0.25 kg) • NXC-ME260/64 with NXS-NMS module: 1.95 lbs (0.88 kg)
Enclosure:	Metal with black matte finish
Certifications:	FCC Part 15 Class B and CE

Included Accessories:	• Connector Bag containing:
	  2-pin 3.5 mm mini-Phoenix connector (female) (41-5025)
	  4-pin 3.5 mm mini-Phoenix connector (female) (41-5047)
	  5-pin 3.5 mm mini-Phoenix connector (female) (41-5053)
	  Back panel (51-2010-61)
	• Front plate with screws and washers

Other AMX Equipment:	• AC-RK Accessory Rack Kit (FG515) • NXF CardFrame (FG2001) • NXI Integrated Controller (FG2101) • NXS-MHS Module (FG2009) • Upgrade Compact Flash (factory programmed with firmware): NXA-CFM4G, 4 GB Flash Upgrade (FG2116-06)

For more detailed product specifications, refer to the NXI Instruction Manual at www.amx.com.

Ethernet Ports used by the NXC-ME260-64

ETHERNET PORTS USED		
Port type	**Description**	**Standard Port #**
FTP	The on-board Master has a built-in FTP server.	21/20 (TCP)
SSH	The SSH port uses SSL as a mechanism to configure and diagnose a NetLinx system. This port value is used for secure Telnet communication. Note: We currently ONLY support SSH version 2.	22 (TCP)
Telnet	The NetLinx Telnet server provides a mechanism to configure and diagnose a NetLinx system.	23 (TCP)
HTTP	The Master has a built-in web server that complies with the HTTP 1.0 specification and supports all of the required features of HTTP v1.1.	80 (TCP)
Port type	Description	Standard Port #
HTTPS/SSL	The Master has a built-in SSL protected web server.	443 (TCP)

ETHERNET PORTS USED		
Port type	**Description**	**Standard Port #**
ICSP	Peer-to-peer protocol used for both Master-to-Master and Master-to-device communications.	1319 (UDP/TCP)
integration! Solutions	The feature on the Master uses, by default, port 10500 for the XML based communication protocol. This port is connected to by the client web browser's JVM when integration! Solutions control pages are retrieved from the Master's web server.	10500 (TCP)

Modes and LED Blink Patterns

ETHERNET 10/100 REAR PANEL LED PATTERNS	
LED	**Description**
• A	Activity - lights (yellow) when the Ethernet cables are connected and terminated correctly, and blinks when receiving Ethernet data packets.
• L	Link - lights when the Ethernet cables are connected and terminated correctly
• SPEED	Lights (green) when transmitting data at 100 Mbps, and is Off when transmitting at 10 Mbps.
• FD	Full Duplex - lights (green) when running in full duplex mode, and is Off when running half duplex mode.

The following table lists the modes and blink patterns for the front LEDs.

MODES AND FRONT PANEL LED BLINK PATTERNS		LEDs and Blink Patterns		
Mode	**Description**	**STATUS (green)**	**OUTPUT (red)**	**INPUT (yellow)**
OS Start	Starting the operating system.	On	On	On
Boot	Master is booting.	On	Off	On
Contacting DHCP server	Master is contacting a DHCP server for IP config. info.	On	Off	Fast Blink
Unknown DHCP server	Master could not find the DHCP server.	Fast Blink	Off	Off
Downloading Boot firmware	Downloading Boot firmware to the on-board flash memory. Do not cycle power during this process!	Fast Blink	Fast Blink	Fast Blink
No program running	There is no program loaded, or the program is disabled.	On	Off	Off
Normal	Master is functioning normally.	1 blink per second	Indicates activity	Indicates activity

Program Port Connections/Wiring

The NXC-ME260/64 is equipped with two Program ports. One is located on the front panel and the other is on the rear for easy access. The port on the front panel is an RS232 (male) connector and the rear port is a 5-pin (male) connector. Use a Programming cable to connect the Program port to your PC's COM port to communicate with the Master card. Then, you can download NetLinx programs to the Master card using the NetLinx Studio 2 software program.

Wiring a Power Connection

Use a 12 VDC-compliant power supply to provide power to the Master through the rear 2-pin 3.5 mm mini-Phoenix. Use the power requirements information listed in the Specifications table to determine the power draw. The incoming PWR and GND cable from the PSN power supply must be connected to their corresponding locations within the PWR connector. Refer to the unit's instruction manual for more detailed wiring connection information.

RS-232/422/485 Wiring Connector Information

The following table shows the pinout and wiring specification information for the front panel RS-232 (DB9) Program Port.

PROGRAM PORT CONNECTOR PINOUTS (RS232)			
Pin	**Signal**	**Function**	
1	N/A	Not used	
2	RXD	Receive data	
3	TXD	Transmit data	
4	DTR	Not used	
5	GND	Signal ground	
6	DSR	Not used	
7	RTS	Request to send	
8	CTS	Clear to send	
9	N/A	Not used	

RJ-45 Connections

Standard Ethernet cable provides communication between the Master and NetLinx devices.

Ethernet 10/100 Base-T Connector

Standard Ethernet cable provides 10/100 network connectivity between the panel and the Master.

Baud Rate Settings

The Program Port DIP switch is located on the card's internal circuit board (FIG. 2).
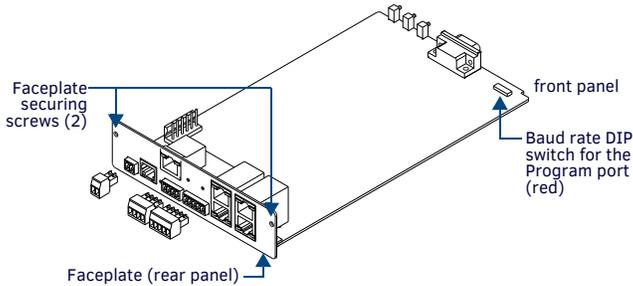

FIG. 2 LOCATION OF (INTERNAL) PROGRAM PORT DIP SWITCH

Note: For cards installed in modules, you must remove the front panel to access the DIP switch. Refer to the NXC-ME260/64 Hardware Reference Guide for details.

Use this internal DIP switch to set the baud rate used by the Program port for communication. Use this DIP switch to set the baud rate for the Program Port, according to the settings shown in the following table. Make sure the baud rate you set matches the baud rate on your PC's NetLinx COM Settings before programming the unit. The default baud rate = 38,400 (bps).

BAUD RATE SETTINGS				
Baud Rate	**Position 5**	**Position 6**	**Position 7**	**Position 8**
9600 bps	OFF	ON	OFF	ON
38,400 bps (default)	OFF	ON	ON	ON
57,600 bps	ON	OFF	OFF	OFF
115,200 bps	ON	ON	ON	ON

- The Program Port DIP Switch is also used to set Program Run Disable (PRD) mode. The PRD mode prevents the NetLinx program stored in the Master from running when you power up the NXC-ME260/64.
- DIP switch 1 activates/deactivates the Program Run Disable Mode. DIP Switches 2,3, and 4 must remain OFF at all times.

Setting the Configuration (Program Port) DIP Switch

1. Disconnect the power supply from the rear 2-pin PWR (green) connector.
2. Set DIP switch positions according to the Baud Rate Settings table above.
3. Reapply power to the unit.

SPE Port Connection/Wiring

Use an RJ-11 cable to connect the NXC-ME260/64 to an AXB-SPE Slave Port Expander (FG714). The EXPANSION OUT port on the rear panel connects to the EXPANSION IN port on the AXB-SPE.

You can daisy chain multiple AXB-SPE's by connecting the EXPANSION OUT on the primary AXB-SPE to the EXPANSION IN port on the secondary.

- The connecting RJ-11 cable should not exceed 6" in length.
- Repeat this process to connect up to nine AXB-SPE's.

Preparing the ME260-64 for Serial Communication

1. Launch NetLinx Studio.
2. Select **Settings** > **Active System Communication Settings** to open the *Communications Settings* dialog (FIG. 3):
3. Use the options in the **Serial** tab to configure the COM port parameters used to communicate to the NetLinx Master.
4. Click **OK.**
5. Right-click inside the **Online Tree** tab and select **Refresh System Online Tree.**
6. Select **Diagnostics** > **Device Addressing** to assign a System Value via the *Device Addressing* dialog (FIG. 4):
7. Check the **Change System** option, and enter the current and New System values.
8. Click the **Change Device/System Number** button and when finished click **Done.**
9. Click **Reboot Master** to restart the Master and incorporate any changes.
10. Once the dialog replies with "*Reboot of system complete*", click **Done** and then click the **OnLine Tree** tab in the Workspace window to view the devices on the System. *Default System value = 1.*
11. Right-click on the *Empty Device Tree/System* entry and select **Refresh System** to re-populate the list.
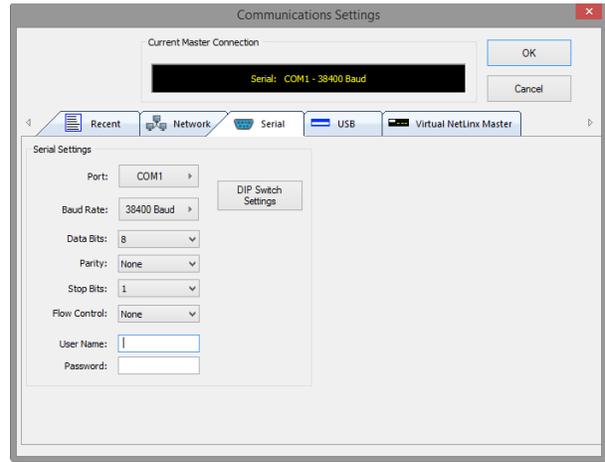

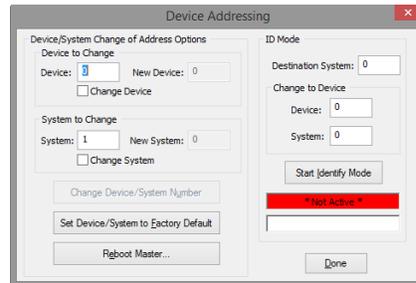**FIG. 3** NETLINX STUDIO - COMMUNICATIONS SETTINGS DIALOG (SERIAL OPTIONS)

FIG. 4 NETLINX STUDIO - DEVICE ADDRESSING DIALOG

Configuring the ME260-64 for Ethernet Communication

Before continuing, complete the COM port steps above.

1. Connect an Ethernet cable to the rear Ethernet connector.
2. Select **Diagnostics** > **Network Addresses** to open the *Network Addresses* dialog and press **Get IP Information** to populate the fields with the current settings (FIG. 5):
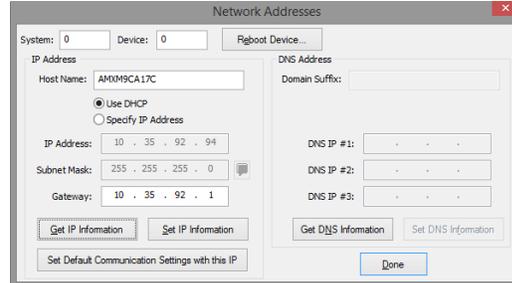

FIG. 5 NETLINX STUDIO - NETWORK ADDRESSES DIALOG

3. Enter the System, Device *(0 for a Master)*, and Host Name information:
4. To configure the Address:
   - To use a DHCP Address, select **Use DHCP**, then click **GET IP** (*to obtain a DHCP Address from the DHCP Server*), click **SET IP Information** (*to retain the new address*), and then finish the process by clicking **Reboot Master**.
   - To use a Static IP Address, select **Specify IP Address**, enter the IP parameters into the available fields, then click **SET IP Information** (*to retain the pre-reserved IP Address to the Master*), and then click **Reboot Master** to finish the process.
5. Repeat steps 1 - 5 from the previous section but rather than selecting the **Serial** option, choose **TCP/IP** and edit the settings to match the IP Address you are using (whether Static or IP).
6. Click **Authentication Required** (*if the Master is secure*d) and press **User Name and Password** to enter a valid username and password for the secured Master.
7. Click **OK** to return to the main application.

Additional Documentation

For more detailed installation, configuration, programming, file transfer, and operating instructions, refer to the NXC-ME260-64 Instruction Manual, available online at www.amx.com.

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