Overview

The NXA-ICSNET ICSNet Daughter Card (FG2105-10) is used to provide ICSNet connectivity for NI-2100 and NI-3100 units that are not already ICSNet-ready.

FIG. 1 NXA-ICSNET ICSNET DAUGHTER CARD

This card is already installed within the NI-4100 NetLinx Integrated Controller, and the versions of both the NI-2100 and the NI-3100 that are ICSNet-Ready (FG2105-14 and FG2105-15, respectively).

It is an optional accessory to both the baseline NI-2100 and NI-3100 units.

The NI-2100 (FG2105-04) can be upgraded to provide one ICSHub and two ICSNet ports through either a field installation of the optional NXA-ICSNET card or by purchasing the ICSNet-ready version (FG2105-14) directly from AMX.

The NI-3100 (FG2105-05) can also be upgraded to provide one ICSHub and two ICSNet ports through either a field installation of the optional NXA-ICSNET card or by purchasing the ICSNet-ready version (FG2105-15) directly from AMX.

Removable ICSNet cover plate

FIG. 2 IDENTIFYING UPGRADEABLE UNITS (NOT ICSNET-READY)

Note: The NI-2100 and NI-3100 upgrade procedures are identical.

The NXA-ICSNET comes with all required mounting hardware:

- 3 nylon screws
- 3 nylon nuts
- 3 nylon spacers

Removing the Outer Housing

CAUTION: THE ELECTRONICS WITHIN THIS UNIT AS WELL AS THE ICSNET CARD ARE ELECTROSTATIC DISCHARGE (ESD) SENSITIVE. ALL SERVICE TO THIS UNIT MUST BE PERFORMED ON A PROPERLY GROUNDED SURFACE. PLEASE ENSURE THAT ANY PERSONS PERFORMING SERVICE ON THIS UNIT BE PROPERLY GROUNDED AND OBSERVE ALL ESD PREVENTION PROCEDURES IN ORDER TO AVOID DAMAGE TO THE UNIT.

1. Carefully detach all connectors from the rear of the unit (see FIG. 3).
2. Remove the chassis housing screws from both the sides and top of the NI-2100/3100 Controllers, as shown in FIG. 3 by using a grounded screwdriver.
    The NI-2100/3100 units each have six screws on the top and three on both sides.
    - You can also remove the factory-installed mounting brackets by using a grounded screwdriver to remove the two sets of screws securing these brackets.
3. Carefully pull-up and remove the housing from the Controller to expose the internal circuit board.
4. Place the housing aside for later re-installation and continue with the procedures in the following sections to both remove the ICSNet cover plate and install the NXA-ICSNET card.
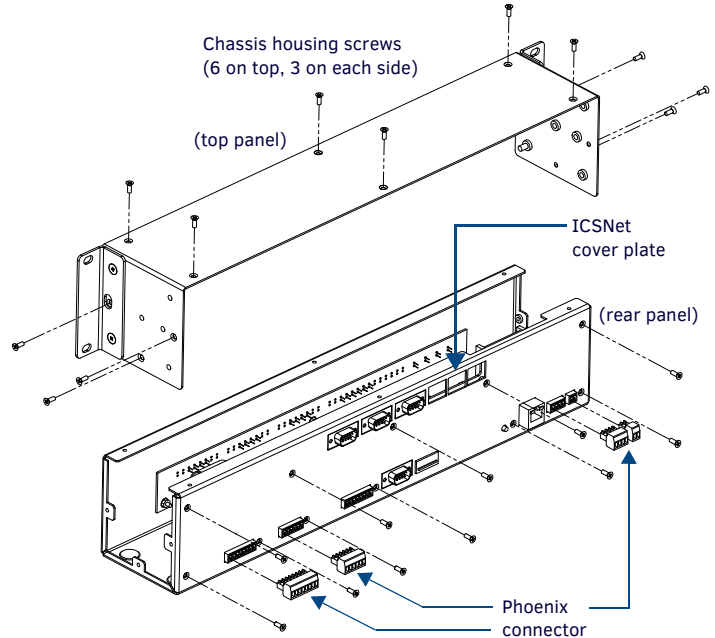
Chassis housing screws
(6 on top, 3 on each side)

(top panel)

ICSNet cover plate

(rear panel)

Phoenix connector

FIG. 3 CHASSIS AND MOTHERBOARD REMOVAL OVERVIEW FOR NI-2100 AND NI-3100 UNITS

Removing the Motherboard

CAUTION: OBSERVE ESD PRECAUTIONS!

1. Outside the chassis, remove all Phoenix connectors. (FIG. 3)
2. Inside the chassis, unplug the ribbon cable from motherboard.
3. Outside the chassis, remove the eleven screws securing motherboard to chassis, and carefully remove the motherboard. (FIG. 3)

Installing the NXA-ICSNet Daughter Card

1. Working on a grounded surface, insert the 3 nylon screws through the motherboard and thread on the 3 nylon spacers until they are seated firmly against the motherboard (FIG. 4).

FIG. 4 NYLON HARDWARE ON MOTHERBOARD

2. Orient the NXA-ICSNET card such that the three screws in the motherboard align with the three mounting holes in the ICSNET card.
3. Gently lower the NXA-ICSNET card with the nylon screws going through the mounting holes, until the card connector is fully engaged, and the NXA-ICSNET card is seated on the nylon spacers.
4. Thread on the other 3 nylon spacers until they are seated firmly against the NXA-ICSNET card. Securely tighten; however, do not over tighten. (FIG. 5)

FIG. 5 ICSNET CARD SEATED AGAINST MOTHERBOARD

Removing ICSNet Cover Plate

The ICSNet cover plate is designed so that the flaps can be easily bent without using any tools.

CAUTION: Do not use a metal tool to assist in this removal process. This plate can be easily bent and can become damaged with excessive force.

1. Inside the enclosure. locate the 3 internal ICSNet cover plate security flaps (FIG. 6).
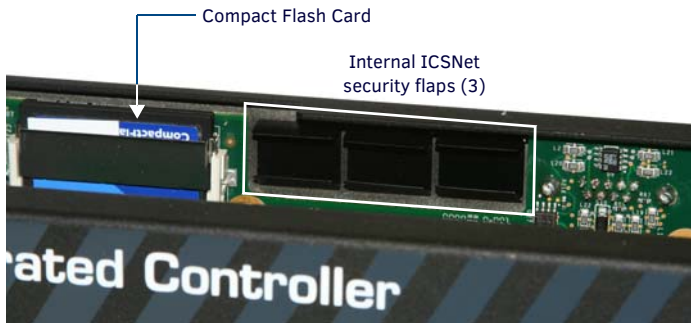

FIG. 6 ICSNET SECURITY FLAPS (REAR PANEL, INSIDE VIEW)

2. Reach inside the unit and squeeze together the flap closest to the Compact Flash card.
3. Carefully repeat this process for the remaining two flaps.
4. Push out the ICSNet cover plate from the inside of the unit. This action dislodges the cover plate and reveals the three ICSNet connector openings (FIG. 7).
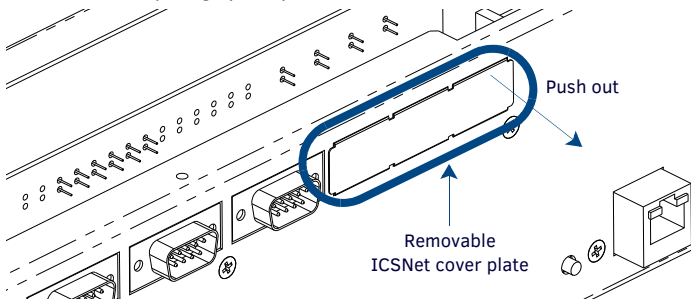

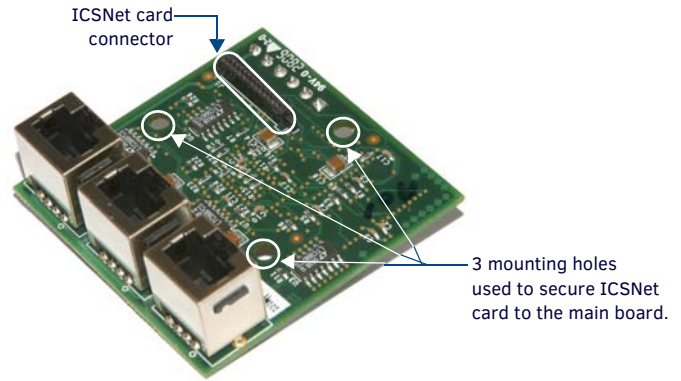**FIG. 7** ICSNET COVER PLATE LOCATION

FIG. 8 NXA-ICSNET CARD COMPONENTS

Replacing the Motherboard/Daughter Card Assembly

1. Carefully replace motherboard into chassis housing.
2. Fasten with 11 mounting screws. See FIG. 3.
3. Reattach ribbon cable to motherboard.
4. Reattach Phoenix connectors.

Replacing the Outer Housing

1. Align the chassis back over the unit and gently slide it down until the chassis housing openings are aligned over their respective openings along both the sides and top of the unit.
2. Insert and secure the chassis housing screws back into their respective locations on both the sides and top of the NI-2100/3100 Controllers, as shown in FIG. 3 by using a grounded screwdriver.
    *   Re-install the mounting brackets by using a grounded screwdriver to resecure the two sets of screws securing these brackets (FIG. 3).
3. Re-install all connectors and apply power to the unit.

The finished product is an upgraded NI-X100 Controller with one new ICSHub and two new ICSNet ports available at the rear of the unit (FIG. 9).
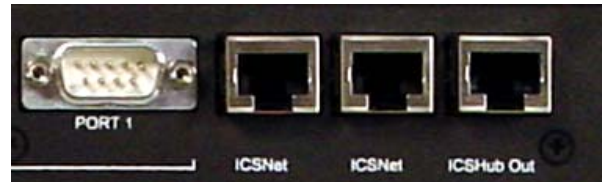

FIG. 9 NXA-ICSNET CARD CONNECTORS

Additional Documentation

For more detailed installation, configuration, and operating instructions, refer to the *NetLinx Integrated Controllers (NI-2100, NI-3100, and NI-4100 Series)* Instruction Manual, available online at **www.amx.com**.

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