



NetSure™ Control Unit (NCU) Controller 2nd Ethernet Port Retrofit Kit

Installation Manual

Kit Specification Number: 559251

For Use in Spec. No. 582127000 and 581127000 Power Systems

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Technical Support Site

If you encounter any installation or operational issues with your product, check the pertinent section of this manual to see if the issue can be resolved by following outlined procedures.

Visit <https://www.vertiv.com/en-us/support/> for additional assistance.

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Admonishments Used in this Document



DANGER! Warns of a hazard the reader *will* be exposed to that will *likely* result in death or serious injury if not avoided. (ANSI, OSHA)



WARNING! Warns of a potential hazard the reader *may* be exposed to that *could* result in death or serious injury if not avoided. This admonition is not used for situations that pose a risk only to equipment, software, data, or service. (ANSI)



CAUTION! Warns of a potential hazard the reader *may* be exposed to that *could* result in minor or moderate injury if not avoided. (ANSI, OSHA) This admonition is not used for situations that pose a risk only to equipment, data, or service, even if such use appears to be permitted in some of the applicable standards. (OSHA)



ALERT! Alerts the reader to an action that *must be avoided* in order to protect equipment, software, data, or service. (ISO)



ALERT! Alerts the reader to an action that *must be performed* in order to prevent equipment damage, software corruption, data loss, or service interruption. (ISO)



FIRE SAFETY! Informs the reader of fire safety information, reminders, precautions, or policies, or of the locations of fire-fighting and fire-safety equipment. (ISO)



SAFETY! Informs the reader of general safety information, reminders, precautions, or policies not related to a particular source of hazard or to fire safety. (ISO, ANSI, OSHA)

Important Safety Instructions

Safety Admonishments Definitions

Definitions of the safety admonishments used in this document are listed under “Admonishments Used in this Document” on page iv.

Safety and Regulatory Statements

Refer to Section 4154 (provided with your customer documentation) for Safety and Regulatory Statements.

Déclarations de Sécurité et de Réglementation

Reportez-vous à la Section 4154 (fourni avec les documents de votre client) pour les déclarations de sécurité et de réglementation.

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1 Vertiv™ NetSure™ Control Unit (NCU) Controller 2nd Ethernet Port Retrofit Kit

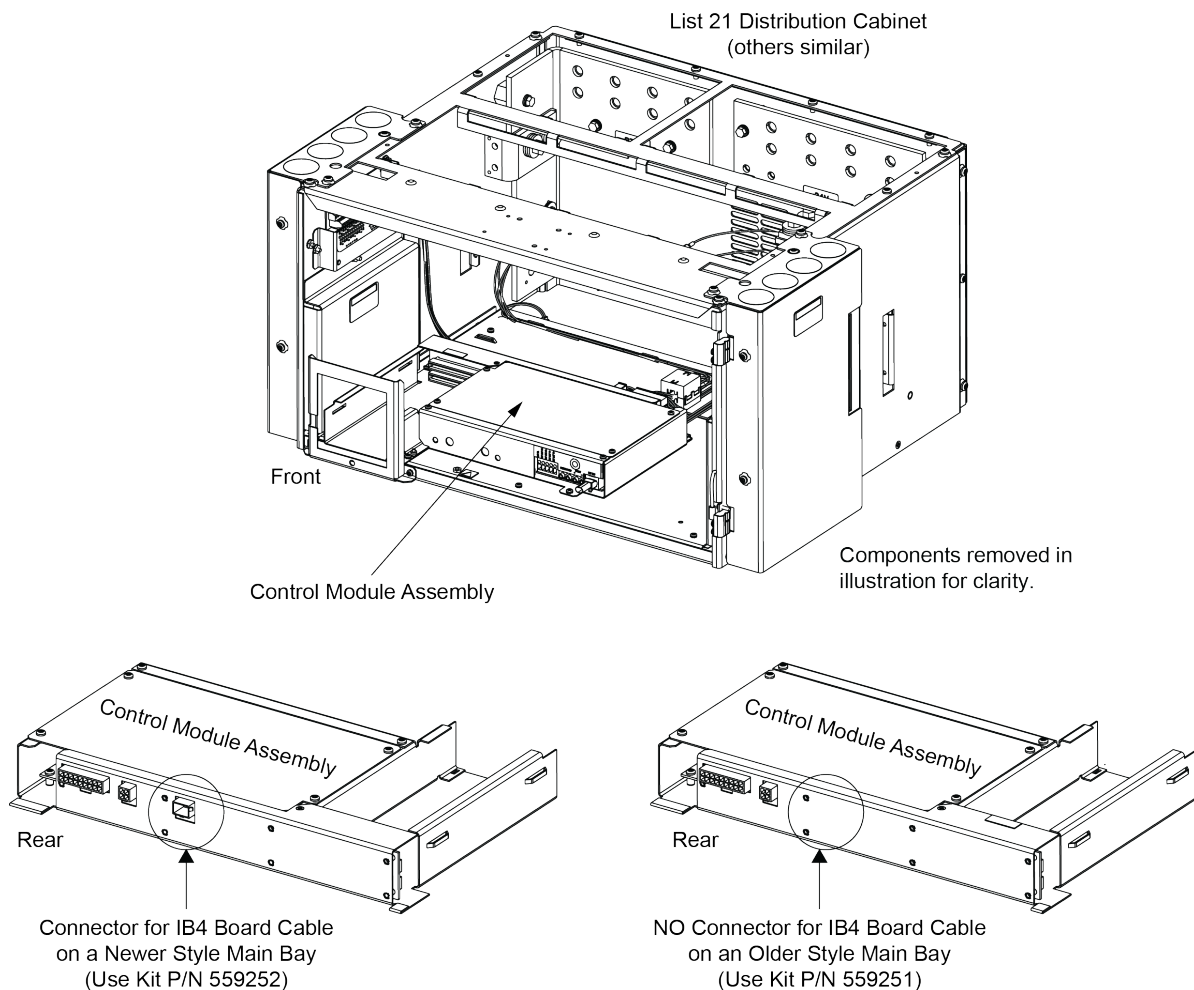
1.1 Kit Description

These instructions provide a step-by-step procedure to field install this kit into Power System Spec. No. 582127000 and 581127000. Installation of this kit in other equipment should not be attempted.

This kit provides a complete control module assembly that allows an IB4 board to be connected to the NCU Controller in an older main bay. This kit provides the IB4 board with a second Ethernet port. The Ethernet port located on the NCU Controller's front panel can be used to connect a computer directly to the NCU. The Ethernet port located on the IB4 board can be used to connect the NCU Controller to your Local Area Network (LAN).

There are two kits available. One to add the IB4 board to a newer style main bay that provides an NCU Controller motherboard connector for an IB4 board cable and the other for an older style main bay that does not have this NCU Controller motherboard connector. THIS KIT IS FOR A MAIN BAY THAT DOES NOT HAVE AN IB4 BOARD CONNECTOR LOCATED ON THE NCU MOTHERBOARD. See Figure 1.1 for identification.

Figure 1.1 Identifying Control Module Assembly IB4 Board Connector



1.2 Kit Contents

Table 1.1 lists the items furnished with this kit. Before starting the procedure, check the items furnished against those listed to ensure that there are no shortages.

Table 1.1 Kit Contents

Qty.	Description	P/N
1	Preassembled Control Module Assembly	559240
1	IB4 Board Assembly	559239
1	IB4 Board USB Cable	559324
1	LVD Inhibit Label	548124
1	Battery Disconnect Label	548131



NOTE! The system must be equipped with the NCU controller (model 1M830DNA) for the second Ethernet port to operate. If the system is equipped with the ACU+ controller (model 1M820DNA) it must be replaced by the NCU controller, which is not provided with this kit and must be ordered separately.

1.3 Tools and Material Required

Table 1.2 lists the items required to install this kit.

Table 1.2 Tools and Material Required

Description
Cross-Blade Screwdriver
Standard Socket Set

1.4 Installation Procedure

THESE INSTRUCTIONS SHOULD BE READ THROUGH COMPLETELY BEFORE INSTALLING THE KIT.

The following is a step-by-step procedure to install the kit. The procedure has been written for ease of use and to minimize the possibility of contact with potentially hazardous energy. This procedure should be performed in the sequence given, and each step should be completely read and fully understood before performing that step. Observe all “Important Safety Instructions” presented at the beginning of this document as this procedure is being performed. As each step of the procedure is completed, the box adjacent to the respective step should be checked. This will minimize the possibility of inadvertently skipping any steps. If the step is not required to be performed for your site, also check the box to indicate that it was read.



NOTE! When performing any step in this procedure which requires removal of existing hardware, retain all hardware for use in subsequent steps, unless otherwise stated.

1.4.1 Procedure



DANGER! Observe the Important Safety Instructions located at the beginning of this document.



NOTE! Refer to Figure 1.1, Figure 1.2, Figure 1.3, and Figure 1.4 as this procedure is performed.

Removing the Existing Control Module Assembly

- [] 1. Remove the NCU Controller from the system. Set the NCU Controller aside. It will be re-used.
- [] 2. Locate the cables connected to the existing control module assembly. Note that the top of the control module assembly may have to be removed to access some cables. These cables will be disconnected. Label the cables so they can be re-connected to the proper connectors. See Figure 1.2.
- [] 3. Remove all cables from the existing control module assembly.
- [] 4. If the existing control module assembly contains the optional LVD Driver Circuit Card, optional LVD Driver Lite Circuit Card, and/or the optional Manual Battery Disconnect Circuit Card, these assemblies must be removed from the existing control module assembly and mounted into the kit supplied control module assembly. Refer to Figure 1.2 and transfer any of these assemblies from the existing control module assembly to the kit supplied control module assembly.
- [] 5. Remove the existing control module assembly by removing the two (2) screws securing the front of the assembly to the distribution cabinet floor. Slide the assembly forward and up to remove it from the distribution cabinet. See Figure 1.3.
- [] 6. Set the existing control module assembly aside. It will not be re-used.

Installing the Kit Supplied Control Module Assembly

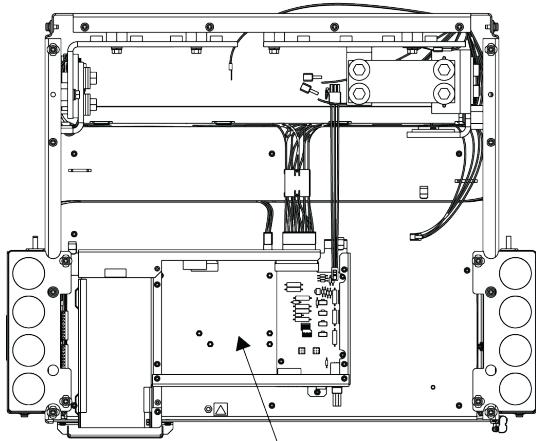
- [] 1. Install the kit supplied control module assembly by sliding it into the distribution cabinet, ensuring the assembly's base is inserted under the tabs located on the distribution cabinet floor (at the rear). Secure the control module assembly to the distribution cabinet floor using the two (2) screws removed from the existing control module assembly. See Figure 1.3.
- [] 2. Re-connect the cables to the kit supplied control module assembly as they were connected to the existing control module assembly. See Figure 1.2.
- [] 3. If the existing control module assembly contained the optional LVD Driver Circuit Card, optional LVD Driver Lite Circuit Card, and/or the optional Manual Battery Disconnect Circuit Card, adhere the kit provided label(s) to the front of the kit supplied control module assembly as required.
- [] 4. Re-install the NCU Controller into the control module assembly.

Installing the Kit Supplied IB4 Board

- [] 1. Locate the two (2) cable lacing holders at the top of the distribution cabinet. Remove these cable lacing holders. See Figure 1.4.
- [] 2. Remove the hardware from the kit supplied IB4 board assembly mounting bracket. Orient the kit supplied IB4 board assembly (with mounting bracket) over the holes that the cable lacing holders were removed from, as shown in Figure 1.4. Secure the IB4 board mounting bracket to the distribution cabinet with the hardware just removed. See Figure 1.4.
- [] 3. Attach the provided IB4 board cable to the IB4 board. Route the cable along existing cables to the back of the control module assembly. Plug the cable into the appropriate connector located on the back of the control module assembly. See Figure 1.1 and Figure 1.4.

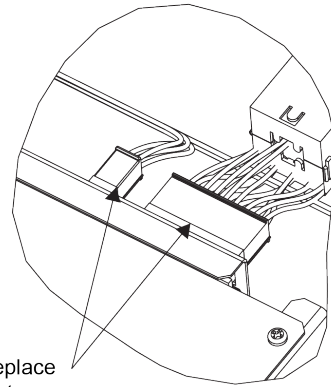
Figure 1.2 Installing the Kit (Removing / Replacing Cables)

List 21 Distribution Cabinet
(others similar)



Control Module Assembly
(top cover removed)

Components removed in illustration for clarity only.



Remove / Replace these connectors.

Control Module Assembly

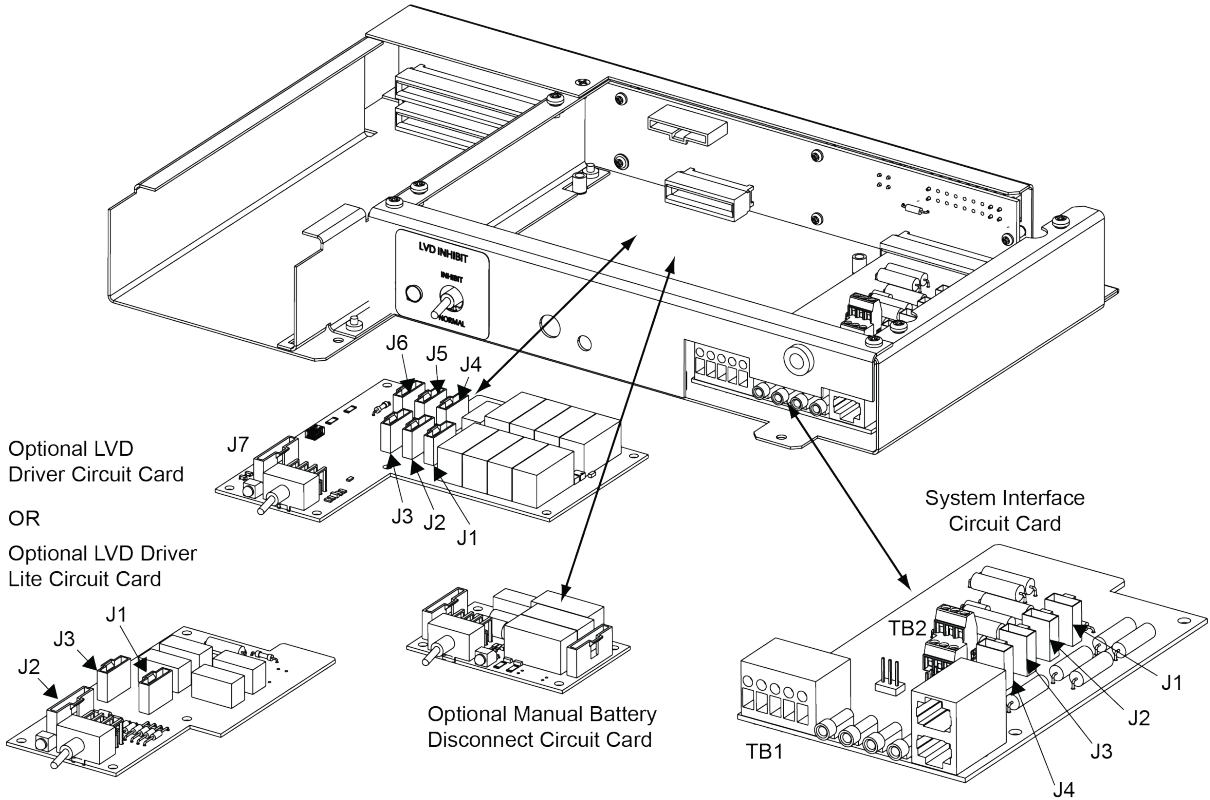
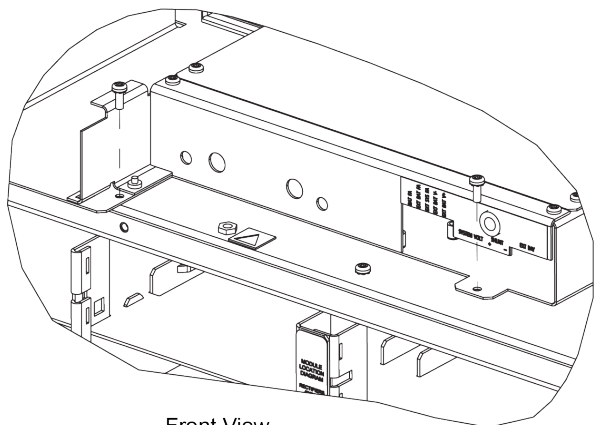
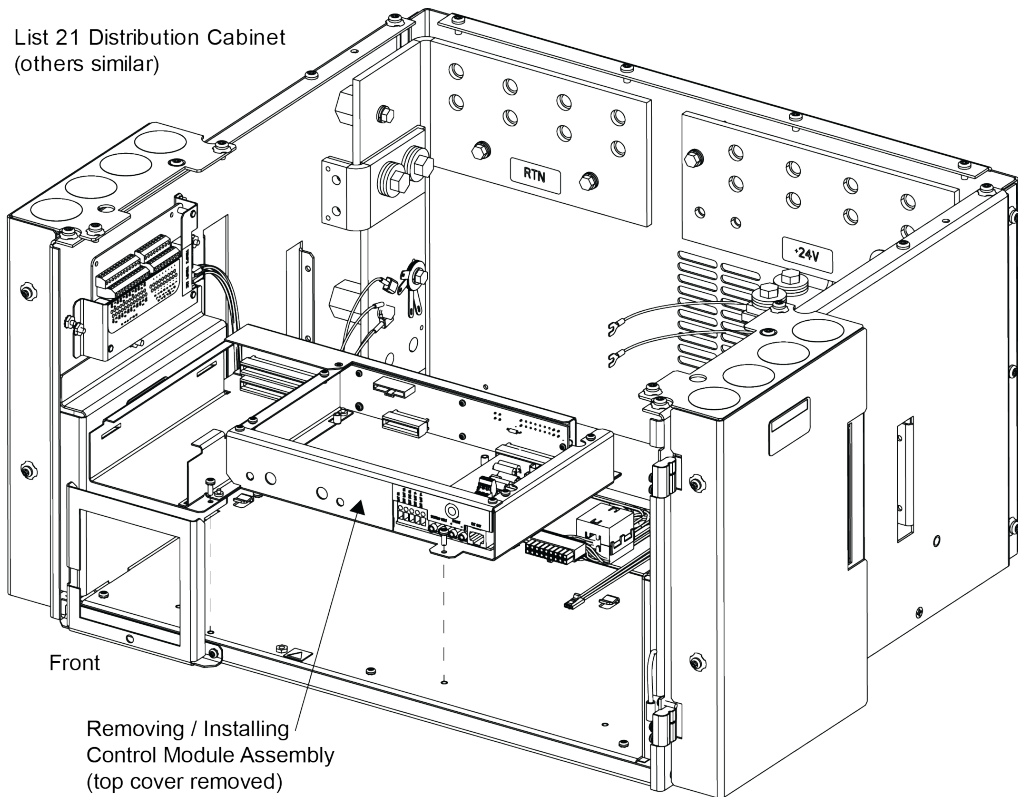


Figure 1.3 Installing the Kit (Control Module Assembly)

List 21 Distribution Cabinet
(others similar)



Front View
Removing / Installing Screws

Components removed in illustration for clarity only.

When installing control module assembly, ensure control module assembly base is inserted under the tabs located on the distribution cabinet floor.

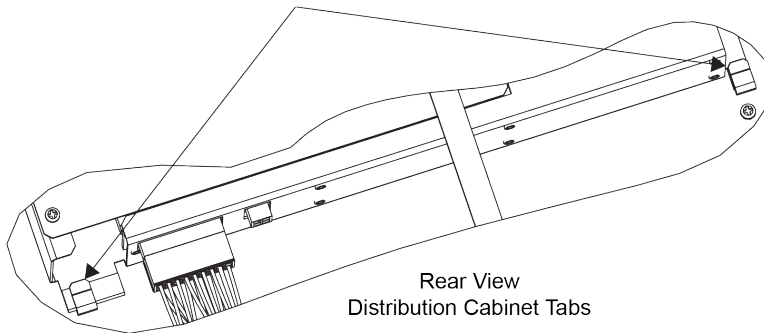
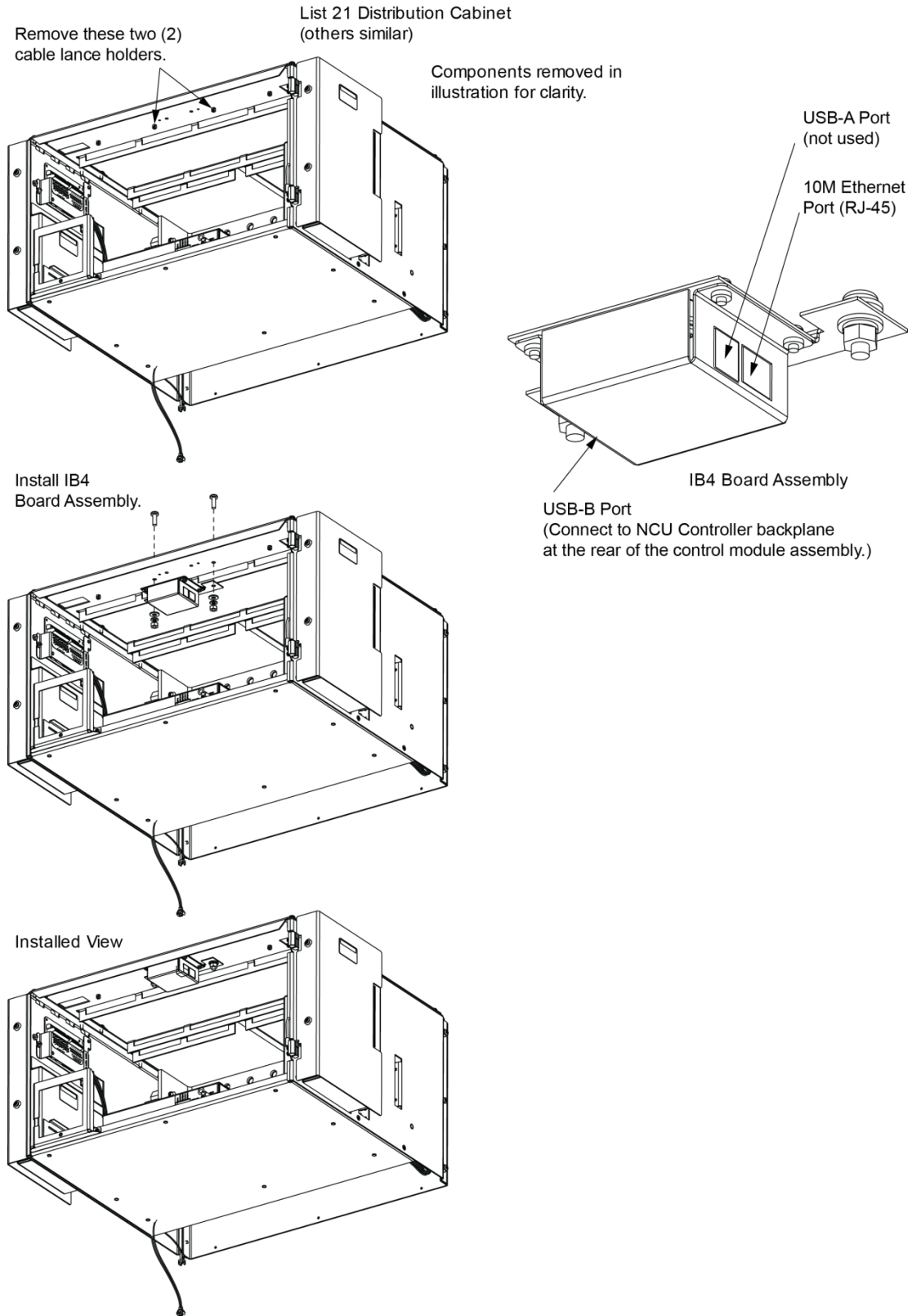


Figure 1.4 Installing the Kit (IB4 Board Assembly)



2 Vertiv™ NetSure™ Control Unit (NCU) Controller Second Ethernet Port Connection

You just installed the IB4 board and connected it to the NCU Controller backplane via the kit furnished cable. The IB4 board provides a second Ethernet port. The Ethernet port located on the NCU Controller's front panel can ONLY be used to connect a computer directly to the NCU. The Ethernet port located on the IB4 board can be used to connect the NCU Controller to your Local Area Network (LAN).



NOTE! If your system has an IB4 board, DO NOT connect your Local Area Network (LAN) to the NCU front Ethernet port.



NOTE! Refer to the NCU Controller User Manual (UM1M830BNA) for instructions on using the controller's Ethernet connections.

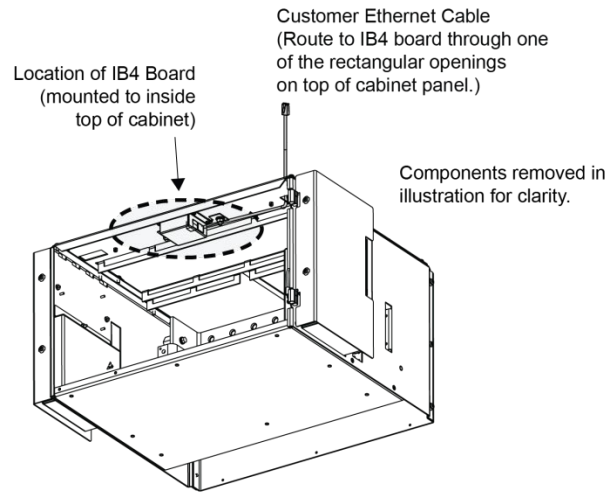
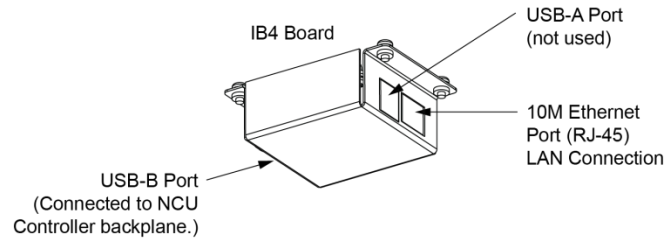
An RJ-45 10BaseT jack is provided on the IB4 board for connection into a customer's network. This jack has a standard Ethernet pin configuration scheme, twisted pair. Refer to Figure 2.1 for location. Use shielded Ethernet cable (grounded at both ends). Note that the IB4 board's RJ-45 jack is connected to chassis ground. Refer to the NCU Controller Instructions (UM1M830BNA) for operational details.



WARNING! The intra-building port(s) of the equipment or subassembly is suitable for connection to intra-building or unexposed wiring or cabling only. The intra-building port(s) of the equipment or subassembly MUST NOT be metalically connected to the interfaces that connect to the OSP or its wiring. These interfaces are designed for use as intra-building interfaces only (Type 2 or Type 4 ports as described in GR-1089-CORE, Issue 4) and require isolation from the exposed OSP cabling. The addition of Primary Protectors is not sufficient protection in order to connect these interfaces metalically to OSP wiring.

The intra-building port (RJ-45) of the equipment or subassembly must use shielded intra-building cabling/wiring that is grounded at both ends.

Figure 2.1 IB4 Board NCU Controller Second Ethernet Port Connection



List 21 Distribution Cabinet (others similar)

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