Installation Manual

EDACS ADVANTAGE™

Three and Five-Channel
Basic EDACS® Repeater Sites with
Enhanced Local Interconnect (ELI)

ERICSSON

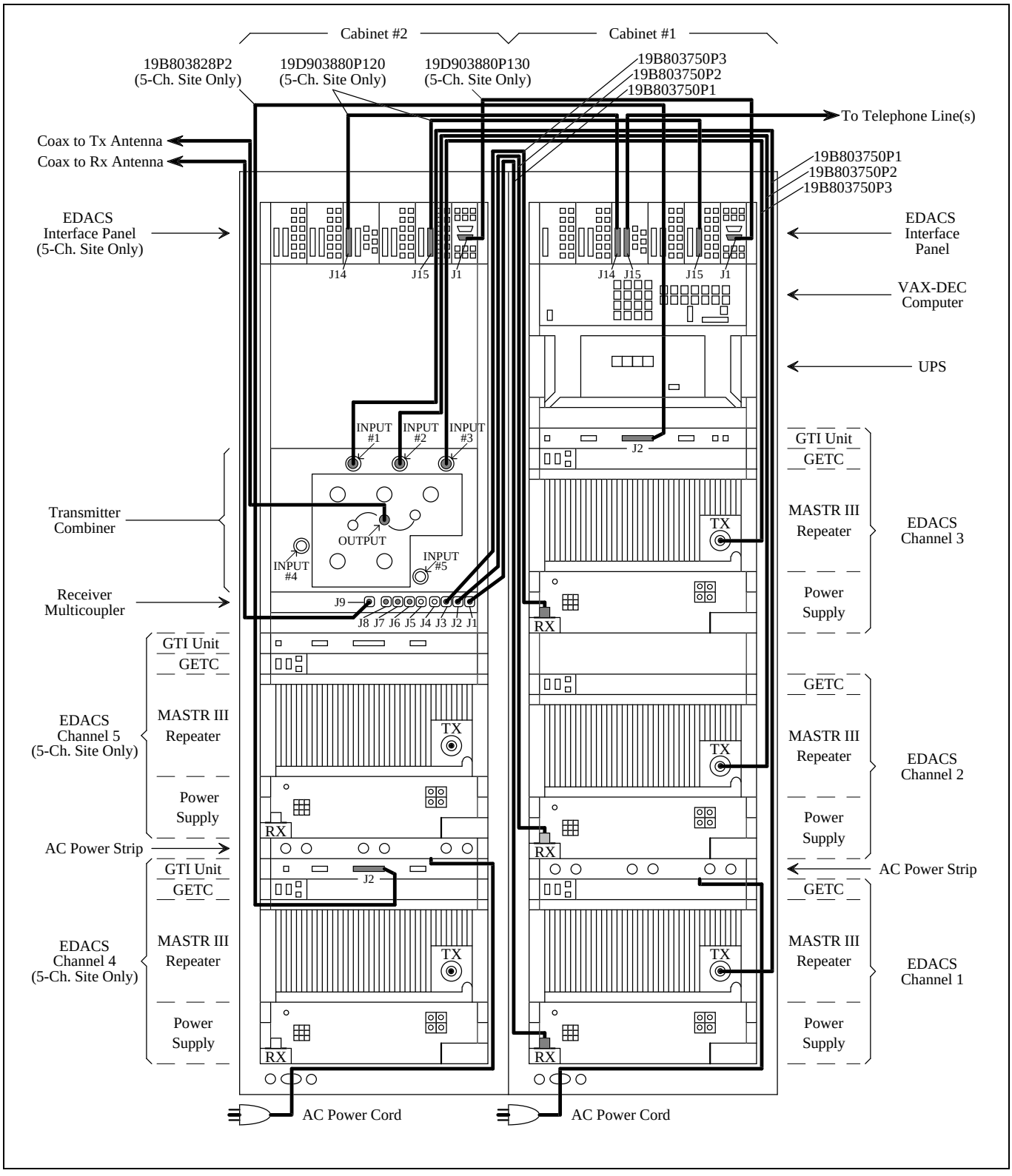

Figure 1 - Installation Connections - Rear View of Cabinets

INTRODUCTION

The EDACS ADVANTAGE three and five-channel Basic EDACS (Enhanced Digital Access Communications System) with Enhanced Local Interconnect (ELI) is a three or five-channel, two cabinet, single site system providing basic trunking and local telephone interconnect features in a "plug and play" package with the minimum amount of installation required.

The cabinet drawings and installation instructions contain information for five channels. If your system has only 3 channels, skip references to channels 4 and 5. The antenna system drawing and installation instructions refer to a standard antenna system. If some other antenna system is used, follow the installation instructions supplied with the system used. If more information is needed about a specific item, see the EDACS MASTR® III Basic or Level 1 System Installation Manual, LBI-39074.

Cabinets must be bolted securely to the floor and connected to a grounding point which is provided as part of the building and/or antenna tower structure. Cables to be connected between the cabinets are shipped (connected and coiled) in cabinet #2. These cables are to exit through the top of the cabinets (remove covers over oval cable openings in top as required). Cable ties are supplied to secure the cables after installation.

AC power cords may exit the cabinets through the top, or the openings below the rear door. The AC power cords must be plugged into three-contact electrical outlets that have the ground wire securely connected to the electrical ground and meet local codes and ordinances.

If MDR full duplex radios are to be used with this system, make sure each radio contains 344A4271Gx software (where x = 2 or higher).

The Enhanced Local Interconnect (ELI) is configured (by default) for two-wire, end-to-end, loop start telephone lines (most common subscriber line in the United States). If this type of telephone line is not available, see the ELI System Manual, LBI-39076, and the ELI Configurator Manual, LBI-39077, for re-configuration information.

CABINET CONNECTIONS

THREE OR FIVE-CHANNEL SYSTEM

- ☐ Orient the cabinets as shown in Figure 1 (note that this is a rear view), and fasten to the floor.
- ☐ Connect each cabinet to building ground (attach to the #4 stranded copper cable running down the left front cabinet rail).
- ☐ In cabinet #2, find coiled coaxial cable 19B803750P1 connected to Input 1 on the Transmitter Combiner. Connect the other end to the RF output for channel 1 (lower right corner of heatsink) in cabinet #1.
- ☐ In cabinet #2, find coiled coaxial cable 19B803750P2 connected to Input 2 on the Transmitter Combiner. Connect the other end to the RF output for channel 2 (lower right corner of heatsink) in cabinet #1.
- ☐ In cabinet #2, find coiled coaxial cable 19B803750P3 connected to Input 3 on the Transmitter Combiner. Connect the other end to the RF output for channel 3 (lower right corner of heatsink) in cabinet #1.
- ☐ In cabinet #2, find coiled coaxial cable 19B803750P1 connected to J1 on the Receiver Multicoupler. Connect the other end to "CHANNEL RX" for channel 1 (bracket on left below heatsink) in cabinet #1.
- ☐ In cabinet #2, find coiled coaxial cable 19B803750P2 connected to J2 on the Receiver Multicoupler. Connect the other end to "CHANNEL RX" for channel 2 (bracket on left below heatsink) in cabinet #1.
- ☐ In cabinet #2, find coiled coaxial cable 19B803750P3 connected to J3 on the Receiver Multicoupler. Connect the other end to "CHANNEL RX" for channel 3 (bracket on left below heatsink) in cabinet #1.
- ☐ Connect the coaxial cable from the transmit antenna to the output of the Transmitter Combiner in cabinet #2.
- ☐ Connect the coaxial cable from the receive antenna to J9 on the Receiver Multicoupler in cabinet #2.
- ☐ Plug the AC power cord from each cabinet into a separate 115 Vac, 60 Hz outlet. (Each outlet should be connected to a separate 20 amp circuit breaker.)
- ☐ Connect the telephone line(s) to J15 on the ELI TELCO module (4th module from right) in the EDACS Interface Panel in cabinet #1. (Lines must be lightning protected.)

FIVE-CHANNEL SYSTEM ONLY

- ☐ In cabinet #2, find the coiled cable 19D903880P130 connected to J1 on the SERIAL MODULE (1st module from right) in the EDACS Interface Panel. Connect the other end to J1 on the similar SERIAL MODULE (1st

module from right) in the EDACS Interface Panel in cabinet #1.

- ☐ In cabinet #2, find the coiled cable 19D903880P120 connected to J15 on the GETC DATA module (2nd module from right) in the EDACS Interface Panel. Connect the other end to J15 on the similar GETC DATA module (2nd module from right) in the EDACS Interface Panel in cabinet #1.
- ☐ In cabinet #2, find the coiled cable 19D903880P120 connected to J14 on the ELI TELCO module (4th module from right) in the EDACS Interface Panel. Connect the other end to J14 on the similar ELI TELCO module (4th module from right) in the EDACS Interface Panel in cabinet #1.
- ☐ In cabinet #2, find the coiled cable 19B803828P2 connected to J2 on the GTI Unit for channel 4. Connect the other end to J2 on the GTI Unit for channel 3 in cabinet #1.

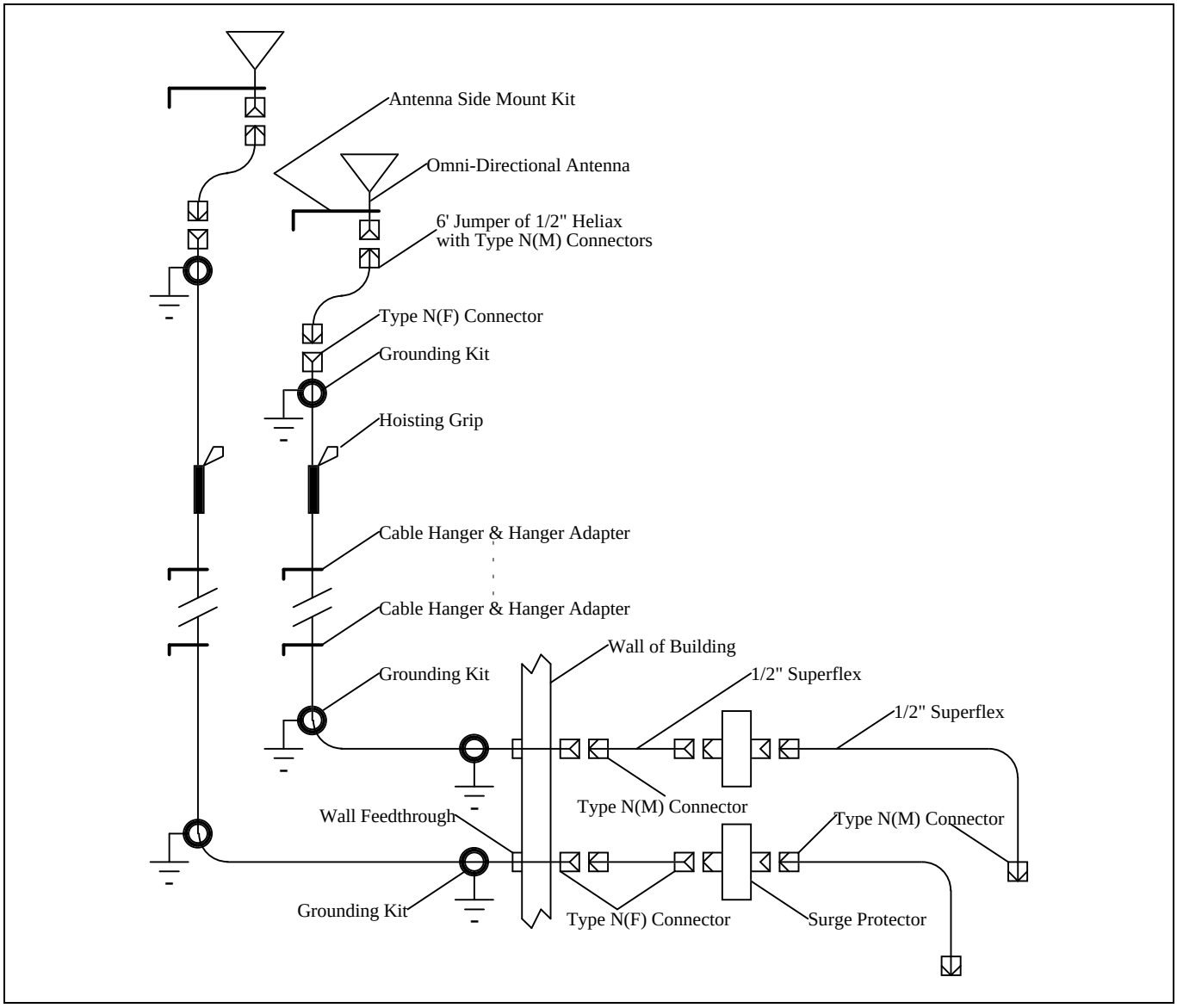

Figure 2 - Standard Antenna System

ANTENNA SYSTEM

The standard antenna system is shown in Figure 2. If some other antenna system is used, follow the installation instructions supplied with the system and skip this section.

The installation description given here is intended to identify which parts go where for purposes of inventory and inspection. It is not sufficient to direct an inexperienced tower crew through an installation. The antenna system should only be installed by an experienced tower crew with the specialized equipment and skills required for working on towers and antenna systems.

- ☐ Two antennas are supplied for the transmit and receive signals, and two antenna side mount kits are supplied for their mounting. The antennas can be mounted on the side of the tower (one 10 feet or more above the other), or on the top of the tower (6 feet or more between antennas).
- ☐ Two 6-foot coaxial jumpers are supplied to connect each antenna to its respective transmission line.
- ☐ A single 400-foot length of 7/8-inch diameter coaxial cable is supplied for the transmit and receive transmission lines between the antennas and the equipment room (up to 200 feet for each transmission line). Each transmission line must be a continuous run with no connections or splices.
- ☐ Two hoisting grips are supplied (one for each transmission line) to allow hoisting without damaging the cable. The hoisting grips may be left attached to the transmission lines after the installation is complete. Do not exceed the minimum bending radius of 250 mm (10 inches) for the 7/8-inch diameter coaxial cable supplied for the transmission lines.
- ☐ Ten screw-on cable hanger kits (each containing 10 hangers) and ten screw-on angular-member hanger adapter kits (each containing 10 adapters) are supplied to secure the transmission lines to the tower at 3-foot intervals. If the structural members of the tower are round, additional materials will be needed.
- ☐ Four female Type N connectors are supplied for installation on each end of both transmission lines.
- ☐ Six coaxial cable grounding kits are supplied to ground the outer conductor of both transmission lines in three places for lightning protection: at the top end, just before it leaves the tower, and just before it enters the feedthru in the wall to the equipment room.
- ☐ Weatherproof tape is provided to wrap each of the four exposed outside connector joints (at each end of both 6-foot coaxial cable jumpers) to keep moisture out.

POWER UP

- ☐ Turn on the power supply for each channel (switch is on the front of each power supply).
- ☐ Observe that the red L7 indicator is lit on the front of each GETC and that the red L6 indicator is lit on the front of one GETC.
- ☐ Check to see that the three toggle switches on the front of the SYSTEM MODULE of each MASTR III Repeater are in the down position.
- ☐ Turn on the power supply for the multicoupler (switch is on the front and is lit when the power is on).
- ☐ Turn on each GTI Unit (switch is in the back, on the right).
- ☐ Observe that the green POWER indicator is lit and the red STATUS indicator flickers approximately twice a second on the front of each GTI Unit.

The interconnection diagram for the 5-channel version (installation and factory connections) is shown in Figure 3. For the 3-channel version, omit the items noted and add 2 additional 50-ohm terminations to J4 and J5 on the Receiver Multicoupler.

Customer assistance is available through the Ericsson Technical Assistance Center by calling 1-800-528-7711.

Ericsson Inc.
Private Radio Systems
Mountain View Road
Lynchburg, Virginia 24502
1-800-528-7711 (Outside USA, 804-528-7711)

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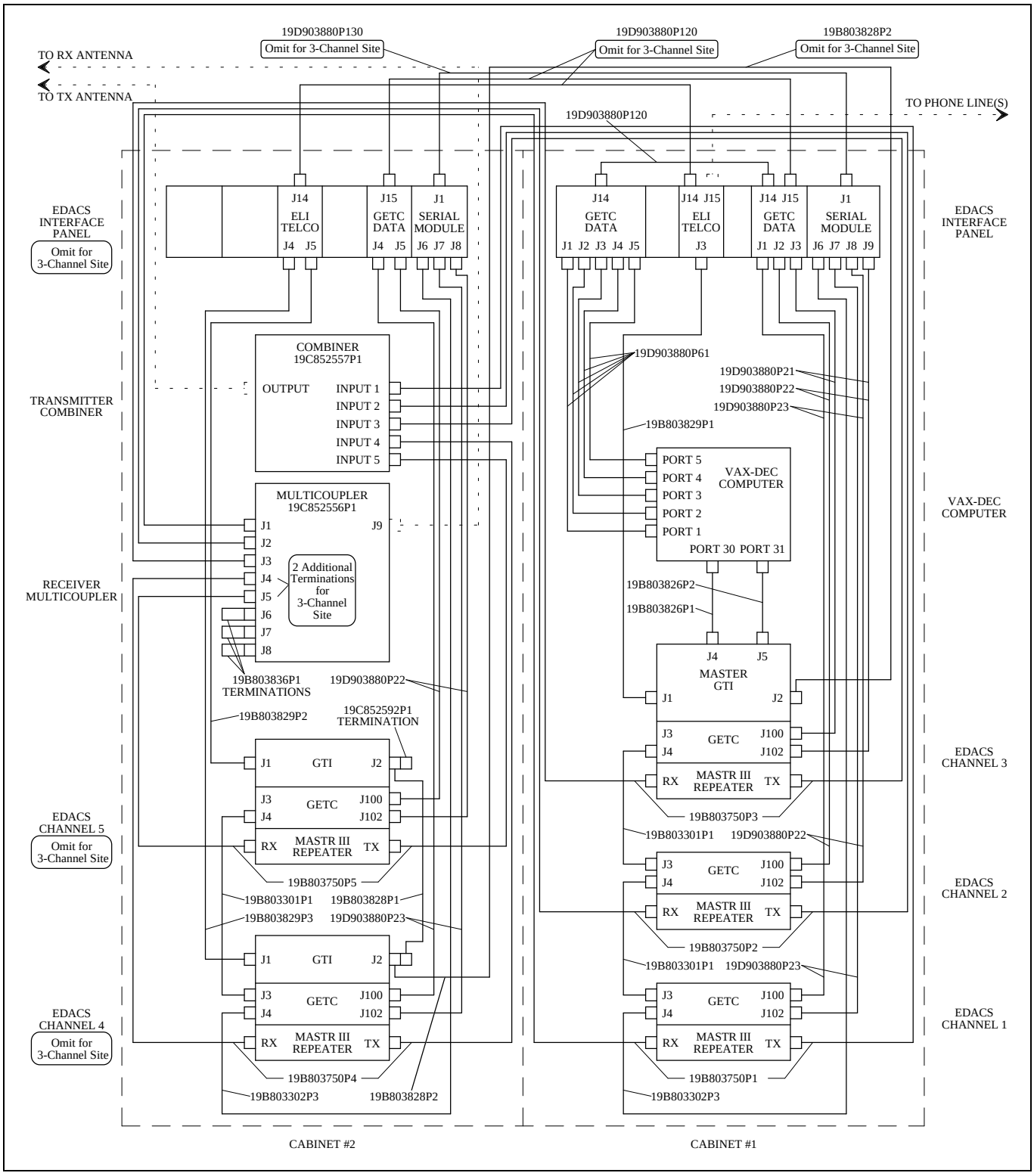

Figure 3 - 5-Channel Site Interconnection Diagram (Installation and Factory Connections)