SL-1

2-Mbs/ Remote Peripheral Equipment

QCA146 cabinet and QSD74 shelf description

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90 11 02

Changes have been made to add references to publications 553-2931-100 and 553-2931-200 for Generic X11 Supplementary Features (Phase 6) Remote Peripheral Equipment and include miscellaneous updates.

Contents

General

This Appendix describes 2-Mb/s Remote Peripheral Equipment (RPE) that can be installed in a QCA146 RPE cabinet and in a QSD74 RPE shelf mounted in a cabinet either at the remote end or the local end.

A description of the use and operation of RPE is given in NTPs 553-2741-100 for Generic X08 and 553-2931-100 for Generic X11 Supplementary Features.

Description

QCA146 RPE cabinet

The QCA146 RPE cabinet is used to house RPE equipment at a remote location. The single-tier base cabinet is equipped with an RPE shelf, one PE shelf capable of accommodating ten PE line packs and a peripheral buffer circuit pack, and the required power equipment (Figure 2-1). The base cabinet can be expanded to a two- or three-tier cabinet by the addition of expansion shelves. An RPE shelf can be installed in place of a PE expansion shelf in the second tier of the cabinet if additional network loops are required.

Expansion shelves

QSD74 RPE shelf

The QSD74 RPE shelf assembly can be mounted at the main Meridian SL-1 location in a QCA136 or QCA141 CE equipment cabinet (Figure 2-2) or in a QCA146 RPE cabinet at the remote location. The RPE shelf assembly is designed to contain all the RPE related circuit packs required to operate three remote network loops. When required, one of the loops can be used as a spare. Included in the shelf assembly is a PE shelf containing eight slots for lines and trunks. One additional slot is reserved for a peripheral buffer circuit pack. A second QSD74 RPE shelf can be installed in the second tier of the cabinet when additional RPE loops are required.

QSD66 PE expansion shelf

The QSD66 PE expansion shelf can be used to expand a QCA146 RPE cabinet to a two- or three-tier cabinet. The QSD66 is equipped with two PE shelves each capable of accommodating eight line circuit packs and one peripheral buffer circuit pack.

N Although the QSD66 PE expansion shelf provides dual-loop ***o*** capabilities, the shelf can only be used in a single-loop mode when ***t*** operating with RPE at a remote location.s
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Bus terminating units

Each QSD74 RPE shelf requires three Bus Terminating Units (BTUs). When used in a QCA146 cabinet (remote end), three QPC477A23 BTUs are required. When used in a QCA136 or QCA141 CE cabinet (local end), three QPC477A24 BTUs are required.

Connectors for inserting the BTUs are located between slots 3 and 4, 6 and 7, 9 and 10 at the front of the RPE shelf.

Loop assignment

Loops are assigned from left to right on the RPE shelf. Circuit packs for each loop are located in the following slots in the RPE shelf;

- slots 2 and 3 for the first loop (LM0 in software)
- slots 5 and 6 for the second loop (LM1 in software)
- slots 10 and 11 for the third loop (LM2 or LM3 in software)

N The spare loop cannot be defined as LM0, LM1 or LM2 in ***o*** software.
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Spare loop

When a spare loop is assigned to a shelf, it must be connected to the third loop on the shelf and defined as loop member LM3 in software.

Spare loop operation is described in 553-2471-100 (X08) or 553-2931-100 (X11 Supplementary Features).

Network extender

Each RPE shelf (local and remote ends) requires one QPC769 Network Extender circuit pack to connect a maximum of three network loops to the RPE equipment.

Other circuit packs

Information about other RPE related circuit packs used with the QCA146 RPE cabinet is given in 553-2741-200 (X08) or 553-2931-200 (X11 Supplementary Features).

Power converters

QPC705 power converter

The QPC705 power converter supplies ±15 V (for SL-1 and digital telephones) and -150 V (for message waiting lamps) to the PE shelf in the first tier of the cabinet. A QCAD278 cable is required to connect the QPC705 converter.

QPC706 power converter

The QPC706 power converter provides all the required power supplies to each PE shelf in the second and third tiers of the cabinet. One converter is required for each PE shelf and is installed in the designated slot on each shelf.

QPC190, QPC355, QPC691 5/12 V converter

One of these 5/12 V converters is required for the QSD74 shelf when mounted in a QCA136 or QCA141 CE cabinet at the local end (Figure 2-2). A 5/12 V converter is not required when the shelf is installed in a QCA146 cabinet.

Power line cords

Three commercial power line cords can be used with the QCA146 RPE cabinet.

(a) A QCAD273 line cord is used when a 115 V 15A power supply is provided. A NEMA type 5-15R power supply receptacle is required to accommodate the line cord.

(b) A QCAD274 line cord is used when a 220 V 20A power supply is provided. A NEMA type L6-20R power supply receptacle is required to accommodate the line cord.

(c) A QCAD275 line cord is used when a 110 V 30A power supply is provided. A NEMA type L5-30R power supply receptacle is required to accommodate the line cord.

Power cords are connected to the rear of the -48 V rectifier in the cabinet.

Reserve batteries

One or two QBL24 battery units containing rechargeable dry cells can be connected to the cabinet when service is required during commercial power failures.

The cabinet can also be connected to lead acid batteries or a customer provided power supply through a QBL15 battery distribution box and a QCAD321 junction box assembly.

Cooling units

QUD24 Cooling Units are required in cabinets equipped with three tiers. The units are mounted in the cabinet top assembly.

Figure 2-1
Front view of QCA146 RPE cabinet

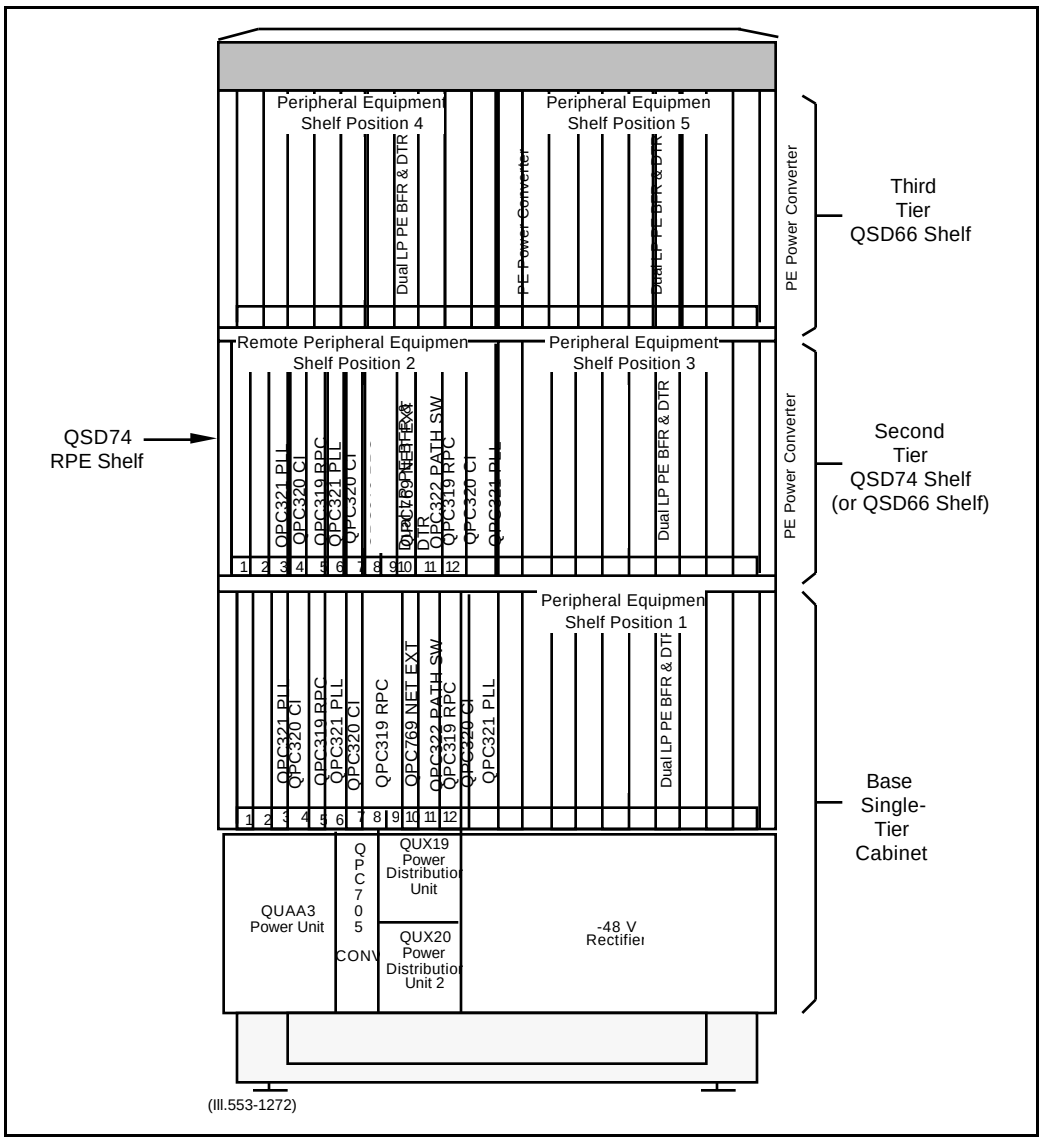
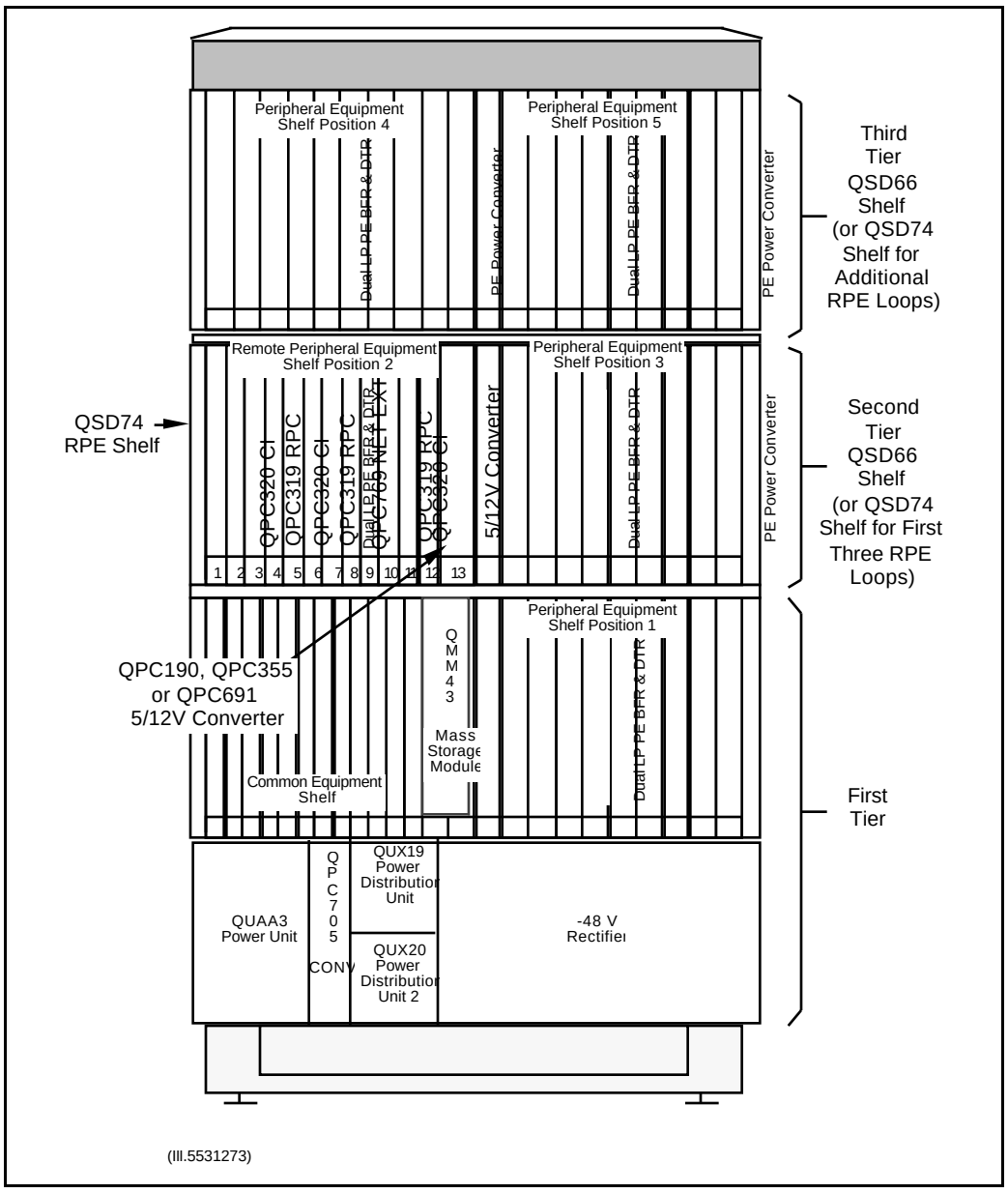


Figure 2-2
Front vew of typical common equipment (CE) cabinet



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