

DIGITAL AlphaServer Voice Platform

Hardware Installation Guide

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Table of Contents

Preface

Part I Dialogic ISA Options

1 Introduction

Overview	1-1
AlphaServer Voice Platform Models.....	1-2
AlphaServer Voice Board, Module, and Cabling Options.....	1-4

2 EISA Configuration Utility (ECU)

Introduction	2-1
ECU Configurations.....	2-1
Configuring IRQ Type A Boards.....	2-2
I/O Port Selection.....	2-2
IRQ Selection.....	2-2
Memory Block Selection.....	2-2
Configuring IRQ Type B Boards.....	2-2
I/O Port Selection.....	2-2
IRQ Selection.....	2-3
Memory Block Selection.....	2-3
Configuring IRQ Type C Boards.....	2-4
I/O Port Selection.....	2-4
IRQ Selection.....	2-4
Configuring GammaFax Boards.....	2-4
Configuring Antares Boards.....	2-5

Configuring Boards in an Expansion Box	2-5
Completing the ECU Configuration.....	2-5

3 Installation

Introduction.....	3-1
PEB Only Options	3-4
2T-VC41E (D/41E) Option Board.....	3-4
2T-VCF4E (VFX/40E) and 2T-VCF40 (VFX/40) Option Boards	3-6
2T-VC121 (D/121B) Option Board	3-8
2T-VCLSI (LSI/120) Option Board.....	3-10
2T-VC211 (DTI/211) Option Board.....	3-12
2T-VC212 (DTI/212) Option Board.....	3-14
2T-VCFAX (FAX/120) Option Board.....	3-16
2T-VCVRP (VR/160) Option Board	3-18
2T-VCVR4 (VRM/40) Daughterboard Option.....	3-20
2T-VCVR2 (VRM/2C) Daughterboard Option	3-21
2T-VCDMX (DMX) Option Board	3-22
2T-VCMSI (MSI/C) Option Board.....	3-24
2T-VCM40 (MSI/40) Daughterboard Option.....	3-26
PEB and SCbus Options	3-28
2T-VC240 (D/240SC) Option Board.....	3-28
2T-VC24T (D/240SC-T1) Option Board.....	3-31
2T-VC320 (D/320SC) Option Board.....	3-34
2T-VCC06-AA (CP-6/SC) and 2T-VCC12-AA (CP-12/SC) Option Boards	3-37
2T-VC4SC (D/41ESC) Option Board.....	3-39
SCbus Only Options	3-41
2T-VC250-AA (Antares 2000/50) Option Board.....	3-41
2T-VC350-AA (Antares 3000/50) Option Board.....	3-41
2T-VC650-AA (Antares 6000/50) Option Board.....	3-41
2T-VC16L (D/160SC-LS) Option Board.....	3-43
2T-VCFSC (VFX/40ESC) Option Board.....	3-45
2T-VC30E (D/300SC-E1) Option Board.....	3-47
2T-VC242-US (D/240SC-2T1) Option Board	3-50
2T-VC480-US (D/480SC-2T1) Option Board	3-52
2T-VC302 (D/300SC-2E1) Option Board	3-54
2T-VC600 (D/600SC-2E1) Option Board	3-56
2T-VCI40-US (DTI/240SC) and 2T-VCI41-US (DTI/241SC) Option Boards .	3-58
2T-VCI80-US (DTI/480SC) Option Board.....	3-60
2T-VCI30 (DTI/300SC) and 2T-VCI31 (DTI/301SC) Boards	3-62
2T-VCI60 (DTI/600SC) Option Board.....	3-64

2T-VCM80-AA (MSI/80SC), 2T-VCM16-AA (MSI/160SC) and 2T-VCM24-AA (MSI/240SC) Option Boards	3-66
2T-VCD32-AA (DCB/320SC), 2T-VCD64-AA (DCB/640SC), and 2T-VCD96-AA (DCB/960SC) Boards	3-68
Miscellaneous Options	3-70
2T-VC220-IB/2T-VC221-IB Expansion Box	3-70
2T-VC220-IP Interconnect Kit	3-72

4 Troubleshooting

Where to look	4-1
System problems	4-1
Voice and Network Interface boards	4-1
Voice-recognition boards	4-2

Part II DM3 Options

5 Introduction

Overview	5-1
AlphaServer DM3 Voice Platform Models	5-1
AlphaServer DM3 Voice Board and Cabling Options	5-2

6 Installation

DM3 Options	6-1
DM3 QuadSpan Voice Option Boards	6-1
DM3 Fax Option Boards	6-3
Fax Option Boards Without Network Interface	6-3
Fax Option Boards With Network Interface	6-4
DM3 IPLink Option Boards	6-6
CT Bus/SCbus Adapter	6-8
2T-VCFAN-AA Fan Assembly	6-11

7 Troubleshooting

System Problems	7-1
DM3 Board LED Indicators	7-1
DM3 Option Board Troubleshooting	7-2

A Board Configurations (PEB and SCbus)

SCbus Configurations	A-1
PEB Configurations	A-1

Figures

Figure 3-1: 2T-VC41E (D/41E) Board	3-5
Figure 3-2: 2T-VC4E (VFX/40E) Board	3-7
Figure 3-3: 2T-VC121 (D/121B) Board	3-9
Figure 3-4: 2T-VCLSI (LSI/120) Board	3-11
Figure 3-5: 2T-VC211 (DTI/211) Board	3-13
Figure 3-6: 2T-VC212 (DTI/212) Board	3-15
Figure 3-7: 2T-VCFAX (FAX/120) Board	3-17
Figure 3-8: 2T-VCVRP (VR/160) Board	3-19
Figure 3-9: 2T-VCVR4 (VRM/40) Daughterboard	3-20
Figure 3-10: 2T-VCVR2 (VRM/2C) Daughterboard	3-21
Figure 3-11: 2T-VCDMX (DMX) Board	3-23
Figure 3-12: 2T-VCMSI (MSI/C) Board	3-25
Figure 3-13: 2T-VCM40 (MSI/40) Daughterboard	3-27
Figure 3-14: 2T-VC240 (D/240SC Rev. 1) Board	3-29
Figure 3-15: 2T-VC240 (D/240SC Rev. 2) Board	3-30
Figure 3-16: 2T-VC24T (D/240SC-T1 Rev. 1) Board	3-32
Figure 3-17: 2T-VC24T (D/240SC-T1 Rev. 2) Board	3-33
Figure 3-18: 2T-VC320 (D/320SC Rev. 1) Board	3-35
Figure 3-19: 2T-VC320 (D/320SC Rev. 2) Board	3-36
Figure 3-20: 2T-VCC06-AA & 2T-VCC12-AA (CP-6/SC & CP-12/SC) Boards ..	3-38
Figure 3-21: 2T-VC4SC (D/41ESC) Board	3-40
Figure 3-22: 2T-VC250-AA (Antares 2000/50), 2T-VC350-AA (Antares 3000/50), 2T-VC650-AA (Antares 6000/50) Board	3-42
Figure 3-23 2T-VC16L: (D/160SC-LS)	3-44
Figure 3-24: 2T-VCFSC (VFX/40ESC) Board	3-46
Figure 3-25: 2T-VC30E (D/300SC-E1 Rev. 1) Board	3-48
Figure 3-26: 2T-VC30E (D/300SC-E1 Rev. 2) Board	3-49
Figure 3-27: 2T-VC242-US (D/240SC-2T1) Option Board	3-51
Figure 3-28: 2T-VC480-US (D/480SC-2T1) Option Board	3-53
Figure 3-29: 2T-VC302 (D/300SC-2E1) Option Board	3-55
Figure 3-30: 2T-VC600 (D/600SC-2E1)	3-57
Figure 3-31: 2T-VCI40-US (DTI/240SC) & 2T-VCI41-US (DTI/241SC)	3-59
Figure 3-32: 2T-VC180-US (DTI/480SC) Option Board	3-61
Figure 3-33: 2T-VCI30 (DTI/300SC) & 2T-VCI31 (DTI/301SC) Boards	3-63
Figure 3-34: 2T-VCI60 (DTI/600SC) Option Board	3-65

Figure 3-35: 2T-VCM80-AA (MSI/80SC), 2T-VCM16-AA (MSI/160SC), & 2T-VCM24-AA (MSI/240SC) Boards	3-67
Figure 3-36: 2T-VCD32-AA (DCB/320SC), 2T-VCD64-AA (DCB/640SC), & 2T-VCD96-AA (DCB/960SC) Option Boards	3-69
Figure 6-1 DM3 QuadSpan Voice Option Boards.....	6-2
Figure 6-2 DM3 Fax Option Boards Without Network Interface	6-4
Figure 6-3 DM3 Fax Option Boards With Network Interface	6-5
Figure 6-4 DM3 IPLink Option Boards	6-7
Figure 6-5 Installing the CT Bus/SCbus Adapter.....	6-9
Figure 6-6 Connecting CT Bus and SCbus Cables.....	6-10
Figure 6-7 Installing the 2T-VCFAN-AA Fan Assembly.....	6-12
Figure A-1 Low-Density 4-Channel Analog Configurations.....	A-1
Figure A-2: Low-Density 2/16-Channel Voice-Recognition Configuration	A-2
Figure A-3: Standard-Density Configurations	A-3
Figure A-4: Mixed-Density Configurations	A-4
Figure A-5: High-Density Configuration.....	A-5

Tables

Table 1-1: Available AlphaServer Voice Platform Models.....	1-2
Table 1-2: PEB Board Options.....	1-5
Table 1-3: PEB and SCbus Board Options	1-6
Table 1-4: SCbus Board Options.....	1-7
Table 1-5: Miscellaneous Equipment.....	1-8
Table 1-6: Terminator and Cabling Options (PEB)	1-9
Table 1-7: Cabling Options (SCbus)	1-9
Table 1-8: Miscellaneous Cables and Other Options	1-9
Table 3-1: Board/IRQ Types.....	3-2
Table 5-1: Available AlphaServer DM3 Voice Platform Models.....	5-1
Table 5-2: DM3 Board Options.....	5-2
Table 5-3: Miscellaneous DM3 Options and Cables.....	5-3
Table 7-1 Status LED Indicators	7-1
Table 7-2 Alarm LED Indicators.....	7-2

Preface

Overview

The *DIGITAL AlphaServer Voice Platform Hardware Installation Guide* provides information for installing Dialogic's voice-processing, voice-recognition, network-interface, and fax-interface boards used with DIGITAL AlphaServer systems. It also provides information about I-Bus 20-slot ISA Expansion Box (2T-VC220-IB or 2T-VC221-IB) and Access Technologies' Interconnect Kit (2T-VC220-IP) that can be used with rackmount versions of the AlphaServer systems.

Organization

The *AlphaServer Voice Platform Hardware Installation Guide* is organized as follows:

Part I Dialogic ISA Options

- **Chapter 1, Introduction** describes the DIGITAL AlphaServer voice platform. Tables 1-1 through 1-10 list model numbers and describe AlphaServer platforms and the available telephony options.
- **Chapter 2, EISA Configuration Utility (ECU)** describes the procedure for using the ECU to configure the installed voice and network-interface boards.
- **Chapter 3, Installation** describes the installation procedure for Dialogic's voice-processing, voice-recognition, network-interface, and fax-interface boards, and I-Bus 20-slot ISA expansion box and Access Technologies' interconnect kit that can be used with rackmount AlphaServer systems.
- **Chapter 4, Troubleshooting** provides procedures for troubleshooting the voice-recognition and network-interface boards after installation.

Part II DM3 Options

- **Chapter 5, Introduction** describes the DIGITAL AlphaServer voice DM3 platform. Tables 5-1 through 5-3 list model numbers and describe AlphaServer platforms and the available DM3 telephony options.

- **Chapter 6, Installation** describes the installation procedure for Dialogic's DM3 QuadSpan voice, fax, and IPLink boards and the CTbus/SCbus adapter and 2T-VCFAN-AA fan assembly that are used with rackmount AlphaServer systems.
- **Chapter 7, Troubleshooting** provides procedures for troubleshooting the DM3 QuadSpan voice, fax, and IPLink boards after installation.

Appendix A, Board Configurations (PEB and SCbus) illustrates how the different voice and network-interface boards can be interconnected.

Conventions

The following conventions are used in this guide:

Convention	Meaning
Note	A note calls the reader's attention to important information.
Caution	A caution contains information essential to avoid damage to the equipment.
Warning	A warning contains information essential to the safety of personnel.

Related Documentation

For more information about DIGITAL's AlphaServer systems, refer to the following documentation:

<i>AlphaServer 1000 Owner's Guide</i>	EK-DTLSV-OG
<i>AlphaServer 1000 Rackmount Owner's Guide</i>	EK-RMALP-OG
<i>AlphaServer 1000A Rackmount Owner's Guide</i>	EK-RMNOR-OG
<i>AlphaServer 1000/1000A Model 5/xxx Owner's Guide Supplement</i>	EK-AL530-OG
<i>Dialogic Drivers for DIGITAL UNIX Software Installation Guide</i>	
<i>DIGITAL DM3 Telephony Drivers for Compaq's DIGITAL UNIX Software Installation Guide</i>	
<i>DM3UTIL User's Guide</i>	

For more information about Dialogic's voice-processing, voice-recognition, network-interface, and fax-interface boards, refer to the following documentation included in the DIGITAL AlphaServer Voice Platform Hardware Document Kit (QA-4FBAA-GZ):

<i>Voice Hardware Reference</i>	05-0147-xxx ¹
<i>Network Hardware Reference</i>	05-0176-xxx ¹
<i>FAX/120 Hardware Reference</i>	05-0034-xxx ¹
<i>VR/160 Hardware Reference</i>	05-0062-xxx ¹
<i>SCbus Configuration Planning Guide</i>	05-0288-xxx ¹
<i>DIGITAL AlphaServer Voice Platform Hardware Installation Guide</i>	EK-VOICE-IN

For more information about the 20-slot ISA expansion box from I-bus, refer to the following documentation:

<i>Model 4820 AT System Enclosure User's/Technical Manual</i>	095-80891-xx ²
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¹ xxx represents the manual's version number.

² xx represents the manual's version number.

Part I

Dialogic ISA Options

1

Introduction

Overview

An AlphaServer Voice Platform consists of either a wide-tower or rackmounted AlphaServer system with DIGITAL UNIX or Windows NT operating systems along with Dialogic voice boards and drivers. Voice board options are installed in available ISA slots within the AlphaServer system or installed in an optional ISA expansion box. Drivers are installed during software installation after the operating system has been installed.

The optional I-Bus 20-slot ISA Expansion Box is available for rackmounted AlphaServer systems. There are two versions of the I-Bus 20-slot ISA Expansion Box; a 375 W (2T-VC220-IB) version and a 430 W (2T-VC221-IB) version.

Note

When using an expansion box, all telephony boards are installed in the expansion box rather than within the AlphaServer system.

The Access Technologies' Interconnect Kit (2T-VC220-IP), consisting of two interface boards and an interconnect cable, is required to connect an ISA slot in the rackmounted AlphaServer system to the expansion box.

Introduction

AlphaServer Voice Platform Models

Table 1-1 lists the model numbers for the available AlphaServer systems.

Table 1-1: Available AlphaServer Voice Platform Models

Platform	Operating System	Model Number
120 Vac AlphaServer 1000 5/300 wide-tower package system	Windows NT	CT-VC75B-AA
120 Vac AlphaServer 1000 5/300 wide-tower package system	DIGITAL UNIX	CT-VC75B-FA
240 Vac AlphaServer 1000 5/300 wide-tower package system	Windows NT	CT-VC75B-AB
240 Vac AlphaServer 1000 5/300 wide-tower package system	DIGITAL UNIX	CT-VC75B-FB
120 Vac AlphaServer 1000 5/300 wide-tower system building block	Windows NT	CT-VC75C-AA
120 Vac AlphaServer 1000 5/300 wide-tower system building block	DIGITAL UNIX	CT-VC75C-FA
240 Vac AlphaServer 1000 5/300 wide-tower system building block	Windows NT	CT-VC75C-AB
240 Vac AlphaServer 1000 5/300 wide-tower system building block	DIGITAL UNIX	CT-VC75C-FB
120 Vac AlphaServer 1000 5/300 rackmount system building block	Windows NT	CT-VC75S-AA
120 Vac AlphaServer 1000 5/300 rackmount system building block	DIGITAL UNIX	CT-VC75S-FA
240 Vac AlphaServer 1000 5/300 rackmount system building block	Windows NT	CT-VC75S-AB
240 Vac AlphaServer 1000 5/300 rackmount system building block	DIGITAL UNIX	CT-VC75S-FB
120 Vac AlphaServer 1000 5/300 rackmount package system	Windows NT	CT-VC75P-AA
120 Vac AlphaServer 1000 5/300 rackmount package system	DIGITAL UNIX	CT-VC75P-FA
240 Vac AlphaServer 1000 5/300 rackmount package system	Windows NT	CT-VC75P-AB
240 Vac AlphaServer 1000 5/300 rackmount package system	DIGITAL UNIX	CT-VC75P-FB

Table 1-1: Available AlphaServer Voice Platform Models (cont.)

Platform	Operating System	Model Number
120 Vac AlphaServer 1000A 5/400 rackmount system building block	Windows NT	CT-VC78S-AA
120 Vac AlphaServer 1000A 5/400 rackmount system building block	DIGITAL UNIX	CT-VC78S-FA
240 Vac AlphaServer 1000A 5/400 rackmount system building block	Windows NT	CT-VC78S-AB
240 Vac AlphaServer 1000A 5/400 rackmount system building block	DIGITAL UNIX	CT-VC78S-FB
120 Vac AlphaServer 1000A 5/400 rackmount system building block w/unlimited UNIX user license.	DIGITAL UNIX	CT-VC78S-FC
240 Vac AlphaServer 1000A 5/400 rackmount system building block w/unlimited UNIX user license.	DIGITAL UNIX	CT-VC78S-FD
120 Vac AlphaServer 1000A 5/400 rackmount package system	Windows NT	CT-VC78P-AA
120 Vac AlphaServer 1000A 5/400 rackmount package system	DIGITAL UNIX	CT-VC78P-FA
240 Vac AlphaServer 1000A 5/400 rackmount package system	Windows NT	CT-VC78P-AB
240 Vac AlphaServer 1000A 5/400 rackmount package system	DIGITAL UNIX	CT-VC78P-FB
120 Vac AlphaServer 1000A 5/400 rackmount package system 256MB 2.1GB	Windows NT	CT-VC78P-AC
120 Vac AlphaServer 1000A 5/400 rackmount package system 256MB 2.1GB	DIGITAL UNIX	CT-VC78P-FC
240 Vac AlphaServer 1000A 5/400 rackmount package system 256MB 2.1GB	Windows NT	CT-VC78P-AD
240 Vac AlphaServer 1000A 5/400 rackmount package system 256MB 2.1GB	DIGITAL UNIX	CT-VC78P-FD
120 Vac AlphaServer 1000A 5/400 rackmount package system 128MB 2.1GB w/unlimited UNIX user license.	DIGITAL UNIX	CT-VC78P-FE
240 Vac AlphaServer 1000A 5/400 rackmount package system 128MB 2.1GB w/unlimited UNIX user license	DIGITAL UNIX	CT-VC78P-FF
120 Vac AlphaServer 1000A 5/400 rackmount package system 256MB 2.1GB w/unlimited UNIX user license	DIGITAL UNIX	CT-VC78P-FG

Introduction

Table 1-1: Available AlphaServer Voice Platform Models (cont.)

Platform	Operating System	Model Number
240 Vac AlphaServer 1000A 5/400 rackmount package system 256MB 2.1GB w/unlimited UNIX user license	DIGITAL UNIX	CT-VC78P-FH
120 Vac AlphaServer 1000A 5/500 rackmount package system 128MB 4.3GB	Windows NT	CT-VC79P-AA
240 Vac AlphaServer 1000A 5/500 rackmount package system 128MB 4.3GB	Windows NT	CT-VC79P-AB
120 Vac AlphaServer 1000A 5/500 rackmount package system 256MB 4.3GB	Windows NT	CT-VC79P-AC
240 Vac AlphaServer 1000A 5/500 rackmount package system 256MB 4.3GB	Windows NT	CT-VC79P-AD
120 Vac AlphaServer 1000A 5/500 rackmount package system 128MB 4.3GB	DIGITAL UNIX	CT-VC79P-FA
240 Vac AlphaServer 1000A 5/500 rackmount package system 128MB 4.3GB	DIGITAL UNIX	CT-VC79P-FB
120 Vac AlphaServer 1000A 5/500 rackmount package system 256MB 4.3GB	DIGITAL UNIX	CT-VC79P-FC
240 Vac AlphaServer 1000A 5/500 rackmount package system 256MB 4.3GB	DIGITAL UNIX	CT-VC79P-FD

AlphaServer Voice Board, Module, and Cabling Options

Dialogic board options available for the AlphaServer Voice Platform are listed in the following tables. Tables listing miscellaneous options and cabling are also included.

Each option is categorized by the type of bus for which it is designed. Boards and modules can support PCM Expansion Bus (PEB) products only, Signal Computing Bus (SCbus) products only, or both PEB or SCbus, depending on your environment.

Table 1-2: PEB Board Options

Dialogic Board Description	Bus Type³	DIGITAL Model Number⁴
<i>D/41E</i> , a 4-channel, low-density, analog loop-start call processing board.	---	2T-VC41E-xx
<i>VFX/40</i> , a 4-channel, low-density, analog loop-start call processing and 9,600 bits/s fax processing board.	---	2T-VCF40-xx
<i>VFX/40E</i> , a 4-channel, low-density, analog loop-start call processing and 14,400 bits/s fax processing board.	---	2T-VCF4E-xx
<i>D/121B</i> , a 12-channel, standard-density, analog loop-start call processing board.	PEB	2T-VC121-xx
<i>LSI/120</i> , a 12-channel, standard-density, analog loop-start network interface board.	PEB	2T-VCLSI-xx
<i>DTI/211</i> , a 24-channel, standard-density, T1 network interface board.	PEB	2T-VC211-xx
<i>DTI/212</i> , a 30-channel, standard-density, E1 network interface board.	PEB	2T-VC212-xx
<i>FAX/120</i> , a 12-channel, standard-density, fax processing board.	PEB	2T-VCFAX-xx
<i>VRP</i> , a 4/8/12/16-channel, standard-density, T1 voice recognition board.	PEB	2T-VCVRP-xx
<i>VRM/40</i> , a 4-channel, discrete voice recognition daughterboard.	PEB	2T-VCVR4-xx
<i>VRM/2C</i> , a 2-channel, continuous voice recognition daughterboard.	PEB	2T-VCVR2-xx
<i>DMX</i> (DIGITAL Matrix Switch) board for switching time slots on as many as four PEB spans.	PEB	2T-VCDMX-AA
<i>MSI/C</i> (Modular Station Interface) board. It is used to connect up to 24 analog station devices.	PEB	2T-VCMSI-AA
<i>MSI/40</i> daughterboard for the <i>MSI/C</i> that provides 4 line interfaces and Coder/DECoders. (Requires an external MSI Power Module.)	PEB	2T-VCM40-AA

³ --- means standalone use only

⁴ xx represents a two-letter country code

Introduction

Table 1-3: PEB and SCbus Board Options

Dialogic Board Description	Bus Type	DIGITAL Model Number⁵
<i>D/240SC</i> , a 24-channel, high-density, voice processing board.	PEB or SCbus	2T-VC240-xx
<i>D/240SC-T1</i> , a 24-channel, high-density, voice-processing and network-interface board.	PEB or SCbus	2T-VC24T-xx
<i>D/320SC</i> , a 32-channel, high-density, voice-processing board.	PEB or SCbus	2T-VC320-xx
<i>D/41ESC</i> , a 4-channel, low-density, analog loop-start call processing board.	PEB or SCbus	2T-VC4SC-xx
<i>CP-6/SC</i> , a 6-channel, high density, multi-line fax processing board.	PEB or SCbus	2T-VCC06-AA
<i>CP-12/SC</i> , a 12-channel, high density, multi-line fax processing board.	PEB or SCbus	2T-VCC12-AA

Table 1-4: SCbus Board Options

Dialogic Board Description	Bus Type	DIGITAL Model Number⁵
<i>D/160SC-LS</i> , a 16-channel voice processing and analog interface board.	SCbus	2T-VC16L-xx
<i>D/300SC-EI</i> , a 30-channel DSP-based voice processing board with onboard digital E1 interface.	SCbus	2T-VC30E-xx
<i>VFX/40ESC</i> , a 4-channel, low-density, analog loop-start call-processing and 14,400 bits/s fax processing board.	SCbus	2T-VCFSC-xx
<i>D/240SC-2T1</i> , a 24-channel voice processing board with dual T1 network interfaces.	SCbus	2T-VC242-US
<i>D/480SC-2T1</i> , a 48-channel voice processing board with dual T1 network interfaces.	SCbus	2T-VC480-US
<i>D/600SC-2E1-120</i> , a 60-channel voice processing board with dual 120 Ohm E1 network interfaces.	SCbus	2T-VC600-EU
<i>D/300SC-2E1-75</i> , a 30-channel voice processing board with dual 75 Ohm E1 network interfaces.	SCbus	2T-VC302-75
<i>D/300SC-2E1-120</i> , a 30-channel voice processing board with dual 120 Ohm E1 network interfaces.	SCbus	2T-VC302-EU
<i>DTI/240SC</i> , a 24-channel, high-density, T1 network interface board.	SCbus	2T-VCI40-US
<i>DTI/241SC</i> , a 24-channel, high-density, T1 network interface board with tone signaling.	SCbus	2T-VCI41-US
<i>DTI/300SC-75</i> , a 30-channel, high-density, 75 Ohm E1 network interface board.	SCbus	2T-VCI30-75
<i>DTI/301SC-75</i> , a 30-channel, high-density, 75 Ohm E1 network interface board with tone signaling.	SCbus	2T-VCI31-75
<i>DTI/300SC-120</i> , a 30-channel, high-density, 120 Ohm E1 network interface board.	SCbus	2T-VCI30-EU
<i>DTI/301SC-120</i> , a 30-channel, high-density, 120 Ohm E1 network interface board with tone signaling.	SCbus	2T-VCI31-EU
<i>DTI/480SC</i> , a 48-channel, high-density, dual T1 network interface board.	SCbus	2T-VCI80-US
<i>DTI/600SC-75</i> , a 60-channel, high-density, dual 75 Ohm E1 network interface board.	SCbus	2T-VCI60-75
<i>DTI/600SC-120</i> , a 60-channel, high-density, dual 120 Ohm E1 network interface board.	SCbus	2T-VCI60-EU

⁵ xx represents a two-character country code or variation

Introduction

Table 1-4: SCbus Options (cont.)

Dialogic Board Description	Bus Type	DIGITAL Model Number⁶
DCB/320SC, an audio conferencing board supplying 32 ports.	SCbus	2T-VCD32-AA
DCB/640SC, an audio conferencing board supplying 64 ports.	SCbus	2T-VCD64-AA
DCB/960SC, an audio conferencing board supplying 96 ports.	SCbus	2T-VCD96-AA
Antares 2000/50, a DSP expansion board with up to 32-channel capacity, 512Kb local SRAM, 4Mb Global DRAM.	SCbus	2T-VC250-AA
Antares 3000/50, a DSP expansion board with up to 32-channel capacity, 512Kb local SRAM, 8Mb Global DRAM.	SCbus	2T-VC350-AA
Antares 6000/50, a DSP expansion board with up to 32-channel capacity, 2Mb local SRAM, 8Mb Global DRAM.	SCbus	2T-VC650-AA
MSI/80SC (Modular Station Interface) board, to connect up to 8 analog station devices.	SCbus	2T-VCM80-xx
MSI/160SC (Modular Station Interface) board, to connect up to 16 analog station devices.	SCbus	2T-VCM16-xx
MSI/240SC (Modular Station Interface) board, to connect up to 24 analog station devices.	SCbus	2T-VCM24-xx

Table 1-5: Miscellaneous Equipment

DIGITAL Model Number	Description
2T-VC220-IB	I-Bus 20-slot expansion box
2T-VC220-IP	Access Technologies' interconnect kit (two interface boards and a two meter interconnect cable)

⁶ xx represents a two-character country code or variation

Table 1-6: Terminator and Cabling Options (PEB)

DIGITAL Model Number	Description
2T-VCPEB-01	PEB terminator
2T-VCPEB-02	2-connector PEB flat ribbon cable
2T-VCPEB-03	3-connector PEB flat ribbon cable
2T-VCPEB-04	4-connector PEB flat ribbon cable
2T-VCPEB-05	5-connector PEB flat ribbon cable
2T-VCPEB-06	6-connector PEB flat ribbon cable
2T-VCPEB-07	7-connector PEB flat ribbon cable
2T-VCPEB-08	8-connector PEB flat ribbon cable
2T-VCPEB-09	9-connector PEB flat ribbon cable
2T-VCFIC-01	Fax interconnect flat ribbon cable
2T-VC220-RJ	RJ-11 distribution box with 25-pin Sub-D connector
2T-VCPEB-98	Male-to-Male crossover ribbon cable (DMX)
2T-VCPEB-99	Male-to-Female crossover ribbon cable (DMX)

Table 1-7: Cabling Options (SCbus)

DIGITAL Model Number	Description
2T-VCSCC-04	4-Connector flat ribbon SC cable
2T-VCSCC-08	8-Connector flat ribbon SC cable
2T-VCSCC-12	12-Connector flat ribbon SC cable
2T-VCSCC-16	16-Connector flat ribbon SC cable

Table 1-8: Miscellaneous Cables and Other Options

DIGITAL Model Number	Description
2T-VCMPS -01	-24 Vdc MSI power module (120/240 Vac)
2T-VCSA2-TE	SA/240 24-port Telephone Station Adapter
2T-VCSA2-LS	SA/160 16-port Telephone Station Adapter

2

EISA Configuration Utility (ECU)

Before you run the EISA Configuration Utility (ECU), you should be familiar with this utility. For more information and instructions on using the ECU, refer to the AlphaServer system documentation.

Introduction

Run the ECU before you install the software. Run it from the console prompt with the `runecu` command.

The ECU is used to register the boards with the system hardware, and to reserve the addresses and interrupt request levels (IRQs) that are to be used by the boards. The ECU will attempt to identify and resolve resource conflicts and may also be used to determine unused I/O ports, shared memory addresses, and IRQs.

The system may crash during boot if the hardware is configured into Dialogic configuration files and the ECU has not yet been run to configure the hardware into the system configuration EEPROM. If this occurs, either run the ECU to configure the hardware into the system or boot a saved kernel and edit the Dialogic configuration files.

There are four ECU files shipped on the floppy disk. The first file (!ISA4000.cfg) is for Dialogic network-interface and voice boards of IRQ type A and IRQ type B. The second file (!ISA4010.cfg) is for Dialogic network-interface boards of IRQ type C. The third file (!ISA4020.cfg) is for GammaFax boards. The fourth file (!ISA4030.cfg) is for Antares boards.

After you complete the configuration, exit from the ECU and cycle power to the system.

ECU Configurations

The following sections contain the configuration process for IRQ type A, type B, and type C boards. These boards can be installed either in the system box or the 2T-VC220-IB or 2T-VC221-IB Expansion Box.

EISA Configuration Utility (ECU)

Configuring IRQ Type A Boards

I/O Port Selection

The I/O port selection is used to reserve the ports so that other modules in the system will not be able to allocate them using ECU.

It is possible to select from 1 to 8 SpringBoards (D/121B or VRP) installed. This enables the possibility of allocating 1 to 8 consecutive I/O port locations from the same slot.

IRQ Selection

For the first IRQ type A board on the EISA bus, choose “Allocate SpringBoard IRQ.” Press F6 to select the appropriate IRQ for the type A boards. Since all IRQ type A boards share both IRQ and memory allocation, it is only necessary to configure one IRQ type A board.

Note

It is important that the ECU IRQ selections be set correctly. This reserves the IRQ and informs the DIGITAL UNIX operating system to which driver the interrupts should be delivered. If the IRQ selections are not set correctly in the ECU, then the software will not function properly.

Memory Block Selection

The memory block selection is used to reserve the address range(s) so that other modules in the system will not be able to allocate them using ECU.

Select one memory block for the first board of this type. Since these boards are capable of sharing memory, it is not necessary to allocate memory for the remaining boards. However, if enough memory is available, it would improve system performance by spreading out memory allocation as much as possible.

Press F6 and select the size of memory block required for the board in this slot:

- 8K = 2000 hex = size of VRP memory block
- 24K = 6000 hex = size of D/121B memory block

Configuring IRQ Type B Boards

I/O Port Selection

Select “No SpringBoards installed” for all boards of IRQ type B.

EISA Configuration Utility (ECU)

IRQ Selection

For the first IRQ type B board on the EISA bus, choose “Allocate SpanCard IRQ.” Press F6 to select the appropriate IRQ for the type B boards. Since all IRQ Type B boards share both IRQ and memory allocation, it is only necessary to configure one IRQ type B board.

Note

It is important that the ECU IRQ selections be set correctly. This reserves the IRQ and informs the DIGITAL UNIX operating system to which driver the interrupts should be delivered. If the IRQ selections are not set correctly in the ECU, then the software will not function properly.

Memory Block Selection

The memory block selection is used to reserve the address range(s) so that other modules in the system will not be able to allocate them using ECU.

Select one memory block for the first board of this type. Since these boards are required to share memory, it is not necessary to allocate memory for the remaining boards.

Note

All IRQ Type B boards must share a single memory block. This block should normally be 32K, but may be set to 8K if only D/41E or VFX/40E boards are used in the system.

EISA Configuration Utility (ECU)

Configuring IRQ Type C Boards

Boards of IRQ type C only require IRQ and I/O port selection. They *do not* require memory block selection.

I/O Port Selection

Select “One DTI/2xx.” Press F6 to select the specific I/O port for the DTI/2xx board.

IRQ Selection

For the first IRQ type C board on the EISA bus, choose “Allocate DTI/2xx IRQ.” Press F6 to select the appropriate IRQ for the type C boards. For the remaining IRQ type C boards installed in the system, choose “IRQ(s) already allocated” or “No DTI/2xx modules.”

Note

It is important that the ECU IRQ selections be set correctly. This reserves the IRQ and informs the DIGITAL UNIX operating system to which driver the interrupts should be delivered. If the IRQ selections are not set correctly in the ECU, then the software will not function properly.

Configuring GammaFax Boards

GammaFax boards 2T-VCC06-AA (CP-6/SC) and 2T-VCC12-AA (CP-12/SC) require only CSR settings. The actual ports used are implicitly set via the four DIP switches on switch block SW1. The 16 values listed in the ECU may be individually set to either OFF, CP6 or CP12. For each CP-6 or CP-12 installed in the system, set the I/O port range corresponding to the switch setting to the appropriate board type.

If using an expansion box, then one ECU entry may be used to configure all of the CP-6/CP-12 boards installed in the expansion box.

Note

Setting “E” (14) or “F” (15) may *not* be used if a VGA is installed in the system (will work with TGA). Setting “F” (15) may only be used with a CP-6 board. If 96 ports of GammaFax are being installed, settings “E” (14) and/or “F” (15) will be used; therefore, a VGA may not be used.

EISA Configuration Utility (ECU)

Configuring Antares Boards

The Antares option boards only require setting the IRQs and the port addresses. Using ECU, under Dialogic Antares Card Definition, the IRQ is selected by setting the Antares Interrupt Vector; the port address is selected by setting the Antares Switch Setting.

Please refer to the *Quick Install for the Antares Board* Quick Installation Card for setting the port address on the board accordingly.

Configuring Boards in an Expansion Box

If the Dialogic boards are configured in an expansion box using the Windows NT operating system, both IRQ type A and type B boards may be configured by selecting a single ECU entry. To allocate both IRQ types in a single slot, choose “Allocate SpanCard and SpringBoard IRQs.”

Do not choose the “Allocate SpanCard and SpringBoard IRQs” option if you are using DIGITAL UNIX. If you are using Dialogic boards of multiple IRQ types in an expansion box on DIGITAL UNIX, then use the expansion box slot for one of the IRQ types and use spare EISA slots for the other types. For example, if you are using an expansion box connected to EISA slot 3 in the system with IRQ type A and type B boards, configure EISA slot 3 for all of the IRQ type A boards and an unused slot for all of the type B boards.

Completing the ECU Configuration

Record the selected values. These values are for setting switches and jumpers on the boards, and are required during the software installation procedure.

Caution

While still in ECU, lock the Dialogic boards. This prevents the installation of other modules from automatically changing the allocation. If the boards are not locked, then be careful when you install other modules. If ECU does change the allocations, then changes will need to be made to the software configuration, and to the board switch and jumper settings.

Refer to the system documentation for instructions on how to save the changed settings and to exit the ECU.

If the Dialogic Drivers software is already configured on the system, then the software configuration may have to be changed to match the hardware change.

3

Installation

This chapter provides information about installing and configuring the AlphaServer Voice board options.

Introduction

Telephony boards are installed in available ISA slots in the AlphaServer system. Some basic configuration rules follow:

- One and only one of the voice or network-interface boards of IRQ type A and type B installed in the same AlphaServer system must have an interrupt terminator jumper installed.
- PEB terminators must normally be installed on boards at the ends of PEB cables. However, when installing voice boards on an SCbus, a PEB terminator is never used.
- All voice and network-interface boards installed in the same AlphaServer system must have different board identification numbers.
- All telephony boards of the same IRQ type (see the following table) installed in the same AlphaServer system must be set to the same IRQ setting; Each IRQ type group must use a different IRQ setting. The IRQ for only one board of each IRQ type must be specified when you run the EISA Configuration Utility (ECU) (See Chapter 2). The ECU designates all other boards within the IRQ type as “IRQ already allocated”.

Installation

The following boards are included in each of the three IRQ types:

Table 3-1: Board/IRQ Types

Type A (Springboard)	Type B (SpanCard)	Type C (DTI/2xx)
2T-VC121 (D/121B) 2T-VCVRP (VRP)	2T-VC16L (D/160SC-LS) 2T-VC24T (D/240SC-T1) 2T-VC240 (D/240SC) 2T-VC30E (D/300SC-E1) 2T-VC320 (D/320SC) 2T-VC41E (D/41E) 2T-VC4SC (D/41ESC) 2T-VCF4E (VFX/40E) 2T-VCFSC (VFX/40ESC) 2T-VCF40 (VFX/40) 2T-VC242-US (D/240SC-2T1) 2T-VC480-US (D/480SC-2T1) 2T-VC600-EU (D/600SC-2E1-120) 2T-VC302-75 (D/300SC-2E1-75) 2T-VC302-EU (D/300SC-2E1-120) 2T-VCI40-US (DTI/240SC) 2T-VCI41-US (DTI/241SC) 2T-VCI30-75 (DTI/300SC-75) 2T-VCI31-75 (DTI/301SC-75) 2T-VCI30-EU (DTI/300SC-120) 2T-VCI31-EU (DTI/300SC-120) 2T-VCI80-US (DTI/480SC) 2T-VCI60-75 (DTI/600SC-75) 2T-VCI60-EU (DTI/600SC-120) 2T-VCD32-AA (DCB/320SC) 2T-VCD64-AA (DCB/640SC) 2T-VCD96-AA (DCB/960SC) 2T-VCM80-xx (MSI/80SC) 2T-VCM16-xx (MSI/160SC) 2T-VCM24-xx (MSI/240SC)	2T-VC211 (DTI/211) 2T-VC212 (DTI/212) 2T-VCDMX (DMX) 2T-VCMSI (MSI/C) 2T-VCM40 (MSI/40)

Note

The 2T-VCLSI (LSI/120), 2T-VCFAX (FAX/120), 2T-VCVR4 (VRM/40), 2T-VCVR2 (VRM/2C), 2T-VCC06 (CP-6/SC), and 2T-VCC12 (CP-12/SC) option boards do not require IRQ settings.

The Antares cards have their own Interrupt and ECU file.

Two optional I-Bus 20-slot ISA expansion boxes are available for rackmounted AlphaServer systems. An Access Technologies' interconnect kit is required to connect an EISA slot in the rackmounted AlphaServer system to the expansion box.

After you install and cable the options, power up the expansion box and then the AlphaServer system. Refer to the EISA Configuration Utility (ECU) chapter of this guide to configure the installed options.

The following sections provide configuration and installation information for each Dialogic telephony option.

Installation

PEB Only Options

AlphaServer Voice options in this section are used with PCM Expansion Bus (PEB) products.

2T-VC41E (D/41E) Option Board

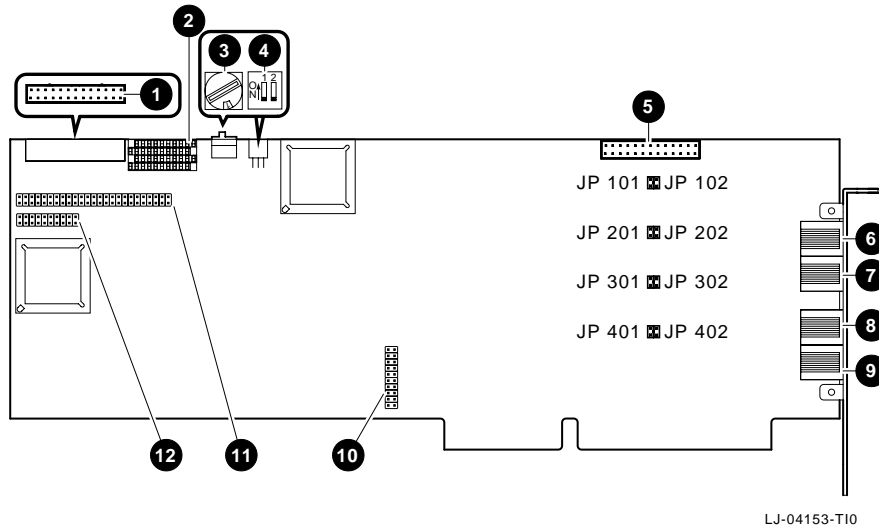
The 2T-VC41E (D/41E) board is a 4-channel loop-start voice and network-interface board that provides four telephone line network-interface circuits for direct connection to analog loop-start lines.

Jumpers JP101 through JP402 are factory set and country specific. Do not alter these settings.

Refer to Dialogic's *Voice Hardware Reference* manual, the AlphaServer system documentation, Figure 3-1, and the following procedure to configure and install the board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to the appropriate section in the Board Installation chapter of Dialogic's *Voice Hardware Reference* manual and Dialogic's *Quick Install for the D/41E and D/41ESC Boards (and VFX Boards)* Quick Installation Card, while you perform the following configuration steps:
 - a. Set the board identification number using rotary switch SW1 and switch block SW2 switch 2.
 - b. Set the default line state using switch block SW2 switch 1.
4. Refer to the AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
5. Connect the appropriate telephone line to each of the RJ-11 female jacks on the board.
6. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-1: 2T-VC41E (D/41E) Board



- | | |
|----------------------------|---|
| 1. PEB connector P5 | 7. Channel 2 input jack J2 |
| 2. PEB terminator socket | 8. Channel 3 input jack J3 |
| 3. Rotary switch SW1 | 9. Channel 4 input jack J4 |
| 4. Switch block SW2 | 10. AEB connector J6 for daughterboards |
| 5. AEB connector P3 | 11. Daughterboard connector J5 |
| 6. Channel 1 input jack J1 | 12. Daughterboard connector J7 |

Installation

2T-VCF4E (VFX/40E) and 2T-VCF40 (VFX/40) Option Boards

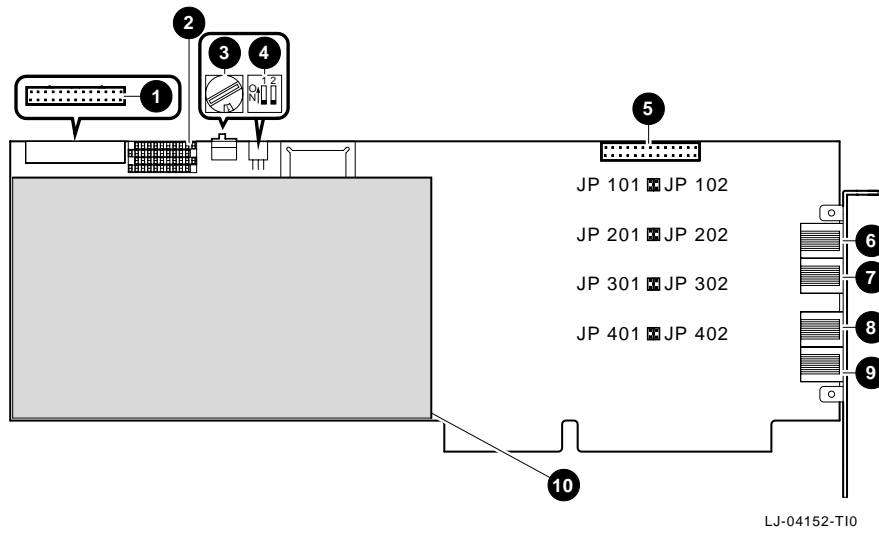
The 2T-VCF4E (VFX/40E) board is a 4-channel loop-start voice and 14,400 bits/s fax board that provides four telephone line network-interface circuits for direct connection to analog loop-start lines. The 2T-VCF40 (VFX/40) board is similar, but provides 9,600 bits/s fax service.

Jumpers JP101 through JP402 are factory set and country specific. Do not alter these settings.

Refer to the AlphaServer system documentation, Figure 3-2, and the following procedure to configure and install the board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to Dialogics's *Quick Install for the D/41E and D/41ESC Boards (and VFX Boards)* Quick Installation Card while you perform the following configuration:
 - a. Set the board identification number using rotary switch SW1 and switch block SW2 switch 2.
 - b. Set the default line state using switch block SW2 switch 1.
4. Refer to the AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
5. Connect the appropriate telephone line to each of the RJ-11 female jacks on the board.
6. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-2: 2T-VCF4E (VFX/40E) Board



- | | |
|----------------------|--------------------------------------|
| 1. Not Used | 6. Channel 1 input jack J1 |
| 2. Not Used | 7. Channel 2 input jack J2 |
| 3. Rotary switch SW1 | 8. Channel 3 input jack J3 |
| 4. Switch block SW2 | 9. Channel 4 input jack J4 |
| 5. AEB connector B3 | 10. 2T-VCX4E (FAX/40E) daughterboard |

Installation

2T-VC121 (D/121B) Option Board

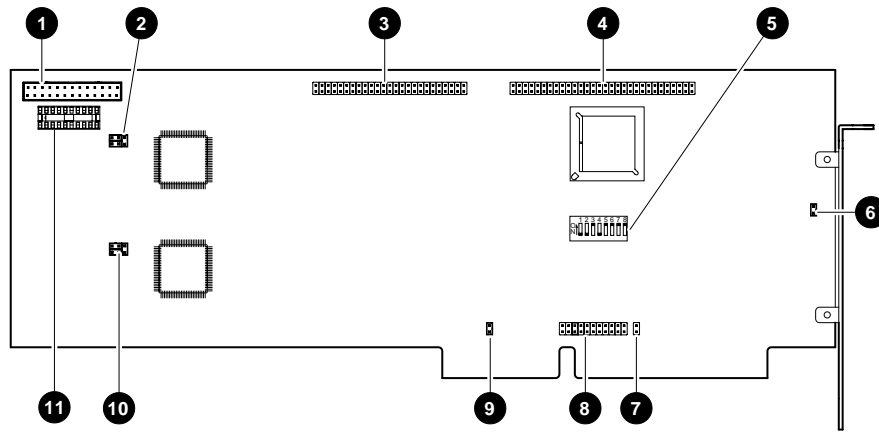
The 2T-VC121 (D/121B) board is a 12-channel analog loop-start call-processing board. It *must* be installed with a network-interface board. You can install the board in either of these configurations:

- With one 2T-VCLSI (LSI/120) 12-channel standalone telephone network interface (voice only) board.
- With one 2T-VC211 (DTI/211) 24-channel standalone telephone network interface (voice only) board, which can support up to two 2T-VC121 (D/121B) boards.

Refer to the *Dialogic Voice Hardware Reference* manual, the AlphaServer system documentation, Figure 3-3, and the following procedure to configure and install the board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to the appropriate section in the Board Installation chapter of Dialogic's *Voice Hardware Reference* manual while you perform the following configuration steps:
 - a. Set the base I/O port address switches on switch block SW1.
 - b. Set the IRQ setting using jumper block JP1. All boards of the same IRQ type (see Table 2-1) in the system must be set to the same IRQ setting.
 - c. Set the interrupt terminator JP7. Only one board in an IRQ type group (see Table 2-1) in the system can have this jumper installed.
 - d. Set the 8-bit bus mode jumper JP168 and the 16-bit bus mode jumper JP16 to select 8-bit or 16-bit mode.
 - e. Install a PEB terminator (if needed). Normally, PEB terminators must be installed on boards at the ends of PEB cables (see Appendix A).
 - f. Attach a PEB cable with the proper number of connectors to the PEB connector.
4. Refer to the AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
5. Connect the PEB cable to the other boards in your configuration. If this board is being added to an existing configuration, the PEB cable connecting the other boards may have to be replaced with a PEB cable with the proper number of connectors.
6. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-3: 2T-VC121 (D/121B) Board



LJ-04154-T10

- | | |
|--------------------------------------|----------------------------------|
| 1. PEB connector | 7. Interrupt terminator JP7 |
| 2. Factory-assigned jumper JPX1 | 8. IRQ setting jumper block JP1 |
| 3. FAX/120 connector P2 | 9. 16-bit bus mode jumper JP16 |
| 4. Connector P3 | 10. Factory-assigned jumper JPZ1 |
| 5. I/O port address switch block SW1 | 11. PEB terminator socket |
| 6. 8-bit bus mode jumper JP168 | |

Installation

2T-VCLSI (LSI/120) Option Board

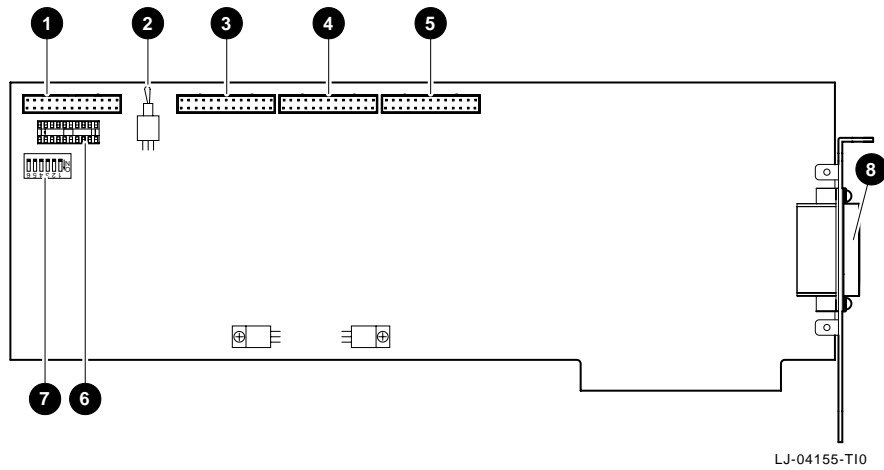
The 2T-VCLSI (LSI/120) board is a 12-channel analog loop-start network-interface board. It must be installed with a call-processing board. You can install the board in either of these configurations:

- With one 2T-VC121 (D/121B) 12-port DSP-based voice board.
- With one 2T-VC240 (D/240SC) 24-port DSP-based voice board, which can support up to two 2T-VCLSI (LSI/120) boards.

Refer to the Dialogic *Network Hardware Reference* manual, the AlphaServer system documentation, Figure 3-4, and the following procedure to configure and install the board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to the appropriate section in the Board Installation chapter of Dialogic's *Network Hardware Reference* manual while you perform the following configuration steps:
 - a. Set the switch settings on switch block SW1.
 - b. Set the Norm/Loop switch SW2 to the Norm position.
 - c. Install a PEB terminator (if needed). Normally, PEB terminators must be installed on boards at the ends of PEB cables (see Appendix A).
 - d. Attach a PEB cable with the proper number of connectors (see Appendix A) to the PEB connector.
4. Refer to the AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
5. Connect the PEB cable to the other boards in your configuration. If this board is being added to an existing configuration, the PEB cable connecting the other boards may have to be replaced with a PEB cable with the proper number of connectors.
6. Connect the appropriate external communication cable to the DB-25 male connector P3 on the board.
7. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-4: 2T-VCLSI (LSI/120) Board



- | | |
|-------------------------|----------------------------|
| 1. PEB connector P2 | 5. AEB connector P6 |
| 2. Norm/Loop switch SW2 | 6. PEB terminator socket |
| 3. AEB connector P4 | 7. Switch block SW1 |
| 4. AEB connector P5 | 8. DB-25 male connector P3 |

LJ-04155-T10

Installation

2T-VC211 (DTI/211) Option Board

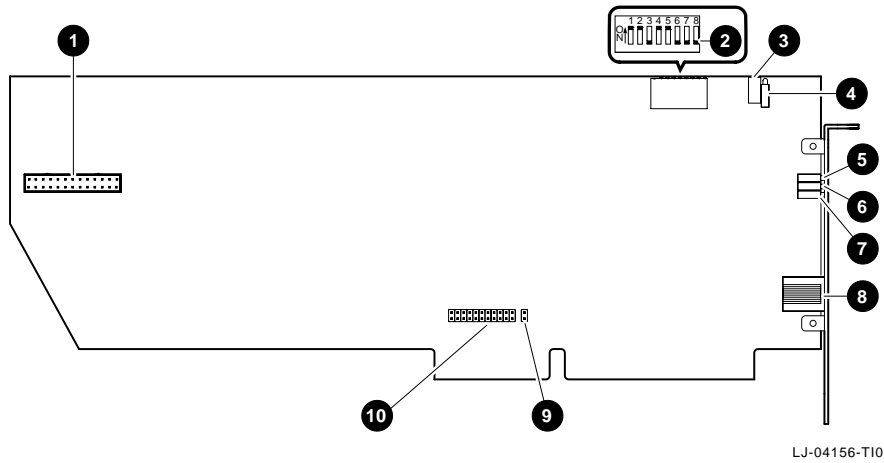
The 2T-VC211 (DTI/211) board is a 24-channel T1 network-interface board. It must be installed with a call-processing board. You can install the board in one of these configurations:

- With one 2T-VC240 (D/240SC) 24-port DSP-based voice board.
- With up to two 2T-VC121 (D/121B) 12-port DSP-based voice boards.

Refer to the Dialogic *Network Hardware Reference* manual, the AlphaServer system documentation, Figure 3-5, and the following procedure to configure and install the board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to the appropriate section in the Board Installation chapter of Dialogic's *Network Hardware Reference* manual while you perform the following configuration steps:
 - a. Set the base I/O port address switches on switch block SW1.
 - b. Set the IRQ setting using jumper block JP1. All boards of the same IRQ type (see Table 2-1) in the system must be set to the same IRQ setting.
 - c. Set the interrupt terminator JP2. Only one board in an IRQ type group (see Table 2-1) in the system can have this jumper installed.
 - d. Set the remote loopback test switch SW101 to the OFF position.
 - e. Attach a PEB cable with the proper number of connectors to the PEB connector P201.
4. Refer to the AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
5. Connect the PEB cable to the other boards in your configuration. If this board is being added to an existing configuration, the PEB cable connecting the other boards may have to be replaced with a PEB cable with the proper number of connectors.
6. Connect the appropriate external communication cable to the RJ-48C connector jack J201 on the board.
7. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-5: 2T-VC211 (DTI/211) Board



- | | |
|--------------------------------------|----------------------------------|
| 1. PEB connector P201 | 6. Alarm LED (yellow) |
| 2. I/O port address switch block SW1 | 7. Signal present LED (green) |
| 3. Remote loopback test switch SW101 | 8. RJ-48C connector jack J201 |
| 4. Remote loopback LED (red) | 9. Interrupt terminator JP2 |
| 5. Alarm LED (red) | 10. IRQ setting jumper block JP1 |

Installation

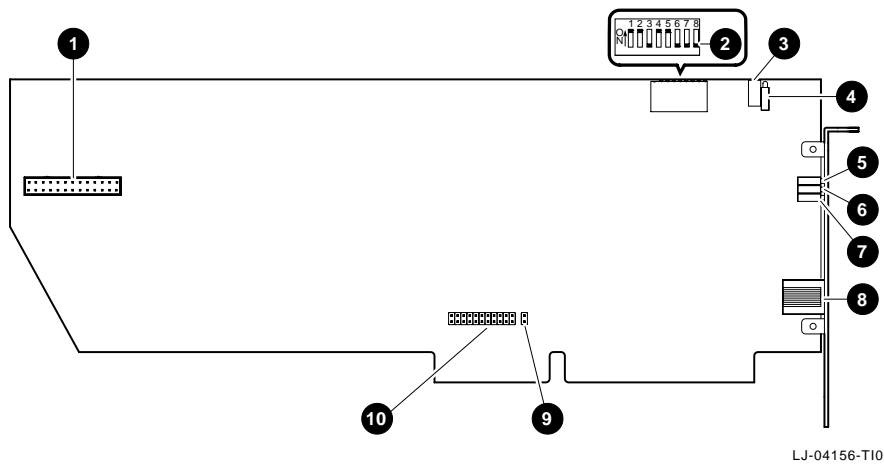
2T-VC212 (DTI/212) Option Board

The 2T-VC212 (DTI/212) board is a 30-channel E1 network-interface board. It *must* be installed with a call-processing board. You can install one 2T-VC212 (DTI/212) board with a 2T-VC320 (D/320SC) board.

Refer to Dialogic's *Network Hardware Reference* manual, the AlphaServer system documentation, Figure 3-6, and the following procedure to configure and install the board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to the appropriate section in the Board Installation chapter of Dialogic's *Network Hardware Reference* manual and perform the following configuration steps:
 - a. Set the base I/O port address switches on switch block SW1.
 - b. Set the IRQ setting using jumper block JP1. All boards of the same IRQ type (see Table 2-1) in the system must be set to the same IRQ setting.
 - c. Set the interrupt terminator JP2. Only one board in an IRQ type group (see Table 2-1) in the system can have this jumper installed.
 - d. Set the remote loopback test switch SW101 to the OFF position.
 - e. Attach a PEB cable with the proper number of connectors to the PEB connector P201.
4. Refer to the AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
5. Connect the PEB cable to the other boards in your configuration. If this board is being added to an existing configuration, the PEB cable connecting the other boards may have to be replaced with a PEB cable with the proper number of connectors.
6. Connect the appropriate telephone lines to the available connectors on the board. This is either a single RJ-48C connector (120 Ohm variant) or two BNC connectors (75 Ohm variant of the board).
7. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-6: 2T-VC212 (DTI/212) Board



- | | |
|--------------------------------------|---------------------------------------|
| 1. PEB connector P201 | 6. Alarm LED (yellow) |
| 2. I/O port address switch block SW1 | 7. Signal present LED (green) |
| 3. Remote loopback test switch SW101 | 8. RJ-48C connector J201 ⁷ |
| 4. Remote loopback LED (red) | 9. Interrupt terminator JP2 |
| 5. Alarm LED (red) | 10. IRQ setting jumper block JP1 |

⁷ 120 Ohm variant of this board is shown. The 75 Ohm variant has two BNC style connectors.

Installation

2T-VCFAX (FAX/120) Option Board

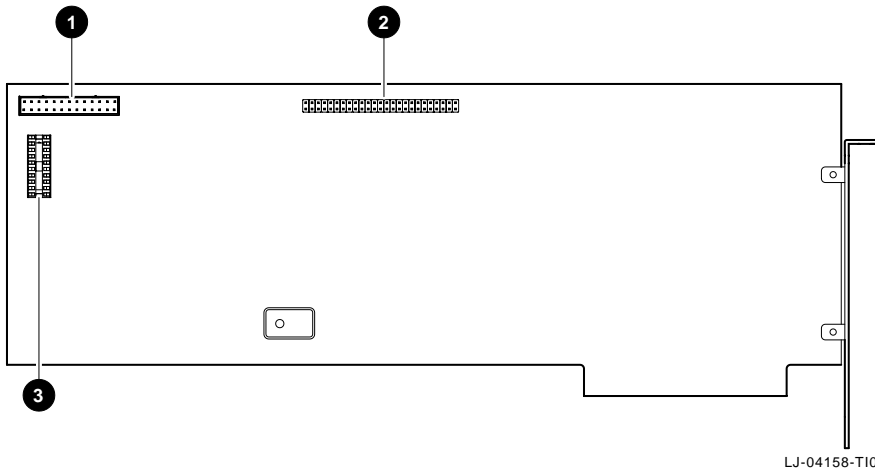
The 2T-VCFAX (FAX/120) board is a 12-channel fax-processing board. It must be installed in a slot adjacent to a 2T-VC121 (D/121B) board and must be connected to this board with a P2 ribbon cable.

Refer to Dialogic's *FAX/120 Hardware Reference* manual, the AlphaServer system documentation, Figure 3-7, and the following procedure to configure and install the board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to Dialogic's *FAX/120 Hardware Reference* manual while you perform the following configuration steps:
 - a. Install a PEB terminator (if needed). Normally, PEB terminators must be installed on boards at the ends of PEB cables (see Appendix A).
 - b. Attach a PEB cable with the proper number of connectors to the PEB connector P1.
 - c. Attach a P2 ribbon cable to the P2 connector.
4. Refer to the AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot adjacent to a 2T-VC121 (D/121B) board.
5. Connect the P2 ribbon cable to the P2 connector on the adjacent 2T-VC121 (D/121B) board.
6. Connect the PEB cable to the other boards in your configuration. If this board is being added to an existing configuration, the PEB cable connecting the other boards may have to be replaced with a PEB cable with the proper number of connectors.
7. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Installation

Figure 3-7: 2T-VCFAX (FAX/120) Board



1. PEB connector P1
2. D/121B connector P2
3. PEB terminator socket

Installation

2T-VCVRP (VR/160) Option Board

The 2T-VCVRP (VR/160) board is a 4/8/12/16-channel voice-recognition board. It can be installed with these call-processing boards:

- 2T-VC121 (D/121B)
- 2T-VC240 (D/240SC)
- 2T-VC320 (D/320SC)
- 2T-VC24T (D/240SC-T1)

Note

Before you install the board, you must connect either a 2T-VCVR4 (VRM/40) or 2T-VCVR2 (VRM/2C) daughterboard to the board. Information about these daughterboards and how to mount them appears in the sections immediately following this one.

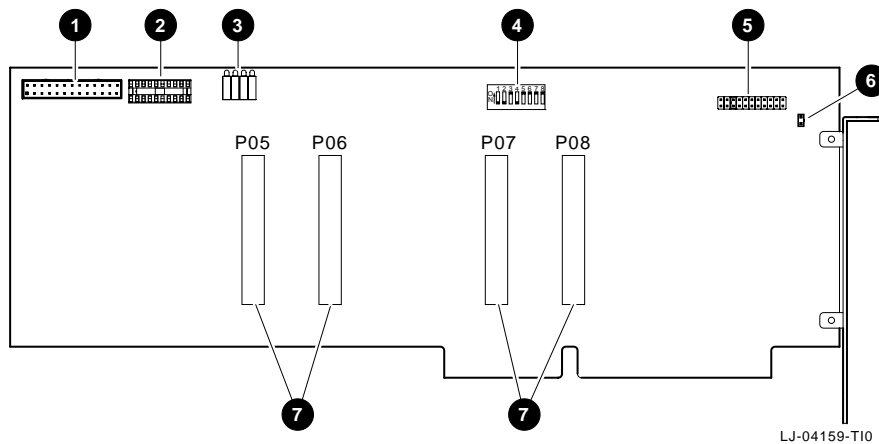
Refer to Dialogic's *VR/160 Hardware Reference* manual, the AlphaServer system documentation, Figure 3-8, and the following procedure to configure and install this board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to Dialogic's *VR/160 Hardware Reference* manual and perform the following configuration steps:
 - a. Set the base I/O port address switches on switch block SW01.
 - b. Set the IRQ setting using jumper block JP01. All boards of the same IRQ type (see Table 3-1) in the system must be set to the same IRQ setting.
 - c. Set the interrupt terminator JP07. Only one board in an IRQ type group (see Table 3-1) in the system can have this jumper installed.
 - d. Connect either a 2T-VCVR4 (VRM/40) or 2T-VCVR2 (VRM/2C) daughterboard to this board. Before continuing, go to the appropriate section immediately following this one for information about installing the daughterboard you are using.
 - e. Install a PEB terminator (if needed). Normally, PEB terminators must be installed on boards at the ends of PEB cables (refer to Appendix A).
 - f. Attach a PEB cable with the proper number of connectors to the PEB connector P04.

Installation

4. Refer to your AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
5. Connect the PEB cable to the other boards in your configuration. If this board is being added to an existing configuration, the PEB cable connecting the other boards may have to be replaced with a PEB cable with the proper number of connectors.
6. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-8: 2T-VCVRP (VR/160) Board



- | | |
|---------------------------------------|--|
| 1. PEB connector P04 | 5. IRQ setting jumper block JP01 |
| 2. PEB terminator socket | 6. Interrupt terminator JP07 |
| 3. Daughterboard LEDs | 7. Daughterboard connectors P05, P06, P07, and P08 |
| 4. I/O port address switch block SW01 | |

Installation

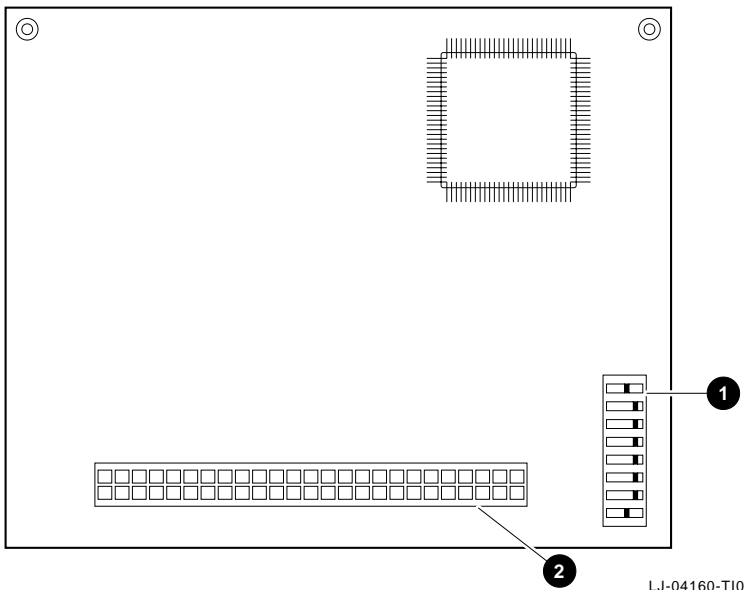
2T-VCVR4 (VRM/40) Daughterboard Option

The 2T-VCVR4 (VRM/40) board is a 4-channel discrete voice-recognition daughterboard that mounts directly to a 2T-VCVRP (VR/160) 4/8/12/16-channel voice-recognition board. You can connect up to four of these daughterboards to a 2T-VCVRP (VR/160) board.

Refer to the Board Installation chapter of the Dialogic *VR/160 Hardware Reference* manual, Figure 3-9, and the following procedure to configure and connect this daughterboard to the 2T-VCVRP (VR/160) voice board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the daughterboard.
3. Refer to Dialogic's *VR/160 Hardware Reference* manual and set the base I/O port address switches on switch block SW01.
4. Connect the daughterboard to the 2T-VCVRP (VR/160) board. Connect the first daughterboard to P05, the second to P06, and so on.
5. Return to the *2T-VCVRP (VR/160) Option Board* section of this guide and continue to install and configure this module.

Figure 3-9: 2T-VCVR4 (VRM/40) Daughterboard



1. I/O port address switch block SW01
2. VRP board connector P1

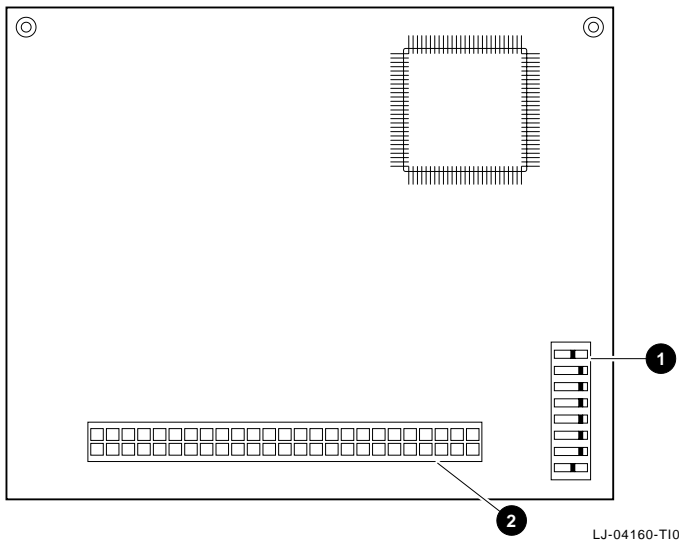
2T-VCVR2 (VRM/2C) Daughterboard Option

The 2T-VCVR2 (VRM/2C) board is a 2-channel continuous voice-recognition daughterboard that mounts directly to a 2T-VCVRP (VR/160) 4/8/12/16-channel voice-recognition board. Up to four of these daughterboards can be connected to a 2T-VCVRP (VR/160) board.

Refer to Dialogic's *VR/160 Hardware Reference* manual, Figure 3-10, and the following procedure to configure and connect this daughterboard to the 2T-VCVRP (VR/160) board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the daughterboard.
3. Refer to Dialogic's *VR/160 Hardware Reference* manual and set the base I/O port address switches on switch block SW01.
4. Connect the 2T-VCVR2 (VRM/2C) daughterboard to the 2T-VCVRP (VR/160) board. Connect the first daughterboard to P05, the second to P06, and so on.
5. Return to the *2T-VCVRP (VR/160) Option Board* section of this guide and continue to install and configure this module.

Figure 3-10: 2T-VCVR2 (VRM/2C) Daughterboard



1. I/O port address switch block SW01
2. VRP board connector P1

Installation

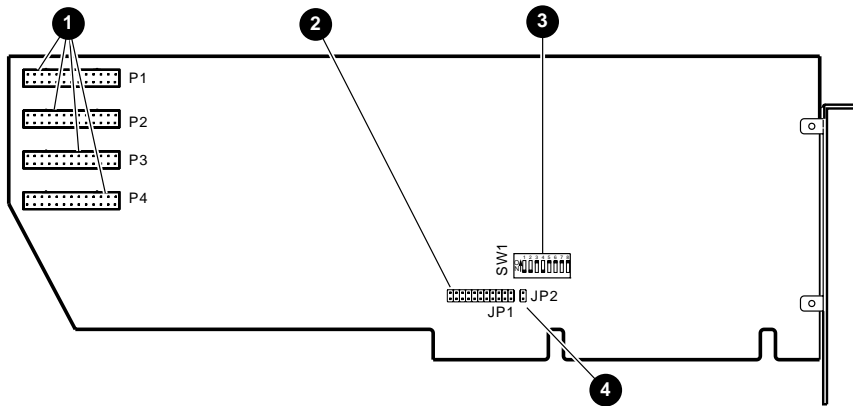
2T-VCDMX (DMX) Option Board

The 2T-VCDMX (DMX) board is a digital matrix switch that allows routing of calls across multiple time slots. This board provides an interface to up to four PCM Expansion Buses (PEBs).

Refer to Dialogic's *Network Hardware Reference* manual, your AlphaServer system documentation, Figure 3-11, and the following procedure to configure and install the board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to the appropriate section in the Board Installation chapter of Dialogic's *Network Hardware Reference* manual and perform the following configuration steps:
 - a. Set the base I/O port address switches on switch block SW1.
 - b. Set the IRQ setting using jumper block JP1. All boards of the same IRQ type (see Table 2-1) in the system must be set to the same IRQ setting.
 - c. Set the interrupt terminator JP2. Only one board in an IRQ type group (see Table 2-1) in the system can have this jumper installed.
 - d. Attach a PEB crossover cable from each PEB to the DMX, beginning with P1, then P2, and so on.
4. Refer to the AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
5. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-11: 2T-VCDMX (DMX) Board



LJ-04506.AI4

- | | |
|---------------------------------|--------------------------------------|
| 1. PEB connectors P1 through P4 | 3. I/O port address switch block SW1 |
| 2. IRQ setting jumper block JP1 | 4. Interrupt terminator JP2 |

Installation

2T-VCMSI (MSI/C) Option Board

The 2T-VCMSI (MSI/C) board can connect up to 24 analog devices, such as local telephones, modems, fax machines, or audio equipment to a PCM Expansion Bus (PEB). You can add up to six 2T-VCM40 (MSI/40) daughterboards, each with four station interfaces.

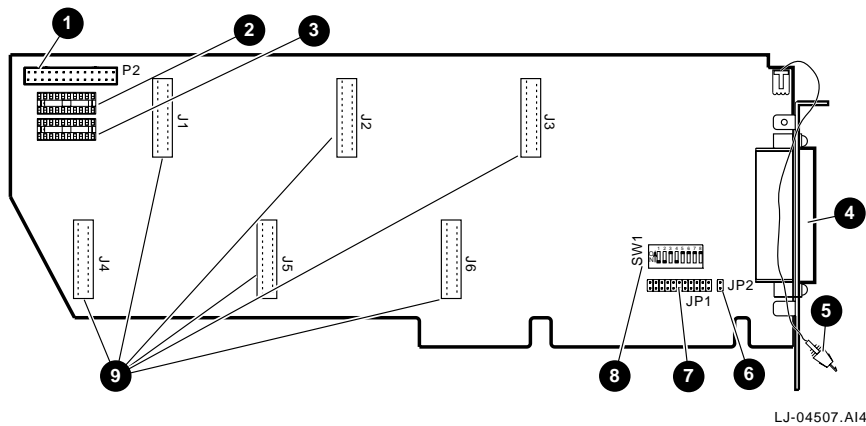
Refer to Dialogic's *Network Hardware Reference* manual, your AlphaServer system documentation, Figure 3-12, and the following procedure to configure and install the board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to the appropriate section in the Board Installation chapter of Dialogic's *Network Hardware Reference* manual and perform the following configuration steps:
 - a. Set the base I/O port address switches on switch block SW1.
 - b. Set the IRQ setting using jumper block JP1. All boards of the same IRQ type (see Figure 3-1) in the system must be set to the same IRQ setting.
 - c. Set the interrupt terminator JP2. Only one board in an IRQ type group (see Figure 3-1) in the system can have this jumper installed.
 - d. Connect the 2T-VCVCM (MSI/40) daughterboard(s) to this board. Before you continue, go to the section of this guide that explains how to install this daughterboard.
 - e. Normally, PEB terminators must be installed on boards at the ends of PEB cables (refer to Appendix A). Install a PEB terminator in ONE of the following sockets according to how the board is being used:
 - XRN1: When the board functions as a network module and provides clocking information to other boards on the PEB.
 - XRN2: When the board functions as a resource module and receives clocking information from the PEB.
 - f. Attach a PEB cable with the proper number of connectors to PEB connector P2.
4. Refer to your AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
5. Connect the PEB cable to the other boards in your configuration. If this board is being added to an existing configuration, the PEB cable connecting the other boards may have to be replaced with a PEB cable with the proper number of connectors.

Installation

6. Connect the cable that leads to your telephones to the RJ-21X station interface connector P1.
7. Connect the external power connector P3 to the external MSI power supply.
8. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-12: 2T-VCMSI (MSI/C) Board



- | | |
|--|---|
| 1. PEB connector P2 | 6. Interrupt terminator JP2 |
| 2. PEB terminator socket XRN1 | 7. Interrupt terminator JP1 |
| 3. PEB terminator socket XRN2 | 8. I/O port address switch block SW1 |
| 4. RJ-21X station interface connector P1 | 9. Daughterboard connectors J1 through J6 |
| 5. External power connector P3 | |

LJ-04507.A14

Installation

2T-VCM40 (MSI/40) Daughterboard Option

The 2T-VCM40 (MSI/40) board provides four loop-start interfaces for connecting analog devices to a T1 or E1 system. You can add as many as six of these daughterboards to each 2T-VCMSI (MSI/C) board.

This daughterboard can be used in either T1 or E1 environments. A maximum configuration allows the hardware to connect all 24 time slots of a T1 or loop-start system to 24 analog station devices. Two 2T-VCMSI (MSI/C) boards and eight daughterboards are needed to service all 30 channels in an E1 system.

Note

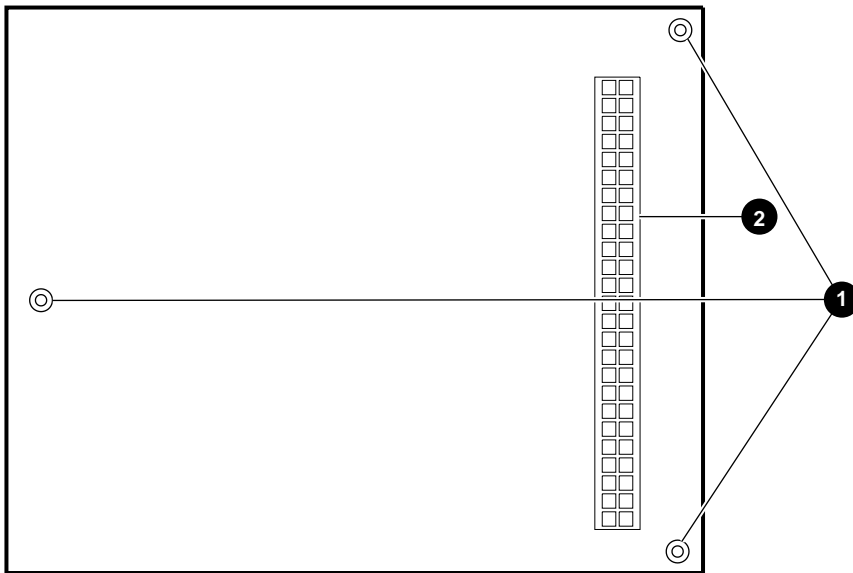
To install a daughterboard, you must have an MSI power module or other compatible external 24 Vdc power supply. A single power supply module can support up to six daughterboards.

Refer to the Board Installation chapter of the *Dialogic Network Hardware Reference* manual, Figure 3-13 (which shows a bottom view of the daughterboard), and the following procedure to configure and connect this daughterboard to the 2T-VCMSI (MSI/C) board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the daughterboard.
3. Connect the daughterboard to the 2T-VCMSI (MSI/C) board. Connect the first daughterboard to J1, the second to J2, and so on. When you are working with an E1 system that uses two 2T-VCMSI (MSI/C) boards, divide the number of daughterboards being used equally between the boards.

Return to the *2T-VCMSI (MSI/C) Option Board* section of this guide and continue to install and configure this module.

Figure 3-13: 2T-VCM40 (MSI/40) Daughterboard



LJ-04508.A14

1. Standoffs
2. 50-Pin connector P01

Installation

PEB and SCbus Options

The AlphaServer Voice options in this section can either be used with PEB or with Signal Computing Bus (SCbus) products. The way you configure any of these boards depends on the bus type of your installation.

Caution

You cannot mix PEB only and SCbus only options on the same system!

2T-VC240 (D/240SC) Option Board

The 2T-VC240 (D/240SC) board is a 24-channel voice-processing board that must be installed with a network-interface board. This board can be used in PEB or SCbus environments, as follows:

- In PEB environments:
 - ⇒ With one 2T-VC211 (DTI/211) 24-channel standalone telephone interface (voice only) board.
 - ⇒ With up to two 2T-VCLSI (LSI/120) 12-channel standalone telephone network interface (voice only) boards.
- In SCbus environments:
 - ⇒ This board is compatible with other SCbus-only boards.

Refer to the Board Installation chapter of Dialogic's *Voice Hardware Reference* manual, the AlphaServer system documentation, Figure 3-14 or Figure 3-15, and the following procedure to configure and install this board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to the appropriate section in the Board Installation chapter of Dialogic's *Voice Hardware Reference* manual while you perform the following configuration steps:
 - a. Set the board identification number with rotary switch.
 - b. If you are installing boards in a PEB environment, PEB terminators must be installed on boards at the ends of PEB cables (see Appendix A). (In SCbus installations, no PEB terminator is required.)

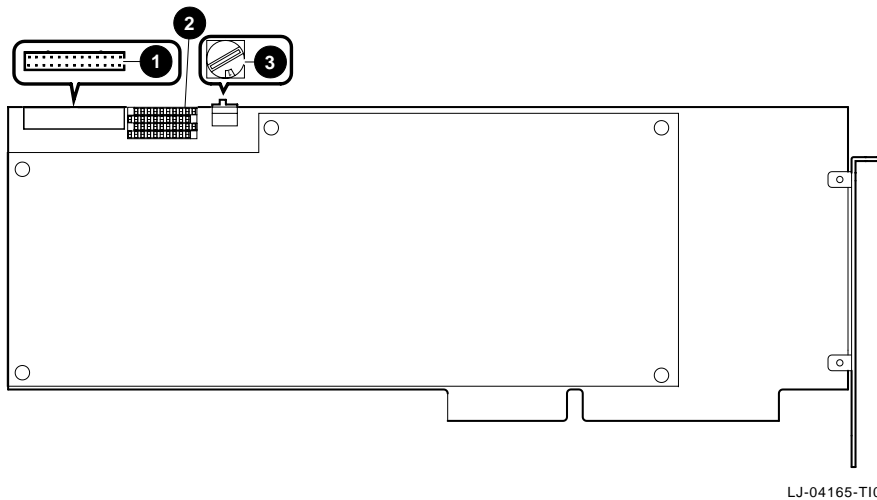
Installation

If you are using this card with other PEB products, and this board is at the end of a PEB cable or is being installed as a standalone board, install a PEB terminator in the holes in the terminator socket. Use the lower set of holes in the terminator socket as you look at the board, with the edge connectors down.

Otherwise, continue with the next step.

- c. Depending on the environment, attach a PEB or SCbus cable with the proper number of connectors to the PEB/SCbus connector.
4. Refer to your AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
5. Connect the PEB/SCbus cable to the other boards in your configuration. If this board is being added to an existing configuration, you may have to replace the PEB/SCbus cable connecting the other boards with a PEB/SCbus cable with the proper number of connectors.
6. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-14: 2T-VC240 (D/240SC Rev. 1) Board

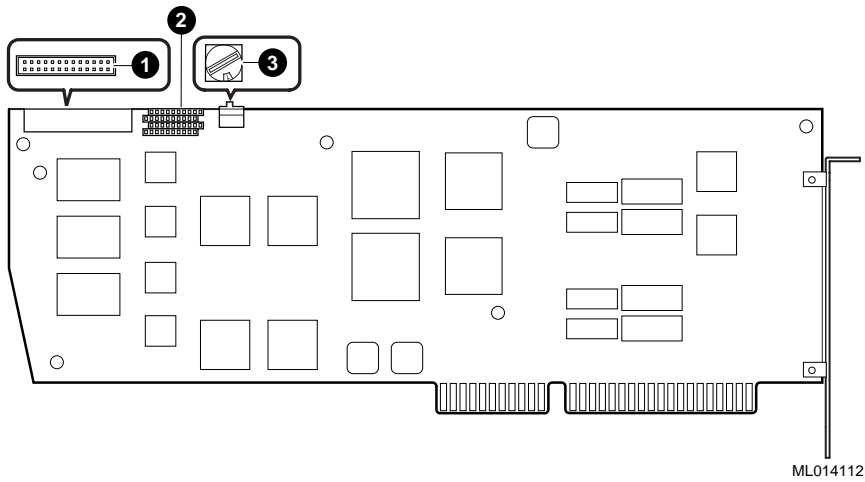


LJ-04165-T10

1. PEB/SCbus connector
2. PEB terminator socket
3. Rotary switch

Installation

Figure 3-15: 2T-VC240 (D/240SC Rev. 2) Board



1. PEB/SCbus connector
2. PEB terminator socket
3. Rotary switch

2T-VC24T (D/240SC-T1) Option Board

The 2T-VC24T (D/240SC-T1) board is a 24-channel voice-processing and T1 network-interface board. It can be used with either PEB or SCbus products.

Refer to Dialogic's *Voice Hardware Reference* manual, the system documentation, Figure 3-16 or Figure 3-17, and the following procedure to configure and install the 2T-VC24T (D/240SC-T1) board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to the appropriate section in the Board Installation chapter of Dialogic's *Voice Hardware Reference* manual and Dialogic's *Quick Install for the D/240SC-T1, D/300SC-E1, DTI/241SC and DTI/301SC Boards* Quick Installation Card while you perform the following configuration steps:
 - a. Set the board identification number with the rotary switch.
 - b. Set the remote loopback test switch to the OFF position.
 - c. If you are installing boards in a PEB environment, PEB terminators must be installed on boards at the ends of PEB cables (see Appendix A). (In SCbus installations, no PEB terminator is required.)

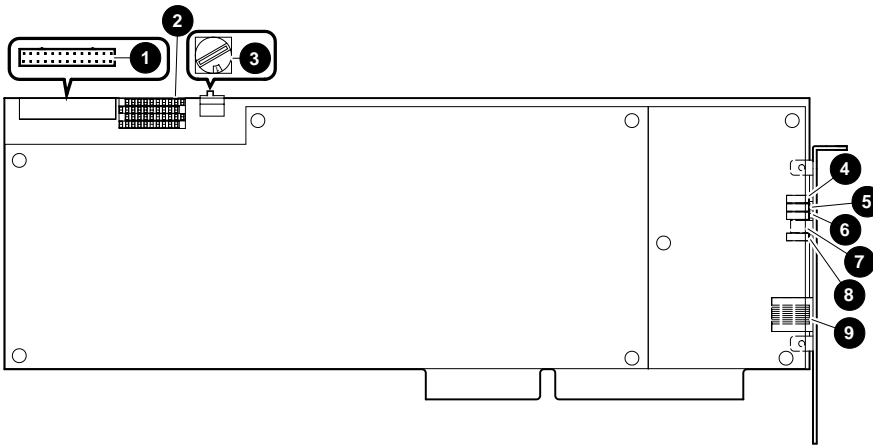
If you are using this card with other PEB products, and this board is at the end of a PEB cable or is being installed as a standalone board, install a PEB terminator in the holes in the terminator socket. Use the lower set of holes in the terminator socket as you look at the board, with the edge connectors down.

Otherwise, continue with the next step.

- d. Depending on the environment, attach a PEB or SCbus cable with the proper number of connectors to the PEB/SCbus connector.
4. Refer to your AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
5. Connect the PEB/SCbus cable to the other boards in your configuration. If this board is being added to an existing configuration, you may have to replace the PEB/SCbus cable connecting the other boards with a PEB/SCbus cable with the proper number of connectors.
6. Connect the appropriate telephone line to the RJ-48C connector on the board.
7. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Installation

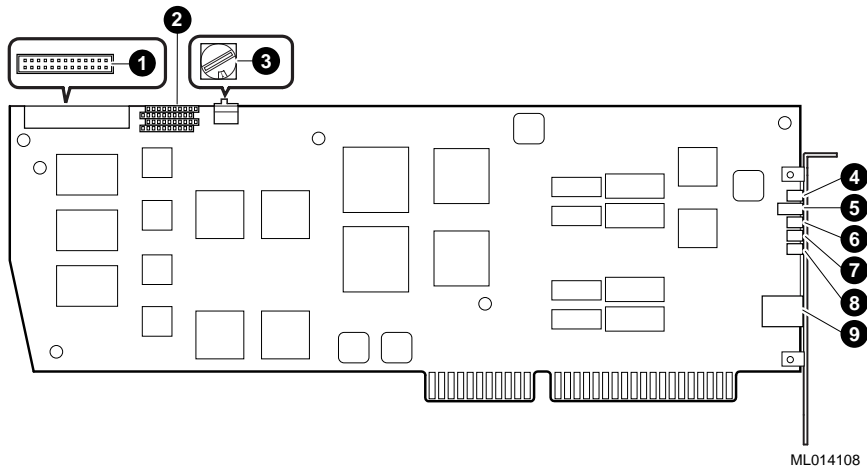
Figure 3-16: 2T-VC24T (D/240SC-T1 Rev. 1) Board



LJ-04164-T10

- | | |
|--------------------------|--------------------------------|
| 1. PEB/SCbus connector | 6. Signal present LED (green) |
| 2. PEB terminator socket | 7. Remote loopback test switch |
| 3. Rotary switch | 8. Remote loopback LED (red) |
| 4. Alarm LED (red) | 9. RJ-48C connector jack |
| 5. Alarm LED (yellow) | |

Figure 3-17: 2T-VC24T (D/240SC-T1 Rev. 2) Board



- | | |
|--------------------------------|-------------------------------|
| 1. PEB/SCbus connector | 6. Signal present LED (green) |
| 2. PEB terminator socket | 7. Alarm LED (yellow) |
| 3. Rotary switch | 8. Alarm LED (red) |
| 4. Remote loopback LED (red) | 9. RJ-48C connector jack |
| 5. Remote loopback test switch | |

Installation

2T-VC320 (D/320SC) Option Board

The 2T-VC320 (D/320SC) board is a 32-channel voice-processing board. This board can be used in PEB or SCbus environments, as follows:

- In PEB environments:
 - ⇒ With a 2T-VC212 (DTI/212) 30-channel standalone telephone network interface (voice only) board.
- In SCbus environments:
 - ⇒ This board is compatible with other SCbus-only boards.

Refer to the Board Installation chapter of Dialogic's *Voice Hardware Reference* manual, the AlphaServer system documentation, Figure 3-18 or Figure 3-19, and the following procedure to configure and install this board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to the appropriate section in the Board Installation chapter of Dialogic's *Voice Hardware Reference* manual while you perform the following configuration steps:
 - a. Set the board identification number with rotary switch.
 - b. If you are installing boards in a PEB environment, PEB terminators must be installed on boards at the ends of PEB cables (see Appendix A). (In SCbus installations, no PEB terminator is required.)

If you are using this card with other PEB products, and this board is at the end of a PEB cable or is being installed as a standalone board, install a PEB terminator in the holes in the terminator socket. Use the lower set of holes in the terminator socket as you look at the board, with the edge connectors down.

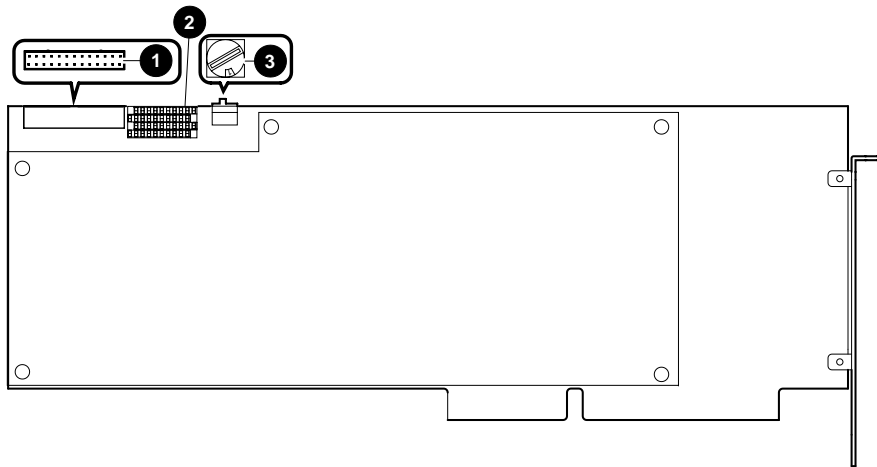
Otherwise, continue with the next step.

- c. Depending on the environment, attach a PEB or SCbus cable with the proper number of connectors to the PEB/SCbus connector.
4. Refer to your AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
5. Connect the PEB/SCbus cable to the other boards in your configuration. If this board is being added to an existing configuration, you may have to replace the PEB/SCbus cable connecting the other boards with a PEB/SCbus cable with the proper number of connectors.

Installation

6. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-18: 2T-VC320 (D/320SC Rev. 1) Board

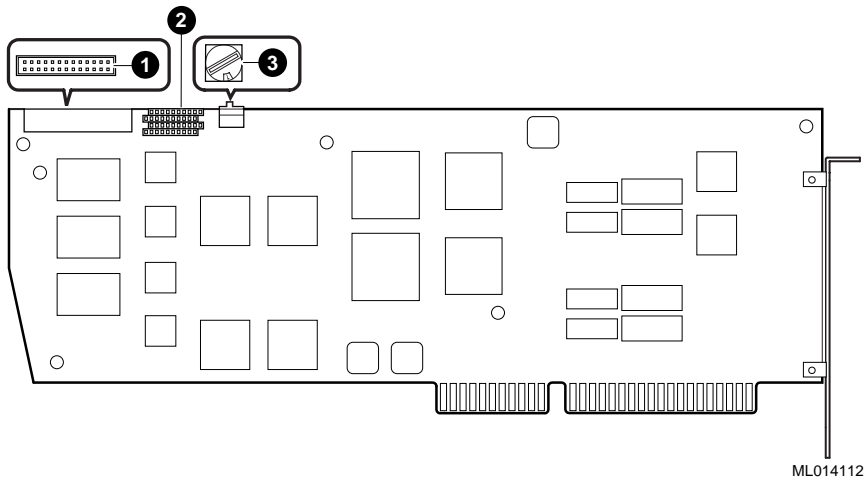


LJ-04165-T10

1. PEB connector
2. PEB terminator socket
3. Rotary switch

Installation

Figure 3-19: 2T-VC320 (D/320SC Rev. 2) Board



1. PEB connector
2. PEB terminator socket
3. Rotary switch

2T-VCC06-AA (CP-6/SC) and 2T-VCC12-AA (CP-12/SC) Option Boards

The 2T-VCC06-AA (CP-6/SC) option board is a 6-channel, high density multi-line fax processing board that must be installed with a network-interface board.

The 2T-VCC12-AA (CP-12/SC) board combines two fax boards: the CP-6/SC base board and a daughterboard, which supports 12 complete fax channels. Both boards can be used in PEB and SCbus environments, as follows:

- In PEB environments:

With one if the following telephone network interface boards:

LSI/120	D/240SC-T1
DT1/211	D/41ESC
DTI/212	

In SCbus environments this board is compatible with other SCbus-only boards.

Refer to the Installation Basics chapter of Dialogic's *Network Hardware Reference* manual, the AlphaServer system documentation, Figure 3-20, and the following procedure to configure and install this board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to the appropriate sections in GammaLink's *GammaFax CP-6/SC and CP-12/SC Hardware Installation Guide* while you perform the following configuration steps:
 - a. Set the board I/O address on the CP-6/SC base board with DIP switch block SWI.
 - b. If you are installing boards in a PEB environment, PEB terminators must be installed on boards at the ends of PEB cables (See Appendix A). (In SCbus installations, no PEB terminator is required).

If you are using this card with other PEB products, and this board is at an end of a PEB cable, install a PEB terminator in the holes in the terminator socket.

Otherwise, continue with the next step.

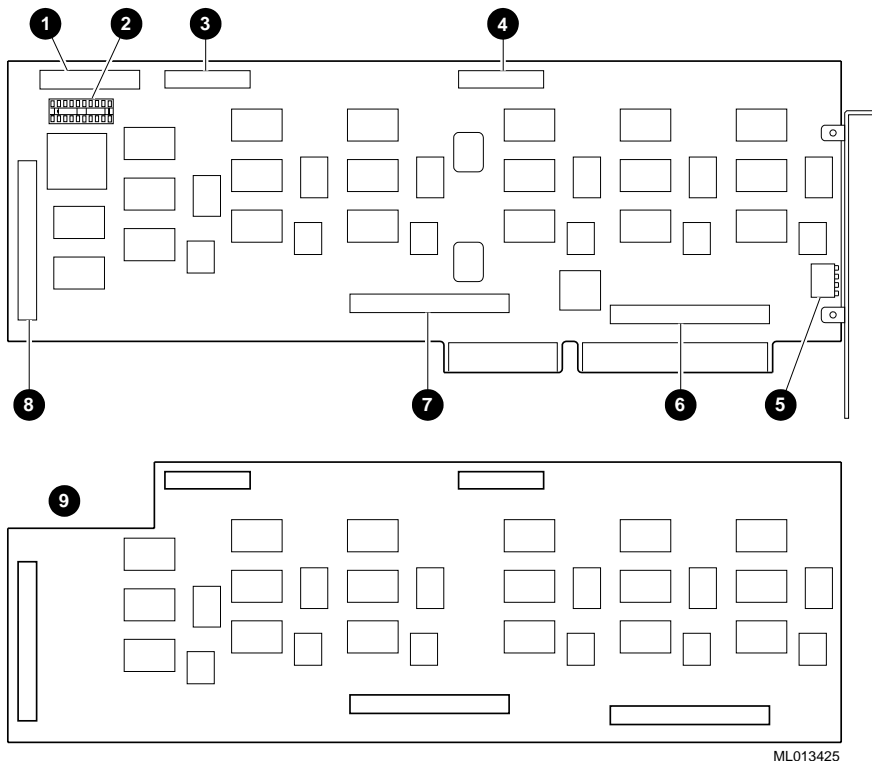
- c. Depending on the environment, attach a PEB or SCbus cable with the proper number of connectors to the PEB/SCbus connector.
4. Refer to your AlphaServer system documentation for the EISA board installation procedures and install the board in an available EISA slot.

Installation

5. Connect the PEB/SCbus cable to the other boards in your configuration. If this board is being added to an existing configuration, you may have to replace the PEB/SCbus cable connecting the other boards with a PEB/SCbus cable with the proper number of connectors.
6. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-20: 2T-VCC06-AA & 2T-VCC12-AA (CP-6/SC & CP-12/SC) Boards



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- | | |
|--|--------------------------------|
| 1. PEB/SCbus connector | 6. 50-pin interboard connector |
| 2. PEB terminator socket | 7. 50-pin interboard connector |
| 3. 26-pin interboard connector | 8. 50-pin interboard connector |
| 4. 26-pin interboard connector | 9. CP-12/SC daughterboard |
| 5. I/O port address DIP switch block (SW1) | |

2T-VC4SC (D/41ESC) Option Board

The 2T-VC4SC (D/41ESC) board is a 4-channel loop-start voice and network-interface board designed for use with the PEB or SCbus. It provides four telephone line network-interface circuits for direct connection to analog loop-start lines.

Jumpers JP101 through JP402 are factory set and country specific. *Do not alter these settings.*

Refer to Dialogic's *Voice Hardware Reference* manual, your AlphaServer system documentation, and Figure 3-21 while you configure and install the board according to the following procedure:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to Dialogic's *Quick Install for the D/41E and D/41ESC Boards (and VFX Boards)* Quick Installation Card while you perform the following configuration steps:
 - a. Set the board identification number using rotary switch SW1 and switch block SW2 switch 2.
 - b. Set the default line state using switch block SW2 switch 1.
 - c. If you are installing boards in a PEB environment, PEB terminators must be installed on boards at the ends of PEB cables (see Appendix A). (In SCbus installations, no PEB terminator is required).

If you are using this card with other PEB products, and this board is at the end of a PEB cable or is being installed as a standalone board, install a PEB terminator in the holes in the terminator socket. Use the lower set of holes in the terminator socket as you look at the board, with the edge connectors down.

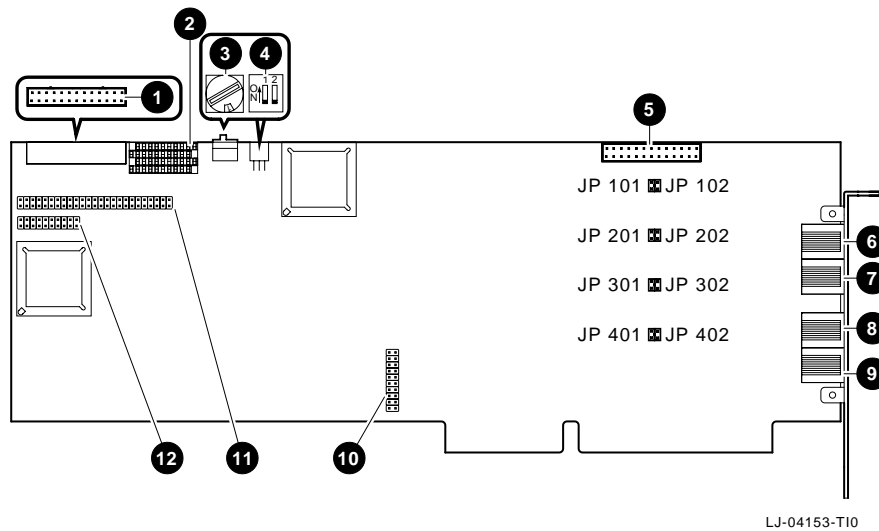
Otherwise, continue with the next step.

- d. Depending on the environment, attach a PEB or SCbus cable with the proper number of connectors to the PEB/SCbus connector P5.
4. Refer to your AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
5. Connect the PEB/SCbus cable to the other boards in your configuration. If this board is being added to an existing configuration, you may have to replace the PEB/SCbus cable connecting the other boards with a PEB/SCbus cable with the proper number of connectors.
6. Connect the appropriate telephone line to each of the RJ-11 female jacks on the board.

Installation

7. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-21: 2T-VC4SC (D/41ESC) Board



- | | |
|----------------------------|---|
| 1. PEB/SCbus connector P5 | 7. Channel 2 input jack J2 |
| 2. PEB terminator | 8. Channel 3 input jack J3 |
| 3. Rotary switch SW1 | 9. Channel 4 input jack J4 |
| 4. Switch block SW2 | 10. AEB connector J6 for daughterboards |
| 5. AEB connector P3 | 11. Daughterboard connector J5 |
| 6. Channel 1 input jack J1 | 12. Daughterboard connector J7 |

SCbus Only Options

The AlphaServer Voice options in this section are for use exclusively with SCbus products.

2T-VC250-AA (Antares 2000/50) Option Board

2T-VC350-AA (Antares 3000/50) Option Board

2T-VC650-AA (Antares 6000/50) Option Board

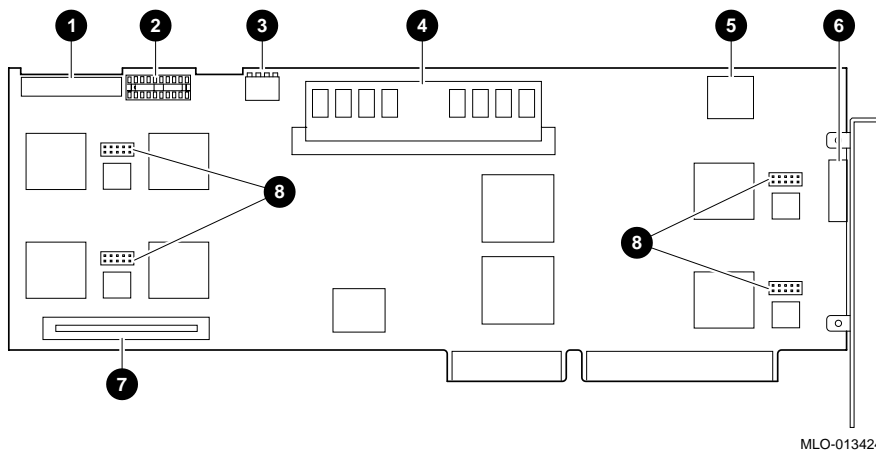
The 2T-VC250-AA (Antares 2000/50), 2T-VC350-AA (Antares 3000/50) and the 2T-VC650-AA (Antares 6000/50) Option boards are powerful DSP expansion boards that provide flexibility to support SCbus-based applications, up to 32-channel capability via the SCbus.

Refer to Dialogic's *Quick Install for the Antares Board* Quick Installation Card, Figure 3-22 and the following procedure to configure and install the board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to the *Quick Install for the Antares Board* Quick Installation Card to set up the port address (SWI).
4. Refer to the AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
5. Connect the SCbus cable to the other boards in your configuration. If this board is being added to an existing configuration, you may have to replace the SCbus cable connecting the other boards with a SCbus cable with the proper number of connectors.
6. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Installation

Figure 3-22: 2T-VC250-AA (Antares 2000/50), 2T-VC350-AA (Antares 3000/50), 2T-VC650-AA (Antares 6000/50) Board



MLO-013424

- | | |
|----------------------------|---------------------------------|
| 1. PEB/SCbus connector | 6. Status Lights |
| 2. PEB terminator socket | 7. Daughterboard |
| 3. Port address switch SW1 | 8. DSP emulator port connectors |
| 4. Global DRAM SIM module | |
| 5. Security/License Key | |

2T-VC16L (D/160SC-LS) Option Board

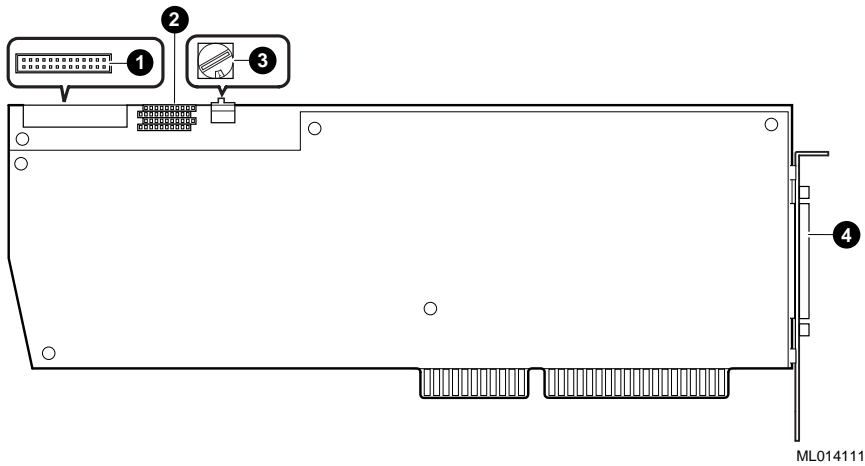
The 2T-VC16L (D/160SC-LS) board is a 16-channel call processing and loop-start network-interface board.

Refer to your AlphaServer system documentation and Figure 3-23 while you configure and install the board according to the following procedure:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to Dialogic's *Quick Install for the D/160SC-LS Board* Quick Installation Card while you perform the following configuration steps:
 - a. Set the board identification number with rotary switch.
 - b. Attach an SCbus cable with the proper number of connectors to the SCbus connector.
4. Refer to your AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
5. Connect the SCbus cable to the other boards in your configuration. If this board is being added to an existing configuration, you may have to replace the SCbus cable connecting the other boards with a SCbus cable with the proper number of connectors.
6. Connect a telephone station adapter to the DB-37 connector on the board.
7. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Installation

Figure 3-23 2T-VC16L: (D/160SC-LS)



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- | | |
|---------------------------|--------------------|
| 1. PEB/SCbus connector | 3. Rotary switch |
| 2. PEB termination socket | 4. DB-37 connector |

2T-VCFS (VFX/40ESC) Option Board

The 2T-VCFS (VFX/40ESC) board is a 4-channel loop-start voice and 14,400 bits/s fax board designed for the SCbus. It provides four telephone line network-interface circuits for direct connection to analog loop-start lines.

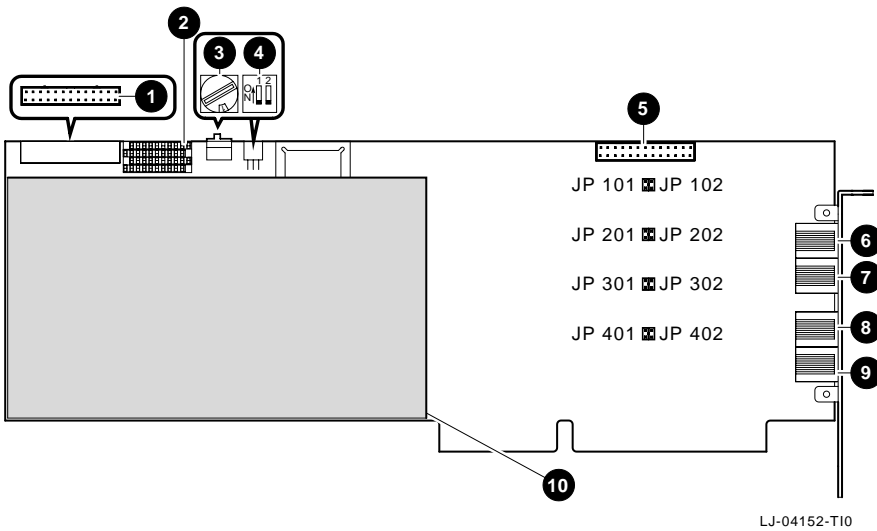
Jumpers JP101 through JP402 are factory set and country specific. *Do not alter these settings.*

Refer to your AlphaServer system documentation and Figure 3-24 while you configure and install the board according to the following procedure:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to Dialogic's *Quick Install for the D/41E and D/41ESC Boards (and VFX Boards)* Quick Installation Card while you perform the following configuration steps:
 - a. Set the board identification number using rotary switch SW1 and switch block SW2 switch 2.
 - b. Set the default line state using switch block SW2 switch 1.
4. Refer to your AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
5. Connect the SCbus cable to the other boards in your configuration. If this board is being added to an existing configuration, you may have to replace the SCbus cable connecting the other boards with a SCbus cable with the proper number of connectors.
6. Connect the appropriate telephone line to each of the RJ-11 female jacks on the board.
7. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Installation

Figure 3-24: 2T-VCFS (VFX/40ESC) Board



- | | |
|-----------------------|----------------------------|
| 1. SCbus connector P5 | 6. Channel 1 input jack J1 |
| 2. Not used | 7. Channel 2 input jack J2 |
| 3. Rotary switch SW1 | 8. Channel 3 input jack J3 |
| 4. Switch block SW2 | 9. Channel 4 input jack J4 |
| 5. AEB connector B3 | 10. FAX/40E daughterboard |

2T-VC30E (D/300SC-E1) Option Board

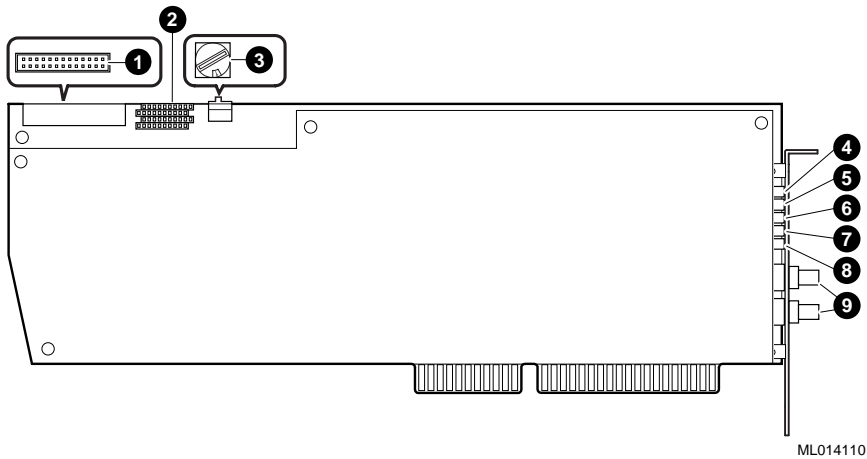
The 2T-VC30E (D/300SC-E1) board is a 30-channel voice-processing and E1 network-interface board.

Refer to Dialogic's *Quick Install for the D/240SC-T1, D/300SC-E1, DTI/241SC, & DTI/301SC Boards* Quick Installation Card, your AlphaServer system documentation, and Figure 3-25 or Figure 3-26, while you configure and install the board according to the following procedure:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Set the board identification number with rotary switch.
4. Attach a SCbus cable with the proper number of connectors to the SCbus connector if needed.
5. Refer to your AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
6. Connect the SCbus cable to the other boards in your configuration. If this board is being added to an existing configuration, you may have to replace the SCbus cable connecting the other boards with a SCbus cable with the proper number of connectors.
7. Connect the appropriate telephone lines to the available connectors on the board. These are either BNC connectors (75 Ohm variant of the board) or a single RJ-48C connector (120 Ohm variant).
8. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Installation

Figure 3-25: 2T-VC30E (D/300SC-E1 Rev. 1) Board

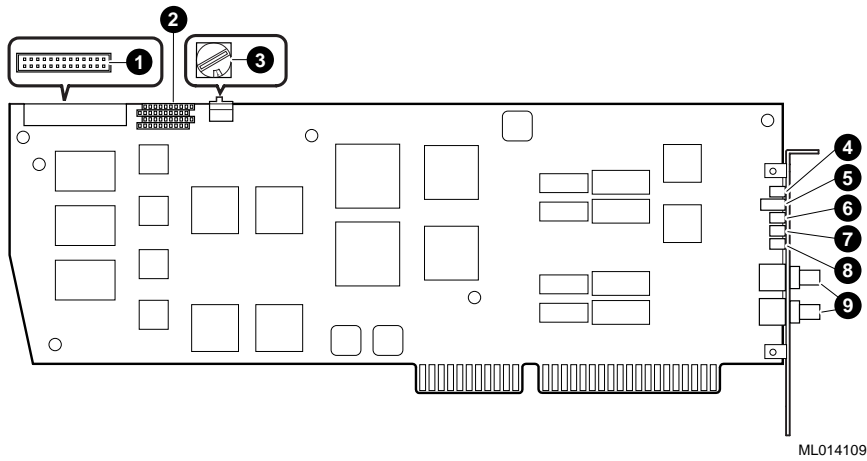


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- | | |
|--------------------------|--------------------------------|
| 1. PEB/SCbus connector | 6. Signal present LED (green) |
| 2. PEB terminator socket | 7. Remote loopback test switch |
| 3. Rotary switch | 8. Remote loopback LED (red) |
| 4. Alarm LED (red) | 9. BNC connectors ⁸ |
| 5. Alarm LED (yellow) | |

⁸ 75 Ohm variant of this board is illustrated. The 120 Ohm version has a single RJ-48C style connector.

Figure 3-26: 2T-VC30E (D/300SC-E1 Rev. 2) Board



- | | |
|--------------------------------|--------------------------------|
| 1. PEB/SCbus connector | 6. Signal Present LED (green) |
| 2. PEB terminator socket | 7. Alarm LED (yellow) |
| 3. Rotary switch | 8. Alarm LED (red) |
| 4. Remote loopback LED (red) | 9. BNC connectors ⁹ |
| 5. Remote loopback test Switch | |

⁹ 75 Ohm variant of this board is illustrated. The 120 Ohm version has a single RJ-48C style connector.

Installation

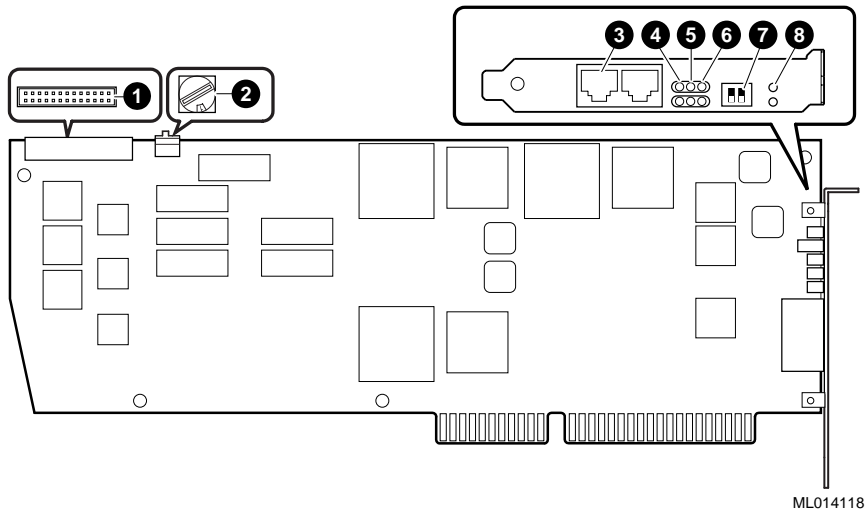
2T-VC242-US (D/240SC-2T1) Option Board

The 2T-VC242-US (D/240SC-2T1) is a 24-channel voice processing board with dual T1 network interfaces.

Refer to Dialogic's *Voice Hardware Reference* manual, the system documentation, Figure 3-27, and the following procedure to configure and install the 2T-VC242-US (D/240SC-2T1) board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to the appropriate section in the Board Installation chapter of Dialogic's *Voice Hardware Reference* manual and Dialogic's *Quick Install for the D/240SC-2T1, D/480SC-2T1 & DTI/480SC Boards* Quick Installation Card while you perform the following configuration steps:
 - a. Set the board identification number with the rotary switch.
 - b. Set the remote loopback test switch to the OFF position.
 - c. Attach an SCbus cable with the proper number of connectors to the SCbus connector.
4. Refer to your AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
5. Connect the SCbus cable to the other boards in your configuration. If this board is being added to an existing configuration, you may have to replace the SCbus cable connecting the other boards with an SCbus cable with the proper number of connectors.
6. Connect the appropriate telephone line(s) to the RJ-48C connector(s) on the board.
7. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-27: 2T-VC242-US (D/240SC-2T1) Option Board



- | | |
|--------------------------|--|
| 1. SCbus connector | 6. Signal Present LED (green) |
| 2. Rotary switch | 7. Remote Loopback Test Switch |
| 3. RJ-48C Connector Jack | 8. Remote Loopback LED (red) ¹⁰ |
| 4. Alarm LED (red) | |
| 5. Alarm LED (yellow) | |

¹⁰ Callouts 3-8 indicate the connector, LEDs, and switch for the second T1 span. The complementary connector, LEDs, and switch are for the first T1 span.

Installation

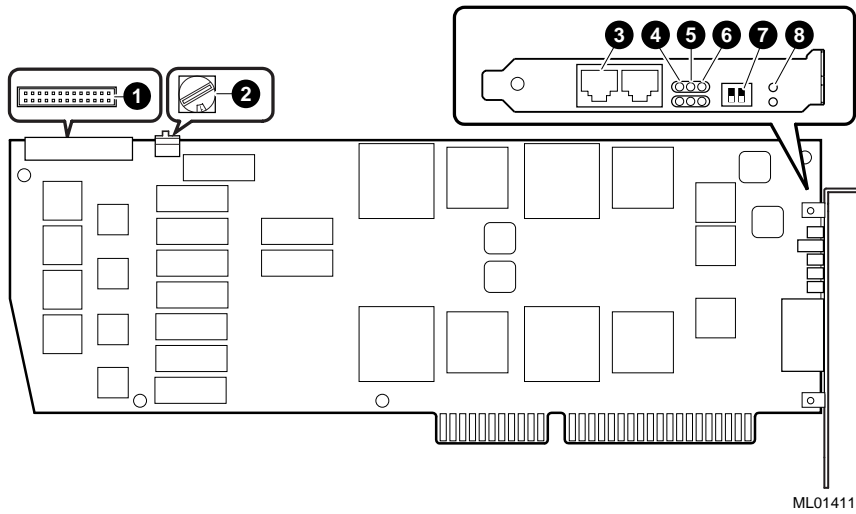
2T-VC480-US (D/480SC-2T1) Option Board

The 2T-VC480-US (D/480SC-2T1) is a 48-channel voice processing board with dual T1 network interfaces.

Refer to Dialogic's *Voice Hardware Reference* manual, the system documentation, Figure 3-28, and the following procedure to configure and install the 2T-VC480-US (D/480SC-2T1) board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to the appropriate section in the Board Installation chapter of Dialogic's *Voice Hardware Reference* manual and Dialogic's *Quick Install for the D/240SC-2T1, D/480SC-2T1 & DTI/480SC Boards* Quick Installation Card while you perform the following configuration steps:
 - a.) Set the board identification number with the rotary switch.
 - b.) Set the remote loopback test switch to the OFF position.
 - c.) Attach an SCbus cable with the proper number of connectors to the SCbus connector.
4. Refer to your AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
5. Connect the SCbus cable to the other boards in your configuration. If this board is being added to an existing configuration, you may have to replace the SCbus cable connecting the other boards with an SCbus cable with the proper number of connectors.
6. Connect the appropriate telephone line(s) to the RJ-48C connector(s) on the board.
7. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-28: 2T-VC480-US (D/480SC-2T1) Option Board



- | | |
|--------------------------|--|
| 1. SCbus connector | 6. Signal Present LED (green) |
| 2. Rotary Switch | 7. Remote Loopback Test Switch |
| 3. RJ-48C Connector Jack | 8. Remote Loopback LED (red) ¹¹ |
| 4. Alarm LED (red) | |
| 5. Alarm LED (yellow) | |

¹¹ Callouts 3-8 indicate the connector, LEDs, and switch for the second T1 span. The complementary connector, LEDs, and switch are for the first T1 span.

Installation

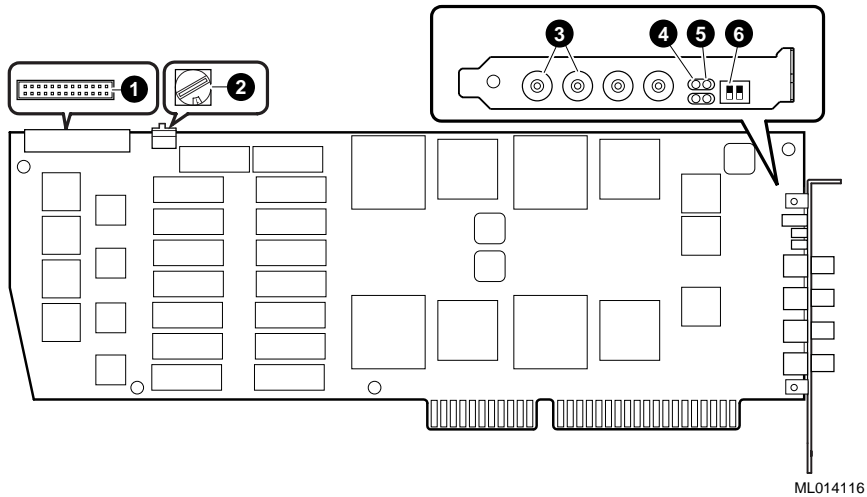
2T-VC302 (D/300SC-2E1) Option Board

The 2T-VC302 (D/300SC-2E1) is a 30-channel voice processing board with dual E1 network interfaces.

Refer to Dialogic's *DualSpan E-1 Series* Quick Install Card, your AlphaServer system documentation and Figure 3-29 while you configure and install the 2T-VC302 (D/300SC-2E1) according to the following procedure:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Set the board identification number with the rotary switch.
4. Set the remote loopback test switch to the OFF position.
5. Attach an SCbus cable with the proper number of connectors to the SCbus connector.
6. Refer to your AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
7. Connect the SCbus cable to the other boards in your configuration. If this board is being added to an existing configuration, you may have to replace the SCbus cable connecting the other boards with an SCbus cable with the proper number of connectors.
8. Connect the appropriate telephone line(s) to the available connector(s) on the board. These are either BNC connectors (75 Ohm variant of the board) or RJ-48C connectors (120 Ohm variant).
9. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-29: 2T-VC302 (D/300SC-2E1) Option Board



- | | |
|---------------------------------|--|
| 1. SCbus connector | 5. Signal Present LED (green) |
| 2. Rotary switch | 6. Remote Loopback Test switch ¹³ |
| 3. BNC connectors ¹² | |
| 4. Alarm LED (red) | |

¹² 75 Ohm variant of this board is shown. 120 Ohm version has dual RJ-48C style connectors.

¹³ Callouts 3-6 indicate the connectors, LEDs, and switch for the second E1 span. The complementary connectors, LEDs, and switch are for the first E1 span.

Installation

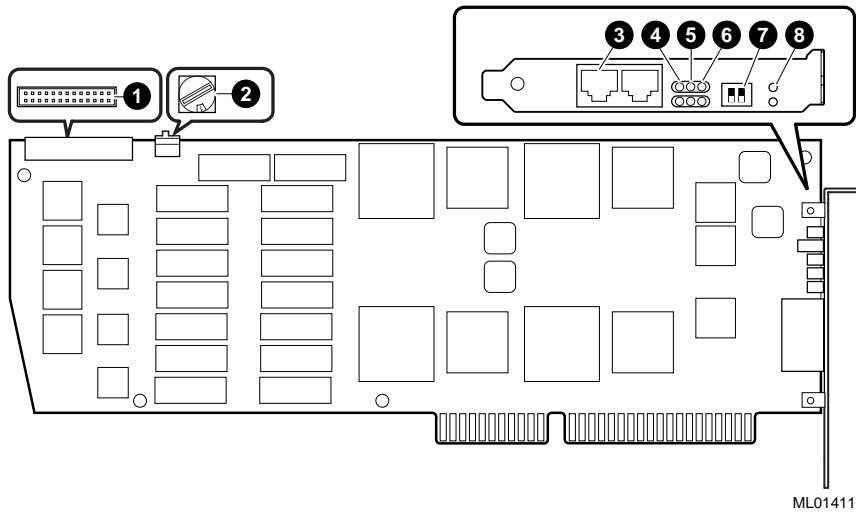
2T-VC600 (D/600SC-2E1) Option Board

The 2T-VC600 (D/600SC-2E1) is a 60-channel voice processing board with dual E1 network interfaces.

Refer to Dialogic's *Dual Span E-1 Series* Quick Install Card, your AlphaServer system documentation and Figure 3-30 while you configure and install the 2T-VC600 (D/600SC-2E1) according to the following procedure:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Set the board identification number with the rotary switch.
4. Set the remote loopback test switch to the OFF position.
5. Attach an SCbus cable with the proper number of connectors to the SCbus connector.
6. Refer to your AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
7. Connect the SCbus cable to the other boards in your configuration. If this board is being added to an existing configuration, you may have to replace the SCbus cable connecting the other boards with an SCbus cable with the proper number of connectors.
8. Connect the appropriate telephone line(s) to the available connector(s) on the board. These are either BNC connectors (75 Ohm variant of the board) or RJ-48C connectors (120 Ohm variant).
9. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-30: 2T-VC600 (D/600SC-2E1)



- | | |
|--------------------------|--|
| 1. SCbus connector | 6. Signal present LED (green) |
| 2. Rotary switch | 7. Remote loopback test switch |
| 3. RJ-48C connector jack | 8. Remote loopback LED (red) ¹⁴ |
| 4. Alarm LED (red) | |
| 5. Alarm LED (yellow) | |

¹⁴ Callouts 3-8 indicate the connector, LEDs, and switch for the second T1 span. The complementary connector, LEDs, and switch are for the first T1 span.

Installation

2T-VCI40-US (DTI/240SC) and 2T-VCI41-US (DTI/241SC) Option Boards

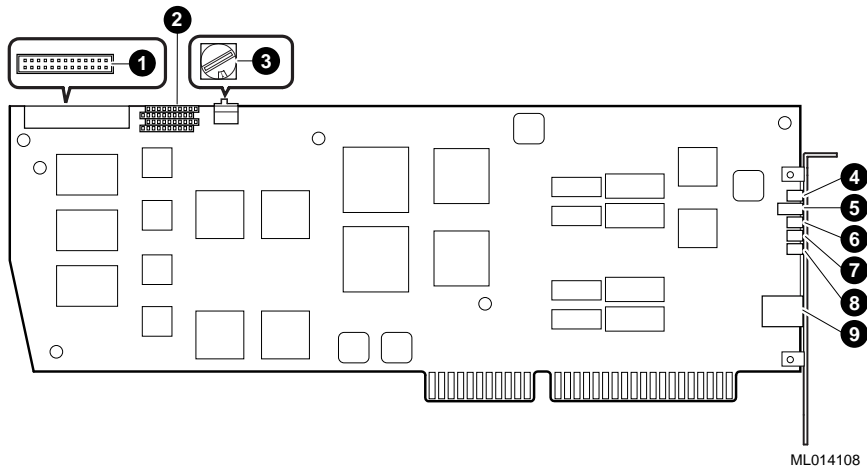
The 2T-VCI40-US (DTI/240SC) and 2T-VCI41-US (DTI/241SC) boards are 24-channel T1 network interface boards. The 2T-VCI41-US (DTI/241SC) board supports tone signaling and outbound call progress detection.

Refer to Dialogic's *Dialog/HD* Quick Install Card, your system documentation, Figure 3-31 and the following procedure to configure and install the 2T-VCI40-US (DTI/240SC) and 2T-VCI41-US (DTI/241SC) boards:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Set the board identification number with the rotary switch.
4. Set the remote loopback test switch to the OFF position.
5. Attach an SCbus cable with the proper number of connectors to the SCbus connector.
6. Refer to your AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
7. Connect the SCbus cable to the other boards in your configuration. If this board is being added to an existing configuration, you may have to replace the SCbus cable connecting the other boards with an SCbus cable with the proper number of connectors.
8. Connect the appropriate telephone line to the RJ-48C connector on the board.
9. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Installation

Figure 3-31: 2T-VCI40-US (DTI/240SC) & 2T-VCI41-US (DTI/241SC)



- | | |
|--------------------------------|-------------------------------|
| 1. PEB/SCbus connector | 6. Signal present LED (green) |
| 2. PEB terminator socket | 7. Alarm LED (yellow) |
| 3. Rotary switch | 8. Alarm LED (red) |
| 4. Remote loopback LED (red) | 9. RJ-48C connector jack |
| 5. Remote loopback test switch | |

Installation

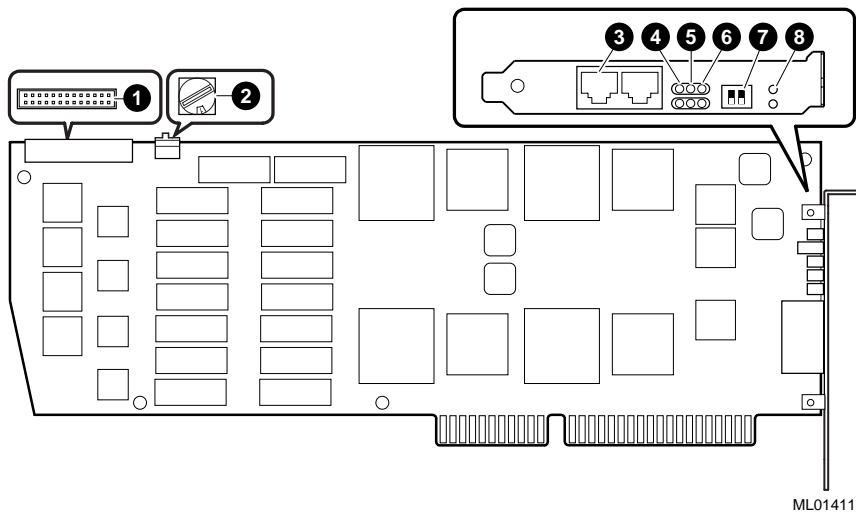
2T-VCI80-US (DTI/480SC) Option Board

The 2T-VCI80-US (DTI/480SC) board is a 48-channel T1 network interface board with dual T1 interfaces.

Refer to Dialogic's *Quick Install for the D/240SC-2T1, D/480SC-2T1, & DTI/480SC* Quick Installation Card, your system documentation, Figure 3-32, and the following procedure to configure and install the 2T-VCI80-US (DTI/480SC) board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Set the board identification number with the rotary switch.
4. Set the remote loopback test switch to the OFF position.
5. Attach a SCbus cable with the proper number of connectors to the SCbus connector.
6. Refer to your AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
7. Connect the SCbus cable to the other boards in your configuration. If this board is being added to an existing configuration, you may have to replace the SCbus cable connecting the other boards with an SCbus cable with the proper number of connectors.
8. Connect the appropriate telephone line(s) to the RJ-48C connector(s) on the board.
9. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-32: 2T-VC180-US (DTI/480SC) Option Board



- | | |
|--------------------------|--|
| 1. SCbus connector | 6. Signal present LED (green) |
| 2. Rotary switch | 7. Remote loopback test switch |
| 3. RJ-48C connector jack | 8. Remote loopback LED (red) ¹⁵ |
| 4. Alarm LED (red) | |
| 5. Alarm LED (yellow) | |

¹⁵ Callouts 3-8 indicate the connector, LEDs, and switch for the second T1 span. The complementary connector, LEDs, and switch are for the first T1 span.

Installation

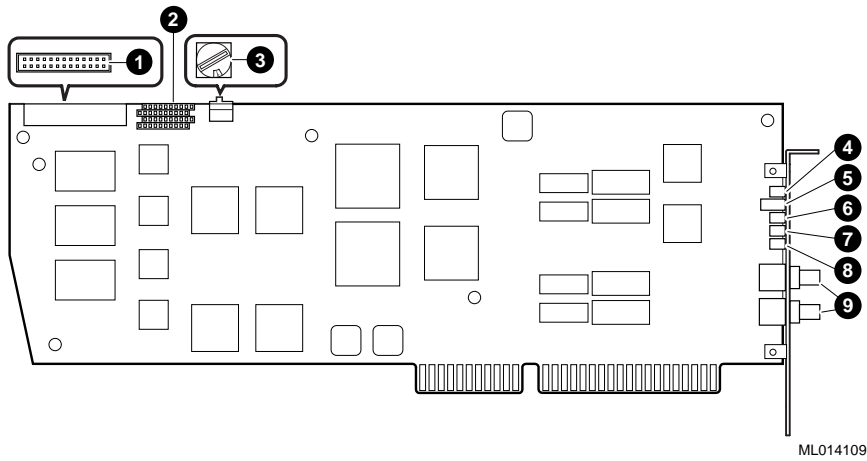
2T-VCI30 (DTI/300SC) and 2T-VCI31 (DTI/301SC) Boards

The 2T-VCI30 (DTI/300SC) and 2T-VCI31 (DTI/301SC) boards are 30-channel E1 network interface boards. The 2T-VCI31 (DTI/301SC) board supports tone signaling and outbound call progress detection.

Refer to Dialogic's *Dialog/HD* Quick Install Card, your system documentation, Figure 3-33, and the following procedure to configure and install the 2T-VCI30 (DTI/300SC) and 2T-VCI31 (DTI/301SC) boards:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Set the board identification number with the rotary switch.
4. Set the remote loopback test switch to the OFF position.
5. Attach an SCbus cable with the proper number of connectors to the SCbus connector.
6. Refer to your AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
7. Connect the SCbus cable to the other boards in your configuration. If this board is being added to an existing configuration, you may have to replace the SCbus cable connecting the other boards with an SCbus cable with the proper number of connectors.
8. Connect the appropriate telephone line(s) to the available connector(s) on the board. These are either BNC connectors (75 Ohm variant of the board) or a single RJ-48C connector (120 Ohm variant).
9. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-33: 2T-VCI30 (DTI/300SC) & 2T-VCI31 (DTI/301SC) Boards



ML014109

- | | |
|--------------------------------|---------------------------------|
| 1. PEB/SCbus connector | 6. Signal Present LED (green) |
| 2. PEB terminator socket | 7. Alarm LED (yellow) |
| 3. Rotary switch | 8. Alarm LED (red) |
| 4. Remote loopback LED (red) | 9. BNC connectors ¹⁶ |
| 5. Remote loopback test Switch | |

¹⁶ 75 Ohm variant of this board is illustrated. The 120 Ohm version has a single RJ-48C style connector.

Installation

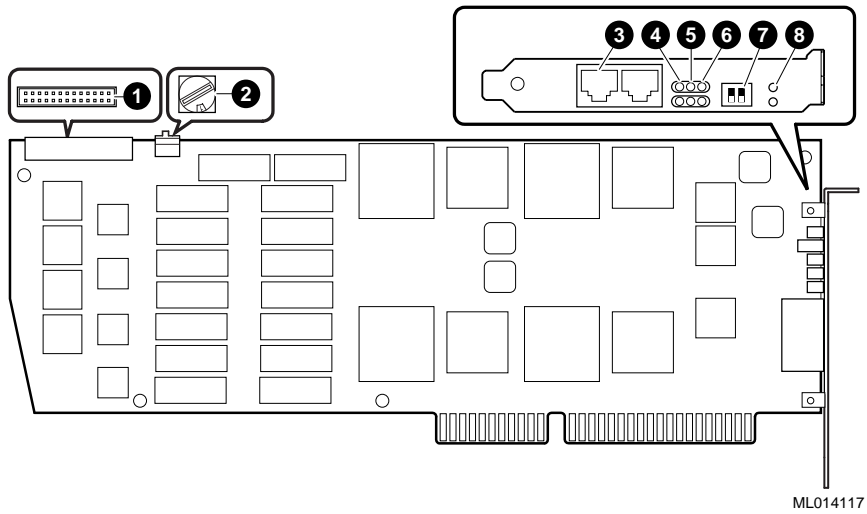
2T-VCI60 (DTI/600SC) Option Board

The 2T-VCI60 (DTI/600SC) board is a 60-channel E1 network interface board with dual E-1 network interfaces.

Refer to Dialogic's *DualSpan E-1 Series Quick Install Card*, your system documentation, Figure 3-34, and the following procedure to configure and install the 2T-VCI60 (DTI/600SC) board:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Set the board identification number with the rotary switch.
4. Set the remote loopback test switch to the OFF position.
5. Attach an SCbus cable with the proper number of connectors to the SCbus connector.
6. Refer to your AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
7. Connect the SCbus cable to the other boards in your configuration. If this board is being added to an existing configuration, you may have to replace the SCbus cable connecting the other boards with an SCbus cable with the proper number of connectors.
8. Connect the appropriate telephone line(s) to the available connector(s) on the board. These are either BNC connectors (75 Ohm variant of the board) or RJ-48C connectors (120 Ohm variant).
9. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-34: 2T-VCI60 (DTI/600SC) Option Board



ML014117

- | | |
|--|--|
| 1. SCbus connector | 6. Signal present LED (green) |
| 2. Rotary switch | 7. Remote loopback test switch |
| 3. RJ-48C connector jack ¹⁷ | 8. Remote loopback LED (red) ¹⁸ |
| 4. Alarm LED (red) | |
| 5. Alarm LED (yellow) | |

¹⁷ 120 Ohm variant of this board is shown. The 75 Ohm version has four BNC style connectors.

¹⁸ Callouts 3-8 indicate the connector, LEDs, and switch for the first E1 span. The complementary connector, LEDs, and switch are for the first E1 span.

Installation

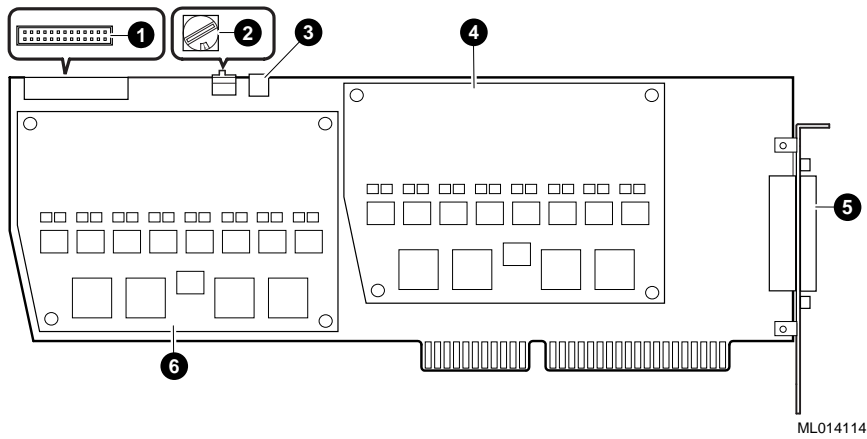
2T-VCM80-AA (MSI/80SC), 2T-VCM16-AA (MSI/160SC) and 2T-VCM24-AA (MSI/240SC) Option Boards

The 2T-VCM80-AA (MSI/80SC), 2T-VCM16-AA (MSI/160SC) and 2T-VCM24-AA (MSI/240SC) boards are modular station interface boards allowing connection of up to 24 analog telephone devices to computer telephony systems.

Refer to Dialogic's *Quick Install for the MSI/xxxSC* Quick Installation Card, your system documentation, Figure 3-35, and the following procedure to configure and install the 2T-VCMxx (MSI/xxxSC) boards:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Set the board identification number with the rotary switch SW1.
4. Set the board identification number switchpack SW2 to OFF to select the low board ID numbers 00 - 0F, and ON to select the high board ID numbers 10-1F.
5. Attach an SCbus cable with the proper number of connectors to the SCbus connector.
6. Refer to your AlphaServer system documentation for the EISA board installation procedure and install the board in an available EISA slot.
7. Connect the SCbus cable to the other boards in your configuration. If this board is being added to an existing configuration, you may have to replace the SCbus cable connecting the other boards with an SCbus cable with the proper number of connectors.
8. Connect the RJ-21X station interface connector on the board to an RJ-21X telephone service or to the optional 2T-VCSA2-TE (SA/240) 24-port telephone station adapter.
9. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-35: 2T-VCM80-AA (MSI/80SC), 2T-VCM16-AA (MSI/160SC), & 2T-VCM24-AA (MSI/240SC) Boards



1. SCbus connector
2. Rotary switch SW1
3. Switch Block SW2
4. MSI daughterboard (not present on MSI/80SC)
5. RJ-21X Station Interface Connector
6. MSI daughterboard (not present on MSI/80SC)

Installation

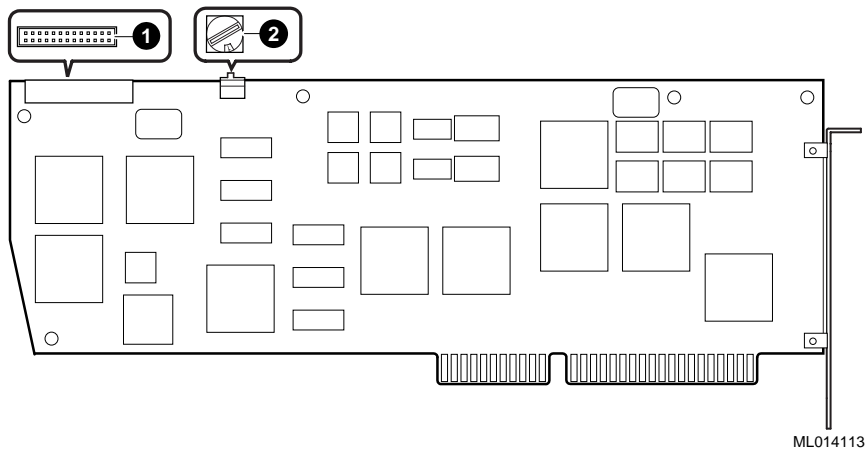
2T-VCD32-AA (DCB/320SC), 2T-VCD64-AA (DCB/640SC), and 2T-VCD96-AA (DCB/960SC) Boards

The 2T-VCD32-AA (DCB/320SC), 2T-VCD64-AA (DCB/640SC), and 2T-VCD96-AA (DCB/960SC) are audio conferencing boards that support up to 96 conferencing resources.

Refer to the *Dialogic Audio Conferencing Quick Install Card*, the system documentation, Figure 3-36, and the following procedure to configure and install the 2T-VCDxx-AA (DCB/xxxSC) boards:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Set the board identification number with the rotary switch.
4. Attach an SCbus cable with the proper number of connectors to the SCbus connector.
5. Refer to your AlphaServer system documentation for the EISA board Installation procedure and install the board in an available EISA slot.
6. Connect the SCbus cable to the other boards in your configuration. If this board is being added to an existing configuration, you may have to replace the SCbus cable connecting the other boards with an SCbus cable with the proper number of connectors.
7. Refer to the EISA Configuration Utility (ECU) chapter in this guide to configure the installed options.

Figure 3-36: 2T-VCD32-AA (DCB/320SC), 2T-VCD64-AA (DCB/640SC), & 2T-VCD96-AA (DCB/960SC) Option Boards



1. SCbus connector

2. Rotary Switch

Installation

Miscellaneous Options

The AlphaServer Voice options in this section can be used with any PEB or SCbus product.

2T-VC220-IB/2T-VC221-IB Expansion Box

The 2T-VC220-IB I-Bus Model 4820-2338 20-slot ISA Expansion Box with a 375 watt power supply and the 2T-VC221-IB I-Bus Model 4820-2819 20-slot ISA Expansion Box with a 430 watt power supply are available for rackmounted AlphaServer systems. If the expansion box is used, all of the 2T-VCXXX-XX option boards used must be installed in the expansion box. A 2T-VC220-IP Access Technologies' Interconnect Kit, consisting of two interface boards and an interconnect cable, is required to connect an ISA slot in the rackmounted AlphaServer system to the expansion box.

The expansion box requires 22.23 cm (8.75 in.) of vertical space in the cabinet for installation. It must be installed directly below the AlphaServer chassis to prevent cabling problems if an optional BA350 storage shelf is also installed in the cabinet.

Perform the following procedure to install the expansion box in the cabinet with the AlphaServer system:

1. Perform an orderly shutdown of the AlphaServer system, power down the cabinet, and unplug the cabinet from the ac power source.
2. Select the first two holes directly below the AlphaServer chassis on the cabinet rail that have a 1.27 cm (0.50 in.) space between them.
3. Make a mark between the holes. This is your starting point.
4. Measure down 22.23 cm (8.75 in.) and make a mark. The area between the marks is the installation area.
5. Measure and mark the installation area on both front and both rear cabinet rails.
6. Remove the outer slide from the left side of the expansion box by sliding it toward the rear of the box. Extend the outer slide to the rear as far as it will go, then push in the slide lock and continue extending the outer slide to the rear until it is completely free from the inner slide race.
7. Align the left outer slide assembly with the sixth and seventh holes up from the bottom of the installation area on the left front and rear cabinet rails. Secure the assembly to the cabinet rails using four 10-32 truss-head screws (two in front, two in rear) and two 10-32 bar nuts (one in front, one in rear).
8. Remove the outer slide from the right side of the expansion box by sliding it toward the rear of the box. Extend the outer slide to the rear as far as it will go, then push in the slide lock and continue extending the outer slide to the rear until it is completely free from the inner slide race.

Installation

9. Align the right outer slide assembly with the sixth and seventh holes up from the bottom of the installation area on the right front and rear cabinet rails. Secure the assembly to the cabinet rails using four 10-32 truss-head screws (two in front, two in rear) and two 10-32 bar nuts (one in front, one in rear).
10. Install a 10-32 clip nut over the third, tenth, and thirteenth hole up from the bottom of the installation area on the right and left front cabinet rails by sliding them over the edge of the rail and aligning them with the holes.
11. Slide both the left and right inner slide races attached to the expansion box toward the rear until they fully extend and lock in place.

WARNING

The expansion box weighs approximately 25 kg (55 lb). Use sufficient personnel or proper lifting equipment to install it. Failure to do so could cause personal injury.

Before you attempt to install the expansion box into a cabinet, ensure that the cabinet is stable and that all provided stabilizing features have been activated.

12. Lift the expansion box and position it so that the extended left and right inner slide races align with the outer slide assemblies that are attached to the cabinet rails.
13. Move the expansion box into the cabinet while ensuring that the inner slide races slide into the outer slide assemblies.
14. Tighten the six screws (three on each side) that secure the expansion box front bezel to the cabinet rails.

Now you are ready to install the 2T-VC220-IP Interconnect Kit.

Installation

2T-VC220-IP Interconnect Kit

The 2T-VC220-IP Access Technologies' Interconnect Kit consists of two interface boards and an interconnect cable, and is used to connect an EISA slot in the rackmounted AlphaServer system to the 2T-VC220-IB or 2T-VC221-IB Expansion Box. There are two versions of the 2T-VC220-IP Interconnect Kit available. One version is the LTRC-AT (older version) and the other version is the PTRC-AT (newer version). Both versions require that a Wait State be implemented on the transmit interface board.

The LTRC-AT Interconnect Kit consists of an LT2-AT transmit interface board, an LR2-AT receive interface board, and a two meter interface cable. The board designation is located along the top edge of the component side of the board. The Wait State jumper (JP1) is located between U2 and U29 along the top edge of the LT2-AT transmit interface board and ships with the jumper on JP1 pins 1 and 2 (noWait State). To install one Wait State, remove the jumper from pins 1 and 2 and install the jumper on pins 2 and 3.

The PTRC-AT Interconnect Kit consists of an LT3-AT transmit interface board, an LR3-AT receive interface board, and a two meter interface cable. The board designation is located in the center near the 100 pin connector (J55) on the component side of the board. The Wait State jumper (a four pin header labeled WAIT SEL) is located on the top left corner of the LT3-AT transmit interface board and ships with the jumper installed on the two left most pins. To install one Wait State, remove the jumper from the two left most pins and install the jumper on the two middle pins of the WAIT SEL header.

Use the following procedure to install the interconnect kit:

WARNING

Before you extend the AlphaServer system or the expansion box on their slides, ensure that the cabinet is stable and that all provided stabilizing features have been activated.

1. Perform an orderly shutdown of the AlphaServer system, power down the cabinet, and unplug the cabinet from the AC power source.
2. Fully extend the AlphaServer system on its slides.
3. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the transmit interface board.
4. Refer to your AlphaServer system documentation for the EISA board installation procedure, and install the transmit interface board in an available EISA slot in the AlphaServer system.

Installation

5. Fully extend the expansion box on its slides.
6. Remove the expansion box top cover by removing the four screws along the top front edge of the expansion box and lifting the cover.
7. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the receive interface board.
8. Install the receive interface board in slot 1 of the expansion box.
9. Connect the interconnect cable between the transmit interface board in the rackmounted AlphaServer system EISA slot and the receive interface board in the expansion box.

Now you can install the telephony option boards in the remaining expansion box slots.

4

Troubleshooting

Where to look

System problems

Refer to the system documentation for troubleshooting problems related to the DIGITAL AlphaServer system.

Voice and Network Interface boards

Refer to Dialogic's *Voice Hardware Reference* manual for troubleshooting problems related to the following voice and network-interface boards:

2T-VC41E (D/41E)

2T-VC600 (D/600SC-2EI)

2T-VC121 (D/121B)

2T-VC302 (D/300SC-2EI)

2T-VC240 (D/240SC)

2T-VC242 (D/240SC-2TI)

2T-VC24T (D/240SC-T1)

2T-VC480 (D/480SC-2TI)

2T-VC320 (D/320SC)

Troubleshooting

Refer to Dialogic's *Network Hardware Reference* manual for troubleshooting problems related to the following voice and network-interface boards:

2T-VCLSI (LSI/120)	2T-VCI30 (DTI/300SC)
2T-VC211 (DTI/211)	2T-VCI31 (DTI/301SC)
2T-VC212 (DTI/212)	2T-VCI80 (DTI/480SC)
2T-VCDMX (DMX)	2T-VCI60 (DTI/600SC)
2T-VCMSI (MSI/C)	2T-VCM80 (MSI/80SC)
2T-VCM40 (MSI/40)	2T-VCM16 (MSI/160SC)
2T-VCI40 (DTI/240SC)	2T-VCM24 (MSI/240SC)
2T-VCI41 (DTI/241SC)	

Voice-recognition boards

Refer to Dialogic's *VR/160 Hardware Reference* manual for troubleshooting problems related to the following voice-recognition boards:

- 2T-VCVRP (VRP)
- 2T-VCVR4 (VRM/40)
- 2T-VCVR2 (VRM/2C)

Refer to Dialogic's *FAX/120 Hardware Reference* manual for troubleshooting problems related to the 2T-VCFAX (FAX/120) board.

Refer to GammaLink's *GammaFax CP-6/SC & CP-12/SC Hardware Installation Guide* for troubleshooting problems related to the 2T-VCC06 (CP-6/SC) and the 2T-VCC12 (CP-12/SC) boards.

Part II

DM3 Options

5

Introduction

Overview

An AlphaServer DM3 Voice Platform consists of a rackmount AlphaServer system with the DIGITAL UNIX operating system along with Dialogic DM3 option boards and drivers. DM3 board options are installed in available PCI slots within the AlphaServer 1000A 5/500 system. Drivers are installed during software installation after the operating system has been installed. Refer to the *DIGITAL DM3 Telephony Drivers for Compaq's DIGITAL UNIX Software Installation Guide* for information on installing the drivers.

AlphaServer DM3 Voice Platform Models

Table 5-1 lists the model numbers for the available DM3 AlphaServer systems.

Table 5-1: Available AlphaServer DM3 Voice Platform Models

Platform	Operating System	Model Number
120 Vac AlphaServer 1000A 5/500 rackmount package system 128MB 4.3GB	DIGITAL UNIX	CT-VC79P-GA
240 Vac AlphaServer 1000A 5/500 rackmount package system 128MB 4.3GB	DIGITAL UNIX	CT-VC79P-GB
120 Vac AlphaServer 1000A 5/500 rackmount package system 256MB 4.3GB	DIGITAL UNIX	CT-VC79P-GC
240 Vac AlphaServer 1000A 5/500 rackmount package system 256MB 4.3GB	DIGITAL UNIX	CT-VC79P-GD

AlphaServer DM3 Voice Board and Cabling Options

Dialogic DM3 board options available for the AlphaServer DM3 Voice Platform are listed in Table 5-2. Table 5-3 lists miscellaneous DM3 options and cabling.

Table 5-2: DM3 Board Options

Dialogic Board Description	Bus Type	DIGITAL Model Number
DM3 QuadSpan Voice Options		
<i>DM/V960-T1-PCI</i> , a 96-port voice and 96-port network board with T1 network interface.	CT Bus	2T-VCQQT-US
<i>DM/V1200-E1-PCI</i> , a 120-port voice and 120-port network board with E1 network interface.	CT Bus	2T-VCQQE-EU
<i>DM/V480-4T1-PCI</i> , a 48-port voice and 96-port network board with T1 network interface.	CT Bus	2T-VCQDT-US
<i>DM/V600-4E1-PCI</i> , a 60-port voice and 120-port network board with E1 network interface.	CT Bus	2T-VCQDE-EU
DM3 Fax Options		
<i>DM/F240-PCI</i> , a 24-port fax processing board without network interface.	CT Bus	2T-VCDXN-24
<i>DM/F240-T1-PCI</i> , a 24-port fax processing board with T1 network interface.	CT Bus	2T-VCDXT-US
<i>DM/F300-PCI</i> , a 30-port fax processing board without network interface.	CT Bus	2T-VCDXN-30
<i>DM/F300-E1-PCI</i> , a 30-port fax processing board with E1 network interface.	CT Bus	2T-VCDXE-EU
DM3 IPLink Options		
<i>DM/IP0821A-T1</i> , an 8-port voice over internet protocol board with T1 network interface.	CT Bus	2T-VCRDT-US
<i>DM/IP0821A-E1-120</i> , an 8-port voice over internet protocol board with E1 network interface.	CT Bus	2T-VCRDE-EU
<i>DM/IP2431A-T1</i> , a 24-port voice over internet protocol board with T1 network interface.	CT Bus	2T-VCRGT-US
<i>DM/IP3031A-E1-120</i> , a 30-port voice over internet protocol board with E1 network interface.	CT Bus	2T-VCRHE-EU

Table 5-3: Miscellaneous DM3 Options and Cables

DIGITAL Model Number	Description
2T-VCCTC-AA	CT Bus/SCbus Adapter
2T-VCCTC-04	4-Connector flat ribbon CT cable
2T-VCCTC-08	8-Connector flat ribbon CT cable
2T-VCCTC-12	12-Connector flat ribbon CT cable
2T-VCCTC-16	16-Connector flat ribbon CT cable
2T-VCFAN-AA	Fan Assembly

6

Installation

This chapter provides information about installing the AlphaServer DM3 QuadSpan Voice board options, DM3 Fax board options, DM3 IPLink Voice over Internet Protocol board options, the CT Bus/SCbus adapter, and the 2T-VCFAN-AA fan assembly.

DM3 Options

The AlphaServer DM3 options described in the following sections are for use with SCbus and CT Bus products.

Caution

When installing DM3 board options in the AlphaServer 1000A 5/500, an auxiliary 2T-VCFAN-AA fan assembly is required. See the 2T-VCFAN-AA Fan Assembly section in this chapter.

DM3 QuadSpan Voice Option Boards

To install the DM3 QuadSpan voice option boards listed in Table 5-2, refer to your AlphaServer system documentation and Figure 6-1 while you configure and install the board according to the following procedure:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to your AlphaServer system documentation for the PCI board installation procedure and install the board in an available PCI slot.

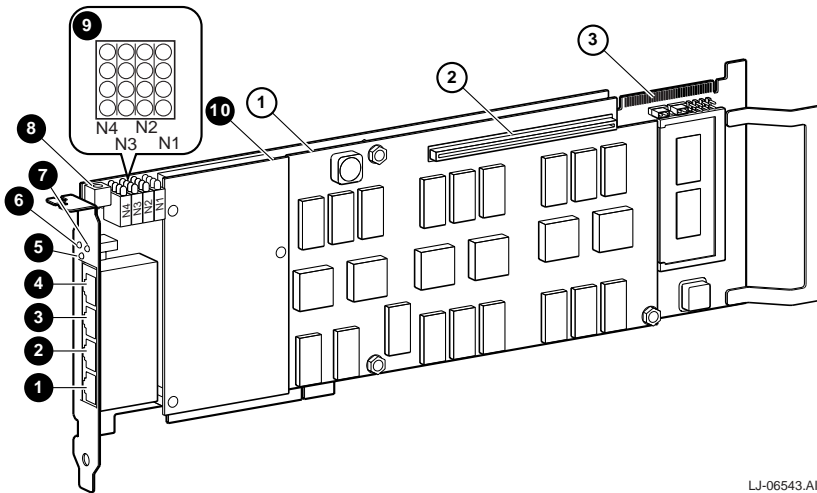
Installation

4. Refer to Dialogic's *DM3QuadSpan Series Quick Install Card for PCI* while you perform the following configuration steps:
 - a. Attach a CT Bus cable with the proper number of connectors to the board's CT Bus connector if it is being connected to other DM3 boards.
5. Connect the CT Bus cable to the other DM3 boards in your configuration. If this board is being added to an existing DM3 configuration, you may have to replace the CT Bus cable connecting the other DM3 boards with a CT Bus cable with the proper number of connectors.

If the DM3 QuadSpan voice option board is being connected to SCbus options, refer to the CT Bus/SCbus Adapter section of this chapter to install and connect the CT Bus/SCbus adapter.

6. Connect the appropriate telephone lines to the RJ-48C jacks on the board.

Figure 6-1 DM3 QuadSpan Voice Option Boards



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- | | |
|-------------------------------|---------------------------------|
| ① NI4 RJ-48C jack | ⑧ Rotary switch (not used) |
| ② NI3 RJ-48C jack | ⑨ Alarm LEDs |
| ③ NI2 RJ-48C jack | ⑩ DTI daughterboard |
| ④ NI1 RJ-48C jack | ① SP daughterboard |
| ⑤ GENERAL NI ALARM status LED | ② SP daughterboard connector J5 |
| ⑥ POWER status LED | ③ CT Bus connector |
| ⑦ RESET status LED | |

DM3 Fax Option Boards

Table 5-2 lists the DM3 fax option boards that are available for use with SCbus and CT Bus products. There are two types of DM3 fax option boards.

One is a multi-port fax processing board without a network interface. This type must be connected to a network interface option.

The other is a multi-port fax processing board with a T1/E1 network interface.

The following sections provide the procedure for installing both types of DM3 fax option boards.

Fax Option Boards Without Network Interface

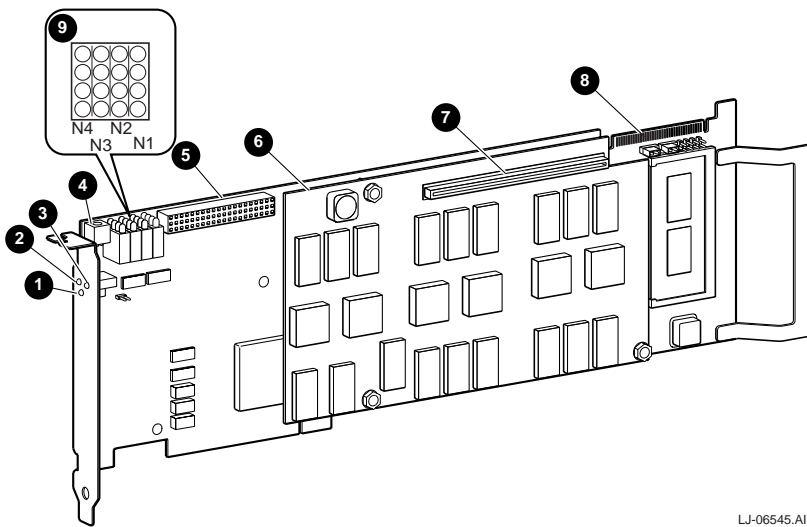
To install the DM3 fax option boards without network interface that are listed in Table 5-2, refer to your AlphaServer system documentation and Figure 6-2 while you configure and install the board according to the following procedure:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to your AlphaServer system documentation for the PCI board installation procedure and install the board in an available PCI slot.
4. Refer to Dialogic's *DM3 Fax Series Quick Install Card* while you perform the following configuration steps:
 - a. Attach a CT Bus cable with the proper number of connectors to the board's CT Bus connector if it is being connected to other DM3 network interface option boards.
5. Connect the CT Bus cable to the other DM3 boards in your configuration. If this board is being added to an existing DM3 configuration, you may have to replace the CT Bus cable connecting the other DM3 boards with a CT Bus cable with the proper number of connectors.

If the DM3 fax option board is being connected to SCbus options, refer to the CT Bus/SCbus Adapter section of this chapter to install and connect the CT Bus/SCbus adapter.

Installation

Figure 6-2 DM3 Fax Option Boards Without Network Interface



LJ-06545.A17

- | | |
|-------------------------------|---------------------------------|
| ❶ GENERAL NI ALARM status LED | ❸ SP daughterboard |
| ❷ POWER status LED | ❹ SP daughterboard connector J5 |
| ❸ RESET status LED | ❺ CT Bus connector |
| ❹ Rotary switch (not used) | ❻ Alarm LEDs (not used) |
| ❺ DTI daughterboard connector | |

Fax Option Boards With Network Interface

To install the DM3 fax option boards with T1/E1 network interface that are listed in Table 5-2, refer to your AlphaServer system documentation and Figure 6-3 while you configure and install the board according to the following procedure:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to your AlphaServer system documentation for the PCI board installation procedure and install the board in an available PCI slot.

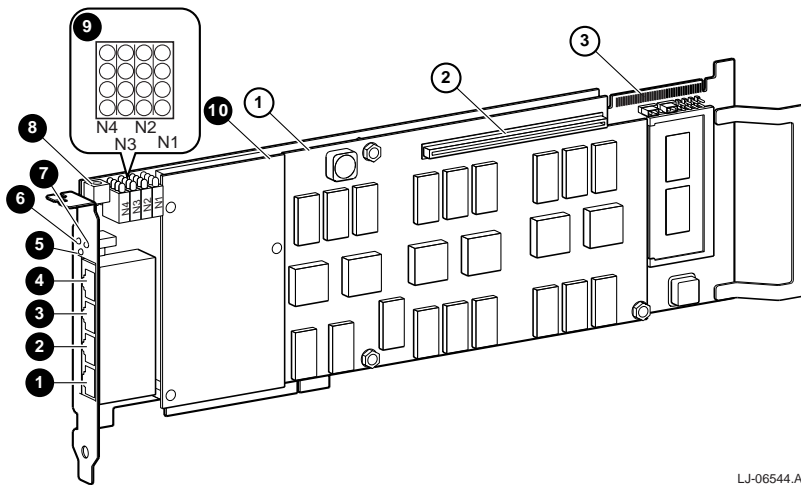
Installation

4. Refer to Dialogic's *DM3 Fax Series Quick Install Card* while you perform the following configuration steps:
 - a. Attach a CT Bus cable with the proper number of connectors to the board's CT Bus connector if it is being connected to other DM3 option boards.
5. Connect the CT Bus cable to the other DM3 boards in your configuration. If this board is being added to an existing DM3 configuration, you may have to replace the CT Bus cable connecting the other DM3 boards with a CT Bus cable with the proper number of connectors.

If the DM3 fax option board is being connected to SCbus options, refer to the CT Bus/SCbus Adapter section of this chapter to install and connect the CT Bus/SCbus adapter.

6. Connect the appropriate telephone lines to the RJ-48C jacks on the board.

Figure 6-3 DM3 Fax Option Boards With Network Interface



LJ-06544.A17

- | | |
|-------------------------------|---------------------------------|
| ① NI4 RJ-48C jack | ⑧ Rotary switch (not used) |
| ② NI3 RJ-48C jack | ⑨ Alarm LEDs |
| ③ NI2 RJ-48C jack | ⑩ DTI daughterboard |
| ④ NI1 RJ-48C jack | ① SP daughterboard |
| ⑤ GENERAL NI ALARM status LED | ② SP daughterboard connector J5 |
| ⑥ POWER status LED | ③ CT Bus connector |
| ⑦ RESET status LED | |

Installation

DM3 IPLink Option Boards

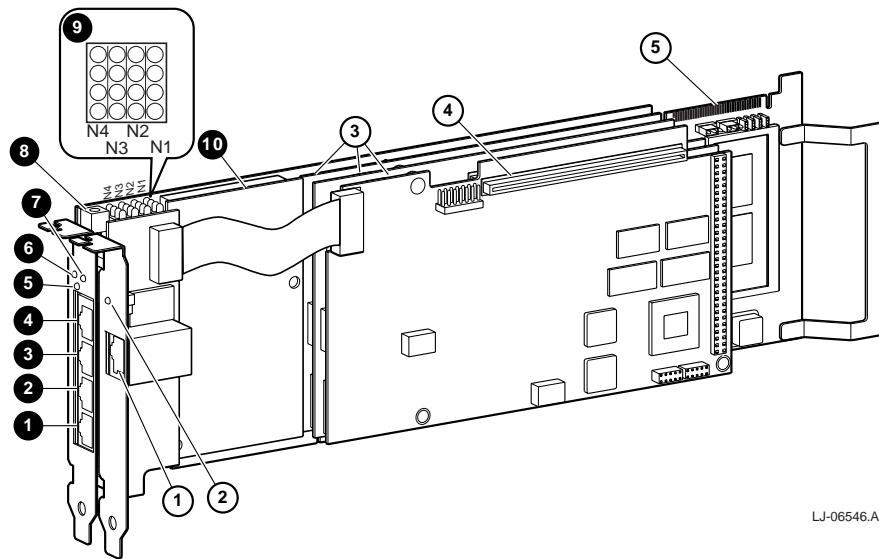
To install the DM3 IPLink multi-port voice over internet protocol option boards listed in Table 5-2, refer to your AlphaServer system documentation and Figure 6-4 while you configure and install the board according to the following procedure:

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the board.
3. Refer to your AlphaServer system documentation for the PCI board installation procedure and install the board in a pair of available PCI slots. The IPLink option board only occupies one slot, but the slot adjacent to the board must be empty to allow clearance for the daughterboard stack and the board's second bulkhead bracket.
4. Refer to Dialogic's *DM3 IPLink Series with Network Interface Quick Install Card for PCI* while you perform the following configuration steps:
 - a. Attach a CT Bus cable with the proper number of connectors to the board's CT Bus connector if it is being connected to other DM3 boards.
5. Connect the CT Bus cable to the other DM3 boards in your configuration. If this board is being added to an existing DM3 configuration, you may have to replace the CT Bus cable connecting the other DM3 boards with a CT Bus cable with the proper number of connectors.

If the DM3 IPLink option board is being connected to SCbus options, refer to the CT Bus/SCbus Adapter section of this chapter to install and connect the CT Bus/SCbus adapter.

6. Connect the appropriate telephone lines to the RJ-48C jacks and the 10Base-T Ethernet cable to the 10Base-T jack on the board.

Figure 6-4 DM3 IPLink Option Boards



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- | | |
|-------------------------------|---|
| ❶ NI4 RJ-48C jack | ❹ Alarm LEDs |
| ❷ NI3 RJ-48C jack | ❺ DTI daughterboard |
| ❸ NI2 RJ-48C jack | ❶ J3 10Base-T jack |
| ❹ NI1 RJ-48C jack | ❷ GOOD LINK status LED |
| ❺ GENERAL NI ALARM status LED | ❸ SP daughterboard(s) (1 or 2) and PowerPC/10Base-T daughterboard |
| ❻ POWER status LED | ❹ SP daughterboard connector J5 |
| ❼ RESET status LED | ❺ CT Bus connector |
| ❽ Rotary switch (not used) | |

Installation

CT Bus/SCbus Adapter

If the DM3 option boards are being interconnected to SCbus options in the same chassis, a CT Bus/SCbus adapter must be installed on the CT Bus connector on the DM3 option board. This adapter allows the connection of CT Bus and SCbus cables to the DM3 option board.

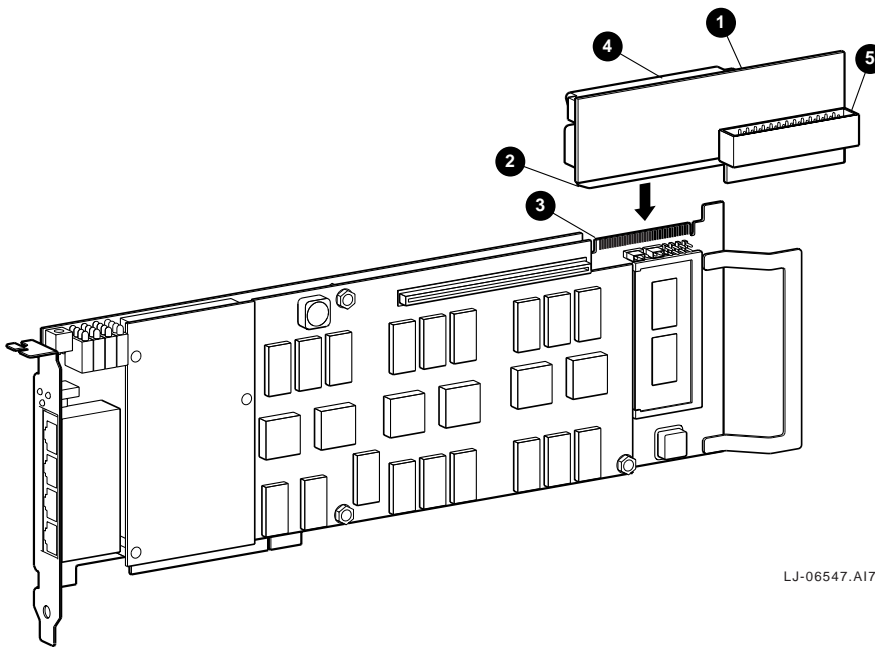
To install the CT Bus/SCbus adapter on a DM3 option board and connect the CT Bus and SCbus cables, refer to your AlphaServer system documentation, Figure 6-5, and Figure 6-6 while you install the adapter and connect the cables according to the following procedure:

Note

Before installing the CT Bus/SCbus adapter, ensure that the DM3 and SCbus option boards in your AlphaServer system are positioned in the correct order. The DM3 option on which the adapter is installed must be installed in the first PCI slot adjacent to the ISA slots (see Figure 6-6).

1. Perform an orderly shutdown of the AlphaServer system.
2. Wear an antistatic wriststrap and observe standard antistatic procedures while you unpack the adapter and install it on the DM3 option board.
3. Refer to Dialogic's *CT Bus/SCbus Adapter Installation* card while you perform the following steps:
4. Locate the DM3 option board that the CT Bus/SCbus adapter will be installed on. It will be the DM3 board installed in the first PCI slot adjacent to the ISA slot (see Figure 6-6).
5. Align pin 1 of the CT Bus connector on the CT Bus/SCbus adapter with pin 1 of the CT Bus connector on the DM3 board (see Figure 6-5).
6. Press the CT Bus/SCbus adapter onto the DM3 board until it is fully seated.
7. Connect one end of a SCbus cable with the proper number of connectors to the SCbus connector on the CT Bus/SCbus adapter (see Figure 6-5 and Figure 6-6).
8. Connect the remaining SCbus cable connectors to the SCbus boards (see Figure 6-6).
9. Connect one end of a CT Bus cable with the proper number of connectors to the CT Bus connector on the CT Bus/SCbus adapter (see Figure 6-5 and Figure 6-6).
10. Connect the remaining CT Bus cable connectors to the CT Bus boards (see Figure 6-6).

Figure 6-5 Installing the CT Bus/SCbus Adapter

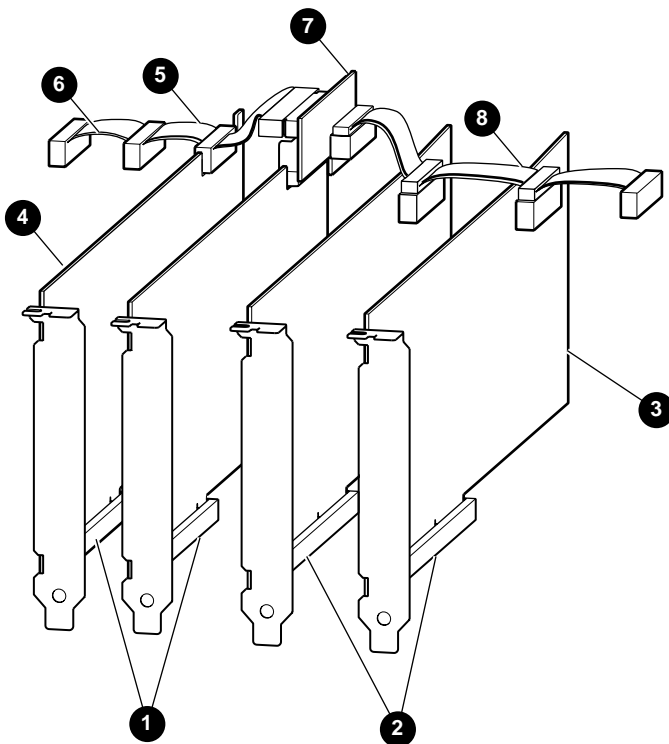


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- | | |
|--|---|
| ❶ CT Bus/SCbus adapter | ❷ CT Bus cable connector on the adapter |
| ❸ Pin 1 of CT Bus connector on adapter | ❹ SCbus cable connector on the adapter |
| ❹ Pin 1 of CT Bus connector on DM3 board | |

Installation

Figure 6-6 Connecting CT Bus and SCbus Cables



LJ-06548.AI7

- | | | | |
|---|-------------|---|--------------------------------|
| ❶ | PCI slots | ❺ | CT Bus cable |
| ❷ | ISA slots | ❻ | Colored stripe on CT Bus cable |
| ❸ | SCbus board | ❼ | CT Bus/SCbus adapter |
| ❹ | DM3 board | ❽ | SCbus cable |

2T-VCFAN-AA Fan Assembly

When DM3 option boards are installed in an AlphaServer 1000A 5/500 system, an auxiliary 2T-VCFAN-AA fan assembly is required for extra cooling. To install the 2T-VCFAN-AA fan assembly, refer to Figure 6-7 and perform the following procedure:

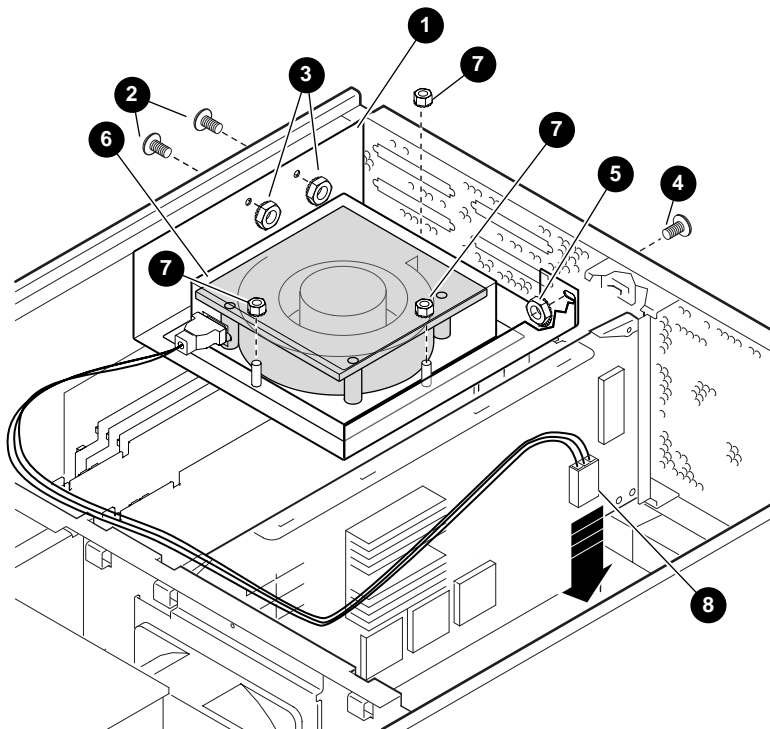
1. Perform an orderly shutdown of the AlphaServer system, power down the cabinet, and unplug the cabinet from the AC power source.
2. Fully extend the AlphaServer system on its slides.
3. Unlock the top cover by turning the key, located on the rear of the chassis, clockwise to the unlock position.
4. Insert two fingers into the finger grip on the rear edge of the top cover.
5. Slide the top cover toward the rear of the chassis and remove.
6. Wear an antistatic wriststrap and observe standard antistatic procedures while handling DM3 option boards.
7. Install the DM3 option boards in the PCI slots of the AlphaServer system.
8. Connect the CT bus cables with the proper number of connectors to the DM3 option boards.
9. Set the 2T-VCFAN-AA fan assembly bracket ❶ on top of the DM3 option boards (see Figure 6-7).
10. Insert two M3 screws ❷ through the top two holes in the left side of the AlphaServer system chassis and through the two holes in the 2T-VCFAN-AA fan assembly bracket (see Figure 6-7).
11. Secure the 2T-VCFAN-AA fan assembly bracket to the left side of the AlphaServer system chassis with two M3 locking nuts ❸ (see Figure 6-7).
12. Insert an M3 screw ❹ through a hole in the rear of the AlphaServer system chassis and through the hole in the 2T-VCFAN-AA fan assembly bracket (see Figure 6-7).
13. Secure the 2T-VCFAN-AA fan assembly bracket to the rear of the AlphaServer system chassis with an M3 locking nut ❺ (see Figure 6-7).
14. Align the three holes in the 2T-VCFAN-AA fan assembly ❻ with the three studs on the 2T-VCFAN-AA fan assembly bracket ❶ and set the 2T-VCFAN-AA fan assembly on the 2T-VCFAN-AA fan assembly bracket (see Figure 6-7). Ensure that the fan assembly output grill is toward the rear of the AlphaServer system chassis.

Installation

15. Secure the 2T-VCFAN-AA fan assembly ⑥ to the 2T-VCFAN-AA fan assembly bracket ① with three 6-32 locking nuts ⑦ (see Figure 6-7).
16. Connect the end of the 2T-VCFAN-AA fan assembly power cable ⑧ to the J24 power connector on the system motherboard.

To remove the 2T-VCFAN-AA fan assembly for adding additional DM3 option boards, power down the system, remove the top cover, and reverse steps 9 through 16 of the installation procedure.

Figure 6-7 Installing the 2T-VCFAN-AA Fan Assembly



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7

Troubleshooting

System Problems

Refer to the system documentation for troubleshooting problems related to the DIGITAL AlphaServer system.

DM3 Board LED Indicators

The DM3 option boards have three Status LED indicators on the bulkhead plate and a group of 16 Alarm LED indicators mounted on the outer edge of the board. Each 4-LED row of the Alarm LED indicator group corresponds to one of the NI RJ-48C jacks on the board bulkhead plate.

Table 7-1 lists the Status LEDs located on the DM3 board bulkhead plate and their function.

Table 7-1 Status LED Indicators

Status LED/Color	Function
POWER (Green)	Lit when power is applied to the DM3 board.
RESET (Red)	Lit when the DM3 board is in reset mode.
GENERAL NI ALARM (Yellow)	Lit to indicate that a Network Alarm has occurred.

Troubleshooting

Table 7-2 lists the four Alarm LED indicators associated with each of the NI RJ-48C jacks on the board bulkhead plate and their function.

Table 7-2 Alarm LED Indicators

Alarm LED/Color	Function
Loopback (Red)	Lit when loopback mode is activated. This LED is located closest to the board.
Signal Present (Green)	Lit when power is applied and the jack is receiving a signal from external sources..
Sync Alarm (Yellow)	Lit to indicate a loss of frame synchronization at the far end of the external network.
Signal Alarm (Red)	Lit to indicate that a loss of signal has occurred.

DM3 Option Board Troubleshooting

Refer to the *DIGITAL DM3 Telephony Drivers for Compaq's DIGITAL UNIX Software Installation Guide* to troubleshoot DM3 option board problems.

A

Board Configurations (PEB and SCbus)

This appendix illustrates the low-density, standard-density, mixed-density, and high-density board configurations that are supported on AlphaServer voice platforms in PEB and SCbus environments.

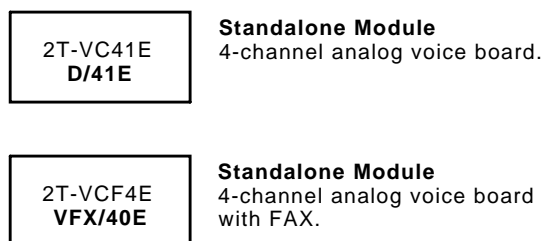
SCbus Configurations

Any SCbus boards can be used in an SCbus configuration. All boards should be connected to the same bus.

PEB Configurations

Figure A-1 shows low-density 4-channel analog configurations.

Figure A-1 Low-Density 4-Channel Analog Configurations



LJ-04173-T10

Board Configurations (PEB and SCbus)

Figure A-2 shows a low-density 2/16-channel voice-recognition configuration.

Figure A-2: Low-Density 2/16-Channel Voice-Recognition Configuration

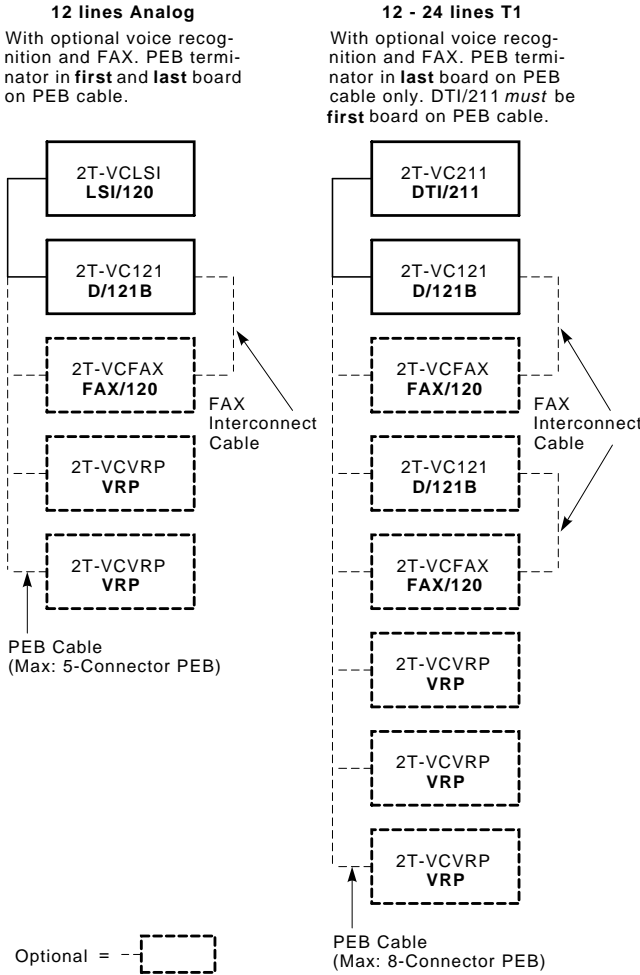
2T-VCVRP VRP	Voice-Recognition Motherboard Must use 1-4 of either VRM/40 or VRM/2C.
2T-VCVR4 VRM/40	Daughterboard for VRP 4-channel discrete voice recognition. Up to 4 can be used on VRP for up to 16 channels.
2T-VCVR2 VRM/2C	Daughterboard for VRP 2-channel continuous voice recognition. Up to 4 can be used on VRP for up to 8 channels.

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Board Configurations (PEB and SCbus)

Figure A-3 shows standard-density configurations.

Figure A-3: Standard-Density Configurations

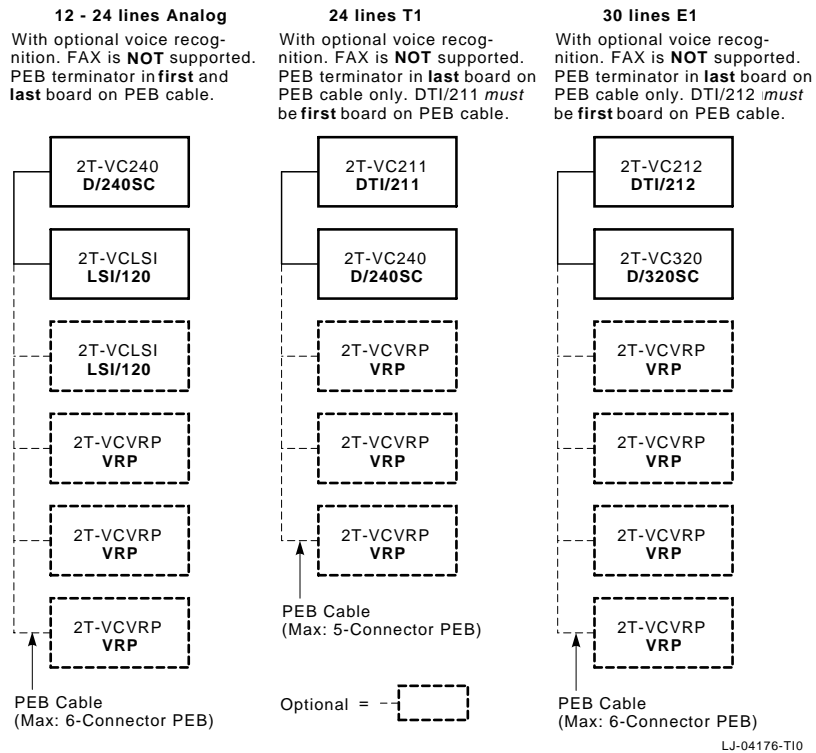


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Board Configurations (PEB and SCbus)

Figure A-4 shows mixed-density (standard and high) configurations.

Figure A-4: Mixed-Density Configurations



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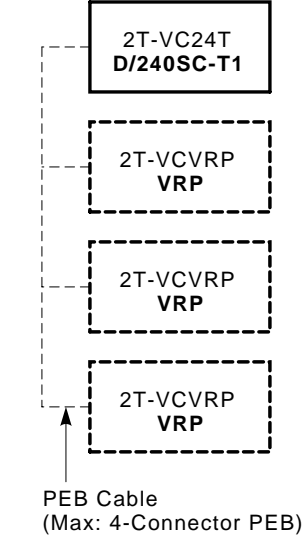
Board Configurations (PEB and SCbus)


Figure A-5 shows a high-density configuration.

Figure A-5: High-Density Configuration

24 lines T1

With optional voice recognition. FAX is **NOT** supported.
PEB terminator in **first** and **last** board on PEB cable. PEB terminator required on standalone board.



Optional = 

LJ-04177-T10

