



AltiWare™ OE  
Release 3.5A

**SUPPLEMENT**  
to AltiWare OE Release 3.5 Manuals

### **WARNING!**

Toll fraud is committed when individuals unlawfully gain access to customer telecommunication systems. This is a criminal offense. Currently, we do not know of any telecommunications system that is immune to this type of criminal activity. Altigen Communications, Inc. will not accept liability for any damages, including long distance charges, which result from unauthorized and/or unlawful use.

Although Altigen Communications, Inc. has designed security features into its products, it is your sole responsibility to use the security features and to establish security practices within your company, including training, security awareness, and call auditing.

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## ***Liability***

### **Limitation of Liability**

Except for personal injury, direct damages to tangible personal property proximately caused by AltiGen products and liability otherwise expressly assumed in a written agreement signed by AltiGen, the liability of AltiGen, its affiliates, suppliers, and authorized resellers for any claims, losses, damages, or expenses from any cause whatsoever (including acts of omission of third parties), regardless of the form of action, whether in contract, tort or otherwise, shall not exceed an amount equal to the lesser of the direct damages proven or the purchase price of the product. In no event shall AltiGen or its affiliates, suppliers, or authorized resellers be liable for incidental, consequential or any other indirect loss or damage (including lost profits or revenues) incurred in connection with the product. This limitation of liability shall survive failure of the exclusive remedy set forth in the limited warranty referred to in this book under “Warranty”.

## ***FCC and Industry Canada Compliance***

This section describes the requirements for compliance with Federal Communications (FCC) Rules and Industry Canada CS-03 standard.

### **Statement**

This equipment has been tested and found to be in compliance with the limits for a Class B digital device pursuant to Part 15 and Part 68 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial or residential environment. This equipment generates and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

This Class B digital apparatus meets all requirements of the Canadian interference-causing Equipment Regulations. Cet appareil numérique de la Classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

### **FCC Requirements**

1. The Federal Communications Commission (FCC) has established Rules which permit this device to be directly connected to the telephone network. Standardized jacks are used for these connections. This equipment should not be used on party lines or coin phones.
2. If this device is malfunctioning, it may also be causing harm to the telephone network; this device should be disconnected until the source of the problem can be determined and until repair has been made. If this is not done, the telephone company may temporarily disconnect service.

## FCC and Industry Canada Compliance

3. The telephone company may make changes in its technical operations and procedures; if such changes affect the compatibility or use of this device, the telephone company is required to give adequate notice of the changes. You will be advised of your rights to file a complaint with the FCC.
4. If the telephone company requests information on what equipment is connected to their lines, inform them of:
  - a. The telephone number to which this unit is connected.
  - b. The ringer equivalence number. [0.0B]
  - c. The USOC jack required. [RJ11C]
  - d. The FCC Registration Number. [see label on board]
  - e. Industry Canada (Industrie Canada) Certification Number. [see label on board]

Items (b) and (d) are indicated on the label. The Ringer Equivalence Number (REN) is used to determine how many devices can be connected to your telephone line. In most areas, the sum of the RENs of all devices on any one line should not exceed five (5.0). If too many devices are attached, they may not ring properly.

## Service Requirements

In the event of equipment malfunction, all repairs should be performed by our Company or an authorized agent. It is the responsibility of users requiring service to report the need for service to Altigen or to one of our authorized agents. Service can be obtained at your Authorized Altigen Dealer.

## Equipment Attachment Limitations

**NOTICE:** The Canadian Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational, and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with the single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to the certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

**CAUTION!** Users should not attempt to make such connections themselves, but should contact the appropriate electrical inspection authority, or electrician, as appropriate.

The Load Number (LN) assigned to each terminal device denote the percentage of the total load to be connected to a telephone loop which is used by the device, to prevent overloading. The termination on a loop may consist of any combination of devices subject only to the requirement that the total of the Load Number of all the devices does not exceed 100.

**WARNING!** Changes or modifications to this unit not expressly approved in writing by AltiGen Communications, Inc. could void the user's authority to operate this equipment.

## Triton T1 Facility Interface Information

In order to connect registered terminal equipment to the telephone company lines, the terminal equipment must utilize FCC registered jacks. Standardized jacks are used for this equipment. The following table contains Facility Interface Code (FIC), Ringer Equivalence Number (REN), Service Order Code (SOC) and network jack information for the equipment.

Port Identifier	FIC	SOC/ASC	Network Jack
Triton ALTI-TTT1-1	04DU9-BN	6.0p / AS.2	RJ-48C
Triton ALTI-TTT1-1	04DU9-BN	6.0p / AS.2	RJ-48C
Triton ALTI-TTT1-1	04DU9-BN	6.0p / AS.2	RJ-48C
Triton ALTI-TTT1-1	04DU9-BN	6.0p / AS.2	RJ-48C

The Triton T1 interface connects to the Public Switched Telephone Network through a FCC registered NCTE which specifies the type of network jack to be used.

## Disruption of Network

If the Triton T1 disrupts the telephone network, the telephone company can discontinue your service temporarily. If possible, the telephone company will notify you in advance. If advance notice is not practical, they will notify you as soon as possible. You are also informed of your right to file a complaint with the FCC.

## **Direct Inward Dialing (DID) Answering Supervision**

Customers allowing Triton T1 to be operated in such a manner as to not provide for proper answer supervision is a violation of Part 68 of the FCC rules.

Proper answer supervision is when:

- a. The Triton T1 returns answer supervision to the PSTN when DID calls are:
  - Answered by the called station.
  - Answered by the attendant.
  - Routed to a recorded announcement that can be administered by the customer.
- b. The Triton T1 returns answering supervision on all DID calls forwarded to the PSTN.

Permissible exceptions are:

- A call is unanswered.
- A busy tone is received.
- A reorder tone is received.



## *Safety*

The following information is included in this publication for the use and safety of installation and maintenance personnel.

### **Important Safety Instructions**

- Read all of the instructions before attempting to operate the equipment and before connecting the power supply.
- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water. Never spill liquid of any kind on this product.
- Never push objects of any kind into this product through module openings or expansion slots, as they may touch dangerous voltage points or short out parts, which could result in the risk of fire or electrical shock.
- Refrain from opening the cabinet as there are high voltage components inside. Refer servicing to qualified service personnel. If you are a qualified service personnel, power down everything before opening.
- Do not attach the power supply cord to building surfaces. Do not allow anything to rest on the power cord or allow the cord to be abused by persons walking on it.
- To protect this equipment from overheating, do not block the slots and openings in the module housings that are provided for ventilation.

### **Safety with Electricity**



#### **DANGER**

**Do not take chances with your life. Follow these safety guidelines carefully.**

### **High Voltages**

- Observe all safety regulations and read the warnings, cautions, and notes posted on the equipment.
- Find the switch to power off the cabinet. Read the posted instructions.
- Ensure that equipment can not be powered from another source or controlled from a different circuit breaker or disconnecting switch.
- When a procedure requires that you power off the system:
  - Lock the wall box-switch in the off position.
  - Attach a DO NOT OPERATE tag to the wall box-switch.

## Safety

- ***Never assume*** that the power is turned off. Always check to ensure that a circuit does not have power.
- Do not work alone. Work with another person who knows the locations of the power-off switches, especially if you are working with *exposed* electrical circuits.
- Follow the instructions in the manual carefully, especially when working with circuits that are powered. Disconnect power when instructed to do so in the procedures.
- Disconnect all power before working near power supplies unless otherwise instructed by a maintenance procedure.
- Disconnect all power before installing changes in machine circuits unless otherwise instructed by a maintenance procedure.
- High voltages capable of causing shock are used in this equipment. Be extremely careful when measuring high voltages and when servicing cards, panels, and boards while the system is powered on.
- Do not wear jewelry or other metal objects when working on the equipment.
- When possible, work with one hand so that a circuit is not created.
- Use caution when installing or modifying telephone lines. Never install telephone wiring during an electrical storm.
- If this system is being installed in an area where lightning occurs, it is strongly recommended that lightning protection devices be installed between the system and the trunk services from the local exchange carrier.
- Never install a telephone jack where it can get wet unless the jack is specifically designed for wet conditions.
- Never touch un-insulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
- Avoid using a telephone (other than the cordless type) during an electrical storm due to the remote risk of shock from lightning.

## **Triton T1 Electrical Safety Advisory**

While the Triton T1 is fully compliant with FCC rules and regulations, it is recommended that an alternating current (ac) surge arrestor of the form and capability suitable for the model purchased be installed in the ac outlet to which AltiGen Communications products are connected. Consult with your distributor as to the surge protector requirements for your equipment.

## UL Regulatory Safety Requirements

### Host PC

1. Model Altigen/Altiserv apparatus is approved for connection to Telecommunications Systems specified in these instructions for use subject to the conditions set out in them. Any other usage will **INVALIDATE** this approval.
2. The host PC shall be “CE” marked, with the internal ISA and PCI slots operating at SELV in accordance with EN60950, 1992, issue 2, +A4.
3. This apparatus **MUST** be professionally installed.
4. The host PC **MUST** be hardwired earthed in accordance with EN60950, 1992, issue 2, +A4, 1997, cl. 6.2.1.2 with an earth wire from the host PC earthing terminal to the building earth.
5. The host PC SELV circuit is connected to the protective earthing terminal in accordance with EN60950 cl. 2.5.
6. The host PC ISA bus pins B1, B10 or B31 (edge connectors on CPU motherboard/backplane) **MUST** be less than 0.1 Ohms to host PC earthing terminal.
7. The power required by the host PC and the total of all adapter cards installed within the host environment, together with any ancillary apparatus, shall not exceed the power specification of the host PC.
8. It is essential that, when other option cards are introduced which use or generate a hazardous voltage, the minimum creepages and clearances specified in the table below are maintained. A hazardous voltage is one that exceeds 42.4V peak AC or 60V DC. If you have any doubt, seek advice from a competent engineer before installing other adapters into the host PC.

Clearance (mm)	Creepage (mm)	Voltage used or generated by host or other cards
2.0	2.4 (3.8)	Up to 50 Vrms or Vdc
2.6	3.0 (4.8)	Up to 125 Vrms or Vdc
4.0	5.0 (8.0)	Up to 250 Vrms or Vdc
4.0	6.4 (10.0)	Up to 300 Vrms or Vdc

For a host or other expansion card fitted in the host, using or generating voltages greater than 300V (rms or dc), advice from a competent safety engineer must be obtained before installation of the relevant equipment.

Any other usage will **INVALIDATE** the approval of the apparatus, if as a result, it then ceases to conform to the standards against which approval was granted.

## Safety

### Approved Hardware

1. Host PC, with an earthing terminal, which is “CE” marked to include compliance to LVD and EMC European Directives.
2. PC chassis will comprise the following as minimum:
  - a. Pentium PC, 5 expansion slots, SVGA, IDE, 1.0 GB, keyboard
  - b. Color monitor, non-interlaced, 1024 x 768
  - c. Mouse, two button
  - d. Memory, at least 128 MB RAM
  - e. CD ROM
  - f. Floppy disk drive
  - g. Modem 28,800 baud, approved by BABT (optional)
  - h. Microsoft NT software
3. Altigen/Altiserv cards, Rev. D:
  - a. CD0804UD
  - b. CD0408UD
  - c. CD0012UD

### Operating Software

Provided by Altigen: Altiserv Rev. 3.5 or above.

### Power Fail

In the event of a power fail, the first telephone extension on each card (except for the CD0012UD) is connected directly to the first exchange line, thus permitting access to dial the emergency services. This telephone must be powered from the PSTN or have local battery backup capable of calling the emergency services four hours after the power fail event occurs.

### Wiring

All wiring must conform to National Telecommunications Wiring Regulations and the National Electrical Wiring Regulations.

### Additional Requirements for Australia

1. **Warning:** For safety reasons, connect only ACA or AUSTEL permitted or certified equipment to the telephone ports (RJ11) of the patch panel or the audio in/out jacks on the Altiserv card.
2. **Warning:** THIS EQUIPMENT MUST ONLY BE INSTALLED AND

MAINTAINED BY SERVICE PERSONNEL

### **Additional Requirements for USA and Canada**

1. The interconnecting line cord should be at least size 26AWG.
2. This card must be fitted in host equipment with fire enclosures complying with the flammability requirements of sub-clause UL1950/CSA C22: 1995 4.4.3. In addition, the card must be separated from internal materials of flammability class or lower by at least 25 mm of air Class V-1 or better. Also, the card must be separated from openings in the top or sides of the enclosure by at least 25 mm of air or by a barrier of flammability Class V-1 or better unless the openings comply with one of the following:
  - not exceed 5 mm in any direction, or
  - not exceed 1 mm in width, regardless of length
3. Any holes in the chassis not conforming to the above should be covered with a metal perforated screen, with holes not exceeding 5 mm diameter, fixed internally.

### **Instructions for Hardwired Earth Connection**

1. A supplementary equipment earthing conductor is to be installed between the product or system and earth, that is, in addition to the equipment earthing conductor in the power supply cord.
2. The supplementary equipment earthing conductor may not be smaller in size than the unearthed branch-circuit supply conductors. The supplementary equipment earthing conductor is to be connected to the product at the terminal provided, and connected to earth in a manner that will retain the earth connection when the power supply cord is unplugged. The connection to earth of the supplementary earthing conductor shall be in compliance with the appropriate rules for terminating bonding jumpers in Part K of Article 250 the National Electrical Code, ANSI/NFPA 70, and Article 10 of Part I of the Canadian Electrical Code, Part I, C22.1. Termination of the supplementary equipment earthing conductor is permitted to be made to building steel, to a metal electrical raceway system or to any earthed item that is permanently and reliably connected to the electrical service equipment earthed.
3. Bare, covered or insulating earthing conductors are acceptable. A covered or insulating earth conductor must have a continuous outer finish that is either green, or green with one or more yellow stripes.

### **UL Hardware Preparation**

Prepare the hardware as follows ensuring that the relevant manufacturer's installation instructions are complied with:

1. This apparatus must be professionally installed.
2. Select "CE" PC chassis according to the Safety Requirements above, ensuring that it has an external marked earth point.

## Safety

3. The host PC ISA bus pins B1, B10 or B13 MUST be tested to ensure that there is less than 0.1 Ohms to the host PC earthing terminal.
4. Prepare PC chassis, in accordance with the PC manufacturers instructions, to receive the necessary PC cards, ensuring the installation of extension cards does not result in non-conformance to the Safety Requirements above.
5. AltiServ cards: CD0804UD, CD0408UD, CD0012UD (Note that the continued compliance to the LVD and EMC EU Directives at the system level is the responsibility of the system supplier.
6. Prepare above cards ensuring all jumpers are set according to the manufacturer's instructions.
7. Attach suitable grounded ESD wrist strap between wrist and earth.
8. Follow the manufacturer's instruction and install above cards into PC.
9. Note: If more than three cards are using the MVIP, ensure that the Quantum board set as board zero is installed at one end of the MVIP cable and the board at the far end of the MVIP cable has its switch set to terminated (switch closed).
10. Install MVIP cable. Use a suitable length cable to ensure that there is no more than one spare connector.
11. Replace PC outer case.
12. Connect a fixed earth from the PC to a suitable premises fixed earthing point. Note that the earth cable must be at least the same gauge as the live wire of the main cord and fixed to the earth terminal and the rear of the PC.
13. Connect cable supplied with AltiServ to the "D-type sub-miniature" (25 pin) connector on the AltiServ card and the connector to the Modular RJ-11 or RJ-45 Patch Panel.
14. Connect the building telecommunication wiring to the RJ-11 or RJ-45 sockets with the center pair connected to tip and ring.
15. Building telecommunication wiring should be installed according to the National Wiring Regulations for Telecommunications.
16. IF IN DOUBT ABOUT ANY OF THESE ISSUES, CONTACT YOUR SUPPLIER BEFORE PROCEEDING.

## ***Warranty***

### **What The Warranty Covers**

AltiGen Communications warrants its hardware products to be free from defects in material and workmanship during the warranty period. If a product proves to be defective in material or workmanship during the warranty period, AltiGen Communications will, at its sole option, repair, refund or replace the product with a like product.

### **How Long is the Warranty Effective**

All AltiGen Communications products are warranted for one (1) year for all parts from the date of the first end user purchase.

### **Who the Warranty Protects**

This warranty is valid only for the first end user purchaser.

### **What the Warranty Does Not Cover**

1. Any product on which the serial number has been defaced, modified or removed.
2. Damage, deterioration or malfunction resulting from:
  - a) Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
  - b) Repair or attempted repair by anyone not authorized by AltiGen Communications.
  - c) Any damage of the product due to shipment.
  - d) Removal or installation of the product.
  - e) Causes external to the product, such as electric power fluctuations or failure.
  - f) Use of supplies or parts not meeting AltiGen Communications' specifications.
  - g) Normal wear and tear.
  - h) Any other cause which does not relate to a product defect.
3. Shipping, installation, set-up and removal service charges.

### **How to Get Service**

End user customers should contact your Authorized AltiGen Dealer for service.

Authorized AltiGen Dealers must follow the steps below for service:

## Warranty

1. Take or ship the product (shipment prepaid) to your AltiGen distributor or to AltiGen Communications, Inc.

All materials being returned to AltiGen must have an associated RMA number. RMA numbers are issued by AltiGen Customer Service and can be obtained by calling 1-888-ALTIGEN (258-4436) or faxing an RMA form (See Appendix D in the *System Administration Manual*) to 510-252-9738, attention to Customer Service. AltiGen reserves the right to refuse return of any material that does not have an RMA number. The **RMA number should be clearly marked on the outside of the box** in which the material is being returned. Please see the example below:

Attn.: RMA # 123  
AltiGen Communications, Inc.  
47427 Fremont Blvd.  
Fremont, CA 94538

Upon authorization of return, AltiGen will decide whether the malfunctioning product will be repaired or replaced.

2. To obtain warranty service, you will be required to provide:
  - a) the date and proof of purchase
  - b) serial number of the product
  - c) your name and company name
  - d) your shipping address
  - e) a description of the problem.
3. For additional information contact your AltiGen Dealer or AltiGen Communications, Inc. directly at 1-888-ALTIGEN (258-4436) or via e-mail at [service@altigen.com](mailto:service@altigen.com).

## Effect of State Law

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow limitations on implied warranties and/or do not allow the exclusion of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

## Sales Outside the U.S.A.

For AltiGen Communications products sold outside of the U.S.A., contact your AltiGen Communications dealer for warranty information and services.



# Preface

## *About This Guide*

This *AltiWare OE Release 3.5A Supplement Manual* is an addendum to and should be used in conjunction with the *AltiWare OE Release 3.5 Getting Started Manual* and *System Administration Manual*. It includes descriptions, instructions and applications of all **new** or **enhanced features** that are included in AltiWare OE Release 3.5A, as well as other minor changes and corrections.

## *Target Audience*

This guide is designed for the dealers, administrators and technicians that are responsible for installation, configuration, and administration of the AltiServ system.

## *Using This Guide*

This guide contains the following chapters and appendixes:

- Chapter 1, “Overview” describes the newest AltiServ functions, features, and benefits.
- Chapter 2, “Installation” describes specification, hardware and software installation of the AltiServ system.
- Chapter 3, “PRI” describes how to configure and administer ISDN PRI for AltiWare OE.
- Chapter 4, “T1” describes how to configure and administer T1 for AltiWare OE.
- Chapter 5, “Data and Internet Integration” describes how to set up the Exchange Integration feature in AltiWare OE.

## *Related Publications*

Related publications include:

## Preface

- AltiWare OE Getting Started Manual
- AltiWare OE System Administration Manual
- AltiServ User Guide

# Chapter 1 Overview

## *What's New in AltiWare OE Release 3.5A*

This *AltiWare OE Release 3.5A Supplement Manual* is an addendum to and should be used in conjunction with the *AltiWare OE Release 3.5 Getting Started Manual* and *System Administration Manual*. It includes descriptions, instructions and applications of all new or enhanced features that are included in AltiWare OE Release 3.5A, as well as other minor changes and corrections. This chapter provides an overview of these new or enhanced features.

### AltiServ Platforms

- **\*Windows 2000 Support** - in addition to Windows NT 4.0, the AltiServ platform may be installed on a Windows 2000 operating system. See “AltiWare OE Installation on Windows 2000” on page 2-2 for more information.

### PRI Features

- **\*AT&T MEGACOMM PRI Service Support** - In addition to AT&T 4ESS PRI, AT&T 5ESS PRI, NT DMS-100 PRI and US N12-PRI switch type settings, the option for AT&T MEGACOMM PRI is available. See “T1/PRI Board Configuration” on page 3-1 for more information
- **\*ISDN Numbering Plan** - allows the system administrator to specify the type of number and number plan for all classes of calls to properly prepare a number sent to the CO. See “T1/PRI Board Configuration” on page 3-1 for more information.

### T1 Features

- **\*Centrex Flash** - Centrex Flash support is available for T1 trunks. See “Centrex Flash Option” on page 4-1 for more information.

\* new feature in AltiWare OE Release 3.5A

## What's New in AltiWare OE Release 3.5A

\* new or improved feature in AltiWare OE Release 3.5A

**1-2 AltiWare OE 3.5A Supplement**

## Chapter 2 Installation

### *Minimum System Requirements*

To accommodate Quantum and/or Triton telephony boards with AltiWare software, the AltiServ system requires the following minimum system configuration:

- An IBM/PC compatible system with adequate number of **full size** ISA and PCI slots
- Microsoft Windows NT Server 4.0 **with Service Pack 6a (or higher) installed** or Microsoft Windows 2000.
- Web Server for AltiReach (Microsoft's Internet Information Server is included in Windows NT Server 4.0.)
- Channel Service Unit for T1/PRI

### *AltiWare as NT Service*

#### **CAUTION!**

**Do NOT tamper with the startup settings of AltiGen services in the Services applet of the Control Panel. Only the AltiGen Switching Service should be set to *Automatic*; all other AltiGen services should be set to *Manual*.**

## ***AltiWare OE Installation on Windows 2000***

The following is a step-by-step procedure for installing the AltiWare OE software from the **AltiWare OE Release 3.5A** CD-ROM onto the Windows 2000 platform. Before you begin installation, however, please note the following:

- ?
- ?
- ?

### **AltiWare OE - New Installation on Windows 2000**

To install AltiWare OE, follow the instructions below:

1. Login to Windows 2000 as a domain user account which has both local and domain administrator privileges. If your machine is a stand-alone server, you need to login as a local administrator account.
2. Insert the AltiWare OE CD-ROM into the CD-ROM drive.
3. Select and read the Readme.txt file.
4. After reading the Readme.txt file, click on **SETUP.EXE** in the AltiWare OE folder.
5. Follow the instructions on the AltiWare installation wizard setup screens.
6. When prompted, enter the 20-digit software license key (located on the End User License Agreement). Your Authorized AltiGen Dealer will need this CD key when contacting AltiGen for technical support.

- **Extension:**

- **Extension Length** - specifies the number of digits for all extension numbers. All extensions in the AltiServ configuration must be the same length. The range is from 2 to 7 digits in length.

**IMPORTANT!**

The length of the extension numbers is not changeable once the first extension is configured. The length is determined in the **AltiWare Setup** screen and cannot be changed without totally

re-configuring the system or deleting all the extensions already configured. It is recommended that you assign 3 digit extensions or longer as problems may be experienced with 2 digit extensions.

## Installing Client Products

To install a client product, run the **SETUP.EXE** program in the appropriate folder in the CD. For example, to install AltiAdmin on a client system, run **SETUP.EXE** from the 'AltiAdmin' folder. Follow the instructions provided by the setup program to complete installation.

**Note:** Please be sure to install any AltiWare server software before installing any client applications.

## AltiAdmin Installation

**AltiAdmin** contains the **AltiWare Administrator** GUI application that can be installed on a **Windows 2000** platform. AltiAdmin does not support Windows 95 or Windows 98.

AltiAdmin is designed to allow control of the AltiServ system from a remote client system on the LAN. If there is no firewall on the LAN where AltiServ resides, AltiAdmin can be installed and used to manage AltiServ over the Internet from a remote site as well. Although it is possible to install AltiAdmin on the AltiServ system, it provides no added value since the AltiWare Administrator is already installed on the AltiServ.

## Starting AltiWare Administrator

- If you are opening **AltiAdmin**, enter the server name when prompted. If you are logging into AltiAdmin at a remote site to administer AltiServ over the Internet, be sure to enter the **fully qualified domain name** (e.g. altiserv.xyzcompany.com) or **IP address** (e.g. 100.100.100.100) of the AltiServ system when prompted for the server name. Multiple AltiServ systems can be managed at a single location with an AltiAdmin open for each AltiServ system.

## Restarting AltiWare OE

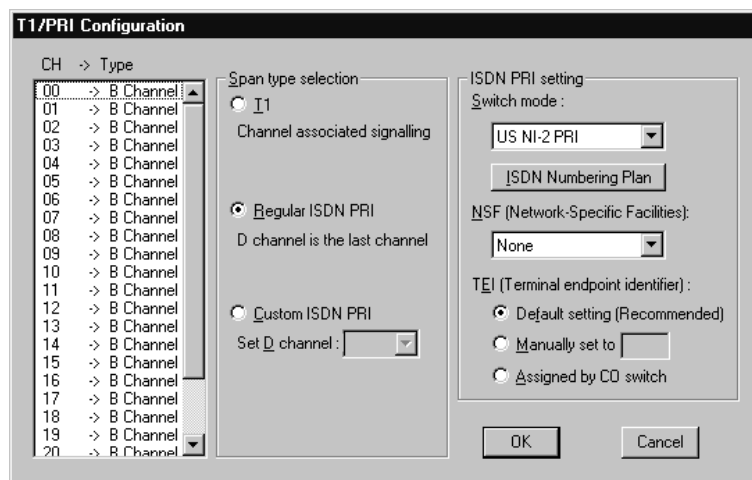
If TAPI is installed, restarting AltiWare OE may cause TAPI to become out of sync with AltiServ. If you experience any problems, restart **Telephony Service** (from the **Services** applet in **Control Panel**) and all TAPI client applications **after** AltiWare is restarted.



# Chapter 3 PRI for AltiWare OE 3.5A

## *T1/PRI Board Configuration*

Use the **T1/PRI Configuration** button to invoke the **T1/PRI Configuration** screen, as shown in Figure 3-1. The Triton T1/PRI Board can be configured to either T1 or PRI through the configuration options within the **Channel Configuration** screen.



3. PRI for AltiWare  
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Figure 3-1. T1/PRI Configuration screen

The **T1/PRI Configuration** screen is composed of:

- **CH -> Type** window - this window displays the channel types associated with each T1/PRI channel. The channel types are:
  - **CAS** - channel associated signal, for all T1 channels
  - **B Channel** - 64 kbps clear voice channel
  - **D Channel** - call setup channel for all voice channels
- **Span Type Selection** group box:

## T1/PRI Board Configuration

- **T1** - select this option to associate all channels on the span to a T1 Robbed-bit signal.
- **Regular ISDN PRI** - select this option to indicate 23B+D ISDN PRI span and to designate the last channel as the D channel.
- **Custom ISDN PRI** - select this option to set the D channel to the desired location. Use the drop-down list to select the desired D channel.
  - **Set D channel** - in the drop-down list, select the channel you wish to set as the D channel.
- **ISDN PRI Setting** group box:
  - **Switch mode** - select the appropriate ISDN switch type from the drop-down list:
    - AT&T 4ESS PRI
    - AT&T 5ESS PRI (default)
    - NT DMS-100 PRI
    - US N12-PRI
  - **ISDN Numbering Plan** button - clicking this button invokes the **PRI ISDN Numbering Plan** dialog box (Figure 3-2).

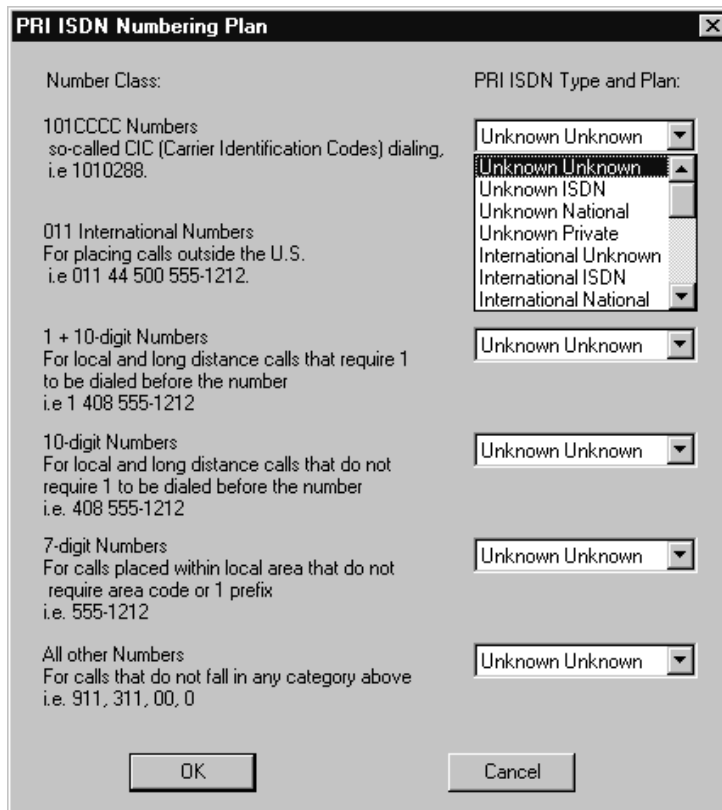


Figure 3-2. PRI ISDN Numbering Plan dialog box

The **PRI ISDN Numbering Plan** dialog box displays the six *classes* of numbers (call type) that can be received by a CO:

- 101CCCC Numbers - CIC (Carrier Identification Codes) dialing.
- 011 International Numbers - for placing calls outside the U.S.
- 1+10-digit Numbers - for local and long distance calls that require dialing 1 before the number.
- 10-digit Numbers - for local and long distance calls that do not require 1 before dialing.
- 7-digit Numbers - for calls placed within the local area that do not require an area code or a 1 prefix.

## T1/PRI Board Configuration

- All Other Numbers - for calls that do not fall into any category above, i.e. 911, 311.

For each class, select the type of *number/numbering plan* from the scroll list:

- *Type of Number:*

- Unknown
- International
- National
- Network Specific
- Subscriber Number

- *Type of Numbering Plan:*

- Unknown
- ISDN
- National
- Private

**Note:** The setting 'Unknown' is used when the user or network has no knowledge of the numbering plan. In this case, the number digits field is organized according to the network dialing plan.

- **NSF (Network-Specific Facilities)** - if applicable, use the scroll down list to identify the type of carrier service for your ISDN PRI lines:
  - None
  - AT&T MegaCom
  - CDN Nat-ISDN (called party number, National number, ISDN numbering plan)
  - CDN Nat-Unk (called party number, National number, Unknown numbering plan)
  - CDN Unk-Unk (called party number, Unknown number, Unknown numbering plan)
  - CDN Unk-ISDN (called party number, Unknown number, ISDN numbering plan)

## T1/PRI Board Configuration

- **TEI (Termination Endpoint Identifier)** - defines values that are used in point-to-point data network.
  - **Default setting** - this is the recommended setting
  - **Manually set to** - should always be set to 0.
  - **Assigned by CO switch** - do not use this setting unless advised by your CO.

**Note:** You must shut down and restart AltiServ for new configuration settings to take effect.

## ***Service Parameters for PRI***

To subscribe to PRI service, certain parameters are required to establish service. The information provided below identifies the recommended and supported parameters for PRI service.

### **PRI Service Request Information**

When ordering PRI service, provide the following service request information:

#### **Equipment Information**

**Product Manufacturer** - AltiGen Communications, Inc.

**Product Name** - AltiServ PBX Phone System

**CSU/DSU** - ADTRAN T1 ACE (recommended) or other CSU/DSU

#### **Technical Information for PRI with Voice**

##### **Switch Type:**

- 5ESS (recommended)
- DMS (recommended)
- NI2 (recommended)
- 4ESS
- MEGACOMM

##### **Framing:**

- Super Frame (SF)/D4
- Extended Super Frame (ESF) (recommended)

##### **Line Coding:**

- Alternate Mark Inversion (AMI)
- B8ZS (recommended)

**Physical Termination** - RJ-48X or RJ-48C

**Wire:** 4 wires

**800 Service:** you decide

**Termination Impedance** - 100 ohms

#### **Type of Registered Services Provided**

**BN 1.544 MHz SF without power**

**DN 1.544 MHz SF B8ZS without power**

**1KN 1.544 MHz ANSI ESF without power**

**1SN 1.544 MHz ANSI ESK, B8ZS without power** (recommended)

## **Service Order Code**

**SOC 6.0P AS.2**

## **PRI Channel Assignment**

**D Channels Assignment:** channel 24

**Note:** Altiserv can configure any channel in a PRI span to be the D channel. The default setting is the last channel. Every span should select a D channel within the span.

**Hunting:** Most Idle, Least Idle, Ascend, Descend

**DNIS Digits:** can be 3 to 7 digits

## **CSU/DSU Requirements**

The CSU (channel service unit) is a device used to connect a digital trunk line coming in from the phone company to the PBX. A CSU can terminate signals, repeat signals and respond to loopback commands sent from the central office.

You can plug PRI service directly to the Triton T1/PRI board without a front end CSU device. However, the Triton T1/PRI board does not provide echo loopback. If the Altiserv system is down and the PRI line does not have a loopback device, your service will be terminated. You must call the service provider or central office when the equipment is up again to re-establish service.

Service Parameters for PRI



# Chapter 4 T1 for AltiWare OE 3.5A

## *Centrex Flash Option*

The Centrex Flash is available for T1 trunks. The option was previously available only for analog trunks.

**Trunk Configuration -- Card:10 Channel:0**

General | In Call Routing | Out Call Routing

Location	Type	Access Code	Phone No
08:00	LS	9	-
08:01	LS	9	-
08:02	LS	9	-
08:03	LS	9	-
09:00	DID	-	-
09:01	DID	-	-
09:02	DID	-	-
09:03	DID	-	-
10:00	T1	9	-
10:01	T1	9	-
10:02	T1	9	-
10:03	T1	9	-
10:04	T1	9	-
10:05	T1	9	-
10:06	T1	9	-
10:07	T1	9	-
10:08	T1	9	-
10:09	T1	9	-
10:10	T1	9	-
10:11	T1	9	-
10:12	T1	9	-
10:13	T1	9	-
10:14	T1	9	-
10:15	T1	9	-
10:16	T1	9	-
10:17	T1	9	-
10:18	T1	9	-

Access Code: 9

Area Code:

Phone Number:

Direction:   
☐ Outgoing   
☐ Incoming   
☒ Both   
☐ Paging

Trunk Call Predial String:   
☐ Trunk Predial String

Trunk Dialing Scheme:   
☒ Overlap   
☐ En-bloc

Centrex Flash:   
☐ Centrex Flash Support   
 Note: Set Duration using Trunk Configuration.

Attribute:   
☒ In Service   
☐ Out Of Service

Trunk Configuration

Print Apply to ... OK Cancel Apply Help

4. T1 for AltiWare  
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Figure 4-1. T1 Trunk Configuration Screen - General Page

To set up Centrex Flash for T1 trunks:

1. Go to the **General Page** of the **Trunk Configuration** screen (Figure 4-1).
2. Highlight the T1 trunk you wish to set up Centrex Flash for.

#### Centrex Flash Option

3. Select the **Centrex Flash Support** check box.
4. Click 'OK'.

**Note:** To set the duration, configure this option through the **Trunk Configuration** button.

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