Intel® NetStructure™ IPT Series on Windows

Configuration Guide

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Intel Converged Communications, Inc.
1515 Route 10
Parsippany, NJ 07054

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Contents

Figures

About This Publication

The following topics provide information about the *Intel® NetStructure™ IPT Series on Windows Configuration Guide*.

Purpose

This guide provides information about configuring Intel® NetStructure IPT Series boards in a Windows environment. Configuration procedures are included, as well as a description of each configuration parameter.

Intended Audience

This information is intended for:

- Developers:
  - System, application, and technology developers
  - Toolkit vendors
  - VAR/system integrators
- System Operators:
  - System and network administrators
  - Support personnel (crafts person)

How to Use This Publication

This information is organized as follows:

- Chapter 1, "Configuration Overview" describes the major configuration steps in the order in which they are performed. It also provides a brief overview of each aspect of configuring a system containing an Intel® NetStructure™ IPT Series boards.
- Chapter 2, "Intel® Dialogic™ Configuration Manager (DCM) Details" provides an overview of the Intel® Dialogic Configuration Manager (DCM) graphical user interface. This chapter also provides an overview of entities as they relate to DCM parameters.
- Chapter 3, "Configuration Procedures" contains detailed procedural information for configuring an Intel® NetStructure IPT Series board.

Related Information

For additional information related to configuring an Intel® NetStructure IPT Series board, see the following:

- For timely information that may affect configuration, see the Release Guide and Release Update. Be sure to check the Release Update for the system release you are using for any updates or corrections to this publication. Release Updates are available on the Telecom Support Resources web site at *http://resource.intel.com/telecom/support/documentation/releases/index.htm*
- For information about installing the system software, see the systems software installation guide supplied with your release.
- For additional information about the DCM, including parameter information, refer to the DCM Online Help supplied with DCM.
- For information about configuring Intel® NetStructure on DM3 Architecture boards, see the *Intel® NetStructure™ on DM3 Architecture for CompactPCI on Windows Configuration Guide*.
- For information about administrative functions relating to the Intel® NetStructure boards, see the systems administration guide supplied with your release.
- For information about administrative functions relating to the SNMP agent software, see the *SNMP Agent Software for Windows Administration Guide*.
- For information about configuring a third-party board as the TDM bus clock master, refer to the *Third Party Hardware TDM Bus Administration for Windows.*
- The Intel® Telecom Support Resources Web site at *http://developer.intel.com/design/telecom/support/* provides wide-ranging information in the form of technical notes, problem tracking, application notes, as well as other helpful documentation.
- *http://www.intel.com/network/csp/* (for product information)

Configuration Overview 1

The configuration overview describes the major configuration steps in the order in which they are performed. It also provides a brief overview of each aspect of configuring a system containing an Intel® NetStructure™ IPT Series boards

1.1 Major Configuration Steps

The following major steps are used to configure a system containing an Intel® NetStructure on IPT Series board:

1. Starting the Intel@ Dialogic Configuration Manager (DCM)
2. Configuring the Ethernet* ports
3. Modifying other DCM property sheet parameters (optional)
4. Initializing the system
5. Reconfiguring the system (optional)

Detailed information about the board configuration procedures is provided in Chapter 3, “Configuration Procedures”.

1.2 The Configuration Process

Once the Intel® Dialogic® System Release is installed, you start the configuration process by invoking the Intel® Dialogic Configuration Manager (DCM). The configuration parameters that you select in the DCM are used by the downloader to initialize the system when the boards are started. For detailed procedures, see Chapter 3, “Configuration Procedures”. An overview of the configuration process is as follows:

Starting the Intel@ Dialogic Configuration Manager (DCM)
: Within the DCM, each board has a set of property sheets that display the board’s configuration parameters, grouped together on tabs according to the type of board functionality they affect (for example, the Network or Driver tabs). For details about the DCM, including property sheets and parameters, see the DCM Online Help.

Configuring the Ethernet Ports
: This step provides instructions for modifying the parameters associated with the Ethernet* connectors, or ports, on the board. These parameters, which include the IP addresses and User Datagram Protocol (UDP) ports, must be set prior to running the Intel© NetStructure™ IPT Series board.

Modifying Other DCM Property Sheet Parameters

This step provides instructions for modifying additional DCM parameters. For details about DCM property sheets and associated parameters, refer to the DCM Online Help supplied with your system release.

Initializing the System

During system initialization, all required firmware for an Intel® NetStructure product is downloaded and configured using the identified parameter settings.

Reconfiguring a System

If hardware is added or configuration parameters need to be changed, the system must be reconfigured. Parameter changes can be made by invoking the DCM and changing the parameter values as needed. The system is then re-initialized by starting the system service.

Intel® Dialogic™ Configuration Manager (DCM) Details 2

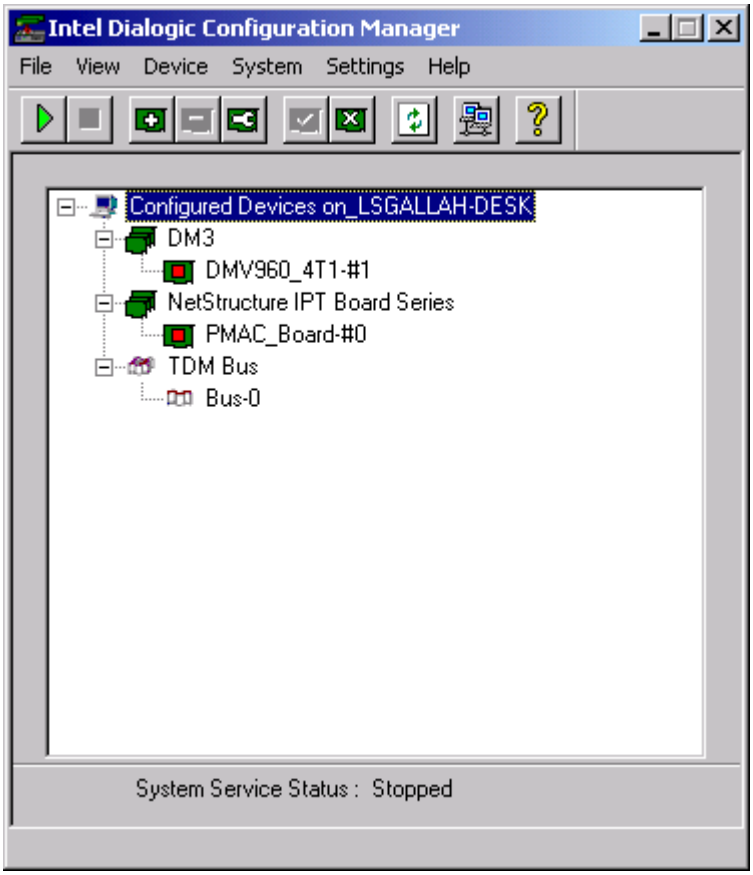
This chapter provides an overview of the Intel® Dialogic Configuration Manager (DCM) graphical user interface. It also provides an overview of entities as they relate to DCM parameters.

2.1 Intel® Dialogic Configuration Manager (DCM)

The Intel® Dialogic Configuration Manager (DCM) utility is a graphical user interface that allows you to customize board, system, and TDM bus configuration. The interface is also used to modify parameter settings, start and stop the system, and start and stop individual boards. In addition, the DCM can be set to automatically start the system, or individual boards in the system, using the default configuration settings.

The DCM main window contains pull-down menus, shortcut icons, and a system window. The system window contains a tree structure of the boards installed in your system. The top line of the display, Configured Devices on..., shows the name of the computer you connected to. If you entered an IP address instead of a computer name, the IP address is shown. Refer to Figure 1.

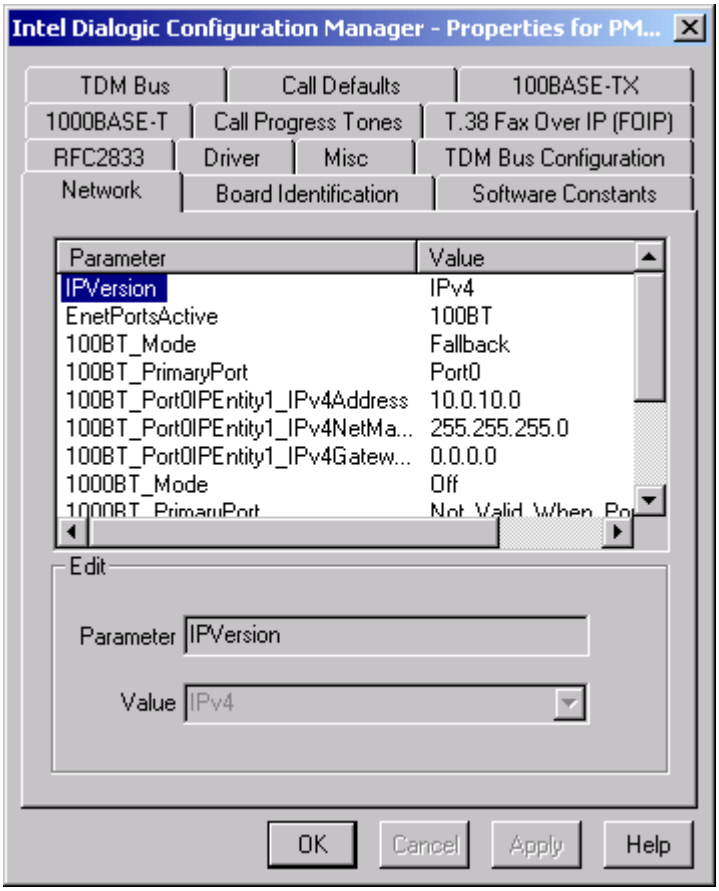
Figure 1. DCM Main Window



The first level of the tree structure shows the board families or categories of boards currently installed in your system, and also shows the TDM bus, which refers to the resource bus used to carry information between boards. The next level displays the model names of the boards in your system. If the board model names are not displayed, click the family name node(s) to expand the tree structure.

Within the DCM, each board has a set of property sheets that display a set of board's configuration parameters. Each property sheet displays a different set of parameters based on the functionality they affect. To access a Intel® NetStructure IPT Series board's property sheets, double-click on the board model name in the DCM main window. The Network property sheet is displayed by default. Refer to Figure 2.

Figure 2. Network Property Sheet



The property sheet's parameters and current value are displayed in the property sheet window. Select a parameter by clicking on it. Select a different property sheet by clicking on the appropriate property sheet tab at the top of the window.

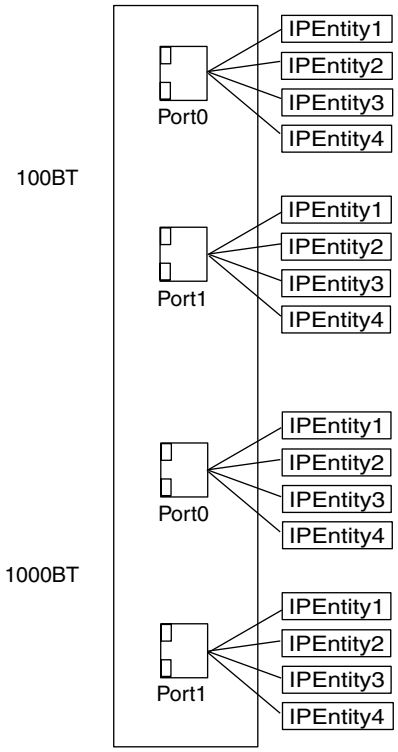
Parameter values are modified by selecting the parameter in the property sheet window and selecting (or entering) a new value in the Edit section of the property sheet windows. For instructions on modifying parameters, refer to Section 3.4, "Configuring the Ethernet* Ports", on page 17 and Section 3.5, "Modifying Other DCM Property Sheet Parameters", on page 21.

For additional information about the DCM, including pull-down menus, shortcut icons, and parameter reference information, refer to the DCM Online Help supplied with DCM. The DCM Online Help can be accessed from the Help pull-down menu located on the DCM main window or by pressing the F1 key. To access information about a specific parameter within DCM, highlight the parameter and press the F1 key.

2.2 Ports and Entities

Ports, as they relate to DCM parameters, refer to the physical Ethernet* connectors on an Intel® NetStructure™ IPT Series board. Entities are the IP pathways associated with each of the ports and each port supports up to four entities. Refer to Figure 3.

Figure 3. Ports and Entities



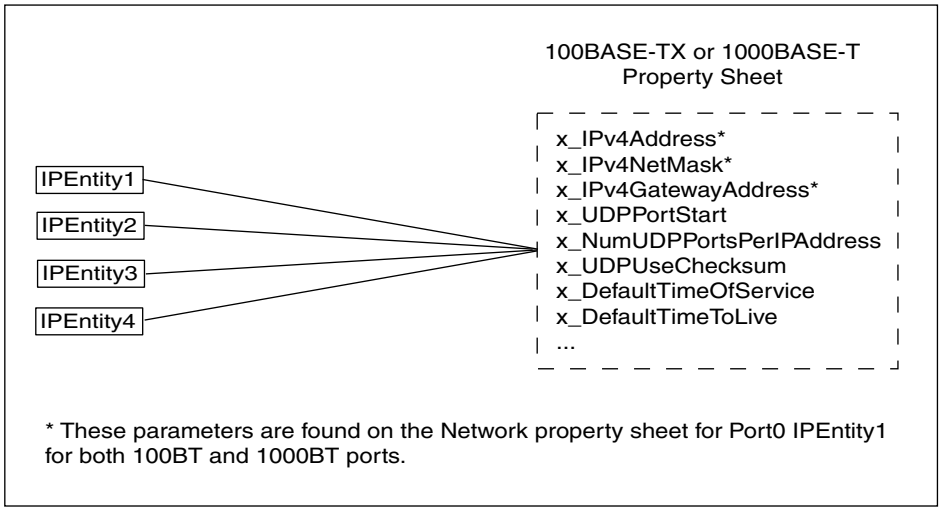
The first and second ports (top two ports) are 100Base-TX (100BT) Ethernet ports and are identified as port 0 and port 1, respectively. The third and fourth ports (bottom two ports) are 1000Base-T (1000BT) Ethernet ports and are also identified as port 0 and port 1, respectively.

Note: For this discussion, the terms 100Base-TX and 100BT, and the terms 1000Base-T and 1000BT, are used interchangeably when discussing port-specific parameters (since the names of these parameter are prefaced with either 100BT or 1000BT depending on the Ethernet interface being configured).

A system is configured as either a 100Base-TX or a 1000Base-T system. That means, all boards/ports in a system must be configured as either 100Base-TX or 1000Base-T Ethernet connections. The system cannot be configured to use both.

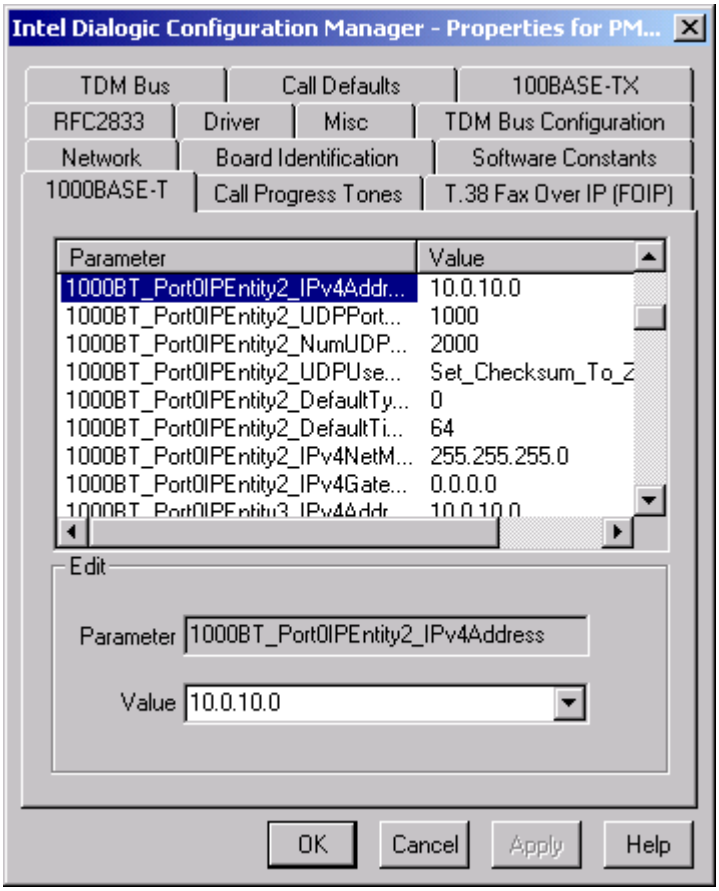
Each port contains four entities identified as IPEntity1 to IPEntity4. Each entity is defined by a set a parameters that includes an IP address, an IP gateway address, and User Datagram Protocol (UDP) ports. Refer to Figure 4.

Figure 4. Entity Parameters



The parameter names are prefaced with an entity-specific descriptor. This descriptor includes the Ethernet connector, the port number, and the entity number. For example, the full parameter name of **x_IPv4Address** for 1000BT Port0 IPEntity2 is **100BT_Port0IPEntity2_IPv4Address**. To see the DCM Port0 IPEntity2 parameters, refer to Figure 5.

Figure 5. Port 0 Entity 2 Parameters



Most parameters are located on the 100BASE-TX or 1000BASE-T property sheet, depending on the Ethernet connectors being configured. The exceptions to this are the **x_IPv4Address**, **x_IPv4NetMask**, and **x_IPv4GatewayAddress** parameters for Port0 IPEntity1. For quick access, these parameters are located on the Network property sheet (for both the 100BT and 1000BT ports). Refer to Figure 2.

Assuming Port0 is configured, the system assigns transmissions starting with the UDP port range associated with the Port0 IPEntity4 (**x_Port0IPEntity4_NumUDPPortsPerIPAddress**). When these UDP ports are consumed, the system uses the UDP port range associated with Port0 IPEntity3 (**x_Port0IPEntity3_NumUDPPortsPerIPAddress**). This continues with all Port0 IP addresses (IPEntity2 then IPEntity1) until all UDP ports are consumed.

Configuration Procedures 3

The following information provides detailed procedures for each major step in the configuration process (some steps may not apply to your configuration):

3.1 Assumptions and Prerequisites

The following assumptions and prerequisites exist regarding the configuration procedures:

- All required software, including prerequisites, have been installed according to the procedures in the software installation guide supplied with the system release.
- The Intel® Dialogic® System Software was installed in the default directory *C:\Program Files\Dialogic*. Command instructions, directory paths and environment variables are shown relative to the default installation directory.
- You have administrative privileges on the local computer and on any remote computer you connect to in order to use the DCM. Contact your network administrator to set up administrative privileges as required.
- A board other than the Intel® NetStructure™ IPT Series board has been designated as the TDM bus clock master. Intel® NetStructure™ IPT Series boards are pre-configured as TDM bus clock slaves, that is, another board, such as an Intel® NetStructure DM/V board, *must* be configured as the clock master. If a clock master is not present, the Intel® NetStructure™ IPT Series board will not download. To configure a DM3™ architecture boards as the clock master, refer to the *Intel® NetStructure on DM3™ Architecture for CompactPCI on Windows Configuration Guide*. To configure a third-party board as the clock master, refer to the *Third Party Hardware TDM Bus Administration for Windows*.

3.2 Order of Procedures

Configuration procedures should be performed in the order presented. Procedures that are required when initially configuring any system are noted as such. The additional procedures may be required depending on your system.

1. Starting the Intel® Dialogic® Configuration Manager (DCM) (**required**)

2. Configuring the Ethernet* ports (**required**)
3. Modifying other DCM property sheet parameters
4. Initializing the system (**required**)
5. Reconfiguring the system

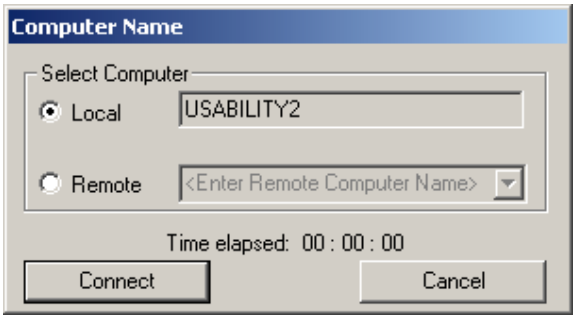
3.3 Starting the Intel® Dialogic® Configuration Manager (DCM)

Online Help is available for all parameters accessible through the Intel® Dialogic Configuration Manager (DCM). To access the help, select the Contents option from the Help pull-down menu. To start the DCM, perform the following steps:

1. From the Start menu, select Programs > System Release 6.0 cPCI > Configuration Manager-DCM to access the Intel® Dialogic Configuration Manager (DCM). The Computer Name dialog box will display. Refer to Figure 6.

   Note: The Computer Name dialog box will display automatically the first time you run the DCM with the local computer name as the default. If the Computer Name dialog box is not already displayed, you can get it by selecting the Connect option from the File pull-down menu or by clicking the Connect icon on the DCM main window.

Figure 6. Computer Name Dialog Box



Note: The Intel® Dialogic System uses DCOM objects to run Intel® Dialogic software on remote computers. Remote DCM Intel® Dialogic software internally sets up the DCOM security level programmatically. Do *not* use the Windows DCOM configuration utility *dcomcnfg.exe* to change the security settings. If you do, the Intel® Dialogic System may not work properly. For example, on a Windows machine, if you change the setting to Anonymous, the Intel® Dialogic System does not work properly.

2. Connect to either the local computer or a remote computer as follows:
   - To connect to the local computer, click the Connect button.

– To connect to a remote computer, select the Remote radio button, enter the remote computer name, and click the Connect button. For TCP/IP networks, you can enter the IP address instead of the remote computer name.

After you connect to a computer, a window will appear that indicates that boards are being detected followed by the DCM main window. The DCM main window contains a tree structure of the boards installed in your system. Refer to Figure 1, "DCM Main Window", on page 10. In addition to the DCM main window, a system tray icon is also created. For details about the DCM system tray icon, refer to the DCM Online Help.

Proceed with Section 3.4, "Configuring the Ethernet* Ports", on page 17.

3.4 Configuring the Ethernet* Ports

Certain port-specific and entity-specific parameters must be set prior to running the Intel© NetStructure™ IPT Series board.

1. Double-click the NetStructure IPT Board Series family name on the DCM main window to display the Intel® NetStructure IPT boards installed in the system. Refer to Figure 1, "DCM Main Window", on page 10.

2. Double-clicking a board model name to access the board's property sheets. The Network property sheet is displayed by default. Refer to Figure 2, "Network Property Sheet", on page 11.

   Note: When modifying parameters, you can click the Apply, OK, or Cancel buttons at any time. The Apply button saves your changes and the current property sheet remains displayed in DCM. The OK button saves your changes and returns you to the DCM main window. The Cancel buttons reverts parameter values to their previous settings (that is, since the last save).

3. If you want to configure 1000Base-TX Ethernet* ports, select the **EnetPortsActive** parameter and change the value to 1000BT. (The **EnetPortsActive** parameter defaults to 100BT).

4. Select the primary port by performing the following:

   4a. Select the **<100BT | 1000BT>_Mode** parameter by clicking on it; the parameter and its current value are displayed on the bottom of the property sheet.

   4b. In the Value window of the property sheet, select Fallback from the pull-down menu.

   4c. Select the **<100BT | 1000BT>_PrimaryPort** parameter by clicking on it; the parameter and its current value are displayed on the bottom of the property sheet.

   4d. In the Value window of the property sheet, select the primary (active) port, Port0 or Port1, from the pull-down menu.

   4e. Click the Apply button to save the change. (Click the Cancel button to ignore the changes.)

5. Modify parameters as follows:

5a. Select the **<100BT | 1000BT>_Port0IPEntity1_IPv4Address** parameter by clicking on it; the parameter and its current value are displayed on the bottom of the property sheet.

5b. In the Value window of the property sheet, type a valid IP address in the format 123.123.123.123 (for example, 146.152.108.156).

5c. Select the **<100BT | 1000BT>_Port0IPEntity1_IPv4NetMask** parameter by clicking on it; the parameter and its current value are displayed on the bottom of the property sheet.

5d. In the Value window of the property sheet, type a valid subnet mask in the format 123.123.123.123 (for example, 255.255.255.0).

5e. Select the **<100BT | 1000BT>_Port0IPEntity1_IPv4GatewayAddress** parameter by clicking on it; the parameter and its current value are displayed on the bottom of the property sheet.

5f. In the Value window of the property sheet, type a valid Gateway IP address in the format 123.123.123.123 (for example, 146.152.108.250).

5g. Click the Apply button to save the change. (Click the Cancel button to ignore the changes.)

6. If you are configuring 100Base-TX ports, select the 100BASE-TX property sheet. The 100BASE-TX property sheet is displayed in the DCM windows. Refer to Figure 7.

7. If you are configuring 1000Base-T ports, select the 1000BASE-T property sheet. The 1000BASE-T property sheet is displayed in the DCM windows. Refer to Figure 8.

Figure 7. 100BASE-TX Property Sheet

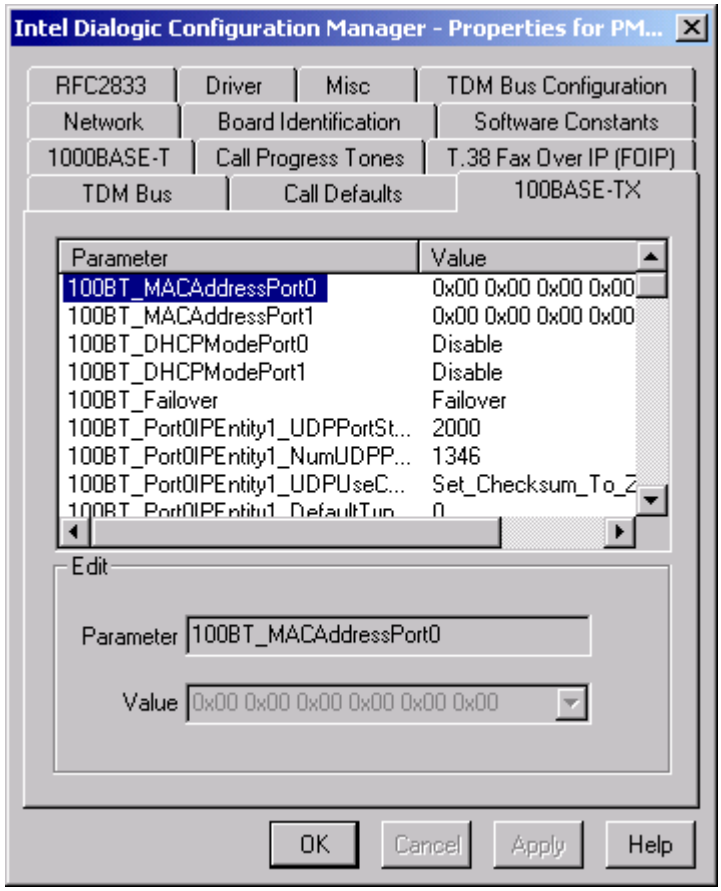
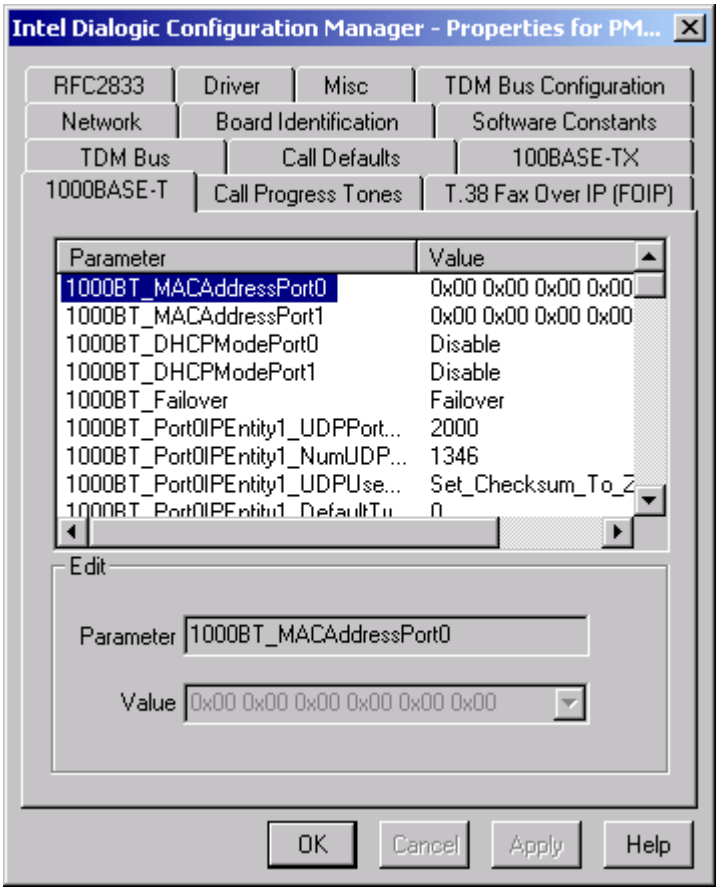


Figure 8. 1000BASE-T Property Sheet



8. Verify the **<100BT | 1000BT>_Port0IPEntity1_UDPPortStart** and the **<100BT | 1000BT>_Port0IPEntity1_NumUDPPortsPerIPAddress** parameters are appropriate for your system. If they default values are not appropriate, perform the following:

   8a. Select the **<100BT | 1000BT>_Port0IPEntity1_UDPPortStart** parameter by clicking on it; the parameter and its current value are displayed on the bottom of the property sheet.

   8b. In the Value window of the property sheet, type, or select from the pull-down menu, the initial User Datagram Protocol (UDP) port number.

   8c. Select the **<100BT | 1000BT>_Port0IPEntity1_NumUDPPortsPerIPAddress** parameter by clicking on it; the parameter and its current value are displayed on the bottom of the property sheet.

   8d. In the Value window of the property sheet, type the number of UDP ports allowed.

   Note: The total number of **x_NumUDPPortsPerIPAddress** for all active entities on a given port must add up to at least 960, to ensure there are enough UDP ports for each channel on the board.

   8e. Click the Apply button to save the change. (Click the Cancel button to ignore the changes.)

9. Repeat Step 5 and Step 8 for the remaining ports and entities that you want to configure (that is, for Port0 IPEntities 2, 3 and 4, and for Port1 IPEntities 1, 2, 3, and 4). If you are configuring 100Base-TX ports, these remaining entities are located on the 100BASE-TX property sheet. If you are configuring 1000Base-T ports, these remaining entities are located on the 1000BASE-T property sheet.

10. Click the OK button to return to the DCM main window.

If you need to change additional DCM parameters, see Section 3.5, "Modifying Other DCM Property Sheet Parameters", on page 21. Otherwise, if you are satisfied with all configuration information, proceed with Section 3.6, "Initializing the System", on page 23.

3.5 Modifying Other DCM Property Sheet Parameters

Within the DCM, each board has a set of property sheets that display the board's configuration parameters, grouped together on tabs according to the type of board functionality that they affect.

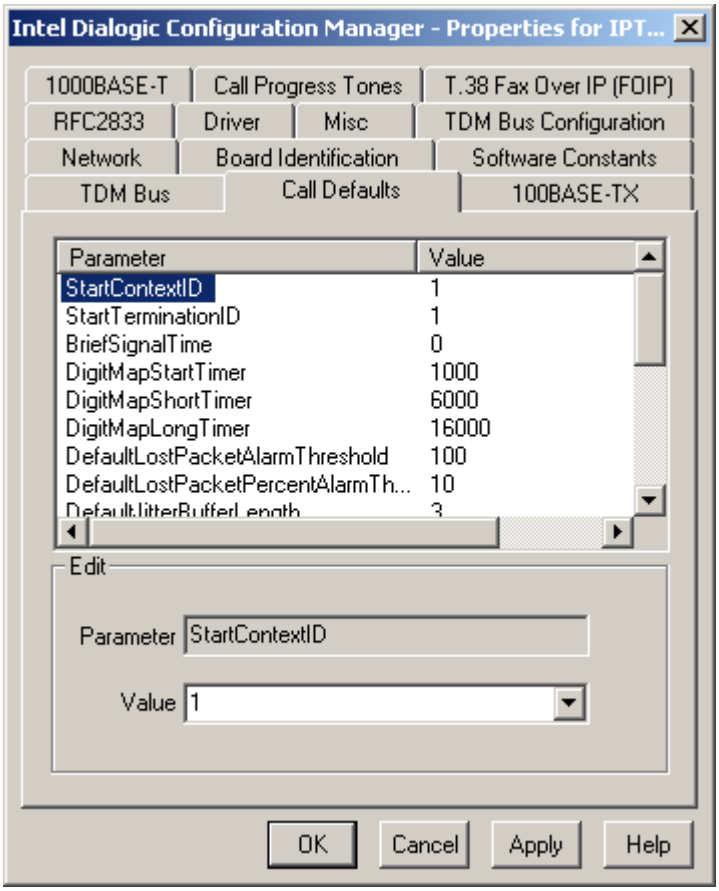
Note: To configure a third-party board installed in your system, refer to the *Third Party Hardware TDM Bus Administration for Windows* supplied with your system release.

To change a board's configuration parameters, follow this procedure:

1. Double-clicking the board model name on the DCM main window to display the board's property sheets. Refer to Figure 2, "Network Property Sheet", on page 11.

2. Click a property sheet tab to view all of the board parameters associated with a particular property sheet. For example, to view the parameters associated with the Call Progress Tones property sheet, click the Call Progress Tones tab. The Call Defaults property sheet and associated parameters are displayed in the DCM window. Refer to Figure 9.

Figure 9. Call Defaults Property Sheet



Refer to the DCM Online Help for a description of property sheets and parameters. The DCM Online Help can be accessed from the Help pull-down menu located on the DCM main window or by pressing the F1 key. To access information about a specific parameter, highlight the parameter in the DCM and press the F1 key.

3. Select a parameter by clicking on it; the selected parameter and its current value are displayed on the bottom of the property sheet.

4. In the Value window of the property sheet, type the parameter value or select a value from the drop-down list.

5. Click the Apply button to save the change. (Click the Cancel button to ignore the changes.)

6. Repeat this procedure for all parameters that need to be modified.

7. Click the OK button to return to the DCM main window.

Proceed with Section 3.6, “Initializing the System”, on page 23.

3.6 Initializing the System

To initialize the system for the first time, proceed as follows:

1. Select the Start System option from the System pull-down menu or click the Start All Enabled Devices icon on the DCM main window.

2. Verify the system has started (indicated by a status of Started in the System Service Status line at the bottom of the DCM main window).

3. After starting the system for the first time, you may want to use some of the tools provided by the system software to verify that your system is operating properly. Look in the *\Program Files\Dialogic/Demos* directory for demo programs.

4. If you have problems, see the Troubleshooting section of the system administration guide supplied with the system release. Problems on initial startup are typically caused by errors in your configuration settings.

Once the system is initialized for the first time, you do not need to reboot the system to implement additional configuration changes. For a detailed procedure, refer to Section 3.7, "Reconfiguring the System", on page 23.

3.7 Reconfiguring the System

You only have to reboot the system for the initial startup. Once the system is initialized for the first time, if you need to modify and re-download the parameters, performing the following in the DCM.

1. To stop a single board, perform the following:

   1a. Ensure your application is notified that the board is no longer in service and the channels are closed.

   1b. Select the board from the DCM main window by clicking on it (refer to Figure 1, "DCM Main Window", on page 10).

   1c. Select the Stop Device option from the Device pull-down menu or right click on the board and select the Stop Devices option from the pop-up menu. A red square in the board icon (to the left of the board name in the DCM main window) indicates the board is stopped.

2. To stop the entire system, perform the following:

   2a. Stop the application and ensure all channels are closed.

   2b. Select the Stop System option from the System pull-down menu or click the Stop All Enabled Devices icon on the DCM main window. A status of *Stopped,* in the System Service Status line at the bottom of the DCM main window, indicates the system is started.

3. If you wish to restore the board's DCM parameter settings to the values stored on the board, select the board from the DCM main window by clicking on it and then select the Restore Defaults option from the DCM Device pull-down menu. This resets *all* of the board's modified parameters to their default values in the DCM.

4. If you wish to restore the configuration parameters to the factory default values, type the following at the command line:

   ```
   pmacadmin -eics
   pmacadmin -r
   ```

   Then select the Restore Defaults option from the DCM Device pull-down menu.

5. If necessary, modify parameters as described in Section 3.4, "Configuring the Ethernet* Ports", on page 17 or Section 3.5, "Modifying Other DCM Property Sheet Parameters", on page 21.

6. To start a single board, perform the following:

   6a. Select the board from the DCM main window by clicking on it.

   6b. Select the Start Device option from the Device pull-down menu or right click on the board and select the Start Devices option from the pop-up menu. A green arrow head in the board icon (to the left of the board name in the DCM main window) indicates the board is started.

7. To start the entire system, select the Start System option from the System pull-down menu or click the Start All Enabled Devices icon on the DCM main window. A status of *Started,* in the System Service Status line at the bottom of the DCM main window, indicates the system is started.

The firmware and new configuration settings are downloaded once the board or system is started. For detailed procedures about other administrative tasks, see the system release administration guide supplied with your software.

DCM Parameter Reference 4

This section lists and describes all parameters contained in the Intel™ Dialogic Configuration Manager (DCM). Parameters are grouped based on the property sheet on which they reside. DCM property sheets include the following:

4.1 100BASE-TX/1000BASE-T Property Sheets

The 100BASE-TX/1000BASE-T Property Sheets allow you to configure the Ethernet* ports on your board. Since the parameters on these property sheets are the same except for the prefix 100BT or 1000BT, the parameter descriptions for both property sheet have been consolidated in this section. For additional port-specific parameters, see also Section 4.7, “Network Property Sheet”, on page 45.

Note: When configuring parameters on the 100BASE-TX property Sheet, the parameter names are prefaced with 100BT. When configuring parameters on the 1000BASE-T property sheet, the parameter names are prefaced with 1000BT. Also, Port<x> denotes either Port0 or Port1, depending on the Ethernet port being configured, and IPEntity<z> denotes IPEntity1, IPEntity2, IPEntity3, or IPEntity4, depending on the entity being configured.

- <100BT | 1000BT>_MACAddressPort0
- <100BT | 1000BT>_MACAddressPort1
- <100BT | 1000BT>_DHCPModePort0
- <100BT | 1000BT>_DHCPModePort1
- <100BT | 1000BT>_Failover
- <100BT | 1000BT>_Port<x>IPEntity<z>IPv4Address

- <100BT | 1000BT>_Port<x>IPEntity<z>UDPPortStart
- <100BT | 1000BT>_Port<x>IPEntity<z>NumUDPPortsPerIPAddress
- <100BT | 1000BT>_Port<x>IPEntity<z>UDPUseChecksum
- <100BT | 1000BT>_Port<x>IPEntity<z>DefaultTypeOfService
- <100BT | 1000BT>_Port<x>IPEntity<z>DefaultTimeToLive
- <100BT | 1000BT>_Port<x>IPEntity<z>IPv4NetMask
- <100BT | 1000BT>_Port<x>IPEntity<z>IPv4GatewayAddress

<100BT | 1000BT>_MACAddressPort0

Description: The **MACAddressPort0** parameter denotes the Media Access Control (MAC) address for Port 0.

Values: A six byte array

Guidelines: The **MACAddressPort0** parameter is read-only.

<100BT | 1000BT>_MACAddressPort1

Description: The **MACAddressPort1** parameter denotes the Media Access Control (MAC) address for Port 1.

Values: A six byte array

Guidelines: The **MACAddressPort1** parameter is read-only.

<100BT | 1000BT>_DHCPModePort0

Description: The **DHCPModePort0** parameter determines whether or not Dynamic Host Configuration Protocol (DHCP) is enabled for Port 0.

Values:

- Disable [default]
- Enable

Note: If DHCP is enabled on an Ethernet port, the board will only support one IP address on that port.

Guidelines: The **DHCPModePort0** parameter is read-only.

<100BT | 1000BT>_DHCPModePort1

Description: The **DHCPModePort1** parameter determines whether or not Dynamic Host Configuration Protocol (DHCP) is enabled for Port 1.

Values:

- Disable [default]
- Enable

Note: If DHCP is enabled on an Ethernet port, the board will only support one IP address on that port.

Guidelines: The **DHCPModePort1** parameter is read-only.

<100BT | 1000BT>_Failover

Description: The **Failover** parameter defines the behavior of packet traffic on Ethernet ports in the event of an Ethernet port failure. If **Failover** is active and the **Mode** parameter is set to LoadSharing, then all network traffic is re-routed from the failed port to the port that is still active. If **Failover** is active and **Mode** is set to Fallback, network traffic is moved from the **PrimaryPort** to the backup port. If **Failover** is not active and a port fails, call traffic is not moved.

Values:

- No_Failover [default]
- Failover

Guidelines: The **Failover** parameter is read/write but this parameter must be set to No_Failover. Failover is not currently supported.

<100BT | 1000BT>_Port<x>IPEntity<z>IPv4Address

Description: The **IPv4Address** parameter defines the IP address for RTP terminations.

Note: This parameter is found on the Network property sheet for port 0 IP entity 1.

Values: A valid IP address. The default value is 10.0.10.0.

Note: A value of 255.255.255.255 make the IP port inactive.

Guidelines: The **IPv4Address** parameter is read/write.

<100BT | 1000BT>_Port<x>IPEntity<z>UDPPortStart

Description: The **UDPPortStart** parameter sets the initial User Datagram Protocol (UDP) port number for an IP address to support RTP packets.

Values: A positive integer or hexadecimal value. The default value is 0.

Note: The lower order 11 bits of the value must be set to 0.

Guidelines: The **UDPPortStart** parameter is read/write.

<100BT | 1000BT>_Port<x>IPEntity<z>NumUDPPortsPerIPAddress

Description: The **NumUDPPortsPerIPAddress** parameter defines the number of UDP ports allowed on an IP address for both RTP and RTCP packets.

Values: A positive integer or hexadecimal value. The default value is 1346.

Guidelines: The **NumUDPPortsPerIPAddress** parameter is read/write.

<100BT | 1000BT>_Port<x>IPEntity<z>UDPUseChecksum

Description: The **UDPUseChecksum** parameter denotes the calculated UDP checksum. A checksum is a count of the number of bits in a packet that is included with the packet so that the

receiving end can check to see whether the same number of bits arrived. If the counts are identical, the complete transmission was received.

Values:

- Set_Checksum_To_Zero [default]
- Transmit_UDP_checksums

Guidelines: The **UDPUseChecksum** parameter is read/write.

<100BT | 1000BT>_Port<x>IPEntity<z>DefaultTypeOfService

Description: The **DefaultTypeOfService** parameter indicates the default value that will be used in the Type of Service (TOS) field of all transmitted IP packet headers. The TOS field specifies transmission precedence for the packet.

Values: A positive integer from 0 to 255. The default value is 0 (normal precedence).

Guidelines: The **DefaultTypeOfService** parameter is read/write.

<100BT | 1000BT>_Port<x>IPEntity<z>DefaultTimeToLive

Description: The **DefaultTimeToLive** parameter sets the default value that will be used in the Time To Live (TTL) field of all transmitted IP packet headers. The value determines the number of routers through which the packet can pass.

Values: A positive integer or hexadecimal value. The default value is 64.

Guidelines: The **DefaultTimeToLive** parameter is read/write.

<100BT | 1000BT>_Port<x>IPEntity<z>IPv4NetMask

Description: The **IPvNetMask** parameter denotes the network mask for the classes of IPv4 addresses.

Note: This parameter is found on the Network property sheet for port 0 IP entity 1.

Values: A valid network mask address. The default value is 255.255.255.0 (Class C).

Guidelines: The **IPv4NetMask** parameter is read/write.

<100BT | 1000BT>_Port<x>IPEntity<z>IPv4GatewayAddress

Description: The **IPv4GatewayAddress** sets the IPv4 gateway address (packet router address).

Note: This parameter is found on the Network property sheet for port 0 IP entity 1.

Values: A valid IP address. The default value is 10.0.10.0.

Guidelines: The **IPv4GatewayAddress** parameter is read/write.

4.2 Board Identification Property Sheet

The Board Identification property sheet contains the following parameters:

- AUID
- BoardPresent
- BoardEnabled
- PhysicalShelf
- PhysicalSlot
- PciBusNumber
- PciSlotNumber
- DriverBoardId

AUID

Description: The **AUID** parameter defines the Addressable Unit Identifier (AUID) of the Intel® NetStructure IPT Series board. The AUID is a unique string of numbers that identifies an Intel® Dialogic™ system component with which communications may be initiated. In the context of the DCM, the AUID is a unique identifier for an Intel® NetStructure IPT Series board.

Values: A positive integer or hexadecimal value

Guidelines: The **AUID** parameter is read-only and is set by the Intel® Dialogic System Software.

BoardPresent

Description: The **BoardPresent** parameter indicates whether or not the board is physically present in the system and was detected by the Intel® Dialogic System Software.

Values:

- Yes
- No

Guidelines: The **BoardPresent** parameter is read-only and is determined by the Intel® Dialogic System Software.

A value of No is displayed if you enter configuration data for a board that is not in the system or if a board is improperly installed or malfunctioning.

BoardEnabled

Description: The **BoardEnabled** parameter determines whether or not the system should start the board when the system is started.

Values:

- Yes [default]
- No

Guidelines: The **BoardEnabled** parameter is read/write. You can temporarily suspend the use of a board by setting this parameter to No.

PhysicalShelf

Description: The **PhysicalShelf** parameter denotes the number of the shelf in which the board is installed. Individual cPCI chassis can be assigned unique shelf identification numbers. The shelf identification number for a chassis can then be reported by any board that is plugged into the chassis backplane.

Values: A positive integer or hexadecimal value

Guidelines: The **PhysicalShelf** parameter is determined by the cPCI chassis. It only applies to cPCI boards and cannot be modified through the DCM.

PhysicalSlot

Description: The **PhysicalSlot** parameter specifies the number of the physical slot in which the cPCI board is installed.

Values: A positive integer or hexadecimal value

Guidelines: The **PhysicalSlot** parameter is read-only and only applies to cPCI boards. A value of 1 indicates the first slot on the left.

PciBusNumber

Description: The **PCIBusNumber** parameter indicates the number of the PCI bus on which the board is installed.

Values: A positive integer or hexadecimal value

Guidelines: The **PciBusNumber** parameter is read-only.

PciSlotNumber

Description: The **PCISlotNumber** denotes the number of the PCI slot in which the board is installed.

Values: A positive integer or hexadecimal value

Guidelines: The **PCISlotNumber** parameter is read-only.

DriverBoardId

Description: The **DriverBoardId** parameter specifies the identification number that the Intel® NetStructure IPT Series device driver assigns to the board.

Values: A positive integer or hexadecimal value

Guidelines: The **DriverBoardId** parameter is read-only and is determined by the Intel® Dialogic System Software.

4.3 Call Defaults Property Sheet

The Call Defaults property sheet contains parameters that allow you to customize the call handling properties of the board.

Note: These parameters should not be modified by the user.

- StartContextID
- StartTerminationID
- BriefSignalTime
- DigitMapStartTimer
- DigitMapShortTimer
- DigitMapLongTimer
- DefaultLostPacketAlarmThreshold
- DefaultLostPacketPercentAlarmThreshold
- DefaultJitterBufferLength
- DefaultInterarrivalJitterAlarmThreshold
- DefaultRTPPacketLatencyAlarmThreshold
- DefaultEchoTailLength
- DefaultEchoReturnLoss
- DefaultTDMTransmitAttenuation
- DefaultVoiceActivityDetection
- DefaultVoiceFramesPerPacket
- DefaultLocalCodec
- DefaultRemoteCodec

Note: The Context-Termination associations supported by Intel® NetStructure IPT Series boards are modelled after the concepts outlined in the Megaco (ITU H.248) standard.

StartContextID

Description: The **StartContextID** parameter defines the lowest number Context ID, which the board can assign or be assigned by a host. The Context ID is a 16-bit value that uniquely identifies a context for call control purposes. Context IDs are assigned from a contiguous block of numbers starting with the value set by the **StartContextID** parameter.

Values: A positive integer or hexadecimal value. The default value is 1.

Note: 0 is an invalid value because it is reserved for the NULL context.

Guidelines: The **StartContextID** parameter is read/write, although it is recommended that you leave this parameter at its default value.

StartTerminationID

Description: The **StartTerminationID** parameter indicates the lowest number Termination ID, which the board can assign or be assigned by a host. The Termination ID is a 16-bit value that

uniquely identifies a termination. Termination IDs are assigned from a contiguous block of numbers starting with the value set by the **StartTerminationID** parameter.

Values: A positive integer or hexadecimal value. The default value is 1.

Guidelines: The **StartTerminationID** parameter is read/write, although it is recommended that you leave this parameter at its default value.

BriefSignalTime

Description: The **BriefSignalTime** parameter specifies the time duration that any signal will be played on a termination.The value must be set in milliseconds.

Values: A positive integer or hexadecimal value. The default value is 0.

Guidelines: The **BriefSignalTime** parameter is read/write.

DigitMapStartTimer

Description: The **DigitMapStartTimer** parameter defines the time-out used when waiting for the first digit of a dial string. A digit map is a dialing plan that is used for detecting and reporting digit events that are received on a termination. The value must be set in milliseconds.

Values: A positive integer or hexadecimal value.The default value is 1000.

Guidelines: The **DigitMapStartTimer** parameter is read/write.

DigitMapShortTimer

Description: The **DigitMapShortTimer** parameter sets the inter-digit time-out when a match is found within a dial string, but there is still the possibility of receiving more digits that could give a match on a different dial string. A digit map is a dialing plan that is used for detecting and reporting digit events that are received on a termination. The value must be set in milliseconds.

Values: A positive integer or hexadecimal value. The default value is 6000.

Guidelines: The **DigitMapShortTimer** is read/write.

DigitMapLongTimer

Description: The **DigitMapLongTimer** parameter sets the inter-digit time-out when there is at least one more digit to match in a dial string. A digit map is a dialing plan that is used for detecting and reporting digit events that are received on a termination. The value must be set in milliseconds.

Values: Any positive integer or hexadecimal value. The default value is 16000.

Guidelines: The **DigitMapLongTimer** parameter is read/write.

DefaultLostPacketAlarmThreshold

Description: For packet terminations, a value of lost packets that is greater than the **DefaultLostPacketAlarmThreshold** parameter causes an Excessive Lost Packet event to be generated.

Values: A positive integer or hexadecimal value. The default value is 100.

Note: A value of 0 indicates that no threshold is monitored and therefore no alarm event is reported.

Guidelines: The **DefaultLostPacketAlarmThreshold** parameter is read/write. This value is used for all RTP terminations on the board.

DefaultLostPacketPercentAlarmThreshold

Description: For packet type terminations, a percentage of lost packets greater than the **DefaultLostPacketPercentAlarmThreshold** value causes an Excessive Lost Packet Percent event to be generated.

Values: 0 to100 (0 to 100%) The default value is 10.

Note: A value of 0 means no threshold is monitored and therefore no alarm will be reported.

Guidelines: The **DefaultLostPacketAlarmPercentThreshold** parameter is read/write. This value is used for all RTP terminations on the board.

DefaultJitterBufferLength

Description: The **DefaultJitterBufferLength** parameter sets the default length of packet jitter buffers for all packet termination types on the board.The value must be set in milliseconds.

Values: A positive integer or hexadecimal value. The default value is 3.

Note: The jitter buffer is initially filled to one half of this value.

Guidelines: The **DefaultJitterBufferLength** parameter is read/write. This value is used for all RTP terminations on the board.

DefaultInterarrivalJitterAlarmThreshold

Description: If jitter exceeds the **DefaultInterarrivalJitterAlarmThreshold** parameter value, an Excessive Interarrival Jitter event is generated. The value must be set in milliseconds.

Values: A positive integer or hexadecimal value. The default value is 30.

Guidelines: The **DefaultInterarrivalJitterAlarmThreshold** parameter is read/write. This parameter sets the threshold for all packet termination types on the board.

DefaultRTPPacketLatencyAlarmThreshold

Description: If RTP packet latency exceeds the **DefaultRTPPacketLatencyAlarmThreshold** value, an RTP Packet Latency event is generated. The value must be set in milliseconds.

Values: A positive integer or hexadecimal value. The default value is 950.

Note: A value of 0 means no threshold is monitored and therefore no alarm will be generated.

Guidelines: The **DefaultRTPPacketLatencyAlarmThreshold** parameter is read/write. The value is used for all RTP terminations on the board.

DefaultEchoTailLength

Description: The **DefaultEchoTailLength** parameter specifies the echo cancellation tail length.

Values:

- No_Echo_Cancellation [default]
- 8ms
- 16ms
- 32ms
- 64ms
- 96ms
- 128ms

Guidelines: The **DefaultEchoTailLength** parameter is read/write. This value is used for all TDM terminations on the board.

DefaultEchoReturnLoss

Description: The **DefaultEchoReturnLoss** parameter is a board level property of the echo cancellation return loss for all terminations using echo cancellation.

Values:

- minus6db [default]
- minus3db
- 0db

Guidelines: The **DefaultEchoReturnLoss** parameter is read/write. This value is the default for all terminations that use echo cancellation.

DefaultTDMTransmitAttenuation

Description: The **DefaultTDMTransmitAttenuation** parameter sets the attenuation (gain), in decibels, for TDM terminations applied to samples transmitted to the TDM bus.

Values:

- ALC_Disabled [default]
- minus5dB
- minus10dB
- minus15dB
- minus20dB
- minus25dB
- minus30dB
- minus35dB

Guidelines: The **DefaultTDMTransmitAttenuation** parameter is read/write. This value is the default used by all TDM terminations on the board.

DefaultVoiceActivityDetection

Description: The **DefaultVoiceActivityDetection** parameter controls the Voice Activity Detection (VAD) and the encoding of silence suppression packets.

Values:

- Disabled [default]: the VAD is disabled
- Enabled_but_no_Silence_Frame: VAD is disabled and silence suppression is not used
- Default_Silence_Suppression: VAD is enabled and silence suppressions is set to default value
- VxTel_VAD: VxTel VAD is enabled

Guidelines: The **DefaultVoiceActivityDetection** parameter is read/write. This value is the default used by all TDM terminations on the board.

DefaultVoiceFramesPerPacket

Description: The **DefaultVoiceFramesPerPacket** parameter determines the number of voice encoded frames combined into a single packet.

Values: Any positive integer or hexadecimal value. The default value is 1.

Guidelines: The **DefaultVoiceActivityDetection** parameter is read/write. This value is the default used by all TDM terminations on the board.

DefaultLocalCodec

Description: The **DefaultLocalCodec** parameter determines which codec is applied to media that is received from the network by the board.

Values:

- G.711_MuLaw_10ms_64kbps [default]
- G.711_Alaw_5ms_64kbps
- G.711_Alaw_10ms_64kbps
- G.711_Alaw_20ms_64kbps
- G.711_Alaw_30ms_64kbps
- G.711_Mulaw_5ms_64kbps
- G.711_Mulaw_20ms_64kbps
- G.711_Mulaw_30ms_64kbps
- G.723.1_40ms_5.3kbps
- G.723.1_30ms_6.3kbps
- G.726_10ms_32kbps
- G.726_20ms_32kbps
- G.726_40ms_32kbps
- G.726_60ms_32kbps
- G.729A_10ms_8kbps
- NONE

Guidelines: The **DefaultRemoteCodec** parameter is read/write.

DefaultRemoteCodec

Description: The **DefaultRemoteCodec** parameter determines which codec is applied to media that is sent to the network by the board.

Values:

- G.711_MuLaw_10ms_64kbps [default]
- G.711_Alaw_5ms_64kbps
- G.711_Alaw_10ms_64kbps
- G.711_Alaw_20ms_64kbps
- G.711_Alaw_30ms_64kbps
- G.711_Mulaw_5ms_64kbps
- G.711_Mulaw_20ms_64kbps
- G.711_Mulaw_30ms_64kbps
- G.723.1_40ms_5.3kbps
- G.723.1_30ms_6.3kbps
- G.726_10ms_32kbps
- G.726_20ms_32kbps
- G.726_40ms_32kbps
- G.726_60ms_32kbps
- G.729A_10ms_8kbps
- NONE

Guidelines: The **DefaultRemoteCodec** parameter is read/write.

4.4 Call Progress Tones Property Sheet

The Call Progress Tones property sheet contains parameters that allow you to explicitly set the characteristics of certain call progress tones that are generated by the board.

Note: These parameters should not be modified by the user.

- CallProgressTones
- DialtoneFreqLow
- DialtoneFreqHigh
- RingingOnTime_in_5ms_units
- RingingOffTime_in_5ms_units
- RingingFreqLow
- RingingFreqHigh
- BusyOnTime_in_5ms_units
- BusyOffTime_in_5ms_units
- BusyFreqLow
- BusyFreqHigh
- CongestOnTime_in_5ms_units

- CongestOffTime_in_5ms_units
- CongestFreqLow
- CongestFreqHigh
- CallWaitingOnTime_in_5ms_units
- CallWaitingOffTime_in_5ms_units
- CallWaitingFreqLow
- CallWaitingFreqHigh
- DefaultDTMFPulseTime
- DefaultDTMFGuardTime
- DefaultDTMFInterdigitTime
- DefaultDTMFVolume

CallProgressTones

Description: The **CallProgressTones** parameters allows you to automatically set the values of all parameters on the Call Progress Tones property sheet or to manually set user-defined values for each parameter.

Values:

- US [default]: sets all other parameters on the Call Progress Tones property sheet to values that are consistent with the standard application of audible tones for end users in the United States.
- ITU_T_E.180: sets all parameters on the Call Progress Tones property sheet to values that are consistent with the International Telecommunication Union Telecommunications Standardization Section (ITU_U) E.180 Recommendation for the application of audible tones for end users.
- User_Defined: allows the user to customize each parameter on the Call Progress Tones property sheet.

Guidelines: The **CallProgressTones** parameter is read/write. If you set the value to US or ITU_T_E1.80, then you cannot configure any other parameters on the Call Progress Tones property sheet (the system sets the appropriate values). The User_Defined setting allows you to individually set each parameter on the Call Progress Tones property sheet.

DialtoneFreqLow

Description: The **DialtoneFreqLow** parameter sets the low frequency component of the dial tone that is generate by the board.

Values: The **DialtoneFreqLow** parameter can be set to any one of the values:

250Hz	600Hz	950Hz	1477Hz	2040Hz
300Hz	620Hz	1000Hz	1500Hz	2060Hz
350Hz [default]	660Hz	1004Hz	1620Hz	2100Hz
380Hz	697Hz	1020Hz	1633Hz	2130Hz
400Hz	700Hz	1100Hz	1700Hz	2225Hz
420Hz	750Hz	1140Hz	1740Hz	2280Hz

425Hz	770Hz	1209Hz	1780Hz	2400Hz
440Hz	780Hz	1300Hz	1800Hz	2450Hz
450Hz	852Hz	1336Hz	1860Hz	2600Hz
480Hz	900Hz	1380Hz	1980Hz	2750Hz
540Hz	941Hz	1400Hz	2010Hz	3825Hz

Guidelines: The **DialtoneFreqLow** parameter is read/write.

DialtoneFreqHigh

Description: The **DialtoneFreqHigh** parameter sets the high frequency component of the dial tone that is generated by the board.

Values: For a list of valid settings, refer to the table in the Values section of "DialtoneFreqLow", on page 38. The default value is 440Hz.

Guidelines: The **DialtoneFreqHigh** parameter is read/write.

RingingOnTime_in_5ms_units

Description: The **RingingOnTime_in_5ms_units** parameter specifies the on time value (in 5 millisecond units) for the ringing tone that is generated by the board.

Values: A positive integer or hexadecimal value. The default value is 400 (2000ms).

Guidelines: The **RingingOnTime_in_5ms_units** parameter is read/write.

RingingOffTime_in_5ms_units

Description: The **RingingOffTime_in_5ms_units** parameter specifies the off time value (in 5 millisecond units) for the ringing tone that is generated by the board.

Values: A positive integer or hexadecimal value. The default value is 800 (4000ms).

Guidelines: The **RingingOffTime_in_5ms_units** parameter is read/write.

RingingFreqLow

Description: The **RingingFreqLow** parameter sets the low frequency component of the ringing tone that is generated by the board.

Values: For a list of valid settings, refer to the table in the Values section of "DialtoneFreqLow", on page 38. The default value is 440Hz.

Guidelines: The **RingingFreqLow** parameter is read/write.

RingingFreqHigh

Description: The **RingingFreqHigh** parameter indicates the high frequency component of the ringing tone that is generated by the board.

Values: For a list of valid settings, refer to the table in the Values section of "DialtoneFreqLow", on page 38. The default value is 480Hz.

Guidelines: The **RingingFreqHigh** parameter is read/write.

BusyOnTime_in_5ms_units

Description: The **BusyOnTime_in_5ms_units** parameter sets the on time value (in 5 millisecond units) for the busy tone that is generated by the board.

Values: A positive integer or hexadecimal value. The default value is 100 (500ms).

Guidelines: The **BusyOnTime_in_5ms_units** parameter is read/write.

BusyOffTime_in_5ms_units

Description: The **BusyOffTime_in_5ms_units** parameter sets the off time value (in 5 millisecond units) for a busy tone that is generated by the board.

Values: A positive integer or hexadecimal value. The default value is 100 (500ms).

Guidelines: The **BusyOffTime_in_5ms_units** parameter is read/write.

BusyFreqLow

Description: The **BusyFreqLow** parameter indicates the low frequency component of the busy tone that is generated by the board.

Values: For a list of valid settings, refer to the table in the Values section of "DialtoneFreqLow", on page 38. The default value is 480Hz.

Guidelines: The **BusyFreqLow** parameter is read/write.

BusyFreqHigh

Description: The **BusyFreqHigh** parameter sets the high frequency component of the busy tone that is generated by the board.

Values: For a list of valid settings, refer to the table in the Values section of "DialtoneFreqLow", on page 38. The default value is 620Hz.

Guidelines: The **BusyFreqHigh** parameter is read/write.

CongestOnTime_in_5ms_units

Description: The **CongestOnTime_in_5ms_units** parameter sets the on time value (in 5 millisecond units) for the network congestion tone that is generated by the board.

Values: A positive integer or hexadecimal value. The default value is 50 (250ms).

Guidelines: The **CongestOnTime_in_5ms_units** parameter is read/write.

CongestOffTime_in_5ms_units

Description: The **CongestOffTime_in_5ms_units** parameter sets the off time value (in 5 millisecond units) for the network congestion tone that is generated by the board.

Values: A positive integer or hexadecimal value. The default value is 50 (250ms).

Guidelines: The **CongestOffTime_in_5ms_units** parameter is read/write.

CongestFreqLow

Description: The **CongestFreqLow** parameter indicates the low frequency component of the network congestion tone that is generated by the board.

Values: For a list of valid settings, refer to the table in the Values section of "DialtoneFreqLow", on page 38. The default value is 480Hz.

Guidelines: The **CongestFreqLow** parameter is read/write.

CongestFreqHigh

Description: The **CongestFreqHigh** parameter sets the high frequency component of the network congestion tone that is generated by the board.

Values: For a list of valid settings, refer to the table in the Values section of "DialtoneFreqLow", on page 38. The default value is 620Hz.

Guidelines: The **CongestFreqHigh** parameter is read/write.

CallWaitingOnTime_in_5ms_units

Description: The **CallWaitingOnTime_in_5ms_units** parameter specified the on time value (in 5 millisecond units) for the call waiting tone that is generated by the board.

Values: Time (in 5 millisecond units). The default value is 60 (or 300 milliseconds).

Guidelines: The **CallWaitingOnTime_in_5ms_units** parameter is read/write.

CallWaitingOffTime_in_5ms_units

Description: The **CallWaitingOffTime_in_5ms_units** parameter specifies the off time value (in 5 millisecond units) for the call waiting tone that is generated by the board.

Values: Time (in 5 millisecond units). The default value is 2000 (or 10 seconds).

Guidelines: The **CallWaitingOffTime_in_5ms_units** parameter is read/write.

CallWaitingFreqLow

Description: The **CallWaitingFreqLow** parameter sets the low frequency component of the call waiting tone that is generated by the board.

Values: For a list of valid settings, refer to the table in the Values section of "DialtoneFreqLow", on page 38. The default is 250Hz.

Guidelines: The **CallWaitingFreqLow** parameter is read/write.

CallWaitingFreqHigh

Description: The **CallWaitingFreqHigh** parameter sets the high frequency component of the call waiting tone that is generated by the board.

Values: For a list of valid settings, refer to the table in the Values section of "DialtoneFreqLow", on page 38. The default is 250Hz.

Guidelines: The **CallWaitingFreqHigh** parameter is read/write.

DefaultDTMFPulseTime

Description: The **DefaultDTMFPulseTime** parameter defines the on time (in 5 millisecond units) for a DTMF pulse that is generated by the board.

Values: A positive integer or hexadecimal value. The default value is 20 (100ms).

Guidelines: The **DefaultDTMFPulseTime** parameter is read/write.

DefaultDTMFGuardTime

Description: The **DefaultDTMFGuardTime** parameter defines the silence time (in 5 millisecond units) preceding the first DTMF digit and following the last DTMF digit.

Values: A positive integer or hexadecimal value. The default value is 4 (20ms).

Guidelines: The **DefaultDTMFGuardTime** parameter is read/write.

DefaultDTMFInterdigitTime

Description: The **DefaultDTMFInterdigitTime** parameter defines the time (in 5 millisecond units) between digits in a dialed string.

Values: A positive integer or hexadecimal value. The default value is 4 (20ms).

Guidelines: The **DefaultDTMFInterdigitTime** parameter is read/write.

DefaultDTMFVolume

Description: The **DefaultDTMFVolume** parameter sets the volume at which DTMF tones are generated.

Values: A positive integer or hexadecimal value. The default value is 10.

Guidelines: The **DefaultDTMFVolume** parameter is read/write.

4.5 Driver Property Sheet

The Driver property sheet allows you to optimize the board's throughput by customizing certain aspects of the Intel® IPT Series board's device driver.

- InboundTimer
- InboundQueueSizeThreshold

InboundTimer

Description: The **InboundTimer** parameter determines the timer setting for inbound messages. The value must be set in milliseconds.

Values: A positive integer or hexadecimal value. The default value is 50.

Guidelines: The **InboundTimer** parameter is read/write.

InboundQueueSizeThreshold

Description: The **InboundQueueSizeThreshold** parameter determines the size of the threshold for inbound messages.

Values: A positive integer or hexadecimal value. The default value is 50.

Guidelines: The **InboundQueueSizeThreshold** parameter is read/write.

OutboundTimer

Description: The **OutboundTimer** parameter determines the timer setting for outbound messages. The value must be set in milliseconds.

Values: A positive integer or hexadecimal value. The default value is 50.

Guidelines: The **OutboundTimer** parameter is read/write.

OutboundQueueSizeThreshold

Description: The **OutboundQueueSizeThreshold** parameter determines the size of the threshold for outbound messages.

Values: A positive integer or hexadecimal value. The default value is 50.

Guidelines: The **OutboundQueueSizeThreshold** parameter is read/write.

OrphanMsgTimeout

Description: The **OrphanMsgTimeout** parameter specifies the time-out, in milliseconds, for orphan messages.

Values: A positive integer or hexadecimal value. The default value is 30.

Guidelines: The **OrphanMsgTimeout** parameter is read/write.

4.6 Misc Property Sheet

The Misc property sheet contains miscellaneous parameters that include the following:

- AdministrativeStatus
- OperationalStatus
- Physical State
- PnPAutoDownload
- Board monitoring frequency in seconds

AdministrativeStatus

Description: The **AdministrativeStatus** parameter indicates the status of the currently selected device.

Values:

- Initial: The software representation of the board is created when the board's **Physical State** parameter is In_System_Locked.
- Stopped: The currently selected device is not running
- Started: The currently selected device is running.
- StopPending: The system software is in the process of stopping the currently selected device.
- StartPending: The system software is in the process of starting the currently selected device.
- Disabled: The currently selected device is not started when the system is started.
- Diagnose: Diagnostics are currently being run on the device.

Guidelines: The **AdministrativeStatus** parameter is read only and cannot be modified by the user.

OperationalStatus

Description: The **OperationalStatus** parameter indicates the integrity of the currently selected device.

Values:

- Degraded: The currently selected device is operating at a below optimum level.
- Failed: The currently selected device has failed. Use the Windows Event Viewer to determine the nature of the problem.
- Initial: The software representation of the board is created when the board's Physical State parameter is In_System_Locked.
- Ok: The currently selected device is operating normally.

Physical State

Description: The **Physical State** parameter indicates the physical state of a board.

Values:

- In_System_Locked: The board is fully installed and recognized by the system.
- Out_Of_System: The board has been physically removed from the system, but not from the registry (DCM database).
- In_System_Unlocked: The board is physically installed, but the handles are in the open position.

Guidelines: The **Physical State** parameter is read only and cannot be modified by the user.

PnPAutoDownload

Description: The **PnPAutoDownload** parameter determines whether or not the Intel® Dialogic Plug and Play* subsystem automatically starts the board when the system reboots.

Values:

- No [default]
- Yes

Guidelines: The **PnPAutoDownload** parameter should not be modified by the user. If System/Device Autostart (from the DCM Settings pull-down menu) is set to Detect and Start, then the system software automatically resets this parameter to Yes for all boards in your chassis.

Board monitoring frequency in seconds

Description: The **Board monitoring frequency in seconds** parameter specifies in seconds, the frequency at which the board status is monitored.

Values: Time (seconds). The default value is 10.

Guidelines: The **Board monitoring frequency in seconds** parameter is read/write.

4.7 Network Property Sheet

The Network property sheet parameters allow you to configure the Ethernet ports on your board. For additional port-specific parameters, see Section 4.1, "100BASE-TX/1000BASE-T Property Sheets", on page 25.

- IPVersion
- EnetPortsActive
- <100BT | 1000BT>_Mode
- <100BT | 1000BT>_PrimaryPort
- <100BT | 1000BT>_Port0IPEntity1_IPv4Address
- <100BT | 1000BT>_Port0IPEntity1_IPv4NetMask
- <100BT | 1000BT>_Port0IPEntity1_IPv4GatewayAddress

- DefaultTimeslotEncoding

IPVersion

Description: The **IPVersion** parameter determines the IP version supported by the board's Ethernet interfaces. The IPVersion is used to formulate the IP header format.

Values:

- IPv4 [default]
- IPv6

Guidelines: The **IPVersion** parameter is read-only.

EnetPortsActive

Description: The **EnetPortsActive** parameter allows you to determine which pair of Ethernet ports are active. The Intel® NetStructure IPT Series board provides a pair of 100Base-TX Ethernet ports and a pair of 1000Base-T Ethernet ports. You can activate either the 100Base-TX set of ports or the 1000Base-T set of ports.

Values:

- 100BT [default]: Activate 100Base-TX ports
- 1000BT : Activate 1000Base-T ports

Guidelines: The **EnetPortsActive** parameter is read/write.

<100BT | 1000BT>_Mode

Description: The **Mode** parameter defines the load sharing strategy for the board when assigning RTP sessions to Ethernet ports.

Values:

- Fallback [default]: One Ethernet port functions as a primary while the other serves as a backup. If the primary port fails, network traffic is immediately routed to the backup port.
- LoadSharing: The pair of Ethernet ports share network traffic.
- Off: Ethernet interface pair is currently not active.

Guidelines: The **Mode** parameter is read/write but must be set to Fallback for the current System Release.

<100BT | 1000BT>_PrimaryPort

Description: The **PrimaryPort** parameter determines which Ethernet port serves as the primary port. When the **Mode** parameter is set to Fallback, the primary port receives all network traffic while the other port is designated as a backup.

Values:

- Port0 [default]: Port 0 is the primary port and Port 1 is the backup.
- Port1: Port1 is the primary port and Port 0 is the backup.
- Not_Valid_In_LoadSharing: The Ethernet interfaces are configured for load sharing, so the network traffic is evenly distributed between the two ports. Primary/secondary port assignment does not apply.
- Not_Valid_When_Ports_Are_Off: This parameter is not active when the Ethernet interface pair is not active.

Guidelines: The **PrimaryPort** parameter is read/write.

<100BT | 1000BT>_Port0IPEntity1_IPv4Address

Description: The **Port0IPEntity1_IPv4Address** parameter defines the IP address for RTP terminations for port 0 IP entity 1.

Note: This parameter is found on the 100BASE-TX and 1000BASE-T property sheets for all other ports and entities.

Values: A valid IP address. The default value is 10.0.10.0.

Note: A value of 255.255.255.255 make the IP port inactive.

Guidelines: The **Port0IPEntity1_IPv4Address** parameter is read/write.

<100BT | 1000BT>_Port0IPEntity1_IPv4NetMask

Description: The **Port0IPEntity1_IPv4NetMask** parameter denotes the network mask for the classes of IPv4 addresses for port 0 IP entity 1.

Note: This parameter is found on the 100BASE-TX and 1000BASE-T property sheets for all other ports and entities.

Values: A valid network mask address. The default value is 255.255.255.0 (Class C).

Guidelines: The **Port0IPEntity1_IPv4NetMask** parameter is read/write.

<100BT | 1000BT>_Port0IPEntity1_IPv4GatewayAddress

Description: The **Port0IPEntity1_IPv4GatewayAddress** sets the IPv4 gateway address (packet router address) for port 0 IP entity 1.

Note: This parameter is found on the 100BASE-TX and 1000BASE-T property sheets for all other ports and entities.

Values: A valid IP address. The default value is 10.0.10.0.

Guidelines: The **Port0IPEntity1_IPv4GatewayAddress** parameter is read/write.

DefaultTimeslotEncoding

Description: The **DefaultTimeslotEncoding** parameter indicates the encoding of the TDM timeslot for TDM type terminations.

Values:

- ULAW [default]: Mu-law PCM coding and companding standard is used
- ALAW: A-Law PCM coding and companding standard is used
- PCM: Pulse code modulation is used without companding
- NoConversion: No encoding is used

Guidelines: The **DefaultTimeslotEncoding** parameter is read/write. This value is the default used by all TDM terminations on the board.

4.8 RFC2833 Property Sheet

The RFC2833 property sheet allows you to customize how DTMF tone signals and telephony events are carried in RTP packets. These parameters help avoid distortion of tones due to IP compression.

Note: These parameters should not be modified by the user.

- DefaultRfc2833CapabilityTonePayloadType
- DefaultRfc2833CapabilityEventPayloadType
- DefaultRfc2833CapabilityRedundancyPayloadType
- DefaultRfc2833MuteAudio
- DefaultRfc2833RedLevel
- DefaultRfc2833IpTonePacketBlock
- DefaultRfc2833ToneLossThreshold
- DefaultRfc2833ToneFrameSize

DefaultRfc2833CapabilityTonePayloadType

Description: The **DefaultRfc2833CapabilityTonePayloadType** defines the format of RTP tone payload types for RFC 2833.

Values: A positive integer or hexadecimal value. The default value is 0.

Guidelines: The **DefaultRfc2833CapabilityTonePayloadType** parameter is read/write.

DefaultRfc2833CapabilityEventPayloadType

Description: The **DefaultRfc2833CapabilityEventPayloadType** defines the format of RTP event payload types for RFC 2833.

Values: 96 - 127

Guidelines: The **DefaultRfc2833CapabilityEventPayloadType** parameter is read/write.

DefaultRfc2833CapabilityRedundancyPayloadType

Description: The **DefaultRfc2833CapabilityRedundancyPayloadType** parameter defines the format of RTP redundancy payload types for RFC 2833.

Values: 96 - 127

Guidelines: The **DefaultRfc2833CapabilityRedundancyPayloadType** parameter is read/write.

DefaultRfc2833MuteAudio

Description: The **DefaultRfc2833MuteAudio** parameter determines whether or not audio is included in the IP tone packets.

Values:

- No_Audio [default]
- Send_Audio

Guidelines: The **DefaultRfc2833MuteAudio** parameter is read/write.

DefaultRfc2833RedLevel

Description: The **DefaultRfc2833RedLevel** parameter determines the redundancy level on media that is received by the board.

Values: A positive integer or hexadecimal value. The default value is 5.

Guidelines: The **DefaultRfc2833RedLevel** parameter is not supported in the current system software release.

DefaultRfc2833IpTonePacketBlock

Description: The **DefaultRfc2833IpTonePacketBlock** parameter determines whether or not IP tones packets are blocked.

Values:

- Block_IP_Tone_Packet [default]
- Let_Through_Tone_Packet

Guidelines: The **DefaultRfc2833IpTonePacketBlock** parameter is read only.

DefaultRfc2833ToneLossThreshold

Description: The **DefaultRfc2833ToneLossThreshold** determines the threshold for tone packet loss. This threshold, when used with other RFC2833 Configuration parameters, allows you to develop a mechanism to monitor and regulate RFC2833 operations to ensure reliable tone transport.

Values: A positive integer or hexadecimal value. The default value is 1.

Guidelines: The **DefaultRfc2833ToneLossThreshold** parameter is not supported in the current system software release.

DefaultRfc2833ToneFrameSize

Description: The **DefaultRfc2833ToneFrameSize** parameter determines the maximum IP tone packet frame size.

Values: 0

Guidelines: The **DefaultRfc2833ToneFrameSize** parameter is read only.

4.9 Software Constants Property Sheet

The Software Constants property sheet contains parameters that provide factory-default settings (non-modifiable by the user) for the Intel® NetStructure IPT Series board, including information about the maximum number of Context-Termination associations. The Context-Termination associations supported by Intel® NetStructure IPT Series boards are modelled after the concepts outlined in the Megaco (ITU H.248) standard.

Note: All parameters on the Software Constants property sheet are read-only. They cannot be modified by the user.

- SerialNumber
- HardwareVersion
- BootROMVersion
- MaxNumDSPs
- NumEthernet100BT
- NumEthernet1000BT
- ManufacturerData
- IPTBoardSoftwareVersion
- DspSoftwareVersion
- DspDeviceNumber
- MaxNumContexts
- MaxNumTerminationsPerContexts
- MaxNumTDMTerminations
- MaxNumRTPTerminations
- MaxNumEventsPerTermination
- MaxNumHostTerminations
- MaxNumT38Terminations
- MaxNumEventsPerTermination
- MaxNumSignalsPerTermination
- MaxNumIPAddressesPerInterface
- MaxNumDigitMaps

SerialNumber

Description: The **SerialNumber** parameter contains the unique serial number of the board.

Values: A positive integer or hexadecimal value

Guidelines: The **SerialNumber** parameter is read-only.

HardwareVersion

Description: The **HardwareVersion** parameter specifies the hardware version of the board.

Values: A positive integer or hexadecimal value

Guidelines: The **HardwareVersion** parameter is read-only.

BootROMVersion

Description: The **BootROMVersion** parameter indicates the version of the board's boot code.

Values: A positive integer or hexadecimal value

Guidelines: The **BootROMVersion** parameter is read-only.

MaxNumDSPs

Description: The **MaxNumDSPs** parameter indicates the maximum number of Digital Signal Processors (DSPs) that can be installed on the board.

Values: A positive integer or hexadecimal value. The default value is 16.

Guidelines: The **MaxNumDSPs** parameter is read-only.

NumEthernet100BT

Description: The **NumEthernet100BT** parameter indicates the number of 100Base-TX Ethernet interfaces on the board.

Values: A positive integer or hexadecimal value. The default value is 2.

Guidelines: The **NumEthernet100BT** parameter is read-only.

NumEthernet1000BT

Description: The **NumEthernet1000BT** parameter indicates the number of 1000Base-T Ethernet interfaces on the board.

Values: A positive integer or hexadecimal value. The default value is 2.

Guidelines: The **NumEthernet1000BT** parameter is read-only.

ManufacturerData

Description: The **ManufacturerData** parameter is a 64-byte block of data that is reserved for use by the board manufacturer.

Values: Not Available

Guidelines: The **ManufacturerData** parameter is read-only.

IPTBoardSoftwareVersion

Description: The **IPTBoardSoftwareVersion** parameter uniquely identifies the version of the software on the board.

Values: A positive integer or hexadecimal value

Guidelines: The **IPTBoardSoftwareVersion** parameter is read-only.

DspSoftwareVersion

Description: The **DSPSoftwareVersion** parameter uniquely identifies the software version on the board's Digital Signal Processors (DSPs).

Values: A positive integer or hexadecimal value

Guidelines: The **DSPSoftwareVersion** parameter is read-only.

DspDeviceNumber

Description: The **DspDeviceNumber** parameter.

Values: A positive integer or hexadecimal value

Guidelines: The **DspDeviceNumber** parameter is read-only.

MaxNumContexts

Description: The **MaxNumContexts** parameter indicates the maximum number of simultaneous contexts supported by the board, not including the NULL context.

Values: A positive integer or hexadecimal value. The default value is 480.

Guidelines: The **MaxNumContexts** parameter is read-only.

MaxNumTerminationsPerContexts

Description: The **MaxNumTerminationsPerContexts** parameter defines the maximum number of simultaneous terminations contained in a context. That is, the total number of terminations that can be added to any one context (excluding the NULL context).

Values: A positive integer or hexadecimal value. The default value is 2.

Guidelines: The **MaxNumTerminationsPerContexts** parameter is read-only.

MaxNumTDMTerminations

Description: The **MaxNumTDMTerminations** parameter specifies the number of simultaneous Time Division Multiplexing (TDM) terminations allowed on the board.

Values: A positive integer or hexadecimal value. The default value is 480.

Guidelines: The **MaxNumTDMTerminations** parameter is read-only.

MaxNumRTPTerminations

Description: The **MaxNumRTPTerminations** parameter indicates the number of simultaneous Real-time Transport Protocol (RTP) terminations allowed on the board.

Values: A positive integer or hexadecimal value. The default value is 480.

Guidelines: The **MaxNumRTPTerminations** parameter is read-only.

MaxNumHostTerminations

Description: The **MaxNumHostTerminations** parameter denotes the number of simultaneous Host terminations allowed on the board.

Values: A positive integer or hexadecimal value. The default value is 480.

Guidelines: The **MaxNumHostTerminations** parameter is read-only.

MaxNumT38Terminations

Description: The **MaxNumT38Terminations** parameter specifies the number of simultaneous T.38 FoIP terminations allowed on the board.

Values: A positive integer or hexadecimal value. The default value is 480.

Guidelines: The **MaxNumT38Terminations** parameter is read-only.

MaxNumEventsPerTermination

Description: The **MaxNumEventsPerTermination** parameter defines the number of simultaneous events (DTMF digit detection, Fax tone detection etc.) allowed per termination.

Values: A positive integer or hexadecimal value. The default value is 5.

Guidelines: The **MaxNumEventsPerTermination** parameter is read-only.

MaxNumSignalsPerTermination

Description: The **MaxNumSignalsPerTermination** parameter indicates the number of simultaneous tones (Ringback, Call Waiting etc.) allowed per termination.

Values: A positive integer or hexadecimal value. The default value is 1.

Guidelines: The **MaxNumSignalsPerTermination** parameter is read-only.

MaxNumIPAddressesPerInterface

Description: The **MaxNumIPAddressesPerInterface** parameter defines how many unique IP addresses for sourcing voice packets to the IP Network are supported by each Ethernet interface on the board.

Values: A positive integer or hexadecimal value. The default value is 4.

Guidelines: The **MaxNumIPAddressesPerInterface** parameter is read-only.

MaxNumDigitMaps

Description: The **MaxNumDigitMaps** parameter indicates the maximum number of digit maps allowed on the board. A digit map is a dialing plan that is used for detecting and reporting digit events that are received on a termination. Any termination type (TDM, RTP, T38 or Host) capable of detecting DTMF digits is allowed to detect digit strings using digit maps.

Values: A positive integer or hexadecimal value. The default value is 5.

Guidelines: The **MaxNumDigitMaps** parameter is read-only.

4.10 T.38 Fax Over IP (FoIP) Property Sheet

The T.38 Fax over IP (FoIP) property sheet contains configuration information about the fax over IP settings.

Note: All parameters on the T.38 FoIP property sheet are read only.

- DefaultT38FaxVersion
- DefaultT38MaxBitRate
- DefaultT38FaxFillBitRemoval
- DefaultT38FaxTranscodingMmr
- DefaultT38FaxTranscodingJbig
- DefaultT38FaxRateManagement
- DefaultT38FaxMaxBuffer
- DefaultT38FaxMaxDatagram
- DefaultT38FaxUdpEc
- DefaultT38FaxProtocol
- DefaultOverrideFaxModulation
- DefaultOverrideFaxDataFormat
- DefaultOverrideEcmNegotiatedFaxMode
- DefaultSupportEllipsisCorrigendum
- DefaultTransmitHoldbackThreshold
- DefaultHighSpeedFrameRate
- DefaultTcfPercentageErrorLimit
- DefaultRedundancyLevelV21Indicators

- DefaultRedundancyLevelV21Data
- DefaultRedundancyLevelHighSpeedEcm
- DefaultRedundancyLevelHighSpeedNonEcm
- DefaultRedundancyLevelHighSpeedEof
- DefaultRedundancyLevelHighSpeedEot
- DefaultDynamicVariableRedundancy

DefaultT38FaxVersion

Description: The **DefaultT38FaxVersion** parameter indicates which fax version is supported by the board.

Values: A positive integer or hexadecimal value

Guidelines: The **DefaultT38FaxVersion** parameter is read-only.

DefaultT38MaxBitRate

Description: The **DefaulT38MaxBitRate** parameter indicates the maximum bit rate at which faxes can be sent/received by the board.

Values: A positive integer or hexadecimal value. The default value is 14400.

Guidelines: The **DefaulT38MaxBitRate** parameter is read-only.

DefaultT38FaxFillBitRemoval

Description: The **DefaultT38FaxFillBitRemoval** parameter indicates whether or not fax fill bit removal is enabled on the board.

Values:

- Disable [default]
- Enable

Guidelines: The **DefaultT38FaxFillBitRemoval** parameter is read-only.

DefaultT38FaxTranscodingMmr

Description: The **DefaultT38FaxTranscodingMmr** parameter determines whether or not transcoding memory is active on the board.

Values:

- Disable [default]
- Enable

Guidelines: The **DefaultT38FaxTranscodingMmr** parameter is read-only.

DefaultT38FaxTranscodingJbig

Description: The **DefaultT38FaxTranscodingJbig** parameter determines if joint bi-level imaging is enabled on the board.

Values:

- Disable [default]
- Enable

Guidelines: The **DefaultT38FaxTranscodingJbig** parameter is read-only.

DefaultT38FaxRateManagement

Description: The **DefaultT38FaxRateManagement** parameter indicates the how the fax rate is managed on the board.

Values:

- TransferredTCF [default]
- LocalTCB

Guidelines: The **DefaultT38FaxRateManagement** parameter is read-only.

DefaultT38FaxMaxBuffer

Description: The **DefaultT38FaxMaxBuffer** parameter determines the maximum size of the fax buffer used by the board.

Values: A positive integer or hexadecimal value. The default value is 72.

Guidelines: The **DefaultT38FaxMaxBuffer** parameter is read-only.

DefaultT38FaxMaxDatagram

Description: The **DefaultT38FaxMaxDatagram** parameter determines the maximum size of fax datagrams.

Values: A positive integer or hexadecimal value. The default value is 316.

Guidelines: The **DefaultT38FaxMaxDatagram** parameter is read-only.

DefaultT38FaxUdpEc

Description: The **DefaultT38FaxUdpEc** parameter determines the User Datagram Protocol (UDP) transmission mode of datagrams.

Values:

- T38UDPRedundancy [default]
- T38UDPFEC

Guidelines: The **DefaultT38FaxUdpEc** parameter is read-only.

DefaultT38FaxProtocol

Description: The **DefaultT38FaxProtocol** parameter indicates the protocol used by the board's FoIP feature.

Values:

- UDPTL [default]
- TKPT

Guidelines: The **DefaultT38FaxProtocol** parameter is read-only.

DefaultOverrideFaxModulation

Description: The **DefaultOverrideFaxModulation** parameter determines when the fax modulation should be overwritten by the board.

Values:

- NoOverride [default]
- V27Only
- V29Best

Guidelines: The **DefaultOverrideFaxModulation** parameter is read-only.

DefaultOverrideFaxDataFormat

Description: The **DefaultOverrideFaxDataFormat** parameter determines which data formats should be overridden by the board.

Values:

- NoOverride [default]
- MHOnly
- MRBest

Guidelines: The **DefaultOverrideFaxDataFormat** parameter is read-only.

DefaultOverrideEcmNegotiatedFaxMode

Description: The **DefaultOverrideEcmNegotiatedFaxMode** parameter indicates whether or not ECM should be overridden by the board.

Values:

- NoOverride [default]
- InhibitECM

Guidelines: The **DefaultOverrideEcmNegotiatedFaxMode** parameter is read only.

DefaultSupportEllipsisCorrigendum

Description: The **DefaultSupportEllipsisCorrigendum** parameter indicates whether or not ellipsis corrigendum support is enabled.

Values:

- Disable [default]
- Enable

Guidelines: The **DefaultSupportEllipsisCorrigendum** parameter is read-only.

DefaultTransmitHoldbackThreshold

Description: The **DefaultTransmitHoldbackThreshold** parameter determines the threshold at which the board places a hold on transmitting faxes.

Values: A positive integer or hexadecimal value. The default value is 9.

Guidelines: The **DefaultTransmitHoldbackThreshold** parameter is read-only.

DefaultHighSpeedFrameRate

Description: The **DefaultHighSpeedFrameRate** parameter determines high speed frame rate of FoIP packets.

Values:

- 30ms
- 60ms [default]
- 90ms
- 120ms
- 150ms
- 180ms
- 210ms
- 240ms

Guidelines: The **DefaultHighSpeedFrameRate** parameter is read-only.

DefaultTcfPercentageErrorLimit

Description: The **DefaultTcfPercentageErrorLimit** parameter sets the percentage of TCF errors that the board will process before sending a TCF event to the host.

Values: A positive integer or hexadecimal value. The default value is 10.

Guidelines: The **DefaultTcfPercentageErrorLimit** parameter is read-only.

DefaultRedundancyLevelV21Indicators

Description: The **DefaultRedundancyLevelV21Indicators** parameter sets the redundancy level of V21 indicators.

Values: A positive integer or hexadecimal value. The default value is 7.

Guidelines: The **DefaultRedundancyLevelV21Indicators** parameter is read-only.

DefaultRedundancyLevelV21Data

Description: The **DefaultRedundancyLevelV21Data** parameter sets the redundancy level of V21 data signals.

Values: A positive integer or hexadecimal value. The default value is 6.

Guidelines: The **DefaultRedundancyLevelV21Data** parameter is read-only.

DefaultRedundancyLevelHighSpeedEcm

Description: The **DefaultRedundancyLevelHighSpeedEcm** parameter sets the redundancy level of high speed ECM signals.

Values: A positive integer or hexadecimal value. The default value is 0.

Guidelines: The **DefaultRedundancyLevelHighSpeedEcm** parameter is read only.

DefaultRedundancyLevelHighSpeedNonEcm

Description: The **DefaultRedundancyLevelHighSpeedNonEcm** parameter sets the redundancy level of high speed non-ECM signals.

Values: A positive integer or hexadecimal value. The default value is 1.

Guidelines: The **DefaultRedundancyLevelHighSpeedNonEcm** parameter is read-only.

DefaultRedundancyLevelHighSpeedEof

Description: The **DefaultRedundancyLevelHighSpeedEof** parameter sets the redundancy level of high speed end of file signals.

Values: A positive integer or hexadecimal value. The default value is 1.

Guidelines: The **DefaultRedundancyLevelHighSpeedEof** parameter is read-only.

DefaultRedundancyLevelHighSpeedEot

Description: The **DefaultRedundancyLevelHighSpeedEot** parameter sets the redundancy level of high speed end of transmission signals.

Values: A positive integer or hexadecimal value. The default value is 7.

Guidelines: The **DefaultRedundancyLevelHighSpeedEot** parameter is read-only.

DefaultDynamicVariableRedundancy

Description: The **DefaultDynamicVariableRedundancy** parameter determines the redundancy level of dynamic variables.

Values: A positive integer or hexadecimal value. The default value is 0.

Guidelines: The **DefaultDynamicVariableRedundancy** parameter is read-only.

4.11 TDM Bus Property Sheet

The TDM Bus Configuration section of the *pmac.cfg* file contains parameters that indicate the board's TDM bus settings. The TDM Bus Configuration section contains the following parameters:

Note: Parameters on the TDM Bus property sheet should not be modified by the user.

- BusType
- ClockFallback
- ClockFrequency
- ClockMode
- ClockSource

BusType

Description: The **BusType** parameter specifies.

Values:

- SCBus [default]:
- None:

Guidelines: The **ClockMode** parameter is read/write, but should not be modified by the user.

ClockFallback

Description: The **ClockFallback** parameter indicates the fallback source for clocking if the board is a CT bus master.

Values:

- Fallback_Disabled [default]: board's clock fallback feature is disabled
- Internal_Oscillator: board's clock fallback is its internal oscillator
- Clk_LeadA: board's clock fallback is the signal on the CT Bus Line A
- Clk_LeadB: board's clock fallback is the signal on the CT Bus Line B
- NetRef_1: board's clock fallback is the signal on the CT Bus Netref 1 line
- NetRef_2: board's clock fallback is the signal on the CT Bus NetRef 2 line
- Holdover: board's clock fallback is Holdover mode

Guidelines: The **ClockFallback** parameter is read-only.

ClockFrequency

Description: The **ClockFrequency** parameter specifies the frequency of the board's clocking source.

Values:

- 8KHz [default]
- 1.536MHz
- 1.544MHz
- 2.048MHz

Guidelines: The **ClockFrequency** parameter is read-only.

ClockMode

Description: The **ClockMode** parameter specifies whether the board is a Primary/Secondary clock master for one of the CT Bus lines or a TDM bus slave. For the current system release, it is always set to Slave.

Values:

- Slave [default]: board derives its clocking from either the CT Bus A line or CT Bus B line
- Master_A: board drives clocking on the CT Bus A line
- Master_B: board drives clocking on the CT Bus B line

Guidelines: The **ClockMode** parameter is read-only.

ClockSource

Description: The **ClockSource** parameter specifies where the board will get its clocking signal.

Values:

- Clk_LeadA [default]: board gets clocking signal from CT Bus Line A
- Clk_LeadB: board gets clocking signal from CT Bus Line B
- NetRef_1: board gets clocking from the CT Bus Netref 1 line
- NetRef_2: board gets clocking from the CT Bus NetRef 2 line
- Internal_Oscillator: board gets clocking signal from its internal clock

Guidelines: The **ClockSource** parameter is read-only.

4.12 TDM Bus Configuration Property Sheet

The TDM Bus Configuration property sheet contains parameters for configuring the TDM Bus. Since an Intel® NetStructure™ IPT Series board is pre-configured as TDM bus clock slaves, TDM Bus configuration does not occur as part of the Intel® NetStructure™ IPT Series board configuration process; it occurs when configuring another board as the TDM bus clock master.

Another board, such as an Intel® NetStructure DM/V board, or a third-party board, *must* be configured as the clock master. To configure a DM3™ architecture boards as the clock master,

refer to the *Intel® NetStructure on DM3™ Architecture for CompactPCI on Windows Configuration Guide*. To configure a third-party board as the clock master, refer to the *Third Party Hardware TDM Bus Administration for Windows*.

Glossary

100Base-TX (100BT): Fast Ethernet* - local area network, running at 100 mbps on a Category 5 twisted pair cable (supports simultaneous send and receive).

100BASE-TX property sheet: DCM property sheet that contains most of the parameters to configure the 100Base-TX Ethernet ports on an Intel® NetStructure IPT Series board. (See Network property sheet for exceptions.)

1000Base-T (1000BT): Gigabit Ethernet - local area network, running at 1000 mbps on a Category 5 twisted pair cable (supports simultaneous send and receive).

1000BASE-T property sheet: DCM property sheet that contains most of the parameters to configure the 1000Base-T Ethernet ports on an Intel® NetStructure IPT Series board. (See Network property sheet for exceptions.)

Board Identification property sheet: DCM property sheet that contains parameters that relate to logically or physically identifying the Intel® NetStructure IPT Series board (all non-modifiable by the user).

Call Defaults property sheet: DCM property sheet that contains parameters that allow you to customize the call handling properties of the Intel® NetStructure IPT Series board.

Call Progress Tones property sheet: DCM property sheet that contains parameters to explicitly set the characteristics of certain call progress tones that are generated by the Intel® NetStructure IPT Series board.

Category 5: Electronic Industries Alliance/Telecommunications Industry Association (EIA/TIA) standard for cabling and wiring supporting carrier frequencies of 100 MHz.

clock master: The device (board) that provides timing to all other devices attached to the TDM bus. The clock master drives bit and framing clocks for all of the other boards (slaves) in the system.

DCM: Intel® Dialogic Configuration Manager - a software program that allows you to configure system-level and certain board-level parameters. (Windows only).

DHCP: Dynamic Host Configuration Protocol

Driver property sheet: DCM property sheet that contains parameters to optimize the board's throughput by customizing certain aspects of the Intel® NetStructure IPT Series board's device driver.

DTMF: Dual Tone, Multi-Frequency. Touch tone dialing.

entity: The IP pathways associated with each of the Ethernet ports on an Intel® NetStructure™ IPT Series board. There are four entities per port and each entities consists of an IP address, a subnet mask, a gateway IP address, and UDP ports.

MAC: Media Access Control

Misc property sheet: DCM property sheet that contains system-level parameters.

Network property sheet: DCM property sheet that contains the parameter that determines which set of Ethernet ports are active. It also contains Port0 IPEntity1-specific parameters for both 100BT and 1000BT ports: **x_IPv4Address**, **x_IPv4NetMAsk**, and **x_IPv4GatewayAddress**.

packet switching: Transmission of information that has been separated into smaller pieces of information (packets) and re-assembled at the destination.

port: Physical Ethernet interface on the Intel® NetStructure™ IPT Series boards.

property sheet: A grouping of parameters in DCM that is based on functionality.

RFC2833 property sheet: DCM property sheet that contains parameters that customize how DTMF tone signals and telephony events are carried in RTP packets. Parameters in the RFC2833 Configuration section help avoid distortion of tones due to IP compression.

slave: Device (board) that is not a clock master, but instead, derives its timing from the TDM bus. Intel® NetStructure IPT Series boards must be, and are by default, configured as slaves.

Software Constants property sheet: DCM property sheet that contains parameters that provide factory-default settings (non-modifiable by the user) for the Intel® NetStructure IPT Series board, including information about the maximum number of Context-Termination associations. The Context-Termination associations supported by Intel® NetStructure IPT Series boards are modelled after the concepts outlined in the Megaco (ITU H.248) standard.

system tray: In a Windows operating system, an area of the interface (normally in the lower, right-hand corner) that contains icons, or short cuts, for launching applications.

T.38 Fax Over IP (FOIP) property sheet: DCM property sheet that contains configuration information about the fax over IP settings (non-modifiable by the user) for an Intel® NetStructure IPT Series board.

TCP/IP: Transmission Control Protocol/Internet Protocol - packet-switched communication method used across networks and across platforms (that is, independent of the hardware or software installed).

TDM bus: The resource bus used to carry information between boards

TDM Bus property sheet: DCM property sheet that contains parameters (non-modifiable by the user) that indicate the board's TDM bus settings.

TDM Bus Configuration property sheet: DCM property sheet that contains parameters (non-modifiable by the user) that indicate the board's TDM bus settings.

UDP: User Datagram Protocol - TCP/IP, Layer 4 (transport layer), packet-switched transmission method. Information is separated into packets and each packet is transmitted individually without regard to the other packets. Only source and destination information is transmitted with the data; no call setup or data transmission validation is performed.

Index

Numerics

A

B

C

D

E

F

H

I

L

M

N

O

P

R

S

T