TOSHIBA
IPedge

Toshiba IP EDGE Description

1
2
3
4
5
6
Table Of Contents
7
8
9
10
11
12
13
14
15
16
17

-

Table of Contents

Bookmarks

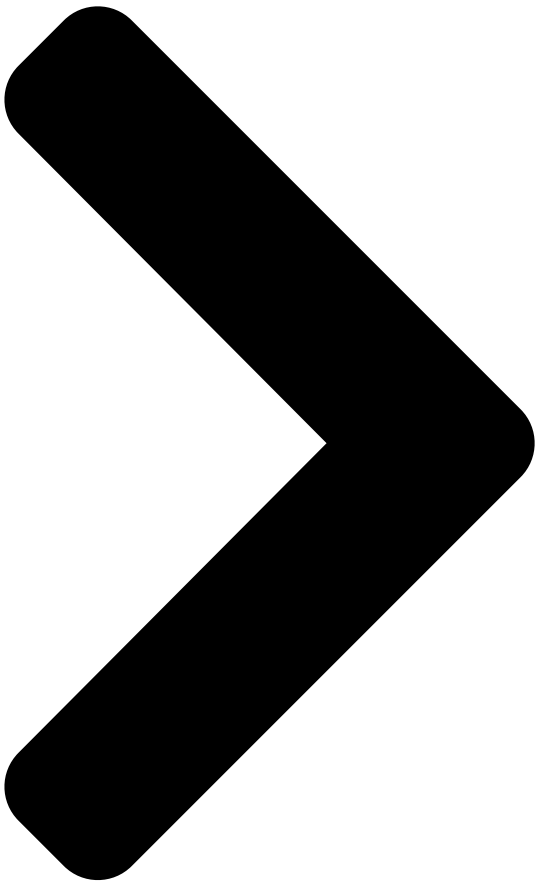
Quick Links

1 Administration

2 Configuration

Download this manual

See also: User Manual , Quick Reference Manual



TOSHIBA

Telecommunication Systems Division

General Description

April 2013

Table of Contents

Next Page

1
2
3
4
5

Related Manuals for Toshiba IP EDGE

IP Phone Toshiba IP EDGE User Manual

Ip5000-series ip telephone, messaging and call manager (242 pages)

Conference System Toshiba IP Edge Quick Reference Manual

(11 pages)

Telephone Toshiba IP5000 Series User Manual

Ip telephone, messaging and call manager user guide (322 pages)

Server Toshiba IPedge Installation Manual

(196 pages)

IP Phone Toshiba IP edge General Description Manual

Ipedge systems and virtual server (170 pages)

IP Phone Toshiba IPEDGE User Manual

(142 pages)

Conference System Toshiba IPedge Manual

(18 pages)

IP Phone Toshiba DKT3200 Specifications

Toshiba ip telephone specifications (2 pages)

IP Phone Toshiba iES16 Brochure

Ip communication solutions (12 pages)

IP Phone Toshiba VIPedge IP5131-SDL User Manual

Ip telephone, messaging and call manager (214 pages)

IP Phone Toshiba IPedge IP5000 Series Installation Instructions Manual

(58 pages)

IP Phone Toshiba IP5000 Series Quick Start Manual

(12 pages)

IP Phone Toshiba Strata CIX IP5000-UG-VB User Manual

Toshiba ip telephone user guide (216 pages)

IP Phone Toshiba IP Telephone Brochure

Ip5000 series (4 pages)

IP Phone Toshiba IP Telephone Brochure

(4 pages)

IP Phone Toshiba ID EDGE Description

(142 pages)

Summary of Contents for Toshiba IP EDGE

Page 1: General Description

TOSHIBA Telecommunication Systems Division General Description Title Page April 2013...

Page 2 To view the latest version of this or other documents please refer to the Toshiba FYI web site. Toshiba America Information Systems shall not be liable for any commercial losses, loss of revenues or...

Page 3 In accordance with U.S. Copyright Law, a license may be required from the American Society of Composers, Authors and Publishers, or other similar organization, if radio or TV broadcasts are transmitted through the music-on-hold feature of this telecommunication

system. Toshiba America Information Systems, Inc., strongly recommends not using radio or television broadcasts and hereby disclaims any liability arising out of the failure to obtain such a license.

Page 4 Telecommunication Systems Division, End User Standard User Limited Warranty Refer to “End User Standard Limited Warranty” on page 131 Toshiba America Information Systems, Inc. Telecommunication Systems Division, Redistribution of OpenSource GPL Attribution Refer to Toshiba Internet FYI > IPedge > Documentation.

Page 5 WARRANTIES FOR NON-TOSHIBA BRANDED THIRD PARTY PRODUCTS A valuable element of Toshiba’s product strategy is to offer our customers a complete product portfolio. To provide this value to our customers at the most optimal prices, we offer both Toshiba-branded and third- party manufactured products that support our Toshiba IPedge and Strata CIX product portfolio.

Page 6 This page is intentionally left blank.

Page 7: Table Of Contents

Contents Introduction Organization .....xiii Conventions .....xiv Related Documents/Media ..... xiv Chapter 1 – Overview IPedge Solutions ..... 3 Other Advantages .....4 Operating Environment ..... 5 Software .....5 Deployment .....5 Administration .....6 Unified System Administration .....6 Configuration .....

Page 8 Contents Chapter 4 – Networking Unified Messaging .....28 Other Messaging Features .....28 Call Manager .....29 Call Manager Standard ..... 29 Call Manager Advanced ..... 30 Companion Applications .....31 Microsoft® Lync® Integration .....32 Meeting ..... 34 Audio Conference Features .....

Page 9 Contents Chapter 5 – Contact Center Web Conferencing .....50 Benefits .....50 Requirements .....50 Interactions ..... 50 Chapter 5 – Contact Center Basic ACD Features .....51 Advanced Call Routing ..... 51 Intelligent Announcements .....51 IVR Voice Assistant Open Database Connectivity (ODBC) Access ..... 51 Enhanced ACD Features .....

Page 10 Contents Chapter 6 – Features Direct Inward Dialing (DID) ..... 64 Dialed Number Identification Service (DNIS) ..... 64 Directory Numbers .....65 Direct Station Selection (DSS) .....66 Distinctive LED Indicator .....66 Distinctive Ringing .....67 Do Not Disturb (DND) .....67 Emergency Call .....

Page 11 Contents Chapter 6 – Features Power Failure Protection .....77 Reserve Power Battery Backup .....77 Privacy .....77 Remote Update ..... 77 Repeat Last Number Dialed ..... 77 Ringing .....77 SIP Trunk .....78 SIP Trunk Wizard ..... 78 Security .....

Page 12 Contents Appendix – Specifications Appendix – Specifications Operating Environment.....103 Power Considerations .....104 UPS Recommendation ..... 104 Station Dimensions ..... 104 IP Telephone Power Consumption .....105 IPedge Component Compatibility ..... 106 System Tones ..... 107 IPedge Net and IP Telephone Bandwidth Requirements .....110 Capacities .....

Page 13: Introduction

• Chapter 3 – Unified Communications describes the IPedge Messaging, Call Manager, Meeting, and Mobility Solutions which together form Toshiba’s Unified Communications product suite. • Chapter 4 – Networking describes the various network related configurations that need to be done when installing the IPedge system.

Page 14: Conventions

• IPedge Telephone, Messaging, and Call Manager Quick Reference Guide • IPedge IP5000-Series Telephone Internet Site For authorized users, Internet site FYI (http://fyi.tsd.toshiba.com) contains all current IPedge documentation and enables you to view, print and download current publications. IPedge General Description 04/13...

Page 15 Overview ® The IPedge system is an advanced pure IP platform that provide sophisticated business communication features. The IPedge system performs call processing, voice mail, unified messaging, media processing that includes conferencing and paging, meet-me conferencing with web collaboration, centralized management, Call Manager unified communications, and more. IPedge uses Red Hat Enterprise Linux 5.4 for the base operating system that provides a high level of scalability and security.

Page 16 Overview IPedge EP System IPedge EP System (Horizontal view (Horizontal and Vertical view) with Left and Right Rack-mount Brackets) Figure 2 IPedge EP Server Table 1 Basic Specifications EC Server EM Server EP Server Rackmount Rackmount Stand alone or 19” Rackmount 1.75U or 2.362”...

Page 17: Chapter 1 - Overview Ipedge Solutions

Overview IPedge Solutions IPedge Solutions The IPedge server integrates all the necessary customer centric applications as shown below. The IPedge reduces the need for multiple servers to support each application separately, therefore it dramatically decreases the cost and complexity of deploying multiple applications. IPMobility Figure 3 IPedge System Architecture...

Page 18: Other Advantages

Overview Other Advantages • IPMobility application allows an iOS or Android client to make calls using the app which routes them through the host IPedge system, and without displaying the users mobile number to the called party. • Centralized Management for multiple sites – The Enterprise Manager resides on the IPedge Server and enables an administrator to manage all trunks and stations in all the servers of the enterprise, using one consolidated view.

Page 19: Operating Environment

Overview Operating Environment • Gateways are not required for SIP trunking. • A variety of SIP endpoints are available for specific needs including wireless, smartphone, door phone, paging, etc. See Chapter 2 – Telephones and Peripherals for SIP approved end points.

Page 20: Administration

• Several sites, at different geographical locations, each with its own IPedge system, all managed centrally over a WAN. Toshiba’s personal administration tool integrated in Enterprise Manager using a User login, puts telephone personalization in the hands of individual users, allowing them to easily program speed dial buttons, feature buttons, Do Not Disturb functions, and even the name on their LCD displays, using their PC’s Web browser.

Page 21: Configuration

Overview Configuration Configuration In a typical network configuration with IPedge, the IPedge server is placed behind the NAT firewall and given a private IP address. IPedge provides SIP trunking for incoming and outgoing calls. On the LAN, IPedge works with the SoftIPT and IP telephones.

Page 22: Ipedge Model Databases

IPedge Net operation. IPedge Model Databases Toshiba has developed “model databases” for the IPedge EC, EM, and EP systems. Model databases may be downloaded and installed using the Data Restore functionality from Webmin in Enterprise Manager. These programs are in addition to the current default values. The default...

Page 23: Software Support And Upgrade Service

Registration and proof of purchase of the original owner of the IPedge system may be required. While Toshiba has made every effort at the time of publication to ensure the accuracy of the information provided herein, this information is subject to change without notice. Toshiba assumes no liability for any damages incurred directly or indirectly from any errors or omissions contained herein.

Page 24 This page is intentionally left blank.

Page 25: Chapter 2 - Telephones And Peripherals

Telephones and Peripherals This chapter covers Toshiba's 5000-series Internet Protocol (IP) Telephones and peripherals that are compatible with IPedge telephone systems. IP 5000-Series IP Telephones The IPedge system supports the IP5000-series telephone product line. Toshiba offers many IP Telephone models with backlight displays (except IP5022-SD), full- duplex speakerphones, and Gigabit Ethernet: •...

Page 26 Telephones and Peripherals IP 5000-Series IP Telephones IP5022-SD & IP5522-SD IP5132-SD 10 programmable buttons, 4-line LCD 20 programmable buttons, 4-line backlit IP5122-SD, IP5122-SDC & IP5622-SD 10 programmable buttons, 4-line backlit LCD IP5131-SDL, IP5531-SDL & IP5631-SDL 20 programmable buttons, large backlit LCD with HTML support and navigation key IPedge General Description 04/13...

Page 27: Features

Telephones and Peripherals IP 5000-Series IP Telephones Features The IP5000-series telephones include a speakerphone and are 802.3af standard compliant for Power-Over-Ethernet (PoE). The IP Telephony product family also includes matching Add-on Module and a DSS Console. The IP5000-series telephones support a very comprehensive and powerful feature set including: •...

Page 28: Capabilities

IP 5000-Series IP Telephones Capabilities The Toshiba IP Telephones also have the following capabilities: • The IP telephones contain two types of codecs (coder/decoder): G.711 and G.729A. The codec determines the IP telephone voice quality and network bandwidth requirements. The G.711 requires the most bandwidth and provides the best voice quality.

Page 29: Liquid Crystal Display (Lcd) Models

Telephones and Peripherals IP 5000-Series IP Telephones Liquid Crystal Display (LCD) Models The IP5022-SD, IP5122-SD, IP5522-SD, IP5622-SD, IP5122-SDC and IP5132-SD models display up to 24 characters times four lines of information and provide four Soft Keys. The IP5131-SDL, IP5531-SDL, IP5631-SDL has 4 soft keys and a 9-line LCD. From the idle screen you can access telephone directories and speed dial lists of names or departments, internal or external to the telephone system.

Page 30: Ip4100 Dect Telephone

Telephones and Peripherals IP4100 DECT Telephone IP4100 DECT Telephone The IP4100 DECT telephone (shown right) supports 8~10 simultaneous call sessions per base and allows for seamless roaming between bases in a multi-base configuration. The High Definition voice enabled speaker and microphone allows for crystal clear speech.

Page 31: Telephone Button Expansion Options

Telephones and Peripherals Telephone Button Expansion Options Telephone Button Expansion Options Upgrade options for the Toshiba IP telephones are described below. LCD Add-on Module (LM5110) The LM5110 adds 10 programmable LCD feature buttons to the 5000-series telephones (except the IP5522-SD and IP5622-...

Page 32: Attendant Console

The Attendant Console runs on a PC with Microsoft® Windows XP Professional or Windows 7 (32 bit) operating system. The Attendant Console PC offered by Toshiba is equipped with an Intel two gigahertz CPU in a small, compact desktop chassis that is just the right size for a receptionist's desk.

Page 33 Telephones and Peripherals Attendant Console The Attendant Console is designed to handle all call activity within a single Call Monitor screen, shown below. All calls will appear in a single list. Menu Bar Info Bar Toolbar Icons Call List Call Status Call Attributes icons View Pane...

Page 34: Peripherals

Telephones and Peripherals Peripherals Peripherals The IPedge supports a variety of third party peripherals in order to meet specific business needs. Polycom End Points The IPedge call control platform supports a variety of end points from Polycom. The following table lists end points (by

type – desk phones, wireless, conference etc) that have been qualified to work with IPedge.

Page 35: Cyberdata

Telephones and Peripherals Peripherals Table 2 Polycom End Points (continued) Type IPedge - End Points Supported Image SoundStation IP 7000 Conference Phones SoundStation IP 6000 Note The list of supported end points changes as Polycom brings new products to market. For the most recent versions supported Polycom end points, Data sheets, etc, refer to Internet FYI >...

Page 36: Gateways

VoIP systems. Other functions of a VoIP gateway include voice compression or decompression, control signaling, call routing, and packetization. VoIP gateways come in many different configurations. Toshiba sells some third party gateways. Audiocodes Mediant 1000 Series (Digital) The Mediant 1000 (shown right) is Audiocodes'cost-effective, converged wireline...

Page 37 Telephones and Peripherals Peripherals Mediapack Series (Analog) The MediaPack Series Analog VoIP Gateways are cost-effective, best-of-breed technology products. These stand-alone analog VoIP Gateways provide superior voice technology for connecting legacy telephones, and PBX systems with IP-based telephony networks, as well as for integration with new IP-based PBX systems.

Page 38 Telephones and Peripherals Peripherals Epygi Gateways The Epygi Gateways (shown right) are available in a sturdy metal rack- mountable housing that permits the inclusion of a built-in power source and cooling fan for heavy duty operation and extended life span. These gateways include call routing and auto attendant capabilities, voice prioritization over data and sophisticated firewall and security elements.

Page 39 Unified Communications This chapter describes IPedge Messaging, Call Manager, Meeting, and Mobility Solutions which together form Toshiba's Unified Communications product suite. The IPedge system supports all Unified Communications (UC) applications on one platform, dramatically decreasing the cost and complexity of deploying multiple applications. This includes Presence, IM/Chat, PC call control, Auto Attendant, Voice Mail, Unified Messaging, Interactive Voice Response (IVR), and Enterprise Manager system administration.

Page 40 Unified Communications stand-alone IP soft phone providing mobility and remote access. You get the efficiency of combining your telephone and computer into one integrated communication tool. • CRM Integration and Screen-pops – Your call answering personnel can provide better service by immediately knowing which customer is calling with screen-pop integration to your customer relationship management applications and databases.

Page 41 It's important to improve employee productivity for all of them no matter where they are. Toshiba provides the tools for remote connectivity and mobility to make them all operate as if they were right there in the office.

Page 42: Chapter 3 - Unified Communications Ipedge Messaging

Unified Communications IPedge Messaging IPedge Messaging Messaging is an integrated voice processing application within the IPedge system that provides standard voice mail and Automated Attendant features as well as Unified Messaging capabilities, Follow Me, Message Notifications, Soft Key navigation of mailbox menus, and Call Recording. Since Messaging is incorporated into the IPedge system, it delivers streamlined user administration and system management.

Page 43: Call Manager

Unified Communications Call Manager Call Manager Call Manager (CM) is a powerful unified communications tool, a PC soft phone designed to enhance productivity for mobile and office users. The Call Manager application runs on a PC with Microsoft® Windows XP, Windows Vista, the Terminal server on Windows Server 2003 ~ Windows Server 2008 R2, or Windows 7 operating systems.

Page 44: Call Manager Advanced

Unified Communications Call Manager Call Manager Advanced Call Manager Advanced provides the following major functions: • Desktop call control from your • Customized call handling – CM allows you to place, answer, handle, view, and manage phone calls using your computer screen,

keyboard, and mouse.

Page 45: Companion Applications

ACD Viewer The Call Manager is tightly integrated with the ACD from Toshiba. The Call Manager ACD Viewer enables users connected to ACD to view the status of all ACD groups in which they belong. This additional functionality does not require MIS software to be installed. Call Manager shows the operating status of each group.

Page 46: Microsoft Lync Integration

® ® Toshiba has a plugin that is installed on a customer's PC to integrate with the Microsoft Lync client. This eliminates the complex server configuration that is required for server integration. This integration enables customers who adopt Lync as the Instant Messaging/Presence application to integrate with the IPedge system telephone features.

Page 47

Toshiba digital telephone, IP telephone, or SoftIPT for the user to control the telephone from Toshiba Plugin. In addition, as an option, the built-in softphone can be used with Toshiba Plugin. Telephones to be used with Toshiba Plugin should be configured to have the Primary DN Note only, and Secondary DN/Shared DN and other GCO/Pool line keys should not be used.

Page 48: Meeting

Unified Communications Meeting Meeting The Meeting application is integrated into the IPedge system. Meeting allows participants to dial into a single conference or any combination of conferences. Meeting is web-based (shown below), so it's easy to set up conferences from anywhere, view conference participation during a call, and share a desktop screen.

Page 49: Web Collaboration Features

Unified Communications Meeting • Web-based Reporting – enables managers to have a view into the impact of audio conferences and web collaboration sessions in their business. • Moderator and Participants Codes – adds security and control to who can manage and participate in conferences.

Page 50: Mobility

Unified Communications Mobility Mobility The IPedge delivers virtually every feature to every user, regardless of the type of device they are using, whether they are stationary or mobile. Each individual user can choose the type of device that best meets their communication needs. These devices can be used by local or remote users, so employees can work anywhere, with the same level of functionality and productivity.

Page 51: Wireless Telephones

Unified Communications Wireless Telephones Wireless Telephones The IPedge also works with Toshiba certified SIP telephones, such as Polycom over WLAN. Refer "Polycom End Points" on page • The IP4100 DECT telephone on page • The Polycom SpectraLink and Kirk Wireless Telephones fully integrate with the IPedge system.

Page 52

Unified Communications IP User Mobility No VPN, and thus, no security • Third party VPN software residing on DHCP gateway server. To connect IP telephones over the • Internet, using third party or Microsoft VPN software residing on a DHCP gateway server, see Figure ATM (IP over ATM virtualization by VC/VP) •...

Page 53: Softipt Client

PC. The SoftIPT client on a PC integrates the power of the PC with most of the features available on an IP5000-series telephone. With the Toshiba SoftIPT installed on a Wi-Fi laptop PC, users can have true mobility with access to voice mail, programmable feature buttons, and a directory that works with Microsoft®...

Page 54

• Internet – A wired or wireless PC at a remote site can connect to a Cable or DSL modem, to an Internet Service Provider (ISP), to a router. • Wireless – The wireless PCs or Toshiba Tablet PC need a Wi-Fi system. The SoftIPT wireless units can operate within range of an access point (dealer-supplied or use existing).

Page 55: Chapter 4 - Networking

Requirements Network Assessment – A network assessment must be carried out to determine whether network or service upgrades are required to support a VoIP deployment. Toshiba recommends carrying out the network assessment with QoS enabled on the network. Site Inventory Analysis – A site survey must be carried out to determine the list of network devices required for a given deployment.

Page 56: Interactions

Interactions While most end customer deployments fit the Toshiba recommended network deployment model, there may be instances where an end customer has unique network infrastructure or security policies which necessitate custom configuration and deployment. As this can potentially increase deployment time and effort it is critical to review end customer deployment environment and policies as part of the planning process.

Page 57: Lan Deployment

Networking LAN Deployment LAN Deployment Benefits Cost savings from using and administering a single IP network infrastructure for both voice and data communications. Requirements Core Network Characteristics for VoIP – In order to maintain voice quality, the underlying IP network must satisfy the characteristics that are listed in the following table. The table lists requirements for delivery over both Local Area Networks (LANs and WLANs) and for delivery over Wide Area Networks (WANs).

Page 58: Interactions

Networking LAN Deployment the network. IPedge can be deployed with a private/static IP address, or it can be deployed with a public/static IP address as long as it is still behind a firewall. DHCP Server – A DHCP server must be installed and configured at each site in order to automatically provision IP addresses for the IP telephones.

Page 59: Remote Administration

Networking Remote Administration Remote Administration Benefits Gives an administrator the ability to manage the system from a remote location, thereby saving time and money. Requirements In order to manage an IPedge system from a remote location, any of the following mechanisms can be used.

Page 60: Centralized Administration

Networking Centralized Administration Centralized Administration Benefits Centralized administration allows multiple nodes to be managed through a single point, reducing the time it takes to administer multiple servers and also reducing the possibility of miss- configuration. Requirements • VPN – A VPN is required between sites that implement Centralized Administration in order to provide for security of the administration information.

Page 61: Remote Ip Telephones

Networking Remote IP Telephones Remote IP Telephones Benefits • Small office or Home office users can be connected to their work phone system. • When using SoftIPT, enables Road warrior scenarios. Requirements In order to connect a remote IP telephone (or SoftIPT) to an IPedge node, either of the following mechanisms can be used: Media Relay Server (MRS) –...

Page 62: Remote Sip Phones

Networking Remote SIP Phones Remote SIP Phones Benefits SIP end points provide the ability to use application specific devices such as door phones, wireless devices, paging systems, etc. Requirements In order to connect a remote SIP end point to an IPedge node, any of the following mechanisms can be used: •...

Page 63: Sip Trunking

• IPedge system is able to support SIP Trunking with routers that cannot support SIP ALG. Requirements • SIP trunking service – SIP trunking service needs to be purchased from a Toshiba certified SIP trunk provider. • Configure SIP trunking on IPedge node – SIP trunk parameters provided by the service provider need to be configured within the IPedge administration interface in order to register with and use the service.

Page 64: Web Conferencing

Networking Web Conferencing Web Conferencing Benefits Gives users across geographic boundaries the ability to do audio and web conferencing on demand. This is helpful for purposes of collaboration in distributed team environments; attendees from different locations can view and work on the same information in real time by using features such as desktop and document sharing.

Page 65: Chapter 5 - Contact Center

Contact Center An external Automatic Call Distribution (ACD) software option with the IPedge is provided by connection of an external PC-based CTI application server or as an application on the Media Application Server (MAS). The CTI server runs both the ACD call processing application and the separate Management Information System (MIS) application such as Insight, as well as other CTI applications.

Page 66: Enhanced Acd Features

Contact Center Enhanced ACD Features Enhanced ACD Features Agent Priority Routing The Agent pool can be expanded when traffic gets heavy based upon agent priority levels. When all agents are busy at one level, calls automatically get distributed to agents at the next level. Calls can be distributed by agent priority, preferred agent treatment, or balanced call count.

Page 67: Chapter 6 - Features

Features This chapter contains the IPedge features. They are presented in alphabetical order to make it easy to locate each feature. Account Codes Account Codes are often used for cost allocation of the call or the time the caller was involved on a phone call.

Page 68: Advisory Message

Features Advisory Message One to two KM5020's (20 button) can be attached to the IP5000-series telephones to pro- vide an additional 40 flexible buttons. Note The KM5020 is not supported on the VIPedge system. ADM buttons can be programmed with outside line or Directory Number buttons, Direct Station Selection, One Touch Speed Dial or any other flexible feature button.

Page 69: Automatic Line Selection (Als)

Features Automatic Line Selection (ALS) Key or by dialing 4. When the busy DN or outside line becomes available, the station will be automatically called back and be connected to and ring the originally called station or receive a dial tone from an outgoing line. When ACB is activated, the calling station receives a success tone followed by a busy tone.

Page 70: Call Completion

Features Call Completion Call Completion This feature applies when calls are not completed because the station does not answer, is busy, or is in Do Not Disturb. A series of options are available to the user when encounter- ing these conditions. They include changing the calling signal from Voice Announce to Ringing or vice versa, setting Automatic Callback, setting the Message Waiting light, Camp on Busy, Overriding the condition with Privacy/DND/Executive Overrides, or using Off-Hook Call Announce.

Page 71: Call Manager

Features Call Manager number, name (if provided), time and date of the call, and status of the call (answered, abandoned, or redirected). This list is accessible by the user from the telephone LCD and Caller ID Hist any call may be selected and redialed using the flexible button.

Page 72: Call Pickup

Features Call Pickup Call Pickup Call Pickup enables station users to pick up all types of ringing or held calls including internal, PDN or PhDN calls ringing or on hold at other stations. When you pick up an internal call, the calling station and the called station displays on your LCD. Group Pickup Two or more stations can be assigned to a pickup group, there are a total of 48 pickup groups available.

Page 73: Call Waiting

It eliminates the need for the caller to enter the desired mailbox number after being connected to the voice mail system. This feature is available using standard DTMF VM integration and does

not require Toshiba proprietary VM integration. Call Waiting When a station is busy with a call and another call is directed to that station's busy...

Page 74: Caller Identification

Features Caller Identification Caller ID, DNIS, or ANI information appears on LCD telephones for 10 seconds. If Caller ID information is not available, the device name, such as the SIP trunk or DNIS name or number is shown. IP telephones receive a Call Waiting tone twice from the handset receiver. Call Waiting tones can be turned off on each station by the System Administrator.

Page 75: Conference Call

IP5000 Series telephone may establish a conference call with other stations or outside lines. Some models of SIP telephones, including the Toshiba IP4100 Series, also have their own built-in conference feature. Please refer to the device documentation for description and programming instructions.

Page 76: Conference On-Hold

Features Credit Card Calling Conference on-Hold A conference call may be placed on hold where callers remain connected and no Music- on-Hold is applied. The station placing the conference on hold may rejoin the conference Line by pressing the button. "Conference Master"...

Page 77: Day/Night Mode

Features Day/Night Mode Calls are billed to the credit card instead of the IPedge Net line. The "0+" credit card call- ing feature can be enabled selectively or assigned to stations and CO lines capable of sup- porting this service. Day/Night Mode Auto Schedule –...

Page 78: Dial Directory

Schedule. Dial Directory Station users can dial by name using Toshiba's IP5000-series LCD telephones. The Dial by Name feature searches for names much like a cell phone directory and then allows the user to press one button to dial. This feature includes speed dialing and internal directory names.

Page 79: Directory Numbers

Features Directory Numbers displays on the telephone's LCD. This allows the user to identify the caller before answer- ing. The DNIS Name/Number routes calls to specific telephones, departments, or ACD groups. When the call is ringing and after it is answered, the DNIS Name/Number dis- plays on the telephone's LCD.

Page 80: Direct Station Selection (Dss)

Features Direct Station Selection (DSS) Pilot DN A Pilot DN is a pseudo-location that is assigned a DN where calls may be directed. Unlike PDNs and PhDNs, a Pilot DN is not a button on any telephone. A Pilot DN is used as a device where calls can ring and be held while an external application using the Computer Telephony Integration (CTI) can control the call.

Page 81: Distinctive Ringing

Features Distinctive Ringing Distinctive Ringing IP Telephone users sometimes need to distinguish the ringing of one key on their phone from another key and sometimes stations in close proximity to one another need to distin- guish the calls on one desk from another. Typically, multiple sounds are used to provide Line this distinction.

Page 82: Feature Prompting With Soft Keys

Features Feature Prompting With Soft Keys 911 will not work correctly, until the appropriate action to update 911 emergency response address is completed. This involves the customer notifying the dealer about the location change. WARNING! You may NOT be able to contact emergency personnel by dialing 9-1-1 from a telephone or from Call Manager.

Page 83: Headset

Features Headset Headset IP telephones have a built-in headset adapter and therefore require only the headset. Hearing Aid Compatible Toshiba's IP telephone product line includes telephones that support hearing aids. High Call Volume Buttons Release Release/Answer Cancel , and buttons can be assigned to telephones. They enable a busy user to handle calls quickly

and efficiently in high call volume situations.

Page 84: Exclusive Hold

Features Hot Dialing Exclusive Hold A call may be placed on Exclusive Hold to ensure the privacy of the connection and that the call may only be retrieved by you, even if the held call appears on buttons on other telephones.

Page 85: Ipedge Net

Features IPedge Net IPedge Net IPedge Net is a private networking application based on QSIG, an international standard for interconnecting telephone systems. IPedge Net delivers a rich set of calling features across multiple systems throughout the enterprise. Users benefit from transparent dialing and simple feature operation.

Page 86: Making Calls

Making Calls For outgoing calls, Toshiba's IPMobility application uses the host IPedge system's phone services to reach intended destinations. This feature not only takes advantage of the host system's telephone service rates, but also masks the user's cell phone number with the IPedge system office phone number.

Page 87: Live System Programming

Features Live System Programming like individual CO line buttons except these buttons represent all the lines for a particular Channel Group. This enables channels to operate similar to analog CO lines on a key tele- phone system. These buttons may have appearances on multiple telephones providing call coverage across several telephones.

Page 88: Mobility

Features Mobility Users can disable (in programming) stutter dial tone for message waiting and when in the DND mode. If stutter dial tone is disabled, they will hear a normal dial tone when off- hook. Mobility The Mobility features are covered in Chapter 3 –...

Page 89: Off-Hook Camp On

Features Off-hook Camp On Delayed Ringing begins. This feature is assigned for each line or DN button independently for each DN. You can assign Delayed Ringing to voice mail and auto attendants. This feature can also be used to ring multiple (25 max.) telephones immediately or with a delay by dialing a group pilot number.

Page 90: Privacy Override

Features Paging their conversation. Executive Override can be blocked selectively to any station in the sys- tem. Executive Override must be allowed in system programming for the called and call- ing station. The Do Not Disturb feature can also be used to block Executive Override; however, sta- tions that are allowed DND Override can use Executive Override on stations in the DND Privacy mode.

Page 91: Power Failure Protection

Features Power Failure Protection Power Failure Protection Reserve Power Battery Backup An Uninterruptible Power Supply (UPS) is required for power backup on an IPedge sys- tem. The UPS is similar to the ones used for Computer systems and Networking equip- ment.

Page 92: Sip Trunk

SIP Trunk Wizard Toshiba has made programming SIP Trunks easier by giving the administrator the ability to enter URI ranges. The URI field range allows the administrator to enter a range of the user portion of the SIP Trunk URIs for the selected SIP Trunk service in the targeted server.

Page 93: Specified Caller Id

• Industry standard vulnerability scans are run on IPedge and its software components are updated as required. Provided that Toshiba's IPedge system is used explicitly as it is intended and as described in Toshiba's documentation, the IPedge is a minimum security risk for virus attacks. There are no guarantees against all threats that may arise in the future.

Page 94: One Touch Buttons

Features Station Hunting One Touch Buttons One touch buttons enable users to store speed dial and custom feature access sequences on a single button. When this button is pressed, the stored number is dialed or the feature is accessed. You can store frequently dialed numbers, such as three-digit System Speed Dial codes, onto a One Touch button.

Page 95: Circular Hunting

Features Station Message Detail Recording (SMDR) Circular Hunting In this type of hunt group, calls hunt DNs in a specific series. However, the series form a loop, which enables the last DN to hunt to the first DN. When any DN in the series is called, the system will ring the first idle DN in the series, starting with the called DN, hunting to all DNs in the series.

Page 96: Survivability

Features Survivability Survivability Survivability is based on the capability of the IPT to send Register messages to two IPedge servers. This makes it possible to provide telephone service in the event that an IPedge server or the link to that server goes down. The IPT can register to the backup survivability server (Secondary Server) automatically when sever goes down or the linkage between server and IPT is disconnected.

Page 97: Messaging Survivability

Features System Fault Finding and Diagnostics Messaging Survivability The IPedge Messaging application can be licensed and configured with a feature called Direct Cluster Networking (DCN). DCN allows the joining of two or more IPedge sys- tems (individually referred to as a Node) into a cluster. These clusters act in unison to maintain the integrity of the messaging database of the entire network.

Page 98: Maintenance And Administration

Features Tenant Services location using FTP. The backup and restore functions can be performed locally or remotely. Maintenance and Administration The Enterprise Manager terminal can be connected directly to the IPedge system or via the customer’s LAN as well as remotely over the Internet over the public network. Software Upgrade A regular IPedge system software upgrade can be performed.

Page 99: Transfer Direct To Voice Mail

Features Transfer Direct To Voice Mail Transfer Direct To Voice Mail Transfer Direct To Voice Mail is the ability to redirect a connected call to new destination. The IPedge system provides three means of transferring a call and three means of termi- nating transferred calls, depending on the calling state of the destination.

Page 100: Uniform Call Distribution

It eliminates the need for the caller to enter the desired mailbox number after being connected to the voice mail system. This feature is available using standard SMDI VM integration and does not require Toshiba proprietary VM integration. Music or Ringing Option This feature enables ringing or music to be heard by the caller when their call is trans- ferred, depending on system programming.

Page 101: Reasons A Company Might Want Vlans

Features Voice / Tone Signaling server, however, ensure that the data switch port connected to the IPedge server is config- ured to be in the same VLAN ID as the IPTs. For IPT configuration, broadcast mode is not recommended for large deployments (100+ phones). With or without VLANs, 802.1p and Diffserv protocols may be used to provide Quality of Service for voice by allowing voice packets to be prioritized over data packets.

Page 102: Volume Control

Features Volume Control Signaling by dialing 2. Whether a call is initiated with Tone or Voice Signaling, it can always be switched back and forth by dialing 1 or 2. Note A call to a Voice Signaling DN will not Call Forward No Answer unless the signaling is switched from Voice to Tone Signaling.

Page 103

Features Messaging Do Not Disturb A mailbox owner can set “Do not disturb” to have calls sent directly to voicemail. Follow-Me A mailbox can be set up to forward a call to an

external phone number before the call is transferred to voicemail.

Page 104: Fax

Features Messaging All IPedge system models support T.38 communication when the end-to-end communications are entirely SIP. Fax features are licensed on a user level, not a system level basis. An Advanced User license is required for a user to take advantage of the fax mail and personal fax features. Fax from Desktop Provides the ability to send faxes from the mailbox owner's desktop.

Page 105: Voice Messaging

Features Messaging Voice Messaging Ad-Hoc Groups A mailbox owner can send or forward a message to a group of mailboxes created on the fly, as opposed to predefined groups. See "Distribution Groups" on page 92). Archive Mailbox Messages can be archived by automatically copying from an originating mailbox to an archive mailbox.

Page 106 It eliminates the need for the caller to enter the desired mailbox number after being connected to the voice mail system. This feature is available using standard DTMF or SMDI VM integration and does not require Toshiba proprietary VM integration. Distribution Groups A new message can be sent, or a message can be redirected to multiple individuals, without having to input individual mailbox numbers.

Page 107 Features Messaging External Message Notification The mailbox owner can schedule notification to external devices when a message is received, such as text message to cell, notification to pager, and call-out to another phone number. First-time User Tutorial (Mailbox Set-up) Assists the mailbox owner with the set-up of her voicemail box (change password, set up personal greeting).

Page 108 Features Messaging Message Delete Confirmation Message delete confirmation requires the mailbox owner to confirm message deletion by pressing an additional key. This option can be enabled or disabled by the system administrator. Message Waiting Indication The system will trigger a light on a phone when a new message is received. In addition, an indication on the phone display shows the mailbox owner how many phone messages are in the mailbox.

Page 109 The subscriber's menu provides the mailbox owner access to all available features of the voicemail system. System and Department Language Selection IPedge Messaging supports multiple languages and can be used independently or simultaneously per system department group. Additional languages available by request. Contact Toshiba Sales Applications Desk for details. IPedge General Description 04/13...

Page 110 Features Messaging Variable Extension Length Variable extension length is a configurable option that sets the number of digits that make up a valid extension number. Variable Mailbox Length Variable mailbox length is a configurable option that sets the number of digits that make up a valid mailbox.

Page 111: Unified Messaging

Features Messaging Unified Messaging Unified messaging allows a mailbox owner to access voice messages directly through an email inbox. Emails may also be listened to and can be managed from the voicemail box. Fax-to-Email Fax-to-email allows the mailbox owner to review fax information directly from the email inbox (including fax sender and number of pages), view fax messages onscreen with any TIFF or PDF image viewer and forward fax messages to any email address directly from the email inbox.

Page 112: Administration

Features Messaging Administration System administration is done using a web-based application named Enterprise Manager. An administrator's password is required for access to all system administrator functions. Callout Length A definable maximum length for a number the system is allowed to callout. Class of Service (COS) Class of service controls each specific mailbox's activities including personal options, incoming calls, transfer supervision, ringer and housekeeping.

Page 113 Features Messaging Maximum Greeting Length A configurable option to set a maximum mailbox greeting length. Options are also available for those mailboxes requiring an unlimited greeting length. Maximum Message Length Mailboxes may be assigned a maximum

message length that determines the length of a message the incoming caller can leave for that mailbox.

Page 114: Reporting

Features Messaging Variable Password Length Variable password length is a configurable number of digits that make up a valid password number. Each department may have a different variable password length. WebController All administration can be managed through a web-based interface. Administrators can create different roles for sub-administrators and mailbox owners to manage subsets of the system.

Page 115: Messaging Survivability

Features Messaging Scripts Messaging creates customized routines or scripts for directing callers around the system. Scripts programming is a centralized application that can create various choices to a caller as well as being the standard tool for setting up “Audio Text” mailboxes and building custom applications. Scripts offers many different applications, including;...

Page 116: Security

Features Messaging • If a telephone has a Message Waiting Indicator (MWI) illuminated and the system that supports that telephone fails, the MWI will not be reinstated until another new message is received. The telephone survives over to another system that is in the cluster and has its mailbox intact, but the Message Waiting light will not light until a new message is received.

Page 117: Operating Environment

Appendix – Specifications This appendix includes detailed information on the items listed below. The sections in this appendix apply to the IPedge systems, unless otherwise stated. • Operating Environment. • Power Considerations • Station Dimensions • IP Telephone Power Consumption •...

Page 118: Power Considerations

The IPedge server should have a dedicated AC power circuit. The specific input voltage and current requirements for each server is listed the specifications for each model. UPS Recommendation Toshiba recommends an Uninterruptible Power Supply (UPS) with power conditioning for the IPedge server. The recommended UPS from ONEAC are shown in the Table 5 below.

Page 119: Ip Telephone Power Consumption

Appendix – Specifications IP Telephone Power Consumption IP Telephone Power Consumption The power consumption for the IP5000-series telephones and the Add-on modules is shown in Table Use this information to calculate the Power over Ethernet (PoE) requirements and UPS capacity. Table 7 IP Telephone and Add-On Module Power Consumption Option...

Page 120: Ipedge Component Compatibility

IPedge Component Compatibility IPedge Component Compatibility The IPedge system supports all types of Toshiba IP and third party provided SIP telephones, it provides the configuration flexibility to build the communications system you need, in addition to the investment protection from re-using devices from other Strata systems. It’s a unified communications environment that supports many types of client devices.

Page 121: System Tones

Appendix – Specifications System Tones System Tones Tones which can be heard from speaker or handset are described in Table Table 9 Call Progress Tones Tone Name Conditions Ringing Cadence Prompting to dial [DN] or access code or to Prime Dial Tone press a feature button or to dial 9 + number.

Page 122

Appendix – Specifications System Tones Ring tones are described, along with their cadences in Table 10. Due to the limitation in the tone generation algorithm, the listed tone duration is slightly different from the actual one. Table 10 Ring Tones Tone Name Description Ringing Cadence...

Page 123

Appendix – Specifications System Tones Other types of tones that do not fit in the

previous categories are listed in Table Table 11 Administration/Programming Tones Tone Name Description Ringing Cadence During user programming or administration 2 kHz two bursts of 0.125 sec. apart Confirmation Tone mode, indicates the acceptance of input.

Page 124: Ipedge Net And Ip Telephone Bandwidth Requirements

Appendix – Specifications IPedge Net and IP Telephone Bandwidth Requirements IPedge Net and IP Telephone Bandwidth Requirements The amount of bandwidth required for communications over a particular IP network segment depends on the number of voice channels supported, the anticipated call setup traffic, and how much other data network traffic is present.

Page 125 Appendix – Specifications IPedge Net and IP Telephone Bandwidth Requirements When sharing voice and data on the same network segment, the data will cause some jitter in voice communications, especially on slower segments. Table 13 shows calculations of the amount of jitter assuming a worst case data packet size of 1500 bytes (Maximum Transmission Unit (MTU) = 1500) based on a segment's bandwidth.

Page 126: Capacities

Appendix – Specifications Capacities Capacities The following tables contain IPedge capacities. Table 16 Station/Peripherals System Capacities EP Server Stations EC Server EM Server PC Attendant consoles 200 per 1,000 per IP5000-series stations / SIP stations System System 8 per Station 8 per Station 8 per Station DSS Consoles...

Page 127 Appendix – Specifications Capacities Table 19 System Feature Capacities Features EC Server EM Server EP Server Pilot DNs Advisory LCD Messages (Set on a Telephone) Advisory LCD Messages Lists (per System) Attendant Groups Call Accounting SMDR Interface Call Forward, System CF Patterns Call Park Orbits (General) Call Park Orbits (Individual) Minimum / Maximum Caller ID per Station...

Page 128 Appendix – Specifications Capacities Table 19 System Feature Capacities(continued) Features EC Server EM Server EP Server Ring Tones (Internal Call Ring Tones for IP telephones) Speed Dial - Station SD numbers per system 8,400 8,400 8,400 Speed Dial - System SD numbers per system Tenants Destination Restriction Level (DRL) Classes Verified Account Codes...

Page 129: Application Capacities

Appendix – Specifications Capacities Application Capacities Table 20 Enterprise Manager EC Server EM Server EP Server Enterprise Manager Simultaneous Sessions Web Based Station Admin Simultaneous Sessions Table 21 Media Server EC Server EM Server EP Server Resources Table 22 Meeting EC Server EM Server EP Server...

Page 130: Device Monitor Capacities For Ipedge Systems

Appendix – Specifications Capacities Device Monitor Capacities for IPedge Systems Applications including Strata ACD, Call Manager, Tracer, Taske, and System TAPI send requests to the IPedge system to monitor the status of the telephones using the respective applications. These requests are sent over the CSTA ethernet link connecting the application and the IPedge system.

Page 131: Ipedge Software License Requirements

Optional RAID1 kit (I-EC-RAID1-KIT) includes second 250GB hard drive, factory installed in a drive drawer. Requires I-SYS-EC or I-SYS-EC-DSCNT license. Optional custom red front bezel with Toshiba and IPedge logos for I-EC-1A server. Provides a I-EC-BZL-1A sleek look and secures accessibility. Includes two keys. (Buy extra bezel keys using the I- BEZEL-KEY part number).

Page 132 Appendix – Specifications IPedge Software License Requirements Table 27 IPedge License Part Numbers (continued) I-CP-CSTA IPedge CSTA license - per application One required for each SoftIPT user on IPedge. Also requires a user license (I-CP-USR-EM or I-CP-SOFTIPT I-CP-USR-EC). I-CP-IPENET One required for each IPedge Net channel. I-CP-TRUNK IPedge Trunk License - per channel of SIP, PRI or Analog Gateway IPedge Call Processing Trunk License.

Page 133 One license is required to activate each Attendant Console on an IPedge or Strata CIX or CTX system. This license is also bundled with Toshiba supplied Attendant Console PCs IPATTCONS, CIX-IPATTCONS and CTX-ATTCONSOLE2 so it is NOT necessary to order the LIC-ATT

for these parts.

Page 134 I-USR-STD-EP EP User bundle with Call Manager Standard. Includes I-CP-USR-EP, I-CM-STD1. 1. Toshiba strongly recommends that dealers carry at least one spare hard drive to support their installed base. Hard drives are field replaceable. Table 28 Audiocodes Part Numbers...

Page 135 Appendix – Specifications IPedge Software License Requirements Table 28 Audiocodes Part Numbers (continued) Bundles the MP118/4S/4O/SIP gateway + Audiocodes Ext. Technical Support + Advance Warranty Replacement. MediaPack 118 Analog VoIP Gateway, 4 FXS, 4 FXO SIP Package including 4 FXO and 4 FXS analog lines, single 100/10 BaseT, AC power supply, including G.711/723.1/ MP1184S4O-BDL 726/727/729AB Vocoders, SIP.

Page 136 Appendix – Specifications IPedge Software License Requirements Table 28 Audiocodes Part Numbers (continued) Bundles the M1K-D3 gateway + Audiocodes Enhanced Technical Support + Hardware Replacement Warranty. Mediant 1000 VoIP Gateway, 4 E1/T1, SIP Package including single module of 4 spans E1/T1, dual 10/100BaseT Ethernet, and single AC power supply.

Page 137: Mobile Device Support For Ipmobility

2.2.1. With the above information in mind, and considering the array of differences among mobile devices in the marketplace including best practices for mobile application development - Toshiba elected to test the IPMobility application with a sampling of popular devices.

Page 138 This page is intentionally left blank.

Page 139: End User License Agreement

United States of America IMPORTANT: THIS END USER LICENSE AGREEMENT (“EULA”) IS A LEGAL AGREEMENT BETWEEN YOU (“YOU”) AND TOSHIBA AMERICA INFORMATION SYSTEMS, INC. (“TAIS”). CAREFULLY READ THIS EULA. USE OF ANY PROPRIETARY TOSHIBA AND THIRD PARTY SOFTWARE OR ANY RELATED DOCUMENTATION...

Page 140 person in possession of the Software. You and any other person whose possession of the Software violates this EULA shall promptly surrender possession of the Software to TAIS, upon demand. Furthermore, you hereby agree not to create derivative works based on the Software. TAIS reserves the right to terminate this license and to immediately repossess the Software in the event that you or any other person violates this EULA 2.

Page 141 OBLIGATIONS WITH RESPECT TO TOSHIBA SOFTWARE IS SET FORTH IN THIS EULA. UNLESS OTHERWISE STATED IN WRITING, ALL TOSHIBA AND THIRD PARTY SOFTWARE ARE PROVIDED ON AN “AS IS” BASIS WITHOUT WARRANTY OF ANY KIND BY TOSHIBA. UNLESS THIRD PARTY SOFTWARE MANUFACTURERS, SUPPLIERS OR PUBLISHERS EXPRESSLY OFFER THEIR OWN WARRANTIES IN WRITING IN CONNECTION WITH YOUR USE OF THEIR THIRD PARTY SOFTWARE, SUCH THIRD PARTY SOFTWARE IS PROVIDED ON AN “AS IS”...

Page 142 8. State/Jurisdiction Laws. SOME STATES/JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES OR LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY MAY LAST, OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO SUCH LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THIS LIMITED WARRANTY GIVES YOU SPECIFIC RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE/ JURISDICTION TO STATE/JURISDICTION.

Page 143 TAIS AND SUPERSEDES ANY PROPOSAL OR PRIOR AGREEMENT, ORAL OR WRITTEN, OR ANY OTHER COMMUNICATION RELATING TO THE SUBJECT MATTER OF THIS EULA. © Copyright 2007-2012 Toshiba America Information Systems, Inc. All Rights Reserved. Rev: June 2011 IPedge General Description 04/13...

Page 144 This page is intentionally left blank.

Page 145: End User Standard Limited Warranty

IF THE PRODUCT FAILS TO WORK AS WARRANTED, END USER’S SOLE AND EXCLUSIVE REMEDY WILL BE REPAIR OR REPLACEMENT. IN NO EVENT WILL TOSHIBA, ITS AFFILIATES OR SUPPLIERS BE LIABLE TO END USER OR ANY THIRD PARTY FOR ANY DAMAGES IN EXCESS OF THE

PURCHASE PRICE OF THE MALFUNCTIONING PRODUCT.

Page 146 THE END USER LICENSE AGREEMENT FOR THE SOFTWARE, WHICH IS ACCEPTED BY USING THE PRODUCT. The sole obligation of Toshiba under this limited warranty is to repair or replace defective parts or Product with new or refurbished parts or Product (at its option).

Page 147 Service made necessary by installing or using Product in combination or in assembly with third party products that are incompatible or of inferior quality, design or performance. · Service on Product on which the Toshiba label or logo or serial number is defaced or missing. ·...

Page 148 ACCORDINGLY, TOSHIBA DISCLAIMS ANY AND ALL LIABILITY ARISING FROM USE OF THE PRODUCT IN ANY CRITICAL APPLICATIONS. IF END USER USES THE PRODUCT IN A CRITICAL APPLICATION, END USER, AND NOT TOSHIBA, ASSUMES FULL RESPONSIBILITY FOR SUCH USE.

Page 149: Index

Index tandem, codec, 14, abandoned call numbers, conference capacities, basic features, on-hold, enhanced features, ports, server, split | join | drop, ACT, consultation hold, administration, CyberData advisory messages, intercom, ANI, attendant console, delayed ringing, 74, Audiocodes, destination restriction, automated attendant, DHCP, automatic distinctive LED indicator,...

Page 150 Index H ~ R count, delete, hold, waiting, automatic, message waiting, consultation, Messaging, exclusive, messaging, xiii, xiv, 1, 3, 4, 5, 6, 25, 27, 30, 88, 91, hospitality mailbox, 94, 95, 97, 99, 100, 101, hunt groups, automated attendant, voice, Microsoft, instant messaging, Outlook,...

Page 151 Index S ~ W ring tones, 108, 113, security, SIP trunking, smartmedia, soft keys, speaker OCA stations, speed dial, 79, split, station buttons, dimensions, hunt groups, system tones, tandem CO lines, telephone group paging, types, telephones DP5000-series, tenants, terminal authentication, time zone, UCD, unified messaging, 3, 4, 5, 27, 28,...

Page 152 This is the last page of the document.

This manual is also suitable for:

Ipedge