



OMNISWIFT® IPBX 2120/2240/2280
Voice over Internet integrated turnkey system

OMNISWIFT® IP-PBX runs on the Linux operating system, using generic computer hardware and various telephony cards.

Serving as Internet Access Device (IAD) OMNISWIFT® IP-PBX connects with the PSTN (analogue and digital access) and interconnects with standard VoIP protocols: IAX2, H323 and SIP. It supports up-to 120 switched voice circuits in PABX mode and up to 20,000 when used as a main network SIP server. It connects to FXO lines from 1 to 24 in various configurations or to one or two cards 4x E1 allowing 1 to 8 E1 interface with PRI or SS7 signalling. It has all traditional PBX functions, such as: Music on Hold, Auto-Attendant, voice-mail, multi party conferencing, forwarding, etc.

OMNISWIFT® IP-PBX can be used without specialized telephony hardware because it can use soft and hard IP phones, generic sound cards for audio and standard Ethernet cards, hubs and routers for networking. This includes standard Cat 5, gigabit LANs, wireless, optical fibre, satellites or any medium that can support IP.

OMNISWIFT® IP-PBX can use any IP phone, which uses a standard protocol, and is even able to use the Cisco® SCCP protocol. OMNISWIFT® IP-PBX can connect to PSTN devices and GSM or CDMA networks through channel banks or E1 trunks and devices. OMNISWIFT® IP-PBX also connects to simple analogue subscriber lines and standard analogue telephone sets via PCI cards.



OMNISWIFT® IP-PBX telephony solutions offer a rich and flexible feature set. Asterisk offers both classical PBX functionality and advanced features, and interoperates with traditional standards-based telephony systems and Voice over IP systems. OMNISWIFT® IP-PBX offers the features one would expect of a large proprietary PBX system such as Voicemail, Conference Bridging, Call Queuing, and Call Detail Records.

The dial plan is very powerful and flexible so that many users may implement their own special features. An AGI (Applications Gateway Interface) allows any scripting language to be used with OMNISWIFT® IP-PBX dial plan to implement further features. OMNISWIFT® IP-PBX generates CDRs (Call Detail Records) and has an integrated Billing system. It can generate PIN numbers for prepaid cards applications, Voice IVR account information and real time billing. It also produces billing for each extension.

Network Management System (NMS): a console which may be accessed on the machine in which OMNISWIFT® IP-PBX runs, or may be accessed remotely allow for full management and supervision. This allows maintenance, trouble-shooting and software upgrade of OMNISWIFT® IP-PBX server any place on the planet from any other place as long as there is an Internet connection.

OMNISWIFT® IP-PBX console displays console messages and will answer queries pertaining to the status of channels, peers and resource usage.

OMNISWIFT® IP-PBX has now proven itself as a reliable solution for small and large businesses and carriers. It is robust, versatile and holds great promise for future expansion.



Call Features (depending on the configuration of the network.)

- ADSI On-Screen Menu System
- Alarm Receiver
- Append Message
- Authentication
- Automated Attendant
- Blacklists
- Blind Transfer
- Call Detail Records
- Call Forward on Busy
- Call Forward on No Answer
- Call Forward Variable
- Call Monitoring
- Call Parking
- Call Queuing
- Call Recording
- Call Retrieval
- Call Routing (DID & ANI)
- Call Snooping
- Call Transfer
- Call Waiting
- Caller ID
- Caller ID Blocking
- Caller ID on Call Waiting
- Calling Cards
- Conference Bridging
- Database Store / Retrieve
- Database Integration
- Dial by Name
- Direct Inward System Access
- Distinctive Ring
- Distributed Universal Number Discovery (DUNDi™)
- Do Not Disturb
- E911
- ENUM
- Fax Transmit and Receive (3rd Party OSS Package)
- Flexible Extension Logic
- Interactive Directory Listing
- Interactive Voice Response (IVR)
- Local and Remote Call Agents
- Macros
- Music On Hold
 - Flexible Mp3-based System
 - Random or Linear Play
 - Volume Control
- Music On Transfer
- Predictive Dialer
- Privacy
- Open Settlement Protocol (OSP)
- Overhead Paging
- Protocol Conversion
- Remote Call Pickup
- Remote Office Support





- Roaming Extensions
- Route by Caller ID
- SMS Messaging
- Spell / Say
- Streaming Media Access
- Supervised Transfer
- Talk Detection
- Text-to-Speech (via Festival)
- Three-way Calling
- Time and Date
- Transcoding
- Trunking
- VoIP Gateways
- Voicemail
 - Voicemail to email
- Zapateller

Computer-Telephony Integration

- AGI (Asterisk Gateway Interface)
- Graphical Call Manager
- Outbound Call Spooling
- Predictive Dialler
- TCP/IP Management Interface

Scalability

- TDMoE (Time Division Multiplex over Ethernet)
 - Allows direct connection of Asterisk PBX
 - Zero latency
 - Uses commodity Ethernet hardware
- Voice-over IP
 - Allows for integration of physically separate installations
 - Uses commonly deployed data connections
 - Allows a unified dial plan across multiple offices

Codecs

- ADPCM
- G.711 (A-Law & μ -Law)
- G.723.1 (pass through)
- G.726
- G.729 (through purchase of commercial license through Digium)
- GSM
- iLBC
- Linear
- LPC-10
- Speex

Protocols

- IAX™ (Inter-Asterisk Exchange)
- H.323
- SIP (Session Initiation Protocol)
- MGCP (Media Gateway Control Protocol)
- SCCP (Cisco® Skinny®)

Traditional Telephony Interoperability

- E&M
- E&M Wink
- Feature Group D
- FXS
- FXO



- GR-303
- Loopstart
- Groundstart
- Kewlstart
- MF and DTMF support
- Robbed-bit Signalling (RBS) Types

BRI/PRI Protocols

- 4ESS
- BRI (ISDN4Linux)
- DMS100
- EuroISDN
- Lucent 5E
- National ISDN2
- NFAS



STANDARD BUILD LEVELS FOR OMNISWIFT VOIP PLATFORMS

INTRODUCTION

This document details the standard build levels of servers provided by Dantech Digital Limited for the Omniswift VOIP product range. Where appropriate, Dantech Digital Limited reserves the right to provide servers of higher specifications to those quoted below.

Specific customer requirements can usually be accommodated on request; it should however be noted that any changes effecting an increase in processor loading may require a move to a higher specification platform.

OVERVIEW

The Omniswift VOIP range is designed to operate in three distinct modes:

1. Omniswift iPBX

In this end-user configuration, the iPBX provides features and facilities normally associated with customer premises usage. This includes local allocation of extension numbers, direct inward dialling with auto-attendant, local voicemail, call transfer, selectable calling restriction level, management reports for usage statistics etc.

Line interfaces may be 2-wire FXO, ISDN BRI, ISDN PRI. Capacities up to 120 trunks and 1000 extensions are available.

2. Omniswift iX

In this Central Office Switch configuration, the Omniswift iX provides features and facilities normally associated with small central office installations. These include secure management of configuration, performance and billing information, centralised voice-mail with secure user access, speaking clock, routing tables for

least cost management and intra-unit direct IP trunking. Interfaces may be 2-wire FXO, ITU Sig. System No.7, ITU-R2 with national variants. Capacities up to 240 trunks and 2000 subscribers per server are available.

3. Omniswift iCon

Deployment of digital switches as small central offices has proved, in many cases, to be uneconomic due to the high cost of subscriber line circuits and external cable pairs. Conversely, the cost of providing ISDN PRI interfaces is relatively inexpensive. Delivery of the access network by wired or wireless LAN methods resolves this problem.

The iCON central office concentrator provides the interface between the ISDN PRI and the VOIP LAN and enables progressive expansion of local area telephony without the need for expensive 2-wire analogue interfaces. The concentrator also extends features and facilities available at the digital switch to LAN VOIP subscribers and provides these additional features and facilities in cases where the digital switch is not so equipped. Interfaces are E1 ISDN PRI and capacities are up to 240 PRI trunks and 2000 subscribers.

In each of the above modes, intra-calling between subscribers can be effected without (subject to billing requirements) the need to employ trunk capacity. The subscriber protocols may be SIP or IAX2 and, depending upon firewall settings, the system is inherently non-geographic by nature.



HARDWARE BUILD LEVELS

1. Level 1

Level 1 build is the smallest of the iPBX platforms. It may be delivered in tower or desktop format or in an industrial 4U 19" rack/cabinet mounting system.

Specification:

Pentium D945 3.4GHz Dual Core HT 4MB cache
RAM: 1Gbyte DDR2 533MHz
HDD: 200GB S-ATA2 3.0Gbits 8MB buffer
16x/48x DVD-ROM/CD-RW Combo
Onboard 10/100baseT network port
Onboard USB2 ports
Onboard audio
Onboard Video Graphics Adapter

Options

FXO/FXS 4-port PCI card

Software

LINUX Fedora Core 5
Asterisk PBX
Dantech Front Office Configurator
Shorewall Firewall
Sample configuration
Call Detail Records/Usage Reporting

Warranty

12 months Full Warranty
On-line & Telephone support available
Installation/Commissioning Service available





2. Level 2

Level 2 build is designed to support the larger iPBX configurations and the smaller central office and concentrator platforms. It may be delivered in tower or desktop format or in an industrial 4U 19” rack/cabinet mounting system.

Specification:

2xIntel Xeon 7030 3.0GHz HT 2MB cache
RAM: 1Gbyte DDR2 333MHz
HDD: 160GB SATA2 12ms 8MB buffer
16x/48x DVD-ROM/CD-RW Combo
Onboard 2 x 10/100/1000baseT network port
Onboard USB2 ports
Onboard audio
Onboard Video Graphics Adapter
Onboard Raid controller
550W a.c Mains PSU

Options

RAM UPGRADE: 1Gbyte DDR2 533MHz
FXO/FXS 4-port PCI cards (16 ports max)
E1 ISDN PRI 4-span PCI cards (4 spans max*)
2nd HDD: 160GB SATA2 12ms (RAID 0 or 1)
SATA Caddy
1.44MB FDD
Keyboard/Mouse/TFT Display
Redundant 220/240v Mains PSU
-48v d.c single or redundant PSU

Software

LINUX Fedora Core 5
Asterisk PBX
Dantech Front Office Configurator
Shorewall Firewall
Sample configuration
Call Detail Records/Usage Reporting

Warranty

12 months Full Warranty
On-line & Telephone support available
Installation/Commissioning Service available

Note: * 8 spans max if trans-coding not required.

3. Level 3

Level 3 build is the flagship product and is designed to support the largest iPBX configurations, central office and concentrator platforms. It is delivered in an industrial 4U 19” rack/cabinet mounting system.

Specification:

2xIntel Dual-Core Xeon 7120 3.0GHz HT 4+2MB cache
RAM: 2Gbyte DDR2 800MHz
HDD: 200GB SATA2 12ms 8MB buffer
16x/48x DVD-ROM/CD-RW Combo
Onboard 2 x 10/100/1000baseT network port
Onboard USB2 ports
Onboard audio
Onboard Video Graphics Adapter
Onboard Raid controller
450W a.c Mains PSU

Options

RAM UPGRADE: 2Gbyte DDR2 800MHz
FXO/FXS 4-port PCI cards (16 ports max)
E1 ISDN PRI 4-span PCI cards (8 spans max)
2nd HDD: 200GB SATA2 12ms (RAID 0 or 1)
SATA Caddy
1.44MB FDD
Keyboard/Mouse/TFT Display
Redundant 220/240v Mains PSU
-48v d.c single or redundant PSU

Software

LINUX Fedora Core 5
Asterisk PBX
Dantech Front Office Configurator
Shorewall Firewall
Sample configuration
Call Detail Records/Usage Reporting

Warranty

12 months Full Warranty
On-line & Telephone support available
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