

# ALCATEL-LUCENT OPENTOUCH MULTIMEDIA SERVICES RELEASE 2.0 AND ALCATEL-LUCENT OMNIPCX ENTERPRISE COMMUNICATION SERVER RELEASE 11.1

The pace of change in the competitive landscape for enterprises is accelerating, thanks to global economic, social, and technological shifts; business cycles that used to take days now take hours. Today's business environment crosses traditional enterprise boundaries: remote offices, global work teams, mobile professionals, home workers and third-party partners are all part of today's enterprise.

Unified communications create new opportunities to increase employee productivity and customer satisfaction in this changing environment.



## ALCATEL-LUCENT OPENTOUCH SUITE

The Alcatel-Lucent OpenTouch™ Suite delivers high-quality unified communications. It is a modular software suite for large organizations that require professional business communications, multimedia collaboration at the office and on the go, customer service functionality and management services.

## ALCATEL-LUCENT OMNIPCX ENTERPRISE COMMUNICATION SERVER (CS)

Employees who primarily work on company premises and make extensive use of voice communications benefit from OpenTouch Connection, the advanced business communications experience available on reliable desk phones, sturdy DECT or WLAN mobile handsets, and on software clients for PCs, tablets or smartphones. Users can pick the telephony features that suit their office work style from the comprehensive features offered by the embedded Alcatel-Lucent OmniPCX™ Enterprise CS.

Office workers enjoy high-quality wideband voice communications with easy vocal and visual guidance, and ultra-fast directory look-up from the phone keyboard.

## ALCATEL-LUCENT OPENTOUCH MULTIMEDIA SERVICES (MS)

Employees who need powerful interactive visual communication will benefit from OpenTouch Conversation, the multi-device, multiparty, multimedia experience for easy collaboration at the office and on the go.

OpenTouch Conversation sessions feature voice, video, instant messaging (IM), presentation sharing and natural conferencing capabilities to help users better engage with customers, partners and colleagues.

Users are able to shift their session between their devices when they move to another location. They can create and join multiparty and multimedia conferences in a few clicks.

| ORGANIZATIONAL NEED   | FEATURES   | BENEFITS   |
|---|--|--|
| <b>OmniPCX ENTERPRISE COMMUNICATION SERVER</b>  |  |  |
| <b>OpenTouch Connection experience</b>  |  |  |
| Enterprise-grade communication services, including state-of-the-art telephony and a wide range of professional terminals            | Comprehensive, advanced business telephony services, including flexible auto-attendant, screening, group, routing and messaging services   | Instant business response: all important calls are identified and answered   |
|   | Rapid directory lookup and speed-dial  | Save time when dialing contacts  |
|   | Multi-platform support: desk phones, mobile handsets, and PC, tablet and smartphone software clients   | Flexible options: business continuity, with always-on desk phones and with robust handsets for roaming employees, supports BYOD policies with software clients |
|   | Proven multi-site support with bandwidth control   | Improved voice over IP (VoIP) quality in multi-site organizations, with centralized communications to improve operational expenditure                          |
|   | High availability options  | Improved business continuity for communication services during network outages or server failures  |
| High scalability: 15,000 users per server or virtual machine; 250,000 users in network; more than 1 million users in supra-networks | Improve total cost of ownership (TCO) with centralized operations on a limited number of servers. Networking of servers to meet requirements for higher availability and demarcation points between communication networks |  |
| <b>Integrated customer service applications</b>   |  |  |
| Best-of-breed customer interaction services to increase sales and customer loyalty  | Professional welcome services, from greeting and group calls, to centralized attendant applications  | Increased customer satisfaction by answering all calls – centrally or in branch offices  |
|   | Contact center services, including a patented visual distribution matrix   | Accelerate first call resolution with a call distribution logic that can be adapted within days to evolving needs  |
|   | Integration with the OpenTouch Customer Service suite and the Genesys™ Suite   | Increase customer satisfaction and brand e-reputation with multi-channel interactions  |
| <b>OpenTouch MULTIMEDIA SERVICES</b>  |  |  |
| <b>OpenTouch Connection applications</b>  |  |  |
| PC and smartphone integrations to boost productivity at the office and on the go  | Remote call control, software communication client that can be integrated with PC productivity applications  | Single contact management. so office and remote workers can save time by controlling their phone or softphone from their PC                                    |
|   | Single identity, directory lookup, name presentation, communication history and on-call access to business services from smartphones   | Employees are reachable anywhere, with access to business communication services while on the go   |
| <b>OpenTouch Conversation experience</b>  |  |  |
| Innovative multimedia collaboration solutions that boost productivity, facilitate mobility and decrease travel costs                | Single business identity with multi-device routing profiles and rapid session shift between desk phones, smartphones, tablets and PCs  | Employees are reachable anywhere and on the device best suited for their location  |
|   | Easy access to multiparty conferences with audio, video, IM and content sharing  | Reduced travel expenses and efficient interactions between geographically-dispersed teams  |
|   | Easy addition of multimedia, including IM, voice, video and content sharing  | Instant business response with multitasking between IM and voice sessions. Better engagement with contextual video- and content-sharing interactions           |
| <b>Web conferencing with customers, partners and colleagues</b>   |  |  |
| New ways to communicate with customers, partners and colleagues   | Integrated conferencing capabilities easily accessible from any phone or browser. Shared documents stay within the enterprise premises   | Customers, partners and colleagues can easily and securely join OpenTouch voice and content-sharing sessions from outside the enterprise firewall              |
| <b>OmniVista 8770 NETWORK MANAGEMENT SYSTEM<sup>1</sup></b>   |  |  |
| <b>Unified user management and operations</b>   |  |  |
| Decrease TCO while maximizing service continuity  | Unified user management across OmniPCX Enterprise CS and OpenTouch MS applications   | Improved daily move, add, change and delete operations   |
|   | Advanced, real-time thresholds and alerts  | Instant notification of changes to communications quality, service availability and service level agreements (SLAs)  |

## TECHNICAL SPECIFICATIONS

### User experience

#### OmniPCX Enterprise Communication Server OpenTouch Connection: Business telephony services

- Centralized directory with call by name
- Multi-line telephony
- Call options, including speed dial
- Audio conferencing
- Personal and enterprise call routing and forwarding
- Call shift of current session from desk phone to mobile device of choice
- Call-back and call history features
- Contextual voice prompts
- Informal group features
- Desk-sharing for shared offices
  - Alcatel-Lucent Premium DeskPhones (IP)
  - Alcatel-Lucent OpenTouch Connection for Alcatel-Lucent OmniTouch™ 8082 My IC Phone™
  - Logon, logoff, re-logon
  - Automatic logoff

#### Manager/assistant

- Teams
- Filtered lines and private lines
- Text messaging, IM and voice messaging
- Discreet listening

#### Teams and groups

- Hunting groups and queues
- Supervision

#### Multi-tenancy

- Services per entity:
  - Speed dial
  - CLIP/CLIR
  - Auto attendant
  - Greeting message
  - Music on hold
  - Night service

#### Telephony at the desk

##### Alcatel-Lucent OmniTouch 8082 My IC Phone

- 17.78 cm (7 in) capacitive and haptic touch screen
- OpenTouch Connection experience
  - Business communication services
  - Digital dial-pad or keyboard
  - Display of participant name and contextual feature keys
  - Hands-free loudspeaker announcement
  - Alcatel-Lucent NOE protocol
  - XML kit/library for developers
- Hospitality application (SIP)
- 10/100/1000 Ethernet
- Bluetooth® or corded handset

##### Alcatel-Lucent Premium DeskPhones

- Business telephony services
- Embedded alphabetical keyboard
- Display of names and contextual feature keys
- Wideband VoIP
- Hands-free loudspeaker announcement
- Headset capability, such as Bluetooth
- Alcatel-Lucent NOE protocol, SIP or NOE over SIP
- Add-on supervision modules
- XML kit/library for developers

##### Alcatel-Lucent 8012 DeskPhone

- Essential SIP telephony services
  - Multi-line support
  - Display of names and contextual feature keys
- Unified directory
- Hands-free loudspeaker

#### Telephony on the go and at the desk

##### Alcatel-Lucent OmniTouch 8118/8128 WLAN, 500/500EX DECT and 8232/8242 DECT handsets

- Business communication services
- Hands-free option
- Headset capability
- Integration with notification and location-based services through Alcatel-Lucent Application Partner Program (AAPP)

##### Alcatel-Lucent IP Desktop Softphone

- Premium DeskPhone user interface
  - Microsoft® Windows® 7, Windows 8.1 operating system
  - Apple Mac, Apple iPad and Apple iPhone
  - Tablets and smartphones using the Google® Android™ platform

#### OpenTouch Multimedia Services

##### OpenTouch Connection applications for office workers at the desk and on the go

##### Alcatel-Lucent OpenTouch Connection for PC

- Remote call control
- VoIP softphone
  - Wideband audio
  - Unified directory
  - Session history
  - Visual voice-mail
- Instant messaging and presence
- Microsoft Lync® 2010, Microsoft Lync 2013: PC integration
- Microsoft Outlook® 2010, Outlook 2013 messaging software: PC integration
- IBM® Sametime® 8.5.x, IBM Notes® 8.5.x: PC integration
- Microsoft Windows 7, Windows 8.1 operating system
- Citrix XenApp®, Microsoft Windows Server® 2008 R2 Remote Desktop Services support for remote call control

##### Alcatel-Lucent OmniTouch 8600 My Instant Communicator Mobile

- Software client with intuitive GUI
- Single identity, directory lookup, business caller name presentation, communication history, and on-call access to business services on:
  - iPhone
  - Google Android platform

#### OpenTouch Conversation services

- Wideband VoIP, HD video and IM communications
- Ad hoc and scheduled audio, video, IM and web conferencing using voice-activated video switching: set up and join instantly
- Whiteboard and webinar presentation modes with annotation
- Enterprise presence, including conversation status
- Desktop phone and mobile phone control from PC
- Universal directory access
- Call by name
- Favorites list unified across devices
- Unified call and messaging history across devices
- Single identity using routing profiles
  - User-defined routing rules
  - Route to one or several devices
- Rapid session shift between devices
- Visual mailbox access

#### Conversations on the go and at the desk

##### Alcatel-Lucent OpenTouch Conversation for PC

- Place, answer and manage voice and video calls and conferences
- Remote call control
- Background-mode notifications
- View contact presence and availability
- Start with a simple one-to-one chat and add people, voice, video and content
- Call and IM from Microsoft Office contact cards
- See OpenTouch on-the-phone presence in Microsoft Office contact cards
- Manage call routing profiles
- Maintain a single business identity across devices
- Wideband audio
- Listen to voice mail messages
- Schedule meetings on the go
- View, deliver, annotate presentations
- Share and display PC screen
- VPN-less connectivity through reverse proxy and OpenTouch Session Border Controller

- IBM and Microsoft PC desktop integration
  - Microsoft Office 2010, Office 2013
  - Microsoft Exchange Server 2010, Exchange Server 2013
- Microsoft Windows 7, Windows 8.1 operating system

*Alcatel-Lucent OpenTouch Conversation for iPad*

- Place, answer and manage voice and video calls
- Background-mode notifications
- View contact presence and availability
- Start with a simple one-to-one chat and add people, voice, video and content
- Manage call routing profiles
- Maintain a single business identity across devices
- Listen to voice mail messages
- Schedule meetings on the go
- View, deliver and annotate presentations
- See shared screen sessions
- VPN-less connectivity through reverse proxy and OpenTouch Session Border Controller
- Download from the Apple App Store

*Alcatel-Lucent OpenTouch Conversation for iPhone*

- Software client with intuitive GUI
- Single identity, routing profile selection
- Dual cellular/enterprise VoIP mode
- Directory lookup, contact presence and availability
- Business caller name presentation, communication history, on-call access to business services
- View and join meetings easily
- Download from the Apple App Store

*Alcatel-Lucent OpenTouch Conversation for Android*

- Software client with intuitive GUI
- Single identity, directory lookup, business caller name presentation, communication history, and on-call access to business services on:
  - Google Android platform

**Conversations at the desk**

*Alcatel-Lucent OmniTouch 8082 My IC Phone*

- 17.78 cm (7 in) capacitive and haptic touch screen
- Media player, screensaver and pictures
- Contacts sync for Microsoft Outlook messaging software

- Conversation services
  - Wideband audio
  - Video escalation
  - Unified directory
  - Session history
  - Visual messaging
  - Favorites
  - Call supervision and pick-up
  - Session shift
  - Routing profiles
- Presence-based manager/assistant conversations
- SIP and web services
- SIP and SRTP encryption
- 10/100/1000 Ethernet
- Bluetooth or corded handset
- 802.3 AF PoE (class 3)

*Alcatel-Lucent 8012 DeskPhone*

- Essential SIP telephony services
  - Multi-line support
  - Display of names and contextual feature keys
- Unified directory
- Routing profiles
- Hands-free loudspeaker

**Web conferencing with customers, partners and peers**

*Alcatel-Lucent OpenTouch Conversation for Web*

- Web conferencing user interface
  - Secure access for guests outside the enterprise firewall
  - OpenTouch Conversation or Connection users schedule meetings from Outlook
  - Dial-in or dial-out to any phone
  - See who is talking
  - Mute/unmute
  - Share and annotate documents
  - View shared desktop sessions
  - Exchange IMs
- Multi-platform technology:
  - Microsoft Windows 7, Windows 8.1, Google Android tablets, Apple iPad
- Web-based zero-touch client:
  - Microsoft Internet Explorer® browser
  - Google Chrome™ browser
  - Mozilla® Firefox™ browser

**Video rooms and whiteboards**

- LifeSize® 220s, Icon™ 600
- OpenTouch Conversation endpoints
  - One-to-one or multiparty conversations with other OpenTouch endpoints
  - Routing profiles
  - Rapid session shift
  - SIP, H.264

**Attendant services**

**OmniPCX Enterprise Communication Server**

**Greeting services**

- Call queuing services
- Alarm indication
- Attendant group features
- Busy Lamp Field
- Multi-tenant services
- Record online
- Trunk and charging features
- VIP line features
- User management features
- Add-on module
- Headset capability

**Attendant positions**

*Alcatel-Lucent 4059 Extended Edition Attendant Console*

- PC-based console
  - Directory and presence look-up
  - Busy Lamp Field
- 8068 Premium DeskPhone

**Hospitality communication services**

**OmniPCX Enterprise Communication Server**

- My IC Phone, Premium DeskPhones, or analog phones
- Guest features
- Room service features
- Room directory features
- Billing and barring features

**Messaging**

**OmniPCX Enterprise Communication Server**

**Messaging services**

*Alcatel-Lucent 4645 Voice Messaging Services*

- Integrated or unified messaging
  - Local storage
  - IMAP servers
- Extended recording and playback control
- Message waiting indication and visual control
- Automated attendant
- Personal automated attendant
- Record online
- Shared mailbox

## **OpenTouch Multimedia Services**

### **Messaging services**

- Integrated or unified messaging
  - Local storage
  - IMAP servers
- Extended recording and playback control
- Message waiting indication and visual control
- Automated attendant
- Personal automated attendant
- Record online
- Shared mailbox

### **Fax services**

- Embedded software
- SIP, SIP/TLS, T.38 Fax over IP and SMTP
- Microsoft Exchange 2010, Exchange 2013
- Lotus Domino® R8, R8.5, R8.5.3
- Any SMTP-compliant mail server
- Web access

## **OpenTouch Message Center**

### **Messaging services**

- Integrated or unified messaging
  - Local storage
  - IMAP servers
- Extended recording and playback control
- Message waiting indication and visual control
- Automated attendant
- Record online
- Multiple time zones
- High scalability
- High availability (HA)

## **Customer services**

### **OmniTouch Contact Center Standard Edition<sup>1</sup>**

#### **Embedded OmniPCX Enterprise voice distribution**

- Patented visual tool to manage configuration and design routing, to check call flow in real time and update
- Skill- and cost-based distribution
- Routing time schedule
- Expected and remaining waiting time announcement
- Group selection options

#### **Unified multimedia interactions**

- OTCS add-on for multimedia handling

#### **Architecture**

- Up to 2000 connected and 5000 declared agents
- VMware® ESXi™ compliant
- Distributed contact center with ABC network

- HA and branch survivability with OmniPCX
- Business, home, and mobile agents

#### **Voice announcement**

- External/Internal voices guides
- From audio station, Premium DeskPhones or IP Touch™ phones

#### **Agent features**

- Free seating agent position
- Logon/logoff, withdraw, wrap-up (manual or CTI-based)
- Private call barring
- Transaction code (with reporting)
- Supervisor help
- Agent direct call with statistics
- IP Agent Softphone (PC desktop, tablets, iPhone)
- Agent greeting (automatic welcome prompt)

#### **Supervisor features**

- All agent features
- Discrete call listening and monitoring

#### **Agent Desktop**

- CCA toolbar providing personal statistics
- CCA partner bar providing groupware facilities
- CCA API for CRM integration
- CCA native OmniPCX Record or NICE integration (native record on demand button)
- CCA nomadic mode
- CCA H.323 softphone
- OTCS Unified Desktop for multimedia blending

#### **Supervision and statistics Desktop**

- Up to 120 connected and 250 declared supervisor desktops
- Real-time statistics
- Customizable alarms and reports
- Automatic emailing reports
- Discrete call listening and monitoring
- Predefined and customizable Microsoft Excel® spreadsheet-based statistics and reporting
- Statistics download (FTP)
- Free seating supervisor position
- Wallboard display control for LED and TV
- Openness to other workforce management software

#### **OpenTouch Customer Service<sup>1</sup>**

##### **Architecture**

- VMware ESXi compliant
- HA disaster recovery

#### *Unified multimedia interactions*

- Voice (inbound/outbound)
- E-mail, web chat
- Web and voice callbacks
- Virtual hold
- Facebook®, Twitter®
- Social media integration
- Fax
- SMS, MMS
- Open media (with monitoring and reporting)

#### *Unified multimedia routing/queuing*

- Platform (PBX) independent
- Multi-site
- Unified multimedia queuing across campaigns
- Workload overflow
- Virtual routing
- Pre-routing
- Pre-defined default routing strategies
- Rules-based and intelligent routing
- Blending with outbound dialing

#### **Unified Dialer**

- Multiple dialing modes (power, preview, predictive)
- Filter support
- Regulation compliance: UK, US
- Calling number per campaign
- Fax and voice-mail answering machines detection on predictive calls

#### **Voice Portal**

- Commodity hardware
- SIP inbound and outbound
- Voice prompts (audio files)
- DTMF collection
- Integrated with ASR/TTS
- Integrated with natural language
- Integrated with business applications

#### **Management Portal**

- Profile-based interface
- Configuration: campaign creation, workforce management
  - Business data support
  - Alarms
  - Routing rules
  - Gateways
  - Recording rules
  - Pacing rules
  - Compliance rules
  - SLA



- Management
  - Live configuration update
  - Start/stop campaign
  - Load contacts lists
  - Broadcast messages
  - Scoring
- Real-time monitoring and historical reporting
  - Built-in reports
  - Custom reports
  - Excel-based reporting
  - Web-based reporting
  - Multi-time zone support
  - Custom monitoring views
  - Agents, teams, campaign states and performance monitoring
  - Queues monitoring
  - Outbound call classification
  - Outcomes reporting
  - Strategy manager (Outbound calls)
  - Performance indicators
  - Operational and business alarms
- Wallboard display control for LED and TV

#### **Unified Desktop**

- Free seating agent position
- Single workspace
  - Live interactions
  - Logged interactions
  - Tasks
- Optimized control of all multimedia interactions
- Deep integration with CRM
- Banner mode
- Windows PC thick client
- Windows PC web client
- Citrix compliant
- Knowledge management
- Answer templates (e-mail, IM, Facebook, Twitter)
- Multi-language
- Customizable user interface (scripting)
- Quick script editor (rapid desktop customization)
- Agent scripting
- Agent motivator (agents, campaign monitoring)
- Native OmniPCX Record integration (native record on demand button)
- Telephony toolbar
- Ready/not ready and wrap-up
- Outcomes (with reporting)
- Supervisor call
- Supervisor features
  - Discrete call listening
  - Call monitoring
- Softphone

#### **Workflow**

- Centralized definition and distribution of processes
- Priority management
- Single view of all pending work
- Integration with business processes

#### **Design Studio**

- Text and graphical environment
- Auto-completion
- Support for all solution components
- Enhanced debugging
- Templates
- Rapid Application Development (RAD)
- Automatic campaign definition

#### **Integration server and connectors**

- Native connectors: CRM, QM, WFM
- Homogeneous API layer
- Open standards

#### **OmniPCX Enterprise integration**

- OmniPCX Routing Service Intelligence (RSI)
  - Optimization by leveraging OmniPCX features and resources
  - CCD backup on OmniPCX
- Distributed topology over ABC network
- HA and branch survivability with OmniPCX
- Agent features:
  - Premium DeskPhones agent display
  - IP agent softphone (PC Desktop, iPhone, iPad, Android tablets)
  - Business, home
  - Free seating agent position
  - Withdrawal (Ready/Not Ready)
  - Private call barring
  - Supervisor help
  - Agent greeting (automatic welcome prompt)
- Supervisor features:
  - All agent features
  - Discrete call listening and monitoring

#### **Collaboration**

- Microsoft Lync integration

#### **OmniTouch 4625 Interactive Voice Response<sup>1</sup>**

- Short deployment time and easy access to autonomy with packaged IVR, including application generator
- Outbound applications
- ASR, TTS, voice mailboxes, fax

#### **Genesys suite integration<sup>1</sup>**

- OmniPCX Routing Service Intelligence (RSI)
  - Optimization by leveraging OmniPCX features and resources
  - Database synchronization
  - CCD backup on OmniPCX
- Premium Deskphones agent display

#### **Genesys Compact Edition<sup>2</sup>**

- Segmented media distribution:
  - Visual Contact Center reuse of popular/patented CCS matrix concepts applied to blended e-mail/voice routing
- Visual IVR
- E-mail
- Outbound
- Voice announcement
- Agent features
- Supervisor features
- Supervision and statistics
- Openness options
- Professional services options

#### **Operations**

##### **Serviceability toolkit**

- Virtual machine silent installation tool
- Data collection tool

#### **Alcatel-Lucent OmniVista™ 8770 Network Management System (NMS)<sup>1</sup>**

- Comprehensive application suite to manage OmniPCX Enterprise CS, OpenTouch MS and OpenTouch MC
- Centralized, hosted or distributed management
  - Meta-profiles: simplified user creation
  - Microsoft Active Directory® integration
- Real-time performance monitoring, including MOS and R-factor
- Advanced proactive real-time thresholding and alerting with versatile reporting capabilities
- Tailored and animated topology maps
- Multi-carrier metering
- Unified web and LDAP corporate directory
- Company directory
- Device management
- Evolution path from OmniVista 4760 NMS

#### **Infrastructure**

##### **OpenTouch Multimedia Services**

##### **Capacity**

- Single server: 3000 users with applications, 6000 monitored devices
- VMware delivery: 5000 users with applications, 10,000 monitored devices

## **OpenTouch Message Center**

### **Capacity**

- Single server: 15,000 users, 255 voice ports
- 10-server network: 150,000 users

## **OmniPCX Enterprise Communication Server**

### **Capacity**

- Single server or VMware delivery: 15,000 IP users or 5000 TDM users
- 100 servers in a single network
- Fully networked servers, 100,000 IP/TDM users with single image
- 250 servers in a supra network
- More than 1 million users in a supra network
- BHCC per server: 300,000
- 4645 Voice Messaging Services: 5000 users, 30 ports per server

### **Architecture**

- Centralized or distributed CS
- CS and database duplication
- Seamless communications failover
- Ethernet redundancy on INTIP-3, GD-3 and GA-3 boards
- Full-featured branch office survivability
- Backup signaling link for branch office survivability
- TDM or IP switching
- IPv4 support
- IPv6 support
- Rack-based media gateways
- Software media services
  - IP, SIP, ABC network deployment
  - Up to 120 ports per virtual machine
  - G.711, G.729.AB, G.722
  - Transcoding
  - Ad hoc, meet-me and mastered audio conferencing
  - Dynamic voice guides

### **Business process integration**

- TAPI
- MAPI
- DDE
- OLE.com
- LDAP

### **Interfaces for Alcatel-Lucent Application**

#### **Partner Program (AAPP)**

- SIP
- XML web services
- CSTA, TSAPI Premium Server, TAPI Premium Server, RTI, WMI
- DR-Link
- Alcatel-Lucent Hospitality Link, InfoCenter
- OmniVista Tickets Collector, CDR
- QSIG, Paging Interface

### **SIP**

- SIP proxy/registrar/redirect server and SIP gateway
- Server redundancy (active/passive)
- Branch office survivability

### **IPv6**

- IPv6 and IPv4 dual stack
  - Communication server
  - RM1 and RM3
- IPv6/IPv4 proxy
  - RM1 and RM3

### **IETF standards**

- SIP RFC: 2782, 3261, 2543, 3262, 3263, 3264, 3265, 3311, 3323, 3324, 3325, 3327, 3515, 3891, 3892, 3398, 3608, 3966 (partial), 4497, 2327, 2617, 1321, 2833, 4733, 3842, 4028, 3725 (partial), 3960 (partial), 5009
- RTP RFC: 1889, 1890, 2198, 3550, 3551, 3711, 3362
- SIP best practices: RFC 4504

### **VoIP**

- G.722 audio wideband
- G.722.2 for peer-to-peer and conference sessions with OpenTouch Conversation applications and devices
- G.711 A-law and  $\mu$ -law, G.723.1A, G.729.AB audio
- Call admission control
- Automatic compression algorithm allocation
- Dynamic jitter buffer, echo cancellation, packet loss concealment (PLC), VAD: silence suppression and comfort noise generation
- DTMF Q23, robust DTMF relay, RFC 2833
- Generic signal qualification and modem transport
- Anti-saturation mechanism; backward and forward automatic gain control
- Embedded signal quality diagnostic tool
- QoS: TOS or DiffServ tagging, 802.1 p/Q

### **Messaging networks**

- 4645 VMS: IMAP4, VPIM, Octel® OctelNet™ and Amis

### **Fax**

- G3, super G3 fall-back
- Automatic fax detection
- G.711 transparent (Alcatel-Lucent protocol) and T.38 (Alcatel-Lucent protocol, H.323 and SIP)

### **Public networking protocols**

- SIP, SIP/TLS, E164 support
- T0 ISDN
- T1-CCS ISDN (T2)
- E1-CAS
- T1 CCS (PRI)
- T1 CAS
- DID/DDI or NDDI/non-DID analog networks

### **Private networking protocols**

- Alcatel-Lucent ABC
  - User feature transparency
  - Network-wide management
  - Network-wide routing
  - Centralized applications
- IP
  - ABC based on enhanced QSIG (tunneling) and H.323 for VoIP
  - SIP, H.323v2
  - ABC VPN for networking over ISDN/PSTN network
- TDM
  - ABC
  - QSIG BC, QSIG GF, DPNSS

### **OpenTouch Multimedia Services**

#### **VoIP**

- G.722.2 for peer-to-peer and conference sessions with OpenTouch Conversation applications and devices
- G.711 A-law and  $\mu$ -law, G.729.AB audio
- Call admission control
- Automatic compression algorithm allocation
- Dynamic jitter buffer, echo cancellation, packet loss concealment (PLC), VAD: silence suppression and comfort noise generation
- DTMF Q23, robust DTMF relay, RFC 2833
- Anti-saturation mechanism; backward and forward automatic gain control
- QoS: TOS or DiffServ tagging, 802.1 p/Q

#### **Video**

- SD/HD video
- H.264
- Voice-activated video switching for ad hoc and scheduled conferences
- ISDN gateways (AAPP)
- Continuous video presence integration: LifeSize UVC Multipoint™

#### **Fax**

- G3, super G3 fall-back
- Automatic fax detection
- G.711 transparent (Alcatel-Lucent protocol) and T.38 (Alcatel-Lucent protocol, H.323 and SIP)

## Security

### OmniPCX Enterprise Communication Server

#### Authentication

- Local, RADIUS, LDAP authentication
- NTLM Single Sign-On
- IEEE 802.1X MD5/TLS

#### Traffic filtering

- OmniPCX Enterprise CS
  - Trusted hosts file
  - TCP wrapper function
- Client/device (Premium DeskPhone, IP Touch)
  - ARP spoofing protection
  - PC port switch VLAN filtering

#### SIP perimeter defense

*Alcatel-Lucent OpenTouch Session Border Controller<sup>1</sup>*

- SIP deep packet inspection against SIP DoS attacks
- Certified with SIP service providers
- Secures OpenTouch Conversation and Connection software clients outside the enterprise
- VMware delivery
- Dedicated appliance: up to 4000 audio sessions, 2000 video sessions
- Active – standby redundancy

#### Guest access

- OpenTouch Edge Server<sup>1</sup>
  - Front-end server in DMZ
  - Enables guests to access OpenTouch conferences
  - Software or VMware delivery

#### Encryption

- SSHv2 for secure sessions (such as Telnet, FTP)
- SSLv2/v3 for secure HTTP session
- SNMP v1/v2c/v3 for complete NMS integration
- Client/device confidentiality (signaling protocol and media)
- IPSec and Secure RTP (AES 128 bits)
- Secure SIP/SRTP
  - SIP trunks

#### Integrity

- Media gateway, Premium DeskPhones binary signatures

#### User authorization to communication services

- Call monitoring and barring
- Internal toll fraud protection by class of services

## Platforms

### OpenTouch Multimedia Services

- Software distribution
- HP ProLiant DL servers
- VMware vSphere® 5.5

### OmniPCX Enterprise Communication Server

- IBM System x® servers
- HP ProLiant DL servers
- VMware vSphere 5.5
- Linux Kernel-based Virtual Machine (KVM)

#### OmniPCX Enterprise RM1 (19-in. rack)

- 3 modular slots (stackable up to 3 with RM3)
- Hot-swappable boards
- Height: 66 mm (2.60 in)
- Width: 442 mm (17.40 in)
- Depth: 400 mm (15.75 in)
- Weight: 10 kg (22 lb)

#### OmniPCX Enterprise RM3 (19-in. rack)

- 9 modular slots (stackable up to 3 with RM1)
- Takes optimized hardware modules (and/or e-CS communications server)
- Hot-swappable boards
- Height: 154 mm (6.06 in)
- Width: 442 mm (17.40 in)
- Depth: 400 mm (15.75 in)
- Weight: 17 kg (38 lb)

#### OmniPCX Enterprise M2 (cabinet)

- 1 ACT 28 or 2 ACT 14
- Hot-swappable boards
- Height: 740 mm (29.13 in)
- Width: 570 mm (22.44 in)
- Depth: 516 mm (20.31 in)
- Weight: 70 kg (154.32 lb)

#### OmniPCX Enterprise M3 (cabinet)

- 2 ACT 28 or 4 ACT 14
- Hot-swappable boards
- Height: 1500 mm (59.05 in)
- Width: 570 mm (22.4 in)
- Depth: 516 mm (20.31 in)
- Weight: 110 kg (242.5 lb)

#### OmniPCX Enterprise ACT 14-in data rack format (19-in. rack)

- 48 V power supply and battery backup
- Hot-swappable boards
- 1 ACT 14
- Height: 264.4 mm (10.41 in)
- Width: 486.3 mm (19.15 in)
- Depth: 383.4 mm (15.09 in)
- Weight: 30 kg (66.14 lb)

#### OmniPCX Enterprise ACT 28 in data rack format (19-in. rack)

- 48 V power supply and battery backup
- Hot-swappable boards
- 1 ACT 28
- Height: 530 mm (20.87 in)
- Width: 486.3 mm (19.15 in)
- Depth: 383.4 mm (15.09 in)
- Weight: 70 kg (154.3 lb)

## Wireless infrastructure

### OmniPCX Enterprise Communication Server DECT radio

- DECT/GAP/Alcatel-Lucent GAP
- Hybrid IBS/RBS and IP DECT networks
- Radio frequency range
  - 1.88 GHz to 1.90 GHz (Europe)
  - 1.91 GHz to 1.93 GHz (South America)
  - 1.92 GHz to 1.93 GHz (US) with power adaptation
- Optimized Radio Base Station (IBS)
  - Six simultaneous communications
  - 2 x UA interfaces
  - Inline powered
- Advanced Radio Base Station (RBS)
  - 12 simultaneous communications
  - Dedicated DECT8 board
  - External power supply
  - Outdoor versions

*Alcatel-Lucent 4070 DECT Base Stations*

- Six simultaneous communications per BS
- Radio coverage from 50 m (55 yd) to 300 m (328 yd)
- Indoor, outdoor models
- ATEX model (Europe only)
- Remote power feeding on digital cables

*Alcatel-Lucent 8340 IP DECT Access Point*

- 11 simultaneous communications per AP
- 256 AP (750 project-mode)
- POE or POE injector
- Outdoor versions
- DAP manager for automated configuration and handset roaming
- OmniPCX Enterprise CS duplication and full-featured branch survivability

### WLAN

*OmniAccess WLAN access points and WLAN controllers*

- IEEE 802.11a/b/g/n
- IEEE 802.11ac
- Radio frequency range
  - 2.4 GHz to 2.4835 GHz (“b” and “g”)
  - 5.150 ~ 5.250 GHz (low band)
  - 5.250 ~ 5.350 GHz (mid band)
  - 5.470 ~ 5.725 GHz (Europe)
  - 5.725 ~ 5.850 GHz (high band)



- Automated radio coverage
  - Dynamic RF management for AP channel power and channel optimal setting
  - Self-healing around failed access points
- Wireless security
  - WEP, WPA, WPA-PSK, WPA2 and WPA2-PSK
  - Integrated stateful firewall
  - Rogue access point detection and containment
  - Wireless IDS/IPS
- Standardized quality of service
  - Over-the-air QoS: 802.11e
  - WMM (EDCA)
  - 802.11e Power Save (U-APSD)
  - 802.11e Traffic Specification (TSPEC)
- SRP mode
- Connection Admission Control with graceful load balancing
- 802.1p DiffServ marking
- Call persistency
  - Proxy mobile IP for Layer 3 handover
  - Fast handover – WPA2 opportunistic key caching
  - Voice-aware scanning
  - Voice-aware 802.1x re-authentication

## International directives

### EC Directives

- 94/9/EC: ATEX
- 1999/5/EC: R&TTE
- 1999/519/EC: SAR

- 2011/65/EU: ROHS
- 2012/19/EU: WEEE
- 2004/108/EC: EMC
- 2009/125/EC: Ecodesign
- 2006/95/EC: LVD

### Safety

- IEC 60950-1
- UL 60950-1

### SAR

- CENELEC EN 50360
- CENELEC EN 50385
- FCC OET 65 and IEEE 1528

### EMC

- IEC CISPR 22 Class B
- CENELEC EN 55022 Class B
- FCC Part 15B
- IEC CISPR24
- CENELEC EN 55024
- IEC EN 61000-3-2
- ETSI EN 301 489-1
- ETSI EN 301 489-06: DECT
- ETSI EN 301 489-17: Bluetooth and WLAN

### Radio

- ETSI EN 300 328: 2.4 GHz
- ETSI EN 301 893: 5 GHz
- ETSI EN 301 406: DECT
- FCC Part 15 Subpart C and D

### EX environment (DECT)

- CENELEC EN 60079-0
- CENELEC EN 60079-11

### Miscellaneous environments

- ACT:
  - CENELEC EN 50121-4: Railway applications
- RM1, RM3:
  - DNV certificate: Maritime
  - IEC 60945: Maritime

### Environmental conditions

- ETSI – ETS 300 019 Part 1-1: Storage
- ETSI – ETS 300 019 Part 1-2: Transportation
- ETSI – ETS 300 019 Part 1-3: In Use

### Telecom

- ETSI EG 201 121
- ETSI ES 203 021
- ETSI ES 203 038
- ETSI TBR 010, 022, 003, 033, 004, 034, 008
- ITU-T H.323
- FCC Part 68
- Canada CS03

### Over voltage and over currents

- ITU-T K.21

<sup>1</sup>This feature requires additional software modules.

<sup>2</sup> Genesys Compact Edition: end of sales January, 1st 2015.