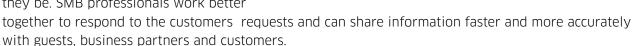# Alcatel-Lucent OXO Connect

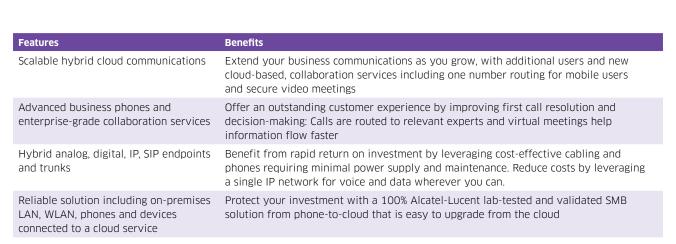## Communication Server for SMBs Scalable. Customer-focused. Reliable and Cost-effective.

Alcatel-Lucent OXO Connect is a scalable phone system based on a robust, connected and converged communication platform for businesses with up to 300 users. OXO Connect offers built-in access to the cloud-based, Alcatel-Lucent Rainbow™ collaboration service.

Together, OXO Connect and Rainbow, offer customer-focused business communications and video collaboration services to all employees, wherever they be. SMB professionals work better together to respond to the customers requests and can share information faster and more accurately with guests, business partners and customers.

Enjoy high reliability with ALE technology that is tested and validated from phone-to-cloud.

OXO Connect is optimized for cost-effective operations: Unified Communications and remote management are offered through an external cloud service connection.

Features	Benefits
Scalable hybrid cloud communications	Extend your business communications as you grow, with additional users and new cloud-based, collaboration services including one number routing for mobile users and secure video meetings
Advanced business phones and enterprise-grade collaboration services	Offer an outstanding customer experience by improving first call resolution and decision-making: Calls are routed to relevant experts and virtual meetings help information flow faster
Hybrid analog, digital, IP, SIP endpoints and trunks	Benefit from rapid return on investment by leveraging cost-effective cabling and phones requiring minimal power supply and maintenance. Reduce costs by leveraging a single IP network for voice and data wherever you can.
Reliable solution including on-premises LAN, WLAN, phones and devices connected to a cloud service	Protect your investment with a 100% Alcatel-Lucent lab-tested and validated SMB solution from phone-to-cloud that is easy to upgrade from the cloud

OXO Connect Large   **OXO Connect Medium**   **OXO Connect Small**

Business services

Business communication services

Communication experience
- Multiline telephony
- Directory search and call by name
- Visual voicemail and call log
- Message waiting indication
- Presence
- Computer Telephony Integration (CTI)
- Phones with color screen, touch screen, customized display
- Navigation by touch screen and keyboard
- Hands-free, super-wideband, high quality audio
- Phone models with Bluetooth handset
- Add on modules

Conversation service
- Mobility services: Nomadic mode
  ¬ Routing to multiple devices: Business phone, DECT or WLAN handset, PC, smartphone
  ¬ One number service
  ¬ User-defined routing rules
- Hot-desking/desk sharing
- Business communications services
  ¬ Call option, speed dial
  ¬ Call back, call queuing
  ¬ Call pickup, barge-in
  ¬ Call diversion
  ¬ Dynamic routing: No answer, busy
  ¬ Call recording
  ¬ Paging
  ¬ DISA
- Team and group
  ¬ Workgroup and key system
  ¬ Groupware supervision
  ¬ Audio notifications
  ¬ Group: broadcast, parallel, cyclical, sequential modes
  ¬ Manager assistant services

- Conference
  ¬ 3-party conference
  ¬ 6-party conference
  ¬ Alcatel-Lucent 8135s IP Conference Phone (5 legs)
  ¬ Alcatel-Lucent 4135 IP Conference Phone (5 legs)
  ¬ Conference on SIP devices (3 legs)
- Emergency number
  ¬ Virtual number: Location, PSAP
  ¬ Local notification service

Supported phones
- Analog 2 wires
  ¬ Native analog ports
  ¬ FXS SIP gateway 2/4/8 ports
- Wireline business phones (NOE protocol)
  ¬ Alcatel-Lucent 8088 V2 Smart DeskPhone
  ¬ Alcatel-Lucent 8078s, 8068s, 8058s, 8028s, 8039s, 8029s Premium DeskPhone models
  ¬ Alcatel-Lucent 8018, 8008G, 8008 DeskPhone models
  ¬ Alcatel-Lucent 8019s DeskPhone (digital)
- Mobile business handsets
  ¬ Alcatel-Lucent 8212 DECT Handset, Alcatel-Lucent DECT Intercom: GAP
  ¬ Alcatel-Lucent 8232, 8234, 8242, 8244, 8254, 8262, 8262EX DECT Handset models: Alcatel-Lucent AGAP
  ¬ Alcatel-Lucent 8158s, 8168s, 8118, 8128 WLAN Handset models
- Alcatel-Lucent IP Desktop Softphone: NOE/IP
  ¬ Platforms: Microsoft Windows, Apple Mac, Android
- SIP phones
  ¬ Alcatel-Lucent 8008, 8008G Cloud Edition Deskphone
  ¬ VTech hospitality models
- Alcatel-Lucent Rainbow: VoIP softphone
- OpenTouch Conversation (OTCV)
  ¬ Android

- Conference Modules
  ¬ Alcatel-Lucent 8135s IP Conference Phone
  ¬ Alcatel-Lucent 4135 IP Conference Phone
- Third party phones (AAPP)
  ¬ DECT (GAP), SIP (Open and Basic)

PIMphony
Telephony and Unified Communication services (CTI)
- PIMphony Touch
  ¬ Platform: Microsoft Windows (modern UI)
  ¬ Microsoft Windows Store
- PIMphony
  ¬ Platform: Microsoft Windows (desktop mode)
  ¬ VoIP softphone
  ¬ Multisite supervision
  ¬ Assistant mode (operator)

Rainbow Unified Communication services
Hybrid cloud service between OXO Connect phones and Rainbow applications
- UC services
  ¬ Contact management, presence, calendar sharing, chat, audio/video call, screen and file sharing
  ¬ Persistent group chat with audio/video/screen sharing conference capabilities
  ¬ Audio conference up to 100 participants
- Hybrid cloud integration with OXO Connect
  ¬ Mobility services
  ¬ Business phone CTI: Call control, visual voicemail , call log, telephony presence
  ¬ WebRTC VoIP over the Internet: smartphone, PC, MAC, Web
- Self-care services (for company admin)
  ¬ Call server Common directory synchronization with Rainbow business directory
  ¬ Greeting voice message management

- Platforms
  - ¬ Desktop, Web, IOS, Android
  - ¬ Microsoft Outlook add-in, Microsoft Azure Active Directory, Microsoft Skype For Business

Customer welcome services

ACD

OXO Connect built-in features
- Compatible with Alcatel-Lucent business phones, DECT and WLAN handsets, SIP phones, third-party analog devices
- ACD and business calls can be handled simultaneously on business phone
- Applications
  - ¬ Agent menus from phone and PC application
  - ¬ Supervisor PC application for real time ACD activity monitoring of agents and group call queuing
  - ¬ Statistic services with predefined reports
- Services
  - ¬ Group selection: Longest idle time, rotating, priority, fixed priority
  - ¬ Group overflow and priority levels between groups
  - ¬ Group Queue and Voice guidance
  - ¬ Customer code
  - ¬ Screen pop/CRM

Smart call routing SCR

Service allowing call routing based on multiple criteria
- Up to 10,000 routes
- Routing by criteria: Customer code, CLI, DDI, defined planning
- Routing destinations: ACD, MLAA, any destination

Welcome greeting
- Personal assistant
- Attendant services
  - ¬ Attendant group, call queuing, call overflow
  - ¬ Time range: Daily, weekly, bank holidays, restrict mode control
  - ¬ Alarm indicator
  - ¬ PBX and end user management
- Greetings
  - ¬ Company greetings
  - ¬ Night greetings
  - ¬ Music on hold

- Automated attendant (2 levels)
- Multiple Language Automated Attendant (MLAA)
  - ¬ 5 trees with 3 levels per tree
  - ¬ 5 languages per tree
  - ¬ Time range
- Multiple company welcome: Up to 4 companies

Verticals services

Hospitality
- Guest rooms and administrative sets: Up to 300 sets
- Integrated application: Up to 120 rooms
- Alcatel-Lucent OXO Connect Hospitality link (OHL): Up to 300 rooms

Metering
- Metering counters and traffic counters
- Accounting link
- Printout facilities
- Local call metering: XML/HTTP
- Account code
- Duration-based forced disconnect
- Duration base call accounting (3 levels)

Messaging
- Voicemail: Up to 500 mailboxes, 200 hours
- Instant Messaging (IM)
- Text messaging (exclusive of IM)
- Voicemail in email
- Call log in email

Directory services
- Dial by name: Auto and unified modes
- Universal Directory Access: External LDAP server
- Integrated Directory
- Common and personal directories
- Rainbow Directory

Application and interfaces
- Alcatel-Lucent OmniVista 8770 NMS: Accounting and VoIP ticket collection, call detail record
- Alcatel-Lucent Enterprise Application Partner Program (AAPP)
- QSIG
- SIP trunk, Open SIP
- Rainbow CPaaS
- SNMP
- CSTA, TAPI 2.0, TAPI 2.1

- Alcatel-Lucent Hospitality
  - ¬ OLD: Office Link Driver
  - ¬ OHL: Hotel Link
- Call accounting: Web Services and OHL
- Local Call Metering Application (LCMA)
- Isolated Working Protection (IWP)
  - ¬ Alarm server (SIP trunk, T2)

Networking and topology
- Multi-sites
  - ¬ Up to 5 sites
  - ¬ Directory synchronization via management console
- Networking
  - ¬ ISVPN (T0/T2)
  - ¬ QSIG-BC (DLT0 DLT2)
  - ¬ Private SIP trunks, multiple SIP trunks
  - ¬ Automatic Route Selection (ARS): 3000 entries, time range, Least Cost Routing
- Branch office
  - ¬ Remote business phone: IPSEC VPN
  - ¬ Alcatel-Lucent 8378 DECT IP x-BS, Alcatel-Lucent 8318 SIP-DECT Single Base Station

Operation and serviceability
- OXO Management Console (OMC) on PC
- Rainbow Admin & Self-care (Web Based)
- Alcatel-Lucent OmniVista 8770 NMS
- Alcatel-Lucent Cloud Connect, Fleet Dashboard for OXO Connect
- Plug and play zero-touch services:
  - ¬ Rainbow UC services
  - ¬ Alcatel-Lucent business phones and mobile handsets, DECT base stations, OmniSwitch, OmniAccess Stellar, Rainbow WebRTC Gateway
  - ¬ Third party device deployment
- Backup/restore: local, external, MSDB
- Network Time protocol (NTP), SNMP

Technical specifications

Architecture

Software
- OS: Linux
- Software suite: Alcatel-Lucent OXO

System architecture
- All-in-one chassis
- Hybrid IP and TDM switching
- Hybrid cloud UC solution
  - ¬ Rainbow Agent for UCaaS, CPaaS
  - ¬ Rainbow VOIP WebRTC Gateway
  - ¬ External appliance:
    - Intel® NUC (max 50 channels)
    - OCE Front End (max 20 Channels)

Capacity
- Max users (devices)
  - ¬ PowerCPU EE: 300
- BHCA 1500

Connectivity

Connectivity
- IPv4
- HTTP/HTTPs
- VoIP
  - ¬ G.711, G.729, G.722, Super-Wide Band (OPUS), codec pass-through (direct RTP)
  - ¬ QOS: TOS, DiffServ, 802.1 p/Q
  - ¬ Direct RTP, RTP proxy, integrated software media server
  - ¬ DTMF: In-band, RFC 2833
  - ¬ IETF/ RFC standards
- FAX
  - ¬ G.711 transparent fax
  - ¬ T.38: Direct RTP only
- Rainbow WebRTC Gateway provides WebRTC VOIP services over the Internet
  - ¬ Firewall friendly port forwarding and VPN less
  - ¬ Encrypted media, STUN/TURN
- Management: Remote Access
  - ¬ Alcatel-Lucent Cloud Connect: Firewall-friendly HTTPS
  - ¬ Integrated VPN IPsec
  - ¬ ISDN (1 or 2B), call back

SIP
- Public SIP trunk
- Private SIP trunk
- SIP endpoints (local users)

DECT base stations
- 8378 DECT IP-xBS: GAP and AGAP
- 8318 SIP-DECT Single Base Station: SIP, GAP
- 8379 DECT IBS: GAP and AGAP

WLAN
- Alcatel-Lucent OmniAccess WLAN access points and WLAN Controllers
- Alcatel-Lucent OmniAccess Stellar AP Series

Security

Authentication
- User Authentication
  - ¬ Password 6 digits
  - ¬ Access locked after repeated authentication errors, notification
  - ¬ Normal/restricted modes
  - ¬ User right to services
  - ¬ Pin for remote access (DISA)
- Certificate
  - ¬ Server self-signed
  - ¬ Import for public authority
- WAN access: HTTP proxy compliant
- SIP Authentication: RFC2617

Traffic filtering
- ARP spoofing protection
- SIP perimeter defense
  - ¬ Quarantine, blacklist, automated blacklist
  - ¬ Connection tracking

Encryption
- HTTPS (TLS 1.2)

Physical characteristics

Software
- Linux: Linux kernel 2.6.29.6
- Alcatel-Lucent OXO

Hardware CPU Board
- PowerCPU EE (PowerPC e300)
  - ¬ Chassis: Compact, S, M, L models
  - ¬ 16 VoIP DSP channel (embedded)
  - ¬ VoIP 32 optional daughter board: 48 VoIP channels
  - ¬ VoIP 64 optional daughter board: 76 VoIP channels
  - ¬ Memory Storage daughter board (MSDB): 8GB (eMMC)
- Daughter board (optional)
  - ¬ AFU: CD-player, door phone, loudspeaker
  - ¬ HSL1 or HSL2: for multiple cabinet interconnection (S, M, L chassis)
  - ¬ MiniMIX 2/0/2 (compact chassis only)

Chassis
- Compact (C) Edition
  - ¬ AC/DC power supply: external
  - ¬ Backup battery: external (optional)
  - ¬ Installation: wall-mounted
  - ¬ 1 free modular slot
  - ¬ No fan
  - ¬ Height: 70 mm (2.75 in.)
  - ¬ Width: 345 mm (13.58 in.)
  - ¬ Depth: 340 mm (13.38 in.)
  - ¬ Weight (unpacked): 5.1 kg (11.24 lb.)
  - ¬ Power maximum/typical: 40 W/25W
  - ¬ Noise level: 0 dBA
- S, M, L racks
  - ¬ Fan
  - ¬ 19-inch rack
  - ¬ AC/DC power supply: Integrated
  - ¬ Backup battery: Internal/external (option)
  - ¬ Installation: stack, rack, wall-mounted
  - ¬ Combination: up to 3 chassis, maximum of 27 free slots
- Small (S) 1U rack
  - ¬ 2 free modular slots
  - ¬ Height: 66 mm (2.60 in.)
  - ¬ Width: 442 mm (17.40 in.)
  - ¬ Depth: 400 mm (15.75 in.)
  - ¬ Weight (unpacked): 6 kg (13.22 lb.)
  - ¬ Power maximum/typical: 70W/28W
  - ¬ Noise level: maximum 40dBA
- Medium (M) 2U rack
  - ¬ 5 free modular slots
  - ¬ Height: 111 mm (4.37 in.)
  - ¬ Width: 442 mm (17.40 in.)
  - ¬ Depth: 400 mm (15.75 in.)
  - ¬ Weight (unpacked): 11 kg (24.25 lb.)
  - ¬ Power maximum/typical: 88W/40W
  - ¬ Noise level: Max 41dBA
- Large (L) 3U rack
  - ¬ AC/DC or 48v integrated power supply
  - ¬ 8 free modular slots
  - ¬ Height: 154 mm (6.06 in.)
  - ¬ Width: 442 mm (17.40 in.)
  - ¬ Depth: 400 mm (15.75 in.)
  - ¬ Weight (unpacked): 13 kg (28.7 lb.)
  - ¬ Maximum/typical power: 108W/57W
  - ¬ Noise level: Max 45dBA

Interface boards
- Terminals
  - ¬ Digital Interfaces UAI 8, 16
  - ¬ Analog Interfaces SLI 8, 16
- Network
  - ¬ BRA boards: 4, 8 T0
  - ¬ PRA boards: 1 T1, T2
  - ¬ Analog trunk: (1) 2
  - ¬ Mixed boards: T0/UA/SL 2/4/4, 4/4/8, 4/8/4
  - ¬ Analog mixed boards: APA/UA/SL 4/4/4-1, 4/4/8-1, 4/8/4-1
  - ¬ Mini-MIX2/0/2
- LAN
  - ¬ 10/100/1000 BT auto-sense unmanaged

International directives
- EC and EU Directives
  - ¬ 1999/519/EC: SAR
  - ¬ 2009/125/EC: Eco-design
  - ¬ 2011/65/EU: ROHS
  - ¬ 2012/19/EU: WEEE
  - ¬ 2014/53/EU: RED
  - ¬ 2014/35/EU: LVD
  - ¬ 2014/30/EU: EMC
  - ¬ 2014/34/EU: ATEX

- Safety
  - ¬ IEC 60950-1
  - ¬ UL 60950-1
- SAR
  - ¬ Cenelec EN50360
  - ¬ Cenelec EN50385
  - ¬ Cenelec EN62311
  - ¬ FCC OET 65 and IEEE 1528
- EMC
  - ¬ IEC-CISPR22 Class B
  - ¬ IEC-CISPR32 Class B
  - ¬ Cenelec EN55022 Class B
  - ¬ Cenelec EN55032 Class B
  - ¬ FCC Part 15B
  - ¬ IEC-CISPR24
  - ¬ Cenelec EN55024
  - ¬ IEC-EN61000-3-2
  - ¬ 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, D, E

- EX environment
  - ¬ Cenelec EN 60079-0
  - ¬ Cenelec EN 60079-11
- Miscellaneous environments
  - ¬ 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 TBR 021, 010, 022, 003, 033, 004, 034, 008, 038
  - ¬ ITU-T H.323
  - ¬ FCC part 68
  - ¬ Canada CS03
- Over voltage and over currents
  - ¬ ITU-T K.21, K.22

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