



Communication and collaboration solutions for healthcare

Alcatel-Lucent Enterprise is a recognized healthcare facilities and emergency services around the world.

We are present in many hospitals, university hospitals, clinics, senior living facilities, health centers and medical social centers as well as fire, rescue and emergency services. This success is the result of ALE systems' reliable, wide-ranging features and security, as well as our technological know-how.

Our goal is to contribute to the healthcare sector's digital transformation by offering proven communications and network infrastructure technologies.

We connect patients, healthcare professionals and stakeholders within their ecosystem to optimise the care pathway.

To succeed with this digital transformation we have developed an ecosystem of partnerships, the Developer and Solution Partner Program (DSPP), which enables program participants to develop, certify and deploy innovative solutions in Alcatel-Lucent Enterprise environments.

What is digital transformation?

Digital transformation uses technology to improve the patient experience, make life easier for healthcare staff, facilitate the secure exchange of data and speed up decision-making processes.

Alcatel-Lucent OmniPCX® Enterprise Purple (OXE Purple)

The heart of your efficient and robust real-time communications system for the digital age

OXE Purple is a proven communication server based on a software-only platform that handles multimedia calls from Alcatel-Lucent and third-party vendor phones, including TDM, IP and SIP.

OXE Purple provides the building blocks for any IP and/or TDM communications solution by integrating the very latest Linux, XML, SIP and VXML technologies, and QSIG, CSTA and SIP open standards. Superior scalability allows OXE Purple to support from 10 to 100,000 users spread over several geographic sites.

It also offers extremely reliable, real-time, carrier-grade performance with unrivalled, 99.999% availability.

In addition, it supports a wide variety of apps and telephones:

- Access your messages from an internal or external telephone using a centralized voice messaging solution, such as **Alcatel-Lucent 4645 Voice Messaging Services**
- Benefit from a contact center (**Alcatel-Lucent OmniTouch® Contact Center Standard Edition – OTCC SE**) that manages incoming voice interactions with advanced supervision and agent phone functions
- Enrich OTCC SE with omnichannel cloud services (email, chat, Facebook Messenger, X and phone call) to connect with your customers their preferred way with **ALE Connect***
- Eliminate costs associated with fax machines, analog lines and consumables with the 100% Fax over IP (FoIP) software solution, **Alcatel-Lucent OpenTouch Fax Center**
- Monitor, record and evaluate all interactions between employees and customers or patients with **Alcatel-Lucent OmniPCX® RECORD**, which allows you to record calls and screen captures and listen to conversations in real-time
- Enable your teams to define notification and alert strategies with the **Alcatel-Lucent Visual Notification Assistant** "no-code" interface: Notification by email, SMS or chat using **Rainbow™ by Alcatel-Lucent Enterprise**, mass merging and audio diffusion on Alcatel-Lucent and third-party phones
- Equip your PC/MAC with all the functions of a desktop phone with the **IP Desktop SoftPhone** and **ALE Softphone apps**
- Use desktop phones adapted to your needs from our large range of ergonomic phones with high-quality sound

* Selected countries (Western Europe)



Alcatel-Lucent
Enterprise



Economical and reliable on-site mobility solutions

- Discover our VoWLAN 8158s/8168s handsets, compatible with 802.11 a/b/g/n radio networks and 802.11r quality of service and roaming standards
- Discover our complete DECT offer featuring:
 - Standard DECT (IBS/RBS) and IP DECT (8378 DECT IP-xBS) bases for indoor and outdoor use, adaptable to any connection (TDM or IP) and any size of building and site
 - A large range of DECT handsets. Discover the models best suited to the healthcare sector:
 - The compact, robust, antibacterial DECT 8254 Handset with red emergency button
 - The **DECT 8244** Handset with red emergency button, using Bluetooth® technology for precise localization
 - The **DECT 8262** Hardened Handset with IWP* function associated with Bluetooth Low Energy technology



8158s/8168s

The + of 8378 DECT IP-xBS terminal

- High-density base station (11 channels) with dedicated channels for alarming
- Superior scalability for campuses, such as university hospitals
- Transparent air update service of DECT Handsets binary code
- Can be combined with standard Alcatel-Lucent TDM DECT base station including roaming and handover services



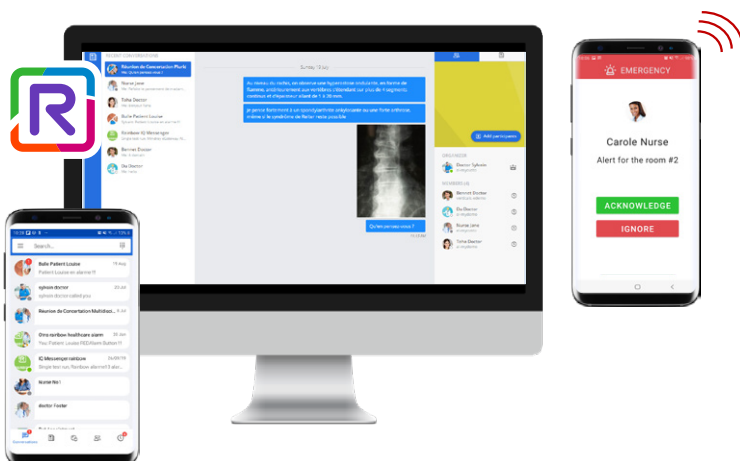
8254



8244



8262



Address mobility and collaboration needs

- Adapt your working environment to meet current requirements for remote working, mobile telephony and multi-site team needs
- Use communications and collaboration services to work as a team: For example, easily make a “one-click” call with your desktop phone while sharing your PC screen to improve understanding and help with decision-making
- Arrange instant video conferences using the Web or a smartphone and set up multi-disciplinary consultative meetings with fellow clinicians
- Using the presence functions, quickly identify who is available to answer your questions (for example, who is not on the phone or in a meeting)
- Share files: The cloud provides access to all types of documents such as a care sheet, a simple prescription, or large DICOM format images
- Maintain social links by chatting with your colleagues on your smartphone, wherever they are
- Add video capabilities to a meeting room optimizing time to connect with one-click video meetings (Rainbow Room)
- Generate persistent alert message with text or photo and allow the recipient(s) to acknowledge or ignore the emergency notification using Rainbow Alert

The + of Rainbow

- Customizable cloud collaboration solution including a free subscription
- Protected data **: GDPR, ISO 27001, HDS (France), ENS (Spain), and HIPAA (USA) and more
- Hybrid model: Connect OXE to the cloud service to control your office terminal and/or call any OXE user or external user from your Rainbow client
- Rainbow options: Rainbow Alert and Rainbow Room
- Off-the-shelf connectors ***: CRM, UC (Microsoft® Teams), LMS with Rainbow Classroom, Third-party PBX and more
- API for integrating connectivity into business application

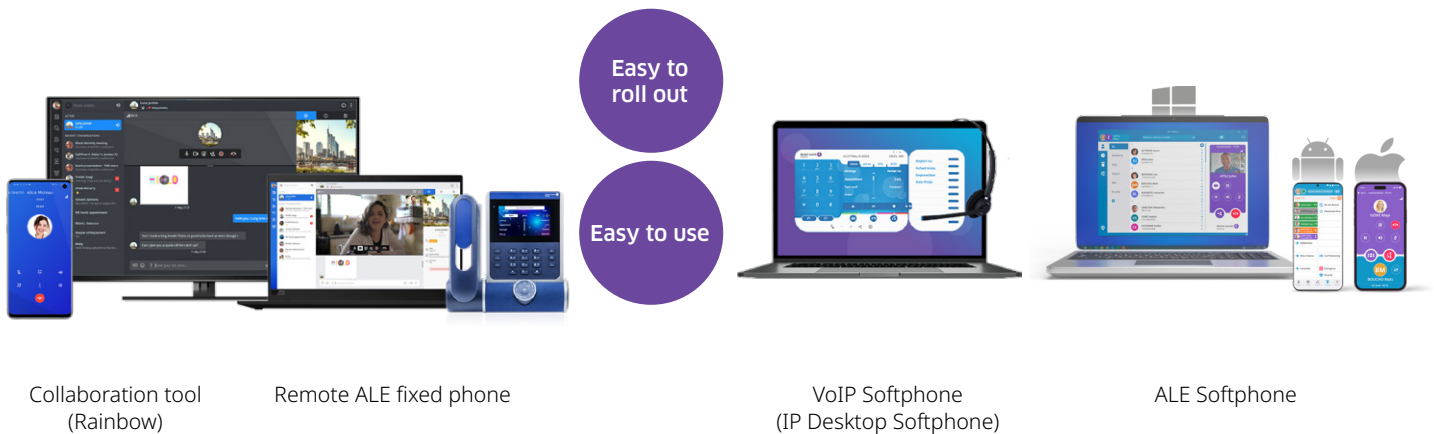
* IWP: Isolated Worker Protection detects fall, shock, immobility, among others.

** GDPR: General Data Protection Regulation & HDS: Health Data Hosting

*** CRM: Customer Relationship Management, UC: Unified Communications, LMS: Learning Managing System, PBX: Private Branch Exchange

Make remote working easier for administrative staff

The global health crisis has highlighted the importance of innovative telecommunication strategies for remotely coordinating activities to ensure continuity of the healthcare facility, all while safeguarding individual's health data. Four solutions have proven to be effective and relevant:



Third-party notification servers

- Connect and monitor your clinical assets (such as patient monitors or infusion pumps) and smart objects. Reduce fatigue among healthcare staff due to the increase in the number of alarms
- Generate alarms from ALE DECT and VoWLAN handsets
- Send secure and reliable notifications on the DECT/VoWLAN handsets and smartphones (iOS/Android OS) from the Rainbow app

Cybersecurity

OmniPCX Enterprise

- Geographic hot redundancy
- Built-in security with hardened operating system
- Security policy for voicemail users to avoid PBX fraud
- Confidentiality and integrity of voice media against wiretapping and IP Phone signatures, and media gateways against denial-of-service attacks (IPSec)
- Mutual authentication against spoofing attacks
- Regular software update policy in order to benefit from the latest patches and upgrades

Rainbow

- Secure by design, reinforced by ALE conformity with the GDPR, ISO 27001, HDS (France), ENS (Spain), HIPAA (USA), as well as audits by independent players (Nmap, Nessus Cloud, Qualys SSL Labs)
- Confidentiality and integrity of sensitive data with encrypted media flows in transport and in storage

Innovation and integration

Integrate connectivity into business applications, clinical and operational procedures and the ecosystem with the ALE OXE (O2G) and Rainbow API, as well as our technological components (such as IoT Hub, Rainbow Workflow):

- Provide communications from the Web portal: click-to-call, video and presence
- Add audio, video and chat to business applications (PC/ mobile), such as shared and computerized medical records
- Connect your application in a secure manner with a variety of IoTs, chatbots and Artificial Intelligence (AI) through Machine Learning (ML) technology
- Perform administrative operations: Synchronization of an HR directory to create, modify or delete the hospital's employee accounts

Communications services for patients

Optimize the hospital welcome and offload the healthcare units

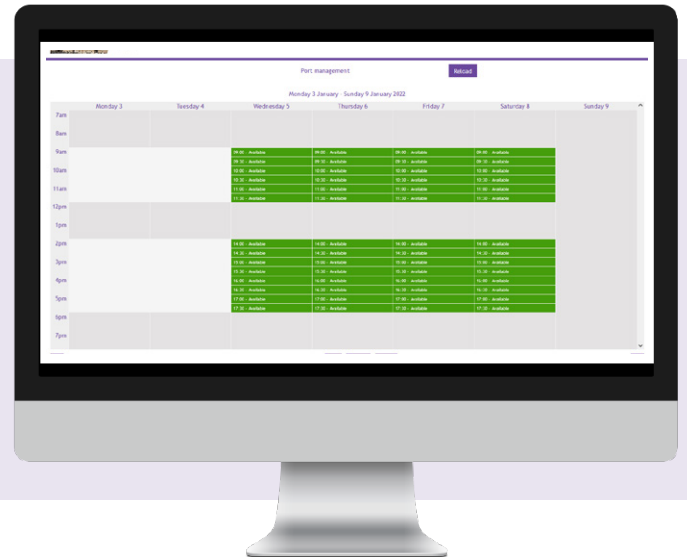
- Automate the most repetitive and resource-intensive tasks with an intuitive and economical interactive voice server, integrating voice synthesis and automatic speech recognition services

The + of Visual Automated Attendant

- Easy creation and modification of routing scripts and voice guide by non-specialist users
- Welcome service professional image and response
- Standardized and differentiated welcome between healthcare units

Welcome 2.0 with “Click-to-Connect”

- No longer drop patients' calls: A simple web-based appointment solution provides automatic call back
- Optimize the facility's reception by offering intelligent routing to an agent based on competence criteria (such as choice of pathology or language) with multimedia management (chat/audio/video)
- Remove any doubt by activating video on the patient's smartphone without having to download an app



Make it easier for patients to communicate while they are hospitalized

- VIP patients and their relatives require high-end hotel style rooms and services, such as monitoring of their in-room comfort features (temperature, lights, ventilation and shutters) and access to hospital services (such as the hairdresser or laundry). ALE provides the 8088 tactile handset running on Android, allowing partner apps to integrate their solutions into a high-end bedside handset.
- We also meet your specific needs such as provisioning of analog or SIP handsets with antibacterial plastic adapted to the healthcare environment. Contact us for further details.



Maintain contact with patients at their homes

- Complete remote consultations, perioperative or chronic illness monitoring with audio video or chat connectivity
- Optimize your resources by connecting the patient to a chatbot
- Monitor your patients' health conditions using IoT
- Connect your patients to an enriched virtual assistant with ML (chatbot/AI) enabling patient data analysis. With improved patient knowledge, the virtual agent can refine recommendations and, if necessary, make quick decisions such as triggering an alarm.

