

# KalliopeV4

Communication made easy



NetResults S.r.l. was founded in April 2006 as a spin-off of the University of Pisa. Since its beginnings, the company has focused its efforts on the research and development of VoIP (Voice over IP) and MoIP (Multimedia over IP) technologies. As a result of this approach, in 2008, the company released a VoIP phone branch exchange, KalliopePBX, on the market.

Over the years, KalliopePBX has become a reference product for SMEs, large commercial enterprises, and the public sector.



Due to its work with an eye toward research of the highest quality, in 2011, NetResults was awarded the ISO 9001:2015 certification in the following field: "Manufacturing, design, and development of software and solutions for NGN (Next Generation Network): VoIP (Voice over IP), MoIP (Multimedia over IP) and IoT (Internet of Things)."

### INDEX

Simplicity of use and	
freedom of choice	
Security	4
Integration	ļ
Automation and reporting	(
OUR OFFER	
ADVANCED FEATURES	1
TELEPHONE FEATURES	1
Automatic Call Distribution (ACD)	12
Advanced Call Routing (ACR)	1:
Call Recording	14
Hot Desking	1!
Multi-level Interactive Voice Response (IVR)	1(
Boss/Secretary service	1
Paging Service	18
One number, many	10

Audio Conference	20
Forking to Mobile/Fast Transfer	21
Video Call	22
Voice Mail	23
High availability	24
Multitenant	25
Kalliope FAX server	26
APPLICAZIONI	27
AFFLICAZIONI	21
Kalliope Web CTI	28



### SIMPLICITY OF USE AND FREEDOM OF CHOICE

Technology belongs to everyone

When it comes to technology such as VoIP, it's often necessary to make compromises and choose between advanced services and usability. Our goal is to offer a transparent and instant solution for both.

The simplicity of use without compromising quality has been the guiding principle of our product since its inception.

This allows us to provide **everyone with advanced, easy-to-use, and configurable features**, meaning KalliopePBX can reach maximum flexibility and scalability, adapting to the necessities of the VoIP market.

#### The desire to offer our users the freedom to

**choose** completes the philosophy that guides the release of our products and subsequent updates. With KalliopePBX, you can tailor your experience according to expertise and discover the optimal setup for your business profile. Freedom to choose the solutions that best fit your needs and manage them, guided by our certified partners, will help you find the best solution and manage it with complete autonomy.

You can quickly modify your solution to adapt to the growth of your business, as KalliopePBX does not limit the number of users but grows with you without prohibitive initial investment.

As we do not create proprietary solutions, there are no compatibility restrictions, and KalliopePBX guarantees full compatibility with all products that follow the SIP standard.

All this is made possible due to partnerships formed over the years with the most widely recognized and reliable names in the VoIP market to offer a robust and reliable service.



"The best result will come when everyone in the group does what's best for himself and the group."

John Nash



### **SECURITY**

### In defense of innovation

Like all IT services, VoIP technology requires a particular focus on security.

KalliopePBX pays close attention to these issues and offers a variety of tools to minimize the risks and the consequences of outside threats. KalliopePBX guarantees full coverage regarding security, robust solutions, and attention to privacy.

#### **Security of our services**

- Both signaling and media encryption.
- Electronic lock services: lock your phone with a user-adjustable code.
- Access Control List: allow access to your PBX only to a predefined set of IPs.
- Advanced Call Routing: set custom call permissions for every user, regulating call routing (see page 13).

### Hardware reliability

All KalliopePBX hardware models have no moving parts and are resistant to vibrations and closed environments.

#### **Respecting your privacy**

Call recordings and completed call logs with unobscured numbers are available via a web interface, protected by a password known only to the privacy officer responsible for the end user's privacy and not to our certified partner.



### **INTEGRATION**

The missing piece

VoIP technology was born to integrate two traditionally considered separate worlds: telephony and IT services.

KalliopePBX aims to simplify this integration by offering multiple ways to interface with third-party systems.

You can link your telephony and business data and utilize your telephone infrastructure for your service distribution process.

### Practical examples:

With KalliopePBX, you can consult an internal database to automatically manage call routing and limit access to certain services to users with a specific identification code.

With KalliopePBX, integration with your CRM with your telephone lines is straightforward. You can call a number directly from your software (click-to-call), import the list of inbound, outbound, or missed calls, and immediately call up the client profile of a caller.

5



### **AUTOMATION AND REPORTING**

Because we value your time

Since its inception, KalliopePBX has strived to improve the work experience of its users and partners.

As time is, for most people, an essential and valuable resource, KalliopePBX offers a wide range of tools to optimize implementation and maintenance times to promote work efficiency. This way, we can shorten activation times and the times needed to restore service in cases of downtime to the clear advantage of both the end-users and our certified partners.

### A few simple steps and you're in business

Because of its complexity, the implementation times of a VoIP network are generally longer than those of a standard telephone network, causing end-users to put off switching to VoIP. KalliopePBX aims to reduce this gap considerably by offering a quick and straightforward configuration, thanks to tools such as:

- Auto-provisioning lets you automatically generate the configuration files necessary for the device's correct operation and transfer them to your phones.
- **Guided procedures** that walk you through your first configuration (see page 26).
- The ability to import user configuration data via an Excel file to set up large numbers of users in a few minutes.

#### We take care of your PBX

Immediately locating the cause of any anomalies help us resolve problems, guaranteeing short waiting times before restoring services.

On the main page of the configuration interface, you can find information on the current state of your exchange.

A complete call detail record (CDR) documents every internal or external call (transfers, overflows, time-based routing). It lets you



monitor how your business makes use of its telephone resources.

KalliopePBX has total Simple Network Management Protocol (SNMP) support, which lets it interface with an external monitoring system to evaluate the correct operation of its services and components constantly.

Our partners can find on our website, **www.kalliope.com**, a series of tools specially designed to simplify identifying and resolving issues.



### **OUR OFFER**

### With KalliopePBX you won't have to make compromises!

### **Base features (protocols)**

- SIP v.2.0 support with UDP and TCP transport protocols.
- Signaling (SIP/TLS) and media (SRTP) encryption.
- ENUM support.
- Access control list (ACL).
- External USB storage support.
- SNMP (v1/v2c) read access support (Net-SNMP daemon).
- LDAP support.

### **Traditional telephone services**

- Blind and attended transfer.
- Unconditional call forwarding.
- Call parking.
- Completion of Calls to Busy Subscriber (CCBS).
- Direct inward dial (DID).

- Ring groups (simultaneous, sequential, and hybrid mode).
- Electronic lock.
- BLF (Busy Lamp Field) support.
- Call pickup (direct, for pickup groups, or with the option of seeing the calling number before picking up).
- Completely filterable and exportable call detail record (CDR).
- Manual and automatic day/night service.

### **Advanced Telephone features**

- SIP/WebRTC video call support (H263, H264, VP8).
- Completely customizable multi-level IVR.
- Voicemail box with email forwarding.
- Multi-user, multi-room audio conference with the option of setting users as managers of each room.
- Single number reach.



- Completely customizable automatic call routing (ACR) with unlimited user classes.
- Call recording (unconditional and on demand, inbound and outbound).
- Advanced queue management.
- Advanced integrated provisioning system for SIP devices (currently supported: Snom, Gigaset Pro, Yealink, Cisco SMB, Escene, and Audiocodes).
- Boss/secretary service.
- Paging.
- Hot Desking.
- Closed extension groups.
- Call admission control for subnets.

#### **Unified Communications services**

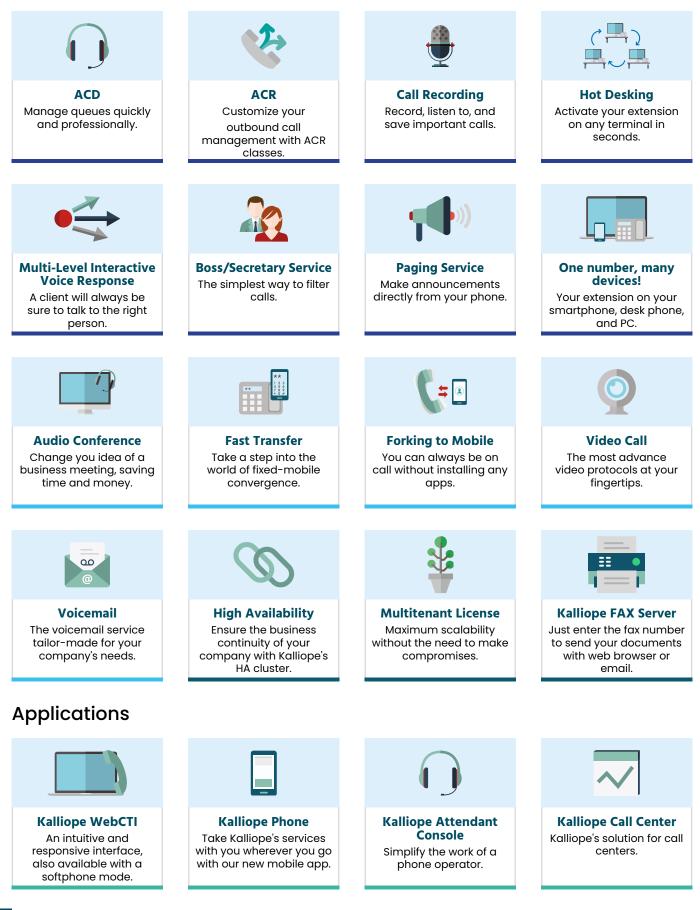
 Database connector for dynamic call routing based on query results on external web services.

- Web-based shared and personal contact lists with click-to-call functions and importing/exporting via CSV.
- Exporting contact lists via integrated LDAP server.
- Importing contact lists from external LDAP servers.
- Fixed-mobile integration through Forking to Mobile and Fast Transfer services.
- XMPP chat.
- FAX support (T.38 passthrough).
- WebAPI, REST API, and AMI (Asterisk Manager Interface) for integration with third-part applications.

For an up-to-date list of features, please visit our official website at **www.kalliope.com**.

### **ADVANCED FEATURES**

### **Telephone Features**



## **TELEPHONE FEATURES**



### **AUTOMATIC CALL DISTRIBUTION (ACD)**

Not your usual waiting times

### Automatic call distribution lets you give your customers a professional reception by using the time spent waiting for an operator. The

client will be informed of the estimated waiting time, their position in the

queue, and other user-adjustable information. When an operator is free, the system will distribute the calls according to the selected engagement policy.

#### **Queue priority**

An operator may handle multiple queues with different priorities. In case of concurrent calls from more than one queue, the service will route the call belonging to the highest priority queue to the operator.

#### **Queue notifications**

When an operator answers a call, the ACD

service will tell them which queue the call originates from, either with an audio message or through the telephone display. This way, the operator will be able to best deal with the client's request. Only the Mini model has a one queue limit.

### USE CASE

A client dials a number to access a technical support service. The ACD service will greet the client with a pre-recorded message, "Welcome to MyBank. Your call is first in the queue, and an operator will answer your call as soon as possible. Your estimated wait time is less than five minutes." Then it will play hold music. Before picking up the request, the ACD service will provide the operator with information on the inbound call (which queue it belongs to, how long the client has waited, etc.). This information will help the operator appropriately respond to the client.

12



### **ADVANCED CALL ROUTING (ACR)**

### Take the right route

KalliopePBX allows you to regulate access to your phone lines to ensure business resources are used correctly. With advanced call routing, you can set custom call permissions for each user and choose the most appropriate call routing (e.g., the least costly) based on the called party's number.

With KalliopePBX, you can create an unlimited number of ACR rules configured to correspond to the area code or the exact number. Each extension on KalliopePBX will be assigned an ACR class and will only be able to call numbers permitted by this class (e.g., landline and mobile numbers, but not international numbers).

### **USE CASE**

Advanced Call Routing lets users set permission categories for outbound calls for different departments, such as administration, sales, technical, etc. For example, the administration department will not be able to make international calls, but the sales and marketing departments will.



### **CALL RECORDING**

(Re)listen to your customers!

KalliopePBX allows you **to record your calls by** setting recording rules, either unconditional or upon request. Only your company's privacy officer will be able to access the archives and configure the service. They will also be able to delegate their powers to other users at their discretion (you can download a manual on assigning privacy permissions on www. kalliopepbx.com).

You can activate the service for calls from both external and internal numbers. It is possible to set a customizable prerecorded message informing the called party that their call is being recorded. You can store the files on the KalliopePBX storage space, an external device connected to the UBS port, or a NAS. It is possible to forward, copy, and move the files, download them to your computer, or delete them permanently through the web interface.

This service is not available on the Mini model.

### **USE CASE**

This service is for companies that need to record calls, either because it offers services of a highly critical nature or simply because it is legally obligated to keep records of important calls.

When a client calls about signing a contract telematically, a message will inform them that their call is about to be recorded because of personal data handling policies or as proof that the call took place and of its contents. Once the call is over, the company will be able to listen to or save the recording.



### **HOT DESKING**

Your extension where you want it!

More and more workplaces are embracing a new work philosophy revolutionizing workspaces and subverting the idea of a single permanently assigned workstation. KalliopePBX can help you embrace this philosophy with its Hot Desking service.

No longer be chained to a single desk; use any enabled company phone by logging in with a PIN. The phone becomes available to other users when you log out, freeing up the desk.

### USE CASE

An employee might need to move from one place to another in a company with multiple branches. With our Hot Desking service, they can keep their telephone identity on any free company desk by dialing their Hot Desking access PIN on the phone. Once their PIN is recognized, the employee has access to their contacts, speed-dial buttons, etc. When logged out, the phone returns to its previous state.



### **MULTI-LEVEL INTERACTIVE VOICE RESPONSE (IVR)**

Straight to the point!

Interactive voice response (IVR) **routes inbound calls to a specific service or number** using the caller's keypad, which is helpful for companies without dedicated phone operators. It also helps the clients by providing information through pre-recorded messages, saving time for both the client and the company.

With the sole exception of the Mini model, KalliopePBX does not limit the number of programmable IVR menus and sub-menus.

### **USE CASE**

Whenever a client calls a company, the IVR system will list the available services and the number to access them. For example: "You have reached the TV Shop. Choose I to speak to the sales office. 2 to speak to the technical department. 3 for stock services. Hold to speak to an operator."

Once the client chooses 3, the automatic response will list further options to more accurately route their call:

"Choose 1 for return services. 2 to check the status of an order. 3 to return to the main menu".



### **MANAGER/SECRETARY SERVICE**

The easiest way to filter calls

The easiest way to filter calls This service lets one or more users (the secretary) **filter calls for another user** (the manager).

Only the "secretaries" (and, optionally, other "managers" in a customizable group) will be able to contact other managers on direct extensions.

The role of the "secretary" is to answer calls for the "manager," check whether they are available, and, if so, transfer the call.

### **USE CASE**

In a company, institute, or public administration with a work hierarchy, an employee will not be able to contact a "manager" directly if KalliopePBX's Management/Secretarial filter is active. The "secretary," the filter, receives the call, then determines the manager's availability. Instead, if the caller is another manager within the same company, they can reach the "manager" directly upon dialing their number without passing through filters.



### **PAGING SERVICE**

Let your voice be heard!

Paging services are usually used to make informative or emergency announcements. They allow you to **send a live or pre-recorded audio message from your phone to multiple recipients**.

KalliopePBX lets you define an arbitrary number of independent "paging groups." Each one is completely configurable regarding permissions, choice of destinations, mode of operation, and messages.

### **USE CASE**

A cashier may need to talk to a department manager in a supermarket. By dialing the prefix of our paging service on their phone, they can call them to the check-out desk through the store's audio system.

Should an emergency occur inside an office, it's possible to alert all employees at once with a simple call. The security officer can send a prerecorded emergency message to every phone simply by dialing our paging service's prefix and a reference code from their phone.



### ONE NUMBER, MANY DEVICES (SINGLE NUMBER)

### One for all!

A single number for all your devices. Using the Single Number service, you can receive incoming calls to all devices connected to your extension.

It also works for outgoing calls; the caller ID will always display your extension number no matter which device you call from.

KalliopePBX also allows you to define the maximum number of calls received simultaneously between devices before the busy tone. This service, called Busy Level, is customizable for each user.

### **USE CASE**

It is crucial for a hospital doctor always to be reachable. Should they be called away from their desk, for example, to visit patients, they can take their extension along on a DECT terminal.



### **AUDIO CONFERENCE**

### Explore new horizons for your meetings

You can connect with people within and outside your company by activating an audio conference room, shortening distances, and optimizing business practices.

You can hold remote meetings with your team or clients through your desk or mobile phone and computer.

Upon creating a new audio conference room, you can:

- set an access PIN, which is required to connect to the conference.
- set an admin PIN for users with advanced permissions.

Each user can also manage their audio conference room, assigned by the system admin, with moderator permissions.

### USE CASE

Market globalization has led to changes in business relations. Distances have increased while negotiation times have become shorter. With KalliopePBX's audio conference service, you can shorten distances and speed up communication. You can be in the same metaphorical room as coworkers, clients, suppliers, etc., via your phone. This is done by sharing a simple PIN that the administrator sends to all participants.



### FORKING TO MOBILE/FAST TRANSFER

Stay connected!

### **Forking to Mobile**

Particularly useful for frequent travelers,

the Forking to Mobile function guarantees maximum availability, as all calls to your extension can be automatically forwarded to your mobile.

#### **Fast Transfer**

Fast Transfer allows call transfers between landlines and mobiles, and vice versa, ensuring the continuity of your conversations.

### **USE CASE**

It is often a priority outside the office to remain reachable through your company number. When Forking to Mobile is enabled, it duplicates all inbound calls to your company extension on your mobile. You can pick up the call on your mobile and, once back in your office, continue the conversation while comfortably sitting at your desk by forwarding the call to your desk phone.

You can activate this Fast Transfer service by dialing a code on your phone's keypad. It's quick and easy: call flow isn't interrupted, and you can carry on your conversation.



### **VIDEO CALL**

When your voice isn't enough

All KalliopePBX models offer video call services (H263, H264, VP8).

In addition to everyday uses of video technology, such as one-on-one calls, video intercoms, and security cameras, KalliopePBX offers full WebRTC support for audio and video.

With WebRTC, it is easy to integrate your phone services with your web platform to offer your clients a way to contact you directly through your website.

### **USE CASE**

A company might ask the firm that manages their company website to implement a WebRTC client to let visitors open audio/video communications with the sales or the technical department.

For example, a client might view a product on the website, and beside the picture, find a button that says, "Click here to contact us." Upon clicking the button, the client will be able to contact customer support through their PC without incurring additional data traffic costs, which will answer their questions: "Is the product ready for delivery? Can I see it? Etc".



### **VOICE MAIL**

Secure, unlimited, everywhere!

Traditional answering services have existed for years; the real innovation is how you use them. With Voice Mail, you can listen to messages on your phone or via email, with voicemail features customizable directly from your phone. Available features:

- Protect your voicemail with a user-set numeric password
- Record new welcome messages, listen to or delete received messages.
- Receive new message notifications via email
- Automatically forward voicemail messages via email

### **USE CASE**

Within a business, each user typically has a private voicemail box. A prerecorded message will instruct the caller to leave an audio message if you can't answer a call. You will then receive an email notification, optionally with an audio file of the voicemail message attached. With our mobile app (see page 29), you can listen to and manage voicemail messages directly from your mobile.



### **HIGH AVAILABILITY**

Don't risk being left stranded!

Being unreachable can have disastrous consequences, especially for those services needing constant contact with clients, such as call centers or technical support desks.

Our High Availability service lets you employ two standby PBXs, a controller and an agent, in constant synchronization. The agent will automatically activate and guarantee continued telephone services if the controller is unavailable.

In the case of hardware-related problems, our High Availability service ensures a return to full functionality within seconds to maintain business continuity.



### **MULTITENANT LICENSE**

Do more with Multitenant

The KalliopePBX multitenant license **lets you host multiple tenants(companies)**, each customizable and fully independent.

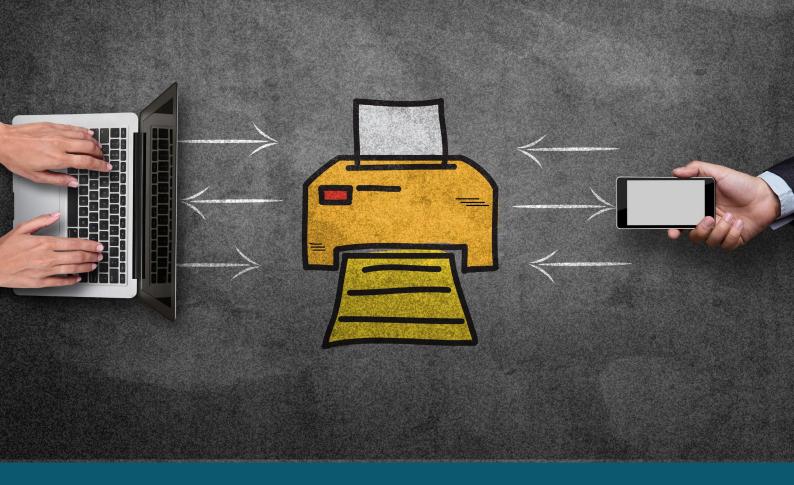
A multitenant license offers you:

- A single administration interface
- Fully independent tenant services
- Maximum optimization of hardware resources
- Full autonomy for the manager of each tenant

### **USE CASE**

A building may house different businesses. Building administrators can share the costs without losing autonomy with a KalliopePBX with a multitenant license; building administrators can share the costs without losing independence among the various tenants. A car manufacturer has dealerships in different areas.

With a multitenant KalliopePBX, they have a single PBX managed by a single technical office, and each dealership has full autonomy in managing the services it wishes to provide.



### **KALLIOPE FAX SERVER**

### Everything changes, even the fax!

The use of fax to communicate has changed as it adapts to the times.

With Kalliope Fax Server, you can send documents via a web browser or email; enter the recipient's fax number.

With an additional license, you can activate this integrated fax module on KalliopePBX:

- FAX sending/receiving via T.38 protocol.
- Advanced management of users/groups / FAX lines with differentiation between privileges criteria.
- Unlimited users and groups.
- Activation of unlimited FAX channels possible.
- Mail2FAX.
- Management of send attempts in case the recipient is busy or unreachable.
- Integrated FAX-to-email service.
- Send/receive notifications via email.

- Complete web-accessible register of received and sent faxes.
- Customization of send and receive FAX notifications.
- Fax history export for archiving.
- SNMP support for monitoring.
- Download partially received faxes.

The FAX module uses the number of active channels on the KalliopePBX license and does not limit the number of users authorized to access the service, and is available for all KalliopePBX platforms except KalliopePBX V4 Mini.

# APPLICATIONS





### **KALLIOPE WEB CTI**

All the benefits of Kalliope, just a click away

### Are you tired of being tied to your desk?

Does managing business calls force you to stay at your workstation? Would you like to access all your contacts directly from your web browser, without being dependent on a specific device?

#### Work from anywhere with Kalliope Web

The new Web allows you to always be reachable by your colleagues and customers, working from anywhere as if you were in the office, ensuring operational continuity for your team even when on the go.

Through a web browser, you can access Kalliope's telephony services and the information stored in the phone system, without the need for additional hardware or locally installed applications. The web-based Kalliope Web CTI client also allows queue management with real-time access to information: the user can view their status in each queue, including any pauses. Additionally, it's easy to switch between available queues, simplifying the management of your tasks.

#### An intuitive and user-friendly interface

Kalliope Web CTI allows you to have easily:

- Use your office number wherever you are for both incoming and outgoing calls
- Maximum flexibility: access from any device connected to the Internet
- All your contacts at your fingertips
- Call management
- Access to CDR (Call Detail Records)
- Queue management

#### Important

Kalliope Web CTI will only work properly if updates are enabled on the machine

#### Home

The main screen displays a convenient contact list, highlights incoming calls, and shows information about recent calls (made, missed, unanswered).





#### **Your contacts**

In the contacts section, you can view and add your contacts, search via the search bar, and see recent activities.

#### Your call log

The CDR provides an overview of all calls, with the option to filter incoming, outgoing, and missed calls. It displays detailed information on the number, date, time, and duration of each call.





### **KALLIOPE PHONE**

Kalliope always with you!

#### Do you want to stay connected to your business even when you're out of the office, right from your smartphone?

Do you need to communicate with colleagues and clients wherever you are while maintaining the reliability of your company extension?

### Kalliope Mobile is the app that allows you to always have Kalliope with you.

Kalliope Phone enables you to make calls via Internet, turning your smartphone into a true corporate extension. Thanks to advanced VoIP technology, you can make and receive calls even when you're out of the office, maintaining the same professionalism and reliability. With the Kalliope Phone client, available for iOS and Android, you can access all business communication features wherever you are, providing a flexible and seamless work experience. This app reduces costs and improves communication efficiency with a single intuitive solution.

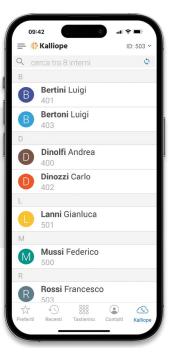
### A reliable and intuitive App

With Kalliope Phone, you can:

- Receive and make calls using your corporate extension, regardless of your geographical location
- Have the contact list of all corporate extensions on your mobile device
- Synchronize your contacts and quickly access all your phone numbers
- Manage ongoing calls:
  - Merge multiple calls to create a conference with several participants
  - Transfer the call: two ongoing calls are connected, freeing up your line
  - Swap calls: switch between two calls, putting one on hold (shuttle service)

#### Your address book

In the dedicated section, you can view the list of corporate extensions, while in Contacts you can find your personal contacts synced with your device.





#### **Ease of use**

The application interface is simple and intuitive: all the main call features are included in a single screen, enabling you to call, answer, and act quickly.

#### Manage your calls

You can merge multiple calls to create a conference, transfer or swap calls to switch between them and put one on hold (shuttle service).





### **COMMERCIAL OFFER**

KalliopePBX: take a different route

### Scalability: KalliopePBX grows with you

KalliopePBX is a complete solution with no limit to the number of extensions, IVR levels, voicemail boxes, call center operators, etc., guaranteeing maximum scalability and protecting your investment.

#### KalliopePBX: a precise and customizable offer

KalliopePBX's commercial offer brings to its users a set of customizable features based on business requirements. It is the task of our certified and qualified partners to find the best solution: the one tailored to the end-user "s needs and interests.

Our task is to ensure our partners can best perform their role as guides, supporting them with refresher courses and providing all the necessary tools.

### The KalliopePBX solution: the top player in every role

KalliopePBX guarantees full compatibility

with all SIP devices. There are no proprietary KalliopePBX phones or gateways. The winning solution is the one that integrates the top players in every role (telephones, gateways, adapters, etc.) quickly and simply. **TECHNOLOGICAL PARTNERS** 





**2**N



Alcatel Lucent

**L**-Itek



Gigaset







Jabra GN

# Kalliope

Copyright © 2024 NetResults S.r.l. All rights reserved. Kalliope® is a registered trademark of NetResults S.r.l. All trademarks and images belong to their respective owners.



sales@kalliope.com support@kalliope.com

www.kalliope.com