

ERICSSON BUSINESSPHONE VOICE MESSAGING AND UNIFIED MESSAGING

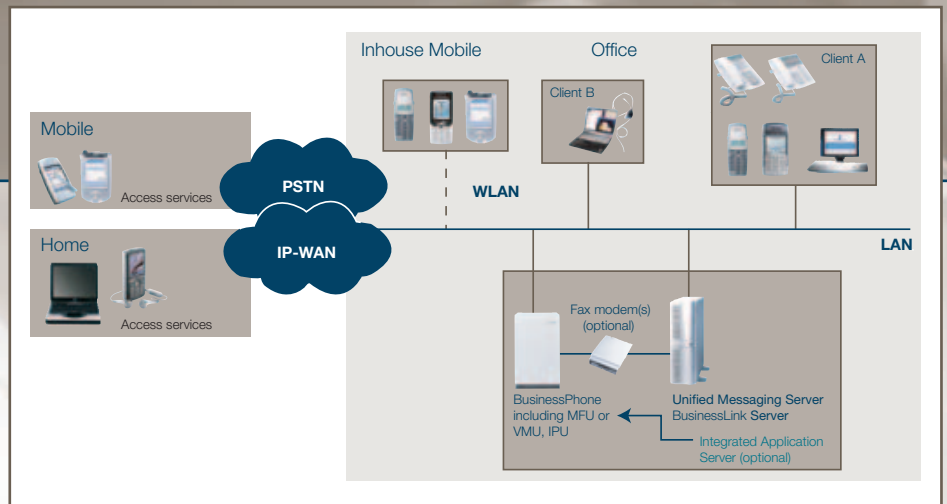
Access to your messages anywhere, anytime and any media



The mobile enterprise demands access to different applications wherever you are using any device at any time. With unified messaging, Ericsson BusinessPhone enables you to get to your voice and fax messages when accessing with your PC from abroad or while in the office. A unified overview of various messaging media not only increases efficiency, but also improves your enterprise's customer service in a simple, straightforward manner.

And even more, the integrated Voice Messaging Unit (VMU) and the Unified Messaging solution have a strong interoperability with other applications such as Ericsson BackStage, helping you to communicate easier, to organize your messages more efficient and to further increase your productivity. With full Integration into Microsoft® Outlook™ or Lotus Notes® you will have a familiar tool to access all your messages in an intuitive way. And when on the move, SMS notification will make sure you won't miss urgent new messages.

Ericsson provides you with the most efficient and cost effective unified messaging solution, a solution that migrates perfectly into new and existing BusinessPhone installations.



Solution overview. Deploying Unified messaging

Overview

The Voice Messaging Unit (VMU)

The BusinessPhone VMU is a scalable, versatile solution for voice and text messaging integrated in the BusinessPhone system, and provides the basis for the BusinessPhone Unified Messaging solution.

A powerful voice mail system to serve up to 300 mail boxes is surrounded with a variety of functions such as conversation recording, automated attendant, voice response and external system access. The BusinessPhone VMU is ideal for demanding voice-messaging applications such as outcall notification, personalized voice mailbox greetings and intelligent messaging for contact center applications. Wake-up calls and guest messaging in a variety of languages are provided for hotels. Users can access their messages from another extension or from outside the enterprise phone system. Voice messages can be stored in individual or in common mailboxes.

The Unified Messaging Solution

The Unified Messaging solution for BusinessPhone is designed to simplify the users day-to-day handling of messages in an intelligent, flexible and intuitive way. It comes down to one single point of access to the voicemail, faxmail and e-mail systems increasing the users efficiency and productivity.

Users can forward voicemail and faxmail messages as an attachment to an e-mail message to numerous addresses within their company or throughout the world. They can access messages remotely via the Internet when on the move.

SMS notification to mobile phones will inform the user about new voice, text, fax or call-me messages. That allows fast response to the message originator. Using this solution, all your messages can follow you, wherever you and your PC are.

By providing your workforce with this fully integrated Unified Messaging solution, you are not just improving their ability to handle their messages more effectively. You are giving them the power to be more productive, both individually and as part of team.

System Set-Up

The Voice Messaging Unit (VMU)

The BusinessPhone VMU can be deployed via two different hardware boards in the BusinessPhone systems: On the core system Multi Function Unit (MFU) or on a separate board, the VMU-HD.

The MFU version offers four simultaneous voice channels with 2 hours 13 minutes or 4 hours 27 minutes of storage capacity. The VMU-HD offers 16 simultaneous voice channels with 4 hour 27 minutes or 17 hours 48 minutes of storage capacity.

The Unified Messaging Solution—Voice and Instant Text

The Slim Unified Messaging Server (SUMS) software combines the strengths of the BusinessPhone Voice Messaging Unit (VMU) and the BusinessPhone IP Unit (IPU) to form the Unified Messaging solution. Up to 200 BusinessPhone users are able to receive HTML-mails with voicemail or text messages attached.

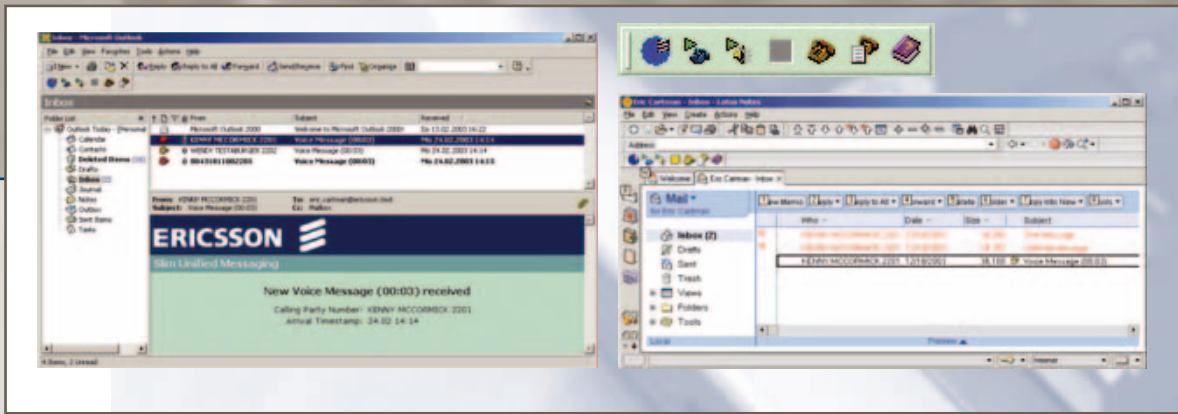
Companies who have not an own e-mail server (e.g. use the service of an internet service provider ISP) do not have to buy a new e-mail server in order to use Ericsson's UM solution. A license free SMTP/POP3 server is already integrated in the SUMS, which can be chosen during installation.

The Unified Messaging Solution—Fax

The Slim Unified Messaging Server SUMS also provides integrated fax server functionality. Connecting with BusinessPhone via one or more analog or ISDN modems permits up to 200 users to send and receive HTML mails with fax TIFF attachments, directly from their computers.

The fax server's primary duties are the distribution logic to the fax clients via Computer Telephony and to serve as an SMTP e-mail server. Special focus has been put on proven, easy deployment and slim configuration.

Beside standard server PCs the SUMS solution also works with BusinessPhone's Integrated Application Server IAS.



Unified Messaging Voice integration. Receive voicemails directly in your email client, like MS Outlook™ or Lotus Notes, or within the Ericsson BackStage client. Get message handling support and direct call-back options by the Ericsson SUM Plug-In.

System functions

The Voice Messaging Unit (VMU)

The BusinessPhone VMU supports the following voice messaging functions.

Voice mail for 300 users with personal greeting

Up to three personal greetings can be saved for each mailbox, according to the status of the called extension (direct forwarding, on busy, or on no reply). Greetings can be changed using either “soft” (programmable) keys on a telephone set, using voice menus from outside or within the office or using Computer Telephony via the BackStage application. The system differentiates new messages from those that have been heard, and those intentionally stored by the user.

Any of these messages can be forwarded from the user’s mailbox to another internal mailbox. Each user can store up to 20 messages and receive notification of the number of messages stored in his or her mailbox. A flashing LED on the phone indicates new messages. Where phones have no LED, a special dial tone indicates that there are messages waiting. The user can also retrieve voice messages from an external phone with DTMF dialing.

Outcall Notification

It is possible to be notified at any external number – immediately or at a predefined time – of new messages received in the voice mailbox. With password access they can be retrieved right away.

Messages can also be recorded and sent directly from the user’s mailbox to one or more mailboxes in the same system, either from internal or external.

Up to 16 common mailboxes can be configured to store messages for a group of people working together, such as in a Contact Center.

Messages received in a common mailbox can be forwarded to any other common mailbox or individual mailbox for appropriate distribution.

Date and time stamps for individual and common mailboxes can be retrieved by pressing a key during or after the message is played, or it can be configured to play automatically with every message.

The voice mail system can also be used to record **telephone conversations**, if a function key on the telephone has been suitably programmed. Recorded conversations are stored and retrieved in the same way as messages. This facility can be accessed by digital system phones.

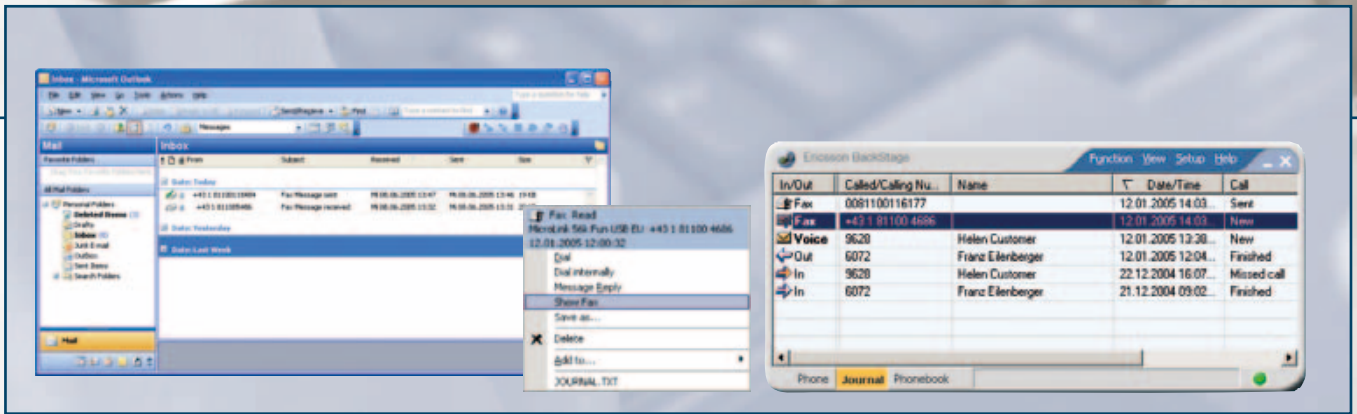
The VMU delivers a **dictaphone function** to any digital, analog or cordless telephone. Users can easily store messages in their own mailbox for later retrieval. This is particularly useful for cordless phone users on the move.

The **Automated Attendant application allows friendly, standardized greetings to be played for callers**, who are guided through a menu-based voice-prompting system to the right extension, service or mailbox, without the aid of an operator. The caller can press a key to exit the system at any time and be connected to an operator.

Automated call handling is provided by using pre-recorded voice prompt menus. The VMU supports up to 32 configurable selection prompts. The caller is greeted with consistently friendly announcements and prompted to enter the appropriate extension or service number on his or her telephone keypad. Callers without DTMF dialing, or who make an invalid selection for a second time, are automatically transferred to the operator or other predefined extensions.

It is possible to bypass voice prompts and gain fast access to the extension or service by directly dialing the function numbers. In Computer Telephony (CT) applications, Automated Attendants can be used to prompt callers to enter special ID numbers, so that their calls are transferred to the most appropriate extension and their computer records retrieved automatically.

The VMU delivers full call data to the BusinessPhone Automated Attendant Optimizer (AAO) application. The AAO can be used to analyze the effectiveness of the system. For instance, it is possible to determine how many calls were received, how many times announcements were replayed, how many callers made invalid entries, how many callers hung up, and so on. This enables fine-tuning of the Automated Attendant system as the point of entry for your customer service department.



Unified Messaging Fax integration. Receive faxmails directly in your MS Outlook™, Lotus Notes or Ericsson BackStage client.

Voice answering information Service

The voice information service allows internal and external callers to obtain pre-recorded information 24 hours a day. The VMU provides information in a polite, friendly voice – no matter how many times the same information is requested.

Standard information such as opening hours, company address, special offers, and so on, can be provided to callers without the need to occupy your staff, who are free to concentrate on providing personal service to those who need it.

Direct Inward System Access

Using the system's Direct Inward System Access (DISA) facility, staff working away from the office can access the office phone system and use it as if they were at their own extensions – outgoing calls are automatically billed to the office using dedicated account codes. The voice messaging system guides the user through the password control procedure to access the public network.

The VMU system is also used to remotely activate, deactivate or reactivate call diversion from any specific extension to any external number.

These functions are particularly useful for those who work from home or teleworkers making external business calls.

Intelligent messaging

Intelligent messaging is particularly useful in contact centers where calls are placed in a queue. While in the queue, callers are kept informed of their position in the queue and the expected waiting time. During the hold time, the system can play music or recorded promotional or customer service information. Furthermore the callers can break out of the queue if wanted, in order to leave a message in a mailbox or to get routed to a general answering position.

Integrated music on hold

The VMU is delivered with one standard music on hold title, and has the storage capacity for up to 16 titles.

BusinessPhone offers in addition up to 13 external music on hold sources to be broadcasted simultaneously serving the needs of a multi-tenant system.

Hotel Messaging

The VMU can also be used as a high end messaging solution for guestrooms. It offers the service of a mailbox including wake-up call handling in 3 languages.

The Unified Messaging Solution—Voice and Instant Text

Any message—voicemail, recorded conversation, dictaphone or text— stored in the BusinessPhone's integrated Voice Messaging Unit VMU will be forwarded to the users e-mail client or BackStage application, either from an individual or from a common mailbox.

You receive a user-friendly HTML page in your e-mail client as notification that includes the identity of the message originator, a time and date stamp and the length of the message. Voice messages are attached as standard WAV files. In Ericsson BackStage you receive a new entry in the unified communication Journal, where also your calls are logged. Flashing message-waiting indication is included. Information such as message originator with name identification from various directories, the time and date are included here as well. Voice messages can be played via a convenient graphical context menu.

In addition a Microsoft® Outlook™ Plug-In as well as a Lotus Notes® Plug-In is offered to increase the users comfort as described in the next chapter. However, playback without the Plug-In is possible via PC Media-Player.

SMS notifications of voice, text or call-me messages are sent to the mobile phone users if desired. The SUM server sends e-mails to an SMS-Gateway, which are then forwarded to the mobile phone. The SMS contains the same information about the message originator as the message in the e-mail client. This allows the mobile phone user with one "click" to callback either the originator of the message or to call the voice mail system to check the message.

Free instant text messages composed by BusinessPhone users via the UM plug-in, BackStage or simply a Dialog 3000 or Dialog 4000 system telephone, can be read immediately in the mobile phone's SMS.

If the customer chooses to use Ericsson's license free SMTP/POP3 server that is already integrated in the SUM server, still one and the same e-mail client can be used for both, e-mails and voice mails, although the mails are retrieved from different servers (Ericsson's SMTP/POP3 server must not be used as e-mail server for corporate e-mail communication and is solely intended to forward the voice messages).

The SUMS serves up to 200 BusinessPhone users with 200 PCs and e-mail clients (more technical information and system capacity can be found in the chapter Technical data).

The UM Plug-In for Microsoft® Outlook™ and Lotus Notes®

With your Outlook™ or Lotus Notes® Plug-In you attain full message synchronization between your Outlook™ or Lotus Notes® inbox and the VMU. This makes handling of voice messages easy and convenient with a mail client you are already familiar with.

If the Notebook is disconnected from the corporate network, e.g. during a trip, and later reconnected – all changes of the voice messages will be updated immediately.

High comfort is given through name and number identity and direct callback possibilities via Computer Telephony Integration.

New voice messages are indicated in Microsoft® Outlook™ as usual in bold with a red phone icon and can be distinguished from heard messages that are indicated with a yellow phone icon in non-bold type, respectively green when stored via the phone. In Lotus Notes®, new voice messages are indicated as usual with red lines while read or heard ones are indicated with black lines. A phone icon appears here as well.

Additionally to playback via PC loudspeaker and media player the Plug-In can also control your phone to playback the message. The Plug-In can also be used to send other BusinessPhone users a callback request or a short instant text message to their telephones.

Group members using a common voice mailbox in BusinessPhone will be notified simultaneously when a new message arrives. Once a member listens to the new message, it's status in all e-mail clients of the group will be updated.

The Unified Messaging Solution—Fax

The fax services combine with the Unified Messaging Text and Voice features for even better performance.

It's all about efficiency and the subsequent cost savings.

All users can have own fax inboxes with personal fax number on the own PC and can send faxes right away from the own PC.

Incoming faxes are automatically distributed via e-mail to the proper users as messages with TIFF attachments. With the Unified Messaging solution, voicemails, instant text messages and faxmails are all routed to users' e-mail inboxes, like in applications such as Microsoft® Outlook™,

Lotus Notes® and Ericsson BackStage Journal.

As with voice messages, the calling number and name (if available in one of the provided various directory interfaces, such as LDAP) are included with the fax entry. Fax message status (e.g., new, read, sent...) is indicated. BackStage can be fully integrated into the Unified Messaging solution. Voice and fax message status is always synchronized between Microsoft® Outlook™, Lotus Notes and BackStage.

The fax TIFF messages can be viewed in any image viewer, stored or forwarded via e-mail (e-fax).

Group fax including synchronization is provided for workgroups. This means that in a specific fax group (with a common fax inbox), every member of the group will receive a fax copy. Once one member reads or deletes the fax, a status update for the whole group will be performed (synchronization).

All users can send faxes from their computers. From any Windows application, such as Microsoft® Outlook™, Lotus Notes or Microsoft® Word, just use the standard Print menu, select the Ericsson Fax printer and run the Send Fax Wizard. The sent faxes are logged in the fax client, along with sent-fax confirmation.

An Auto-Header (with sender identification, such as the name and number that can be dialed back—adjustable by user) and an individual Auto-Cover page are standard. Auto-retries (with settings for number of send attempts and the time between them) and fax scheduling are standard as well.

For mobile users there are again advantages, too. The Ericsson Unified Messaging solution provides SMS notification for new incoming faxes. Remote access to faxes is provided via standard remote data access solutions, such as secured VPN access, webmail accounts, Microsoft® Outlook™ or Lotus Notes webmail, or with BackStage web access via Terminal Server.

From the infrastructure point of view, the SUM server acts both as a Unified Messaging Voice server and as a fax server. The main functions are distribution logic for the fax clients via Computer Telephony and SMTP e-mail server functions. Additional benefits of the SUM Fax server are SMS notification (as previously described), security against misuse, support of prefix fax numbers and a central fax log. Supported modems are analog modems and ISDN modems. A modem pool with up to eight fax channels can be configured.

As with the Unified Messaging Voice solution, the SUMS serves up to 200 users.



Mobility benefits. SMS notification on new voice- or fax messages waiting. Including name data integration.

Benefits

The possibility to combine the VMU with the SUM server offers today's BusinessPhone customers a cost effective migration path to Unified Messaging. There are no new telephone user interfaces to learn and no loss of messages when upgrading to a SUM server. The opportunity to add fax modems completes this cost-effective solution.

One common interface (e.g. Microsoft® Outlook™) for all messages—whether they are e-mail or voicemail or faxmail —will relieve the users from additional training.

Important messages can be placed in the folder of your choice for long-term storage, making the BusinessPhone conversation recording feature even more powerful. Contact centers can record calls and then make use of these for training purposes.

When working offline, no matter where you are, having all messages (voicemail, dictaphone, conversation recordings and faxes) stored in Microsoft® Outlook™ or Lotus Notes®, will help in preparing answers to questions when away from the office or on the way to an important meeting. And even more a follow-up flag can be set for particular messages to remind you.

Important messages can be forwarded to groups or individuals for distribution.

The combination of BackStage and Unified Messaging provides optimal convenience in gaining a unified overview of your multimedia communications, including incoming and outgoing calls, instant text messages and SMS messages, as well as voice and fax messages. You obtain one-click mailbox settings, such as for individual recording of personal greetings and you get the benefit of name identification from Microsoft® Outlook™ contacts or virtually any other database.

Using BackStage call profiles includes voice messaging to your availability preferences in a professional way. Direct callback to message originators in Microsoft® Outlook™ with business call support (such as transfers, conference calls, etc.) and general data integration via BackStage (such as call-related automatic data screen pop-ups) provide even more business value.

The combination of BackStage on a PDA, Mobile Extension and BusinessPhone messaging capabilities will let you easily manage and respond to messages from any location.

Imagine sitting in an Internet café, 10,000 miles away from the office. Despite the distance, you can access your multimedia communication messages, such as playback messages left in your BusinessPhone voice mailbox, by listening to WAV files, and not only read your e-mail, but faxes as well.

Messaging Features at a glance (MFU and VMU-HD)

- ACD announcements (queue info)
- Agent greetings
- Audiotext (Voice information)
- Automated Attendant (AA)
- Conversation Recording
- dictaphone Function
- Direct Inward System Access (DISA)
- Guest mailboxes (choice of 3 languages)
- Integrated Music on Hold (MoH)
- Presence (Absence) information (with pre-defined voice announcements)
- Text before Answer (TbA)
- Text messaging
- Voice Mail
 - Call-back messages to internal extension
 - Common mailboxes
 - Date/Time stamp
 - Forward a message
 - Full external voice mail access
 - Message counter
 - Message waiting indication
 - Messages (new, heard, stored)
 - Outcall Notification
 - Password change
 - Send a message
 - Softkey support on digital system phones
 - Three personal greetings
 - Wake-up calls

Unified Messaging Features at a glance

Common

- Full integration with Microsoft® Outlook™, Lotus Notes® (plug-in) and Ericsson BackStage
- Any e-mail client can be used
- Any e-mail server can be used
- Ericsson SMTP/POP3 server integrated in SUMS software (selectable)
- Message waiting indication for new voice, fax, text or call-me messages
- SMS notification for new voice, fax, text or call-me messages
- Number and name information (from various data interfaces, such as company databases via LDAP)
- Graphical message overview (including status, date and time)
- Send instant text messages to other users (to computers, system telephones, via SMS)
- Send call-back messages to other users
- Call internal or external message originators directly
- Forward messages to any e-mail address – broadcast messages
- Store messages long-term (in the folder of your choice), including offline message availability
- Remote message access, such as web access (via standard remote data solutions, such as VPN, webmail or BackStage via Terminal Server)

Voice Integration

- Full integration with BusinessPhone's VMU
- Full backwards compatibility with existing VMU installations
- UM supports all VMU individual mailboxes
- UM supports all common mailboxes (group members, status synchronization)
- Playback of voice messages via PCs (WAV messages)
- Playback of voice messages via phones
- Fast forward and rewind with PC Media Player
- Storage of conversation recordings and "dictaphone messages" on PCs
- Instant mailbox synchronization between VMU and Microsoft® Outlook™, Lotus Notes® (with plug-in) or BackStage

Fax Integration

- Fax server with distribution services via Computer Telephony and SMTP e-mail
- For analog and ISDN modems, modem pool up to 8
- Receive faxes in user's own fax mailboxes (Microsoft® Outlook™, Lotus Notes®, BackStage Journal)
- View fax TIFF messages (with any image viewer)
- Forward faxes (via Microsoft® Outlook™, Lotus Notes®)
- Send faxes from user's own PC (from any Windows application, including send confirmations and logs)
- Auto Retry and scheduling
- Auto Header and cover page
- Group fax including synchronization
- Central fax log

Technical data

Common Features (MFU and VMU-HD)

- Up to 300 mailboxes
- Up to 1,000 messages (including voice, text and call-me messages)
- 16 common mailboxes
- Up to 32 selection prompts and 10 error prompts for automated attendants
- Up to 32 voice announcements (generally available)
- One TUI language for entire voice system (choice of several languages)
- Three TUI languages for guest mailboxes

MFU Hardware Specific

- Four simultaneous voice channels with four DTMF register channels
- Compact flash card recording capacity:
 - 32 MB provides 2h 13mins at 32kbit/s (1h 7mins at 64kbit/s)
 - 64 MB provides 4h 27mins at 32kbit/s (2h 13mins at 64kbit/s)

VMU-HD Hardware Specific

- 16 simultaneous voice channels or eight simultaneous voice channels with four DTMF register channels
- Flash disk recording capacity:
 - 64 MB provides 4h 27mins at 32kbit/s (2h 13mins at 64kbit/s)
 - 256 MB provides 17h 48mins at 32kbit/s (8h 52mins at 64kbit/s)

Unified Messaging configuration requirements

System set-up	
Communication platforms	BP 7.0, 8.0 MFU or VMU-HD IPU Integrated Application Server (optional, for BusinessLink, BackStage server, UM server) UM user client licenses
Communication link	BusinessLink 3.2 or higher
System capacity	200 UM users
Telephones	All types of CTI-controlled telephones can be used to play back messages via Microsoft® Outlook™ or Lotus Notes® Plug-in control
Fax modem(s)	Analog modems (supporting Fax Class 1) and ISDN modems (supporting G3 Fax via CAPI interface) (optional, if Fax shall be supported). For a list of tested modems please contact to your Ericsson partner. Up to 8 parallel fax channels.
Server requirements	
Processor	350 MHz
Free hard disk space	2 GB
Operating systems	Microsoft® Windows 2000 Server or Microsoft® Windows Server 2003
Client requirements	
Operating systems	MS Windows 2000 (SP2 or higher) or MS Windows XP (SP 1 or higher)
Plug-In for Microsoft® Outlook™	MS Outlook™ 2000, XP, 2003
Plug-In for Lotus Notes®	Lotus Notes® 6.x
Client without e-mail Plug-In	Non-specific – any e-mail client
Fax Plug-In	Non-specific

For Unified Messaging and BackStage, each BusinessPhone has two reference licenses for an unlimited period and open user licenses for a 60 days trial. Full Computer Telephony licenses are automatically included as standard in every BusinessPhone (with BP 7.0, R15 R3A or higher).

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