



## Aastra BusinessPhone Communication System

Are you ready for the improved mobility and cost savings of converged communication? BusinessPhone 8.1 from Aastra is an evolutionary step in the process of creating the best communication systems for small and medium-sized enterprises. Whether you need 8 or 250 extensions, you can benefit from high-quality, IP-based communication for voice, data and multimedia traffic.

### **A reliable, high-quality IP solution**

The BusinessPhone IP solution lets you choose whether you want to use a combination of fixed, mobile or IP extensions, or switch over to a purely IP-based solution. Either way, BusinessPhone ensures that voice and stability are of premium quality, as always, and you can still enjoy all the PBX functionality of your current system. By evolving into IP, and integrating your voice and data networks, you'll experience a wide range of benefits. You can set up cost saving voice and video communication, and lower your telecom bill by using solutions like IP networking to connect remote branch offices via the corporate network. Plus, with simplified maintenance, and the ability to quickly implement moves and changes, a single converged network helps decrease the total cost of ownership of your communication system over the long term.



## Solution areas



Computer Telephony



Messaging



IP Telephony



Hospitality



Contact Center



Networking



System Management



Cabinets



Mobility

**Infrastructure** LAN, WLAN, GPRS, IP, UMTS GSM, ISDN, QSIG, DECT, GAP

### The all-in-one solution

BusinessPhone lets you turn any phone connected to any public or private network into a full-featured telephone extension. With Mobile Extension, even home workers and traveling staff can use their remote fixed phones or mobile phones to benefit from system functions like callback, conference, attendant services, computer telephony integration, and much more. Mobile Extension also helps you gain control over costs by using features such as account codes or user profiles. Plus, mobile workers will appreciate having just one phone, whether they are in the office or on the move.

### The benefits of Unified Messaging

To significantly improve productivity levels, BusinessPhone provides all end-users with a single point of access for voice-mail, e-mail and fax. Using Unified Messaging, you can forward voice-mail to groups, access messages remotely via the Internet, or keep in touch while you are out traveling. A notification via SMS allows immediate reaction on a new voice-mail, thereby improving your customer service and your own efficiency.

### A personalized approach

To make communication even easier, you can choose between a range of contemporary cordless and fixed telephones. BackStage, the application used to provide Computer Telephony and IP Telephony, supports users in a more intuitive and user-friendly way. In the office, at home, or on the move, BackStage lets you manage your calls, access your corporate directories, e-mail, and voicemail messages from wherever you are, all according to your personal preferences. Easy to understand, it provides all the tools you need to keep up to date, and to inform others of where you are and how you can be reached.

### Designed to help you lead the way

We understand that the smaller your company, the more nimble you need to be. That's why BusinessPhone incorporates the latest technological innovations, and why it offers easy upgrades as new solutions become available. As you grow and change our converged architecture and integrated applications help your staff get more done P quickly and easily, regardless of where they happen to be working, meeting or traveling.

### Solutions Areas

BusinessPhone offers you a wide selection from different solution areas targeting the specific needs of small and medium-sized enterprises. Combine one or more solution areas of your choice into BusinessPhone to tailor a communication solution to your needs.

## Mobility

Mobility is a behavior, not a product. The workforce is becoming increasingly mobile and fewer people are able to, or for that matter want to, work solely from their desks. People are expected to be more efficient and provide better service with quicker response times. Availability and accessibility are a must. Work, therefore, becomes a process and not a place. Whatever size of business they work for, mobile workers need to stay in touch with customers, partners and colleagues, and be able to access and exchange the latest information fast P anytime, anywhere.

When we offer mobility we are not just giving you mobile access. The integrated mobile solution brings all the features and services available to wired phones to mobile users. On top of that, BusinessPhone integrated voice supports the features that make the mobile life manageable for all users. Integrating these applications brings two main benefits: on the one hand they are easy to use; on the other hand they are cost-effective.

### Mobile Extension

With Mobile Extension, business people on the move can now use their mobile phones as if they were full-featured extensions of the enterprise PBX. For example, they can make and receive calls, use internal short number dialing, check voicemail, have calls diverted to other extensions or managed by an attendant, as well as access all the usual services. Mobile Extension even allows call control and access to services through computer telephony applications, i.e. you can control your mobile phone with the same value-adding applications as your office phone.

### Integrated Cordless

The Integrated Cordless Solution is based on DECT technology, which is a standard in all European and most world-wide markets. It offers superior voice quality as well as improved service through the availability of all enterprise PBX functions on the cordless device.

## Messaging

BusinessPhone enables you to visualize and listen to your voice messages when accessing from your PC while you are abroad or while in the office. The Voice Messaging Unit (VMU) and UM have strong interoperability with other applications such as BackStage, helping you organize your messages more efficiently and increase your productivity.



## Access devices



Telephones



IP Clients



Operator



Mobile Devices

## Deployment

Office

Roving

Mobile

Home

## IP Telephony

BusinessPhone IP Telephony solutions are based on the IP Unit (IPU), which is a plug-in board that makes Voice-over-IP (VoIP) an affordable, integrated and, above all, useful tool for small to medium-sized enterprises. It enables existing BusinessPhone systems to offer IP-based, as well as traditional telephony.

BusinessPhone is an IP-enabled system, which means that IP telephony is supported in various ways, such as

- IP Networking – to connect two systems or more and create a virtual private network
- IP Extensions – for dedicated IP telephones out of the Dialog 4000 and 5000 IP telephone series or softphones, such as BackStage iClient.
- IP Trunking – to utilize IP-based connections to public operators.

The immediate benefits are cost-effective connectivity and truly integrated computer telephony applications over your corporate network. The BusinessPhone IP Networking solution allows two or more BusinessPhone systems to be networked seamlessly together or with other PBXs, including the Aastra MX-ONE™.

## Communication Efficiency – Computer Telephony

The BusinessPhone Computer Telephony (CT) platform, BusinessLink, enables you to combine the power of telephones and computers to gain a competitive edge. Advanced CT applications can be built on this Vista compliant platform to offer powerful business enhancing solutions.

Computer telephony can give your business a real competitive edge by ensuring that you and your customers speak to the right person at the right time, armed with the right information, every time. By enhancing and automating numerous communication functions, CT offers enormous productivity and revenue gains to any organization where fast, efficient call handling and data integration is a must.

Efficient communication support is also important for enterprises. BusinessPhone now includes “All Computer Telephony”. That means unlimited Computer Telephony is implemented as standard in every BusinessPhone system. Without additional cost.

For your advantage. Herewith, the base for application integration is not an option any more P it is standard now.

### BackStage Platinum

BackStage Platinum brings more communication efficiency to enterprises in a simple, straightforward way. It improves the user's working environment and productivity by allowing applications such as Microsoft's Outlook, Excel, Word and Access to be telephony enabled.

Furthermore BackStage Platinum fully integrates into BusinessPhone's messaging capabilities. It allows you to send and retrieve messages and in addition provides Mobile Messaging functions using SMS which ensures that you never miss important messages.

From a configuration point of view there are various options for deploying BackStage Platinum depending on your varying needs. Furthermore, it now supports standard 32 bit windows operating systems such as Windows 2003, Vista and XP, so as to cater to a variety of customer environments.

The technologies you can choose from are Computer Telephony via LAN, Voice over IP, Terminal Server environment, Web access, and PDA support.

## Contact Center

The BusinessPhone Contact Center solution is for small to medium-sized enterprises that want to improve customer service. The BusinessPhone Contact Center can be built up in several steps and can easily be expanded in terms of number of agents and in terms of functionality depending on immediate and future needs.

At the base of the system is the Automatic Call Distribution (ACD) which is included in the core of BusinessPhone. This ensures that the calls are directed to the most appropriate call handling group – accounts department, sales order team, warehouse – giving callers a better perception of your efficiency, and making the communication process more effective.

One of the building blocks of the system is the BusinessPhone Call Center Supervisor, an information system for the BusinessPhone Call Center solution. It provides management and staff with information on the performance of the call center both in real-time and through detailed historical reports. This information is vital for fine-tuning the day-to-day operation of the call center and for long-term planning.

The BusinessPhone Call Center Assistant can be added to improve support for agents and supervisors. This is a Windows application that enhances the productivity of call center agents by providing a single environment for all activities. As it is Windows XP and Vista compliant, it fits into any standard 32-bit Windows workstation environment.

Computer-telephony integration (CTI) is used to simplify workflow - agents carry out call-control and administration tasks using a networked PC.

## Networking

The BusinessPhone Networking solution allows BusinessPhone communication systems to become part of integrated digital corporate voice and data networks. There are different Networking services, designed to cover a wide range of corporate networking scenarios, allowing BusinessPhone systems to interact with other BusinessPhone and MX-ONE systems, as well as with PBXs from other vendors. Switched dial-up, leased ISDN lines and corporate IP networks can be used to connect them.

In effect, BusinessPhone Networking can link your communication systems together so that they behave like one unified voice and data communication network, providing service transparency, cost-efficiency and adaptability to your organization's needs.

## Hospitality

A truly dedicated solution such as BusinessPhone Hospitality incorporates special, tailor-made features and equipment to meet the specific requirements of your business. The best part is that you also benefit from a wide spectrum of advanced communication features and functions that have made BusinessPhone a worldwide winner.

Whether you run a hotel, holiday complex, hospital, conference center, retirement home or even a cruise ship, you can be sure of the highest standards of operational efficiency and guest satisfaction.

## System Management

BusinessPhone Management Suite is a tool for configuration, administration and maintenance of the BusinessPhone family. It combines the ease of use and access flexibility of a Web-based tool with the efficiency of Java programming optimized for BusinessPhone system configuration and management. This Windows Vista™ compliant application is self-contained, simple to install and use, and has a very wide range of configuration alternatives on various 16 and 32 bit operating systems. The server software can be installed either at customer or service center premises, and can be accessed locally or remotely using a Web browser interface. The package supports multiple user profiles and multiple BusinessPhone systems.

The use of the Web browser graphical user interface (GUI) and the wide range of BusinessPhone-to-BMS server connection alternatives offers great flexibility in the use of the Management Suite.

## Communication devices

BusinessPhone offers a broad range of communication devices from standard analog telephones to high-end IP-Telephones which are available to suit the needs of different individuals and organizations.

### Telephones

Make the most of your Aastra business communication system with the Aastra Dialog 4000 Family of telephones. With their exceptional functionality, they are perfect for harnessing the power of your PBX. Excellent voice qualities as well as state-of-the-art ergonomics optimize the user experience. Dialog 4000 digital telephones contain four models ranging from entry-level to sophisticated executive models for advanced functions.

The analog telephones in the Dialog 4000 series deliver the performance and reliability you expect from Aastra.

### IP Terminals

The Aastra Dialog 4000 and 5000 IP telephone series offers businesses an easy and cost-effective way to integrate telephony into the enterprise data network. It brings data and voice communication together into a single networking infrastructure and at the same time provides all the functions an office telephone has to offer like message waiting, supervision, and an intuitive user interface.

The BackStage soft-phone client adds business class IP telephony to Computer Telephony. In this scenario the PC itself serves as the telephone. The clients are connected to BusinessLink and the integrated IP board of BusinessPhone. This IP telephony offer from BackStage provides freedom of choice for your workplace.

### Operator

BusinessPhone supports two different types of operator consoles, enabling you to choose the perfect solution for your busy switchboard. All of the consoles are designed for comfort and simplicity to allow the operator to work with maximum efficiency. Easy to read displays and ergonomically designed keyboards provide an instant overview and complete control of all calls being handled by the switchboard. Different types of consoles can be used concurrently in the same system.

The Dialog 4224 Operator Telephone is a dedicated but cost-effective system phone with a large graphical display and single key access to the most commonly used operator functions and with an option to add up to four extra key panels providing 68 programmable keys.

NOW 2007 for BusinessPhone is business software that provides a unified working environment for telephone operators, integrating powerful call handling, directory management, messaging, absence information and administration functions on a single workstation.

### Mobile devices

The key requirements in this increasingly mobile world are reachability with easy and fast access to people and vital information, anytime, anywhere. By making use of both integrated solutions and open standards you can choose from a wide range of mobile terminals. Aastra DECT/ GAP phones are available as office telephones as well as rugged, outdoor phones with facilities for short text messaging, group calls, paging and alarm handling. By making use of BusinessPhone's Mobile Extension solution you are free to use virtually any device, be it your mobile phone or your telephone at home. BusinessPhone Mobile Extension and the Sony Ericsson smartphone make the perfect combination. An intuitive graphical interface makes the functions easy-to-use and allows users to easily access all the functions of BusinessPhone. Typical in-call features such as inquiry, conference or call-back are only a click away.

The communication profile of the Mobile Extension can be changed through a new menu on the Sony Ericsson smartphone. For example, you can easily activate your mailbox system, set information or activate the tandem function using a menu accessed via the control line at the bottom of the display window..

# Cabinets

## BusinessPhone Compact

This is the 'start-up' system that comes prepackaged for small enterprises with 10-30 employees. It is a complete BusinessPhone system including telephones, voice functionality and access to all BusinessPhone solution areas. BusinessPhone Compact is a highly attractive entry point for today's dynamic small-sized enterprises and can be easily expanded.

## Integrated Application Server (IAS)

The IAS board is a flexible and inexpensive way of introducing applications. With the help of an embedded Windows 2003 version the board runs the applications that exist on a BusinessPhone. That means that once you have got the board, it is incredibly easy to add and update applications. And there is no maintenance of other components than those, which form part of the BusinessPhone system. The IAS board can of course be maintained and updated easily via remote upgrading.

## BusinessPhone 50

The BusinessPhone 50 system is a single compact wall cabinet with five board slots, that can cater to between eight and 64 extensions. The cabinet has a built-in switched-mode power supply, with the option of an external battery back-up unit or alternative DC power supply. The BusinessPhone 50 system is particularly cost-effective for small offices.

## BusinessPhone 128i

The cabinet size enables it to be mounted into 19-inch racks, the industry standard for data equipment like routers, hubs and switches. Therefore, it is easy to install and integrate into the existing data infrastructure. BP128i has an integrated patch panel which makes additions, moves, and changes to the configuration a simple and fast process.

BP128i is a single, compact cabinet with five board slots. Since it is possible to stack two systems, it can serve up to 128 extensions and 60 trunks. The cabinet has a built-in switched mode power supply.

### BusinessPhone Compact



3 x Dialog 4222 Office      Dialog 4223 Professional + 1 Keypanel      Dialog 4223 Professional



One (1) Free slot for any BusinessPhone board



- 8x Digital Extensions
- 4x Analog Extensions
- 4x ISDN BRA / 50
- Full Voice Messaging
- Music on hold
- + 2x Mobile Extensions
- + 2x BackStage
- + 2 Unified Messaging\*
- + 2x Full networking
- + 2x Call Center Assistant\*
- + 2x BP Extension Assistant\*
- + 60 days free trial

\* License included, additional products required for operation, such as external PC or an IPU board.



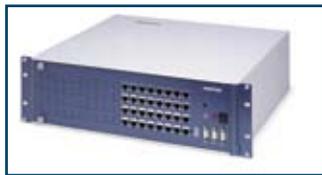
- + BMS CDROM
- + Online Tutorial
- + Designation Card Kit
- + Enterprise Application Suite incl. BackStage, Unified Messaging, CCA, CCS

## BusinessPhone 250

The central system is comprised of between one and three wall-mounted cabinets, each with nine board slots, which can cater to between 20 and 200 extensions (or 300 for the special Hospitality solution). Each cabinet has a built-in transformer with the option of a battery back-up unit or alternative DC power supply.



Astra BusinessPhone 50



Aastra BusinessPhone 128i



Aastra Dialog 4000 Digital Telephone



Aastra BusinessPhone 250

# Function Table

Extension functions	
Name	Description
Abbreviated number dialing	Common and individual numbers
Account number	A number, such as a project code, may be keyed in before or during a call for call accounting purposes. As an option, verification of the code against a predefined list can be done, before the user gains access to the system.
Authorization code	By dialing special codes, extensions may be temporarily barred for calls, or class of service may be transferred to another extension
Alpha-tagging	The received/dialed number is analyzed and replaced with the name from a directory, which is presented on the telephone display.
Automatic call back (busy/free extension)	Callers to a busy or unanswered extension may book an automatic call back
Automatic call back (trunk/route)	Callers to a busy trunk or route may book an automatic call back
Automatic re-dial	Initiates automatic re-dial to an external number when busy or on no answer. Up to 5 numbers can be stored
Call list	Stores incoming and dialed numbers of the telephone.
Call metering	Displayed on the telephone display during and after an external call (actual call, last call and accumulated fee) Printouts are also available
Call pick-up	Calls to any extension can be picked up from other extensions (individual, group, common)
Call waiting indication	If dialed extension is busy, a special "call waiting" tone may be sent by the caller to indicate an important call
Camp on busy	Notifies a busy extension that a call is waiting
Conference	Up to six-way, internal and external
Conversation recording	Record a conversation in your own mailbox
Dictaphone function	Record memos in your own mailbox
Display indications	Telephone display can show information such as date and time, temperature, calling number and name, directory entries, and messages from other extensions
Diversion	Automatically diverts calls to another destination, internal or external (direct, on busy, or on no reply)
Dual line access	Allows a second call to be taken during the first call (which is put on hold)
Fax extension	Extensions can be programmed specifically to handle incoming faxes
Flexible CIL format	To be compatible with various Call Information Logging software products
Follow me	Users can request that their incoming calls are transferred to a designated internal or external number
Group (PBX-) hunting)	A group of extensions may be called using a common group number. Calls may be distributed to free extensions in a predefined order
Hands-free	Loudspeaker and microphone for conversation without handset.
Hot line	May be initiated immediately or delayed by lifting the handset
Absence Information	All types of telephones can be used to leave voice or text information for callers while the user is absent
Intercom	Single-key, hands-free extension-to-extension calling with automatic answer
Intrusion	Authorized users can intrude into an ongoing call
Message system	Instant text, voice and call-back messages can be sent or forwarded from extension to extension.
Monitoring	Operator may monitor an external call while continuing to put through new calls
Outcall notification	The user can be notified that there is a new message in the voice mailbox with a call to a predefined external number. Messages can be retrieved immediately.
Parking	Ongoing calls may be temporarily parked for later retrieval or pick-up from another extension (common or individual)
Personal greeting	A personal greeting can be recorded in the voice messaging system.
Private trunk line	Provides access only to nominated extensions
Recall	After a predetermined time, calls that have been parked, camped on or transferred without answer recall the initiating extension

## Extension functions

Name	Description
Reminder service	Users may set time for reminder, at which the extension gives a special ringing tone
Save/redial	Dialed or incoming numbers are stored for quick call back of incoming answered calls.
Secretary function	Includes direct call, busy indication, call pick-up, intercom and diversion
Supervision	Users may monitor individual directory numbers to determine status, answer incoming calls or call the monitored party
Telephone directory	For internal and external numbers
Transfer	Before or after answering
Unified Messaging	Integration of voice message system, fax and e-mail service

## System functions

Name	Description
Alarm function	Allows an alarm signal to be sent from a telephone with a connected Alarm Interface Unit (AIU) to a predefined extension for instance, from a hotel room to the concierge
Answer position(s) for trunks	Re-routing on busy or no answer
Automatic time synchronization with ISDN	Synchronizes with the time information received from public ISDN to enable automatic change of summer/winter time (daylight saving time)
Background music	Music from an external source may be played through phone speakers
Bypass call diversion and follow me	A specific code may be dialed to bypass call forwarding
Call charge control	Individual extension call metering and central call information logging
Class of service to extensions	Varying levels of restriction on access to functions and traffic authorization may be assigned to extensions
Common bell	All extensions may pick a call from an extension that has been predefined as a common bell extension
Computer Telephony	Full-featured CT support according to industry standards (TSAPI, TAPI)
Diagnostic functions	Built-in diagnostic facilities, accessible by using a local PC or via a modem
Directory Service directories	Computer Telephony function to search and retrieve information from external (e.g. LDAP)
Differentiated ring and tone signals	Indicate, for example, whether call is internal, external or call back
Direct In Dialing (DID)	If offered from the network operator
DISA	Enables external dial in with access to all services
Door phone (optional)	One or more extensions may be used to monitor the entrance to premises and control the door lock remotely
Fictive numbers	Up to 1000 logical extension numbers in up to 16 groups, to support hotdesking, recognition of incoming call type, fax server applications, etc.
Flexible numbering plan	Up to eight digits with number translation
Integrated Application Server	Integrated BusinessPhone server hosting BusinessPhone applications (e.g. BackStage, BP Management Suite). Applications are pre-installed and preconfigured
ISDN basic functions	BA, PRA, S-interface, T-interface
ISDN supplementary services	CLIP, CLIR, COLP, COLR, DDI, MCID, AOC, MSN, SUB, CF/PR
IP networking	Corporate networking to carry internal voice calls over a private local or wide-area IP network (LAN or WAN).
IP telephony	Integration of Aastra IP-Telephones, BackStage iClient or 3rd party IP clients
IP trunking	Transmission of Voice-over-IP (VoIP) between Local Access and Transport Areas (LATAs) and between countries by long distance carriers around the globe
Least Cost Routing	Automatic selection of the cheapest route in the network
Mobile Extension	Extends features such as transfer, inquiry, monitoring, dialing via CT-application, etc. to a mobile phone

## System functions

Name	Description
Mobile Messaging	Messaging for mobile devices based on SMS. Includes functions like Message Waiting Notification, Meeting Reminder, Send and retrieve via BackStage
Music on hold	From internal or external sources, up to 13 channels, which can be assigned to different groups, based on extension, PBX groups or ACD groups
Networking	Corporate networking of BusinessPhone and MX-ONE systems via analog, digital ISDN and IP lines
Night service	Re-routing of calls during restricted hours
Advanced Operator functions	Identification, parking loops, queue indication, serial calls, metered calls, etc.
PBX groups with parallel or serial distribution	Up to 20 extensions per group, and up to 16 groups per system
PBX group flexible display	PBX group members can have different caller information (first called party, calling party or PBX group name and number) on the display, depending on requirements
Power failure circuit	For battery backup
Pre-recorded voice announcements	For voice mail and absence information
Programming of system parameters via service terminal	Basic system configuration via PC
Remote configuration, service and Suite maintenance	Via built-in V.24 modem or Internet connection. Web browser based Management allows remote system changes and upgrades monitoring, fault analysis and correction
Re-routing	On busy or no answer
Route Optimization	The Corporate Network Route Optimization service gives the possibility to optimize the usage of trunk routes in private networks containing BusinessPhone and MX-ONE systems.
SIP Trunking	Access to an Internet Service Provider SIP based Business Trunking service via Aastra's BRI/PRI SIP Media Gateway
Software-based licensing	Functions and applications can be enabled centrally through a software-based license. Free reference users are available permanently. In addition to a fully open 60-days trial period.
Tandem configuration	A wired (desktop) phone and a cordless (portable) phone or a mobile extension are treated as one logical unit
Tariff calculation	Makes it possible to set up a tariff structure, including your margin, for guests using your telephony system, independent of whether the network operator sends pulses or real costs to the PBX
Tone (DTMF) and pulse dialing	Internal and external
Traffic matrix	Individual control over extension and trunk line access for internal calls
Trunk Call Discrimination	Several levels of restriction on external calling from extensions

## Reference users and trial period

A wide range of BusinessPhone solutions are available. In order to get familiar with the features the following functions are permanently available in every BusinessPhone system. In addition a 60-days trial period is available where all functions are available – unlimited.

	Free reference users	60 days trial period
Mobile Extension	2	100
Unified Messaging	2	200
BackStage	2	80
Computer Telephony	80 (=max) **	-
IP telephony	-	12 channels per board*
Networking	Full	Full unlimited
Gateway	-	Open
BusinessPhone Extension Assistant	10	250
Call Center Assistant	2	40

\* The free trial period for IP telephony ends after 28 days

\*\* Computer Telephony is standard in every new BusinessPhone system.

The table below is based on typical business configurations, i.e. it can be used as an average. The actual limitations may differ to some extent, depending on the configuration.

Capacity	BPC*	BP50	BP128i	BP250	Modularity
Extension capacity (theoretical)	300	300	300	300	-
Digital extensions	40	64	128	200 (300 for Hotel systems)	8/16/32
Analog extensions	20	32	128	200 (300 for Hotel systems)	4/8/16
Cordless extensions	64	64	64	210	as per FECU
Mobile extensions	55	100	100	100	5
Operators	3	3	3	3	1
S-Interface terminals	32 (4x 2B+D)	64 (8x 2B+D)	128 (16x 2B+D)	192 (24x 2B+D)	4/8
H.323 clients	128	200	200	200	
CT monitored extensions	80 (Office) 40 (Call Center)				
Trunk Capacity (theoretical)	38	120	120	120	-
Trunk Capacity (typical)	4	30	60	60	-
Analog trunks	8	16	32	60	4/8
Digital trunks PRA	30 (1x 30B+D)	30 (1x 30B+D)	60 (2x 30B+D)	60 (2x 30B+D)	30
Digital trunks with CAS	30 (1x 30B+D)	30 (1x 30B+D)	60 (2x 30B+D)	60 (2x 30B+D)	30
Digital trunks BA	8 (4x 2B+D)	16 (8x 2B+D)	32 (16x 30B+D)	48 (24x 2B+D)	8/16
S-Interface channels	8 (4x 2B+D)	16 (8x 2B+D)	32 (16x 30B+D)	48 (24x 2B+D)	8/16
H.323 trunks	16	32	60	60	4
VoIP channels	16	32	64	64	4/8
Analog tie lines	8	8	16	56	4/8
Base stations	12	12	12	60	1
Free slots for PBAs (except CPU-Dx)	1 **	4	4 + 5	8 + 9 + 9	-
RJ45 sockets available	N/A	N/A	72 + 72	N/A	-

\* BPC can be expanded to BP50 capacity by means of the BPC Upgrade License.

\*\* BPC basic configuration includes CPU-D5C and MFU

System cabinet	BP50 / BP Compact	BP128i	BP250
Cabinets, wall-mounted	1	1 or 2	up to 3
Dimensions (HxWxD)	500x400x155mm	125x483x396mm	435x260x300mm
Weight (fully equipped)	13 kg	14,5 kg	19,2 kg



# Technical data

## Power supply

- **Mains supply:** 110–127VAC  $\pm 10\%$ , or 220–240VAC  $\pm 10\%$
- **Emergency power supply** (battery):  $-48\text{VDC} +8\text{V}/-5\text{V}$

## Analog trunk lines

- **Max. line resistance:** 2000 Ohms at  $-48\text{VDC}$
- **Make/break ratio:** 33/67ms or 40/60ms
- **DTMF signaling:** ITU-T Q.23/Q.24

## Digital trunk lines

- **Channel associated signaling** (CAS) 2Mbit/s interface according to ITU-T G.703 and G.704
- **CAS R2 according to** ITU-T Q.421-424
- **ISDN interfaces according to** ITU-T I.430 (BA), I.431 (PRA), I.440, I.450, I.441, I.451, G.703 (PRA), G.704 (PRA), ETSI CTR3 (BA) and CTR4 (PRA), and Australia specifications

## Integrated Application Server (IAS)

- **Operating System:** Windows Server 2003 Embedded Telecom Edition
- **Processor:** Embedded Industrial PC

## IP Telephony

- Interfaces: Ethernet 10/100BaseT
- Protocols: IPv4, BOOTP, coding of speech packets according to RTP, DHCP, TCP, UDP, FTP, H.323 v4 incl. Annex M.1, H.225 and H.245, Gatekeeper – Gatekeeper signaling with Location Request procedure
- Voice support: up to 12 gateway calls per IPU
- Voice coder: G.711, G.723.1, G.729ab
- Quality of Service support: queuing prioritization, Type of Service (TOS). DiffServ according to RFC 2474
- Support for IP clients, Networking over IP, IP loop trunking

## Environmental Performance

### Environmental Declaration

BusinessPhone complies with the standard TR/70 issued by Ecma International – European association for standardized information on communication systems, which are defined as being critical to a product being judged as environmentally sound.



## Networking

- Common corporate numbering plan: coordinated, location code based or mixed
- Definition of up to 1000 corporate network nodes
- Corporate network routing with first choice and up to three alternative route choices
- Enhanced set of telephony features via the network

## ISDN access

- Basic Rate (2B+D, 144kbit/s)
- Primary Rate (30B+D, 2Mbit/s) Interfaces:
- Q interface (leased-line QSIG)
- T interface (switched public ISDN line with DSS1)

## Analog extensions

- Max. loop resistance (incl. telephones) 2500 Ohms
- Current feed: 2x400mA, -48VDC, or 2x800mA, -48VDC
- Impulse speed: 10Hz ±10%
- Make/break ratio: 33/67ms or 40/60ms
- DTMF signaling: ITU-T Q.23
- Timed break of loop: 80–120ms
- Leakage resistance: 40 kOhms

## Digital extensions

- Max. line length: 800m with 0.5mm diameter cable

## ISDN S-interface

### According to ETSI and Australia recommendations, supporting:

- Group 4 fax
- PC with ISDN board
- PC with ISDN board and telephone
- Terminal adapter
- Videophone
- ISDN telephone

### Bearer services supported include:

- speech
- unrestricted 64kbit/s
- Unrestricted digital information (with tones/ announcements, 7 kHz)
- 3.1 kHz audio
- Video

### Supplementary services supported include:

- Transfer
- Hold
- Suspend

### Maximum range:

- Short passive bus: up to 250m
- Extended passive bus: up to 500m

## Environmental

Operating temperature:	+5°C to +40°C
Relative humidity:	15–80%
Electrostatic discharge:	>8kV at 30% humidity, complies with IEC 801-2

## System programming

- Local programming via V.24 (RS-232) interface
- Web-browser based Management Suite for local (via V.24 or LAN connection) or remote (via built-in) (V.22 modem or Internet connection) configuration, O&M and upgrades

## EMC Standards Compliance

Emission: EN 55022 Class A/Class B

Immunity: EN 55024

Regulative Compliance Information: Hereby, Aastra Telecom Sweden AB declares that BusinessPhone BP250, BP50 and BP128i are in conformity with the essential requirements and other relevant provisions of EU directive 1999/5/EC

## Digital corporate networking (QSIG standards)

Basic Call Control

ETS 300 172/ISO 11572, ISO 11574 GFP (within the scope of the supported supplementary service listed below) ETS 300 239/ISO 11582 Supplementary services

CLIP, COLP, CLIR: ETS 300 173/ISO 14136

CNIP, CONP, CNIR: ETS 300 238/ISO 13864, 13868

AOC: ECMA 211/212

Protocol compliance

Layer 1: ETS 300 011/ETS 300 012

Layer 2: ETS 300 170

Layer 3: ETS 300 172

