

Alcatel OmniPCX 4400

Specifications



Alcatel's

Alcatel's OmniPCX 4400 offers innovative solutions

The Alcatel OmniPCX 4400 is a powerful new way to communicate with voice. Providing innovative solutions for today's business needs, the OmniPCX 4400 simplifies and enhances the workload of every person in the organization, every day that they're at work.

This is made possible by a range of services and solutions that address all of an enterprise's needs. Alcatel divides these capabilities into the electronic workplace, mobility, and applications enabled by a converged network infrastructure (using IP as the underlying technology), and supported by a consolidated set of network services.

The advanced open system architecture of the OmniPCX 4400 meets all of your communication needs today. And with its ability to integrate new technologies, it is uniquely able to rise to the challenges you will face tomorrow.



Electronic workplace

The Alcatel OmniPCX 4400 is designed around the needs of the individual as well as the workgroup. Reflexes digital phones provide the ease of use needed to boost personal and group productivity. They're complemented by a range of PC-based telephony applications that simplify complex office communications. Individuals, workgroups, telephone operators, call center agents, call center managers – all benefit equally.

Mobility

The Alcatel OmniPCX 4400 effectively combines the benefits of wired mobility, cellular cordless based on PWT and DECT, wired and wireless telephone co-operation, and public cellular integration into a comprehensive mobile communication solution.

Applications

General and individual greetings and messaging are based on telephone voice prompts, automated attendant, personal assistant voice mail, personal communication assistant, and directory applications.

Efficient, personalized call center capabilities take advantage of the Alcatel OmniPCX 4400's client/server configuration using a native Ethernet connection. The OmniPCX 4400's automatic call distribution and interactive voice response features integrate with the enterprise's IT platforms and software using the standard CSTA protocol.

Infrastructure

The Alcatel OmniPCX 4400's networking capabilities are built on Alcatel Business Communication (ABC). ABC is a fail-safe protocol, based on QSIG, which provides a full set of advanced user features across a network of PCXs, as well as routing and network management services.

Supported over any type of network (IP, ATM, frame relay, PSTN, ISDN, or leased line), the ABC protocol allows the total distribution of an OmniPCX 4400 network across a campus or around the world. The networking capabilities are adapted to all topologies and transport infrastructures, and deliver all features across all network types. Heterogeneous configurations with traditional PBXs are enabled by QSIG, the standard multi-vendor protocol.

Network services

The network services provided by the OmniPCX 4400 include:

- network management; accessible via any web-based browser or a Windows™ interface
- security, both authorization and authentication built in protection, with the network manager notified immediately of illegal access attempts
- IP address management using an embedded or external DHCP server, simplifying adds, moves, and changes
- directories automatically synchronized across the network
- broadcast reporting services for both billing and usage information by email

Workplace

Electronic workplace

Reflexes™ range of telephones

The Alcatel Reflexes telephones are easy to use and offer a rich set of features that simplify and empower communications. Alcatel offers a complete range of digital Reflexes telephones. The Reflexes phones are connected by an Alcatel high-speed digital interface at 256 Kbps (3B+D) using standard two-wire telephone cabling.

- Advanced Reflexes
- 4020 Premium Reflexes
- 4010 Easy Reflexes
- 4004 First Reflexes
- Alcatel 4037 Advanced IP Phone
- Alcatel 4022 Premium IP Phone

Modules adding keys to a telephone set

- Alcatel 4090 M: 20 keys
- Alcatel 4090 L: 40 keys

Reflexes Plugware

- Alcatel 4095 AP device Z
- Alcatel 4093 ASY asynchronous V.24/CTI
 - communication protocols: V.25bis, Hayes
 - rate adaptation: V.110/V.14 E
- Alcatel 4098 IP Reflexes phone enabler
 - Ethernet connectivity
 - G711 voice coding
 - G723.1 compression algorithm
 - H323 compliant
 - SNMP agent (MIB2)
 - DHCP client
 - hub function
 - QoS: RTP monitoring IEEE 802.1p/q1, Tos, DIFFserv

Reflexes phone extenders

- Alcatel 4051/4052 ISDN / analog Reflexes phone extenders
 - remote connection of Reflexes phone
 - terminal services:
 - full access to Reflexes services
 - data services:
 - remote RS232 or Ethernet port for PC connection
 - dial-up networking support
 - communication services: call on demand, dial back

Telephony enabled PC

- Alcatel 4980 PC telephony software
 - incoming / outgoing call management
 - personal and group phonebook
 - universal call-by-name by automatic directories overflow
 - directory pop-up
 - call log (history call files)
 - visual mailbox
 - multi-line mode
 - manager/assistant
 - Twinset compliant
 - soft keys
 - call planning
 - call related notes
 - Groupware services
 - NetMeeting compliant
 - TAPI, MAPI, DDE, OLE.com, LDAP
 - inter-working with Lotus Notes
 - kit/library for developers

CTI (Computer / telephony integration)

- Alcatel 4961 TAPI Middleware for PC workstation
- Alcatel TAPI Premium Server: TAPI 2.1 / 3.0



Reflexes phones advanced services

- absence message
- adjustable handset volume
- call-by-name: internal and external user
- centralized directory, spelling and syntax adjustment
- call-by-name can be used in all communication contexts (direct call, inquiry, and more)
- caller name display
- conditional/unconditional differentiated forwarding of multiple directory numbers
- contextual voice prompts
- fixed function keys
- hands-free
- headset capability
- help key
- individual customization
- informative icons
- interactive guidance with soft keys
- language synchronization: display, voice prompts, and voice mail

- loudspeaker announcement
- multi-line: multi-appearance and multi-numbers
- multilingual (user choice)
- macro commands
- message waiting indication
- mini-text messages
- personal password for consultation of non-reply personal calls log
- programmable function key
- supervision of user / trunk / bundle

ISDN services

- calling line identification presentation / restriction (CLIP/CLIR)
- digit by digit dialing mode
- end block dialing (digit correction possible)
- ISDN identification (CLIP) converted into name
- ISDN mini-text messages (carrier dependent)
- malicious call identification
- storage of unanswered calls with date, time, and callback
- sub-addressing

Manager-assistant team

- access to manager's voice message headers from assistant's telephone
- filtering scenario allocation to designated assistant
- flexible configuration: multiple manager/assistant team
- forwarding of private line
- immediate forwarding of manager telephone to assistant activated by manager or assistant
- manager-assistant specific on-line text-messaging

- manager discreet listening (on filtered lines only)
- overflow assistant in case of main assistant absence
- private lines
- main assistant absence notification and overflow assistant
- selective filtering (scenarios)

Teamwork configuration

- common / exclusive hold
- group call pick-up
- hunting groups
- log-on, log-off
- manageable ring indicator
- manageable waiting queue

Standard telephone features

- speed dialing
- account code charging
- appointment reminder
- associate (definition, modification by user)
- automatic call-back on busy trunk / bundle / network link
- automatic call-back on free / busy extension
- broker's call
- call forwarding unconditional on busy / no reply to extension, hunting group, voice mail, operator, paging, etc.
- call pick-up
- call waiting indication
- calling line identification restriction for internal calls
- camp on busy telephone / hunting group / voice mail
- conditional external forwarding (busy or no reply)
- waiting call

- controlled private call by Pin code and password (optional)
- distinctive ringing according to hierarchical levels
- do not disturb
- general night service
- hunting group (fix head, cyclic, longest idle time, parallel)
- immediate forwarding
- individual hold
- individual directory
- internal / external music on hold
- internal / external inquiry call
- intrusion
- last internal / external number redial
- local and external call
- moving service
- multi-line selective forwarding
- multiple conference call
- multiple call protection
- multi-tenant services:
 - speed dialing numbers per entity
 - calling line identification
 - integrated auto attendant services per entity
 - presentation (CLIP) per entity
 - greeting message per entity
 - music on hold per entity
 - night service per entity
- over dialing
- personal code modification
- priority call
- store and redial external number
- substitution
- three-party conference
- transfer in conversation on free/busy telephone
- twenty-nine party meet me conference
- voice prompts on / off per telephone
- voice message deposit on forwarded telephone
- waiting call consultation



Mobility

Mobility

Wireless Reflexes - PWT services

- caller's name display
- dial by name
- encrypted communications
- hand-over
- ISDN services
- mini-text messages
- multi-line
- range of gain antenna
- roaming
- Twinset service
- voice mail notification / consultation

Optimized radio base station

- six simultaneous communications
- connectivity 2 x UA interfaces

Paging

- connections handled by the Alcatel OmniPCX 4400: ESPA 3 protocol
- external caller waiting on voice prompt
- internal and external calls transferred to pager:
 - on selection
 - immediate forward
 - no reply or busy
- paging by prefix or suffix

Ubiquity services

- integration of public cellular phone
- one number concept, forward call on caller choice
 - voice mail
 - cellular phone
 - attendant / assistant
- remote access secured by CLIP, access to:
 - call by name
 - office set management
 - Alcatel OmniPCX 4400 regular telephone services

Applications

Applications

Attendant station

- abbreviated dialing
- activation / deactivation of DND
- add-on module
- alarm indication
- attendant groups
- automatic answer
- attendant specialization options (individual or group)
- busy lamp field
- call-by-name in all communication situations
- call charge request (carrier dependent)
- centralized or distributed attendant in network
- call queuing with indication
- call routing depending on class of traffic, DID, company, or called service (entity)
- call waiting with indication
- called party resources
- call pick-up
- charging recall service (carrier dependent)
- chained call
- choice of system status
- conference
- creation, cancellation and modification of abbreviated number with name
- creation, cancellation and modification of subscribers (name, rights, and more)
- discrete call offer
- discrete call offer by mini-text messages on busy / free Reflexes telephone
- DTMF over dialing
- large busy lamp field
- flexible attendant routing time out overflow based on caller waiting time
- headset capability
- hold individual or multiple
- create / delete of directory items
- internal call name / number displayed
- ISDN VIP monitoring
- last number redial
- line reservation
- malicious call identification
- manual reservation mode
- mini-text messages
- multi-tenant services
- override on directory number
- paging
- password
- personal call
- priority call (internal / external)
- receipt and read charging units and costs (carrier dependent)
- record on line on associated entity
- status of calls routed to operator
- store and number redial
- synchronized multi node routing (entity)
- time and date displayed
- transfer with / without announcement
- trunk allotting with barring
- VIP telephone monitoring

Integrated greeting

- integrated automated attendant
- personal automated assistant with context-sensitive greeting
- synchronized greeting message

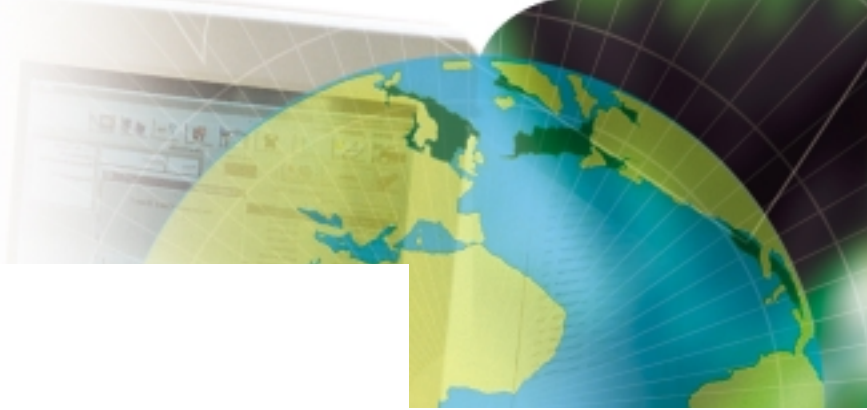
Voice and fax mail

- automated attendant
- call transfer
- direct reply on receipt message
- extended recording, and playback control function

- fax broadcast, on demand, overflow, store, and forward
- general distribution lists
- greeting message according to user status
- immediate or supervised transfers
- message acknowledgment
- message attributes: urgent, normal, private
- message notification via light, display, dialing tone, voice prompt, outgoing
- multi-language
- multi-user password
- networking protocols: Octelnet and Amis
- private distribution lists
- record on line
- shared mail box: home, guest, and assistant mailbox
- user-friendly interface on Reflexes telephones via soft keys or via PC-client visual messenger
- voice message attached to a fax
- voice and DTMF forms
- Web access to voice and fax messages

Automatic call distribution (ACD) / Alcatel OmniPCX 4400 CCx

- active matrix call distribution
 - call flow based on pilot
 - skill and cost based distribution
 - conditional pilot overflow on voice mail
 - look ahead call routing
 - pilot forwarding to other pilot
 - pilot routing to waiting queue according to priority
 - routing time schedule
 - types of waiting queues: waiting, help, and dissuasion



- virtual pilot
- intelligent routing
- outbound call management
- direct agent call management
- remaining waiting time announcement
- voice guidance
 - external voices guides
 - synchronized internal voices guides
 - storage from audio station or Reflexes telephone
- agents features
 - administrative withdrawal
 - agent break
 - agent direct call with statistics
 - agent can belong to different groups
 - call recording
 - CCA applications: Reflexes telephone on toolbar providing personal statistics
 - group selection: fix head, cyclic, longest idle time
 - free sitting agent position
 - help supervisor
 - home agent with analog telephone or Reflexes telephone
 - log-on / log-off
 - open or close pilot from agent position
 - personal call barring
 - suspension of group waiting queues
 - transaction code
 - wrap-up (automatic or manual)
- supervision and statistics
 - alarm handling
 - call level information
 - customizable alarms
 - customizable reports
 - detailed communication reports
 - reports based on communication events
- discrete call listening for supervisor
- Excel based statistics & reporting
- export of communication reports (ASCII files)
- free sitting supervisor position
- full Windows user interface
- native Windows management look and feel
- predefined reports
- real-time service level per pilot
- real-time statistics
- statistics compilation and archive (FTP)
- wallboard display control

Vertical applications

- Hotel / hospital services
 - all types of phones: analog, Reflexes, wireless
 - check-in / check-out individual or group
 - pre check-in / partial check-out
 - cyclic DDI
 - multi occupant room
 - room allocation from the telephone
 - do not disturb
 - guest / patient personal code
 - internal call barring
 - DDI call barring according to time schedule
 - wake-up service (up to four wake-up calls per room)
- room service
 - VIP
 - guest number or name
 - called service identification
 - guest language
- room status
 - multi-language voice prompts (eight simultaneous languages)
- room directory
 - call by name
 - prepayment (deposit)
 - flexible suites
 - Alcatel hotel / hospital link (AHL)
 - secret identity for calls between rooms
 - public booth
 - guest personal identification number
 - manual CDR creation
 - mini-bar
 - billing

Networking

Networking

Network configuration

- analog and digital Alcatel networking protocol (ABC) based on QSIG
- line, star, meshed configuration
- remote shelf (ACT)
- Voice Workgroup Switch
- multi vendor networking
 - Q-SIG BC, GF, and supplementary services (SS)

Packet voice networking

- built-in compression engine
 - compression algorithm G 723.1 / G729.A
 - compression rate 6.4 Kbps / 8 Kbps
 - G3 fax supported
 - end to end compression / decompression
 - mutual help between compression resources
 - multi direction per compression board
- voice over IP
 - compression algorithm: G 723.1, G729.A
 - compression rate 6.4 Kbps / 8 Kbps
 - G3 fax supported
 - full ABC services supported
 - Ethernet connectivity
 - Netscape NetMeeting compliant
 - new call routing in case of QoS or network failure

- voice over frame relay
 - compression algorithm: G723.1, G729.A
 - compression rate 6.4 Kbps / 8 Kbps
 - G3 fax supported
 - full ABC services supported
 - interface Internet X24/V11 or V36
 - new call routing in case of network failure
- voice over ATM
 - ATM adaptation layer AAL1
 - compliant with integrated compression engine
 - full ABC services supported
 - interface ATM OC-3 155 Mbps
 - eight directions per interface
 - unstructured mode service (CES 1.0)
 - UNI 3.1

Virtual private networks (VPN)

- ABC VPN via public ISDN, QSIG
- dissociating signaling over IP network
- six conversations on 64Kbps B channel
- five conversations on 56Kbps B channel
- full ABC services

ABC on demand

- ABC via public ISDN, QSIG
- dynamic virtual leased line
- six conversations on 64Kbps B channel
- five conversations on 56Kbps B channel
- call barring for applications
- full ABC services

Private networking features (ABC protocol)

- automatic call-back on busy private link
- broker's call
- call-back on busy or free extensions
- call deflection
- call forwarding
- call intrusion
- call offer
- call waiting indication
- camp on
- centralized / distributed attendant groups
- data communication
- network wide mobility
 - roaming
 - guest services
- distinctive ringing
- do not disturb
- DTMF
- inquiry call
- flexible numbering plan
- hold
- hunting groups

- intrusion
- ISDN Services
- large busy lamp field
- mini text messages
- number and name identification
- associate telephone
- priority calls
- remote forwarding
- substitution
- supervision
- manager / assistant team
- three-party conference
- transfer (with route optimization)
- transit
- voice mail services
- unified messaging services

ABC network routing

- adaptive routing
- break-in / out
- break-in via secured DISA
- data re-routing
- forced on net
- automatic route selection (ARS)
 - ARS server centralized or distributed
 - ARS time dependant
 - access to alternative route
 - voice prompts
 - multiple carrier access - direct or indirect
 - multi-tenant
 - cost limit barring per user
- overflow if leased line failure or saturation according to user rights
- transfer, forwarding with route optimization
- voice / data differentiation

ABC network management

- management from attendant
- multiple DDI translators
- multiple call barring translators
- VT 100 local management
- centralized or distributed management from external applications
 - topology map
 - configuration
 - alarm management
 - call accounting
 - directory
 - traffic analysis
 - security
 - graphical user interface
 - remote management
 - alarm domains and alarm centralization
- audit mechanism
- broadcast of configuration data
- remote maintenance access
- remote software downloading
- CDRs with VPN and LCR services



Networking Services

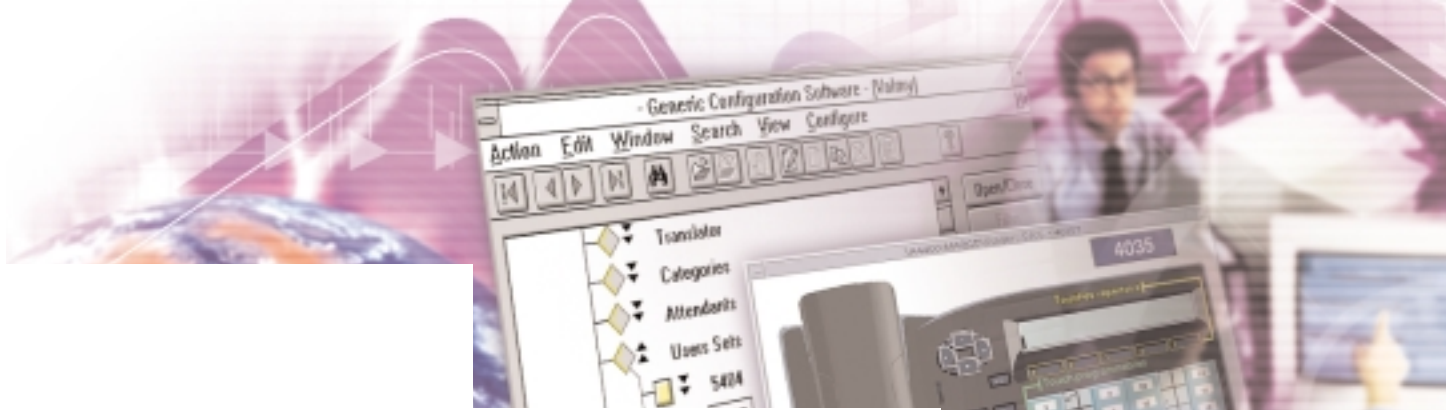
Networking Services

Security

- Internal toll fraud protection
- PIN code for business calls
- PIN code for personal calls with / without call barring
- transfer / forwarding barring categories
- DISA protection
 - password control and access blocked after several wrong attempts
 - alarm generated in case of wrong attempt
 - automatic substitution on CLIP
- strong authentication via secured ID
- controlled access to the OmniPCX 4400 database
- protection by password
- identification of a management platform by name and password
- management operations history file
- remote management access controlled by CLIP (ISDN)
- call-back procedure (PSTN)
- Internet / intranet access protection:
 - trusted host: IP address control
 - TCP wrapper: secured exchange control
- faults and alarms
 - alarms filtering
 - alarm list with colors according to severity
 - alarm display on topology maps
- call accounting
 - organization map
 - time-based cost calculation
 - carrier cost simulation
 - predefined / customizable graphical reports
- reporting services
 - multiple report formats (csv, html)
 - reports distribution by e-mail
- performance
 - traffic analysis per:
 - trunk
 - bundle
 - attendant / attendant group
 - on-site wireless installation
 - DDI number
- convergence with HP OpenView
 - topology map animated by OmniPCX 4400 SNMP traps
 - access to OmniPCX 4400 node from topology maps

Management

- centralized or distributed management via Windows NT application
- client-server architecture (Windows 95 / 98 / NT client)
- web-based management
- move, add, and change
 - unified graphical interface
 - profiles for creation / modification
 - import / export from text files



Architecture

Architecture

Hardware

Alcatel Crystal technology offers

- distributed hardware
 - processing
 - switching
 - power supply
 - auxiliary
- native Ethernet connectivity
- main CPU duplication available in all configurations

Software

- client-server
- Chorus MIX micro kernel operating system
- SQL/CQL database
- UNIX System V compliant

Cabinets

- Voice workgroup switch (19" rack)
 - ACT four slots, expandable to eight
 - integrated power supply
 - integrated maintenance modem
 - depth 12.6 in. / 360 mm
 - height 6.30 in. / 160 mm
 - width 17.72 in. / 450 mm
 - weight 33.06 lb. / 15 kg

- Alcatel OmniPCX 4400 M2 (cabinet)
 - 1 ACT 28 or 2 ACT 14
 - depth 10.04 in. / 255 mm
 - height 29.13 in. / 740 mm
 - width 22.44 in. / 570 mm
 - weight 154.32 lb. / 70 kg
- Alcatel OmniPCX 4400 M3 (cabinet)
 - 2 ACT 28 or 2 ACT 14
 - depth 20.31 in. / 516 mm
 - height 59.05 in. / 1500 mm
 - width 22.4 in. / 570 mm
 - weight 242.5 lb. / 110 kg
- Norms
 - UL / CSA
 - FCC / IC compliance
 - Part 68
 - CS-03



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