REF: 3EH21017BSAA Ed. 02

Section
INSTALLATION MANUAL

ALCATEL OMNIPCX OFFICE

REF: 3EH21017BSAA Ed. 02

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Alcatel OmniPCX Office





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In relation to issue 01 of the manual, this issue adds the following changes:

- **Sheet 4 "Hardware description":** change in consumption for each model.
- Sheet 6 "Installation/Cabling":
 - adds the description of how to attach Rack1 and Rack 2 models to the wall.
 - details on recommendations for choice of site.
 - modification of characteristics of relay contacts used to connect auxiliary equipment.
 - modification of the characteristics of the battery fuse.
 - deletion of consumption.
 - modification of length of system downtime.
- Sheet 14 "Installation of Internet access": add procedures for connection by DSL modem and LAN to LAN routing
- Sheet 16 "First level maintenance": add recommendations on battery and cell maintenance.



REASONS FOR CHANGING ISSUE

INSTALLATION MANUAL



INSTALLATION MANUAL



7

Indicates a remark.

Indicates important information.



SYMBOLS USED IN THIS MANUAL

INSTALLATION MANUAL

▼ ALCATEL

SAFETY

SAFETY



DECLARATION OF CONFORMITY

We, Alcatel Business Systems 32, avenue Kléber 92707 Colombes Cedex - France declare that the following products are deemed to comply with the requirements of Directive 1999/ CE/5 of the European Parliament and the Council.

Any unauthorized modification of the products makes this declaration of conformity null and void.

Pursuant to the directive, as published in the Official Journal of the European Community of April 7, 1999, these appliances can be used in all the countries of the European Community, Switzerland and Norway.

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Alcatel Business Systems - 32, avenue Kléber F-92707 Colombes Cedex RCS Paris 602 033 185.

GENERAL RECOMMENDATIONS



It is vitally important to connect this product to a permanent ground connection installed in accordance with the rules of the art.

Owing to the presence of hazardous voltages, the metal back plate may only be removed by suitably qualified personnel.

In the event of a poor earth connection, it is **IMPERATIVE** to disconnect the telecommunications ports before reconnecting the earth. A check must then be made to ensure that all the connections have been made correctly.

If it is necessary to intervene in the power supply unit, disconnect the mains cable before removing the metal panel on the power supply unit and disconnect the batteries.



SAFETY

INSTALLATION MANUAL

DECLARATION OF CONFORMITY WITH DIRECTIVES

This appliance is designed to be connected to the public telephone network through appropriate interfaces.

The CE marking indicates that the product complies with prevailing community directives, in particular:

- 89/336/CEE (Electromagnetic compatibility)
- 73/23/CEE (Low voltage)
- 1999/5/CE (R&TTE)

CLASSIFICATION OF INTERFACES

SELV: Safety Extra Low Voltage TNV-3: Telecommunications Network Voltage





PRESENTATION OF THE HARDWARE

Alcatel OmniPCX Office is an "e-communication server", a new "All-in-One" concept combining proven telephony functions with access to all the resources of the Internet and data transmission. This "multipurpose" server is a turnkey global communications solution for small and medium-scale enterprises, with anything from 6 to 200 employees.

RECEPTION OF THE HARDWARE

The Alcatel OmniPCX Office module is delivered:

- equipped with all the sub-assemblies necessary for your particular configuration.
- configured with the software key corresponding to the desired levels of service (depending on country).

The terminals are packed separately.



PRESENTATION OF THE HARDWARE

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PRESENTATION OF THE MODULE

Alcatel OmniPCX Office is available in three models.

Rack 1



- 28 ports,

- 1 CPU/CPUe slot and 2 reversible slots (no SLI16 board).
- Energy consumption: 1A / 70 W.
- Dimensions: H = 66 mm; W = 442 mm; D = 400 mm.
- Weight: 6 kg.

Rack 2



- 48 ports.
- 1 CPU/CPUe slot and 5 reversible slots.
- Energy consumption: 2 A / 100 W.
- Dimensions: H = 110 mm; W = 442 mm; D = 400 mm.
- Weight: 11 kg.

Rack 3

- 96 ports.
- 1 CPU/CPUe slot + 4 reversible slots + 4 specific slots (no UAI16 and MIX boards).
- Energy consumption: 2,3 A / 150 W.
- Dimensions: H = 154 mm; W = 442 mm; D = 400 mm.
- Weight: 13 kg.



INSTALLATION SYNOPSIS



A This equipment must be installed by a qualified installation technician.



PRESENTATION OF THE HARDWARE

INSTALLATION MANUAL

DESCRIPTION OF THE BOARDS

BOARDS	FUNCTIONS	OPTIONAL BOARDS	CONNECTIONS
ATA2 ATA4	2 or 4 analog trunk line terminals	MET: pulse meter receiver	Analog Trunk Line (TL) and TL- SUBS diversion
BRA-2 BRA-4 BRA-8	2, 4 or 8 T0 basic ac- cesses		ISDN network
CPU, CPUe	Processing Unit	HSL1, HSL2: interconnec- tion with extension modules XMEM: extended memory and/or IDE interface for the hard disk VoIP: Voice over IP (e-XS model) AFU: auxiliary functions	Hub, Lan switch or Ethernet terminal "Please Wait" message device Background background mu- sic Alarm Doorphone Loudspeaker. General bell Pulse metering device PC PM5
CoCPU, CoCPU@	CoProcessing Unit	VoIP: Voice over IP SLANX: mini switch (CPU/CPUe - CoCPU/CoCPU@)link	Hub, LAN switch or Ethernet terminal
LanX8 LanX16	8 or 16 ports 10/100 BT Ethernet		@ Phones, LAN switch, Hub, etc
MEX (with HSL1 board)	Controller for extension modules		
MIX244 MIX484 MIX448 MIX044 MIX084 MIX044	0, 2 or 4 T0 basic ac- cesses + 4 or 8 UA inter- faces + 4 or 8 Z interfaces		ISDN network, Analog Z termi- nals and Alcatel Reflexes ter- minals
PRA-T1 PRA-T2 DASS2 DLT2	PRA -T2, DASS2, DLT2: 30 B-channels + 1 D- channel; 2048 kbps) PRA-T1: 23 B-channels + 1 D-channel; 1544 kbps		PRA-T2: ISDN network DASS2 UK public/private net- work DLT2: QSIG private network PRA-T1: Hong-Kong ISDN net- work



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PRESENTATION OF THE HARDWARE

SLI-4 SLI-8 SLI-16	4, 8 or 16 Z interfaces	Z analog terminals
UAI-4 UAI-8 UAI-16	4, 8 or 16 UA interfaces	Alcatel Reflexes terminals Multi Reflexes DECT 4070IO/EO base sta- tions



CPU / CPUe Boards

These boards perform the system's central processing unit functions.





The CPUe board of Alcatel OmniPCX Office's e-XS solution offers all of the following features:

- System central processing unit
- Voice over IP
- Internet Access

Function of the LEDs

Name	Color	Function	
CPU	Green	CPU correct operation LED (flashing)	
POWER	Two-colored Red/ Green	 Running on mains power: green LED on steady Running on battery: yellow LED on steady Standby mode: red LED flashing 	
FAN	Two-colored Red/ Green	 2 fans operating correctly: green LED on steady 1 or 2 fans KO: red LED on steady 	
LAN	Green	LAN correct operation LED (flashes to signal traffic)	
MODULE	Green	HSL board installed	
WAN	Green	Not in use	

CPU/CPUe board microswitch settings





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PRESENTATION OF THE HARDWARE

CoCPU / CoCPU@ Boards

These boards perform the following functions:

- CoCPU: Voice over IP and IP Telephony
- CoCPU@: Internet Access, e-mail server, Proxy and VPN.





Function of the LEDs

Name	Color	Function	
CPU	Green	CPU correct operation LED (flashing)	
LAN	Green	LAN correct operation LED (flashes to signal traffic)	
WAN	Green	WAN Correct operation LED (flashes to signal traffic); used if there is an ADSL modem connection. Available from re- lease R1 onwards.	
UNIT 1 - 4 UPLINK	Green	LAN interfaces Switches 1 to 4 correct operation LED (flashing)	

Microswitch settings



CoCPU board



On



PRESENTATION OF THE HARDWARE

SLI-X boards

These boards allow for the connection of 4, 8 or 16 analog terminals.



UAI-X boards

These boards can connect up 4, 8 or 16 Alcatel Reflexes stations or DECT 4070 IO/EO base stations.



MIX X/Y/Z boards

These boards can connect up 2 or 4 T0 basic accesses, 4 or 8 analog terminals and 4 or 8 Alcatel Reflexes stations.





INSTALLATION MANUAL

PRESENTATION OF THE HARDWARE

BRA-X boards

These boards can connect up 2, 4 or 8 TO basic accesses (2 B-channels+1 D-channel).

ISDN ACCES - TO	BRA 8

PRA boards

This board connects up a primary access (PRA-E1: 30 B-channels + 1 D-channel; PRA-T1: 23 B-channels + 1 D-channel).

ISDN ACCESS - E1		PRA-T2
0	BUSY RAI	AIS
NETW Ø PBX 3	NOS CRC	LOS

Function of the LEDs

Name of T2	Name of T1	Function
BUSY	BUSY	B-channels busy (red LED lit if at least 1 B-channel is busy)
RAI (ATD)	RAI	Remote frame alarm (red LED lit if alarm)
AIS (SIA2M)	AIS	Too many "1"s in the 2-megabit binary train (red LED lit if alarm)
NOS (MS)	NSIG	2-megabit signal missing (red LED lit if alarm)
CRC (TE)	CRC	CRC error (red LED lit if alarm)
LOS (PVT)	NSYN	Loss of frame alignment (red LED lit if alarm)



PRESENTATION OF THE HARDWARE

INSTALLATION MANUAL

ATA-X boards

This board allows for connection to the analog public network (2 or 4 TLs).



LAN X8, LAN X16 boards

These boards allow for the creation of a local area network (LAN) by connecting client PCs, IP-Phone, external LAN switches and servers.



Each RJ45 connector (category 5) incorporates 2 green LEDs:

- Left LED = link and activity status:
 - off: link disconnected
 - on: link connected
 - flashing: link active
- Right LED = full duplex/collision:
 - off: Half Duplex
 - on: Full Duplex
 - flashing: collision



EQUIPPING THE CPU BOARDS WITH DAUGHTER/SDRAM BOARDS

The following table describes the different possibilities for fitting daughter boards on the various CPU boards.

DAUGHTER	CPU ,	/ CPUe	CoCPU / CoCPU@		
BOARDS	CPU	CPUe	CoCPU	CoCPU@	
SDRAM32	Yes	No	Yes	No	
SDRAM64	No	Yes	No	No	
SDRAM128	No	Yes, on CPUe model e-XS only	No	Yes	
ХМЕМ	Yes	Yes	No	No	
VoIP	No	Yes on CPUe model e-XS	Yes	No	
HSL1	Yes	Yes	No	No	
HSL2	Yes	Yes	No	No	
AFU	Yes	Yes	No	No	
WAN	No	No	No	Yes	
SLANX4	No	No	Yes	Yes	
HARD DISK	Yes	Yes	No	Yes	

Example of fitting daughter boards on a CPUe





FITTING THE BASIC MODULE

Rack 1

	SLOTI	SLOT2	SLOTCPU	
BOARD	SLOT	1	SLOT 2	CPU SLOT
CPU, CPUe	No		No	Obligatory
MIX x/y/z	Yes +	F	Yes	No
UAI4, UAI8, UAI16	Yes +	F	Yes	No
SLI4, SLI8	Yes +	F	Yes	No
SLI16	No		No	No
PRA-T2, PRA-T1, DASS2, DLT2	Yes		Yes +	No
ATA2, ATA4	Yes		Yes +	No
BRA2, BRA4, BRA8	Yes		Yes +	No
CoCPU, CoCPU@	Yes		Yes +	No
LANX8, LANX16	Yes		Yes +	No
Empty slot blanking cover	Yes		Yes	No

Yes +: recommended slot

Rack 2

SLOTI	SLO T2	SLOT CPU			
SLOT3	SLOT4	SLO T5			

BOARD	SLOT 1-3:	SLOT 2-4	SLOT 5	CPU SLOT
CPU, CPUe	No	No	No	Obligatory
MIX x/y/z	Yes +	Yes	Yes	No
UAI4, UAI8, UAI16	Yes +	Yes	Yes	No
SLI4, SLI8, SLI16	Yes +	Yes	Yes	No
PRA-T2, PRA-T1, DASS2, DLT2	Yes	Yes +	Yes	No
ATA2, ATA4	Yes	Yes +	Yes	No



INSTALLATION MANUAL

PRESENTATION OF THE HARDWARE

BRA2, BRA4, BRA8	Yes	Yes +	Yes	No
				<u> </u>
	Yes	Yes	Yes +	No
	V	V	V I	NL-
LAINXO, LAINXTO	res	res	res +	INO
Empty slot blanking cover	Yes	Yes	Yes	No
Emply slot blanking cover	163	163	163	INO

Yes +: recommended slot

Rack 3



BOARD	SLOT 1-2-3-4	SLOT 5-8	SLOT 6-7	CPU SLOT
CPU, CPUe	No	No	No	Obligatory
MIX x/y/z	Yes	No	No	No
UAI4, UAI8	Yes +	Yes	Yes	No
UAI16	Yes +	No	No	No
SLI4, SLI8, SLI16	Yes +	Yes	Yes	No
PRA-T2, PRA-T1, DASS2, DLT2	Yes	Yes	Yes +	No
ATA2, ATA4	Yes	Yes	Yes +	No
BRA2, BRA4, BRA8	Yes	Yes	Yes +	No
CoCPU, CoCPU@	Yes	Yes +	Yes	No
LANX8, LANX16	Yes	Yes +	Yes	No
Empty slot blanking cover	Yes	Yes	Yes	No

Yes +: recommended slot



PRESENTATION OF THE HARDWARE

INSTALLATION MANUAL


SOFTWARE KEYS



A software key identifies a list of authorized services and their modalities of use.

Each system is assigned 2 software keys: Main (= essentially voice services) and CTI.

Software keys are derived from

- a serial number associated with the system CPU/CPUe board
- a set of unction access rights (system or CTI)

When the system is booted there are three possibilities:

- 1. The key present in the system is correct: the system starts with the level of services provided by this key.
- There is a key in the system, but the serial number indicated in the key differs from the system CPU serial number: the system starts with the level of services provided by the key with temporary validity (30 days). The operator terminal display indicates "Software key problem"; pressing the Alarm key indicates the key expiry date.

Entering a valid key (with the right serial number) during the period of temporary validity changes the system to state 1, otherwise the system switches to state 3 at the end of the period, resets itself and reboots in "limited" mode.

 There is no key, or the time-out has expired: the system boots with the "limited" mode capabilities described below.
Entering a valid key (with the right serial number) resets the system and switches it to state 1.

Voice services available in "limited" mode

- Terminals in the default Attendant Group and analog terminals with automatic call setup on going off-hook
- No DECT terminals, including Reflexes DECT terminals
- Voice server with name announcement, 2 ports and 20 minutes storage
- 4 welcome messages (pre-announcement)
- ARS
- 2 system languages
- "Please Wait" music: 2minutes max.
- Personal Assistant
- DISA
- all the other services are closed.



SOFTWARE KEYS

INSTALLATION MANUAL

CHANGING THE KEY

In BTCO mode, the software key is pre-loaded by the maker; in "stock mode" (post-sale), the key has to be entered by the distributor. When updating the system, the installer has to modify the key to take on board new services.

The key can be changed using PM5 or MMC-Station.

PM5 procedure

- To read the CPU board serial number: select Modification Typical -> System Software Key -> Hardware Serial Number
- Indicate this serial number and the desired levels of services to Alcatel.
- Load the key file Main.msl or CTI.csl from the Alcatel Business Partner web site (this file can also be downloaded by the maker).
- Load the new key:
 - Select Modification Typical -> System ->Software Key
 - Click Import Key
 - In the **Open** screen, select the file corresponding to the new key
 - Confirm
 - In the System screen, click Apply.
- To open some of the features requires a hot reset; a message is displayed.



If the necessary hardware for the features unlocked by the software key is not present, the services are automatically reduced to adapt to the hardware available; an error message is displayed when the key is entered.

It is possible to find out the access rights to the various services controlled by the key.

- In PM5, select Modification Typical -> System -> Software Key
- Click Details

File 5

SERVICES CONTROLLED BY THE "MAIN " SOFTWARE KEY

The following table lists the services controlled by the "Main" software key, the "limited" mode values and the configuration modularity.

Services control- led	Values in "lim- ited" mode	Mod- ulari- ty	Max	Limit without X-MEN	Limit with X- MEN 64	Limit with HARD DISK
		STA	NDARD	TELEPHONY		
Number of Reflexes terminals	Accord- ing to	+1	236	236	236	236
Number of analog terminals	selected mode	+1	200	200	200	200
	•		MO	BILITY		
Number of DECT + DECT Reflexes ter- minals	0	+1	200	200	200	200
		C	ALL MA	NAGEMENT		
ARS	open	open		open	open	open
DISA / DISA transit	open	open		open	open	open
ISVPN on ISDN	closed	open		open	open	open
QSIG +	closed	open		open	open	open
			NET	NORKS		
Number of B-chan- nels in digital networks	0	+1	120	120	120	120
		ļ	NTERNI	ET ACCESS		
Internet access access	closed	open				
Proxy: Web cache and Access control	closed	open				
E mail	closed	open				
Internet VPN	closed	open				
Internet access on CoCPU	NO	YES				
			LAN TE	LEPHONY		



SOFTWARE KEYS

INSTALLATION MANUAL

Services control- led	Values in "lim- ited" mode	Mod- ulari- ty	Max	Limit v X-N	vithout \EN	Limit v MEN	with X- N 64	Limit HARD	with DISK
Number of IP Phones	0	+1	200	0	0	0	200	200	200
Number of PIM-telephony Mul- timedia terminals	0	+1	200	0	0	0	200	200	200
			VoIP G	ATEWA	Y				
Number of VoIP channels	0	+1	120	120	120	120	120	120	120
	I		V	olP	L		1		L
VoIP on CoCPU	NO	YES							
	VOIC	E MAIL /	AND AU	TOMAT	ED ATTE	NDANT			
Number of VMU ports	2 ports	+1	8	4	8	4	8	4	8
Storage capacity	20′	10′	200h	2	0'	1h	20′	20	0h
Automated attendant	closed	open		clo	sed	open o configi	& non- urable*	open & urc	config- Ible
Audiotext	closed	open		clo	sed	clo	sed	ор	en
Fax switching	closed	open		ор	en	ор	en	ор	en
Mailbox welcome messages	closed	open		ор	en	op	en	ор	en
Name in the distri- bution lists	closed	open		clo	sed	clo	sed	ор	en
Recording conversations	closed	open		clo	sed	clo	sed	ор	en
		1	WEL	COME					
Number of messages (16")	4	+4	8	4	4	4	8	4	8
		"P	LEASE W	/AIT" MU	JSIC		ł		<u> </u>
Duration	2 min.	2 min.	10 min.		2		2	1	0
			PULSE A	NETERIN	IG				
Number of NMC tickets	0	+ 1000	30000	1000	1000	1000	1000	30000	30000





SOFTWARE KEYS

Services control- led	Values in "lim- ited" mode	Mod- ulari- ty	Max	Limit v X-N	vithout \EN	Limit v MEN	vith X- N 64	Limit HARD	with DISK
			LANG	UAGES					
Number of lan- guages	2	2	4	2	2	4	4	4	4

* The Automated Attendant cannot be configured; only the company welcome message can be recorded, with a maximum duration of 16".







INSTALLATION OF THE CASE

The Alcatel OmniPCX Office case can be installed in three ways:

- Placed on a table: a maximum of three cases can be mounted on top of one another.
- Attached directly to the wall: a kit can be used to attach the Rack 1 and Rack 2 models to the wall.
- Mounted in a computer bay (rack): the case is secured in the rack by means of the attaching brackets provided by the rack supplier, or using the optional 19" installation kit (there is a kit for each type of module).

Wall mounting (Rack1 and Rack2 only)

The wall-mounting kit is made up of 4 mechanical parts.

After the case has been fitted, the space between it and the wall can be used to run cables through.





INSTALLATION MANUAL

Installation in the 19" rack





Recommendations:

Before installing a system in a 19" rack it must be ensured that:

- the maximum static load (given by the supplier) of the 19" rack is greater than the total weight of the appliances fitted to or to be fitted to the rack.
- In addition, the weight of the appliances must be distributed uniformly throughout the height of the struts.
- If the Alcatel OmniPCX Office module were to exceed the load on the front struts when fitted (in general it equates to the total load of the rack divided by 2), then the module must be placed on a tray attached to the 4 struts of the bay.

ENVIRONMENT

Climatic conditions

Operation:

- **Temperature** : to ensure optimum reliability, an ambient temperature range between 5°C and 40°C is recommended, with temperature variation not exceeding 5°C per hour.
- **Relative humidity**: relative humidity must be between 10 % and 80 % (without condensation) with a variation rate not exceeding 10% per hour.

Storage:

- **Temperature** : storage temperature must be between -20° C and $+ 70^{\circ}$ C.
- **Relative humidity**: relative humidity must be between 10 % and 95 % (non-condensing).

Vibrations

The equipment must not be subjected to any vibration, even intermittent.

Site

- Choose a dry, clean and properly ventilated site.
- Maintain an ambient air flow to ensure normal operation. If the air flow is blocked or restricted, or the incoming air is too warm, there is a risk of overheating.
- When you install the equipment in a closed 19" rack, make sure that the rack is fitted with a ventilation system that is able to dissipate the heat of the installed equipment. Leave a minimum of 3 cm free space around the side ventilation slits (LH and RH side), and at least 10 cm around the ventilation slits at the back of the equipment. Make sure that the air flow is not blocked on the sides of the rack.
- When you attach the system directly to the wall using the wall-mounting kit (Rack 1 and Rack 2 only), leave a free space of 15 cm all around the system. Take care that no objects are placed on



INSTALLATION MANUAL

the top part of the system, thus restricting the extraction of hot air. In the case where multi-cases are installed, choose horizontal alignment of the cases. If the cases are placed one on top of the other, leave at least 10 cm between them.

- Make sure that the connecting cables of the Alcatel OmniPCX Office case or any other item of equipment, or the struts of the receiving structure (19" rack for example) do not obstruct the air flow through the case.
- Have a 230 V or 110 V (depending on country) 50Hz (2P+E) mains power outlet installed no more than one metre from the case if it is not installed in a rack (otherwise the cutout incorporated into the rack is used).
- The room must have suitable lighting.





OUTPUT CONNECTORS

All outputs are made via **RJ45 female** connectors.



Front panel RJ45 female connector

CPU / CPUe boards

RJ45 pin	1	2	3	4	5	6	7	8
LAN	TX+	TX-	RX+			RX-		
AUDIO-OUT	Audio Out A	Audio Out B	Alarm A	CenRg A	CenRg B	Alarm B	Ground	+12 V
CONFIG	CTS	DSR	RX	Ground	Ground	ΤX	DTR	RTS
MODULE1	TX+	TX-	RX+			RX-		
MODULE2	TX+	TX-	RX+			RX-		
AUDIO-IN	Audio In A	Audio In B	Audio Ctrl A			Audio Ctrl B		
DOORPHONE			DoorPh B1	DoorPh A1	DoorPh A2	DoorPh B2		

- LAN: Ethernet 10/100 Base T (MDI-II/straight wiring), for interconnection with CoCPU or LAN.
- AUDIO-OUT: Interfaces: External loudspeaker, alarm, general call ringer; 12V output
- AUDIO-IN: Interfaces: "please wait" message, background music.
- DOORPHONE: Interfaces: doorphone.
- CONFIG : RS232 for PM5.
- MODULE1: HSL link for interconnection with extension cabinet 1.
- MODULE2: HSL link for interconnection with extension cabinet 2.



INSTALLATION MANUAL

CoCPU / CoCPU boards,

RJ45 pin	1	2	3	4	5	6	7	8
LAN/WAN	TX+	TX-	RX+			RX-		
Up-link	TX+	TX-	RX+			RX-		
Unit 1 to 3	RX+	RX-	TX+			TX-		

- LAN: Ethernet 10/100 Base T (MDI-II/straight wiring).
- WAN: Ethernet 10/100 Base T (MDI-II/straight wiring); connection of an ADSL modem (available from version R1.1)
- UNIT1, UNIT2, UNIT3: ports of integrated LAN Switch (MDI-X/crossed wiring).
- UPLINK: up-link of integrated LAN Switch (MDI-II/straight wiring).

SLI board

RJ45 pin	1	2	3	4	5	6	7	8
1 to 16				ZA	ZB			

- 1 to 16: connection of Z analog terminals.

UAI board

RJ45pin	1	2	3	4	5	6	7	8
1 to 16				L1	L2			

- 1 to 16: connection of Alcatel Reflexes terminals or Alcatel 4070 IO/EO DECT base sets.

BRA board

RJ45 pin	1	2	3	4	5	6	7	8
1 to 8			TX+	RX+	RX-	TX-		

- 1 to 8: connection of TO basic access.

PRA board

RJ45 pin	1	2	3	4	5	6	7	8
NETW II	RX+	RX-		TX+	TX-			
PBX X	TX+	TX-		RX+	RX-			



INSTALLATION / WIRING

- NETW II: connection with public network (TNL).
- PBX X: use in a private network with crossed TX and RX pairs.

LAN X board

RJ45 pin	1	2	3	4	5	6	7	8
Ports 1 to 15	RX+	RX-	TX+			TX-		
Up-Link	TX+	TX-	RX+			RX-		

- Port 1 to 15: internal ports.
- Up-Link: LAN connection.

ATA board

RJ45 pin	1	2	3	4	5	6	7	8
1 to 4				PEA	PEB			
SLI				ZA1	ZB1			
PHONE				ZSET A	ZSET B			

- 1 to 4: connection of analog trunk lines.
- SLI: connection of the SLI interface of the TL diversion terminal
- PHONE: connection of the TL diversion terminal.

TYPES OF CABLE TO USE

Access	Туре	Impedance
Alcatel Reflexes, Z, TO, LR	UTP, FTP or STP, Category 3 or 5	100 or 120 Ohms
T2	UTP, FTP or STP, Category 3 or 5	120 Ohms
T1	UTP, FTP or STP, Category 3 or 5	120 Ohms
Ethernet	UTP, FTP or STP, Category 5	100 Ohms
HSL	STP provided with the product, Category 5	100 Ohms

- UTP: Unshielded Twisted Pairs
- FTP: Foiled Twisted Pairs
- STP: Shielded Twisted Pairs



CONNECTING THE CPU / CPUe AND CoCPU / CoCPU BOARDS

Configuration without SLANX4 (recommended configuration)





INSTALLATION / WIRING





Configuration with SLANX4







CONNECTING THE TERMINALS

Connecting the Alcatel Reflexes terminals

The terminals are equipped with a cable and a telephone jack to be plugged into a wall socket. Each terminal is connected by means of a pair of 0.5 or 0.6 mm diameter wires.

System - Alcatel Reflexes terminal distances:

- cable type SYT 0.5 mm: 800 m (terminal with no option) or 600 m (terminal with option S0 or Z).
- cable type 278 0.6 mm: 1200 m (terminal with no option) or 850 m (terminal with option S0 or Z).



Connecting analog terminals

The terminals are equipped with a cable and a telephone jack to be plugged into a wall socket. Each terminal is connected by means of a pair of 0.5 or 0.6 mm diameter wires (1.3 km max with the 0.5 mm cable).





CONNECTION TO THE PUBLIC NETWORK

Digital public network through T0 connection

The Alcatel OmniPCX Office system can be installed near the DNT or remoted up to a specific distance (350 m maximum) depending on requirements.



Digital public network through T2 connection



The PRA board is connected to a digital line termination (DLT) by 2 symmetrical twisted pairs.

Cabling impedance: 120 Ohms +/-20% between 200 kHz and 1 MHz; 120 Ohms +/-10 % at 1 MHz.

Using the L120 series cable (or equivalent L204) is preferred .

The T2-DLT distance is limited by the attenuation between DLT and T2 which must not exceed 6 dB at 1024 kHz.





Analog public network

Without TL diversion





With TL diversion

In the event of a power supply failure or a computer fault, this solution enables the trunk connected to the first equipment of the ATA board to be diverted to one of the system's analog terminals.







CONNECTION OF THE LAN

The LANX8/LANX16 board can be used to connect servers, PCs, Fast IP Reflexes, and external Switches.





CONNECTING ANCILLARY EQUIPMENT

All items of ancillary equipment are to be connected to the AUDIO-IN, AUDIO-OUT and DOOR-PHONE of the CPU/CPUe board.

Connection of a "please wait" message device

The connection is made through the **AUDCTRL** output (normally-open control contact) and the **AU-DIN** input of the AUDIO-IN connector.



Audio input characteristics:

- Input impedance: 600 Ohms

Contact characteristics:

- Max. power: : 10 W
- Max. voltage: : 60 V
- Max. current: : 500 mA



The contacts of the alarm and doorphone controls have the same electrical characteristics as those indicated above.



Connection of a background music tuner

The background music tuner is connected through the **AUDIN** input of the AUDIO-IN connector.



Audio input characteristics:

- Input impedance: 600 Ohms
- Input level: access + 10 dBr

Connection of an alarm

The alarm is activated in the event of a system failure.

The alarm is connected through the **ALARM** output (normally-closed control contact) of the AUDIO-IN connector.





Connection of a external broadcasting loudspeaker

The broadcasting loudspeaker is connected through the **AUDOUT** output of the AUDIO-OUT connector.



Audio output characteristics:

- Output impedance: < 500 Ohms
- Output level: access +3 dBr

Connection of a general ringer

The general ringer is connected through the **CENRG** output of the AUDIO-OUT connector.





INSTALLATION / WIRING

Connection of a doorphone

2 families of doorphones are offered, depending on the operating mode used:

- Type A: relay-controlled doorphones (for example: NPTT)
- Type B: doorphones controlled by MF Q23 signals that require an SLI interface (for example: TE-LEMINI and UNIVERSAL DOORPHONE)

The doorphone equipment comprises an interphone and an optional lock keeper supplied with mains power through a SELV-class transformer (Safety Extra Low Voltage).

The doorphone is connected through the **DOORPHA** and **DOORPHB** outputs (normally-open control contacts) of the DOORPHONE connector.

Connection of a type A doorphone



- Only one doorphone with a lock keeper can be connected to the system.
- The system allows the connection of 2 doorphones without lock keepers.



Connection of a type B doorphone

These doorphones require the use of a Z terminal interface.

- Several doorphones of this type can be connected to the system; the limit is determined by the maximum number of analog terminals that the system can support.



Use of the 12 V outlet

The **GROUND** and **+ 12V** outlets of the AUDIO-OUT connector can be used to connect an external device supplied with 12 V where consumption does not exceed 150 mA (Rack 1 and Rack 2) or 300 mA (Rack 3).





INSTALLATION / WIRING

USING BATTERIES

The system is supplied with its battery (batteries); these batteries are attached to a support and held in place by a collar that is part of the backpanel.

Battery switch

The batteries are isolated during transport by a switch soldered to the power supply board. Plugging the mains cable into the socket closes this switch by means of a lever integrated into the mains socket.

Battery fuse

The battery fuse is located on the board; the backpanel must be removed to access it. Fuse characteristics:

- Rack1 and Rack2: 6.3 A quick-acting, low breaking capacity (F 6.3 AL/250 V)
- Rack3: 10 A quick-acting, low breaking capacity (F 10 AL/250 V)

Replacing the batteries

Refer to this manual's Maintenance section.

CONNECTION OF A UPS

The UPS (Uninterruptible Power Supply) enables system data to be backed up for at least one hour in the event of a mains power failure.



The UPS is connected through the mains connector at the back of the case.

- UPS power supply: use the mains lead provided with the Alcatel OmniPCX Office module.
- Connecting UPS module: use the lead provided with the UPS

If 3 Alcatel OmniPCX Office modules are to be installed, 2 UPS are required: one powering 2 modules and the other the third module.



INSTALLATION MANUAL

CONNECTION OF MAINS POWER - EARTHING

The system can be connected to any type of electrical installation, including:

- TT (local earth for each unit).
- TN (common earth for all equipment).
- IT with 230 V mesh voltage; possible only in Norway.

Mains socket fuse: T2.5 AH / 250 V (time-delayed, high breaking capacity).

The system is supplied with a 3-wire cable (length: 3 m) to be connected to the mains power socket.

Permanent earth

It is vital to connect the system permanently to earth because of the leakage currents that exceed 3.5 mA on all the trunk accesses (safety requirement CEI60950 ed.03). To achieve this, use the earthing wire provided with a minimum cross-sectional area of 4 mm² and connect it to the stud at the rear of the case (LH side).

POWERING ON

After making all the connections, power on the system.

- Plug the mains cable into the socket at the back of the case.
- Press the ON/OFF button of the CPU board. The system reboots (duration: 3 to 4 minutes).

To switch off the system:

- Press the ON/OFF button, the **RED** LED flashes.
- Wait until the red LED stays on (between 15 seconds and 3 minutes depending on configurations): the system is powered off.

Powering on Alcatel Reflexes terminals

When switched on, Alcatel Reflexes terminals perform a test sequence:

- Test of the display,
- Test of the terminal LED or icons and extension unit if one is fitted,
- Audio test.

If this sequence is correct, the Alcatel Reflexes terminal display shows the system date: Monday 01 January 00.00.

After powering on, you can start using the system from an Advanced Reflexes terminal or by PM5 (refer to the specific section).



INSTALLING REFLEXES TERMINALS



REMINDER: DISTANCES FROM SYSTEM

- cable type SYT, 0.5 mm: 800 m (terminal with no option) or 600 m (terminal with option S0 or Z).
- cable type 278, 0.6 mm: 1200 m (terminal with no option) or 850 m (terminal with option S0 or Z).

REFLEXES PREMIUM AND ADVANCED TERMINALS

Installing the line cable

- Turn the terminal upside down.
- Remove the cover from the underside of the terminal (push inwards, then disengage it).
- Plug in the line cable (connector 🐨) and route it as shown below.
- Reinstall the cover.



Installing the receiver cord

- Turn the terminal upside down.

Wall mounting

Preparing Premium Reflexes terminals

- Turn the terminal upside down.



INSTALLING REFLEXES TERMINALS

- Using a screwdriver, remove the two rubber studs from the top.

Preparing Advanced Reflexes terminals

- Turn the terminal upside down.
- Using a screwdriver, remove only the left-hand rubber stud.

Mounting the terminal

- Use the mount as a drilling template and install the mount using the plugs and screws supplied.



- Hook the terminal onto the two lugs of the support: introduce these two lugs into the recesses previously occupied by the rubber studs (or left-hand stud and hole provided for this purpose, in the case of an Advanced Reflexes terminal).
- Install the terminal on its mount by engaging the support lug in the bottom of the terminal.

Mounting the optional module

- Turn the terminal upside down.
- Remove the cover at the rear of the terminal.
- Slide the module into the terminal.
- Connect the module to the terminal (connector 👚).
- Attach the module to the terminal using the screw provided in the kit.
- Connect the module cable (connector **UA**) to the terminal wall socket.



INSTALLING REFLEXES TERMINALS



Typical optional module application: connecting a pulse metering system



Adding an extension unit

- Turn the terminal and unit upside down.
- Connect the unit to the terminal.
- Mount the unit on the terminal using the metal clamp and the four screws supplied in the kit.



INSTALLING REFLEXES TERMINALS

INSTALLATION MANUAL





REFLEXES FIRST AND EASY TERMINALS

Installing the line cable

- Turn the terminal upside down.
- Plug in the line cable (connector 🗇) and route it as shown in the figure.

Installing the receiver cord

- Turn the terminal upside down.
- Plug in the receiver cord (connector *<*) and route it through the channel provided.

Wall mounting

Preparing the terminal

- Turn the terminal upside down.
- Unscrew **A** and remove the metal plate.
- Reinstall this plate in the bottom groove and secure with screw B.
- Extract the receiver hanging lug by turning the screw **C** through one half turn.



Mounting the terminal

- Drill two holes complying with the dimensions indicated below.
- Position the mounting screws as shown below.
- Mount the terminal.



INSTALLING REFLEXES TERMINALS

INSTALLATION MANUAL



Mounting the optional module

In the case of Reflexes First and Easy terminals, the optional module is external to the terminal. The module can stand on a table or be wall-mounted. The installation procedure in this case simply involves making the connection between the terminal, the module and the wall socket.

Wall-mounting the optional module

- Drill two holes (spacing = 105 mm, diameter = 6 mm).
- Position the mounting screws.
- Mount the module.







This sheet describes the rules to be applied for an installation comprising three or four DECT base stations.

With larger installations, a prior study using coverage tools must be performed. The base stations are then installed in accordance with the results of this study.

CONNECTION

The 4070 IO base station is designed for internal installation in the building, while the 4070 EO base station is designed for external installation.

A base station can be connected to 1 or 2 UA links (UAI boards) and allows for 3 or 6 simultaneous communications with DECT/GAP terminals.

Whether three or six communication channels are required depends on the number of cordless terminals and the amount of DECT traffic to be managed.

In the case of connection by two cables:

- use two adjacent interfaces of a UAI board
- use the even interface for the master link and the other interface for the slave link.



The two cables must be of the same length. The first interface of the system UAI16 board must not be used, as the operator terminal uses these points.





INSTALLING DECT BASE STATIONS

INSTALLATION MANUAL

NUMBER OF BASE STATIONS REQUIRED

Radio signals are affected by various propagation phenomena: attenuation, reflection and diffraction. These phenomena are related to the environment of the Alcatel 4070 IO/EO base station and affect the system's radio performance.

The effects can be favorable or detrimental to wave propagation.

If we consider, for example, a building with a metal structure. In such a building, radio wave reflection will be considerable and system performance will be adversely affected.

In addition, the range of the Alcatel 4070 IO/EO base station will be strongly dependent on the degree of attenuation of the radio waves as they pass through numerous partitions.

The table below shows the overall area coverage (cell) values for an Alcatel 4070 IO/EO base station operating under normal environmental and topological conditions:

	Indoors	Outdoors
Coverage radius	~ 50 m	~ 400 m
Area covered	$\sim 7.000 \text{ m}^2$	$\sim 50\;000\;{\rm m}^2$

NUMBER OF USERS PER BASE STATION

Type of base station connection	Number of DECT users
3 channels	4
6 channels	12


POSITIONING OF DECT BASE STATIONS

Certain environmental and infrastructure considerations should be taken into account when siting Alcatel 4070 IO/EO base stations:

	Positioning recommendations	Possible solutions
	As far as possible from walls	Suspend the Alcatel 4070 IO/EO in a clear area
INDOOR COV-	Do not mount the station directly on a metal structure	Move the Alcatel 4070 IO/EO to another area
ERAGE	Do not install in false ceilings or technical roomsInstall the Alcatel 4070 IO/E in favorable areas (corridors)	
	Install as far as possible from industrial machinery or electrical cabi- nets	Install the Alcatel 4070 IO/EO in favorable areas
OUTDOOR	Install the base stations in open spaces (as far from buildings as possible)	Install on pylons, for example
COVERAGE	Place the base stations above obstacles (trees, cars, etc.)	On the top of buildings or on pylons, for example



INSTALLING DECT BASE STATIONS

INSTALLATION MANUAL

ENVIRONMENTAL PROTECTION

For outdoor installations, protection must be provided against lightning strikes, and this will depend on the positioning of the Alcatel 4070 IO/EO base station.

Conditions requiring protection against lightning strikes

The Alcatel 4070 IO/EO base station must be protected against lightning strikes when it:

- is situated less than 1.5 m from a wall and more than 2 m below the antenna,
- uses an outdoor overhead line connection between the base station and the system.

INSTALLATION RECOMMENDATIONS

Normal topology

Building structures can have three basic shapes:



The distances indicated above give some idea of the approximate range of a radio base station. The comparison clearly shows that rectangular zones require more base stations to achieve the same coverage.

Installation considerations

In multi-floor buildings, various solutions must be envisaged, depending on:

- the coverage obtained at each level.
- the location of the Alcatel 4070 IO/EO base station (upper or lower floor).



Installation examples

Square zone



Rectangular zone



Example 1: square building

1st floor







Example 2: rectangular building

1st floor







In this type of building it is possible to alternate the number of base stations used from one floor to the next.

The technique is to alternate base station positioning from one floor to the next. This technique can be applied on every other floor, if a floor can be covered by the base stations on the adjacent floor.



INSTALLING DECT BASE STATIONS

INSTALLATION MANUAL

Infrastructure-dependent coverage



The proposed solution is to install two relay units per floor, with the positioning alternating from one floor to the next. The solid-line circles show the zones covered by each relay unit (B1, B2, B3, B4).

The shaded zones represent the predicted coverage on one floor provided by the relay unit installed on the floor above or below.







CONNECTION

Fast IP Reflexes terminals are connected through a 4098 FRE IP Enabler option.



CONFIGURATION

Depending on the network typology, the configuring of the Fast IP Reflexes terminals can be:

- fully automatic, if they are on the same subnet as Alcatel OmniPCX Office: simply connect the terminals to the LAN and then connect the power supply unit. The DHCP server allocates the dynamic IP addresses and the TFTP server built into the CPU/CPUe board downloads the software into the IP Enabler.
- manual, when the terminals are connected to a different Alcatel OmniPCX Office subnet, or if the DHCP server integrated in the CoCPU VoIP board is deactivated: in this case the IP parameters and the TFTP server address must be entered on the devices.

Registering Fast IP Reflexes terminals connected to a subnet other than Alcatel OmniPCX Office

- Connect the power supply on the relevant Fast IP Reflexes terminal
- Press i then #
- Press 2 (IP Parameters)
- Press 1 (Dynamic Mode)
- Press 2 (IP Address)



INSTALLING FAST IP REFLEXES TERMINALS

INSTALLATION MANUAL

- Enter the IP address of the terminal
- Confirm by pressing #
- Press 3 (Subnet Mask)
- Enter the IP address for the subnet mask of the CoCPU VoIP board
- Confirm by pressing #
- Press 4 (Router Address)
- Enter the IP address of the external router
- Confirm by pressing #
- Press 5 (TFTP Server)
- Enter the IP address of the CoCPU VoIP board
- Confirm by pressing #
- Press End (NB: option 6 (Main CPU Address) is not used).
- Press # to save; the terminal displays two screens in succession: Modification Saved and IPPhone will reset before resetting itself.

The Fast IP Reflexes terminal will perform six registration phases at startup:

- Phase 1: IP initialization
- Phase 2: Downloading of the configuration file
- Phase 3: Downloading of the binary file
- Phase 4: Flashing of the binary
- Phase 5: Downloading of the startup file
- Phase 6: Establishing of IP signaling

At the end of phase 6, the terminal is initialized and appears in the list of PM5 terminals.

6)

- The use of Fast IP Reflexes terminals requires a degree of system configuration by PM5, specifically:
 - number of VoIP subscriber channels
 - activation / deactivation of the DHCP server (dynamic allocation or manual entry of IP addresses)

Consult the Voice over IP section of the product technical documentation for further details.



INSTALLING CLIENT PCS



To access the Internet from a client terminal, the network configuration and Internet explorer configuration have to be modified.



The client PC must be equipped with a web browser(Netscape Navigator or Internet Explorer version 4 or later).

CONFIGURING THE NETWORK

Enter the IP address of the CoCPU@ board as the default gateway.

Consult the documentation of the operating system used on the client terminal for further details.

Exemple : Configuring a Windows 98 station

- Right-click the **Network Neighborhood** icon in the Windows desktop.
- Select the **Properties** option in the context menu. The **Network** window is displayed.
- Double click on the TCP/IP topic. A new window appears: TCP/IP properties.
- Click the **Gateway** tab.
- Enter the IP address of the CoCPU@ board in the New Gateway topic.
- Click Add, then OK.
- Restart the computer for the modification to take effect.

CONFIGURING THE WEB BROWSER

For a simple Internet access, configure the web browser to send requests directly without passing via a proxy server.



For further details, consult the relevant web browser documentation.

Exemple : Configuring Internet Explorer Version 5.0.

- Select the Internet Options... topic in the Tools menu.
- Click the **Connections** tab.
- Click the LAN Parameters button in the Internet Options window.
- Configure the Local Area Network (LAN) Settings window as indicated below, and confirm by



INSTALLING CLIENT PCS

INSTALLATION MANUAL

clicking **OK**.

Automatic configuration maj use of manual settings, disa	y override manual setting ble automatic configurati	s. To ensure the on.
Automatically detect set	tings	
🗖 Use automatic configura	ation <u>s</u> cript	
Address]
Proxy server		
Use a pro <u>x</u> y server		
Addr <u>e</u> ss:	Port:	Advanged
🔲 Bypass proxy server	for local addresses	



DEFAULT CONFIGURATION



REFLEXES TERMINAL PROFILES

- The first Reflexes terminal (extension 100) is the Operator station. This Reflexes Advanced terminal is included in all active operator station (Attendant) groups and the standby Attendant group.
- The second terminal is a Secretary terminal and the third is a Manager terminal.
- Only Reflexes Advanced or Premium terminals support the Manager/Secretary facility.

The meanings of the symbols are explained below





Reflexes First terminal profile

A Reflexes First terminal operates in single-line mode.

	5-	
C.	\$	
* **	1-X	
* ~ !	1.==	

Reflexes Easy terminal profile

A Reflexes Easy terminal cannot be used as an Operator (Attendant), Manager or Secretary terminal.

Int/ext	Int/ext	
5-	\$	
	►	
Ľ.	. ► .	

Reflexes Premium terminal profile

Key system mode

Operator Terminal	Manager Terminal	Secretary Terminal	Normal Terminal
Int/ext Int/ext	Int/ext Int/ext	Int/ext Int/ext	Int/ext Int/ext
Trunk 1 Trunk 2	Trunk 1 Trunk 2	Trunk 1 Trunk 2	Trunk 1 Trunk 2
Trunk 3 AttDiv	Trunk 3 Secrtr	Trunk 3 Managr	Trunk 3
Trunk 4 Normal/Restr	Trunk 4 ScrMgr	Trunk 4 ScrMgr	Trunk 5 Trunk 6
5)		<u>)</u>

PABX mode

Differences in relation to key system mode:

- The first two line keys are replaced by **CalExt** keys (outside line obtained by dialing 0).
- The other line keys are replaced by unassigned keys. You can program these for an internal extension (terminal) or an external number (preceded by the outside line prefix).



DEFAULT CONFIGURATION

Line key programming procedure:



Reflexes Advanced terminal profile

Key system mode

	Operator Terminal				Manag	er Terminal	
Int/ext	Int/ext Trunk	11	Trunk 12	Int/ext	Int/ext	Trunk 11	Trunk 12
Trunk 1	Trunk 2 Trunk	13	Trunk 14	Trunk 1	Trunk 2	Trunk 13	Trunk 14
Trunk 3	Trunk 4 Trunk	15	AttDiv	Trunk 3	Trunk 4	Trunk 15	Secrtr
Trunk 5	Trunk 6	•	Normal/Restr	Trunk 5	Trunk 6	5~	ScrMgr
Trunk 7	Trunk 8		ISDN	Trunk 7	Trunk 8		ISDN
Trunk 9	Trunk 10		**	Trunk 9	Trunk 10		**
	Secretary Termina	al			Normal	Terminal	
Int/ext	Int/ext Trun	(11)	Trunk 12	Int/ext	Int/ext	Trunk 11	Trunk 12
Trunk 1	Trunk 2 Trun	(13)	Trunk 14	Trunk 1	Trunk 2	Trunk 13	Trunk 14
Trunk 3	Trunk 4 Trun	(15)	Managr	Trunk 3	Trunk 4	Trunk 15	Trunk 16
Trunk 5	Trunk 6		ScrMgr	Trunk 5	Trunk 6	7~	Call
Trunk 7	Trunk 8		ISDN	Trunk 7	Trunk 8		ISDN
Trunk 9	Trunk 10	•		Trunk 9	Trunk 10		≜ ► <u>≜</u>

PABX mode

The differences in relation to key system mode are the same as for a Reflexes Premium terminal (see previous page).

OTHER PREDEFINED DATA

- Level 1 dynamic routing of terminals: all calls are routed to recorded message mailboxes after ringing for 12 seconds unanswered.
- Level 2 dynamic routing of terminals: outside calls only are routed to the Attendant group after ringing for 24 seconds unanswered.
- Calls to the operator station overflow to the general level (backup Attendant group) after



DEFAULT CONFIGURATION

INSTALLATION MANUAL

ringing for 24 seconds unanswered.

- **The backup Attendant group** contains the first 2 ports of the integrated voice server, the general bell, remote XRA access and the first Reflexes (Operator Station) interface.
- All the terminals (except the analog terminals) are assigned a voice mailbox.
- The first analog interface is a fax.



STARTING UP THE SYSTEM FROM AN ADVANCED TERMINAL

STARTING UP THE SYSTEM FROM AN ADVANCED TERMINAL

The startup session provides a simple means of configuring all the data you need for optimum operation of your system.

The startup session is proposed automatically, after the first system power-up.

To set up the system properly, you should have the following information available:

- The telephone number of your system (international country prefix, national prefix, etc.).
- The value of the basic metering unit.
- the ranges of numbers assigned by the network operator to the direct public network (DDI) numbers for the terminals in your system.

GENERAL SOFT KEYS



Return to previous menu.



Erase last character.



Go to another of the proposed options.



Movement of the cursor.

Browser for selecting the upper or lower line on the Reflexes Advanced terminal display; also enables left and right scrolling.

Go to next menu.

Confirm an entry.

Cancel.



STARTING UP THE SYSTEM FROM AN ADVANCED TERMINAL

FIRST POWER-UP

operation mode: Business	
Change	Next
Т	





Restarting the session after using the **Exit** function to quit

SYSTEM TYPE

System operation mode: Business					
Change Next					



Defines system type: Business or Hotel.

INSTALLATION NUMBER



This number must be entered and must be complete.

The installation number can contain up to three fields, for a maximum overall total of 16 characters.



Fields are separated by an asterisk.

The various possible fields are:

- International prefix of the country (for example: 44 for Britain): obligatory field.
- National prefix: optional field (N/A for national calls).
- Public installation number: obligatory field.



NUMBERING PLAN





Used to select the system internal numbering plan (terminal numbers: 2 to 4 digits, national or *).

Changing the numbering plan erases the existing DDI numbers.

TERMINAL DDI NUMBERS

This function is used to define the DDI (Direct Dialing Inward) numbers of all the terminals in a Business system and the Administrative (Reflexes) terminals in a Hotel system.

Only one DDI number can be assigned to each internal extension number.





To define the terminal DDI numbers;

display of the 1st internal extension/DDI number.

Internal N	l: 100	Pul	olic Ext: 1	00
Cancel	Down	Clear	Up	OkAll

The number contains up to 4 digits and can be changed (the cursor is positioned at the beginning of the field).

The DDI numbers are usually the last 3 or 4 digits of your line numbers. The telephone company informs you of the range of numbers assigned to you.



Scroll the list of internal extension numbers and validate the displayed entry.

Delete the digits contained in the "Public Ext" field.

Reject the **complete** list of DDI numbers as defined and return to the start of the function.

Validate the **complete** list of DDI numbers.



STARTING UP THE SYSTEM FROM AN ADVANCED TERMINAL

The following error messages may be displayed during data entry:

- "Extension number already used": the DDI number defined is already assigned to another extension.
- "Extension number out of range": invalid DDI number (for example, it may contain a * or # character).
- "List of public extensions full": public numbers table overflow (99 entries).

The following function is only available in a Hotel system.





Define DDI number pool. Display the 1st DDI number.

Pool Entry	: 1/99	Put	olic Ext: 1	0
Cancel	Down	Clear	Up	OkAll

10: Quantity of numbers still available in the DDI table after defining the direct call numbers

In a Hotel system, all Z terminals are used as room extensions (except the first, which is a fax, and the second, which is a callbox).

The pool of DDI numbers allows a DDI number to be dynamically assigned to these extensions when a customer checks in.

The number of DDI numbers available will depend on how many are used for staff extensions (a total of 99 numbers are available in the system public numbers table). The display indicates the table position of the selected entry and the number of entries available.



Scroll the pool of DDI numbers and validate the displayed entry.

Delete the digits contained in the "Public Ext" field. Reject the **complete** list of DDI numbers as defined and return to the start of the function.

Validate the **complete** list of DDI numbers.



NUMBER OF LINES CONNECTED TO THE PUBLIC NETWORK



This function is used to indicate the number of lines or B-channels connected to the public network (max. 120 lines or 120 B-channels). These lines are then included in the main trunk group (following the board acceptance sequence) and are indicated by resource keys. On the operator station, a T2 access can contain up to 30 B-channels; a T1 access up to 23 B-channels; a T0 access up to 2 B-channels. The message "Number exceeds equipped boards" is displayed if the value entered exceeds the number of equipped B-channels.

OPERATING MODE OF USER TERMINALS AND OPERATOR STATIONS

Subscriber terminals: PBX mode				
Prev Change Next				

This function is only available in a business system (in a hotel, only the PBX mode is used).

Chanse

"PBX mode" and "Key system mode".

PBX mode: all the lines are represented by 2 RSB keys (resource keys dedicated to a trunk group).

Key system mode: the terminal has as many RSP keys (resource keys dedicated to an external access) as there are lines in the system.

See "Default Configuration " in this manual for an account of the function of the various keys on each type of terminal, depending on the selected operating mode.



ARI NUMBER

Access Right ID: 14000436074						
Prev Rubout $ \leftarrow \longrightarrow $ Next						



STARTING UP THE SYSTEM FROM AN ADVANCED TERMINAL

This function is only available if your system has a DECT facility

The ARI (Access Right Identifier) number identifies the system uniquely to mobiles. It consists of 11 octal (base-8) digits (values from 0 to 7). The number, keyed in on an ETSI base by the installer, should be entered as soon as the system is installed.

The first digit cannot be modified and always takes the value 1. The cursor is positioned automatically on the second digit. The last digit always takes the value 0 or 4.

USER INFORMATION LANGUAGE



Chanse

Select the language used on all the system terminals (display and voice guides)

BASIC PULSE METERING RATE

Charge rate per unit: 000.00				
Prev	Rubout	\leftarrow	\rightarrow	Next
			Τ	

The value of the basic pulse metering rate is entered in order to calculate the cost of outside calls. In this case, the cost (not the duration) and the progress of the meter readings during the call are displayed. The value entered can comprise 5 digits (including 0 to 2 decimal places) in the selected currency.

This service requires a specific subscription with the telephone company.

Nota : Duration metering requires a third-party application.

DATE AND TIME



It is obligatory to enter the date and time.

Enter the date in the format DD/MM/YYYY and the time in the format HH/MM.

The message "Date and time must be set" is displayed if the "Date" and "Time" fields are blank or contain default values.



SYSTEM RESET

This menu is proposed for confirming the system reset.

Restart the sy	stem in new	configuratio	n?
Prev		Finish	



System reset; the display indicates "System restart in progress".

After this reset phase, your system operates with the data newly entered.



STARTING UP THE SYSTEM FROM AN ADVANCED TERMINAL

INSTALLATION MANUAL



STARTING UP THE SYSTEM WITH PM5

File 13

PRESENTATION

PM5 is the PC application used to program the Alcatel OmniPCX Office system via a **local** connection (V24 or LAN), or a **remote** connection (the PC modem is connected to the built-in Alcatel OmniPCX Office modem via a public network).

PM5 provides three programming levels:

- **Easy View** provides for Wizard configurations, i.e. the parameters vital for starting up the system.
- **EasyPlus View** provides for Wizard configurations with extended possibilities offered by the **Ad-vanced** key. This key opens a window equivalent to Expert View.
- **Expert View** gives unrestricted access to all the configuration possibilities.

The Wizard functions provide a user-friendly system programming facility that guides the user through each step.

The Internet Access functions are configure d with the Wizard by entering the IP address of the CoCPU@ board in the PC navigator.

MINIMUM PC CONFIGURATION

- Pentium 166 MHz processor.
- RAM: 32 MB for Windows 95, 98 and 2000; 64 MB for Windows NT.
- Hard disk.
- Screen: 800 x 600 pixels.
- 1 mouse.
- 1 serial port (connection to Alcatel OmniPCX Office for data transfer).
- 1 Ethernet board (IP mode).
- Operating system: Windows 95, 98, 2000 or NT4, pack 5 minimum.
- 64K PPP-compatible ISDN or V34 modem for remote access.
- Network board.



STARTING UP THE SYSTEM WITH PM5

INSTALLATION MANUAL

To use the serial port or a modem, the Remote Access Service (RAS) must be installed on the PC. It can be found on the operating system software CD.

Installing RAS in Windows NT4

- Open the **control panel**.
- Open the Network folder.
- Select the **Services** tab.
- Click Add.
- Select Remote access service from the list.
- On the NT prompt, open the modem installation program.
- Check the **Don't detect my modem...** box and click **Next**.
- In the list of modems, select the **Dial-up networking serial cable** modem.
- When installation is completed, restart the PC.

TYPES OF CONNECTION

Local connection



- Local connection by LAN

When connected to the LAN port on the CPU/CPUe board via a UTP Category 5 100-Ohm crossover cable, or to the switch on which the CPU/CPUe board is connected via a straight cable, the default IP address for the main CPU/CPUe board is 192.168.92.246.

The PC IP address and network mask must be compatible with the address of Alcatel OmniPCX Office; for example: 192.168.92.1 and 255.255.255.0.



- Local connection by V24

The connection is made using an RJ45 - SUB D 9 point female cable between the **CONFIG** connector on the CPU/CPUe board and the PC serial port.

Wiring of the connection cable:

RJ45	SUB D 9-point (F)
1	7
2	4
3	3
4	
5	5
6	2
7	6
8	8

During the first run, after launching PM5:

- Select the **Comm** menu and then **Connector**.
- Click **Local** then start the NT Modem Wizard.
- Select **Don't detect**.
- In the list of makers, select Alcatel and in models, select OmniPCX Direct V24.
- In the next screen, select the COM port and click **Finish**.
- Close the modem window.
- Then select **OmniPCX Direct V24 created**.

In subsequent sessions, all you have to do to get connected is to select **Local** then **OK** in the **Communication** screen.

Remote connection

- Remote connection by ISDN modem

The ISDN modem must support 64K PPP.

Follow the instructions in the installation manual supplied with the modem. Once installed, configure the modem for RAS.

To use it, simply select **Modem Direct** and click **OK**.

- Remote connection by analog V34 modem

The modem must be V34 compatible. The installation and utilization procedures are the same as for the ISDN modem.



STARTING UP THE SYSTEM WITH PM5

INSTALLATION MANUAL

INSTALLING THE PM5 SOFTWARE

The PM5 software is installed from a CD-ROM.

The application is installed by making selections from the options proposed in the various windows.

When installation is completed, you access the application by double-clicking on the new icon created on the Windows desktop.

- Select Start then Program then Alcatel OmniPCX Office then PM5.
- The window Welcome to PM5 appears.

PM5 FEATURES

Access to modes 2, 3 and 4 is protected by a password: pbxk1064.

1 - DATA COLLECTION AND TOOLS

This mode is used to create .crp files (client collective speed dial files) off-line, for use in the **Installation Typical** menu.

2 - INSTALLATION TYPICAL

This mode enables manual on-line programming by choosing between **Business** and **Hotel** and automatic on-line programming using .crp files.

Nota : The **Business/Hotel** choice is only proposed once. To obtain the choice again, you have to perform a cold reset.

Initial Installation Wizard (Business)

- Default numbering plans
- Installation number.
- Operation mode
- Channels and trunk groups
- DECT ARI
- Creation of DECT terminals
- Pulse metering
- Date and time
- List of subscribers
- Misc. subscribers
- Collective speed dial numbers
- Attendant groups
- Hunting groups
- Broadcast groups
- Pickup groups
- Screening



STARTING UP THE SYSTEM WITH PM5

Initial Installation Wizard (Hotel)

In addition to the Business possibilities, this Wizard configures the room extension numbers.

Installation Wizard

This Wizard uses .crp files created in Data Collection and Tools -> Wizard for Data Collection

Follow the instructions; at the end, if the settings are accepted, the data are transmitted to the system, which then reboots.

3 - MODIFICATION TYPICAL

The 5 icons in this mode (Subscribers, Groups, System, Collective Speed Dialing and External Access) call up Wizards for the straightforward modification or configuration of a range of parameters, as detailed below.

The data are registered in the system by clicking OK.

Subscribers

- List of subscribers: public network number, name, barring level, accessible trunk groups.
- Call distribution in normal and restricted mode.
- **EasyPlus View:** detailed parameters for each subscriber: keys, languages, authorized operation, personal code, diversions, dynamic routing, personal directory, etc.

Groups

Attendant groups

- Composition: entry of the members of each group.
- Assigning a welcome message to each group.

Hunting groups

- Name and type (parallel, cyclic or sequential).
- Composition: entry of the members of each group.
- Assigning a welcome message to each group.

Broadcast groups

- Name of each group.
- Composition: entry of the members of each group.



STARTING UP THE SYSTEM WITH PM5

INSTALLATION MANUAL

Call pickup groups

- Composition: entry of the members of each group.

Collective Speed Dialing

- For each entry: name and number of called party.

System

Default numbering plans

- Choice between national numbering plans or star numbering plans with 2, 3 or 4 digits.
- **EasyPlus View:** Normal mode public network numbering plan.
- **EasyPlus View:** Restricted mode public network numbering plan.
- EasyPlus View: Features in conversation.
- EasyPlus View: Internal numbering plan.

Installation numbers

- International code.
- Intercity code.
- Installation number.
- EasyPlus View: Callback prefix.
- EasyPlus View: Personalized caller's number.
- EasyPlus View: Private installation number.

Pulse metering

- Cost of telephone metering.
- **EasyPlus View:** Hotel pulse metering for the standard currency unit (VAT, prepaid sum, etc.)
- EasyPlus View: Pulse metering options for the standard currency unit.
- EasyPlus View: Print settings.
- **EasyPlus View:** Pulse metering options for the replacement currency unit (Euro).

Date and time

Software keys

- System key.



- CTI key.

External access

- B-channel number.
- Outside number for incoming calls (DISA).
- Dialing type.

4 - EXPERT

This mode authorizes all possible system maintenance and modification operations. The Wizards proposed in modes 2 and 3 are also available.



STARTING UP THE SYSTEM WITH PM5

INSTALLATION MANUAL



INSTALLATION OF AN INTERNET ACCESS



To take advantage of the shared Internet access on a client terminal, several steps have to be undertaken:

- Connect the Alcatel OmniPCX Office system to the existing LAN or via the integrated LAN (LANX8 or LANX16 board).
- Creation and configuration of an Internet connection.
- Configuration of the client terminal

INSTALLING THE ALCATEL OMNIPCX OFFICE SYSTEM - CONNECTING TO THE LAN

Hardware required on Alcatel OmniPCX Office

- a CPUe card (Internet access only) or a CoCPU@ card (Internet access + Proxy, E mail, etc ...), in the case of an ISDN connection. In the case of an ADSL or LAN to LAN routing connection, a CoCPU@ card fitted with a 2nd Ethernet interface is added.
- an ISDN T0 or T2 connection in the case of Internet access via ISDN.
- a client terminal connected to the LAN.
- a LAN switch (LANX8, LAN X16 or external switch).

Items required on the client terminal

- the latest version of the PM5 software.
- an Internet navigator (Netscape Navigator or Internet Explorer version 4 or higher).

Installation procedure

- 1. Connect the CPU card using an Ethernet cable:
 - either to an RJ45 jack available on the company's LAN.
 - or to the internal switch in the Alcatel OmniPCX Office cabinet. This switch can then be connected to another switch if Alcatel OmniPCX Office has several switches.



INSTALLATION OF AN INTERNET ACCESS

INSTALLATION MANUAL

- If necessary, change the default IP addresses (192.168.92.246 for CPUe, 192.168.92.247 for CoCPU@) and the mask of the sub-network to IP addresses that are compatible with the existing LAN (for more information, contact the company's network and system administrator). The IP addresses of the different cards can be accessed through the heading PM5 -> PABX Client -> Hardware and limits-> IP cards.
- 3. Internet access configuration:
 - either via the Internet navigator of a customer terminal connected to the LAN by entering the IP address of the CPU Main or CoCPU@ card in the address bar.
 - or via the PM5 software, from the PM5 -> PABX Client -> Internet access configuration menu.

Subscription to the Internet access provider (IAP)

A subscription with an IAP is necessary to access the Internet. After you have subscribed, the IAP sends you back the information **vital** for installing you Internet access. This information must be entered when configuring Alcatel OmniPCX Office.

Parameters	Definitions
Connection account	Account used during connection to the access service provider. this is a unique account that is used to identify you when connecting. The login and an associated password are provided.
IP addresses of the pri- mary and secondary DNS server	They correspond to the IP addresses of the DNS servers used by the access service provider (DNS is optional item of data that can be negotiated during connection).
Type of connection	The type of link between Alcatel OmniPCX Office and the access supplier can be established as "On-demand call", as "Permanent" or as "Callback".
IP address allocation	The IP address is allocated to Alcatel OmniPCX Office by the access provider. This address is public. The access provider manages or does not manage IP address negotiation.
Telephone number	Call number of the Internet service provider. This is the number dialed when an ISDN type connection is requested.
Bandwidth	The speed of this connection must be 64 or 128 Kbps. it must be an ISDN type connection.

• ISDN type connection



INSTALLATION OF AN INTERNET ACCESS

Connection of a DSL type modem

Parameters	Definitions
Connection account	Account used during connection to the access service provider. this is a unique account that is used to identify you when connecting. The login and an associated password are provided.
IP addresses of the pri- mary and secondary DNS server	They correspond to the IP addresses of the DNS servers used by the access service provider (DNS is optional item of data that can be negotiated during connection).
IP address allocation	The IP address is allocated to Alcatel OmniPCX Office by the access provider. This address is public. The access provider manages or does not manage IP address negotiation.
Connection protocol	This information is provided by the IAP for a connection using a DSL modem. Two types of communication protocols are available to manage this connection: PPPoE or PPTP.
Connection property	To define the connection parameters, the IAP gives the following ele- ments: address of the DSL modem, network mask and IP address of the system.

• LAN to LAN Routing type connection

Parameters	Definitions
IP addresses of the pri- mary and secondary DNS server	IP addresses of the DNS servers used by the access provider (DNS is an optional item of data that can be negotiated during connection) if the IAP gives it, or if this is the case, the IP addresses of the external router.
Connection property	To define the connection parameters, the IAP gives the following ele- ments: address of the Router, network mask and IP address of the sys- tem.



INSTALLATION OF AN INTERNET ACCESS

INSTALLATION MANUAL

CREATING AND CONFIGURING AN INTERNET CONNECTION.

An Internet connection is created using the Internet Wizard. To configure a connection, apply the following procedure.

- 1. Click on Assistants then on Internet Access.
- 2. Enter the following parameters:
 - **IAP profile name:** this name identifies the new Internet connection managed by Alcatel OmniPCX Office. It holds all the parameters linked to this connection. It is recommended that a name that is representative of the created connection is entered, such as the name of the access provider.
 - **Type**: this field is used to define the type of connection. Alcatel OmniPCX Office provides three types of connection to access the Internet: ISDN, DSL modem or LAN to LAN Routing
- 3. Click on **Next** to display the **IAP Configuration** screen.

Configuration of an ISDN connection

- 1. Enter the following parameters in the IAP configurationscreen.
 - Login: connection account given by the service provider.
 - **Password**: password given by the service provider.
 - **Confirm Password** : enter password again. This confirmation step is used to verify that the password entered is correct.
 - **Main Number** : local telephone number given in the subscription. This number must include the external line prefix. Callback: to take account of barring, traffic distribution mechanisms, etc.
- 2. Click on Next to display the Access configuration screen.
- 3. Enter the following parameters:
 - ISDN B Channel management:
 - **1 B channel (64 Kbps)**: this option is selected if the data rate of the subscription is 64 Kbps.
 - **on demand (64-128 Kbps)**: this option is selected if the data rate of the subscription is 128 Kbps, and provides dynamic use of the B channels. This option is used to allocate one or two B channels to meet traffic needs, and to reduce telephone costs by not using the two B channels permanently.



INSTALLATION OF AN INTERNET ACCESS

- **two B channels (128 Kbps)**: this option is chosen if the data rate of the subscription is 128 Kbps, and for the permanent static use of two B channels. The charges generated by using this option correspond to two telephone calls.
- ISDN connection:
 - **On demand**: this option is selected to make a connection according to user connection demands. The connection with the service provider is established on demand and automatically terminated when there is no more traffic over the ISDN link.
 - **Permanent**: this option is selected in order to have a permanent connection with the service provider. Consequently, the call to the service provider is permanent.
 - **Callback**: this option is selected when using VPN. Consequently, it is not recommended for Internet access use only.
- 4. Click on Next to display the Internet configuration screen.
- 5. Enter the following parameters:
 - IP address: public IP address assigned to OmniPCX Office.
 - **Dynamic**: this option is selected if an IP address is assigned to each connection by the service provider.
 - **Fixed**: this option is selected if a fixed IP address is assigned to OmniPCX Office. This address is then provided with the service provider's subscription. The fixed IP address is needed to install other functions, but is not necessary for a simple Internet access.
 - Domain Name Server:
 - **Dynamic**: this option is checked if the DNS resolution is set automatically when connection is established.
 - **Fixed**: enter the IP address of the service provider's primary DNS server if the option is selected.
- 6. Click on **Next** to access the **Summary**screen.
- 7. Click on **Apply** to accept these parameters and enable the profile. Click on **Back** to return to the previous screens and modify the desired parameters.

This stage is used to verify the connection properties.

A connection test is possible, and can be done by clicking on **Test the connection** after accepting the configuration. The test runs all the steps involved in connecting to a service provider, and indicates the causes of any problems and the corresponding solutions in the event of failure.

Configuration of a DSL modem connection

1. Enter the following parameters in the **IAP configuration**screen.



INSTALLATION OF AN INTERNET ACCESS

INSTALLATION MANUAL

- **Login**: connection account given by the service provider.
- **Password**: password given by the service provider.
- **Confirm Password** : enter password again. This confirmation step is used to verify that the password entered is correct.
- 2. Click on Next to display the Access configuration screen.
- 3. Choose the type of connection
 - ▼ Over Ethernet Protocol (PPPoE) option

Choose **on Demand** if your access is not permanent.

- Click on **Next** to display the **Internet configuration** screen.
- Enter the following parameters:

Allocation of IP address: two choices are possible:

- if the IAP gives an IP address, enter it in the **fixed**field
- Otherwise select the **dynamic** option.

Primary DNS server: two choices are possible:

- Check the **Dynamic** option if the resolution of the DNS is automatic during connection.
- Enter the IP address of the access provider's primary DNS. It is recommended that recognition of the IAP's DNS is left at automatic.
- Click on Next to access the Summaryscreen.
- Click on **Apply** to accept these parameters and enable the profile. Click on **Back** to return to the previous screens and modify the desired parameters.

A connection test is possible, and can be done by clicking on **Test the connection** after accepting the configuration. The test runs all the steps involved in connecting to a service provider, and indicates the causes of any problems and the corresponding solutions in the event of failure.

▼ Tunelling Protocol (PPTP)option

- Click on **Next** to display the **Access configuration** screen.
- Enter the following parameters:
 - DSL Modem IP address: enter the IP address of the external modem.
 - System IP address: enter the IP address of the WAN interface.
 - Network mask: enter the defined mask.
- Click on **Next** to access the **Summary**screen.
- Click on **Apply** to accept these parameters and enable the profile. Click on **Back** to return to the previous screens and modify the desired parameters.



INSTALLATION OF AN INTERNET ACCESS

A connection test is possible, and can be done by clicking on **Test the connection** after accepting the configuration. The test runs all the steps involved in connecting to a service provider, and indicates the causes of any problems and the corresponding solutions in the event of failure.

Configuration of a LAN to LAN routing connection

- 1. Click on **Next** to display the **Connection configuration** screen.
- 2. Enter the following parameters:
 - Router address: enter the IP address of the external router.
 - **Network mask**: enter the mask provided.
- 3. Click on **Next** to display the **Internet Settings** screen.
- 4. Enter the following parameters:
 - System IP address: enter the IP address of the WAN interface.
 - **Primary DNS**: Enter the IP address of the access provider's primary DNS.
 - Secondary DNS: Enter the IP address of the access provider's secondary DNS.
- 5. Click on **Next** to access the **Summary**screen.
- 6. Click on **Apply** to accept these parameters and enable the profile. Click on **Back** to return to the previous screens and modify the desired parameters.

This stage is used to verify the connection properties.

A connection test is possible, and can be done by clicking on **Test the connection** after accepting the configuration. The test runs all the steps involved in connecting to a service provider, and indicates the causes of any problems and the corresponding solutions in the event of failure.

CLIENT TERMINAL CONFIGURATION

The client terminal needs to be configured in order to use Alcatel OmniPCX Office's shared Internet Access The changes must be made to the network configuration (TCP/IP configuration), and to Internet navigator.

Configuration varies depending on whether or not a proxy is used to access the Internet.

• with proxy

You must configure the Internet navigator using the settings of the proxy. in contrast, it is not vital to enter the default gateway of the client terminal.



INSTALLATION OF AN INTERNET ACCESS

INSTALLATION MANUAL

• Without proxy

You must enter the default gateway of the client terminal (enter the IP address of the CoCPU@). ; in contrast, there is no need to configure the Internet navigator using the proxy settings.

TCP/IP configuration

Alcatel OmniPCX Office is a routing element between LAN and Internet. Alcatel OmniPCX Office needs to be configured as the default gateway on the client terminal to access the Internet.

Exemple : configuration of a Windows 98 client terminal

- Click on the **Network neighbourhood** icon, and choose the **Properties** option from the context menu.
- In the **Network** window, double-click the **TCP/IP** icon under the **Configuration** tab.
- Enter Alcatel OmniPCX Office's IP address in the **New gateway** field (Tab **Gateway** of the **TCP**/ **IP properties**window).
- Click on **Add** then shut the windows by clicking **OK**.
- Re-boot the client terminal to have the changes take effect.
- **Nota :** This configuration is valid only if Alcatel OmniPCX Office is the main router in relation to the client terminal. In the case of other network configurations, contact the company's system administrator.


Configuring the Internet navigator

The Internet navigator must be configured to take account of the existing LAN.

Exemple : configuring Internet Explorer 5.0

- Run an Internet Explorer session.
- Choose the Internet options ... heading from the Tools menu.
- Click on the **Connections** tab of the **Internet options** window.
- Click on LAN settings...
- Change the options in the Local network (LAN) settings window.
- Click on **OK** to accept the changes.
- **Nota :** If the proxy server is active on Alcatel OmniPCX Office, enter the IP address of the CoCPU@ card, otherwise enter the IP address of the client's proxy server.



INSTALLATION OF AN INTERNET ACCESS

INSTALLATION MANUAL





REPLACING A TERMINAL

You can replace your Reflexes terminal by connecting another terminal of the same family, but of a different type, to your telephone socket. This replacement can be temporary or permanent.

Replacing an analog terminal by another analog terminal, or replacing a Reflexes terminal by another of the same type, does not require any special procedure (just a simple hardware exchange).

Temporary replacement

The replacement terminal keeps the basic functions (customization is not transferred). The data that are not transferred are saved by the Alcatel OmniPCX Office until a terminal of the same type as the initial terminal is connected.



Permanent replacement

A maximum amount of data is transferred from the initial terminal to the replacement terminal. Non-transferred data are erased.





UPGRADING YOUR SYSTEM

INSTALLATION MANUAL

Data conserved following the temporary or permanent replacement of a terminal

- Service categories (supervised systems).
- Barring criteria.
- Metering data.
- Messages and list of recent calls.
- Subscribers receiving MTR, diversion and/or monitoring.
- Subscribers included in a group and/or a manager/secretary relation.
- Appointment reminder.
- Terminal locked or unlocked.
- Callbacks received.
- Active diversions.
- Last number dialed.

Data kept during permanent replacement of a terminal

Replacing Reflexes terminals

Irrespective of the initial and the replacement type of Reflexes terminal, the function and resource keys are not conserved. Directory numbers may be conserved, depending on the volume of the directories for the terminals concerned (for example, if a Reflexes Advanced terminal is replaced by a Reflexes Premium terminal, only the first 10 numbers are conserved).

Extension units are always transferred, providing the unit concerned is supported by the replacement terminal.

MOVING A TERMINAL

If you move to another office, you can move your terminal from one socket to another and conserve its configuration (fully or partially).

Before moving the terminal:

- You must change your password, and it must differ from the default password.
- It is recommended that you lock the terminal.



UPGRADING YOUR SYSTEM

Moving a terminal to an unused socket



ADDING TERMINALS

When adding terminals, the limitations on the number of terminals and the possibilities provided by the system software key must be taken into account.



The terminal is recognized immediately when plugged into socket.

USING THE 4099 MULTI-REFLEXES HUB

The Multi Reflexes 4099 allows for the connection of 3 Alcatel Reflexes terminals using just one UA link with the system; this option makes it easy to add further Reflexes terminals to the system.





This option does not allow for the connection of DECT 4070 IO/EO base stations or Reflexes terminals with the V24, S0 or Z options.



UPGRADING YOUR SYSTEM

INSTALLATION MANUAL



Interface classification

- UA/PBX: SELV
- UA/Reflexes 1 to 3: SELV

Maximum system-terminal distances with a 4099 Multi-Reflexes Hub

- 0.4-mm cable: 325 m
- 0.5-mm cable: 500 m
- 0.6-mm cable: 730 m

3-m and 10-m cables are available for connecting the terminals to the hub.

ADDING / REPLACING BOARDS

All replacements (CPU board, interface boards) must be performed with the system powered off. To do this:

- Press the ON/OFF button: the **RED** LED flashes.
- Wait for the LED to change to steady red (about 30 seconds): the system is powered off.

PM5 allows the configuration to be saved and then restored after replacing the CPU board.



ADDING A HARD DISK

A hard disk is added to a CPU/CPUe or CoCPU/CoCPU@ board by means of an XMEN board.



A system can contain two hard disks at the most.

During installation, always take anti-static precautions (wristband, heelpiece, etc.) before handling the hard disk. **Electrostatic discharges can shorten the life of the disk.**

When going into stand-by mode, wait for red Power LED to stop flashing before you remove the module's CPU board. **Extracting the disk before the switch to standby is completed can destroy part of the disk or damage its contents.** Never handle the hard disk until the motor has stopped completely (about 4 seconds after the red Power LED stops flashing).



ADDING AN EXTENSION MODULE

One or two extension modules can be added to the basic module.



MEX board (extension cabinet 2)

Fitting an extension module

- The CPU slot of the extension module must be equipped with a MEX board (with an HSL1 daughter board).
- Fit the CPU/CPUe board of the main module with an HSL daughter board.
- Extension modules cannot contain synchronizing digital network interfaces (BRA, PRA) or Co boards.
- For other boards, the same rules apply as for the basic module.



UPGRADING YOUR SYSTEM

MEX board

	A	DD-ON MO	DULE		MEX			
	(MAIN		FAN FOWER	$\stackrel{\circ}{\bigcirc}$			
RJ45 pin	1	2	3	4	5	6	7	8
MAIN	TX+	TX-	RX+			RX-		

- MAIN: HSL link to the main module.

Function of the LED

Name	Color	Function
POWER	Two-colored Red/	- Running on mains power: green LED on steady
	Green	- Running on battery: yellow LED on steady
		- Standby: red LED flashing
FAN	Two-colored Red/ Green	- The 2 fans are operating correctly: green LED on steady
		- 1 or 2 fans not operating correctly: red LED on steady

Adding a third module

- Replace the HSL1 board of the CPU/CPUe board with an HSL2 board.
- Reuse the HSL1 board, installing it on the board of the third module.



In a system with two modules, the CPU/CPUe (basic module) and MEX (extension module) boards are equipped with an HSL1 board.



UPGRADING YOUR SYSTEM

ADDING APPLICATIONS FEATURES

The table below sets out the operations that need to be performed (adding hardware, new software key required, etc.) when you want to add features such as VoIP, Internet services or CTI to a Voice installation.



The VoIP and Internet features require the software applications package to be loaded, in addition to the hardware configuration changes.

APPLICATIONS		Software keys				
	To order	Extension to system with CPUe	Extension to system with CPU			
VOICE FEATURES						
2 system languages	No special hardware requirements			No key		
4 system languages	CPU + XMEM64 or CPUe	No additional hard- ware	XMEM64	Add2 system languag- es		
4 pre-announcement messages	No special hardware requirements			No key		
8 pre-announcement messages	CPU + XMEM64 or CPUe	No additional hard- ware	XMEM64	No key		
Default "Please Wait" music:16 seconds	No s	No key				
Customized "Please Wait" mu- sic: 2 minutes	Nos	No key				
NMC with 1000 metering tick- ets	Nos	1000 NMC tickets				
ARS features	No s	No key				
Reflexes terminal users		Add Reflexes users				
DECT (or Reflexes DECT) users		DECT users				
Analog terminals users	SLI boards			Add analog users		
VOICE MAIL						
VMU: 2 ports - 20 minutes	No s	No key				
Name announcement	No s	No key				
Mailbox welcome messages	CPU = 10 mailboxes with welcome messages or CPU + XMEM64/CPUe = 50 mailboxes with welcome messages or Hard disk = up to 200 mailboxes with welcome messages			Welcome messages		
VMU: 4 ports - 20 minutes	No special hardware requirements			Add2 ports		
VMU: 4 ports - 80 minutes	CPU + XMEM64 or CPUe	No special hardware requirements	XMEM64	Add2 ports + up to 80 minutes		
VMU: 6 ports - 80 minutes	CPUe	No special hardware requirements	IMPOSSIBLE	Add4 ports + up to 80 minutes		
VMU: 6 ports - 8 or 200 hours	CPUe + Hard disk	Hard disk	IMPOSSIBLE	Add4 ports + up to 8 or 200 hours		
VMU: 8 ports - 8 hours	CPUe + Hard disk	Hard disk	IMPOSSIBLE	Add6 ports + up to 8 hours		
VMU: 8 ports - 200 hours	rts - 200 hours CPUe + Hard disk Hard disk IMPOSSI		IMPOSSIBLE	Open all VMU features		



UPGRADING YOUR SYSTEM

Distribution lists	CPUe + Hard disk	CPUe + Hard disk Hard disk IMPOSSIBLE		Open all VMU features		
Recording of conversations	CPUe + Hard disk	Hard disk	IMPOSSIBLE	Open all VMU features		
Pre-configured Automatic At- tendant & Fax/Modem Switch- ing	CPU + Hard disk	No special hardware requirements	XMEM64	Basic Automatic At- tendant		
Customized Automatic Attend- ant & Audiotex	CPU + XMEM64 or CPUe	Hard disk	Hard disk	Full Automatic Attend- ant		
INTERNET SERVICES						
Internet access	CPUe	No additional hard- ware	CoCPU@, XMEM64	Internet access		
Proxy/Cache server	CoCPU@, Hai	rd disk, SLanX4	XMEM64, CoCPU@, Hard disk, SLanX4	Full Internet service of- fering		
VPN	CoCPU@	9, SLan X4	XMEM64, CoCPU@, SLanX4	Full Internet service of- fering		
e-mail server	CoCPU@, Hai	rd disk, SLanX4	XMEM64, CoCPU@, Hard disk, SLanX4	Full Internet service of- fering		
СТІ						
Integrated CTI server	No s	TAPI 2.0 interface				
External TAPI 2.1 server	Nos	TAPI 2.1 server (4 ses- sions, 10 monitoring)				
CSTA interface	No s	Client CSTA (25 ses- sions, 25 monitoring)				
PIMphony Basic	No special hardware requirements			PIMphony Basic		
PIMphony Pro	No special hardware requirements			PIMphony Pro		
PIMphony Team	No s	PIMphony Team				
VolP						
Voice over IP network	CPU + XMEM64,	CoCPU, SLanX4	XMEM64, CoCPU,	IP channels		
IP Telephony with Fast IP Re- flexes	daughter boards		SLanX4	e-Reflexes		
IP Telephony with e-PIMphony				PIMphony Pro or Team + e-PIMphony Reflexes		
NETWORK						
Private access		Add B-channels				
ISVPN		ISVPN				



UPGRADING YOUR SYSTEM

INSTALLATION MANUAL





BATTERY MAINTENANCE

The batteries are replaced with the system powered off after removing the mains lead, unscrewing the back panels and undoing the battery rack.

To guarantee correct balancing, replace all the batteries at the same time, using batteries of the same type, from the same supplier and the same batch.

To guarantee system shutdown without data loss in the event of a mains power failure or the mains plug is unplugged at the wall socket, replace the batteries every two years. This maintenance operation is vital to guarantee sufficient power autonomy to allow the files to be saved before the system shuts down.

The batteries are not charged when delivered. Saving the files in the event of a power failure cannot be guaranteed unless the batteries have been charged, which takes about 12 hours from the time when the system is powered up (CPU/CPUe switch in ON position).



Battery characteristics

- number: 1 (Rack 1), 2 in parallel (Rack 2) or 3 in series(Rack 3)
- sealed lead battery
- 1.2 Ah / 12 V
- fire resistance better than or equal to UL94-V2
- pay attention to the connection polarities



Incorrect replacement of the batteries risks causing an explosion. Used batteries must be disposed of in accordance with the manufacturer's instructions.

BATTERY MAINTENANCE

It is recommended that the batteries of the CPU/CPUe and CoCPU/CoCPU boards are replaced by the same type of battery every 2 years. Used batteries must be disposed of in accordance with the manufacturer's instructions.

MAINTENANCE OF THE VENTILATION SYSTEM

Take advantage of the periodic replacement of the batteries to clean the system ventilation louvers using a brush or a cloth.



FIRST-LEVEL MAINTENANCE

INSTALLATION MANUAL

When the system is functioning with only one fan (Rack 2 or Rack 3) or none (Rack 1) in working order, only the T0/T2 external digital accesses and the first two interfaces of the Alcatel Reflexes terminals remain operational.



FIRST-LEVEL MAINTENANCE

REPLACING THE CPU/CPUe BOARD

The software key must be adjusted after a CPU/CPUe board has been replaced.

1. The new CPU board does not have a software key:

- You know the new software key corresponding to the new CPU:
 - start the system with the new CPU: the system works with the default settings.
 - load the new key via PM5or via MMC station.
 - execute a cold reset: the system works with the settings offered by the new key.
 - restore the configuration (not the old key).
- If you do not know the new software key corresponding to the new CPU, use the old key while waiting to enter the new one (30 day delay). The procedure is the same as the previous one.

2. The new CPU board has a software key corresponding to the serial number:

- The new key offers the desired level of service:
 - start the system with the new CPU: the system works with the desired level of service
 - restore the configuration (not the old key).
- The new key does not offer the desired level of service: modify the key.

3. The new CPU board has a software key that does not correspond to the serial number:

you are then in situation 1, but the system starts with the level of service offered by the CPU's key with temporary validity



FIRST-LEVEL MAINTENANCE

INSTALLATION MANUAL

MAINTENANCE OF THE HARD DISK

Please follow the recommendations below: any improper treatment of the hard disk (handling, transport, storage) may result in a reduction of its service life and may also cause malfunctions of your system.

Handling

- Wear a device (strap, heels, etc ..) to protect yourself against electrostatic discharges.
- Avoid knocking the hard drive.
- Do not touch the connector.
- Handle the disk by holding it by the edges.

Storage:

- every hard disk must be stored in an anti-static bag.
- Avoid all contact between hard disks.
- Do not place them one on top of the other (even when packed).

Transport

- A hard disk cannot be transported unless packed in an electrostatic bag.
- Avoid all contact between hard disks.
- When transporting hard disks, use standard packaging for this purpose.



GLOSSARY

File

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GLOSSARY

Α

AFU

"Auxiliary Function Unit". Daughter board of the CPU/CPUe board supporting ancillary functions such as general bell, doorphone, audio In, audio Out, etc.

ARI

"Access Right Identifier". System identification number (DECT function).

ARS

"Automatic Route Selection". A logic direction is a set of trunks used for a call with the following facilities: seeking out the optimal path for a call, using the least-cost operator or network; overflow management: enables a PBX to find a new route to make an outgoing call when there are no resources available in the initial trunk.

ATA

"Analog Trunk Access". Board for connecting analog network lines (switched network).

В

BACKGROUND MUSIC

Device (e.g. radio tuner) that can broadcast music over the loudspeakers of idle terminals; broadcasting is stopped automatically if there is an incoming call to the terminal or if the user makes a call.

BRA

"Basic Rate Access". Board allowing for the connection of TO digital basic accesses; each access supports a data rate of 144 kbps, structured in 2 B-channels at 64 kbps for voice and data transmission, and 1 D-channel at 16 kbps for signaling.

С

CPU

"Central Processing Unit". Term designating the processor or microprocessor. The central processing unit executes computer program instructions.

CTI

"Computer-Telephone Integration". Interaction mechanism between 2 sections, namely a data processing section (computer) and a telecommunications section (PABX), independently of the physical layout of the 2 sections.

D

DASS2

"Digital Access Signaling Specification number 2"



GLOSSARY

INSTALLATION MANUAL

DDI

"Direct Dialing In". Direct external call number for the system terminals (depending on the configuration with the public network operator).

DECT

"Digital Enhanced Cordless Telecommunication". European cordless telephony standard. DECT terminal: cordless terminal that complies with this standard.

DHCP

"Dynamic Host Configuration Protocol". Protocol that manages IP address allocation dynamically so that addresses can be reassigned when no longer being used by LAN hosts.

DISA

"Direct Inward Station Access". Services (analog DISA and Transit DISA) enabling outside callers to dial a specific number giving direct access to the system.

DNS

"Domain Name Server". System used on the Internet for converting domain names or machine names into IP addresses. A domain name, unlike an IP address, is an easily memorized Internet address.

Ε

ETHERNET

Local network (LAN) operating at 10 or 100 Mbps (10 base T or 100 base T) over a coaxial cable. Ethernet is similar to the IEEE 802.3-series standards.

F

FTP/STP/UTP

"Foiled Twisted Pairs/Shielded Twisted Pairs/Unshielded Twisted Pairs". Types of connection cables to be used between Alcatel OmniPCX Office and an external distribution panel.

G

GENERAL BELL

If the operator is absent, internal and external calls to the operator are directed to an external signaling device that lets any authorized terminal take these calls.

Н

HSL

"High Speed links". Link between the basic module and the extension module; requires the CPU and MEX boards to be equipped with an HSL daughter board.

I

IPSec

"Internet Protocol Security". Standard taking network security into account. Protocol used in the implementation of VPNs, and for remote access by connection to a VPN.



File

ISDN

"Integrated Services Digital Network". Standard for the transmission of digital data over telephone cables or other communication vectors.

ISP

"Internet Service Provider". A company that provides Internet access for individuals and enterprises, along with other services, such as web site construction and hosting.

ISVPN

"Integrated Services Virtual Private Network". Protocol used in a private virtual digital network; it offers functions such as transfer optimization and the transmission of information such as the name, busy status or diversions.

Κ

KEY SYSTEM (mode)

Reflexes terminal operating mode in which the terminal features as many resource keys (RSP: Physical resource) as there are network lines in the system.

L

LAN

"Local Area Network". Network of interconnected machines that share the resources of a processor or server in a relatively restricted geographical area, usually the premises of a company. LOUDSPEAKER

External loudspeaker used for the broadcasting messages.

Μ

MANAGER/SECRETARY

Set of specific services (profile, filtering, diversion) between a manager terminal and a secretary terminal.

MEX

Add-on module. Controller board for extension module.

MIX

Mixed equipment board: T0 access, analog and reflexes terminal connection interfaces. MULTILINE TERMINAL

Terminal that has several lines for managing several calls at the same time.



GLOSSARY

INSTALLATION MANUAL

Ν

NMC

"Network Management Center". Workstation allowing a telephone system administrator to remotely manage, administer (storage of call metering tickets for example) and optimize one or more Alcatel OmniPCX Office systems.

Ο

OS

"Operator Station". Dedicated Reflexes terminal for answering incoming calls from the public network.

Ρ

PASSWORD

Code acting as a password controlling access to voice mail and locking of terminals.

PBX (mode)

Mode of operation of Reflexes terminals; in this mode, all the network lines are materialized by general-purpose resource keys (RSB).

PLEASE WAIT MESSAGE

An audio component of the system (or an external device, such as a cassette player) which plays a message or piece of music while keeping an external correspondent on hold.

POP3

"Post Office Protocol". Standard Internet protocol for receiving electronic messages. POP3 is a client/server protocol in which the messages are received and hosted by the ISP. When a message is read, it is transferred to the client terminal and is no longer hosted by the ISP.

PPP

"Point to Point Protocol". Protocol used in communication between two computers using a serial interface (typically between a PC connected to a server via a telephone line).

PRA

"Primary Rate Access". Board allowing for the connection of a T2 digital primary access; the access supports 48 kbps structured in 30 B-channels at 64 kbps for voice and data transmission, and 1 D-channel at 64 kbps for signaling.

PROXY

A proxy server is used as an interface between a user and the external Internet network.

Q

QSIG

"Q Signaling Protocol". Set of standard signaling protocols between the private PBXs of a telephone network (Q reference point) interconnected by digital ATLs.



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INSTALLATION MANUAL

S

SO BUSES

Types of connection for S0 digital terminals (passive short bus, long bus/short point-to-point bus, extended bus); the connection between the S0 buses and terminals is made via an optional S0 embedded in an Alcatel Reflexes terminal.

SELV

"Safety Extra Low Voltage". Classification of interfaces in accordance with standards EN60950 and IEC 950.

SLAN

"LAN switch". Daughter board for mounting on a CoCPU/CoCPU@ board to enable it to communicate with the CPU/CPUe.

SLI

"Single Line Interface". Board allowing the connection of analog terminals (still called Z terminals).

Т

TCP/IP

"Transmission Control Protocol/Internet Protocol". Standard protocol used on the Internet. TERMINAL GROUPS

Series of terminals grouped under the same directory number. A call to the number is routed to one of the free terminal lines.

TFTP

"Trivial File Transfer Protocol". The simplest network application allowing file transfer.

ΤL

"Analog trunk line" connecting the system to the public switched network.

U

UAI

"Universal Alcatel Interface". Board used for the connection of Alcatel Reflexes terminals or DECT 4070 IO/EO base stations.

V

VMU

Voice Mail Unit. The integrated voice server provides a voice mailbox for each user as well as a general voice mailbox and features such as Personal Assistant, Automatic Attendant and Audiotex. VoIP

"Voice over IP". Term designating voice transmission over a data network using the Internet protocol. VPN

"Virtual Private Network". Private data network that uses the public telecommunications infrastructure (e.g. the Internet) while maintaining confidentiality by means of tunneling protocols and security procedures.



GLOSSARY

W

WAN

"Wide Area Network". A geographically dispersed telecommunications network. The term WAN is used in contrast to LAN.



Χ

XMEM

"EXpansion Memory". Daughter board of the CPU board that extends the memory capacity and allows a hard disk to be connected.