Technical Bulletin	Alcatel-Lucent OmniPCX Office

TC1870 ed.01 **Release 9.2**

LIMITS AND DIMENSIONING FOR OMNIPCX OFFICE R9.2

This document gives details of system limits and dimensioning rules of OmniPCX Office R9.2

Revision History

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1 Hardware requirements for R9.2

CPU's delivered in newly ordered R9.2 OmniPCX Office systems:

- PowerCPU – Freescale MPC8377 processor at 667Mhz – 256 Mb DDR2 RAM – 2Gb SDCard

2 Feature level

PowerCPU		
Feature / Storage Device	VMU level	ACD Statistic
Without Hard Disk	Up to 30 hr	No
With Hard Disk	Up to 200 hr	Yes

3 Hardware - Generic rules

3.1 Daughterboard equipment matrix PowerCPU

Storage/Daughter boards	PowerCPU
DDR 256 Mb	Yes (mandatory)
SDCard 2Gb	Yes (mandatory)
Hard-Disk (minimum 20Gb)	Yes (optional)
HSL1	Yes (optional)
HSL2	Yes (optional)
AFU-1	Yes (optional)
Armada VoIP 32	Yes (optional)

3.2 Specific Hardware Limits of CE (Compact Edition) cabinet

- No SLI16
- No APA8
- No DDIx
- No HSL daughterboard on main CPU
- No PowerMEX board
- PowerCPU with hard disk is allowed with following constraint:
  - external power supply with battery unit is mandatory,
  - PSXS-N with reference 3EH73072ACxx is mandatory,
  - the jumper "extBAT" must be set to 'YES'.

4 Slot distribution & equipment rules

4.1 OmniPCX Office RCE Small Rack

BOARD	SLOT 1	SLOT 2	CPU
PowerCPU	No	No	Yes- Mandatory
PowerMEX	No	No	Yes- Mandatory
MIX x/y/z, MIX x/y/z-1	Yes- Preferred	Yes	No
AMIX x/y/z-1	Yes- Preferred	Yes	No
SLI4 / SLI4-1 / SLI4-2 SLI8 / SLI8-1 / SLI8-2	Yes- Preferred	Yes	No
SLI16 / SLI16-1 / SLI16-2	No	No	No
UAI4 / UAI8 / UAI16 / UAI16-1	Yes- Preferred	Yes	No
BRA2 / BRA4 / BRA8	Yes	Yes- Preferred	No
PRA-T2 / PRA-T1 / DASS2 / DLT2 T1-CAS / PCM-R2 / T1-CSS	Yes	Yes- Preferred	No
LANX8 / LANX16 / LANX16-1 LANX8-2 / LANX16-2	Yes	Yes- Preferred	No
ATA2 / ATA4	Yes	Yes- Preferred	No
APA4 / APA8	Yes	No	No
DDI2 / DDI4	No	No	No

Restrictions:

- SLI16 or DDIx boards are not allowed.
- Empty slot must always be completed with a Blind slot board (electromagnetic compatibility).

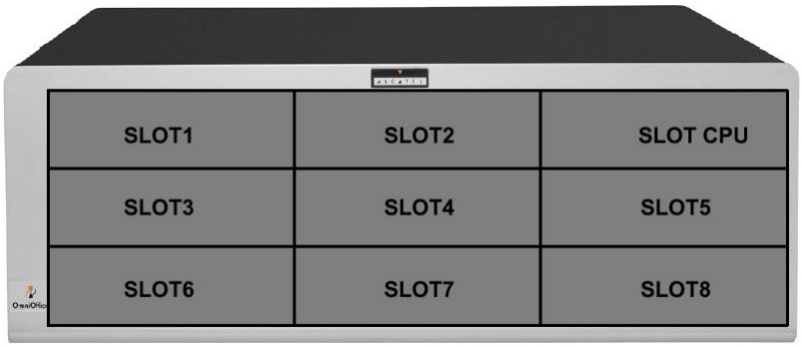
4.2 OmniPCX Office RCE Medium Rack

BOARD	SLOT 1& 3	SLOT 2& 4	SLOT 5	CPU
PowerCPU	No	No	No	Yes- Mandatory
PowerMEX	No	No	No	Yes- Mandatory
MIX x/y/z – MIX x/y/z-1	Yes- Preferred	Yes	Yes	No
AMIX x/y/z-1	Yes- Preferred	Yes	Yes	No
SLIx / SLIx-1 / SLIx-2	Yes- Preferred	Yes	Yes	No
UAI4 / UAI8 / UAI16 / UAI16-1	Yes- Preferred	Yes	Yes	No
BRA2 / BRA4 / BRA8	Yes	Yes- Preferred	Yes	No
PRA-T2 / PRA-T1 / DASS2 / DLT2 / T1-CAS / PCM-R2 / T1-CSS	Yes	Yes- Preferred	Yes	No
LANX8, LANX16, LANX16-1 LANX8-2, LANX16-2	Yes	Yes	Yes- Preferred	No
ATA2 / ATA4	Yes	Yes- Preferred	Yes	No
APA4 / APA8	Yes	Yes- Preferred	Yes	No
DDI2 / DDI4	Yes	Yes- Preferred	Yes	No

Restriction:

- Empty slots must always be completed with a Blind slot board (electromagnetic compatibility).

4.3 OmniPCX Office RCE Large Rack



BOARD	SLOT 1	SLOT 2-3-4	SLOT6-7	SLOT 5-8	CPU
PowerCPU	No	No	No	No	Yes- Mandatory
PowerMEX	No	No	No	No	Yes- Mandatory
MIX x/y/z, MIX x/y/z-1	Yes- Preferred	Yes- Preferred	No	No	No
AMIX x/y/z-1	Yes- Preferred	Yes- Preferred	No	No	No
SLIx / SLIx-1 / SLIx-2	Yes- Preferred	Yes- Preferred	Yes	Yes	No
UAI4 / UAI8	Yes- Preferred	Yes- Preferred	Yes	Yes	No
UAI16 / UAI16-1	Yes- Preferred	Yes- Preferred	No	No	No
BRA2 / BRA4 / BRA8	Yes	Yes	Yes- Preferred	Yes	No
PRA-T2 / PRA-T1 / DASS2 / DLT2 / T1-CAS / PCM-R2 / T1-CSS	Yes	Yes	Yes- Preferred	Yes	No
LANX8 / LANX16 / LANX16-1 / LANX8-2 / LANX16-2	Yes	Yes	Yes	Yes	No
ATA2 / ATA4	Yes	Yes	Yes- Preferred	Yes	No
APA4	Yes	Yes	Yes- Preferred	Yes	No
APA8	Yes	No	Yes- Preferred	Yes	No
DDI2 / DDI4	Yes	Yes	Yes- Preferred	Yes	No

Restrictions:

- UAI16 and UAI16-1 can only be equipped in slot 1-2-3-4.
- APA8 can only be equipped in slot 1,5,6,7 and 8.
- MIX x/y/z and MIX x/y/z-1 can only be equipped in slot 1-2-3-4.
- AMIX x/y/z-1 can only be equipped in slot 1-2-3-4.
- APA8 board operates as an APA4 if located in slot 2-3-4.
- Empty slots must always be completed with a Blind slot board (electromagnetic compatibility).

5 Alcatel OmniPCX Office limits

System limits linked to the software licence are not indicated.
Compact Edition: values between brackets are the CE limits.

System	Rack 1/(CE)	Rack 2	Rack 3	max.
Number of slots (including all boards)	3 (2)	6	9	27
UAI16 / UAI16-1 Boards	1 (1)	3	4	12
SLI16 / SLI16-x Boards	0/(0)	2	5	12
UAI16 / UAI16-1 Boards + MIX Boards	2 (1 mixed)	5	4	12
Armada VoIP 32 Daughterboard	1 (1)	1	1	1
LANX 16-1/2 Boards	2 (1)	4	8	12
LANX Boards	1 LANX16 (1 LANX16)	1 LANX16 +1 LANX8	2 LANX16	6 LANX16
SATA Hard disks	1			1
Capacity of the SATA hard disk	Min 20Go / (Min 20Go)			Min 20Go

Communication Ports	Rack 1/(CE)	Rack 2	Rack 3	max.
Max (UA+Z) users Ports	28 (18)	56	96	200
Max (UA ports) users Ports	24 (16)	56	96	200
Max (Z ports) users Ports	16 (10)	32	80	196
Analog Trunks (ATA – APA)	8 (4)	16	32	72
Analog Trunk DDI	0	16	32	72
PCM R2 Access	1 (1)			3
Basic Rate Access (T0+DLT0)	8 (4)	12		12
Primary Rate Access (T1+T2+DLT2)	1 (1)	3		9
T1 CAS Access /CCS voice only (US only)	1 (0)	3		5
ISDN Access (T0+DLT0+ T1+T2+DLT2)	8 (8)	12		12
VoIP Subscriber Channels	48 (48)	48		48
VoIP Trunk Channels H323 or SIP	48 (48)	48		48
Total Trunks (NDDI, DDI, PCM, T1, T2, T0, IP)	54 (52)	90	120	120

Users	Rack 1/(CE)	Rack 2	Rack 3	max.
Subscriber Numbers	250 *			250*
Z + UA Sets including Multi-Reflexes™ (wired)	28 (22)	56	96	236
UA ports including Multi-Reflexes™ (wired)	24 (16)	56	96	236
Z Sets	16 (10)	32	80	196
Simultaneous Ringing of Z Sets	6(4)	8	20	60
Alcatel Series 9 + Reflexes terminals	24 (16)	56	96	236
Alcatel Series 9 + Reflexes + Analogue sets	28 (20)	56	96	236
OmniTouch 8082 My IC Phone	20			20
OmniTouch 4135 Conference module	3			3
Open SIP phone	120			120

SIP Companion	50	50
Max IP Subscribers [x8 Series + OT 8082/8232/4135 + 8002/8012 Deskphone + SIP phone (Open/Basic) + PIMphony IP + MIPT + SIP companion]	200	200
Virtual Terminals	200	200
IP PIMphony media	200	200
My IC Mobile	50	50
PIMphony clients including IP PIMphony	200 / 25 (1)	

Hotel (Guest)	**Rack 1/(CE)**	**Rack 2**	**Rack 3**	**max.**
Room Sets	27	55	200**	200**

* Subscriber numbers include all terminals and virtual users and auxiliary ports (VMU, Remote Access).

** Including a maximum of 120 analog phones.

(1) First value corresponds to the limit using HTTP and the second is using HTTPS.

Reflexe Options	**Rack 1/(CE)**	**Rack 2**	**Rack 3**	**max.**
Add On Module - max 2 per set for 4020/4035 - max 3 per set for 4029/39 & 4028/38/68	10 (8)	40	60	136
Plugware S0, V24, Z	12 (4)	24	42	48
Extension Direct Number per S0 (multiple EDN)	98			98
Multi-Reflexes (4099)	6 (4)			18
V24 Plugware for metering	1			1

DECT Mobility	**Rack 1/(CE)**	**Rack 2**	**Rack 3**	**max.**
IBS with Remote feeding (System)	4 (3)	4	4	12
IBS with "power splitter" on UAI16-1 and 40V adapter	16 (16)	48	60	60
IBS with local feeding (power supply)	23 (16)	55	60	60
DECT Terminals	120			120

IP DECT Mobility	**Rack 1/(CE)**	**Rack 2**	**Rack 3**	**max.**
IP-DECT sets (DECT 500, 8232, generic GAP)	50			50
4080 IP-DECT AP	16			16

VoWLAN	
Total number of IP users	120
Simultaneous calls per Access point	8 Simultaneous calls

Note: topologies with SVP Server are no longer supported.

Voice Mail Unit	
Number of Voice Mail Ports	8 max
Voice Mail Storage (on SDCard)	Up to 30 hrs *
Voice Mail Storage (with hard disk)	Up to 200 hrs *

Memory Pool for Voice Mail Names & Announces	8750 sec
Number of Voice Mail Boxes	1 per set
Simultaneous Call Recording	3 max (1)
External notification greetings	120 sec
Name recording	5 sec
Play/Record resources	32
Personalised Mail box greetings	7500 sec
Email notification of new messages: max size of attachment	10Gb - approximately 20mn recording (2)

* This duration includes the time of mailbox messages and record on line

(1) Reminder: the call recording feature shares the DSP with the 3 party conferences.

(2) Call record greather than 10 Gb can be retrieved with PIMphony (Pro/Team).

Preannouncement	
Greetings messages min.	64 sec (4 messages)
Greetings messages max.	320 sec (up to 20 messages)

Metering	
V24 / IP metering tickets	1 000
NMC metering tickets	30 000
Account Codes	250
Meter Recall	10

Keys	
User + System Programmable Keys (UPK + SPK)	16 292
Resources	5 155
Filters	5 338
Supervision	312
Supervision Groupware (including manager-secretary supervision keys)	50

Repertories	
Individual	3 920
Common (included in phone book)	2 200
Phone Book (Common + individual)	5 000

Groups	
Attendant Groups	8
Size of each Group	8
Hunting / Broadcasting / Pick Up Groups	50
Size of each Group	32
Trunk groups	120
Size of each Group	120

CTI – Application Interfaces	
TAPI + CSTA server sessions	200
TAPI + CSTA server monitoring	500
Numbering Plan	
Main (internal)	99
DDI (in normal mode)	99
DDI (in restricted mode)	99
Function Codes	35
Private Numbering Plan	36
Modifications of Main Numbering Entries	33
Modifications of DDI Numbering Entries	18
ARS Prefix Entries	500
Main Prefix Entries	100
Day Group Prefix Entries	7
Holiday Group Prefix Entries	20
ARS Bundle List Prefix Entries	120
Splitting Prefix Entries	16
End of Dialling Prefix Entries	20
Installation Number (Main)	1
Private installation number	1

Miscellaneous	
Simultaneous Conferences * (OXO 3 party conference)	3
6-party conference (meet me)	1
OMC feature right "Conference Bridge Allowed" (OT 4135 and/or SIP phone)	3
LDAP connector	1
H.323 Gateways **	20
Immediate forward	200
Mailing (text)	400
Predefined Text Message	30
Appointment	192
Fax Notification	30
Languages	4
Entity	4
System Music on Hold	Up to 4x 10 min.
Customizable Music on Hold	10 min.
Pre-allocated Logical Link (PLL)	32

(*) One conversation record will consume one DSP ressouce of 3 party conference

(**) An external gatekeeper must be used to manage more than 20 H323 gateways.

XML Web services	
My Phones Web services users	30
My IP touch XML services	30
My Management	30
My Messaging	30

OmniTouch Call Center Office	
Declared agents	32
Active agents	32
Agent groups	8
Agent per Agent group	20
Agent Assistant	32
Supervisor Console	8
Statistics	Yes with HD (kept for 14 months max.)
Routing Rules (CLI/DDI)	5000 entries
Queues	1 per ACD group

Note: MLAA (Multi Language Automated Attendant)
When only ACD or MLAA is active, they can use up to 16 play resource ports.
When both ACD and MLAA are active:

- 4 ports minimum must be allocated to MLAA
- 6 ports minimum (including 2 ports for dissuasion) must be allocated to ACD
- Total of ports for ACD + MLAA is limited to 16 (including the 2 resources for ACD dissuasion)

6 Alcatel OmniPCX Office Power Budget

The tables below show the power consumption for boards and terminals. For each cabinet model the following limits must not to be exceeded (unit = W):

- maximum budget for CE = 30 W
- maximum budget for rack S = 34,33 W
- maximum budget for rack M = 52,81 W
- maximum budget for rack L = 79,62 W

If these limitations are not respected some extensions or boards will not start (in the history table a message is generated).

CPU Boards	**Rack S/CE**	**Rack M**	**Rack L**
PowerCPU	8.60	8.60	8.60
PowerMEX)	1.34	1.34	1.34

Daughter Boards			
HSL 1 & 2	0.30	0.30	0.38
Hard disk	2.17	2.33	2.61
Armada VoIP32	1.53	1.53	1.85
AFU / AFU-1	0.61	0.55	0.64

Trunk Boards			
BRA 8	0.90	0.97	1.09
BRA 4	0.53	0.56	0.64
BRA 2	0.31	0.33	0.38
PRA - T2/T1/DASS 2	0.33	0.33	0.41
PCM R2	0.33	0.33	0.41
MET	0.06	0.06	0.07
CLIDSP	0.41	0.41	0.51
GSCLI	0.09	0.10	0.11
ATA4	1.13	1.42	1.42
ATA2	0.62	0.78	0.78
APA8	1.82	2.19	2.27
APA4	1.14	1.34	1.41
DDI4	/	10.25	9.31
DDI2	/	5.12	4.65

LAN Boards			
LANX 8 / LANX8-2	3.64	3.64	4.53
LANX 16	6.88	6.88	8.56
LANX 16-1 / LANX16-2	9.61	9.38	8.12

MIX Boards	Rack S/CE	Rack M	Rack L
4 T0 / 8 UA / 4 Z	2.76	2.90	3.00
4 T0 / 4 UA / 8 Z	3.29	3.45	3.45
2 T0 / 4 UA / 4 Z	2.03	2.13	2.16
2 T0 / 8 UA / 4 Z	2.52	2.65	2.74
2 T0 / 4UA / 8 Z	3.05	3.2	3.2
8 UA / 4 Z	2.33	2.39	2.48
4 UA / 8 Z	2.92	2.96	3.01
4 UA / 4 Z	1.82	1.86	1.91
4 AT / 8UA / 4 Z	2.62	2.52	2.45
4 AT / 4 UA / 8 Z	3.57	3.48	3.35
4 AT / 4 UA / 4 Z	2.56	2.49	2.43

Extension Boards			
UAI 16	2.10	2.21	2.39
UAI 16-1	1.77	1.73	1.66
UAI 8	1.27	1.32	1.38
UAI 4	0.85	0.87	0.88
SLI 16 / SLI 16-1 / SLI 16-2	/	5.00	4.76
SLI 8 / SLI 8-1 / SLI 8-2	2.39	2.51	2.39
SLI 4 / SLI 4-1 / SLI 4-2	1.20	1.26	1.21

Terminals			
UA or x9 series	0.46	0.45	0.39
Add On Module or AOM-E	0.25	0.24	0.21
Multi Reflexes UA	0.62	0.64	0.52
CTI Option	0.94	0.92	0.79
AP Option	0.94	0.92	0.79
V24 Option	0.94	0.92	0.79
S0 Option	1.26	1.23	1.07
IBS (Remote feeding)	2.98	2.90	2.52
Z (Analogue Terminal)	0.22	0.21	0.19

Additional notes:

1 When you use an option having CTI you have to add the CTI value; e.g. for an L rack:
- 4093 (V24+CTI) = 0.79+0.79 = 1.58 W
- 4094 (S0+CTI) = 1.07 + 0.79 = 1.86 W

2 When you use SLI analog extension boards or MIX boards, you have to add the number of analog sets even if they are not connected; e.g. for a L rack:
- SLI16 = 4.64 + (16 * 0.21) = 8 W
- MIX 484 = 2.99 + (4 * 0.21) = 3.83 W

3 For an UAI16-1 board, it is possible to connect on its first port (in parallel with the UA set) a « power splitter » option to feed every terminal and base station connected on this board. Those terminals will then not be taken from the power budget; for example on an L rack:
   - One UAI16-1 with 10 UA sets and 3 IBS without « power splitter » = 13.12 W
     - 1.66 + (10 * 0.39) + (3 * 2.52) = 13.12 W
   - One UAI16-1 with 10 UA sets and 3 IBS with « power splitter » = 1.66W
     - only the UAI16-1 board is taken into account.

4 Warning: cabinet power supply values given in the noteworthy do not take into account any DECT IBS. The consumption of any IBS that is not locally powered must be added manually.

5 The system power consumption can be read with the following noteworthy address:
   - PowBudMain: Main cabinet value
   - PowBudMex1: 1st extension cabinet
   - PowBudMex2: 2nd extension cabinet

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