



MITEL

3300 IP komunikacijska platforma

Omogućuje napredne IP komunikacije i korisničke aplikacije za povezivanje lokalnih i vanjskih mreža tvrtke

Kontroleri

	3300 CX / CXi	3300 Mx Standard	3300 Mx prošireni	3300 Mx Server	3300 AX
Maximalni broj uređaja – uključeni programirani agenti ¹	150	350	1,500	5,000	250
Max. broj IP telefona ¹	100	300	1,400	5,000	100
Max. broj SIP uređaja/korisnika	100	300	1,000	1,000 ²	100
Maksimalno ACD Agenti ¹	50	100	350	350	50
Maksimalno 5550 IP konzola	8	16	24	24	8
Max. broj analog telefona	104	400	1,200 (uz dodatni kabinet)	–	192
Isporučuje se:	1 Dual DSP modul (integrirano) AMB Hard Disk Drive Ispravljač 10 Echo Cancellers	2 Quad DSP modula (integrirano) AMB Hard Disk Drive Ispravljač 128 Echo Cancellers	2 Quad DSP modula (integrirano) AMB Hard Disk Drive Ispravljač 128 Echo Cancellers	2 Quad DSP modula (integrirano) RAID Controller Dual HDD Drive Dupli ispravljač 256 Echo Cancellers	2 Quad DSP modula (integrirano) Flash Drive Ispravljač 42 Echo Cancellers

¹Treba napraviti proračun konfiguracije

²Moguće je spojiti i više portova

Kontroleri (nastavak)

	3300 CX / CXi	3300 MxStandard	3300 MxExpanded	3300 MxServer	3300 AX
Dostupni MMC slotovi	2	5	5	–	2
MMC slotovi za:	Quad CIM Jedan T1 / E1 Quad BRI Dupli i Quad DSP	Dupli FIM Quad CIM Jedan i dupli T1 / E1 Quad BRI Quad DSP Echo Cancellor	Dupli FIM Quad CIM Single i Dupli T1/E1 Quad BRI Quad DSP Echo Cancellor	Quad DSP Echo Cancellor	Jedan i dupli T1 / E1 Quad BRI Quad DSP Echo Cancellor
Max. dupli T1 / E1 digital trunk modula	2 (jedan trunk modul samo)	3	3	–	1
Max. BRI modula	2	3	3	–	1
10 / 100 / Gig Base T Ethernet portova	Pogledati CXi data povezivanje	2	2	2	2 (10 / 100 Base T)
Max. dupli DSP moduli	1	–	–	–	–
Max. Quad DSP moduli	1	3 (plus 2 integrirano)	3 (plus 2 integrirano)	3 (plus 2 integrirano)	2
Max. Echo Cancellor kanala	64	128	128	256	128
Max. G.729a komprimiranih kanala (na 32 kanala zahtjeva DSP modul)	16	32	64	64	32
Max. broj NSU's	–	8	8	–	–
Max. broj digitalnih linkova (izuzev BRI)	2	16	16	–	2
Max. ugrađenih BRI adaptera (2 kanala po adapteru)	8	12	12	–	4
Max. broj duplih FIM modula	–	4	4	–	–
Dupli FIM se koristi Za spajanje:	–	NSU, DSU, periferije kabineti, trostruka FIM kartica	NSU, DSU, periferije kabineti, trostruka FIM kartica	–	–
Analogna osnovna ploča ³	6 LS linija ⁴ 4 analognih internih	6 LS linija 4 analognih internih	6 LS linija 4 analognih internih	–	–
Analogni dodatni modul	6 LS linija 4 analognih internih	–	–	–	–
Analogna kartica u slotu ⁵	–	–	–	–	12
Max. broj CIM spojenih ASU's	3	12	12	–	–

³Uključuje Music-on-Hold (1 izvor), Paging (1 paging zona), Prespajanje kod ispada (2 linije)

⁴Analogne linije podržavaju CLASS signalizaciju za North America i Latin America

⁵Analogne linije su dostupne u dvije varijacije; 16 internih i 4 LS linije & 12 internih ekstenzija. Napomena 4+12 kartica podržava 4 SFT linije.

Kontroleri

	3300 CX / CXi	3300 Mx Standard	3300 Mx prošireni	3300 Mx Server	3300 AX
Max. optikom spojenih perifernih nodova (sa perifernim proširenjem)	–	6 (12)	6 (12)	–	–
Ton generatora	128	128	128	–	128
Ton detektora	32	32	32	–	32
E2T kanala	64	64	128	256 ⁶	128
DTMF prijemnika	128	128	128	–	128
IP umrežavanje – max. IP linija između kontrolera	200	200	200	200	200
IP umrežavanje – total max IP linija	2000	2000	2000	2000	2000
SIP trunking – total maximum SIP linija	2000	2000	2000	2000	2000
SIP trunking – max SIP linija između peers	400	400	400	400	400
Max. controllers u klasteru ⁷	250	250	250	250	250
STP & RSTP	Da	Da	Da	Da	Da
Ugrađeni portovi govorne pošte standardno	4	20	20	–	0
Max. broj portova Govorne pošte ⁸	16	30	30	–	20
Max. pretinaca govorne pošte	750	750	750	–	750
Kapacitet u satima	450	450	450	–	70
Max. poruka po pretincu	100	100	100	–	100

⁶ Podrška za konferencije, muziku na čekanju i paging funkcija

⁷ Do 250 kontrolera može biti povezano kao jedinstveni sustav za podršku do 65,000 IP portova. Mitel System Data Sinhronizacija kontrolira funkcionalnost i transparentiju kroz cijelu mrežu povezanih kontrolera

⁸ Zahtjeva DSP na CX, CXi, Mx i Mx proširenom i dodatnih 4Gb flash drive na AX kontroleru

Mitel 3300 CXi kontroler parametri

Integrirani 16-port PoE L2 10 / 100 Ethernet switch

Dodatni 10 / 100 / 1000 Ethernet uplink port

- Omogućuje spajanje na dodatni switch i router

Ima WAN port koji je "Internet Gateway"

- WAN port omogućuje povezivanje na ISP za Internet (tj., DSL ili cable)
- WAN port omogućuje NAT i firewall
- WAN port ne podržava IP networking

Za IP networking se koristi dodatni router

- Isto vrijedi za CX, MXe, AX Controller

Ugrađeni ACD

- 1,181 agent ID-s
- Max. 350 prijavljenih * logged-in agenata
- 256 putanja
- Moguće je 64 grupe (150 agent IDa po grupi) ILLI 32 grupe (500 agent IDa po grupi)

Podrška za bežične telefone

- SpectraLink 802.11b* ili Mitel IP-DECT wireless telefoni podržani
- 802.11b ili IP-DECT access points podržani
- Integracija sa SpectraLink i IP-DECT MiNet bežičnim telefonima

* 802.11b access pointi moraju biti SpectraLink SVP komplementarni

SIP Trunking

- Supports G.711 i G.729 compression
- SIP Trunking licenca potrebna za svaki SIP kanal
- Podrška RFCs
 - RFC 3261 – SIP Session Initiation Protocol
 - RFC 3262 – Reliability of provisional responses in Session Initiation Protocol (SIP)
 - RFC 3263 – Locating SIP servers
 - RFC 3264 – An offer answer model with session description protocol

- RFC 3515 – The Session Initiation Protocol (SIP)
- RFC 2976 – The SIP info method
- RFC 3325 – Private extensions to the Session Initiation Protocol (SIP)
- RFC 1321 – The MD5 message digest algorithm
- RFC 2833 – RTP payload for DTMF digits, telephony tones i telephony signals (section 3.10)

SIP Linije

- Podrška za G.711 i G.729 compression
- SIP licenca je potrebna za spajanje svakog SIP uređaja

Podrška za RFCs

- RFC 1321 – The MD5 message digest algorithm
- RFC 2976 – The SIP info method
- RFC 3261 – SIP Session Initiation Protocol
- RFC 3262 – Reliability of provisional responses inSIP
- RFC 3263 – Locating SIP Servers
- RFC 3265 – Specific event notification
- RFC 3311 – The Session Initiation Protocol updatemethod
- RFC 3515 – The Session Initiation Protocol refermethod
- RFC 3891 – The Session Initiation Protocol replacesheader
- RFC 4028 – Session timers in the Session InitiationProtocol
- RFC 3680 – A Session Initiation Protocol event package for registrations
- RFC 3842 – A message summary i message waiting indication event package SIP
- RFC 2327 – SDP: Session description protocol
- RFC 3264 – An offer / answer model with SDP
- RFC 2833 – RTP payload for DTMF digits, telephony tones i telephony signals

Digital Trunk Connectivity

Universal NSU (MXe Controller)

- Connects to controller via a FIM link
- A second NSU can be daisy chained from the first NSU via CIM (allows two NSUs per FIM link)
- Each NSU supports two digital links
- Both links in an NSU must run the same protocol (T1-D4 ili MSDN / DPNSS ili PRI / QSIG)

Supports:

CAS (T1-D4) – digital E&M, digital CO, digital DID, IDA-Display for BRI devices (BRI call handling such as Hold ili Transfer are not supported). BRI devices are not line powered from the embedded BRImodule.

T CCS – Primary Rate ISDN, XNET over PRI, QSIG, MSDN/DPNSS

1 – QSIG, Euro ISDN, XNET over PRI, DASSII, MSDN/DPNSS

R2 NSU (MXe Controller)

- Each R2 NSU supports two links
- Connects to controller via a FIM link
- A second NSU can be daisy chained from the first NSU via CIM (allows two NSUs per FIM link)

Dupli Embedded Digital Trunk Module (MXe / AX)

- Each modul has two E1/T1 trunk interfaces (links)
- Provides PRI / QSIG / T1-D4 / DASS II / DPNSS / IDA-P protocol through the controller (no NSU required)
- Each interface can run a different protocol, either PRI, QSIG, ili T1-D4

Does not support:

Min / Max, NFAS, D-Channel Backup ili TDM XNET (Hybrid XNET is supported)

Single Embedded Digital Trunk Module (CX / CXi / MXe / AX Controllers)

- Each modul has a single E1 / T1 trunk interface (link)
- Provides PRI / QSIG / T1-D4 / DASS II / DPNSS / IDA-P protocol through the controller (no NSU required)
- Resiliency (switches to secondary controller)

Does not support:

Min / Max, NFAS, D-Channel Backup ili TDM XNET (Hybrid XNET is supported)

Embedded BRI Module

(CX / CXi / MXe / AX Controllers)

The Embedded BRI modul has four Basic Rate Circuits(total 8 – 64kbs channels)

Each channel may be configured as either a:

- T (trunk) interface for links from a BRI CentralOffice(CO)
- S (subscriber) interface for connecting up to eightBRIdesices.

Note: S interfaces support only basic call features such as calling broj display for BRI devices (BRI call handling such as Hold ili Transfer are not supported). BRI devices are not line powered from the embedded BRImodule.

Note: This modul does not support U interfaces. In North America, we recommend the BRI NSU (NA) for such applications.

TDM Connectivity

Peripheral Cabinet

- Connects via FIM modul, each modul supporting two directly connected peripheral cabinets
- 12 peripheral interface cards per cabinet
- Max 192 analog ili DNI ports
- Can add an expansion cabinet to a peripheral cabinet – providing a total of 384 ports ili 24 peripheral interface cards

Supports:

DID / loop tie card (4 ccts / card)
DNIC line card (16 ccts / card)
DTMF receiver card (16 ccts / card)
E&M trunk card (4 ccts / card)
LS / GS trunk card (8 ccts / card)
Analog, analog CLASS, analog CLASS / CLIP linecards(16 ccts / card)

Dimensions

	3300 Controller	Analog Services Unit (ASU)	Network Services Unit (NSU)	Peripheral Cabinet
Height	CX / CXi / MXe / MXe Server – 3.5 in (8.9 cm) (2U) AX – 13.35 in (39.90 cm) (7U)	ASU – 1.75 in (4.454 cm) (1U) ASU II – 3.3 in (8.4 cm) (2U)	1.75 in (4.454 cm) (1U)	19.0 in (48.0 cm)
Width	CX/CXi/MXe/MXe Server – 17.75 in (45.1 cm) (19" rack mountable) AX – 17.4 in (44.20 cm)	17.75 in (45.1 cm) (19" rack mountable)	17.75 in (45.1 cm) (19" rack mountable)	18.0 in (45.8 cm)
Depth	CX / CXi – 16.5 in (41.9 cm) MXe / MXe Server – 20.25 in (51.4 cm) AX – 13.87 in (35.23 cm)	ASU – 15.5 in (39.4 cm) ASU II – 13.3 in (33.8 cm)	15.5 in (39.4 cm)	19.0 in (48.0cm)
Weight	CX / CXi – 19.8 lb (8.98 kg) MXe – 28 lb. (12.7 kg) MXe Server – 33 lb (15 kg) AX – 39.70 lb. (18.01 kg)	ASU – 10.61 lb. (4.81 kg) ASU II – 14.1 lb. (6.4 kg)	8.41 lb (4.27 kg)	71.8 lb (32.6 kg)

Operational Environment

	3300 Controller	Analog Services Unit (ASU i ASU II)	Network Services Use (NSU)	Peripheral Cabinet
Temperature	40° to 122°F (4° to 50°C)	40° to 122°F (4° to 50°C)	40° to 122°F (4° to 50°C)	40° to 122°F (4° to 50°C)
Humidity	5%-95% relative humidity, non condensing	5%-95% relative humidity, non condensing	5%-95% relative humidity, non condensing	5%-95% relative humidity, non condensing
Max Heat Dissipation – fully loaded	CX / CXi – 170 BTUs per hour MXe – 750 BTUs per hour MXe Server – 1000 BTUs per hour AX – 1024 BTUs per hour	ASU – 170 BTUs per hour ASU II – 260 BTUs per hour	60 BTUs per hour	724 BTUs per hour
Air Flow	46 cubic ft/min at maximum output of fans AX – 110 cubic ft			150 cubic ft/min at maximum output of fans
Acoustic Emissions	Max 50dBA continuous, 75dBA intermittent (<10% duty cycle)			Max 50dBA continuous, 75dBA intermittent (<10% duty cycle)

Conversion factors: One watt is equal to 3.412 BTUs per hour. One ton of refrigeration is equal to 12,000 BTUs per hour ili 3.516 Kilowatts, i 0.75 kilowatt-hour is equal to one ton of refrigeration.

System Input Power Requirements

	3300 Controller	Analog Services Unit (ASU i ASU II)	Network Services Use (NSU)	Peripheral Cabinet
Input/ Disconnect	IEC320-C14 Class 1 AC Receptacle 2 Receptacles on AX i MXe / MXe Server with redundant power	IEC320-C14 Class 1 AC Receptacle	IEC320-C14 Class 1 AC Receptacle	IEC320-C14 Class 1 AC Receptacle
Input Voltage/ Frequency Rating	100-240 VAC 50 / 60 Hz	100-240 VAC 50 / 60 Hz	100-240 VAC 50 / 60 Hz	102-120 VAC 50 / 60 Hz MP914AA PSU Variant 200-240 VAC 50/60 Hz MP914AD PSU Variant
Input Power	CX / CXi 250 W MXe – 200 W MXe Expanded – 250 W MXe Server – 300 W AX – 300 W	ASU – 75 W max ASU II – 125 W max	Universal NSU – 20 W R2 NSU – 30 W	200 W typical (ONS i DNI Mix) 300 W typical (all DNI) 540 W Max (input surge, all DNI)
AC Source	90-264 VAC	90-264 VAC	90-264 VAC	102-132 VAC
Range	47-63 Hz	67-63 Hz	67-63 Hz	47-63 Hz MP914AA 187-264 Hz MP914AD

Glossary

ACD	Automatic Call Distribution	ISDN	Integrated Services Digital Network
ASU	Analog Services Unit	LS	Loop Start Trunk
BRI	Basic Rate Interface	MMC	MITEL Mezzanine Card
BTU	British Thermal Unit	MOH	Music on Hold
CAS	Channel Associated Signaling	MSDN	Mitel Superswitch Digital Network
CCS	Common Channel Signaling	NFAS	Non-Facilities Associated Signaling
CIM	Copper Interface Module	NSU	Network Services Unit
CLASS	Custom Local Access Signaling Services	OPS	Off Premises, long loop analog PBX ports
DASSII	Digital Access Signaling System #2	PRI	Primary Rate Interface, ISDN
DID/DDI	Direct Inward Dial / Direct Dial In	QSIG	Q – Signaling Protocol
DNI	Digital Network Interface	RSTP	Rapid Spanning Tree Protocol
DPNSS	Digital Private Network Signaling System	SIP	Session Initiation Protocol
DSP	Digital Signal Processor	STP	Spanning Tree Protocol
DTMF	Dupli Tone Multi-Frequency	VM	Voice Mail
FIM	Fiber Interface Module	XNET	Switched Networking
IP	Internet Protocol		

Global Headquarters	U.S.	EMEA	CALA	Asia Pacific
Tel: +1(613) 592-2122	Tel: +1(480) 961-9000	Tel: +44(0)1291-430000	Tel: +1(613) 592-2122	Tel: +852 2508 9780
Fax: +1(613) 592-4784	Fax: +1(480) 961-1370	Fax: +44(0)1291-430400	Fax: +1(613) 592-7825	Fax: +852 2508 9232

www.mitel.com

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