DATA SHEET

MITEL

3300 Controllers

Providing feature-rich IP communication and advanced user applications to corporate local and wide area networks

3300 Controllers

	3300 CX II / 3300 CXi II	3300 MXe II / MXe III Standard	3300 MXe II / MXe III Expanded	3300 MXe Server	3300 AX
Maximum number of devices – including software agents[1]	150	350	1,500	5,000	300[2]
Maximum number of IP phones[1]	150	300	1,400	5,000	100[2]
Maximum number of SIP devices / users	150	300	1,000	3,000	100
Maximum ACD Agents[1]	50	100	350	350	50
Maximum 5550 IP consoles	8	16	24	24	8
Maximum number of analog phones[3]	150	350	1,500	0	288
Shipped with:	2 x ADI 21363 DSP modules Power Supply 32 Echo Cancellers AMB	1 Quad DSP Module Power Supply 64 Echo Cancellers AMB	1 Quad DSP Module Power Supply 128 Echo Cancellers AMB	1 Quad DSP Module (integrated) RAID Controller Dual HDD Drives Dual Power Supplies 256 Echo Cancellers	1 Quad DSP Module 2GB Flash Drive Power Supply 40 Echo Cancellers

[1] Engineering rules apply.
[2] For low traffic solutions, like Hospitality systems, up to a maximum of 576 devices will be supported, 288 analog devices and up to 288 IP devices. For systems of this size please refer to Mitel® system engineering.
[3] The Maximum Analog device limit is a nominal figure that depends on the Hardware used to connect the Analog devices. Options include the ASU II, SX200 Peripheral Cabinet and the SX2000 Peripheral Cabinet.

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3300 Controllers (cont'd)

	3300 CX II / 3300 CXi II	3300 MXe II / MXe III Standard	3300 MXe II / MXe III Expanded	3300 MXe Server	3300 AX
Main Software Storage Media	8GB SATA Solid State Drive or 80GB SATA Hard Drive	32GB Solid State Drive or 80GB PATA Hard Drive for MXe II; 160GB SATA Hard Drive for MXe III	32GB Solid State Drive or 80GB PATA Hard Drive for MXe II; 160GB SATA Hard Drive for MXe III	80GB PATA Hard Drive	2GB Flash Drive
Installed RAM:	512MB	512MB	512MB	512MB	512MB
Available MMC Slots	3	6	5	4	2
MMC Slots for:	Quad CIM, Single T1/E1, Quad BRI, and DSP II	Dual FIM, Quad CIM, Single and Dual T1/E1, Quad BRI, Quad DSP, DSP II and Echo Canceller	Dual FIM, Quad CIM, Single and Dual T1/E1, Quad BRI, Quad DSP, DSP II and Echo Canceller	Quad DSP, DSP II and Echo Canceller	Single and Dual T1/E1, Quad BRI, Quad DSP, DSP and Echo Canceller
Maximum embedded T1/E1 digital trunk modules	2 (Do not support Dual trunk modules)	3	4	0	1
Maximum embedded BRI modules	2	3	3	0	1
10/100/1000 MB Ethernet ports	See CXi Controller Data connectivity section	2	2	2	2 (10/100 only)
Maximum Quad DSP or DSP II modules	0 (1)	3 (2)	3 (2)	3 (2)	2 (1)
Maximum Echo Canceller Channels	96	64	192	256	128
Maximum G.729a compression channels (DSP II=128,Quad DSP=32 Dual DSP=16)	64 with DSP II	128	192	256	128
Maximum T38 channels	8	32	32	0	32
Maximum number of NSU's	0	8	8	0	2 (R2 NSU only)
Maximum number of digital links (except BRI)	2	16	16	0	4
Maximum Embedded BRI interfaces (2 channels per interface)	8	12	12	0	4
Maximum number of Dual FIM modules	0	4	4	0	1
Dual FIM can be used to connect:	0	NSU, DSU, Peripheral Cabinets, Triple FIM card and SX200 Bay	NSU, DSU, Peripheral Cabinets, Triple FIM card and SX200 Bay	0	R2 NSU
Analog Main Board[4,5]	6 LS trunks 4 ONS ports	6 LS trunks 4 ONS ports	6 LS trunks 4 ONS ports	0	0

[4] Includes Music-on-Hold (1 source supported), Paging (1 paging zone), System Fail Transfer (2 circuits).
[5] Analog trunks support CLASS Signaling for North America and Latin America.

3300 Controllers (cont'd)

	3300 CX II / 3300 CXi II	3300 MXe II / MXe III Standard	3300 MXe II / MXe III Expanded	3300 MXe Server	3300 AX
Analog Option Board	6 LS trunks 4 ONS ports	0	0	0	0
Analog Line card slots[6]	0	0	0	0	12
Maximum number of CIM connected ASU's	3	12	12	0	0
Applications Processor Card (APC) connectivity	APC COM express module	APC COM express module	APC COM express module	APC COM express module	N/A
Maximum number of Fiber and Copper connected SX200 Bays	0	7	7	0	0
Tone generators	128	128	128	0	128
Tone detector circuits	32	32	32	0	32
E2T Channels	64	64	128[7]	256[8]	128
DTMF Receivers	128	128	192	0	128
IP Networking – maximum IP trunks between controllers	200	200	200	200	200
IP Networking – total max IP trunks	2000	2000	2000	2000	2000
SIP trunking – total maximum SIP trunks	2000	2000	2000	2000	2000
SIP trunking – max SIP trunks between peers	400	400	400	400	400
Maximum controllers in a cluster[9]	999	999	999	999	999
STP and RSTP	Yes	Yes	Yes	Yes	Yes
Embedded Voicemail ports as standard	16	20	20	0	0
Maximum embedded voicemail ports[10]	16	30	30	0	20
Maximum mailboxes	750	750	750	0	750
Storage hours	30 with SSD 130 with HDD	130 with SDD 130 with HDD	130 with SDD 130 with HDD	0	25
Maximum messages per mailbox	100	100	100	0	100

6 The Analog Line card is available in two variants; the 24 ONS circuit card and the 4 LS trunks and 12 ONS extension card. Note the 4+12 Card supports 4 SFT circuits.
7 Supports up to 192 ET2 channels when being used in a Trunking Gateway configuration.
8 Supporting conference, music on hold and paging functions only.
9 Up to 999 controllers can be clustered as a single system to support over 65,000 IP ports. Mitel's System Data Synchronization technology is used to enable feature transparency across a cluster of controllers.
10 Requires an additional 4Gb flash drive on AX controller.

Mitel 3300 CXi II Controller Data Connectivity

Integral 16-port powered Layer 2 10/100 Ethernet switch with embedded 802.af support

Has an additional GigE capable LAN port

- Provides connection to additional switch ports and router

Also has a 10/100 WAN port that is an "Internet Gateway"

- WAN port provides connection to an ISP for Internet access (e.g., DSL or cable)
- WAN port provides NAT and firewall capabilities
- WAN port does not support IP networking

Use external router for IP networking

- Same as you would with a CX II, MXe II, AX Controller

Embedded ACD

- 1,181 agent IDs
- Maximum of 350 total logged-in agents
- 999 paths
- 128 agent groups (500 agent IDs per group)

Embedded Wireless Phones

- SpectraLink® Polycom® 802.11b* or Mitel IP-DECT wireless phones supported
- 802.11b or IP-DECT access points supported

* 802.11b access points must be SpectraLink SVP compliant

SIP Lineside and Trunking specifications

Please see the SIP CoE MCD RFC specifications document on Mitel OnLine for up to date SIP specification support.

Digital Trunk Connectivity

Universal NSU (MXe II and MXe III Controller)

- Connects to MXe II 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 or MSDN / DPNSS or PRI / QSIG)

Supports:

- CAS (T1-D4) – digital E&M, digital CO, digital DID, IDA-P
- T CCS – Primary Rate ISDN, XNET over PRI, QSIG, MSDN / DPNSS
- 1 – QSIG, Euro ISDN, XNET over PRI, DASSII, MSDN / DPNSS

R2 NSU (MXe II Controller, MXe III Controller and AX 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)

Dual Embedded Digital Trunk Module (MXe II Controller, MXe III Controller and AX Controller)

- Each module 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, or T1-D4

Does not support:
Min / Max, NFAS, D-Channel Backup or TDM XNET (Hybrid XNET is supported).

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

- Each module 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 or TDM XNET (Hybrid XNET is supported).

Embedded BRI Module (CX II / CXi II / MXe II / MXe III / AX Controllers)

The Embedded BRI module 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 Central Office (CO)
- S (subscriber) interface for connecting up to eight BRI devices.

NOTE: S interfaces support only basic call features such as calling number display for BRI devices (BRI call handling such as Hold or Transfer are not supported). BRI devices are not line powered from the embedded BRI module.

NOTE: This module does not support U interfaces.

Dimensions

	3300 Controller	Analog Services Unit (ASU)	Network Services Unit (NSU)	Peripheral Cabinet
Height	CX II / CXi II / MXe II / MXe III / MXe Server – 3.5 in. (8.9 cm.) (2U) AX – 13.35 in. (39.90 cm.) (7 U)	ASU – 1.75 in. (4.454 cm.) (1 U) ASU II – 3.3 in. (8.4 cm.) (2 U)	1.75 in. (4.454 cm.) (1 U)	19.0 in. (48.0 cm.)
Width	CX II / CXi II / MXe II / MXe III / MXe Server 17.75 in. (45.1 cm.) (19 in. rack mountable) AX – 17.4 in. (44.20 cm.)	17.75 in. (45.1 cm.) (19 in. rack mountable)	17.75 in. (45.1 cm.) (19 in. rack mountable)	18.0 in. (45.8 cm.)
Depth	CX II / CXi II – 16.5 in. (41.9 cm.) MXe II / MXe III / 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. (48.0 cm.)
Weight	CX II / CXi II – 19.8 lb. (8.98 kg.) MXe II / MXe III – 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 and ASU II)	Network Services Unit (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 II / CXi II – 170 BTUs per hour MXe II / MXe III – 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 or 3.516 Kilowatts, and 0.75 kilowatt-hour is equal to one ton of refrigeration.

System Input Power Requirements

	3300 Controller	Analog Services Unit (ASU and ASU II)	Network Services Unit (NSU)
Input / Disconnect	IEC320-C14 Class 1 AC Receptacle 2 Receptacles on AX and MXe II / MXe Server with redundant power	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
Input Power	CX II / CXi II 250 W MXe II / MXe III – 200 W MXe II / MXe III 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
AC Source	90 – 264 VAC	90 – 264 VAC	90 – 264 VAC
Frequency Range	47 – 63 Hz	67 – 63 Hz	67 – 63 Hz

Glossary

ACD	Automatic Call Distribution
ASU	Analog Services Unit
BRI	Basic Rate Interface
BTU	British Thermal Unit
CAS	Channel Associated Signaling
CCS	Common Channel Signaling
CIM	Copper Interface Module
CLASS	Custom Local Access Signaling Services
DASSII	Digital Access Signaling System #2
DID / DDI	Direct Inward Dial / Direct Dial In
DNI	Digital Network Interface
DPNSS	Digital Private Network Signaling System
DSP	Digital Signal Processor
DTMF	Dual Tone Multi-Frequency
FIM	Fiber Interface Module
IP	Internet Protocol
ISDN	Integrated Services Digital Network
LS	Loop Start Trunk
MMC	MITEL Mezzanine Card
MOH	Music on Hold
MSDN	Mitel Superswitch Digital Network
NFAS	Non-Facilities Associated Signaling
NSU	Network Services Unit
OPS	Off Premises, long loop analog PBX ports
PRI	Primary Rate Interface, ISDN
QSIG	Q-Signaling Protocol
RSTP	Rapid Spanning Tree Protocol
SIP	Session Initiation Protocol
STP	Spanning Tree Protocol
T38	ITU protocol to send FAX transmission across IP Networks
VM	Voice Mail
XNET	Switched Networking
Trunking Gateway	A 3300 Controller used specifically to land PSTN trunks and route them onto a User Gateway
User Gateway	A 3300 Controller / Server used specifically to manage and control Telephones. External traffic is routed via a Trunking Gateway
3300 Controller	Mitel's telephony platform that runs Mitel Communications Director (MCD)

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GD 242_7234 PN 51008713RN-EN