MITEL

3300 | Integrated Communications Platform

Providing feature-rich IP telephony and advanced user applications to corporate local and wide area networks (LAN / WAN)

Controllers

	3300 MX Controller	3300 LX Controller
Typical total number of phones (IP / TDM / Analog)	200	700
Shipped equipped with (standard):	One DSP module 64 echo cancellers Three empty MMC slots	Two DSP modules 128 echo cancellers Five empty MMC slots
Maximum embedded digital trunk modules	2	3
Maximum embedded BRI modules (EMEA and Australia)	3	3
Maximum ACD agents	100 total: Max 50 IP	250 total*
Maximum consoles	8	16
10 / 100 Base T Ethernet ports	1	4
Maximum quad DSP modules	3	5
Maximum echo cancellation channels	64	128

Note: Empty MMC slots can be used for DSP Modules, Dual FIM modules (to the maximum amount specified), echo canceller modules and embedded digital trunk modules. Please note that when peripheral nodes are connected to additional Dual FIM modules, there must be sufficient telecom resources to support them. Please contact your sales engineer for detailed information.

* Engineering rules apply

	3300 MX Controller	3300 LX Controller
Maximum G.729a compression channels (One license required per eight channels) Every 32 channels requires a DSP module	32 Optional	64 Optional
Max number of NSUs	4	8
Maximum number of digital links (except BRI)	8	16
Maximum Number of Dual FIMs (To connect to a TDM peripheral unit, NSU,DSU or Mitel SX-2000 MicroLIGHT Triple FIM Card)	One Dual FIM Two FIM links	Three Dual FIMs Six FIM links
Maximum number of ASUs	2	4
Maximum number of peripheral cabinets	2	6
Maximum number of peripheral cabinets plus peripheral expansion cabinet	4	12
Tone generators	128	128
Tone detector circuits	32	32
E2T channels	64	128
DTMF receivers	128	128
BRI U interfaces (with NSU)	30	60
Embedded BRI module S and/or T interfaces (EMEA and Australia only)	24	24
Max total analog and digital trunks	272	544
IP networking – Max IP trunks between any two controllers	200	200
IP networking – Total max IP trunks	2000	2000
Maximum nodes in a cluster	250	250

Embedded Applications

Embedded Voice Mail

- 20 ports standard, 30 ports optional (needs additional DSP)
- 750 mailboxes max
- 450 storage hours
- 30 simultaneous Auto Attendant or VM sessions (20 is standard, 30 requires additional DSP)
- 100 max messages per mailbox
- Two concurrent system languages
- Multi level options – eight single digit (unlimited multi-digit), maximum of 10 levels

Embedded ACD

- 1181 Agent ID's
- 250 total logged-in agents
- 256 paths
- Either 64 agent groups (150 agent IDs per group) OR 32 agent groups (500 agent IDs per group)

Embedded Wireless

- SpectraLink 802.11b or Mitel IP-DECT* wireless phones supported
- Use as a gateway to: add wireless functionality is to a legacy PBX
- 802.11b** or IP-DECT access points supported
- Custom integration with SpectraLink or IP-DECT MiNet wireless phones

IP Networking

- Support G.711 and G.729 compression
- Connect up to 250 other network nodes
- Total of 2,000 IP Network connections supported to / from any one node
- Up to 200 connections between any two nodes
- One IP network license required per controller

* IP-DECT available in Europe only

** 802.11b access points must be SpectraLink SVP compliant

Digital Trunk Connectivity

Universal NSU

- 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 or MSDN / DPNSS or PRI /QSIG)

Supports:

T1 CAS (T1 / D4) – digital E&M, digital CO, digital DID

T1 CCS – Primary rate ISDN, XNET over PRI, QSIG, MSDN / DPNSS

E1 – QSIG, Euro ISDN, XNET over PRI, DASSII, MSDN / DPNSS

Embedded Digital Trunk Module

- Each module has two E1/T1 trunk interfaces (links)
- Provides PRI / QSIG / T1-D4 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, MSDN or TDM XNET (Hybrid XNET is supported)

BRI NSU

- North American variant supports line side BRI only
- European variant supports both line and trunk side BRI
- Each NSU supports 15 BRI U-interfaces
- Connects to the 3300 ICP through a universal NSU
- Cannot be chained

Supports:

Euro-ISDN, 2B+D, North American National ISDN-1, ISDN-2

Embedded BRI Module*

The Embedded BRI module has four ports supporting 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.

*EMEA and Australia only

R2 NSU

- Each R2 NSU supports two links
- Connects to controller via a FIM link
- Chain two NSUs together via CIM

Analog Connectivity*

Analog Service Unit (ASU)

- Connects to the controller via CIM
- Supports 24 analog CLASS stations

Universal ASU

- Connects to the controller via CIM

Supports:

16 analog CLASS stations

Four LS trunks

Music-On-Hold (one source supported)

Paging (two paging zones per ASU)

System Fail Transfer (qty. four per universal ASU)

Embedded Analog (MX Platform only)

- Built into MX Controller

Supports:

Six LS CLASS trunks

Two analog CLASS stations

Music-On-Hold (one source supported)

Paging (one paging zone)

System Fail Transfer (two circuits)

- Analog Option Module
- One per MX Controller (optional)

Supports:

Six LS CLASS trunks

Two analog CLASS stations

* See Analog Cards in the SX-2000® peripheral cabinet

TDM Connectivity

SX-2000 Peripheral Cabinet

- Connects via Dual FIM module which supports two peripheral nodes each
- 12 peripheral interface cards per node
- Max 192 analog or DNI ports
- Can add an expansion cabinet to a node – this provides a total of 384 ports or 24 peripheral interface cards

Supports:

DID / loop tie card (four ccts / card)

DNIC line card (16 ccts / card)

DTMF receiver card (16 ccts / card)

E&M trunk card (four ccts / card)

LS/GS trunk card (eight ccts / card)

Analog, analog CLASS, analog CLASS / CLIP line cards (16 ccts / card)

OPS line card (eight ccts / card)

Dimensions

	Controller	ASU / Universal ASU	NSU	Peripheral Node
Height	2.7 in. (7 cm) (1.5 U)	1.75 in. (4.454 cm) (1U)	1.75 in. (4.454 cm) (1U)	19.0 in. (48.0 cm)
Width	17.75 in. (45.1 cm) (19" rack mountable)	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	LX Controller– 15.5 in. (39.4 cm) MX Controller – 19.6 in (50 cm)	15.5 in. (39.4 cm)	15.5 in. (39.4 cm)	19.0 in. (48.0 cm)
Weight	LX Controller – 15.8 lb. (7.17 kg) MX Controller – 14 lb (6.39 kg)	10.61 lb. (4.81 kg)	8.41 lb. (4.27 kg)	71.8 lbs (32.6 kg)

Operational Environment

	Controller	ASU / Universal ASU	NSU	Peripheral Node
Temperature	41° to 122°F (5° to 50°C)	41° to 122°F (5° to 50°C)	41° to 122°F (5° to 50°C)	32° to 122°F (0° to 50°C)
Humidity	40-90% relative humidity, non condensing	34-95% relative humidity, non condensing	34-95% relative humidity, non condensing	5-95% relative humidity, non condensing
Max Heat Dissipation – Fully Loaded	LX Controller – 750 BTUs per hour MX Controller – 500 BTUs per hour	170 BTUs per hour	170 BTUs per hour	724 BTUs per hour
Air Flow output of fans fans	46 cubic ft / min at max			150 cubic ft / min at max output of
Acoustic Emissions	Max 50dBA continuous, 75 dB intermittent (<10% duty cycle)			Max 50dBA 75 dB 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

	Controller	ASU/Universal ASU	NSU	Peripheral Node
Input/Disconnect	IEC320-C14 Class 1 AC Receptacle	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 50/60Hz	100–240 VAC 50/60 Hz	100–240 VAC 50/60Hz	102–120 VAC 50/60 Hz MP914AA PSU variant 200-–240 VAC 50/60 Hz MP914AD PSU variant
Input Power	MX Controller– 100 W LX Controller – 135 W	60W maximum	60W (Universal and R2) 60 W (BRI) 30 W (T1/E1)	212 W maximum
AC Source Range	90-64 VAC 47–63 Hz	90–264 VAC 47–63 Hz	90-–64 VAC 47–63 Hz	102–132 VAC 47–63 Hz or 187–264 VAC 47–63Hz depending on variant

Grounding Requirements

The grounding conductor must be an insulated grounding conductor, sized according to the National Electrical Code (NEC) in the United States (NFPA / ANSI 70 Section 250–95, Exception. No. 1, and Section 240-4, Exception No. 1).

The grounding conductor is provided as part of the three-wire, 15-Amp, AC-power cord set included with the equipment. If the power cord must be replaced, use a power cord of the same gauge that has the same insulation, number of conductors, and usage ratings.

The grounding conductor must be:

- Not smaller in size than, and equivalent in insulation material and thickness to, the grounded and ungrounded branch circuit supply conductor
- An insulated green wire with yellow stripes
- Part of the circuit that supplies that product or system
- Connected to ground at the service equipment

The protective grounding conductor must comply with the general rules for grounding contained in Article 250 of the National Electrical Code, NFPA 70, or Section 10 of the Canadian Electrical Code, CSA C22.1. The protective grounding conductor must not depend on the power cord and plug of the product.

The protective grounding conductor must be:

- An insulated wire, #6 (13mm2) to #14 (2mm2) AWG, with green and yellow stripes
- Connected to the grounding stud on the back of the cabinet

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	Direct Inward Dial
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
VM	Voice Mail
XNET	Switched Networking

MH Communications (UK) Ltd.
Springsteen House, 497 Warrington Road
Rainhill, Merseyside, L35 0LR
Telephone: 0871 871 8712
Fax: 0871 871 8715
Email: info@mhcomms.co.uk
www.mhcomms.co.uk