MITEL

SX-200 IP Communications Platform

Advanced, Affordable Communications System for Small Business

Controllers

	SX-200 ICP CX / CXi Controller	SX-200 ICP MX Controller
Maximum desktop stations	150	672
Maximum IP phones	100	248
Maximum TDM devices	104	192 (6 ASU IIs) or 672 (via peripheral cabinets)
Maximum embedded digital trunk modules	1	4
Maximum T1 modules	1 x single T1 module	2 x dual link T1 module
Maximum ACD agents	50 IP	100 IP + TDM
Maximum consoles	N/A	11 SuperConsole 1000
Maximum Dual or Quad DSP modules	1 DSP module	2 DSP modules
Maximum echo cancellation channels	12 default / 42 maximum with optional DSP module	64 maximum
Maximum G.729a compression channels (Every 8 channels requires a DSP)	16	24
Maximum Network Service Units (NSUs)	N/A	4
Maximum Quad Copper Interface Modules (CIMs)	1	2
Maximum Analog Service Unit IIs (ASUIIs)	3	6
Maximum number of Peripheral (Digital) Bays	N/A	7

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Controllers (cont'd)

	SX-200 ICP CX / CXi Controller	SX-200 ICP MX Controlle
Maximum number of Dual Fiber Interface Modules (FIMs)	N/A	2
IP networking	16 IP channels Max 100 systems / network	30 IP channels Max 100 systems / network
Maximum voice mail ports	16	24
Maximum embedded voice mail boxes	748	748
Shipped with (standard):	1 RS-232 port 2 empty MMC slots 6 LS / CLASS circuits 4 ONS / CLASS circuits 1 Music On Hold port 1 paging port 2 Power Fail Transfer circuits 4 ports Voice Mail 1 dual DSP embedded 64 E2T channels DHCP Server 2 USB ports 2 door relays 10/100/1000 Base – TX LAN port 10 / 100 Base – TX WAN port (CXi only) 16 Port L2 PoE 10/100 Switch (CXi only)	2 RS-232 ports 3 empty MMC slots 6 LS / CLASS circuits 2 ONS / CLASS circuits 1 Music On Hold port 1 paging port 2 Power Fail Transfer circuits 4 ports Voice Mail 1 Dual DSP module 64 E2T channels DHCP Server 2 DNIC circuits 2 CIM ports 10 / 100 Base – TX LAN port

Hardware Option Modules

	SX-200 ICP CX / CXi Controller	SX-200 ICP MX Controller
Analog Option Module Provides additional	4 ONS 6 LS / CLASS 1 paging port 2 relays 2 power fail transfer circuits	2 ONS / CLASS 6 LS / CLASS
DSP modules	Dual or quad expand voice mail, conferences, compression	Dual or quad module expands voice mail, conferences, compression, echo cancellation channels
Digital trunking	T1 single link combo module	Dual T1 module – 2 links / module
		Dual FIM modules support PRI card or SX-200 peripheral (digital) cabinets
		SX-200 NSU provides dual link PRI connections

Support for Mitel IP Phones:

Mitel 5201 IP Phone
Mitel 5212 IP Phone
Mitel 5224 IP Phone
Mitel 5330 IP Phone
Mitel 5340 IP Phone (Backlit)
Mitel Superset 4015
Mitel Superset 4025
Mitel SuperConsole 1000

Support for IP Peripherals:

Mitel 5310 IP Conference Unit
Mitel IP Programmable Key Module (PKM) – 12 buttons
Mitel IP Programmable Key Module (PKM) – 48 buttons
Mitel Wireless LAN Stand
Mitel Gigabit Ethernet Stand

SX-200 ICP CXi Controller Data Connectivity

Integral 16-port Power over Ethernet Layer 2 10 / 100 Ethernet switch 10 / 100 / 1000 Ethernet uplink port for connection to additional switch ports and / or router WAN Port for "Internet Gateway" support

- WAN port provides connection to an ISP for Internet access (e.g., DSL or cable) and supports NAT and Firewall capabilities (external router required for IP Networking)

Embedded Applications

Embedded Voice Mail with Auto Attendant

- MX: 4 Auto Attendant or VM simultaneous sessions standard, expandable to 24 sessions
- CX / CXi : 4 Auto Attendant or VM simultaneous sessions standard, expandable to 16 sessions (requires additional DSP)
- 20 expandable up to 750 mailboxes
- 450 storage hours (with hard drive)
- Up to 100 messages per mailbox
- Two concurrent system languages
- Multi level Auto Attendant options – eight single digit (unlimited multi-digit), maximum of 10 levels
- Hospitality

Embedded ACD

- Up to 999 Agent IDs
- Up to 100 IP + TDM (MX) and 50 IP (CX / CXi) logged-in agents at once
- Up to 99 paths
- Up to 50 agent groups
- Up to 99 agents per agent group

IP Networking

- Supports G.711 and G.729 compression
- Connect up to 100 other network nodes
- Total of 30 (MX) or 16 (CX / CXi) IP network connections to / from any one node
- One IP network license required per controller

Embedded Wireless Phones

- SpectraLink 802.11b wireless phones supported via SpectraLink SVP compliant 802.11b access points

Partial List of Supported Features

Account Codes
ANI / DNIS
Auto Attendant
Automatic Route Selection (ARS)
Automatic Call Distribution (ACD)
Broker's Call (Station Swap or Transfer with Privacy)
Busy Lamp Field (BLF)
Call Forwarding
Call Logging
Call Monitor
Call Park and Page
Callback – Busy or No Answer
Campon
Centralized Attendant
CENTREX
CLASS (analog / digital)
Class of Restriction (COR)
Class of Service (COS)
Conference
Direct Inward Dial (DID)
Direct Inward System Access (DISA)
Direct Station Page/Busy Lamp Field (DSS / BLF)
Emergency Calls (911) Reporting to PSAP
FAX Tone Detection
Feature Keys
Flash Control
Group Listen
Hold
Hold and Page
I Hold / You Hold
Languages
Line Appearances
  Prime Line
  Key Line
  Multicall Line
  Direct Trunk Select
Messaging – Advisory
Music on Hold (MOH)
Night Service
Off-Hook Voice Announce
Off Premises Extension (OPS)
Paging
Personal Speed Call
Pickup Groups
Phone Twinning
Q.SIG
Recorded Announcement Device (RAD) Support
Record-a-Call
Redial
Secretarial Line
SMTP Client
Speed Call Key
Station Message Detail Recording (SMDR)
Sub-attendant
Tenanting
Transfer
Trunk Answer From Any Station (TAFAS)
Uniform Call Distribution
Voice Mail Support
Whisper Announce

Digital Trunk Connectivity

Universal NSU (MX Controller only)

- Connects to controller via a FIM or CIM port
- Each NSU supports up to two digital links
- Both links in an NSU must run the same protocol

Provides T1 CCS PRI (NI2 Standard, NI2 5ESS, NI2 GTD5) and QSIG (QSIG ISO), DMS 100/250, 4ESS

Dual Embedded Digital Trunk Module (MX Controller only)

- Each module has two T1 trunk interfaces (links)
- Provides PRI and / or T1 / D4 protocol through the controller (no NSU required)*

Single Embedded Digital Trunk Module (CX / CXi Controllers)

- Provides PRI or T1 / D4 protocol through the controller (no NSU required)*

Analog Connectivity

Analog Service Unit II (ASU II) (CX / CXi / MX Controllers)

- Chassis with 2 line card slots
- Two line card variants:
  16 ONS Line Card
  4 LS + 12 ONS Combo Line Card
- Connects to the controller via CIM

Supports combinations of:

32 analog CLASS stations (16 per ONS LineCard)
8 LS trunks (4 per Combo Line Card)
8 System Fail Transfers (4 per Combo Line Card)

TDM Connectivity

Peripheral Cabinet (MX Controller only)

Supports:

- ONS / CLASS Line Card (12 DTMF, Rotary line circuits/card)
- Digital Line Card (12 Digital Network Interface Circuits (DNIC) / card)
- LS / GS Trunk Card (6 loop start or ground start trunks (jumper-selectable) and 6 message registration inputs)
- LS / CLASS Trunk Card (8 trunk circuits to the system)
- Direct Inward Dial (DID) Trunk Card (6 one-way Direct Inward Dial circuits)
- Off-Premise (OPS) Line Card (6 circuits / card)
- E&M Trunk Module (4 circuits / card)

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

Dimensions

	SX-200 ICP Controller	Analog Services Unit II (ASU II)	Network Services Unit (NSU)	Peripheral Cabinet
Height	CX / CXi - 3.5 in (8.9 cm) (2U) MX – 2.7 in. (7 cm) (1.5 U)	3.3 in. (8.4 cm) (2U)	1.75 in (4.454 cm) (1U)	11" (28 cm)
Width MX – 17.3 in (44 cm)	CX / CXi – 17.75 in (45.1 cm) (19" rack mountable)	17.4 in (44.2 cm) (19" rack mountable)	17.75 in (45.1 cm) (19" rack mountable)	17" (43 cm) (19" rack mountable)
Depth	CX / CXi – 16.5 in (41.9 cm) MX – 19.6 in. (50 cm)	13.3 in. (33.8 cm)	15.5 in (39.4 cm)	17" (43 cm)
Weight MX – 14 lb (6.39 kg)	CX / CXi – 19.8 lb (8.98 kg)	14.1 lb. (6.4 kg)	8.41 lb (4.27 kg)	47 lb (21 kg) Cards installed

Operational Environment

	SX-200 ICP Controller	Analog Services Unit II	Network Services Use (ASU II)	Peripheral Cabinet (NSU)
Temperature	41° to 122°F (5° to 50°C)	40° to 120°F (4° to 49°C)	40° to 120°F (4° to 49°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 (Fully Loaded)	750 BTUs per hour	260 BTUs per hour	170 BTUs per hour	724 BTUs per Dissipation hour
Air Flow max output of fans	46 cubic ft / min at			150 cubic ft / min at max output of fans
Acoustic Emissions	Max 50dBA continuous, 75 dB intermittent (<10% duty cycle)			Max 50dBA continuous, 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

	SX-200 ICP Controller	Analog Services Unit II (ASU II)	Network Services Unit (NSU)	Peripheral Cabinet
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 – 120 VAC 50/60Hz	100–240 VAC 50/60Hz	100 – 240 VAC 50/60Hz	For North America: 100 – 120 / 200 – 240 VAC auto selectable For Europe: 200 – 240VAC
Maximum Input Power	CX / CXi – 300W MX – 100W	125W	20W —-Universal 30W —- R2 40W —- BRI	300 W
AC Source Range	90 – 264 VAC 47 – 63 Hz	90 – 264 VAC 47 – 63 Hz	90 – 264 VAC 47 – 63 Hz	47 – 63 Hz

Glossary

ACD	Automatic Call Distribution
ASU	Analog Services Unit
CIM	Copper Interface Module
CLASS	Custom Local Access Signaling Services
DID	Direct Inward Dial
DNI	Digital Network Interface
DSP	Digital Signal Processor
FIM	Fiber Interface Module
IP	Internet Protocol
ISDN	Integrated Services Digital Network
LS	Loop Start Trunk
MMC	Mitel Mezzanine Card
MOH	Music on Hold
NFAS	Non-Facilities Associated Signaling
NSU	Network Services Unit
OPS	Off Premises, long loop analog PBX ports
PRI	Primary Rate Interface, ISDN
VM	Voice Mail

Electronic Communication Services

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