



TECHNICAL SPECIFICATIONS



Universal Media Gateway

Matrix SARVAM UMG is a Universal Connectivity Media Gateway offering connectivity to VOIP, GSM/3G/4G, T1/E1 PRI, and POTS networks on a single platform. It allows users to make and receive calls transparently on all networks. It supports flexible and intelligent Least Cost Routing (LCR), leading to significant cost savings and round-the-clock connectivity. It allows enterprises to dynamically select one of the networks on a per-call basis for the benefits of improved reach, reduced cost, and enhanced quality of service. Matrix SARVAM UMG links an organization’s existing infrastructure to the new-age communication networks ensuring the right connectivity and the least cost for each call. The gateway is an ideal solution for workplaces such as call centers, ISP, ITSPs, wholesale terminators, and organizations experiencing high call traffic on a per-day basis.

Parameters	Specifications
System Capacity	
Expansion Slots	12

Expansion Cards	64 VOIP Channels per Module (Max. 2 Modules)
	4 GSM/3G/4G SIM per Interface Card
	23/30 Digital (T1/E1 PRI) Channels per Interface Card
	8/16 FXO Ports per Interface Card
	8/16/20 FXS Ports per Interface Card

VoIP Port	
Protocol	SIP v2
Physical Connector	Ethernet (RJ45)
Voice Quality	G.168 Echo Cancellation, Layer3 QoS and DiffServ and CNG
Voice Codecs	G.711 (A-law, μ-Law), G.723, G.729AB, GSM-FR, GSM-EFR, and iLBC Voice Codec
SIP Trunks	250

Mobile Port	
Frequency Bands	2G: GSM 850, EGSM900, DCS1800, PCS1900, UMTS 850/900/1900/2100
	3G: GSM 850, EGSM900, DCS1800, PCS1900, UMTS 850/900/1900/2100
	4G: For EMEA Region - LTE FDD: B1/B3/B5/B7/B8/B20 LTE TDD: B38/B40/B41

	<p>WCDMA: B1/B5/B8 GSM: B3/B8</p> <p>For North America - LTE FDD: B2/B4/B12/B13 WCDMA: B2/B4/B5</p> <p>For Australia - LTE FDD: B1/B3/B5/B7/B28 WCDMA: B1/B5</p>
Compliance	ETSI GSM Phase 2/2+
SIM Interface	1.8, 3V SIM Interface
Antenna	Panel Mount or Extended Cable Antenna
	1.8/3.0 dBi, 50 Ω SMA (Male) Connector

T1/E1/PRI	
Channels	2B+D
Physical Connector	RJ48 (120 Ω)
Personality	Network (NT) and Terminal (TE)
Switch Variants	AT&T 4ESS, AT&T 5ESS, DMS-100, ETSI NET5, ITU-T Q.921, ITU-T Q.931, NTT INS64, US NI2 (National ISDN 2), QSIG ECMA and France VN Signaling
Framing	ESF for T1 and CEPT1 (with/without CRC) for E1

FXO Port	
Physical Connector	RJ11

Dialing	DTMF and Pulse (10/20PPS)
Loop Limit	1200W
CLI Presentation	DTMF, FSK ITU-T V.23 and FSK Bellcore 202A CLI

FXS Port	
Physical Connector	TJ11
Dialing	DTMF and Pulse (10/20PPS)
CLI Presentation	DTMF, FSK ITU-T V.23 and FSK Bellcore 202A CLI
Call maturity	Polarity Reversal

Power Supply	
Input	Option 1 (Mains): 100-240 VAC, 47-60 Hz
	Option 2 (DC): 48VDC +20% to -15%
Power Consumption	170W (Typical)

Mechanical	
Dimensions (W x H x D)	43.65 x 22.6 x 17.35 cm (17.18" x 8.9" x 6.83")
Unit Weight	5 Kg (11.02lbs)
Shipping Weight	8 Kg (17.63lbs)

Mounting Options	Wall Mount, Table Top and 19" Rack Mount with 4U Enclosure
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Environmental	
Operating Temperature	0°C to +45°C (32°F to 113°F)
Storage Temperature	-20°C to +70°C
Operating Humidity	5-95% RH (Non-condensing)
Storage Humidity	0-95% RH (Non-condensing) at 40°C

Regulatory Compliances	IEC 61000-3-2, IEC 61000-3-3, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11, IEC 60950-1, IEC 6000 68-2-6:2007, IEC 68-2-27, IS:9000, TEC, RoHS, FCC Part15 and FCC68, CE
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System Scalability		
Parameters	Description	Specifications
Universal Slots	For Interface Expansion Cards (except VOIP and VMS)	12
SIP Trunks	SIP Trunks (Clients) for ITSP or Peer-to-Peer	250 Max.
VoIP Channels	VOIP Channels for Simultaneous Calling with Transcoding	128 Max.
NX DBM VOCODER64	DAUGHTER-BOARD MODULE on CPU for VOCODER (VOIP) Channels	2

GSM/3G/4G Ports	GSM/3G/4G Network	48 Max.
T1/E1 PRI Ports	T1 or E1 or ISDN PRI Network or Compatible Device	8 Max.
CO/FXO (TWT) Ports	Two Wire Trunk (CO) Lines	192 Max.
SLT/FXS Ports	Single Line Analog Telephones	240 Max.
Max Concurrent IP-TDM Calls	IP-TDM Audio Calls	128

Note: Specifications are subject to change without prior notice

ABOUT MATRIX

Established in 1991, Matrix is a leader in Security and Telecom solutions for modern organizations. Matrix offers a comprehensive range of solutions for IP Video Surveillance, Access Control, Time-Attendance, and Telecom applications. The solutions are designed to meet the communication and security requirements of large enterprises having offices in multiple locations, SMEs, and SMBs.

As an innovative, technology-driven, and customer-focused organization, Matrix is committed to keeping pace with the revolutions in the Security and Telecom industries. With around 40% of its human resources dedicated to the development of new products, Matrix has launched over 60 cutting-edge products and solutions.

IP Video Surveillance includes solutions like Video Management Systems, Network Video Recorders, and IP Cameras. Likewise, solutions in Access Control and Time-Attendance include Visitor Management Solutions, Elevator Access Control, Panels, Door Controllers, and Readers.

We offer Telecom Solutions such as Unified Communications, IP-PBX, Universal Media Gateways, VoIP and GSM Gateways, and Communication Endpoints. All these solutions are feature-rich, reliable, and conform to international standards.



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