

## TECHNICAL SPECIFICATIONS



### MATRIX ETERNITY NENX312

Matrix ETERNITY NENX is a small yet powerful phone system for small businesses, offering advanced features and functionalities as available with enterprise-grade IP-PBXs, based on modular architecture and state-of-the-art design, ETERNITY NENX provides connectivity to CO (FXO), GSM<sup>#</sup>/3G/4G and VoIP networks from a single platform. A range of phone options such as Analog, IP, and Mobile extensions provides flexibility to communicate from anywhere and at any time. Furthermore, ETERNITY NENX offers an integrated voicemail system, multiple auto-attendants, and web-based remote management.

Parameters	Specifications
<b>TECHNOLOGY</b>	
<b>Type of Switching</b>	PCM/TDM Digital Switching (100% Non-Blocking)
<b>Processor</b>	32-bit RISC
<b>Compatible Software Server</b>	SARVAM UCS SOHO (In-built)

PORTS	
Analog Trunk Ports	3*
Analog Extension Ports	12*
Ethernet Port	10/100 RJ45
VoIP Channels	8
GSM/3G/4G Ports	2 <sup>α</sup>
SIP Trunks	8
VoIP Server Module	1
IP Users Ports	50 <sup>β</sup>
Maximum IP to IP Calls (RTP and SRTP)	25
Maximum IP to IP Calls (Transcoding)	4
Maximum IP to TDM Calls	8
Voicemail Channels	4

\*: In-Built  
α: Optional  
β: Scalable

GSM	
GSM/3G/4G Ports	2
Frequency Band (MHZ)	Quad-Band: GSM850, EGSM900, DCS1800, PCS1900
Compliant	ETSI GSM Phase 2/2+
SIM Card	One SIM per GSM Port
SIM Interface	1.8V, 3V
Transmission Power	Class 4 (2W) at GSM850 MHz and EGSM900 MHz Band Class 1 (1W) at DCS 1800 MHz and PCS 1900 MHz Band
RF Sensitivity	Better than -106dBm
Protocol	AT Command Interface
External Antenna	One Antenna per 4 GSM Ports, 1.8/3.0* dBi, 50Ω SMA (Male) Connector, Omni Directional with Cable of 3 Meters Length

SLT (ANALOG STATION)	
Signaling	Loop Start
Dialing	DTMF and Pulse (10/20PPS)

<b>Off Hook AC Impedance</b>	600/900/Complex
<b>Off Hook Current</b>	40mA Max
<b>Loop Limit</b>	1800Ω Max (Excluding Telephone)
<b>On-Hook Voltage (Tip/Ring)</b>	48V Nominal
<b>DTMF Detection</b>	ITU-T Q.24
<b>Return Loss</b>	>18dB
<b>Longitudinal Balance</b>	>50dB
<b>Transmission Level Adjust</b>	Tx Gain: -10dB to +6dB, Rx Gain: -10dB to +6dB
<b>Ringling</b>	Trapezoidal 60VRMS/25Hz and Sinusoidal 52VRMS/25 Hz
<b>REN</b>	3
<b>CLI Presentation</b>	DTMF, FSK ITU-T V.23 and FSK Bellcore 202
<b>Protection</b>	Over Voltage Secondary Protection
<b>Physical Connector</b>	RJ11

<b>CO (TWT- Two Wire Trunk)</b>	
<b>Signaling</b>	Loop Start
<b>Loop Limit</b>	1200Ω
<b>Off Hook AC Impedance</b>	600/900/Complex
<b>Pulse Dialing</b>	10/20PPS
<b>DTMF Dialing and Reception</b>	ITU-T Q.23 & Q.24
<b>Return Loss</b>	>18dB
<b>Longitudinal Balance</b>	>50dB
<b>Transmission Level Adjust</b>	Tx Gain: -15dB to +10dB Rx Gain: -15dB to +10dB
<b>CLI Reception</b>	DTMF, FSK ITU-T V.23 and FSK Bellcore 202
<b>Call Maturity</b>	Delay and Polarity Reversal
<b>Protection</b>	Over Voltage Over Current Secondary Protection
<b>Physical Connector</b>	RJ11

<b>3G</b>	
<b>Frequency Band (MHZ)</b>	Quad-Band: GSM850, EGSM900, DCS1800, PCS1900

	UMTS A Module: Tri-Band: WCDMA 850/1900/2100 UMTS E Module: Tri-Band: WCDMA 900/1900/2100
<b>Compliant</b>	ETSI GSM Phase 2/2+
<b>SIM Card</b>	One SIM per GSM Port
<b>SIM Interface</b>	1.8V, 3V
<b>Transmission Power</b>	Class 4 (2W) at GSM850 MHz and EGSM900 MHz Band Class 1 (1W) at DCS 1800 MHz and PCS 1900 MHz Band Class 3 (0.25W) at WCDMA 850/1900/2100 MHz Band
<b>RF Sensitivity</b>	<-106dBm at GSM850, EGSM900, DCS1800, PCS1900 <-108dBm at WCDMA2100, WCDMA1900 <-106dBm at WCDMA850
<b>Protocol</b>	At Command Interface
<b>External Antenna</b>	One Antenna per UMTS(3G) Ports, 1.8/3.0* dBi, 50Ω SMA (Male) Connector, Omni Directional with Cable of 3 Meters Length

### VOICEMAIL

<b>VMS Channels</b>	4
<b>Voicemail Box</b>	Dedicated Mail Box for all Extension users
<b>Factory-fitted Pen-Drive</b>	8 GB
<b>Voice-Recording</b>	Up to 1152 Hours with 32 GB Pen-Drive
<b>Max. IP to IP Call</b>	25
<b>Max. IP to TDM Call</b>	8

### VoIP

<b>Type</b>	DAUGHTER-BOARD MODULE on CPU
<b>Voice CODECs</b>	G.711 (A-law, μ-law), G.723, G.729AB, GSM-FR, iLBC
<b>VoIP Protocols</b>	SIP, SDP, RTP, SRTP

<b>Network Protocol</b>	IPv6, IPv4, TCP, UDP, DHCP, VLAN, DynDNS, PPPoE, QoS, STUN
<b>Transport Protocol</b>	UDP, TCP, TLS
<b>SIP</b>	Maximum 8 SIP Accounts per System, Out-Bound Proxy Support, Display Name, User Name, Password, URL, Proxy URL, Register Interval
<b>VoIP Channels</b>	8
<b>Line Echo Cancellation</b>	G.168 with 32/64/128ms Tail Length
<b>Voice</b>	Dynamic Jitter Buffer (Adaptive), Comfort Noise Generation and Voice Activity Detection
<b>DTMF</b>	RTP (RFC2833), SIP Info, IN-Band
<b>NAT</b>	STUN and NAT Keep Alive
<b>Call Progress Tones</b>	Dial tone, Ring Back Tone, Busy Tone, Error Tone
<b>LAN</b>	1 x 10/100 Mbps
<b>Voicemail</b>	Yes
<b>T.38 Fax</b>	Yes
<b>Quality of Service</b>	SIP QoS and RTP QoS
<b>Security</b>	MD5 Authentication for SIP, Password Protected Configuration by Admin and User
<b>Physical Connector</b>	Ethernet (RJ45) Gigabit Port, Auto MDIX 910/100 base-T)

#### MECHANICAL

<b>Max. External Storage</b>	32 GB
<b>Unit Weight</b>	1.20 kg
<b>Dimensions (W x H x D)</b>	320.2 x 51.1 x 208.1 mm
<b>Type of Shipping Material</b>	Corrugated Box
<b>Installation</b>	19" Rack Mount, Wall Mount, Table Top

#### POWER SUPPLY

<b>Inputs</b>	24 V DC 2.5Amp
<b>Power Consumption</b>	15 W

<b>LED Indications</b>	One Antenna per UMTS (3G) Ports, 1.8/3.0*dBi, 50Ω SMA (Male) Connector, Omni Directional with Cable of 3 Meters Length
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<b>ENVIRONMENTAL</b>	
<b>Operating Temperature</b>	0° to +45° C
<b>Storage Temperature</b>	-20° to 45° C
<b>Operating Humidity</b>	5-95 % RH Non-Condensing
<b>Storage Humidity</b>	0-95% RH, Non-Condensing

<b>COMPLIANCE LIST</b>		
<b>EMI/EMC</b>	Conducted Emission	EN55032
	Radiated Emission	EN55032
	Harmonic Current Emission	EN 61000-3-2
	Voltage Flicker	EN 61000-3-3
	Electro-static Discharge	IEC 61000-4-2
	Radiated Susceptibility	IEC 61000-4-3
	Electrical Fast Transient	IEC 61000-4-4
	Surge	IEC 61000-4-5
	Conducted Immunity	IEC 61000-4-6
	Power Frequency Magnetic Field	IEC 61000-4-8
	Voltage Interruption and Dips	IEC 61000-4-11
<b>FCC</b>	Conducted Emission	FCC Part 15 Sub-Part B
	Radiated Emission	FCC Part 15 Sub-Part B
<b>EC Directives</b>	LVD 2014/35/EU	
	EMC 2014/30/EU	
<b>RoHS Recast RoHS2</b>	2011/65/EU (As per Standard EN 50581:2012)	
<b>Safety</b>	IEC/EN 60950-1:2006 + A11:2009 + A1:2010 + A2:2013	
<b>Environment Test</b>	Cold Test	NA
	Dry Heat Test	NA

	Damp Test	NA
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**#: For compatibility and use of Matrix GSM products (2G and 4G) in Russia and Iran province connect with Matrix sales or technical support team**

**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 businesses and enterprises. As a technology-driven, and customer-focused organization, the company 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 cutting-edge products like Video Surveillance Systems – Video Management Systems, Network Video Recorders and IP Camera, Access Control and Time-Attendance Systems as well as Telecom Solutions such as Unified Communications, IP-PBX, Universal Gateways, VoIP and GSM Gateways and Communication Endpoints. These solutions are feature-rich, reliable, and conform to international standards.

Having global footprints in Asia, Europe, North America, South America, and Africa through an extensive network of more than 4000+ channel partners, Matrix ensures that the products serve the needs of its customers faster and longer.

Matrix has ISO 27001: 2013, 20000-1 2018, 14001- 2015, and 9001: 2015 certifications for quality management standards. Matrix has also been awarded ZED Quality Certification, and DSIR Certification for indigenous R&D and Manufacturing. Matrix has gained the trust and admiration of customers representing the entire spectrum of industries.



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