



## ETERNITY NE

### The Next Generation IP-PBX for Small Businesses

Today's challenging business scenario requires small businesses to be productive and deliver excellent customer services with limited human and IT resources. An efficient phone system that can streamline business communication, control telephony cost and provide flexibility in working style is the need of the hour.

Matrix ETERNITY NE is a small yet powerful phone system for small business delivering all advance features and functionalities as available with enterprise-grade IP-PBXs.

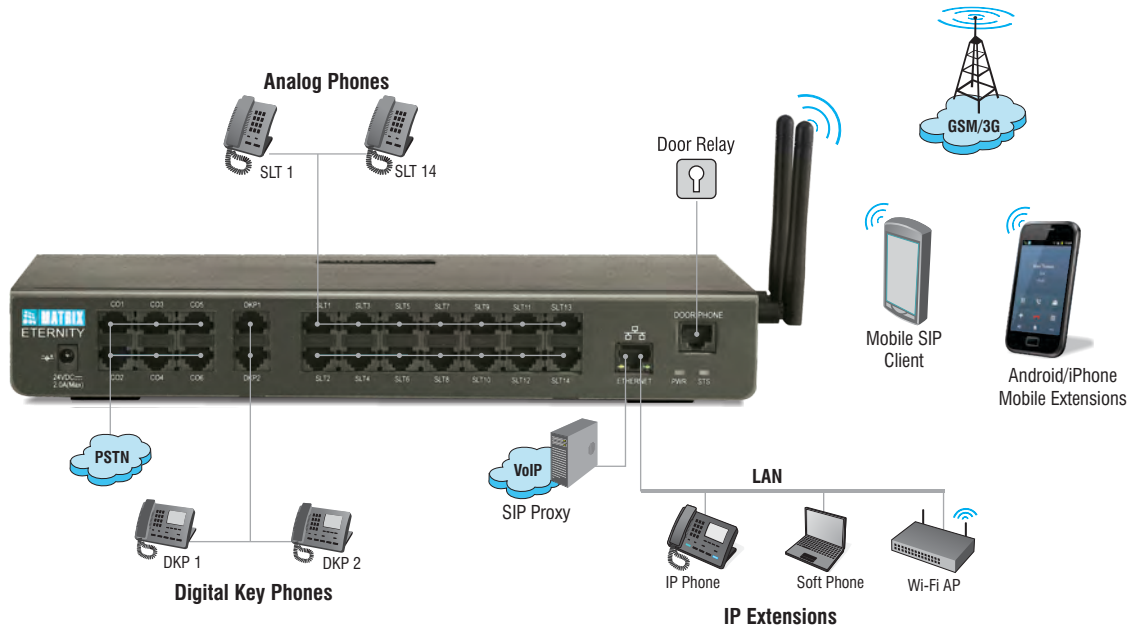
Based on modular architecture and state-of-the-art design, ETERNITY NE provides connectivity to CO (FXO), GSM/3G and VoIP networks from a single platform. Range of phone options such as Analog, Digital, IP and Mobile extensions provides flexibility to communicate from anywhere and anytime. Furthermore, ETERNITY NE offers integrated voice mail system, multiple auto-attendants and web-based remote management.

IP-PBX	Android Softphone	GSM/3G	Voice Mail	SMS
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#### Solution Overview

- Ideal for Small Office, Branch Office, Home Office
- 6 to 32 Users
- VoIP, GSM/3G and POTS Trunks
- Analog, Digital, IP and Mobile Extensions
- Teleworkers and Mobile Workforce Integration
- Integrated Auto-Attendant and Voice Mail
- Unified Messaging (Voice Mail to Email)
- IP Extensions over UMTS (3G)

## ETERNITY NE CONNECTIVITY



## SOLUTION OVERVIEW



### All-in-One Business Class IP-PBX

Delivers Advanced Telephony Features such as Mobility, Teleworking, Voice Mail and SMS



### Provides VoIP Telephony

Offers Benefits of SIP Trunking, Remote Extensions and Superior Voice Quality



### Extends Office Reach

Delivers Complete Access to ETERNITY NE Features from Android/iPhone Softphone Application



### Offers Built-in GSM Integration

Save on Frequent Calls made to Mobile Numbers by Placing Calls through Mobile Trunks



### Flexibility to Work from Anywhere

Analog Phones, Digital Key Phones, IP Phones, PC Softphones and Mobile Phones as Office Extensions



### Plays Automated Messages 24x7

Answers every Call with Personalized and Automated Greetings



### Reduces Telephony Costs

Shared Lines, Least Cost Routing and Integrated Voice Mail Reduces Telephony Expenses



### Understands Business Needs

Single Device that performs Multiple Roles - Key Phone System, IP-PBX and GSM PBX



### Delivers Advance Call Capabilities

Call Transfer, Pickup, Follow-me, Conference, Auto-Attendant, Voice Mail, Music-on-Hold



### Delivers Value for Money

Realize early ROI and Avoid Expense on Devices such as Voice Gateway, SIP Server and Voice Mail

## USER TERMINALS



IP Phones



Digital Key Phones



Analog Phones



PC Softphones



Android/iPhone Mobile Extensions



IP-DECT

## VoIP TELEPHONY

Small businesses are embracing VoIP in their day-to-day office communication realizing the cost benefits and flexibilities offered by VoIP. ETERNITY NE sends all long distance calls via data packets over internet instead of traditional telephony networks. ETERNITY NE VoIP

Server module comes with integrated Registrar, Proxy and Presence server. It can register up to 16 local or remote IP extensions and 8 SIP trunks to make outbound calls. SIP Proxy calling and Peer-to-Peer calling helps substantial saving over long distance calls.

### Advance VoIP Telephony Features

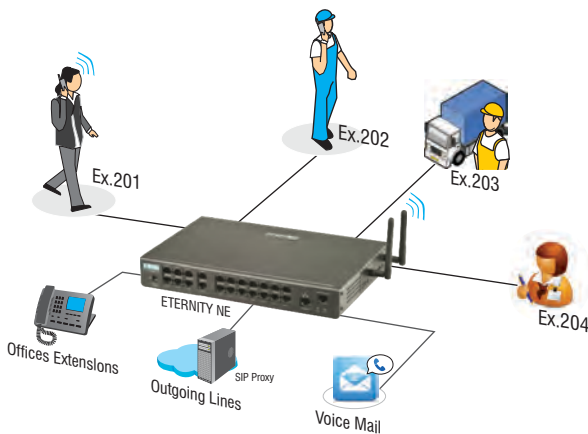
Open-Standard SIP	SIPv2 (RFC 3261) for Open Interoperability with Third-Party SIP Devices
VoIP Users	16 (Local or Remote)
Portable Extensions	SPARSH VP248 IP Phone, Third-Party SIP Phone, PC/Laptop Softphone, Android Phone with SPARSH MS, Mobile Phone with SIP Client
SIP Trunks	8 SIP Trunks for Outbound VoIP Calls
VoIP over UMTS (3G)	In-skin UMTS (3G) module for SIP Proxy, Registration over UMTS (3G) Mobile Network
NAT and STUN Support	Discover and Connect IP devices Located behind NAT Router and LAN Infrastructure
Presence Indication	Available, Busy, Away, On the Phone, Offline Feature is available on PC/Laptop Softphone
Instant Messaging (IM)	Text based Communications on PC/Laptop Softphone
Call Forking	Parallel Ringing on Three IP devices
Fax over IP (FoIP)	Reliable Transmission of Fax over Internet with T.38 and Pass-Through Protocols
Dynamic DNS	Subscribe to DynDNS Service when Static IP is not Available
Global User Group	Department/Group Call for Distributed Users
Peer-to-Peer Calls	Communicate Directly over IP without SIP Proxy 999 Table Entries

## MOBILITY

Reaching to the mobile work force on daily/hourly basis using traditional telephony networks such as POTS (CO) and GSM results in to significant increase in communication costs. The advanced mobility feature of ETERNITY NE enhances the user's flexibility to stay in touch with office communications utilizing system resources from the field.

### Off-Site Mobility with GSM/3G Mobile Extensions

When the employees are out of the office – at customer premises, remote sites or anywhere, they can use standard mobile phones as office extensions to stay connected.



### On-Site Mobility with Wi-Fi Extensions

ETERNITY NE replicates the PBX features available on desk phone to the Wi-Fi handsets with SIP support. This enables workers to roam within campus, cafeteria or anywhere in the office within the reach of wireless local area network (WLAN) coverage. Smart phones and even cost-effective Wi-Fi handsets with SIP support can function as on-premise mobile extensions.



All convenience features, preferences and settings available on user's desk phone follows on user's Wi-Fi and Mobile extensions. Dialing by Extension Number, Trunk Access for outbound calls, Caller ID, Call Transfer, Auto-Attendant, Voice Mail, Conference and many more PBX features allows seamless on-site and off-site user mobility.

### Advance Mobility Features

Mobile Extensions	Standard GSM Mobile Phone, SIP enabled Wi-Fi handset, Mobile Phone with SIP client
On-site Mobility	SIP based Wi-Fi and IP-DECT Phones
Off-site Mobility	Using any Standard GSM/3G Mobile Phone
Automatic DISA	Access System Resources from Remote Location: Auto-Attendant, Operator, Extension, Trunk
DISA Table Entries	999 Entries
System Call Back	From Any Trunk – GSM, CO (FXO) or VoIP
VoIP over Mobile	Any 3G enabled Mobile with SIP client can make VoIP Calls using System SIP Trunks
SIM Balance Inquiry and Recharge	For Balance Inquiry and Recharge from Remote Location using Web GUI
Scheduled Call Forward	Receive Calls on Mobile or Home Phone after Office Hours

## VOICE MAIL SYSTEM

Voice Mail System in ETERNITY NE ensures every caller is greeted with personalized message, allows caller to reach to a desired person without going to the operator and option to leave a voice message in case of non-availability of a person. Email notification of voice mail allows remote users to listen voice mail being anywhere in the field. In-office staff gets notification about new voice mail via message wait Lamp, change in dial tone or by voice message indicating new voice mail.

Organization can thereby rely on voice mail to ensure that customers get prompt response to their calls round-the-clock, information on company, product or scheme and option to leave a message. This means no lost opportunities and zero business lose in event of non-availability of a concerned person in office.

### Voice Mail Features

Mailboxes	32 User Mailboxes, 5 Group Mailboxes
Auto-Attendant	Personalized Greetings for Mailbox Users
Message Notification	Message Wait Lamp, Change in Dial Tone, Message on Off-hook
Unified Messaging	Voice Mail to Email Notification
Conversation Recording	Up to 576 Hours with 32GB Pen Drive (4GB Pen Drive supplied with VMS License)
Mailbox Size	Customizable (0 to 999 Minutes)
Distribution Lists	5 Lists each with 24 Mailbox Numbers
Message Broadcast	To All Mailboxes
Live Call Screening	Listen Voice Mail for Few Seconds, Attend if the Active Call is Important
Graph and Nodes	4 Graphs each with 64 Nodes
Types of Nodes	Home, Transfer, Information, Message
Call Taping	Automatic and On-Demand Taping of Calls To/From Selective Internal or External Numbers

**Note:** Use of call recording feature should be done in accordance to local laws and regulations.

## SIMPLE MANAGEMENT

The installation and administration of ETERNITY NE does not require a person to be a technology or programming expert. Anyone with basic technical know how and computer skills can easily configure and program ETERNITY NE features for day-to-day operations. The simple and reliable operation ensures less management overhead and reduced IT staff. The ETERNITY NE easily gets installed into any office environment with various mounting options. A simple to use Web-based remote management makes troubleshooting easier with

its ability to program it from any part of the world. Basic features and settings are easy to understand and most of them are configurable by user themselves.

Software updates are absolutely free and easy to download. Language is now no barrier for programming the system as the management wizard supports six most used languages for different countries.

Easy to Install	Wall Mount, Table-Top, 19" Rack
Easy to Add Lines	Dedicated RJ11 Ports
System Configuration	Web-browser Based GUI
Security	SA and SE Mode with Password Protected Access
Localization	Call Progress Tones, CLIP Variants, Impedance Matching, Time Zones, Day Light Saving, Date -Time Format
Languages Supported	English, Spanish, Portuguese, French, German, Italian
SMDR	12000 Call Records, Online SMDR
Software Upgrade	Free Updates available via CD/DVD, File Sent via Email, FTP
Back-up	SMDR, System Configuration, Software
Status Indication	CO, Mobile, SIP Trunks Status, SIP Extensions, VoIP Status, System Details

## OPTIONAL MODULES



VoIP Server Module



GSM Module



UMTS (3G) Module



Voice Mail



## USER TERMINALS

### IP PHONES

Matrix SPARSH VP248 is a range of feature-rich executive IP Phones. They provide intuitive operation for call management functions. It supports a host of additional features providing the user fast access to the functions of ETERNITY NE at a single touch of a button.

SPARSH VP248PE	6 Lines x 24 Characters LCD Display with PoE
SPARSH VP248SE	2 Lines x 24 Characters LCD Display with PoE
SPARSH VP248P	6 Lines x 24 Characters LCD Display
SPARSH VP248S	2 Lines x 24 Characters LCD Display



SPARSH VP248PE



SPARSH VP248SE

#### Key Features

- Two-Way Operation - Proprietary, Open SIP
- Programmable Keys
- Auto Answer with Headset Interface
- Peer-to-Peer Calling
- Message Wait Indication
- Ringer, Speech and LCD Controls
- 3 SIP Accounts
- Anonymous Call Rejection
- Conference
- Dialed, Received, Missed and Rejected Call Logs
- Multiple Call Handling (4 Calls)
- Voice Mail Key
- LAN and WAN Ports
- Auto Configuration
- DHCP, PPPoE, NAT and STUN
- G.711, G.722, G.723, G.726 and G.729AB
- Phone Book with 100 Entries
- Web Configuration

### MOBILE SOFTPHONE

Softphone application running on Android phones/tablets and iPhone delivers full-array of ETERNITY NE IP-PBX features for on-the-go users.

#### Key Features

- Advanced Call Capabilities
- Corporate Directory Access
- Native Contact List Integration
- Dial by Extension
- Presence Sharing
- Voice Mail Access



### DIGITAL KEY PHONES

Matrix EON range of Digital Key Phones support a host of advance features providing the fast access to the functions of ETERNITY NE.

#### Key Features

- LCD with Swivel, Backlit and Contrast Control
- Full-Duplex Speaker Phone
- Touch-Sense Keys for Features
- Programmable Keys
- More Direct Station Keys with DSS16x4
- Message Wait Lamp
- Ringer Lamp
- Upright and Horizontal Angles for Desktop Mounting
- Desk-Top and Wall Mounting



EON48P



EON48S



EON310

### ANALOG TELEPHONE

Matrix NE010 is avant-grade business phone blended with productivity boosting features. These advanced features ensure immense convenience and a rich user experience.

#### Key Features

- Auto Redial on Busy
- Battery-Free Operation
- Call Logs: 76 Entries
- Caller ID - FSK and DTMF
- LCD - 3 Lines
- Handset Volume Control-4 Levels
- Message Wait Indication
- One-Touch Speed Dial: 10 Keys
- Phone Book Entries: 80 Numbers
- Ringer Melodies: 16 Tunes
- Ringer Volume Control: 8 Levels
- Speaker Phone
- Wall Mountable



NE010

ETERNITY NE provides all essential features built-in to the system required for systematic operations and efficient functioning of a small business.

Standard Features	Description
Abbreviated Dialing	Personal and Global Directory
Alarms and Reminders with Snooze	Time, Daily, Future Date and Time, Remote
Allowed and Denied Numbers	6 Lists Each with 999 Numbers
Auto Call Back	Busy, No Reply
Auto-Attendant	Simultaneous Call Handling - 4 Calls, Greetings by Day/Night Hours/Holidays, Direct Inward Dialing
Background Music	Play Desired Piece of Music in Phone Stand-by Mode, Upload Music File via Web-based Management
Call Budgeting	On Trunks and Extensions
Call Back on Trunk Ports	Receive a Call Back from CO, Mobile# and SIP Trunks*
Call Cost Calculation	Time, Date, Duration, Area Code, Pulse
Call Duration Control	Internal, Incoming and Outgoing Calls
Call Forward	Scheduled, Busy, No Reply, Dual Ring, External Number
Call Maturity	Polarity Reversal, Delay
Call Park	Personal and General Orbits
Call Pick-Up	Group, Selective
Call Priority	Internal Calls, Trunk Calls
Call Transfer	Screened, On busy, Trunk-to-Trunk
Caller ID based Routing	Route Pre-defined External Calls to Desired Extensions, 400 Numbers
Caller ID Display	DTMF, FSK
Conference	3 Party Conference, 6 Party Conference
Department Group	5 Department Groups Each with 32 Extensions
Direct Inward System Access (DISA)	CLI based Automatic DISA, 900 Entries in DISA Table
Distinctive Ringing	Internal Calls, Emergency, Door Phone, Alarms, Auto Redial
Do-Not-Disturb	Remote, Override
DSS/BLF Console	64 Key Expansion Module with Busy Lamp Field Indication
Dynamic Lock	Automatic and Manual
Emergency	Emergency Calls Detection, Dialing and Reporting
Flexible Extension Numbering Plan	Up to 6 Digits
Flexible Extension Ring Groups	Day and Night Mode
Hot Outward Dial	Automatic Access to Trunk Line when User goes Off-hook
Least Cost Routing	Time, Number, Time and Number, Carrier Pre-selection
Logical Partitioning	Allow/Restrict calls between FXO, GSM, UMTS(3G) and VoIP Networks
Message Wait Indication (MWI)	Ring, LED Display, Change in Dial Tone, Voice Message
Music on Hold	16 Audio Files Each with 16 Seconds Duration
Name Display	Extension and Trunk Names
Paging (Internal)	Make Announcements over Speaker Phones of Extensions in Paging Group Available on EON48 - Digital Key Phones and SPARSH VP248 - IP Key Phones*
PC/Laptop Telephony Integration	EONSOFT - PC Phone/PC Console, Third-Party SIP Softphone*
Return Call to Original Caller (RCOC)	Directly Route an Incoming Call to the Extension User who Attempted the Call in case the Called Person is Busy or the Call is Unanswered
Room Monitoring (Baby Listening)	Silently Listen to Room Activities without Notifying the Extension Users Available on EON48 - Digital Key Phones and SPARSH VP248 - IP Key Phones*
SMDR Buffer Capacity	12000 Call Records (6000 Outgoing, 5000 Incoming, 1000 Internal Calls)
SMDR Report Filters	Trunk, Station, Account Code, Timeline, Speech/Hold Duration, DID/DISA Calls, Answered/Missed Calls, Specific Numbers
System Configuration	Local and Remote Programming with Simple and Easy to Use Web based GUI
Toll Control	Day and Night Modes, Local and Long Distance Calls
Virtual Extensions	Share Telephone Instrument among Multiple Users, Up to 14 Virtual Extensions
Voice Messages	16 Messages for Alarms, MWI, DND, Dial Tone, Busy, RBT, Error etc.
Walk-in Class of Services	For All Extension Users

\*Available with Optional VoIP SERVER Module # Available with Optional GSM or UMTS (3G) Module

## TECHNICAL SPECIFICATIONS

### SLT (ANALOG STATION)

Signaling	Loop Start
Dialing	DTMF and Pulse (10/20PPS)
Off Hook AC Impedance	600/900/Complex
Off Hook Current	45mA Max
Loop Limit	1800Ω Max (Excluding Telephone)
On Hook Voltage (Tip/Ring)	48V Nominal
DTMF Detection	ITU-T Q.24
Return Loss	>18dB
Longitudinal balance	>50dB
Transmission Level Adjust	Tx Gain -10dB to 6dB, Rx Gain -10dB to 6dB
Ringing	Trapezoidal 60VRMS/25Hz and Sinusoidal 52VRMS/25Hz
REN	3
CLI Presentation	DTMF, FSK ITU-T V.23 and FSK Bellcore 202
Protection	Over Voltage Secondary Protection
Physical Connector	RJ11

### DKP (DIGITAL STATION)

Signaling	Proprietary Digital (2B +D)
Interface	Single Pair for Speech, Signaling and Power
Loop Limit	100Ω
Speech Level	Adjustable Tx and Rx Gain for Handset and Hands-Free
Protection	Over Voltage Secondary Protection
Physical Connector	RJ11

### CO (2-WIRE TRUNK)

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

### GSM

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 and EGSM900 MHz Band Class 1 (1W) at DCS1800 and PCS1900 MHz Band
RF Sensitivity	Better than -106dBm
Protocol	AT Command Interface
External Antenna	One Antenna per GSM Port, 1.8/3.0*dBi, 50Ω SMA (Male) Connector, Omni Directional with Cable of 3 Meters Length

### LED INDICATIONS

Power	Single Color (GREEN) LED
System Status	Dual Color (RED/GREEN) LED

### UMTS (3G)

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

### VoIP

VoIP Protocols	SIPv2, SIP over TCP, Symmetric RTP, RTCP, 100rel/PRACK
Network Protocol	IPv4, TCP, UDP, STUN, ARP, ICMP, PPP, DNS
SIP	Maximum 8 SIP Accounts per System, Out Bound Proxy Support, Display Name, User Name, Password, URL, Proxy URL, Register Interval
Line Echo Cancellation	G.168 With 32/64/128ms Tail Length
Voice	Dynamic Jitter Buffer (Adaptive), Comfort Noise Generation and Voice Activity Detection NAT STUN and NAT Keep Alive
Voice CODEC	G.711 (A-law, μ-Law), G.723, G.729AB, GSM-FR and iLBC
Fax	T.38 Relay and Pass Through
Quality of Service	SIP QoS and RTP QoS
Security	Md5 Authentication for SIP, Password Protected Configuration by Admin and User
Data Network	Ethernet (RJ45) Port, Auto MDIX (10/100 base T)

### POWER SUPPLY

Input	External Adaptor 24VDC, 1.5A
Power Consumption	15W (Typical)

### ENVIRONMENT

Operating Temperature	-10°C to +50°C (14°F to 122°F)
Operating Humidity	5-95% RH, Non-Condensing
Storage Temperature	-40°C to +85°C (-40°F to +185°F)
Storage Humidity	0-95% RH, Non-Condensing

### MECHANICAL

Dimension	30 W x 4.25 H x 20 D Cms (11.81"x1.67"x7.87")
Installation	Wall Mount, Table-Top, 19" Rack Mount
Unit Weight	Max. 1.300Kg (2.87lbs)
Shipping Weight	Max. 2.280kg (5.03lbs)

\* Depends on GSM/UMTS(3G) Frequency Band

## RESOURCES

SPECIFICATIONS	ETERNITY NE3	ETERNITY NE312	ETERNITY NE4	ETERNITY NE416	ETERNITY NE6
CO Ports	3	3	4	4	6
Single Line Telephones	6	12	10	16	14
Digital Key Phones	2	-	2	-	2
VoIP (SIP) Trunks*	8	8	8	8	8
IP Extensions*	16	16	16	16	16
GSM/3G Trunks*	2	2	2	2	2
Door Relay*	1	1	1	1	1
Ethernet Port	1	1	1	1	1
Voice Mail*	4 Channels				
Voice Messages	16 Messages of 16 Seconds Each (For Auto-Attendant, Voice Prompts, Voice Help)				

## ORDERING INFORMATION

\* Optional and Field Pluggable Module

PRODUCT	DESCRIPTION
ETERNITY NE3	PBX with 3 CO, 2 Digital and 6 Single Line Telephone Ports
ETERNITY NE312	PBX with 3 CO and 12 Single Line Telephone Ports
ETERNITY NE4	PBX with 4 CO, 2 Digital and 10 Single Line Telephone Ports
ETERNITY NE416	PBX with 4 CO and 16 Single Line Telephone Ports
ETERNITY NE6	PBX with 6 CO, 2 Digital and 14 Single Line Telephone Ports

OPTIONAL MODULE	DESCRIPTION
ETERNITY NE VoIP SERVER	8 VoIP Channels to Connect 8 SIP Trunks and 16 VoIP Users (8 Pre-Activated)
ETERNITY NE IP8	License to Enable 8 VoIP Users
ETERNITY NE GSM	GSM Port for Voice Calls
ETERNITY NE UMTSA	UMTS (3G) Port for Voice Calls for USA and Compatible Networks
ETERNITY NE UMTSE	UMTS (3G) Port for Voice Calls for Europe and Compatible Networks
ETERNITY NE VMS	Voice Mail System to Attend 4 Simultaneous Calls with Mailboxes for Individual Users
ETERNITY NE 4WDP	Relay Contact for Door Lock
ETERNITY NE SMS	License to Enable SMS Gateway Functionality

