



ETERNITY NE

The Next Generation IP-PBX for Small Businesses

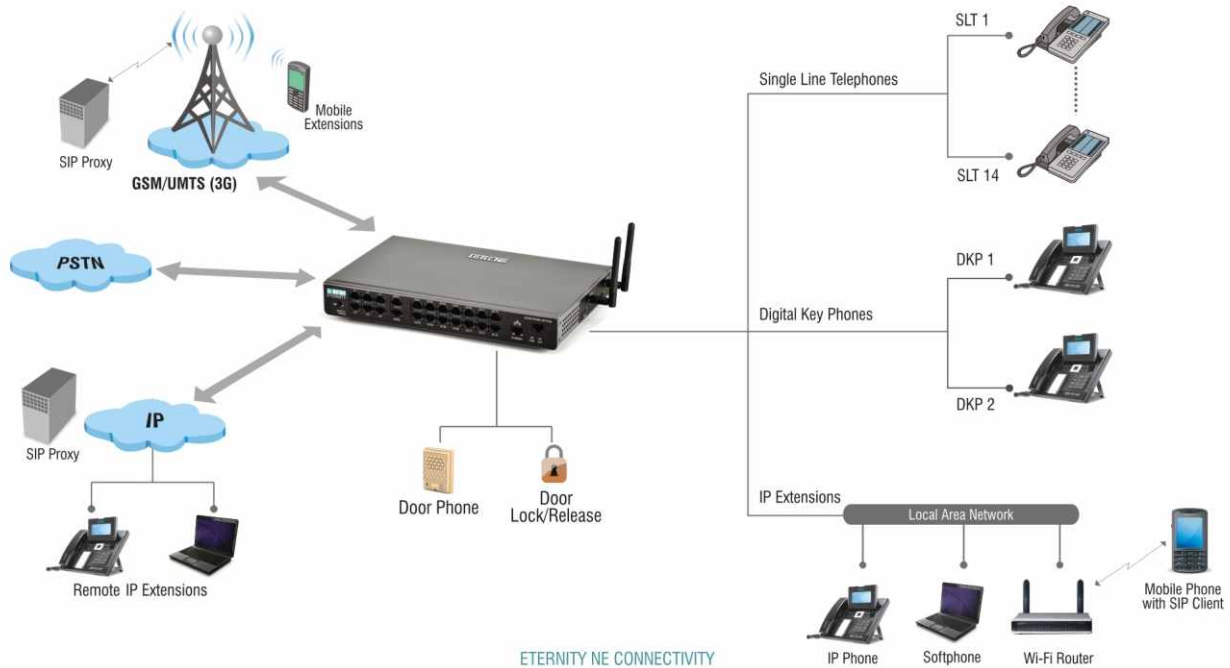
Optimizing resources, increasing efficiency and maximizing productivity is inevitable for any business to survive and remain competitive. The small businesses face more operational challenges compared to the large enterprises. They need to be more agile and productive with limited resources. Such businesses need to explore new communication alternatives that come with a lower acquisition cost, lower day-to-day operational costs and deliver productivity boosting features.

Modern communication systems are versatile, in hand with latest technologies and bring-in advance features and functionalities. But, majority of these communication systems are built for much higher capacities and call for an equally large investment. Thereby, only those from the enterprise cadre seem to be the leveraging the benefits of these advance systems. To extend these benefits to the small businesses, the communication system should offer an affordable solution along with every desired connectivity and resources to work more responsively and productively.

Matrix Presents, ETERNITY NE The Next Generation IP-PBX built to mature today's small businesses into flourished enterprises, breaking the confines of conventional telephony systems. Right from its perception, each and every attribute of NE revolves around the needs of the small businesses. ETERNITY NE brings complete synergy of the wired, wireless and packet based communication into the SMB premise. The multi-functional persona of NE wipes out the need of investing in multiple devices. With the superior features that it delivers, it puts any small business at par to compete actively with the constantly evolving and challenging surrounding.

SINGLE IP-PBX FOR ALL NETWORKS

ETERNITY NE integrates the legacy and new-generation communication technologies to offer a converged solution. It offers connectivity to all sought networks - POTS, GSM, UMTS (3G) and VoIP on a single platform. The small businesses can now use the cost-effective Voice over IP (VoIP) networks for long-distance calling. Mobile networks can be leveraged to avail the benefits of cost and connectivity. The reliable POTS networks still remain an integral part of the communication system.



ETERNITY NE is available in four variants:



ETERNITY NE2

2 CO Ports
2 Digital Extensions
4 Single Line Telephones
2 GSM/UMTS(3G) Ports
Up to 16 IP Extensions



ETERNITY NE3

3 CO Ports
2 Digital Extensions
6 Single Line Telephones
2 GSM/UMTS(3G) Ports
Up to 16 IP Extensions



ETERNITY NE4

4 CO Ports
2 Digital Extensions
10 Single Line Telephones
2 GSM/UMTS(3G) Ports
Up to 16 IP Extensions



ETERNITY NE6

6 CO Ports
2 Digital Extensions
14 Single Line Telephones
2 GSM/UMTS(3G) Ports
Up to 16 IP Extensions

MODULAR ARCHITECTURE

ETERNITY NE comes in a standard configuration of CO (TWT) lines and analog and digital extensions to satisfy initial basic requirements of start-up businesses. Its modular design offers the flexibility to integrate GSM, UMTS (3G) and VoIP on the same platform in form of optional field-pluggable modules. Moreover, Voice Mail functionality and Door Phone connectivity can also be availed as an optional module.

An organization can thereby choose its own preferred mix of communication technologies and functionality and integrate them as and when desired.

INVESTMENT PROTECTION

With continuous emergence and evolution of new technologies, yesterday's innovation becomes today's legacy. Such dynamism is difficult to be

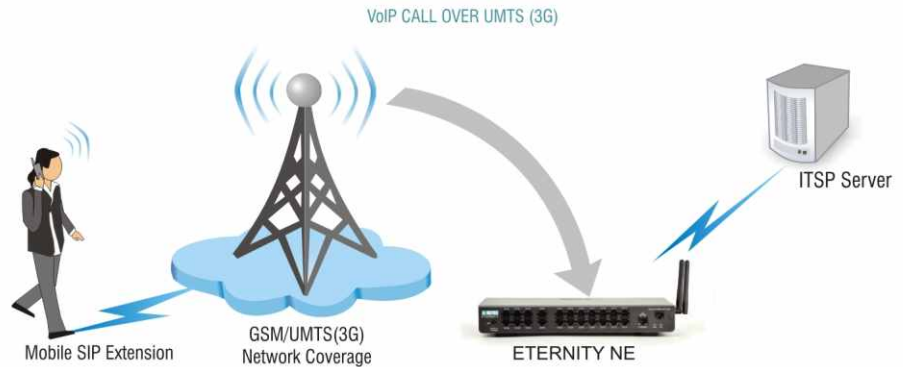
adapted by smaller organizations. Fear of transition to new technology, heavy investments in newer, multiple systems and the concern for existing telephony infrastructure and reusability of older terminals holds them from adapting a new communication mean.

ETERNITY NE allows for a smooth migration from the old analog telephone system to a new-age IP-PBX and at the same time values original investment made in telephone sets and installation set-ups. ETERNITY NE offers connectivity to the wired POTS, wireless GSM/UMTS(3G) and packet IP networks. The converged platform supports analog and digital extensions along with the new-age mobile and IP extensions. This facilitates seamless communication between multiple networks, using a variety of user endpoints.

The multi-function persona of NE reduces the total cost of ownership eliminating the need to invest in third-party equipments such as Auto-Attendant, Voice Mail system, Fixed Cellular Terminal, Gateway or SIP server.

ADVANCED IP FEATURES

ETERNITY NE is an all-integrated IP-PBX with embedded Registrar, Proxy and Presence Server. Up to 16 local or remote IP extensions can be registered with the Registrar Server. The integrated Proxy server performs various call control functions. ETERNITY NE can also register itself as a client with the SIP proxy of a service provider. The services availed thereby can be shared among the various IP users. The integrated Presence server delivers advance features across the IP extensions. An IP key phone; a soft phone or any device with SIP client may work as an IP extension of ETERNITY NE.



Unlike other IP-PBXs, it provides connectivity to POTS, GSM and UMTS (3G) networks and supports analog, digital and mobile extensions. Irrespective of the networks or the end user devices used, ETERNITY NE allows seamless call routing between various networks and delivers similar features across all user endpoints.

Portable Extensions - Carry Same Contact Number across the Globe

Teleworkers can connect to ETERNITY NE and its registered users from anywhere, registering their IP extensions to the integrated SIP server of NE. The remote users log-in to the SIP server with a user-ID and authentication password. A change in user location does not necessitate a change in contact-ID.

The IP extension may be registered using fixed-line IP connectivity or the Wi-Fi connectivity. Even in non-availability or absence of wired Internet / Wi-Fi connection, users can still register with the SIP server over the GSM/UMTS(3G) mobile networks.

ETERNITY NE offers two slots to accommodate GSM/UMTS(3G) interface cards with one SIM per slot. These SIMs can also wirelessly connect to the data services offered by mobile networks and facilitate VoIP Calling. A remote user's connectivity is maintained even when behind a NAT or firewall. The embedded Dynamic DNS client ensures a remote user can register to the IP-PBX configured for a dynamic IP without any hassle.

Calling any another extension of the system, accessing system trunks or any of the telephony features, remains as simple as dialing from a regular, wired extension. The users of ETERNITY NE can be spread across globe and still enjoy alike features. This also negates the need of any separate or multiple telephone systems at the individual branch locations.

Call Forking

IP based communications offer wider terminal options such as an IP phone, a softphone or mobile with SIP client. SIP provides a mechanism called Uniform Resource Identifier (URI), mapping a user's identity to multiple devices. With ETERNITY NE, up to three such devices can be programmed for a single user. So, when a call is initiated, the same is attempted to all (3) user terminals in parallel, known as call forking.

A user now experiences extended connectivity, no matter whether he uses a desktop IP phone or his Mobile phone (with SIP client) while on tour or a soft phone to communicate. The user can pick-up the call from any of the active extension. This also eliminates the need to keep a track of multiple contact addresses of a person.

Global User Groups

Multiple extensions can be grouped under a User Group. This facilitates call reception between pre-defined users. On receiving a call, the extensions will ring according to the assigned priorities. With NE supporting IP extensions, the members of a single group can be dispersed across locations.

Presence Awareness - Contact when Available, No Guess Work

Calling from one end of the world, the caller has no surety whether the callee at the other end is available or not. The Integrated presence server of ETERNITY NE maintains and distributes among its users, the presence status of all the registered IP users. Status such as availability of the users (online, offline), their willingness to participate in a communication session

(busy, available on phone, out of office and others) and also the preferred mode of communication (call or text messaging) are maintained.

Presence status determines a user's availability and preferred mode of communication, even before a communication session is initiated. Presence notifies that a colleague is available to talk and then uses SIP messages to negotiate the means of communication and establish the actual communication session. Knowing a user's status, it is possible to reach a right contact, in right time and on the right terminal.

An IP extension user can alter his presence status and intimate the same to others instantly, through a Presence and IM client. A caller can view the status of other colleagues on any presence leveraging extension and thereby attempt a call only when the other party is available, reducing the number of failed call attempts.

Instant Messaging (IM)

Instant Messaging is a popular and convenient mode of communication. Ability to communicate via text messages, adds an additional and easy mean to communicate with colleagues. Further, with most IM clients, it is possible to alter one's availability status and intimate the same to others, instantly. ETERNITY NE identifies the users as Presentities (whose status is to be viewed) and Watchers (one who needs to know the status of another user). A Watcher SUBSCRIBES (requests) the presence server for the status of presentity. If the presenter has PUBLISHED (intimated) his status, the watcher can be NOTIFIED (informed) about the status of presentity. An administrator can grant certain users the right to not PUBLISH their status, yet avail the presence and IM functionality.

MOBILITY

Business today has crossed geographic boundaries and so organizations tend to have more and more branch offices along with the workforce roaming in-between the branches. These mobo workers leave back their extensions at the office desk and stay disconnected or use multiple devices and contacts - work, home and Mobile Phone numbers. The more devices one uses, the more contact-IDs others need to remember in order to reach him. This time consuming approach leads to ineffective communication and reduces productivity of field workforce.

Mobility Extensions - Carry Desk Extension on Field

With support of mobility extensions, ETERNITY NE replicates the functionalities of desk phones on a user's mobile phone. This allows the field workers to make and receive calls and use system features, while roaming on field. The mobile users can leverage PBX functions like Transfer, Forward, Voice Mail, Directory Dial, Conferencing and others. ETERNITY NE offers the connectivity to GSM/UMTS(3G) networks with an optional module. It supports all popular frequency bands of GSM/UMTS(3G) networks. Use of a particular frequency band is user selectable.

Direct Inward System Access (DISA)-Automatic

This feature allows a mobile user to access the system without the need to provide any authentication details. A user gets system access based on his Caller ID. The system can remember 999 such numbers and whenever the user calls the system, it automatically grants him access to dial internal extensions, make long distance or international calls using system trunk resources and access various system features.

System Call Back

ETERNITY NE recognizes a list of numbers as its trusted callers and allows them to access system features and resources remotely. Making it simpler, these trusted numbers receive a call back on their mobile phone by just leaving a miss call on any of the system's trunk port. On answering the call, these users can be granted system access or landed to the operator or else given a direct inward dial access. Such a call back mechanism brings added benefit of centralizing call billing as the remote workers only need to place a miss call and it is the system which then takes over the complete call activity.

INTELLIGENT FUNCTIONS

ETERNITY NE is engineered to deliver all advance features and functionalities to the small businesses. It delivers superior features to its users, such as remembering access codes for easy and speed dialing, forwarding calls to desired extension, establishing conferencing circuits for multi-party conversations, re-attempting calls at unsuccessful trials, screening live calls, recording conversations and many others. Incoming calls can be automatically directed to specific users; else distributed among a group of users as per defined priorities. Outgoing calls are attempted via the most cost-effective network calculating various routing algorithms. The dial plans can be unlike for different users and flexibly assigned as per the time of calling.

Auto-Attendant

A built-in auto attendant enhances the customer calling experience. It keeps an organization running 24x7, greets callers depending upon the time of the day, plays music when customers are on hold, allows the caller to directly reach an extension without operator assistance and does it all in a smooth and pleasant manner. ETERNITY NE can handle up to 4 calls simultaneously.

Automatic Number Translation

ETERNITY NE offers connectivity to POTS, GSM/UMTS(3G) and IP networks. When a call is placed, the system calculates various algorithms and places the call over the most cost-effective route. The user is thereby not aware of the trunk line used for establishing the call. Also at times, the dialed number needs prefix addition (country/area codes) or stripping to be understood by the destination network. The Automatic Number Translation feature of ETERNITY NE alters the numbers dialed by the users for any such modifications. A user thereby has the convenience of directly dialing desired numbers without worrying on which network the call is going to be placed. This prevents the user from remembering various area/country or trunk access codes, eliminating complex dialing procedures.

Caller-ID based Routing

Based on the Caller-ID details, an incoming call can be routed to a pre-defined extension. For example, important business calls may be directed to the higher authorities, calls with specific Caller-ID may be directed to specific departments, while calls from anonymous numbers may be directed to the customer support teams. Users with Digital or IP key phone can also have display of the caller's name, if programmed accordingly.

Door Phone with Relay Connectivity

ETERNITY NE provides an option of connecting a 4-wire door phone and a relay activated door lock release device through an optional field-pluggable module. When a visitor presses the door phone button, the internal extension and/or external number programmed rings allowing the extension and/or Mobile user to talk to the visitor. Using the Door Lock Release device, the user can open the door and let the visitor in.

Least Cost Routing (LCR)

ETERNITY NE helps to reduce telecom cost significantly by intelligently placing outgoing calls depending up on time of call, number dialed or the network to be used.

ETERNITY NE can be programmed to select only a particular trunk line for making long-distance calls. A specific network may be used to make calls during day-time, but a different one for making local calls during night hours. It can even be programmed in such a way that for calling any Mobile

number, only a particular trunk line is used. All this happens automatically! With Matrix ETERNITY NE, one can rest assured that every call being made outside your organization is always at the least cost!

Logical Partitioning

In fulfillment to the telecom regulatory requirements of different countries, ETERNITY NE comes with special call control feature 'Logical Partitioning' which enables flexible programming to allow or restrict calls to be routed between VoIP and Public switched PSTN or GSM/UMTS(3G) networks.

Return Call to Original Caller (RCOC)

A call attempt may be unsuccessful if the called party is busy or does not pick up the call. ETERNITY NE logs such unsuccessful calls in a RCOC table with details about the caller, number dialed and time of call. With these details available, if a call back is received from any of the called number, it is possible to route the call to the original caller who attempted a call. This greatly reduces communication delay and eliminates the need for operator assistance to redirect the call. With support for Mobile IP extensions, ETERNITY NE extends the feature utility outside the office premise.

Scheduled Call Forward

This feature allows users to forward their extension calls to desired external numbers. Further, it is possible to forward calls to different numbers as per the day-timing. It is a great utility feature for those who can't afford to miss a single business call. Imagine, a sales executive, receiving calls at his office extension on his mobile number while making a sales call on the field and receiving the same on his home number during the non-working hours. Each of the ETERNITY NE users can define their own set of preferred numbers at which they would like to receive the business calls and the system delineates the calls accordingly.

VOICE MAIL SYSTEM

The integrated Voice Mail in ETERNITY NE is designed to deliver all possible voice applications which typically require an external Voice Mail System.

Flexibility

The Voice Mail functionality can be allocated selectively to few or all the users. The voice mail box size is configurable differently for all the NE users. A default 2GB USB stick supports up to 36 hours of recording. The size of voice mail storage is expandable, replacing the USB stick with one having a higher storage. In case, an extension is shared between multiple users, the single extension may be granted multiple mailboxes to maintain message segregation.

Personalized messages recorded in users own voices are played to greet the callers and while guiding them to the voice mail. When busy, user may divert his calls to his voice mail. But, some of these calls may be urgent and may need an immediate attendance. NE allows a user to listen to the call being recorded in the voice mail for few initial minutes. The user can thereby screen an incoming call and decide whether he needs to attend it or continue the storage in voice mail.

In event of non-availability in office, redirecting messages to colleague's mail box is possible. Individual distribution lists share messages among group of users. Messages can be tagged and forwarded to selective mailboxes or broadcasted to all users at a go. Recording of ongoing conversations for future reference and calls made or received from specific numbers can be taped.

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

Message Notifications

ETERNITY NE can be directed to provide a message notification in a multiple ways. Visual, discriminating dial tone, ringers or an audio message - the user can choose the type of message wait indications he needs. The notification may be received immediately, as soon as a message arrives or at scheduled time intervals. External numbers can also be programmed for such notifications; the external number may be a user's residential number or his mobile wherein he intends to be notified during the non-working hours. The destination numbers can also be different as per the time zone.

Remote Access

Voice Mails can be retrieved by calling to Voice Mail server using individual access codes. A Voice Mail can be stamped for its date and time of arrival and can be notified to the user at the time of retrieval. The integrated SMTP client functionality enables a Voice Mail to be delivered as an attachment to the user's Email-ID. Access to voice mail boxes is secured by individual passwords.

SIMPLIFIED MANAGEMENT

The enterprise-grade features and functionalities offered by ETERNITY NE require no special training or high-level of expertise.

Ease of Installation

The system installation is very simple and straightforward. The compact IP-PBX can be mounted in a rack, on the wall or the table-top. Dedicated RJ11 ports are provided to simplify connectivity and cabling. ETERNITY NE can be configured to match the telecom standards of the country where it is installed. Time Zones, Day Light Saving, Date-Time Format, CLIP Variants, Impedance, etc., can be set as per country specific telecom regulations. The multi-function persona of NE saves one from multiple system management and the endless hassle that follows such architectures.

Remote Management

ETERNITY NE comes with built-in web server functionality which makes it possible to configure the system from a remote location, saving time and cost of providing essential technical support. It supports multiple languages like English, French, Spanish, German, Portuguese and Italian. An administrator can monitor and manage system features, users and feature access in real-time. A new user can be added, granted calling rights, defined under a user group, granted voice mail access with a few clicks from the intuitive GUI itself. An administrator can also easily monitor the network and various trunks status from the web interface.

Monitoring and Management Reports

ETERNITY NE has CDR capacity to record 12000 calls details. The system also maintains a log of its own activities and error reports. Detailed reports can be generated, backed-up and printed for later reference. It also supports debug at various functional levels via an embedded syslog client. These logs can be sent over the IP network for remote diagnosis and troubleshooting.

PRODUCTIVITY BOOSTING FEATURES

Auto-Redial

ETERNITY NE can be instructed by the user to keep dialing a busy number repeatedly, till the call gets through. The system can be set for auto-redial priority as low or high, wherein the redial intervals and the number of redial attempts vary depending on the priority.

Auto-Answer

This enables an operator to answer any incoming call automatically and saves time required to pick up the handset or pressing speaker key again and again. Further, if a headset is used then incoming speech audio can be heard directly on the headset.

Distinctive Ringing

The system can be programmed to provide different ring cadences to the user depending on the call origination. Eight types of ringing cadences can be set for different call types like internal calls, calls from boss, emergency, door phone, alarms, auto redial, etc., to alert the users about the type of call they are receiving.

Conference

ETERNITY NE supports up to 6 users, office or field employees to participate in a single conference without compromising the speech quality.

Conference Dial-In

This unique feature allows participants of a conference to dial into a live conference at a scheduled time just by simply dialing a code. Certainly, a great time-saving feature!

Hot Outward Dial

This function is of great use for those stations which make more trunk calls than internal calls. As soon as the station user picks up the receiver, user gets access to the desired trunk line, saving time and effort. This function also offers a variant whereby a specified telephone number may be dialed either immediately as the handset is picked up or after a pre-defined delay.

Memory Dialing

ETERNITY NE offers a memory space of 999 numbers where frequently called numbers can be stored along with the name. User can dial any of these numbers with an access code followed by an index number. It is common for all the users. Users with Digital and IP key phone have the flexibility of dialing directly by name and hence are not required even to remember index numbers.

Multi-Stage Dialing

Many times it is required to dial multiple number strings before the actual number. An abbreviated short code can be programmed to replace these long strings of number by shorter codes, with the flexibility to dial all the codes and the number together, instead of dialing in multiple stages.

Priority

Certain calls like call from CEO, call from special or private trunk line, call on hotline, etc. requires higher priority of access over others. ETERNITY NE allows calls from the senior executives get priority over others, instead of waiting to get connected to a station or trunk.

COST CONTROL FEATURES

Call Budget on Extensions

It allows one to set a monthly call budget individually for all users in order to control the usage of system resources. The system automatically restricts outward dialing privileges of an extension if the user exceeds the call budget value.

Call Budget on Trunks

Attractive schemes of free minutes or talk-time per month/year offered by different service providers can be leveraged by defining call budget in terms of amount and minutes on the trunks i.e. CO lines, GSM, UMTS (3G) and SIP. Once the budget gets exhausted, it does not allow further outgoing calls. Amount and minutes consumed on each trunk port can be cleared either manually or automatically on specified date of every month, to a specified value.

Call Duration Control

This call control feature is used to disconnect calls after a pre-defined duration. A caller can be indicated of the disconnection with a warning tone, few minutes prior to the disconnection. Such control can be exercised selectively over the users.

CUG over GSM/UMTS(3G)

ETERNITY NE offers in-skin GSM/UMTS(3G) module in which two GSM or UMTS (3G) SIMs can be inserted. An organization can take an advantage of the CUG facility offered by service providers. Consider an office with workforce of 10 on field and 20 in office and their requirement is to communicate on day-to-day basis. It is possible to offer 10 CUG SIMs to the field and 2 SIMs can be inserted on the GSM/UMTS(3G) card plugged-in to the system. These 2 SIMs are accessible and shared between the office and field staff. Hence, any call made between the office and field staff falls under a closed user group, saving telecom cost.

Toll Control

It is possible to restrict/allow calls to certain numbers or numbers starting with specific prefix. The calling rights can be programmed distinctly for various users.

ETERNITY NE OPTIONAL MODULES



VoIP SERVER Module



GSM Module



UMTS (3G) Module



Door Phone Module

FEATURES LIST

- Abbreviated Dialing (Global & Personal)
- Access Codes (Programmable)
- Account Codes
- Alarm-Multiple, Snooze
- Alarms (Time, Daily, Future Date & Time, Remote)
- Allowed and Denied Lists
- Alternate Number Dialing
- Anonymous Call Rejection (SIP)
- Auto Call Back (Busy, No Reply)
- Auto Redial
- Auto-Attendant
- Automatic Number Translation
- Backup-System Configuration, Software, SMDR
- Barge-In
- Boss Ring
- Call Back on Mobile Port
- Call Budget on Extension
- Call Budget on Trunk
- Call Chaining
- Call Cost Calculation
- Call Cost Display
- Call Duration Control
- Call Follow Me
- Call Forking (SIP)
- Call Forward (Busy, No Reply, Dual Ring and External Number)
- Call Logs – Missed, Received and Dialed
- Call Park (General and Personal Orbit)
- Call Pick Up (Group, Selective)
- Call Progress Tones (Programmable)
- Call Splitting
- Call Taping
- Call Transfer (Screened, On Busy, While Ringing, Trunk to Trunk)
- Caller ID Presentation and Restriction
- Caller ID based Routing
- Closed User Group
- Conference – 6 Participants
- Conference Dial-in
- Conflict Dialing
- Conversation Recording
- Daylight Saving Time (DST)
- Department/Group Call
- Dialed Number Directory
- Digest Authentication (SIP)
- Direct Dialing-in (SIP)
- Direct Inward Dialing (DID)
- Direct Inward System Access (DISA)
- Direct Station Selection Console (DSS Console)
- Distinctive Rings
- Do-Not-Disturb (DND)
- Do-Not-Disturb (Remote)
- Door Phone (4-Wire) with Relay Contact
- Dynamic DNS (DDNS)
- Dynamic Lock (Manual)
- Embedded SIP Registrar and Proxy Servers
- Emergency Calls Detection and Reporting
- Emergency Number Dialing
- External Call Forward
- Fax over IP (T.38 Relay and Pass-Through)
- File Transfer Protocol
- Flexible Numbering (Up to 6 Digits)
- Forced Answer
- Forced Call Disconnection
- Hold
- Hot Desking
- Hot Outward Dialing
- Hotline
- Hunting/User Groups
- Incoming Call Management
- Incoming CLI Modification
- Interrupt Request
- Last Number Redial
- Least Cost Routing (Time, Number, Time and Number)
- Live Call Screening (Voice Mail System)
- Live Call Supervision
- Logical Partitioning
- Manual BTS Selection
- Maturity (Polarity Reversal, Delay)
- Meet Me Paging
- Message Wait Indication (LED, Shattered Dial tone, Voice Message)
- Mobile Extension (CLI based DISA)
- Mobile Twinning
- Multi-Stage Dialing
- Music-on-Hold
- Name Programming (Station, Trunk)
- NAT and STUN
- Network Selection (GSM)
- OFF-Hook Alert
- Online SMDR
- Operator (Single, Multiple)
- Paging
- Peer-to-Peer Calling
- Presence
- Priority (Intercom and Trunk)
- Raid
- Return Call to Original Caller (RCOC)
- SA and SE Mode
- Scheduled Call Forward
- Selective Trunk Access
- SIM Balance Inquiry and Recharge
- SIP and RTP QoS (VoIP)
- SMDR Posting (Call Accounting System Interface)
- SMDR (Incoming, Outgoing and Internal – 12000 calls)
- SMDR (Online)
- Station In-Service/Out-Service
- System Fault Log
- System Security (Passwords)
- System Stats
- Time Zone Display
- Trunk Auto Answer
- Trunk Reservation
- Virtual Stations
- Voice Mail Integration
- Voice Mail to Email Notification
- Voice Prompts for Tones
- Walk-in Class of Service
- Web based Programming

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 +10 dB, 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 INDICATION

Power	1 LED Single Color (GREEN)
System Status	1 LED Dual Color (RED/GREEN)

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	SIP v2, SIP over TCP, Symmetric RTP, RTCP, 100rel/PRACK
Network Protocol	IPv4, TCP, UDP, STUN, ARP, ICMP, PPP, DNS
SIP	Maximum 4 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)

AUXILIARY PORTS

Door Phone	Speaker Output – 1.41Vrms (Max.), Microphone Input – 1.34Vrms (Max.), RJ45
Relay Contact	Power Relay, Resistive Load – 1.0A 24VDC, Operation Time – 8ms (Max.), RJ45

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

	ETERNITY NE2	ETERNITY NE3	ETERNITY NE4	ETERNITY NE6
Dimension	30 W x 4.25 H x 20 D cms (11.81"x1.67"x7.87")			
Unit Weight	1.160kg (2.56lbs)	1.190kg (2.62lbs)	1.220kg (2.69lbs)	1.300kg (2.87lbs)
Shipping Weight	2.155kg (4.75lbs)	2.175kg (4.80lbs)	2.200kg (4.85lbs)	2.280kg (5.03lbs)
Installation	Wall Mount, Table-Top, 19" Rack Mount			

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

RESOURCES

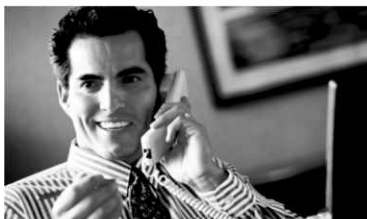
SPECIFICATIONS	ETERNITY NE2	ETERNITY NE3	ETERNITY NE4	ETERNITY NE6
CO Ports	2	3	4	6
Single Line Telephones	4	6	10	14
Digital Key Phones	2	2	2	2
VoIP Trunks*	4	4	4	4
IP Extensions*	16	16	16	16
GSM/UMTS(3G) Trunks*	2	2	2	2
Door Phone with Relay*	1	1	1	1
Voice Mail System*	4 Channels			
Voice Messages (for Auto-Attendant, Voice Prompts, Voice Help)	16 Messages of 14 seconds each			

* Optional and Field Pluggable Module

ORDERING INFORMATION

PRODUCT	DESCRIPTION
ETERNITY NE2	PBX with 2 CO, 2 Digital and 4 Single Line Telephone Ports
ETERNITY NE3	PBX with 3 CO, 2 Digital and 6 Single Line Telephone Ports
ETERNITY NE4	PBX with 4 CO, 2 Digital and 10 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 4 SIP Trunks and 8 VoIP Users
ETERNITY NE IP8	License to Enable 8 IP 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	4-Wire Door Phone Port with a Relay Contact



ABOUT MATRIX

An ISO 9001 Company, Matrix is a leader in Telecom and Security solutions for modern businesses and enterprises. An innovative, technology driven and customer focused organization; the company is committed to keep pace with the revolutions in the telecom and security industries. With around 30% of its human resources dedicated to the development of new products, Matrix has launched cutting-edge telecom products like IP-PBX, Universal Gateways, VoIP Gateways and Terminals, GSM Gateways, Access Control and Time-Attendance Systems and Fire Alarm Systems. These solutions are feature-rich, reliable and conform to the international standards. Having global foot-prints in Asia, Europe, North America, South America and Africa through an extensive network of more than 500 channel partners, Matrix ensures that the products serve the needs of its customers faster and longer. Matrix has gained trust and admiration of more than 150,000 customers representing the entire spectrum of industries. Matrix has won many awards for its innovative products.



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Due to continuous technology upgradations, product specifications are subject to change without notice.