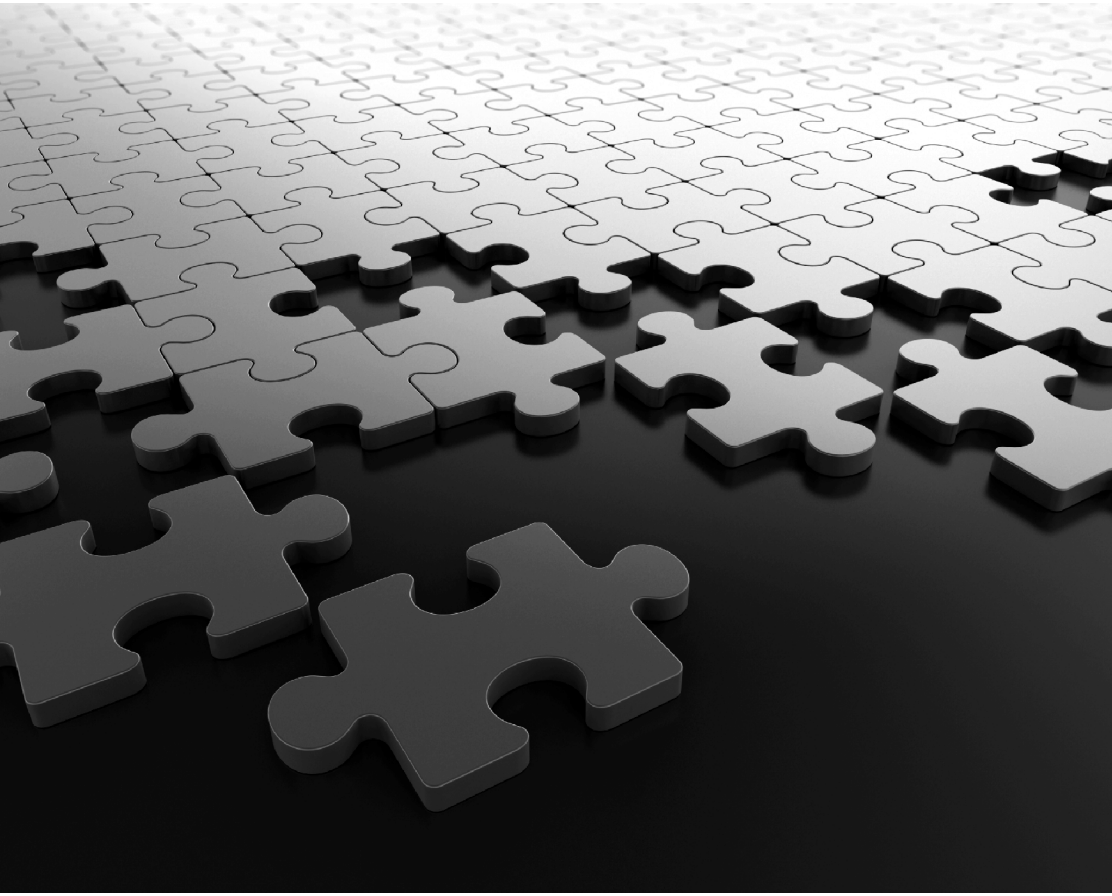
SARVAM UCS
Quick Start



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SARVAM UCS

The Unified Communication Server

Quick Start

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Overview

About the Product

Matrix provides different platforms to run the SARVAM Application[1].

- The ETERNITY GENX platform - This is the common hardware platform[2] for SARVAM UCS SME and SARVAM UMG Application.

  You can use ETERNITY GENX as the Unified Communication Server or the Universal Media Gateway depending upon the Application License you purchase.

- The ETERNITY LENX/MENX platform - This is the hardware platform for SARVAM UCS ENT Application.

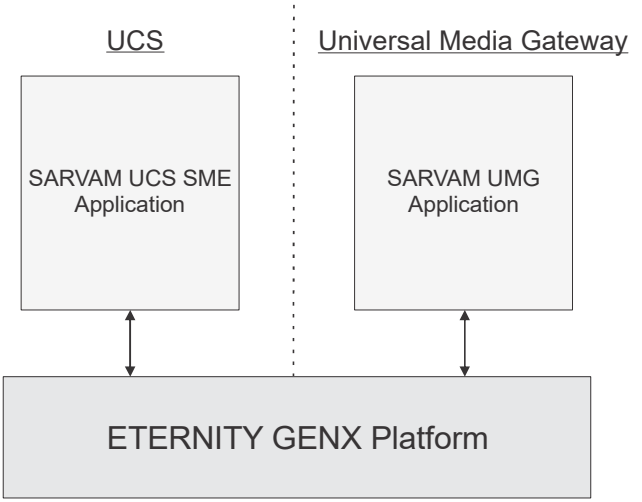
- The ETERNITY PENX platform - This is the hardware platform for SARVAM UCS SMB Application.

ETERNITY GENX Platform

The ETERNITY GENX is the common hardware platform for SARVAM UCS and SARVAM UMG Application.

You can use the ETERNITY GENX as the Unified Communication Server or the Universal Media Gateway depending upon the Application License you purchase.

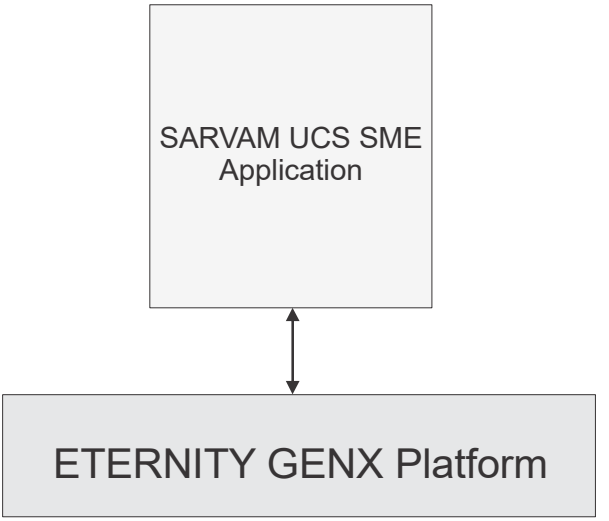
1. *Refer to "Pre-activated Licenses".*
2. The hardware platform refers to an entity that includes the entire assembly of cards and the hardware enclosure.



To run the ETERNITY GENX as the Unified Communication Server, you need to purchase the SARVAM UCS SME Application license and to run it as the Universal Media Gateway, you need to purchase the SARVAM UMG SME Application license.

ETERNITY GENX as the Universal Media Gateway acts as an IP-based system providing value added voice services. The system enables you to route calls from the Source port to the Destination port using Destination Number determination and Destination Port determination methods. It also offers a robust SIP Stack which gives a thorough interoperability and usability with various SIP trunk providers and IP-PBX. The system provides high performance and high reliability in a compact, modular design.

ETERNITY GENX as the Unified Communication Server acts as a fully hosted and managed Unified Communication Server. It delivers the convergence of voice, data, wired communications for small and medium sized businesses. It also offers UC features, Voice over IP Integration, Voice Mail, Computer Telephony Integration and Switching functions. The system provides reliable, efficient and unrestricted simultaneous communication (incoming and outgoing) by all users.

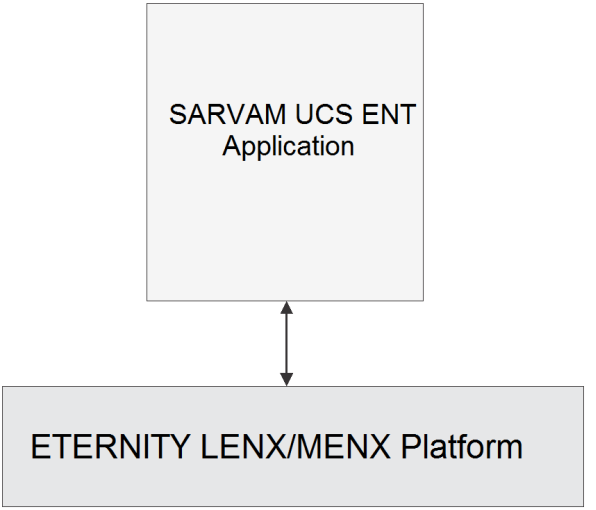


ETERNITY LENX/MENX Platform

The ETERNITY LENX/MENX is the hardware platform for SARVAM UCS ENT Application.

To run the ETERNITY LENX/MENX as the Unified Communication Server, you need to purchase the SARVAM UCS ENT Application license.

ETERNITY LENX/MENX as the Unified Communication Server acts as a fully hosted and managed Unified Communication Server. It delivers the convergence of voice, data, wired communications for small and medium sized businesses. It also offers UC features, Voice over IP Integration, Voice Mail, Computer Telephony Integration and Switching functions. The system provides reliable, efficient and unrestricted simultaneous communication (incoming and outgoing) by all users.

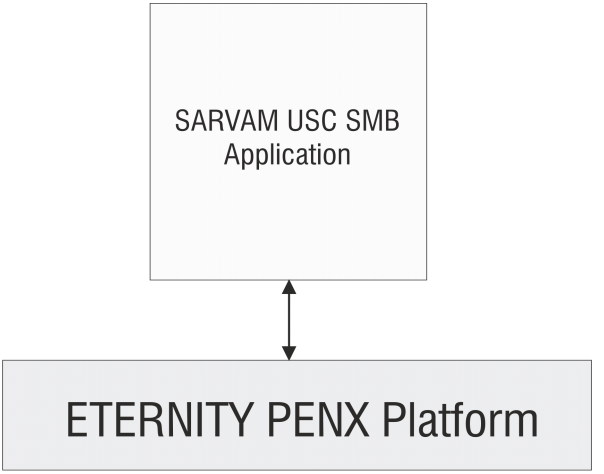


ETERNITY PENX Platform

The ETERNITY PENX is the hardware platform for SARVAM UCS SMB Application.

To run the ETERNITY PENX as the Unified Communication Server, you need to purchase the SARVAM UCS SMB Application license.

ETERNITY PENX as the Unified Communication Server acts as a fully hosted and managed Unified Communication Server. It delivers the convergence of voice, data, wired communications for small and medium sized businesses. It also offers UC features, Voice over IP Integration, Voice Mail, Computer Telephony Integration and Switching functions. The system provides reliable, efficient and unrestricted simultaneous communication (incoming and outgoing) by all users.



The document henceforth will describe in detail — the installation and configuration of SARVAM UCS.

Introduction

Thank you for choosing the Matrix SARVAM UCS. This Quick Start is meant to help you setup the SARVAM UCS and use the basic features.

For detailed description of the installation, advanced configuration and feature description, please refer to the **SARVAM UCS System Manual**. Similarly, the guidelines and instructions for setting up and operating the Server in hotels and health care establishments is documented in **SARVAM UCS Hospitality System Manual.**

To download, click https://www.matrixtelesol.com/product-manuals.html. You can also view and download this manual by scanning the QR code printed on the Product Label/Packaging Label.

For product registration and warranty related details, please visit https://www.matrixcomsec.com/product-registration-form.html

This is a common documentation for all the platforms and the SARVAM UCS Application. This document is written with reference to the ETERNITY GENX platform and SARVAM UCS SME Application.

Hardware Overview

ETERNITY LENX

For Firmware Version V1R2 and earlier

The enclosure of ETERNITY LENX consists of fixed and universal slots. The fixed slots are occupied by specific cards - Power Supply Cards and CPU Cards - and cannot be changed, whereas in the universal slots, you can install any of the various card.

If you upgrade the system firmware to V1R3, the Expansion Slots license will be applicable for the universal slots. No universal slots will be functional by default. You must purchase the SARVAM EXP4 ENT license to activate the universal slots as required.

For details, see Expansion Slots topic under License Management in the System Manual.

The slot connectors are located on the motherboard on the backplane of the enclosure. Each slot has guide rails for inserting the cards.

ETERNITY LENX has two racks and a total of 27 Universal slots. The first rack has a total of 15 slots. The first slot from the left is a fixed slot and the last two slots to the right are fixed slots and the remaining 12 are universal slots.
The second rack has a total of 16 slots. The first slot from the left is a fixed slot and the remaining 15 are universal slots.

ETERNITY LENX can be wall mounted, rack mounted or placed on a table. You can also affix wheels to the system; to move it like a trolley. After you have inserted the required cards, you must affix the front top cover.

For Firmware Version V1R3

The enclosure of ETERNITY LENX consists of fixed and universal slots. The fixed slots are occupied by specific cards - Power Supply Cards and CPU Cards - and cannot be changed, whereas in the universal slots, you can install any of the various card.

If you have upgraded the system firmware to V1R3 in the old ETERNITY LENX system, the Expansion Slots license will be applicable for the universal slots. No universal slots will be functional by default. You must purchase the SARVAM EXP4 ENT license to activate the universal slots as required.

If you have purchased the new ETERNITY LENX system with the firmware V1R3, the Expansion Slots license will be applicable for the universal slots. The first eight universal slots after the power supply card in the first rack will be functional by default. If you require more functional universal slots, you must purchase the SARVAM EXP4 ENT license.

Each SARVAM EXP4 ENT license will provide the activation for next four universal slots in sequence.

For details, see Expansion Slots topic under License Management in the System Manual.

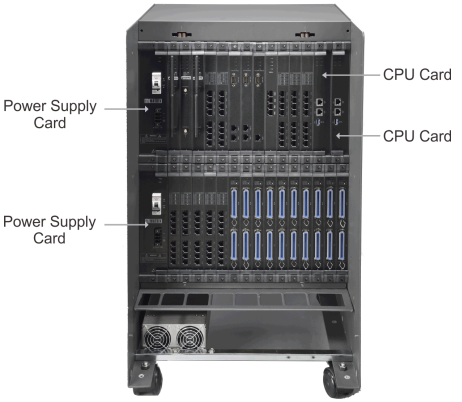
The slot connectors are located on the motherboard on the backplane of the enclosure. Each slot has guide rails for inserting the cards.

ETERNITY LENX has two racks and a total of 27 Universal slots. The first rack has a total of 15 slots. The first slot from the left is a fixed slot and the last two slots to the right are fixed slots and the remaining 12 are universal slots.

The second rack has a total of 16 slots. The first slot from the left is a fixed slot and the remaining 15 are universal slots.

ETERNITY LENX can be wall mounted, rack mounted or placed on a table. You can also affix wheels to the system; to move it like a trolley. After you have inserted the required cards, you must affix the front top cover.

Illustrated below is the design of the enclosure and the position of the slots in ETERNITY LENX.



ETERNITY MENX

Firmware Version V1R2 and earlier

The enclosure of ETERNITY MENX has fixed and universal slots. The fixed slots are occupied by specific Cards - Power Card and the CPU Card - and cannot be changed, whereas in the universal slots you can install various Slave Cards. ETERNITY MENX has 16 universal slots.

If you upgrade the system firmware to V1R3, the Expansion Slots license will be applicable for the universal slots. No universal slots will be functional by default. You must purchase the SARVAM EXP4 ENT license to activate the universal slots as required.

For details, see Expansion Slots topic under License Management in the System Manual.

Inside the enclosure of ETERNITY MENX are slot connectors located on the motherboard on the backplane of the enclosure. Each slot has guide rails for inserting the Cards.

Firmware Version V1R3

The enclosure of ETERNITY MENX has fixed and universal slots. The fixed slots are occupied by specific Cards - Power Card and the CPU Card - and cannot be changed, whereas in the universal slots you can install various Slave Cards. ETERNITY MENX has 16 universal slots.

If you have upgraded the system firmware to V1R3 in the old ETERNITY MENX system, the Expansion Slots license will be applicable for the universal slots. No universal slots will be functional by default. You must purchase the SARVAM EXP4 ENT license to activate the universal slots as required.

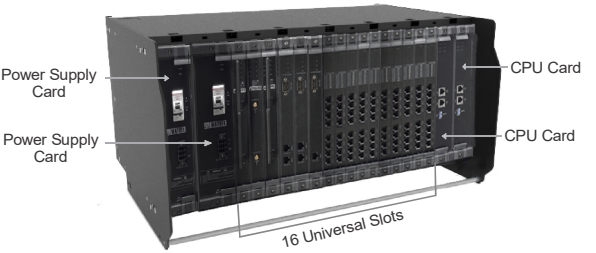
If you have purchased the new ETERNITY MENX system with the firmware V1R3, the Expansion Slots license will be applicable for the universal slots. The first eight universal slots after the power supply card will be functional by default. If you require more functional universal slots, you must purchase the SARVAM EXP4 ENT license.

Each SARVAM EXP4 ENT license will provide the activation for next four universal slots in sequence.

For details, see Expansion Slots topic under License Management in the System Manual.

Inside the enclosure of ETERNITY MENX are slot connectors located on the motherboard on the backplane of the enclosure. Each slot has guide rails for inserting the Cards.

Illustrated below is the design of the enclosure and the position of the slots in ETERNITY MENX.



ETERNITY GENX

Firmware Version V1R2 and earlier

The enclosure of ETERNITY GENX has fixed and universal slots. The fixed slots are occupied by specific factory fitted cards. ETERNITY GENX has 12 universal slots.
If you upgrade the system firmware to V1R3, the Expansion Slots license will be applicable for the universal slots. No universal slots will be functional by default. You must purchase the SARVAM EXP4 SME license to activate the universal slots as required.

For details, see Expansion Slots topic under License Management in the System Manual.

Inside the enclosure of ETERNITY GENX are slot connectors located on the motherboard on the backplane of the enclosure. Each slot has guide rails for inserting the cards.

Firmware Version V1R3

The enclosure of ETERNITY GENX has fixed and universal slots. The fixed slots are occupied by specific factory fitted cards. ETERNITY GENX has 12 universal slots.

If you have upgraded the system firmware to V1R3 in the old ETERNITY GENX system, the Expansion Slots license will be applicable for the universal slots. No universal slots will be functional by default. You must purchase the SARVAM EXP4 SME license to activate the universal slots as required.

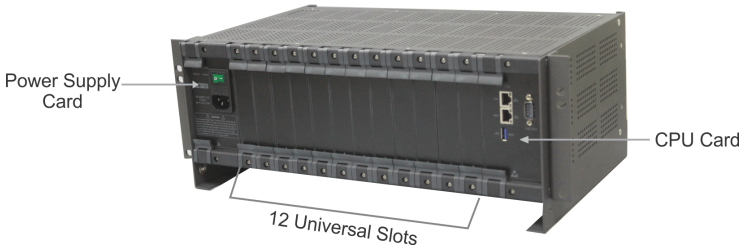
If you have purchased the new ETERNITY GENX system with the firmware V1R3, the Expansion Slots license will be applicable for the universal slots. The first four universal slots after the power supply card will be functional by default. If you require more functional universal slots, you must purchase the SARVAM EXP4 SME license.

Each SARVAM EXP4 SME license will provide the activation for next four universal slots in sequence.

For details, see Expansion Slots topic under License Management in the System Manual.

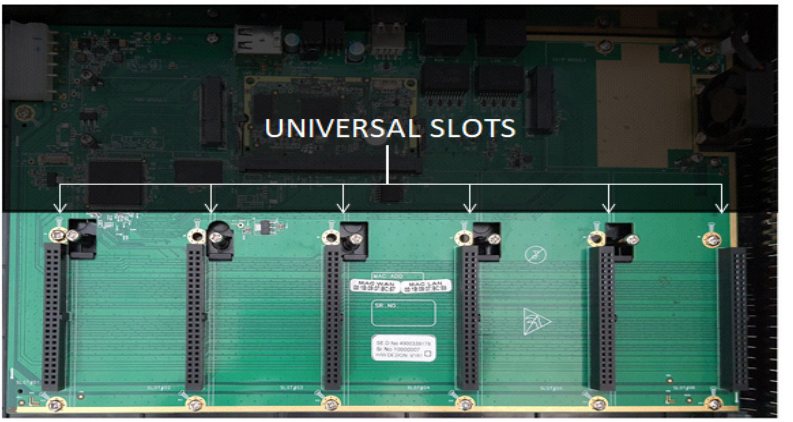
Inside the enclosure of ETERNITY GENX are slot connectors located on the motherboard on the backplane of the enclosure. Each slot has guide rails for inserting the cards.

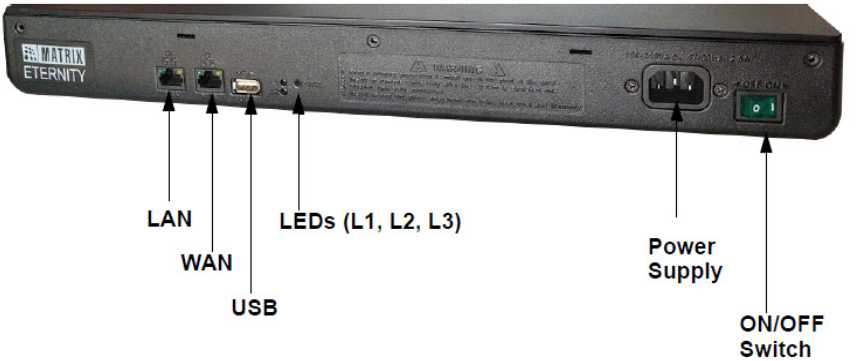
Illustrated below is the design of the enclosure and the position of the slots in ETERNITY GENX.



ETERNITY PENX

The enclosure of ETERNITY PENX has 6 universal slots. In the Universal slots you can install various Slave Cards.





Cards supported

The fixed slots are occupied by specific cards — Power Supply Card/s and the CPU Card — and cannot be changed, whereas in the universal slots you can install any of the various cards.

The following card types are supported by ETERNITY LENX/MENX/GENX/PENX in the universal slots:

Card Type	Description
CO	To connect Two-wire analog trunk lines.
SLT	To connect any standard, two-wire, analog single line telephone instrument - rotary, pulse-tone, cordless, feature phones with or without Calling Line Identification.
DKP	To connect digital key phones. The Matrix EON series, that is, Matrix proprietary digital key phones.
BRI *	To connect the ISDN BRI lines.
T1E1PRI	To connect T1/ E1 lines.
E1FO *	To connect ISDN T1/E1 line on the copper interface or E1 line on the Fiber Optic (FO) interface.
Mobile	To connect to the GSM/UMTS/CDMA/LTE networks.
Data *	To extend the local LAN connectivity to the remote locations over T1/E1 line.
ILC *	To connect any standard, two-wire, analog single line telephone instrument - rotary, pulse-tone, cordless, feature phones with or without Calling Line Identification. Used for Building Intercom application.
E&M *	To connect to another PBX/ Tie Line equipment.
Radio *	To connect Radio devices.
Magneto *	To connect Magneto field telephones.

Card Type with asterisk '' are not supported in PENX.*

Installing the System

Before you Start[3]

Before you begin the installation of the ETERNITY LENX/MENX/GENX/PENX, make sure that the required telecom wiring has been done and you have the following items ready:

- SARVAM UCS SME Application License, if you are installing ETERNITY GENX.
- SARVAM UCS ENT Application License, if you are installing ETERNITY LENX/MENX.
- SARVAM UCS SMB Application License, if you are installing ETERNITY PENX.
- A Main Distribution Frame (MDF)
- A suitable location to install the Main Distribution Frame and the ETERNITY LENX/MENX/GENX/PENX platform. If you want to install the mobile card, make sure the place you select has sufficient signal strength.
- Cables for trunk lines and extensions.

  Terminate the trunk lines from the service provider network and the extension lines from the phones into the Main Distribution Frame.
- The Cards of ETERNITY LENX/MENX/GENX/PENX, as required.
- One or more Single Line Telephone for testing.
- Power supply.

  The ETERNITY MENX/GENX works with input voltages ranging between 100-240VAC or with 48VDC. ETERNITY LENX works with input 48VDC (-15% to +20%). The ETERNITY PENX works with input voltages ranging between 100-240 VAC. Arrange for a separate power point and switch, close to the system. Power supply for the system must be separate from other heavy electrical loads like Air-conditioners, heaters, welding machines, electrical motors, etc. There are different types of PS cards, refer to the System Manual for details.

3. *Refer to "Pre-activated Licenses".*

- One or more active Two-wire Trunk lines (CO lines) for test calls.
- A modem for the ISDN T1E1PRI line.
- An NT1 termination device for the ISDN BRI line.
- Appropriate cables and connectors to set up and test the WAN interface of the system and the LAN connection.
- A standalone PC or a PC connected in LAN.
- A SIM card to test mobile network connectivity.
- A SIP Account to test VoIP connectivity.

- *Make sure you have separate electrical earth and telecom earth for the safety of the product and the people handling it.*
- *Always wear a properly earthed (grounded) electrostatic discharge preventive belt or wrist strap while handling the cards of the System.*
- *Use Primary Protection on trunk and long distance extension lines to protect the system from lightning and electrical surges.*
- *Do not install the system near any source of water, corrosive fumes, and electromagnetic noise such as radio equipment, heavy transformers, faulty electric chokes of tube-lights, device having a faulty coil, to avoid electromagnetic effect.*

  For detailed instructions, refer to the System Manual.

- Unpack the system.
- Make sure that your package contains all the below items. If any item is missing or damaged, please contact the source from where you have purchased the system.
  - ETERNITY GENX 12S[4]
  - 3-pin Power Cord, MC-4 Black[5]
  - 3-pin DC Input Cable[6]

4. *ETERNITY GENX AC with factory fitted AC Power Supply and CPU cards.*
   ETERNITY GENX DC with factory fitted DC Power Supply and CPU cards.
5. *Supplied with ETERNITY GENX AC.*
6. *Supplied with ETERNITY GENX DC.*

- Two Screws M 7/30 for Wall Mounting
- Two Screw Grips for Wall Mounting
- Two Side Clamps
- Four Screw M4X12 CSK for the Side Clamp
- Mounting Templates

For packing list of ETERNITY LENX/MENX/PENX, refer to the SARVAM UCS System Manual.

- Place the system at the location you have selected.

  If installing ETERNITY LENX/MENX/GENX,

  - unscrew and remove the filler bracket of the slots you want to insert the cards.
  - insert the cards into the Universal Slots. Make sure the connectors on the card and those on the motherboard on the backplane make perfect contact.
  - press down the levers of the card mounting brackets and secure the card in its slot with the screws provided.

- If installing ETERNITY PENX,

  - make sure the power supply is turned off and the power cord is unplugged, before you begin inserting the cards.
  - unpack the card and check the package contents.
  - unscrew the top cover and keep the screws and the cover aside.
  - select a Universal Slot to place the card and remove the screws on the studs.
  - seat the card on the slot such that the card connectors make perfect contact with the connector pins on the CPU.
  - secure the card on the slot by fixing the screws on the studs.
  - replace and secure the cover after you have completed installation of all cards and connecting the cables.

- Refer *"Hardware Overview"* to know more about the Universal Slots.

Installing the VOCODER Module

ETERNITY GENX supports two NX DBM VOCODER64 modules. You must purchase the modules separately. The system supports a maximum of 128 VOCODER channels out of which 4 channels are provided by default. If you require more channels, you can purchase the licenses accordingly. Matrix provides two licenses — SARVAM VOCODER CHNL4 and SARVAM VOCODER CHNL16.

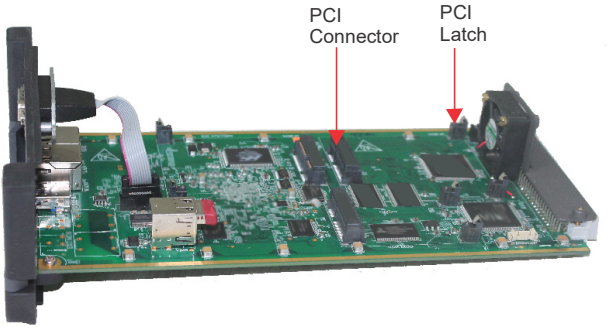
If you require more than 64 VOCODER channels, you can install another NX DBM VOCODER64 module.

To do so,

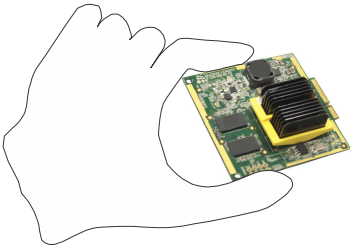
- Unpack the NX DBM VOCODER64 module.

- If the CPU Card is already installed, switch off power supply, unplug the power cord. Remove the screws securing the card. Lift the levers on the mounting bracket to release the card. As the card emerges from the slot, ease it out of the slot.
- Place the card carefully on a table with some packing underneath it. Avoid any physical contact with the PCB part of the card as this could cause Electrostatic Discharge (ESD) and may damage the hardware.

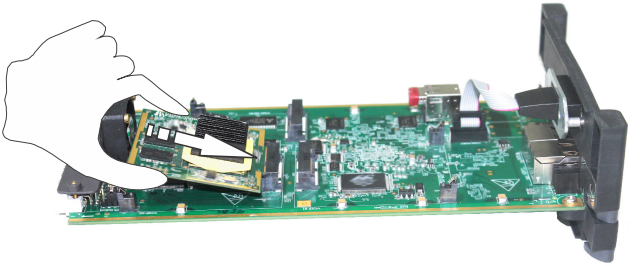
- The NX DBM VOCODER64 module is to be mounted adjacent to the fan on the CPU board.



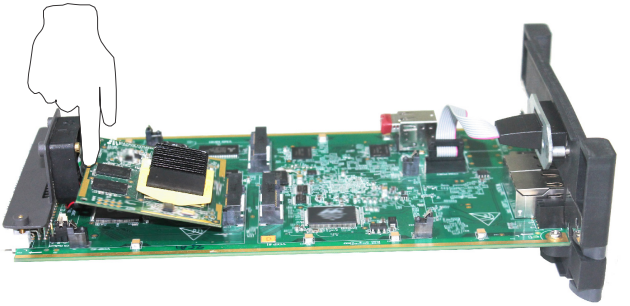
- Locate the PCI Connector and PCI Latch on the mainboard.



- Carefully hold the NX DBM VOCODER64 module from the edges. Make sure you do not touch the PCB area.



- Insert the NX DBM VOCODER64 module into the PCI Connector socket.



- Press the module with a finger to fix the latches perfectly into the mounting holes. Make sure you do not touch the PCB area of the module except the yellow line provided for grounding at the front end of the module.

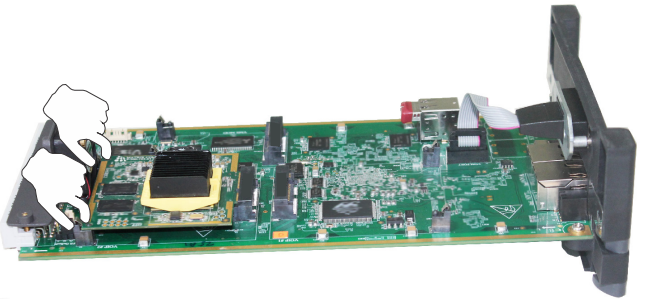
  Do not apply excessive pressure. Follow the same steps to install another module.

Removing the VOCODER Module

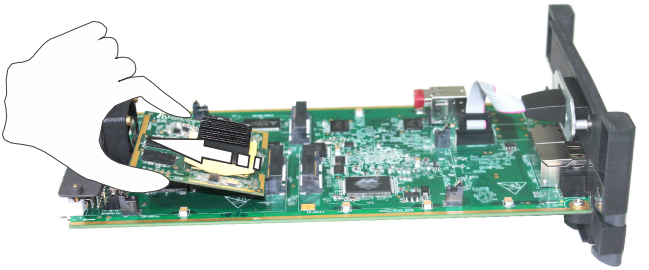
- Locate the VOCODER Module you want to remove from the CPU Card.

- Press both the latches together.

Make sure you support the base of the latches from behind with your thumbs.



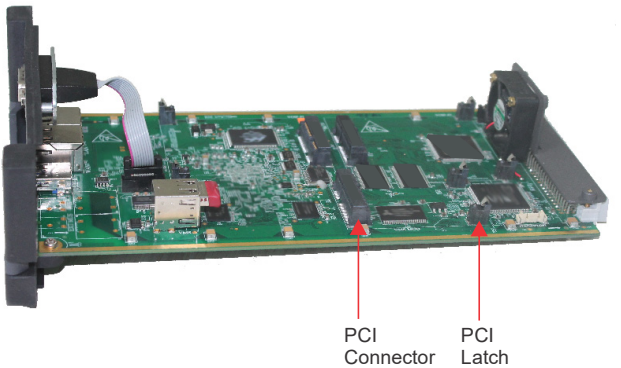
- Firmly hold the module and ease it out of the PCI connector carefully.



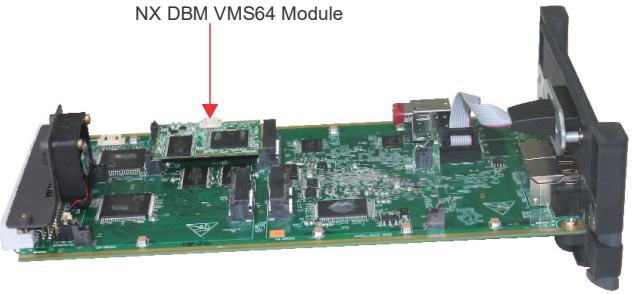
Installing the VMS Module

The VMS in the ETERNITY GENX is an optional module. If required, you may purchase it separately. The system supports a maximum of 64 channels out of which 4 channels are provided by default. If you require more channels, you can purchase the licenses accordingly. Matrix provides two licenses — SARVAM VMS CHNL4 and SARVAM VMS CHNL16.

- Locate the PCI connector for NX DBM VMS64 module on the CPU card.



- Follow the same steps as described in installing the NX DBM VOCODER64 module. See *"Installing the VOCODER Module"*.



- The factory fitted pendrive which is inserted into the Internal USB Port of the CPU Card contains VMS data and VMS firmware. You will be able to use the VMS features once you activate the VMS License.

  If you want to store more voice mail messages or greetings then you will need more space to store the same. You can replace this default pendrive with a new one having more space.

  To do so, you need to format your new pendrive with FAT32 file format and then copy all the contents of the factory fitted pendrive into the new pendrive.

Make sure you do not replace the pendrive with power ON. The system will not detect the new pendrive if you do not restart the system after replacement.

For removing the VMS module, follow the same steps as described in removing the VoIP module. See *"Removing the VOCODER Module"*.

Similarly, you can install or remove the VoIP and VMS Modules from the CPU Card in ETERNITY LENX/MENX.

To install/remove VoIP and VMS Modules from the CPU Card in ETERNITY PENX, refer *"Install/ Remove VoIP and VMS Modules - PENX"*

- After installing the modules, insert the card back into the system.
- Connect a computer to the LAN/WAN Port of system with the Ethernet cable supplied for the port.
- Open a Web browser on the computer to access the embedded Web server, Jeeves.
- Activate the Key provided in the License Voucher for the VMS. For instructions, see *"Activating License Key"*.
- To know more about Configuring VMS, see *Configuring Voice Mail System* in System Manual.

Installing SLT, DKP and CO Cards

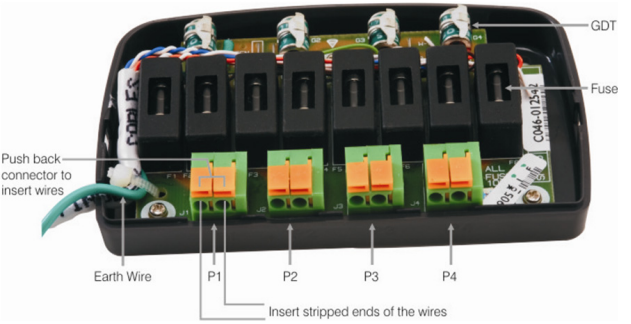
- Unpack the SLT, DKP and/or CO cards. Remove the filler brackets of the universal slots and insert the cards.
- Plug the MDF cables provided with each card into the connectors of the cards.
- Terminate the free ends of the MDF cables from the card connectors into the Krone modules of the Main Distribution Frame. Refer the cable connections given in the *"Appendix"* for terminating the cables into the Main Distribution Frame.

  For CO Trunks, you are recommended to use Primary Protection Module(PPM4) supplied by Matrix. This is to protect the system from heavy voltages from trunk lines and overhead stations. For information regarding the installation, see *"Installing PPM4"*.
- Connect Single Line Analog Telephone instruments to the SLT ports over the MDF.
- Connect Digital Key phones and their consoles to the DKP Ports over the MDF.

- Connect Two Wire Trunk (Analog Trunk) lines to the CO ports over the MDF.

The CO Card supports Power Fail Transfer (PFT). Refer to the topic Power Fail Transfer in the SARVAM UCS System Manual for details.

Installing PPM4



- Unpack the PPM and check the package contents.
- Select an appropriate location for the PPM4. Refer the block diagram above when deciding where to place the PPM4. Also, take into consideration the length of the cables of the PPM4.
- Use the Mounting Template supplied with the PPM4 to drill holes on the wall to fix the PPM in the selected location. Fix the screws supplied with the PPM4 into the drilled holes, with their heads protruding from the wall.
- You may mount the PPM4 first and connect the cables OR you may connect the cables first and then mount the PPM4.
- To connect cables, press the snap fits on both sides of the PPM4 to release the cover. Remove the cover.
- Connect the Earth wire (green wire) to the Telecom Earth.
- Now connect the CO Trunk wires from the CO side into the PPM4 port connectors marked as P1, P2, P3 and P4.
- To do so, strip off about half a centimeter of the insulation of the wire ends of the first pair of CO Trunk you want to connect to the PPM4.

- Push back the (orange-color) levers of the connector of port P1, using a blunt pin or a small flat screw driver or your thumbnail.

- Insert the stripped ends of the two wires into the two (green-color) openings of the connector, with one wire in each opening.

- Release pressure on the levers. Both wires will be held in place by spring clamp action.
  - To remove the wires,
    - push back the levers.
    - pull out the wires gently.
    - release pressure on the levers.

- Now, repeat the above steps to connect the other CO Trunk wires from the CO side into the connectors of the ports P2, P3, and P4.

- Now, terminate the wire pairs emerging from the PPM4 multi-pair cable into the 'Trunk Lines' side of the MDF using the punch tool for Krone Modules.

  Refer the following table for connection details of the wires:

PPM4 Port	Color
P1	Blue and White
P2	Orange and White
P3	Green and White
P4	Brown and White

- Replace the cover of the PPM4 by pressing back the snap fits on both sides.

- Mount the PPM, if not done already.

Install/Remove VoIP and VMS Modules - PENX

Installing the VOCODER Module

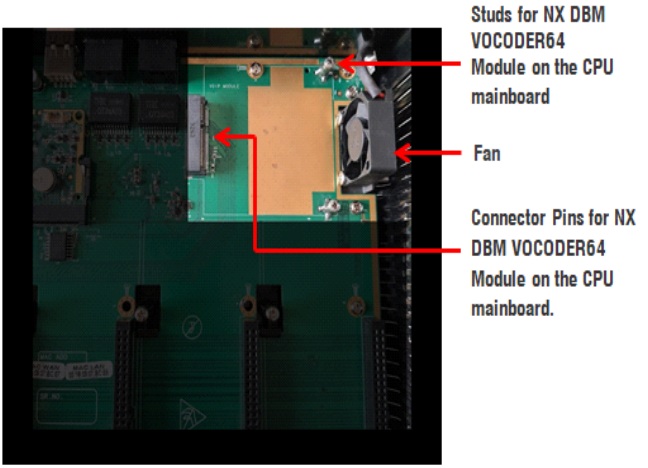
To install,

- Unpack the NX DBM VOCODER64 Module.

- Unscrew the top cover of the ETERNITY PENX and remove it by sliding it out. Keep the cover and the screws aside.

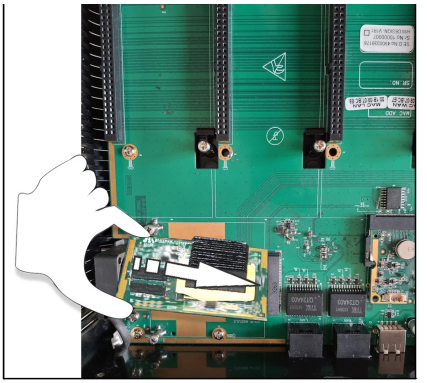
- The NX DBM VOCODER64 Module is to be mounted adjacent to the fan on the CPU board.

- Locate the studs on the CPU mainboard and unscrew them to install the NX DBM VOCODER64 Module.



- Carefully hold the NX DBM VOCODER64 Module from the edges. Make sure you do not touch the PCB area.

- Gently seat the NX DBM VOCODER64 Module on the studs on the CPU mainboard. The connector pins on the module must make complete contact with those on the CPU mainboard. Do not apply pressure.



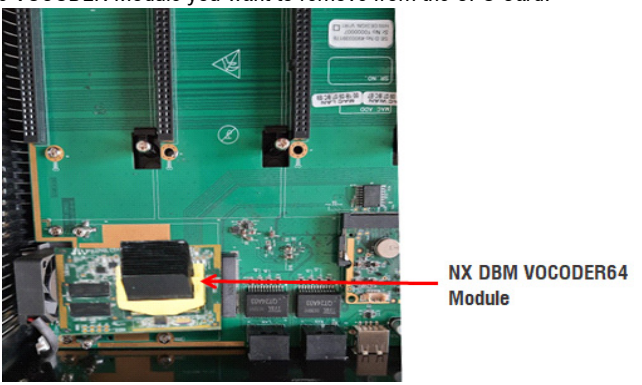
- When the module is seated firmly on the studs on the CPU mainboard, secure the module with the screws on the studs.

- Do not apply excessive pressure. Follow the same steps if you wish to install VMS module, see *"Installing the VMS Module"*.

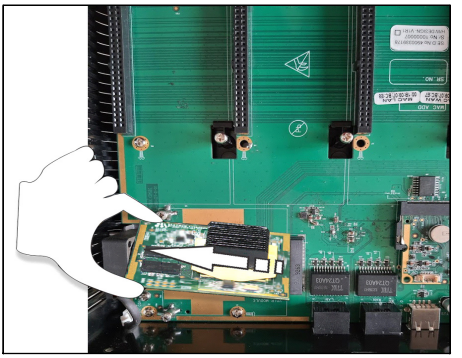
- If you have no other modules to install, replace the top cover and secure the cover with the screws.

Removing the VOCODER Module

- Locate the VOCODER Module you want to remove from the CPU Card.



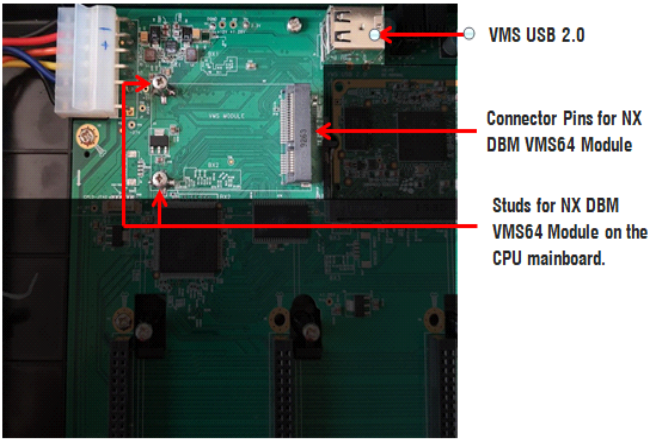
- Remove the screws, firmly hold the module and ease it out of the PCI connector carefully.



Installing the VMS Module

To install,

- Locate the PCI connector for NX DBM VMS64 Module on the CPU card.



- Follow the same steps as described in installing the NX DBM VOCODER64 Module. See *"Installing the VOCODER Module"*.

- The pendrive which is provided to you by default contains VMS data and VMS firmware. You will be able to use the VMS features once you activate the VMS License.

  If you want to store more voice mail messages or greetings then you will need more space to store the same. You can replace this default pendrive with a new one having more space.

  To do so, you need to format your new pendrive with FAT32 file format and then copy all the contents of the factory fitted pendrive into the new pendrive.

Make sure you switch-off the system to replace the pendrive. The system will not detect the new pendrive if you do not restart the system after replacement.

- If you have no other modules to install, replace the top cover and secure the cover with the screws.

Installing the BRI Card[7]

- Unpack the BRI Card.

- A BRI Port can be configured in the TE/NT mode.

  You must set the Orientation Type of the BRI Ports as **Terminal (TE)** or **Network (NT)** mode as per your installation requirement. By default, BRI Ports are configured in the NT mode.

  To set Orientation Type of the BRI Port, you must access the Web-based configuration tool, Jeeves.

  Under **Configuration**, click **BRI Configuration**. Click **BRI Parameters** and set the **Orientation Type**.

- Depending on the installation and configuration scenario, Termination Resistance of 100Ω should be inserted.

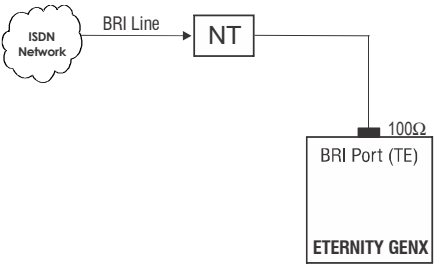
Inserting Termination Resistance on the BRI Port

- Termination Resistance should be inserted in the following cases:

1. When the BRI Port is configured in **NT** mode.

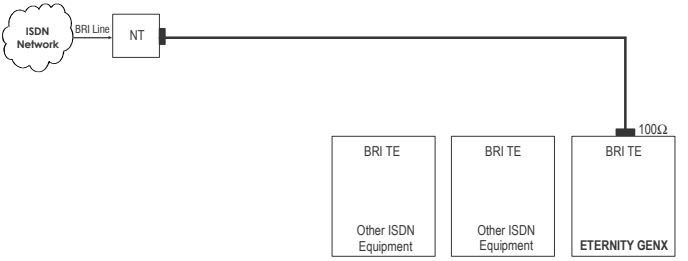
2. When the BRI Port is configured in **TE** mode and connected in a **Point-to-Point** configuration as shown in figure 1.

   Figure 1:



7. ETERNITY PENX does not support BRI Card.

3. When the BRI Port is configured in **TE mode** and connected as the **last terminal on the S0 bus** (Multi-point configuration) as shown in the figure below.



- Termination need not be inserted in case 2 and 3 above, if the S0 bus itself supports Termination resistors.

- Termination need not be inserted if the BRI Port of ETERNITY GENX (configured in TE mode) is connected as any terminal other than the last terminal on the S0 bus (in a Multi-point configuration).

4. To set the 100Ω termination on the BRI Port set the Jumpers on the BRI Module (daughter board) to the position described below.

   By default the Jumpers are set in AB position.

   ETERNITY LENX/MENX

Function	Module 2 (M2)				Module 3 (M3)			
	BRI Port 1		BRI Port 2		BRI Port 3		BRI Port 4	
	Jumper Position		Jumper Position		Jumper Position		Jumper Position	
	J6	J8	J7	J9	J6	J8	J7	J9
To insert 100Ω termination	AB	AB	AB	AB	AB	AB	AB	AB
To remove 100Ω termination	BC	BC	BC	BC	BC	BC	BC	BC

Function	Module 4 (M4)				Module 5 (M5)			
	BRI Port 5		BRI Port 6		BRI Port 7		BRI Port 8	
	Jumper Position		Jumper Position		Jumper Position		Jumper Position	
	J6	J8	J7	J9	J6	J8	J7	J9
To insert 100Ω termination	AB	AB	AB	AB	AB	AB	AB	AB
To remove 100Ω termination	BC	BC	BC	BC	BC	BC	BC	BC

ETERNITY GENX

Function	Module 1 (M1)				Module 2 (M2)			
	BRI Port 1		BRI Port 2		BRI Port 3		BRI Port 4	
	Jumper Position		Jumper Position		Jumper Position		Jumper Position	
	J6	J8	J7	J9	J6	J8	J7	J9
To insert 100Ω termination	AB	AB	AB	AB	AB	AB	AB	AB
To remove 100Ω termination	BC	BC	BC	BC	BC	BC	BC	BC

Feeding Power to Terminal Equipment

- When the BRI Port of the ETERNITY GENX is used as BRI-NT, you can feed power to the terminal equipment connected to the BRI-NT Port from the ETERNITY GENX. Power can be fed through Tx and Rx wires or through a separate pair of wires.

  To Feed Power, you must access the Web-based configuration tool, Jeeves.

  Under **Configuration**, click **BRI Configuration**. Click **BRI Parameters** and select the **Feed Power** check box.

- By default, the Jumpers are set in AB position to feed power through Tx and Rx wires (Phantom Power).

  If you want to feed power through a separate pair of wires, you may change the position of the Jumpers on the BRI module as mentioned in the table below.

ETERNITY LENX/MENX

Function	Module 2 (M2)				Module 3 (M3)			
	BRI Port 1		BRI Port 2		BRI Port 3		BRI Port 4	
	Jumper Position		Jumper Position		Jumper Position		Jumper Position	
	J4	J5	J2	J3	J4	J5	J2	J3
To feed power on Tx and Rx wires (Phantom Power)	AB	AB	AB	AB	AB	AB	AB	AB
To feed power on separate pair of wires	BC	BC	BC	BC	BC	BC	BC	BC

Function	Module 4 (M4)				Module 5 (M5)			
	BRI Port 5		BRI Port 6		BRI Port 7		BRI Port 8	
	Jumper Position		Jumper Position		Jumper Position		Jumper Position	
	J4	J5	J2	J3	J4	J5	J2	J3
To feed power on Tx and Rx wires (Phantom Power)	AB	AB	AB	AB	AB	AB	AB	AB
To feed power on separate pair of wires	BC	BC	BC	BC	BC	BC	BC	BC

ETERNITY GENX

Function	Module 1 (M1)				Module 2 (M2)			
	BRI Port 1		BRI Port 2		BRI Port 3		BRI Port 4	
	Jumper Position		Jumper Position		Jumper Position		Jumper Position	
	J4	J5	J2	J3	J4	J5	J2	J3
To feed power on Tx and Rx wires (Phantom Power)	AB	AB	AB	AB	AB	AB	AB	AB
To feed power on separate pair of wires	BC	BC	BC	BC	BC	BC	BC	BC

The number of ISDN Terminals that can be connected on the BRI Port configured in the NT mode depends on the power consumed by the ISDN terminals.

From signaling point of view, up to 8 terminal equipment can be connected on the BRI Port configured in the NT mode. But the maximum power that can be fed to a single BRI Port is 50mA. So, connect ISDN Terminals to the BRI Port according to the power consumed by them, which together do not exceed 50mA.

- Insert the BRI card in any free Universal Slot and secure the card.
- Use the cable supplied for each connector on the BRI card to connect the BRI Ports to the NT1 device supplied by your ISDN service provider. See the tables below for configuration and pinout details.

Configuration of the U interface (RJ-45) on NT1

Pin Number	Pin Details
4	Tx
5	Rx

Configuration of the S/T interface (RJ-45) on NT1

Pin Number	Pin Details
3	Rx1
4	Tx1
5	Tx2
6	Rx2

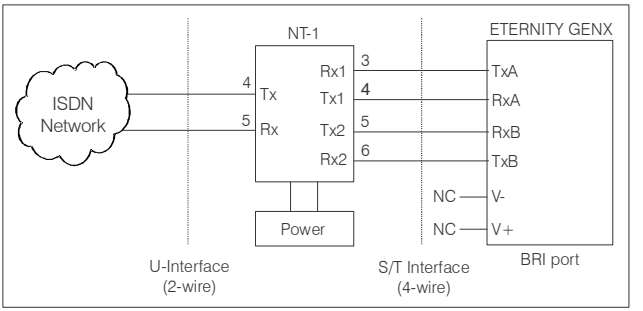
Pin details of BRI Port in TE mode

Pin Number	Signal	Color
1	--	Orange-White
2	--	Orange
3	TX-A	Green-White
4	RX_A	Blue
5	RX_B	Blue-White
6	TX_B	Green
7	VOUT-	Brown-White
8	VOUT+	Brown

Pin details of BRI Port in NT Mode

Pin Number	Signal	Color
1	--	Orange-White
2	--	Orange
3	RX-A	Green-White
4	TX_A	Blue
5	TX_B	Blue-White
6	RX_B	Green
7	VOUT-	Brown-White
8	VOUT+	Brown

This is a typical connection of a BRI Line to the BRI Port in the TE mode:



LED Pattern of BRI Card

The BRI4 Card has an LED for each port: L1, L2, L3, L4.

The LEDs show the Status of the Ports as summarized in the table below:

Port Status	LED Color	LED Cadence
Port is not Active	Red	Continuously ON
Port is Active	Green	Continuously ON

Installing the T1E1PRI Card/E1FO Card

- Unpack T1E1PRI Card/E1FO Card.
- Termination resistance can be changed, using Jumper J5.
- To set the Line Termination Resistor to T1 or E1 Connectivity, you must change the position of the DIP switch SW5 (for LENX/MENX), jumper J5 (for GENX) and DIP switch SW1 (for PENX).

In ETERNITY LENX/MENX

- T1E1Port 1 termination resistance can be changed using DIP switch SW5.
- Set Pins of SW5 as shown below to set termination resistance.

Pin-1	Pin-2	Pin-3	Pin-4	Resistance
Off	Off	On	Off	120Ω (for E1)
Off	On	Off	Off	100Ω (for T1)

- T1E1 Port 2 termination resistance can be changed using DIP Switch SW2.
- Set Pins of SW2 as shown below to set termination resistance.

Pin-1	Pin-2	Pin-3	Pin-4	Resistance
Off	Off	On	Off	120Ω (for E1)
Off	On	Off	Off	100Ω (for T1)

In ETERNITY GENX

Function	Jumper	Position
To set termination resistance of 120Ω E1 connectivity	J5	BC
To set termination resistance of 100Ω T1 connectivity	J5	AB

In ETERNITY PENX

Termination Resistance of the PRI Port for T1 or E1 Connectivity is set by changing the position of the Switch (S1) as given in the table below:

Switch (S1)	Meaning
OFF	To set termination resistance of 120Ω for E1 connectivity
ON	To set termination resistance of 100Ω for T1 connectivity

- If you want to use the T1E1 Card, connect one end of the RJ45 cable provided with the T1E1PRI Card to the T1E1 Port, over the Copper interface. Connect the other end to the modem provided by the ISDN Service Provider.

- If you want to use the E1FO Card, you may:
  - Connect one end of the RJ45 cable provided with the E1FO Card to the T1E1 Port, over the Copper interface (for T1 connectivity) and the other end to the modem provided by the ISDN Service Provider.
    or
  - Connect the Mono mode FO cable with the E1FO Card to the T1E1 Port, over the FO interface (for E1 connectivity) if you have an existing Fiber Optic infrastructure.

For E1FO Card, the T1 connectivity is supported over the Copper interface only.

LED Indications

ETERNITY LENX/MENX

- The ETERNITY ME T1E1PRI Card has four LEDs: L1, L2, L3 and L4.
- LED L1 and L2 are assigned to T1E1 Port 1, while LED L3 and L4 are assigned to Port 2.
- LED L1 shows Card Heart Bit as well as status of the Port1.

ETERNITY GENX

- The ETERNITY GE T1E1PRI Card has 2 LEDs: LED1 and LED2.
- LED patterns are defined as shown below for different state and signaling as shown below.

1. **Port Active Mode**

   Signaling Type: E1-PRI

   LED1 Pattern:

Port Status	Color	Cadence
Layer 1 established successfully	Green	Continuous On
CRC4 Alarm	Green	100 ms On - 100 ms Off
BFA Alarm	Red	500 ms On - 500 ms Off
LOS Alarm	Red	Continuous On

LED2 Pattern:

Port Status	Color	Cadence
Layer 1 established successfully	Green	Continuous On
RAI Alarm	Red	500 ms On - 500 ms Off
AIS or LOS Alarm	Red	Continuous On

Signaling Type: E1-CAS

LED1 Pattern:

Port Status	Color	Cadence
Layer 1 established successfully	Green	Continuous On
CRC4 Alarm	Green	100 ms On - 100 ms Off
MFA Alarm	Red	100 ms On - 100 ms Off
BFA Alarm	Red	500 ms On - 500 ms Off
LOS Alarm	Red	Continuous On

LED2 Pattern:

Port Status	Color	Cadence
Layer 1 established successfully	Green	Continuous On
Y-Bit Alarm	Green	100 ms On - 100 ms Off
AIS16 Alarm	Red	100 ms On - 100 ms Off
RAI Alarm	Red	500 ms On - 500 ms Off
AIS or LOS Alarm	Red	Continuous On

Signaling Type: T1-RBS or T1-PRI

LED1 Pattern:

Port Status	Color	Cadence
No Alarm	Green	Continuous On
BFA Alarm or MFA Alarm	Red	500 ms On - 500 ms Off
AIS Alarm	Red	100 ms On - 100 ms Off
LOS Alarm	Red	Continuous On

LED2 Pattern:

Port Status	Color	Cadence
Layer 1 established successfully	Green	Continuous On
RAI or LOS Alarm	Red	Continuous On

2. Port Disable Mode

LED1 Pattern:

Port Status	Color	Cadence
Port Disable	Red	Continuous On

LED2 Pattern:

Port Status	Color	Cadence
Port Disable	Off	Off

Installing E&M Card[8]

- Unpack the E&M card.
- The E&M Card supports **E&M Interface Type IV** and **Type V** connection.
- To select the **Interface Type** change the position of the jumpers on the E&M module. See the table below for jumper position to set Interface Type.

Function	Jumper	Position
	J1	**J2**
Type IV E&M Interface (default position)	AB	AB
Type V E&M Interface	BC	BC

- Select the **Speech Interface** — 2-wire speech or 4-wire speech — as required, by changing the jumper position on the E&M module. See the table below for jumper positions.

Function	Jumper	Position
	J3	**J4**
4-wire speech interface	AB	AB
2-wire speech interface (default position)	BC	BC

- Select a universal slot for the E&M card and insert the card in the slot and secure it.
- Connect the cables supplied with the E&M card into the connectors on the E&M Card.
- Connect the free end of the cable into the E&M Ports of the other PBX/Router/Tie Line equipment with appropriate crossing of the wires.
- For connecting the wires, refer the pinout details for each E&M Card Type and for each E&M Type and Speech Interface Type given in the "Appendix".

LED indication of E&M Card

Stage	LED Color	LED Cadence
At Power ON		LED OFF
After 30-60 seconds		LED OFF
After 60-90 seconds	RED	L1, L2, L3, L4 ON 500ms - L1, L2, L3, L4 OFF
	GREEN	L1, L2, L3, L4 ON 500ms - L1, L2, L3, L4 OFF
After 65-95 seconds	RED	L1, L2 L3, L4 ON 500ms - L1, L2, L3, L4 OFF
	GREEN	L1, L2 L3, L4 ON 500ms - L1, L2, L3, L4 OFF

8. ETERNITY PENX does not support E&M Interface.

Stage	LED Color	LED Cadence
Normal (Port Event)		
M-Wire High	Green	LED of the Port continuously ON
M-Wire Low		LED of the Port continuously OFF
E-Wire High	Red	LED of the Port continuously ON
E-Wire Low		LED of the Port continuously OFF
E-Wire and M-Wire High	Orange	LED of the Port continuously ON

Installing Mobile Card

For compatibility and use of Matrix GSM products (2G/3G/4G) in Russia and Iran Province connect with Matrix Sales or Technical Support Team.

- Unpack the GSM/CDMA[9] Mobile Card.
- Connect the antenna (provided with the Mobile card) to the connector on the Mobile card.
- You may enable PIN Protection on your SIM card before inserting it into the Mobile card. This allows you to protect it from the unauthorized use.

PIN Protection is not supported for CDMA Mobile Card.
Make sure you disable Call Waiting in the SIM, else it may result in call disconnection.

- *If you want to use PIN Protection*,
  - First, insert the SIM card in a Mobile handset.
  - From the Mobile handset change the PIN to *1234*.
  - Remove the SIM from the Mobile handset.
  - Inserting the SIM with PIN value 1234, allows you to change the SIM PIN from the SARVAM UCS Jeeves later.

  If you do not want to use PIN protection, insert the SIM in the mobile handset and disable PIN protection.

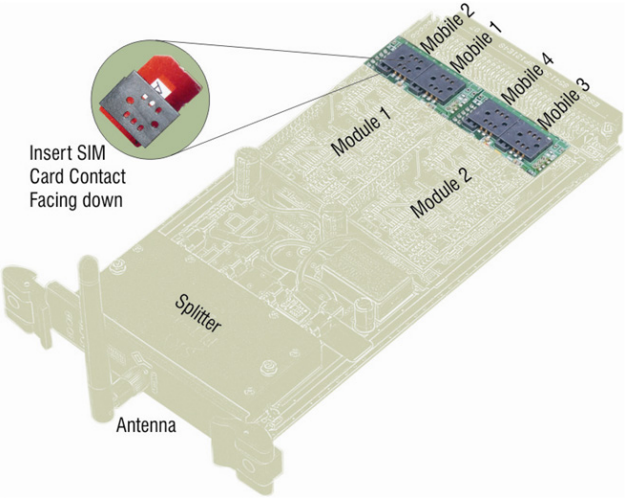
Failure to follow the instructions on PIN protection may cause your SIM Card to be blocked and you will require Personal Unblocking Number (PUK) to reactivate it again.

ETERNITY GENX[10] support both types of Mobile Cards - with SIM Hot-swap and without SIM Hot-swap. Hot-swap allows you to insert or remove a SIM card from the SIM holder (present at the fascia of the Mobile card) without switching off the system.

9. Consider SIM as RUIM, if you are installing CDMA Mobile Card in your system. ETERNITY PENX does not support CDMA.
10. SIM hot-swap is also supported in ETERNITY LENX/ MENX, refer to SARVAM UCS System Manual for detail.

SIM Hot-swap[11] is supported for ETERNITY GE CARD GSM4, ETERNITY GE CARD GSM4 3G having hardware design V2R2, CPLD Version Revision V2R2 and PCB Version Revision V2R1 and later and ETERNITY GE CARD GSM4 4G.

Installing ETERNITY GE Card GSM4/GSM4 3G/CDMA2[12] Card without SIM Hot-swap



- Insert the SIM card (PIN changed to 1234), with its connector side down into the SIM holder on the Mobile card. You can insert multiple SIM cards of the same GSM service provider or of different service providers.

- Now, insert the Mobile card in any of the free Universal slots and secure it.

- Make sure you configure this value in SIM PIN[13] for the Mobile Port using Jeeves. For detailed instructions, see *Mobile Port* in the System Manual.

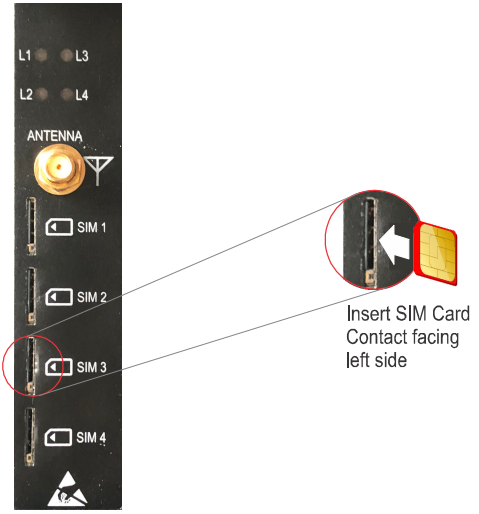
If the wrong SIM PIN is entered thrice in a row, by a user, the SIM Card suspects the user and asks for the Personal Unlock Keyword (PUK).

11. ETERNITY PENX does not support Hot-Swap.

12. Insert RUIM Card instead of SIM Card if you are installing CDMA Mobile Card. Insert the RUIM Cards in Mobile 1 and 2.

13. SIM PIN Protection is not applicable if you are installing CDMA Mobile Card. Disable PIN Protection on RUIM.

Installing ETERNITY GE Card GSM4/GSM4 3G/GSM4 4G with SIM Hot-swap



- Insert the SIM with its contact side facing left into the SIM slot located on the fascia of the Mobile card.
- Push the SIM backwards into the slot until you hear a click and the SIM is locked in place.
- To unlock the SIM, push the protruded portion of the SIM backwards again and release it.
- Now, insert the Mobile card in any of the free Universal slots and secure it.
- Make sure you configure this value in SIM PIN[14] for the Mobile Port using Jeeves. For detailed instructions, see *Mobile Port* in the System Manual.

If the wrong SIM PIN is entered thrice in a row, by a user, the SIM Card suspects the user and asks for the Personal Unlock Keyword (PUK).

The Mobile cards with SIM Hot - swap are designed keeping in mind the Standard Nano SIM size. In case, you face any issues due to the SIM size, contact your respective Service Provider for assistance.

14. SIM PIN Protection is not applicable if you are installing CDMA Mobile Card. Disable PIN Protection on RUIM.

LED indication of Mobile Card

Event	LED Color	Cadence in msec (1 cadence is of 3000msec)
Port Idle	--	LED Off
Port Active (All states other than Ring and Speech)	Red	Continuous On
Ring Event	Green	400ms On-200 ms Off- 400ms On-200 ms Off
Speech	Green	Continuous On
Module Initialization	Orange	200ms On-200ms Off- 200ms On-200ms Off- 200ms On-200ms Off- 200msOn-200ms Off- 200ms On-1200ms Off (5 Blinks)
PUK required	Orange	200ms On-200ms Off- 200ms On-200ms Off- 200ms On-200ms Off- 200msOn-1600ms Off
SIM PIN faulty	Orange	200ms On-200ms Off- 200ms On-200ms Off- 200ms On-2000ms Off (3 Blinks)
SIM Absent	Orange	200ms On-200ms Off- 200ms On- 2400ms Off (2 Blinks)
Network Link Down (absence of GSM Network)	Orange	200 ms On-2800 ms Off (1 Blink)

Installing Mobile Card - PENX

1. Before you install the Mobile Card, make sure that

   - the ETERNITY is installed at a location where sufficient network coverage is available.

   - the power supply is turned off.

   - you are wearing an electrostatic discharge preventive wrist strap and have a grounding mat, before you begin handling the card.

2. Get the SIM Card from the GSM service provider of your choice ready. Use SIM PIN protection, if required.

Disable Call Waiting in the SIM.

3. Unpack the Mobile card and verify the package contents.

SIM PIN Protection

4. Enable SIM PIN to protect your SIM card. Before installing the SIM card in the system, insert the SIM into a mobile handset first. From the mobile handset,

   - enable PIN Protection.

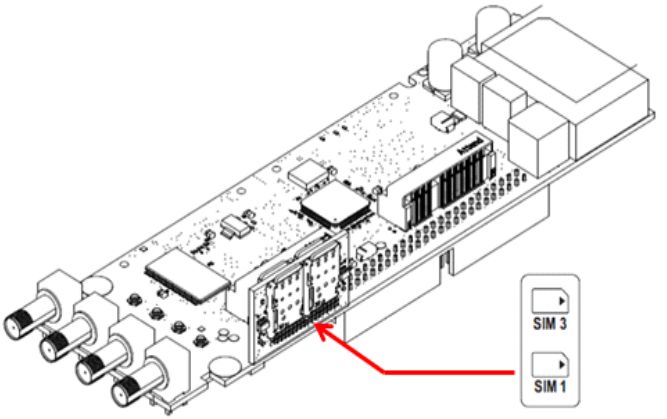
   - change the SIM PIN to 1234 (this is the default PIN for all SIM cards used in the system). Changing the SIM PIN to '1234' enables you to change the SIM PIN from the SARVAm UCS Jeeves later.

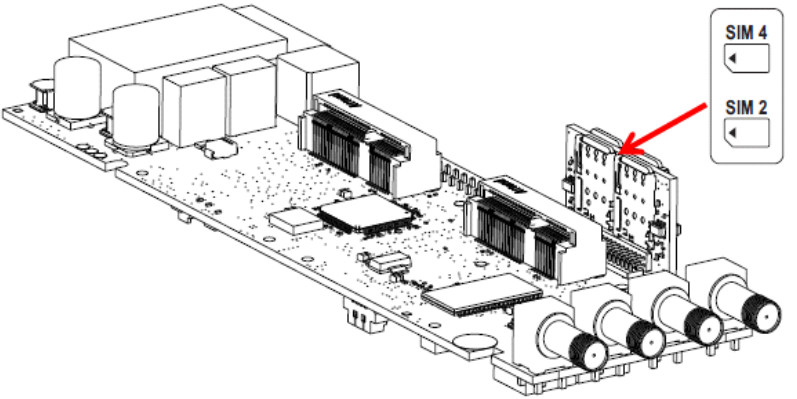
   - remove the SIM from the mobile handset.

If you do not want to use PIN protection, insert the SIM in the mobile handset and disable PIN protection. Remove the SIM Card from the mobile handset.

5. Now, insert the SIM card (PIN changed to 1234), with its connector side down into the SIM holder on the Mobile card. You can insert multiple SIM cards of the same GSM service provider or of different service providers.

ETERNITY PE Card GSM4





6. Remove the top cover of the ETERNITY PENX, if not opened already. Keep the cover and the screws aside.

7. Select any of the free universal slots. Grasping the card by its sides or corners fit it onto the connectors of the selected slot.

   The card should be seated such that its connector pins make perfect contact with those on the CPU (motherboard) on the bottom plane.

8. Secure the card on the studs labeled H1, H2 and H3 with the three screws provided.

9. Screw one end of the Antenna cable onto the Antenna Male Connector on the card.

10. Lead the antenna cable out of the enclosure through any of the two cable outlets on either side of the enclosure. Now, place the antenna at an appropriate location.

11. Repeat the same steps to install another Mobile card, in another free slot. It is not necessary to install the Mobile cards in subsequent slots.

12. If you have completed installing all cards, replace the top cover by sliding it in place. Secure the cover with the two screws you removed.

- *At every power up of the system, it takes about 3 minutes for the Mobile ports to get registered with the network. Once registration with the GSM network is completed, the mobile port can be used.*

- *Each time the Mobile Port sends a request, such as a Registration Request, the system waits for the duration of the Network Response Timer. This Timer signifies the time for which the Mobile Port waits for a response from the GSM network. It is fixed for 150 seconds for all Mobile ports.*

For detailed instructions, refer SARVAM UCS System Manual.

Connecting SIP Extensions

The SIP Extensions function like DKP/SLT Extensions of the SARVAM UCS. You can register any SIP-enabled device, like an IP-phone, a Soft phone, Analog Phone Adapter, as the SIP Extension of the SARVAM UCS.

The Number of SIP Extensions supported by SARVAM UCS varies by model:
- ETERNITY LENX: 2000 SIP Extensions.
- ETERNITY MENX: 2000 SIP Extensions.
- ETERNITY GENX: 999 SIP Extensions.
- ETERNITY PENX: 100 SIP Extensions.

To register SIP Extensions, VOCODER Module must be installed on the CPU Card of ETERNITY GENX.

By default, five SIP Extensions are provided. If you want to use additional SIP Extensions, you need to purchase the license. The following licenses are available — SARVAM IPSUB5, SARVAM IPSUB10, SARVAM IPSUB50, SARVAM IPSUB100 and SARVAM IPSUB500.

For more information on Licensing, refer to the topic *License Management* in the System Manual.

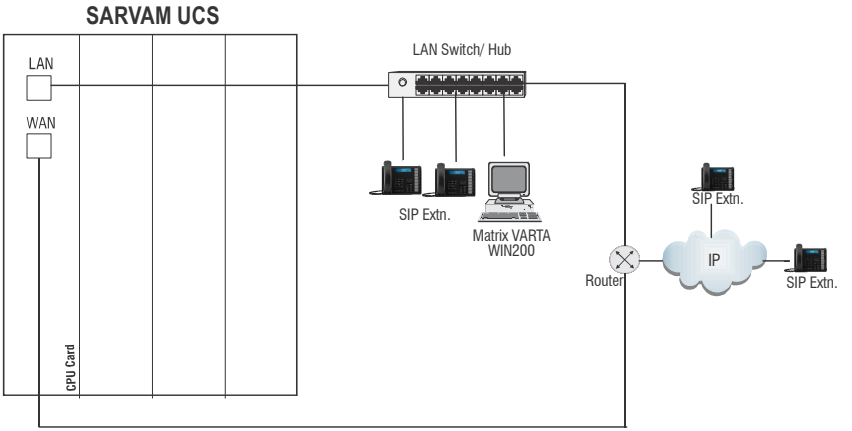
You may also connect/register the following as SIP Extensions of SARVAM UCS:
- SPARSH VP248, the Extended IP Phone
- SPARSH VP310, the Executive IP Phone
- SPARSH VP330, the Touch Screen Extended IP Phone
- SPARSH VP510, the Premium IP Phone
- Extended SPARSH VP710, the Smart IP Deskphone Phone
- SPARSH VP210, the Entry Level IP Phone
- Matrix VARTA WIN200, Unified Communication Client for Windows
- Matrix Mobile UC Clients, as given below:
  - Matrix VARTA AMP100, the Mobile UC Client for iPhones.
  - Matrix VARTA ADR100, the Mobile UC Client for Android Smartphones/Tablets.
- Third Party IP (Open) Phones

The SIP Extensions may be registered over *WAN* or *LAN* according to your preference and your IP network installation scenario. Extended SIP Clients can be registered with SARVAM UCS using IPv4 Addresses only.

You can register the same SIP Extension from three different locations.

If you register the Extended IP Phone outside the Region/Country selected for SARVAM UCS, the time and Time Zone dependent features, such as Alarms, Reminders, Time Zone Display, of the phone at each location will operate according to the Real Time Clock of SARVAM UCS. Also, Access Codes and Emergency Numbers will work according to the Region/Country selected for SARVAM UCS.

Consider the following Installation Scenario:



- Connect the Matrix VARTA WIN200, Extended IP Phone, or any Open IP Phone to the LAN Switch.

- Register any SIP device (Matrix VARTA UC Clients, Extended IP phone/ Soft clients or Open IP phone) on the public network as SIP Extension.

- When you register the Matrix Extended IP Phone and Open IP Phones with SARVAM UCS, the WAN/LAN port is used for Auto Configuration as well for Registration of the Extended IP Phones.

For Auto Configuration, make sure you configure the Open SIP phones at Location1 only.

- When you register a SIP device other than the Matrix Extended IP Phone on the public network as SIP Extension, do the following:

  - In this SIP device configure the following:
    - the Registrar Server Address of SARVAM UCS
    - the Registrar Server Port
    - the SIP ID
    - Authentication ID and Password.

  - Configure **Port Forwarding** for the **WAN Port** of SARVAM UCS on the Router.

SPARSH VP248

SPARSH VP248 is available in two models — SPARSH VP248S and SPARSH VP248P.

SPARSH VP248S

SPARSH VP248P

- For instructions on installing and connecting the phone, refer the SPARSH VP248 Quick Installation Guide (QIG).
- For detailed configuration instructions, refer the SARVAM UCS System Manual.
- For information regarding the features that can be accessed from the phone, refer the EON48_310_SPARSH VP248_310_User Guide.

To download the respective documents, click https://www.matrixtelesol.com/product-manuals.html

You can also view or download the respective document by scanning the QR code printed on the respective Product Label/Packaging Label.

SPARSH VP310

- For instructions on installing and connecting the phone, refer the SPARSH VP310 Quick Installation Guide (QIG).
- For detailed configuration instructions, refer the SARVAM UCS System Manual.
- For information regarding the features that can be accessed from the phone, refer the EON48_310_SPARSH VP248_310_User Guide.

To download the respective documents, click https://www.matrixtelesol.com/product-manuals.html

You can also view or download the respective document by scanning the QR code printed on the respective Product Label/Packaging Label.

SPARSH VP330

- For instructions on installing and connecting the phone, refer the SPARSH VP330 Quick Installation Guide (QIG).
- For detailed configuration instructions, refer the SARVAM UCS System Manual.
- For information regarding the features that can be accessed from the phone, refer the SPARSH VP330 User Guide.

To download the respective documents, click https://www.matrixtelesol.com/product-manuals.html

You can also view or download the document by scanning the QR code printed on the respective Product Label/Packaging Label.

SPARSH VP510

- For instructions on installing and connecting the phone, refer the SPARSH VP510 Quick Installation Guide (QIG).
- For detailed configuration instructions, refer the SARVAM UCS System Manual.
- For information regarding the features that can be accessed from the phone, refer the EON510_SPARSH VP510 User Guide.

To download the respective documents, click https://www.matrixtelesol.com/product-manuals.html

You can also view or download the document by scanning the QR code printed on the respective Product Label/Packaging Label.

Extended SPARSH VP710

- For instructions on installing and connecting the phone, refer the SPARSH VP710 Quick Start Guide.
- For detailed configuration instructions, refer the SARVAM UCS System Manual.
- For information regarding the features that can be accessed from the phone, refer the Extended SPARSH VP710 User Guide.

To download the respective documents, click https://www.matrixtelesol.com/product-manuals.html

You can also view or download the document by scanning the QR code printed on the respective Product Label/Packaging Label.

SPARSH VP210

- For instructions on installing and connecting the phone, refer the SPARSH VP210 (Extended) Quick Start.
- For detailed configuration instructions, refer the SARVAM UCS System Manual.
- For information regarding the features that can be accessed from the phone, refer the SPARSH VP210 (Extended) User Guide.

To download the respective documents, click https://www.matrixtelesol.com/product-manuals.html

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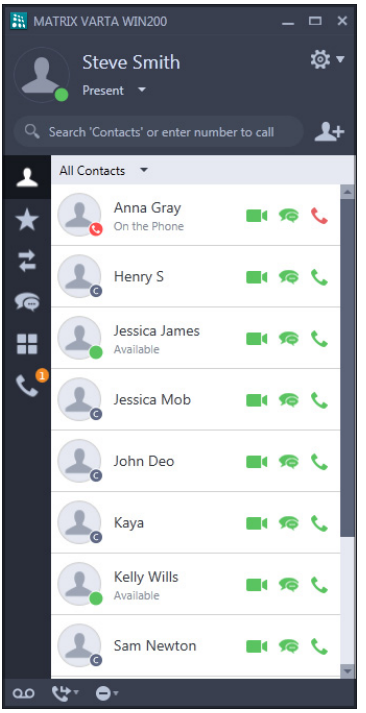
VARTA WIN200

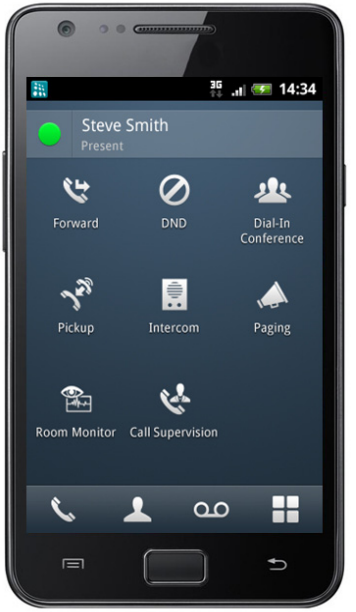


- For detailed configuration instructions, refer the SARVAM UCS System Manual.
- For instructions on installing the Windows Client and operating the features, refer the MATRIX VARTA WIN200 User Guide.

To download the respective documents, click https://www.matrixtelesol.com/product-manuals.html

VARTA Mobile Softphone Clients

Matrix VARTA ADR100



- For detailed configuration instructions, refer the SARVAM UCS System Manual.
- For instructions on installing the Softphone Client and operating the features, refer the Matrix VARTA ADR100 User Guide

To download the respective documents, click https://www.matrixtelesol.com/product-manuals.html

Matrix VARTA AMP100

- For detailed configuration instructions, refer the SARVAM UCS System Manual.
- For instructions on installing the Softphone Client and operating the features, refer the Matrix VARTA AMP100 User Guide.

To download the respective documents, click https://www.matrixtelesol.com/product-manuals.html

Switching ON the system

- Switch ON the system.
- It takes 2 to 3 minutes for initiation.

Reset Cycle on ETERNITY LENX/MENX/GENX

On completion of the initialization, LED L1 of the CPU card will be turned ON Green continuously and LED L2 of the CPU card will be turned ON Green for 1 sec and OFF for 1 sec.

Reset Cycle on ETERNITY PENX

When the system becomes stable after Power-ON, LED L1 glows Red and remains steady ON. L2 blinks Green with cadence of 1 Sec On - 1 Sec Off.

Configuring ETERNITY GENX

ETERNITY GENX Platform provides a Graphic User Interface (GUI), Jeeves, the proprietary web-based configuration software of Matrix. Using Jeeves, you can select the application you want to run on the ETERNITY GENX platform.

The accessibility to the web-based GUI is secured by a password. This password cannot be used to configure the system using commands.

To be able to access Jeeves,

- the LAN/WAN Port of ETERNITY GENX must be connected with a stand-alone PC or in a LAN.
- a web-browser, either Internet Explorer 7 or later or Mozilla Firefox 3.5.1 or later, must be installed on the PC.

If the computer for accessing Jeeves is connected in a LAN Switch and the WAN Port of ETERNITY GENX is connected behind a NAT router, make sure that both the LAN and WAN connections are in different Subnet Masks.

To login,

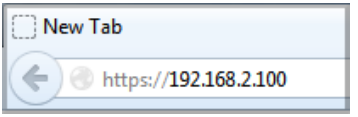
- Open the browser (Internet Explorer/Mozilla Firefox) on the PC (Standalone or LAN PC) to which the ETERNITY GENX is connected.
- Make sure the IP Address of the computer and the LAN Port of ETERNITY GENX do not conflict, and that both are in the same Subnet.

  The default IP Address of the LAN Port is: **192.168.2.100**

  The default Subnet Mask of the LAN Port is: **255.255.255.000**

  Change the Subnet of the computer, if necessary.

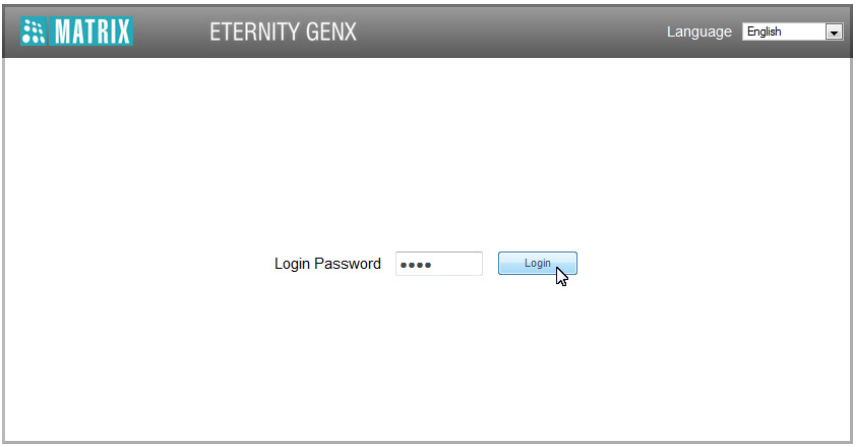
- In the address bar of the browser, enter **https://192.168.2.100**.



*If you enter the IP Address **192.168.2.100** directly, you will be redirected to the HTTPS protocol for secure access. Click the **https://192.168.2.100** link on the page.*

- The **Login** page will open.

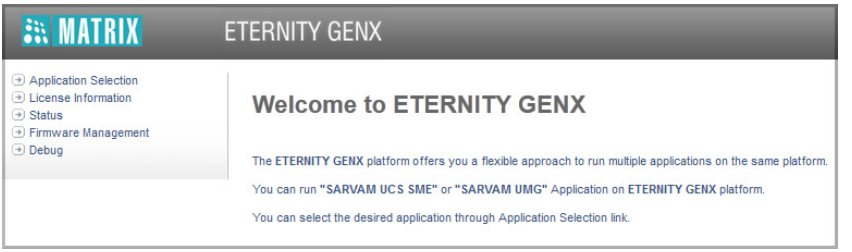
- In **Login Password**, enter *1234*, the default Password.



- Click the **Login** button.

- On successful login, the **Home** page of Jeeves opens.

The left navigation bar displays the links — **Application Selection, License Information, Status, Firmware Management** and **Debug**.



Application Selection enables you to select the application you wish to run on the ETERNITY GENX platform. Select SARVAM UCS SME option.

License Information displays the License key along with the License details of the applications.

Status displays the system details and the status of all the ports.

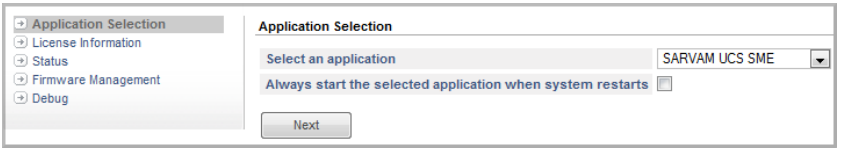
Firmware Management enables you to upgrade the system software with a click of a button.

Debug allows you to enable and configure the debug settings.

Application Selection

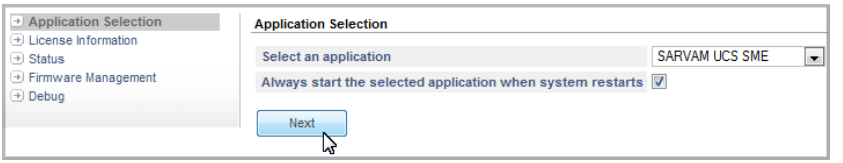
Through **Application Selection**, you can select the application you wish to run on the ETERNITY GENX Platform.

- In **Select an Application**, you must select the SARVAM UCS SME option.



- Select the **Always start the selected application when system restarts** check box, if you want SARVAM UCS application to start whenever the system restarts.

- Keep the check box disabled only if you want to select the application to be run on the ETERNITY GENX platform every-time the system restarts. Default: Disabled.



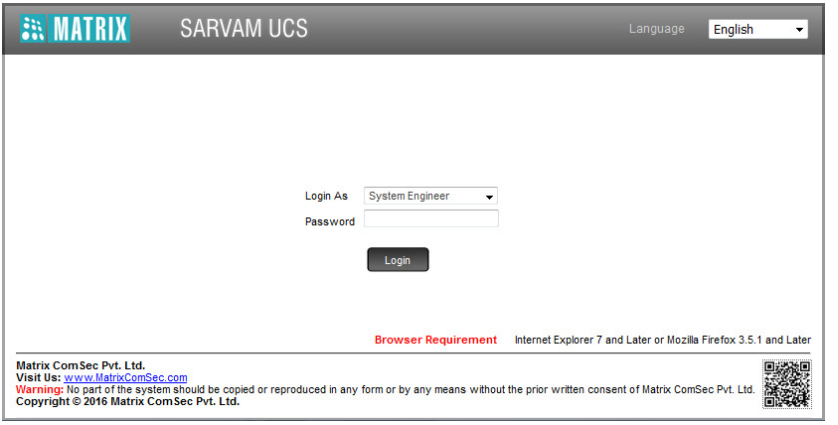
- Now, click on the **Next** button, you will be redirected to the SARVAM UCS SME Application.

Configuring SARVAM UCS

SARVAM UCS Application provides an embedded web server with a Graphic User Interface (GUI), *Jeeves*, for configuration.

To access SARVAM UCS Jeeves,

- In **Login as**, select System Engineer.



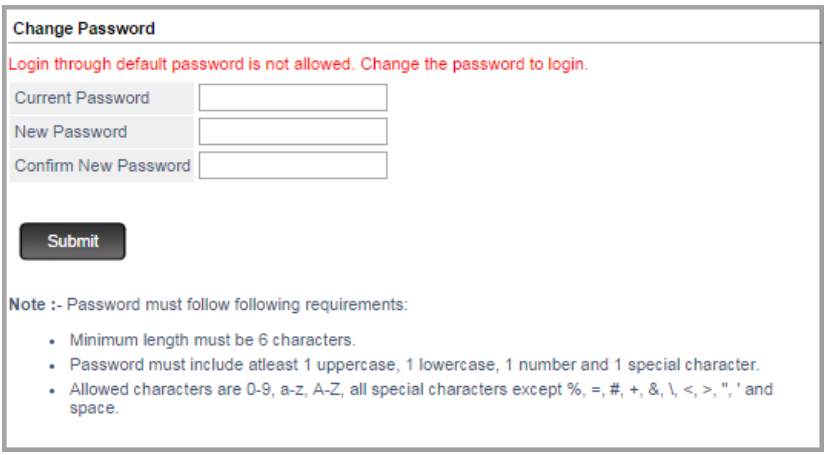
- In **Password,** enter the default SE password, 1234.

- Click the **Login** button.

Due to security concerns the default settings in the systems dispatched with Firmware Versions later than V1R6.7, have been modified. For details refer to "Modified default parameter values for Firmwares later than V1R6.7". With these default settings you will not be able to make outgoing calls, however incoming calls will be placed on the system. You need to change the settings as per your requirement to make outgoing calls. For details refer to Outgoing Call Routing in the System Manual.

Before you start configuring the system, if you wish to view or download the System manual you can scan the QR Code present on the login page of Jeeves.

- You are prompted to change the default password.



- In **Current Password**, enter the default SE Password.

- Enter the **New Password**. All ASCII characters (except Percentage **%**, Hash **#,** Equal to **=,** Plus **+**, And **&**, Backslash \, Less than **<,** Greater than **>,** Apostrophe ' **,** Double Quote " and **Space**) and digits 0 to 9 are allowed.

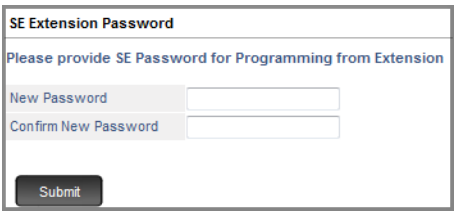
  The new password must be:
  - a minimum of 6 characters to a maximum of 12 characters.
  - include atleast one upper-case, one lower-case, one number and one special character.

- In **Confirm New Password**, re-enter the new password to confirm.

- Click **Submit**. You will be re-directed to the Login page again.

- Now, in **Login as** select System Engineer and in Password enter the new password.

  You will be prompted to change the default **SE Extension Password.**



- Enter the **New Password.** The new password can be a minimum of 4 digits to a maximum of 12 digits. The valid are from 0 to 9.

1234 cannot be set as the New Password.

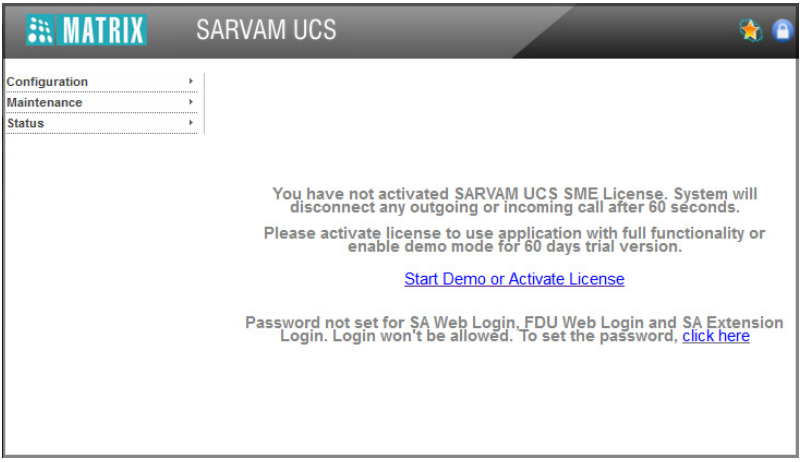
- In **Confirm New Password,** re-enter the new password to confirm.

- Click **Submit** to save your new password. The Home page will open.

As this password is meant for restricting access to the SE mode, we strongly recommend you to:

- Keep the password secret.
- Select a complex password that cannot be easily guessed.
- Change the password regularly. For instructions, see the topic 'Login Password' in the System Manual.

On successful login, the **Home** page of Jeeves opens.



- The following links will appear on the left navigation bar:

  - **Configuration:** The links to all configurable parameters of SARVAM UCS and its extensions appear under this link.

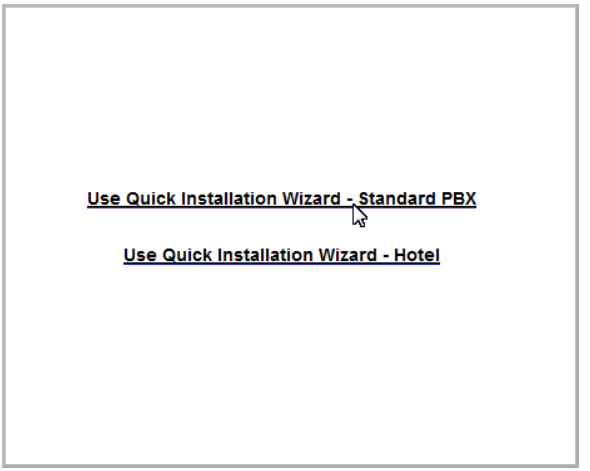
  - **Maintenance:** Provides instructions for back-up, generating reports and debugging.

  - **Status:** Displays the status of the System, Network, SIP Trunks, Mobile Ports, BRI Ports, T1E1 Ports, CO Trunks, SIP Extensions and the Voice Mail System.

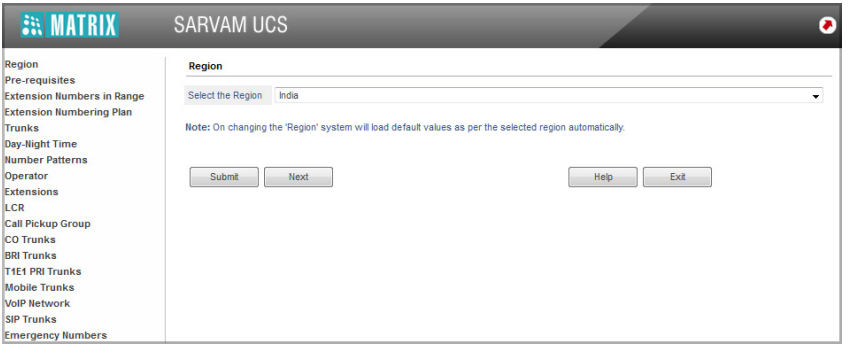
- SARVAM UCS offers a Wizard for quick and easy configuration of its Basic Settings.

- To use the wizard, click the **Wizard icon** .

- The Welcome page of the Wizard will open.



- To configure Basic Settings of SARVAM UCS for its Enterprise Application, click the **Use Quick Installation Wizard-Standard PBX** link.



- To configure the Basic Settings of SARVAM UCS for its Hospitality Application, click the **Use Quick Installation Wizard - Hotel** link.

- The Wizard will open. You may navigate the Wizard screens by clicking the **Next** button, or click the desired parameter link on the left navigation bar and configure its settings.

- To save the changes you make on each page, clicking the **Submit** button at the bottom of each page.

For more information and instructions on using the Wizard, see the topic *Using the Quick Installation Wizard - Standard PBX* in the SARVAM UCS System Manual.

Activating License Key

You must activate[15]:

- **SARVAM UCS SME** Application License to run ETERNITY GENX as an Unified Communication Server.
- **SARVAM UCS ENT** Application License to run ETERNITY LENX/MENX as an Unified Communication Server.
- **SARVAM UCS SMB** Application License to run ETERNITY PENX as an Unified Communication Server.

For the following functional modules and features, you would need to activate a valid License Key.

- Expansion Slots Licenses
- IP Subscribers (For SIP Extensions)
- Matrix VARTA User Licenses
- VOCODER Channels
- VMS Channels
- Computer Telephony Integration (CTI)
- Q-Sig
- Hospitality Management System
- E911
- Property Management System (PMS)
- Gateway
- PLCC
- SMS Server
- SMS Gateway

For more information see the topic *License Management* in the SARVAM UCS System Manual.

Instructions for Matrix Channel Partners

Your license voucher may be a paper or a PDF (protected) file.

You may activate your License Online. For this, keep the following items ready:

- The SARVAM UCS SME License Voucher containing the 16-digit PIN.
- A valid, unique User ID and Password from the Matrix License Support Centre.
- Access to Internet.
- Current License Key of the system.

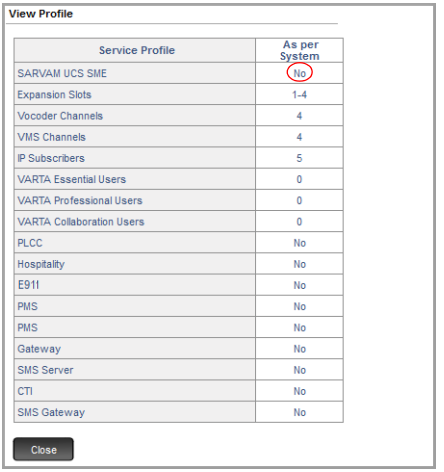
15. Refer to "Pre-activated Licenses".

To activate License key,

- Open Jeeves.
- Log in as System Engineer.
- Under **Configuration**, click **License Management** link.
  The **License Management** page opens.

- Note down or copy the current **License Key** on this page.

  If you wish to view the features and functions currently available on your system, click the **View Profile** button.



View Profile

Service Profile	As per System
SARVAM UCS SME	No
Expansion Slots	1-4
Vocoder Channels	4
VMS Channels	4
IP Subscribers	5
VARTA Essential Users	0
VARTA Professional Users	0
VARTA Collaboration Users	0
PLCC	No
Hospitality	No
E911	No
PMS	No
PMS	No
Gateway	No
SMS Server	No
CTI	No
SMS Gateway	No

Close

  A new window opens which displays the features and functionalities currently available to you.

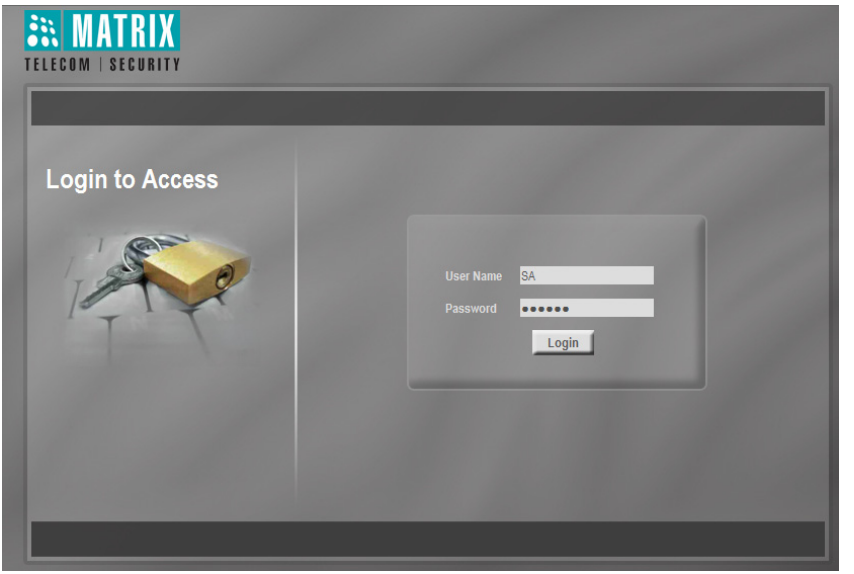
- Keep your Current License Key and the License Voucher ready.

- Open a new window on your browser. Enter **http://www.matrixcomsec.com/MatrixLicense** in the address bar.

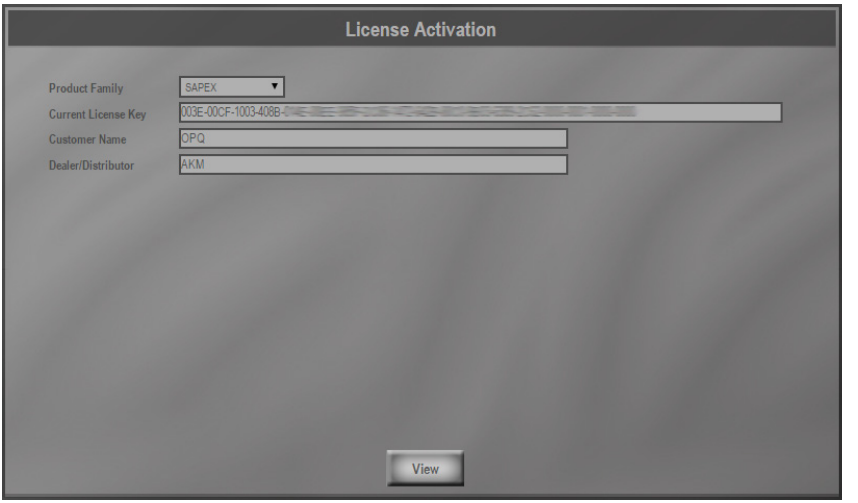
- Click **Login to Access**.

  The **Login to Access** page will open.

- Enter your **User Name** and **Password** provided by Matrix and click the **Login** button.



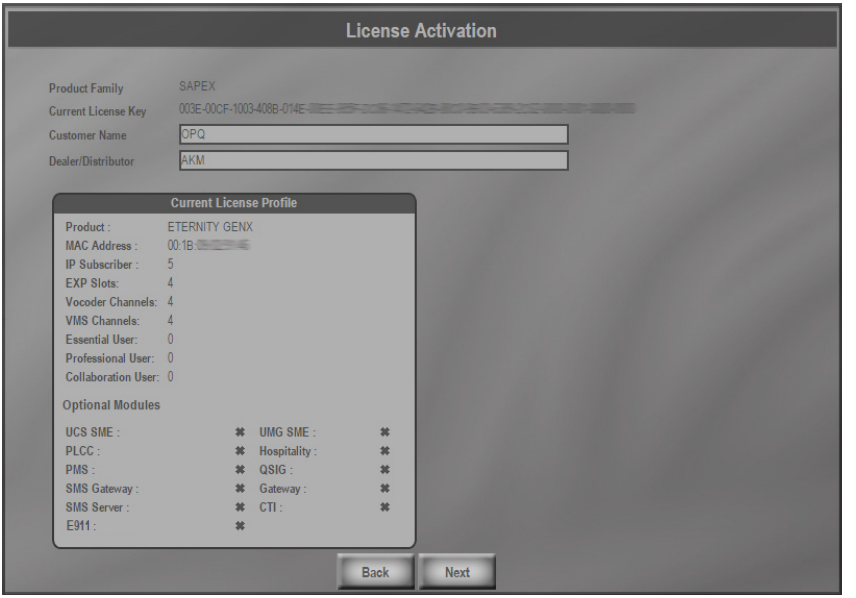
On successful login, the **License Activation** page will open.



- As **Product Family**, select the option **SAPEX**.

- In the field **Current License Key**, paste or type the current product license key you noted from the *License Management* page of Jeeves.

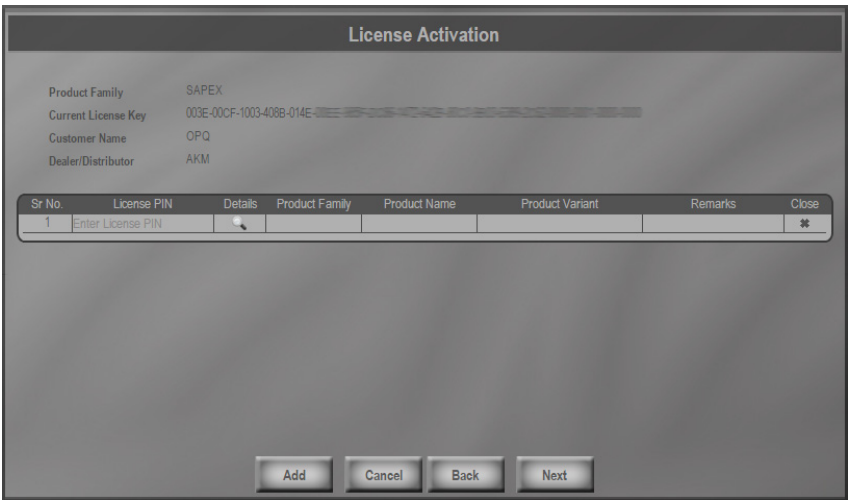
- Click **View** button.



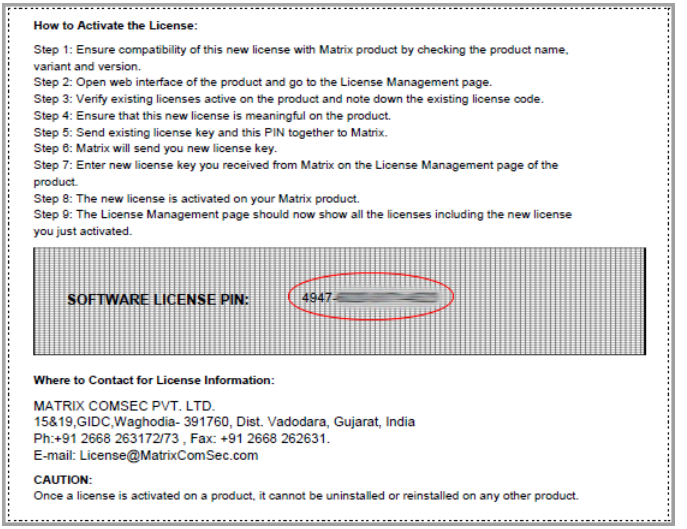
The page will show the current License Profile on ETERNITY GENX. Click the **Next** button to continue.

When ETERNITY GENX is used as the Unified Communication Server, all the licenses except UMG are applicable. UMG License is applicable when you run the ETERNITY GENX as the Universal Media Gateway.

The **License Activation** page opens.



- In the **License PIN** field on this page, enter the License PIN from the Voucher.



How to Activate the License:

Step 1: Ensure compatibility of this new license with Matrix product by checking the product name, variant and version.
Step 2: Open web interface of the product and go to the License Management page.
Step 3: Verify existing licenses active on the product and note down the existing license code.
Step 4: Ensure that this new license is meaningful on the product.
Step 5: Send existing license key and this PIN together to Matrix.
Step 6: Matrix will send you new license key.
Step 7: Enter new license key you received from Matrix on the License Management page of the product.
Step 8: The new license is activated on your Matrix product.
Step 9: The License Management page should now show all the licenses including the new license you just activated.

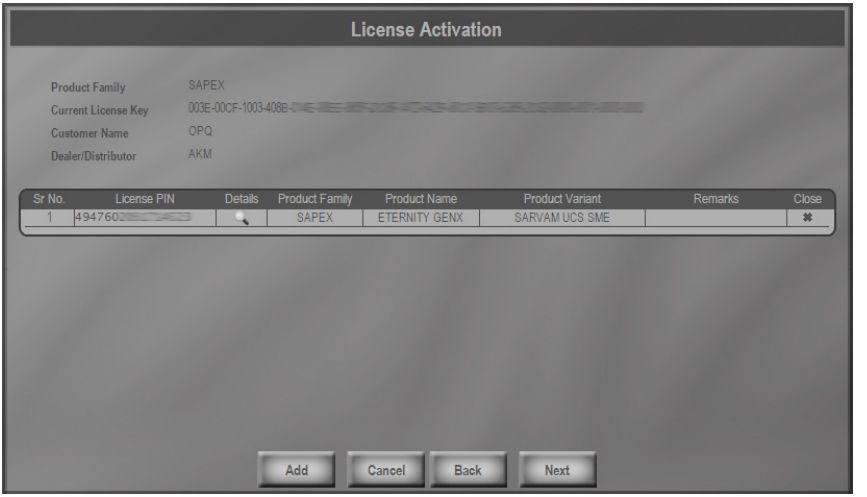
SOFTWARE LICENSE PIN: 4947-

Where to Contact for License Information:

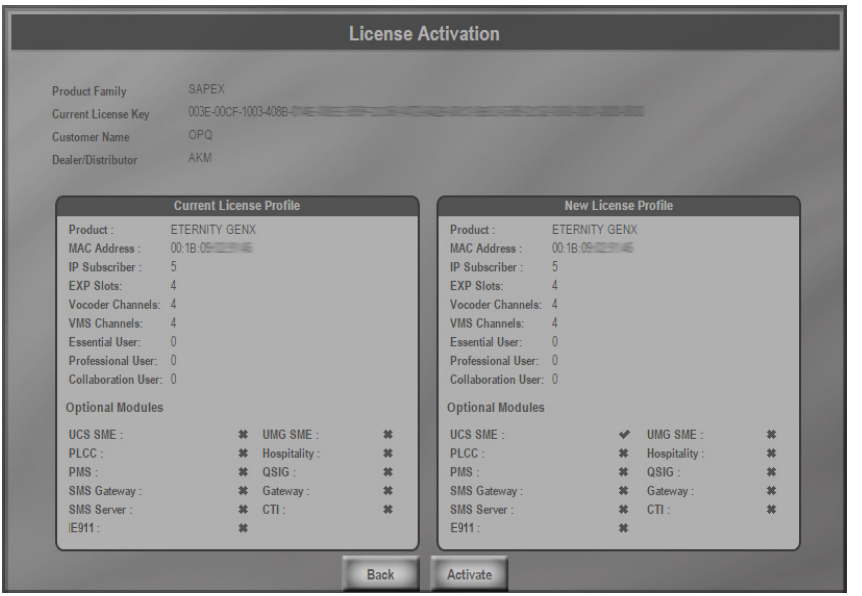
MATRIX COMSEC PVT. LTD.
15&19,GIDC,Waghodia- 391760, Dist. Vadodara, Gujarat, India
Ph:+91 2668 263172/73 , Fax: +91 2668 262631.
E-mail: License@MatrixComSec.com

CAUTION:
Once a license is activated on a product, it cannot be uninstalled or reinstalled on any other product.

- Click **Details**. The details appear in the fields **Product Family, Product Name, Product Variant**.



- Click the **Next** button. Your **Current License Profile** and your **New License Profile** will appear on this page.

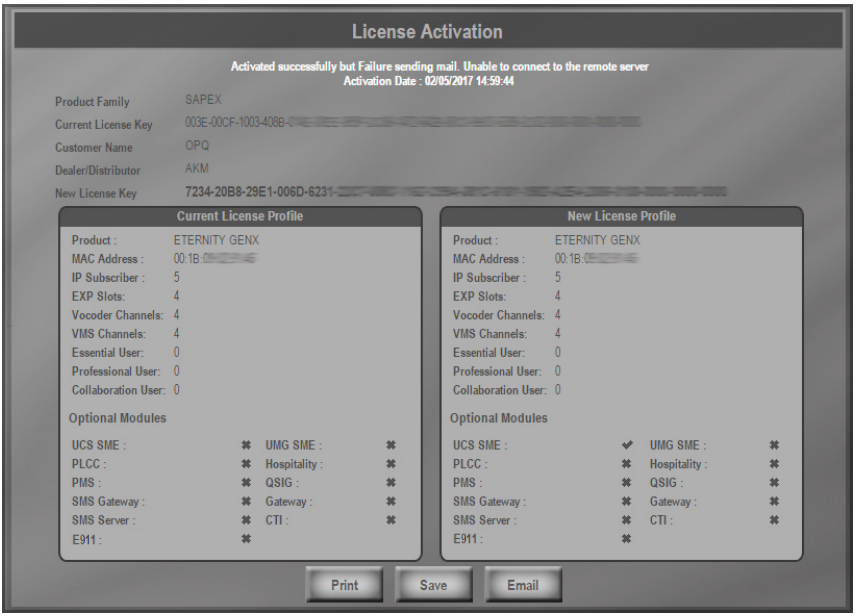


- Click the **Activate** button and wait for a few seconds, as the activation is initiated.

On successful activation, the confirmation message will appear on your screen along with the activation date and time.

*The screens for **Current License Profile** and the **New License Profile** may differ according to the licenses purchased by you.*

You will also be sent a confirmation mail to your e-mail ID (registered with Matrix).



You may **Save**, **Print**, or **Email** this information for your records, by clicking the relevant button on the bottom of the page.

- Note down or copy the New License Key generated on this page.
- Go back to the Jeeves window (or log in as System Engineer again, if your session has ended).

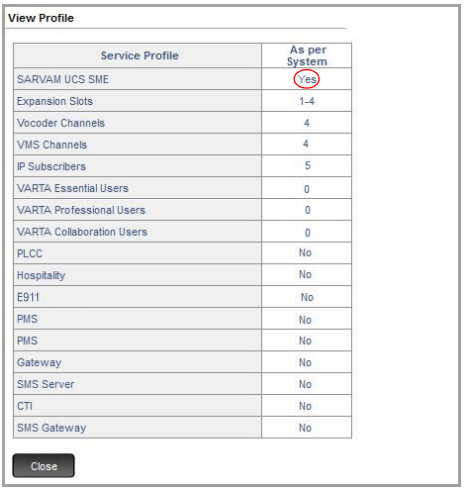
- Under **Configuration**, click **License Management**. The License Management page opens.

- Click the **Enter License Key** button. A new window opens.

- In **Enter License Key,** paste or enter the new License Key generated.

- Click **Submit** button.

  To view the status of the license activated by you, click the **View Profile** button again.



View Profile

Service Profile	As per System
SARVAM UCS SME	Yes
Expansion Slots	1-4
Vocoder Channels	4
VMS Channels	4
IP Subscribers	5
VARTA Essential Users	0
VARTA Professional Users	0
VARTA Collaboration Users	0
PLCC	No
Hospitality	No
E911	No
PMS	No
PMS	No
Gateway	No
SMS Server	No
CTI	No
SMS Gateway	No

Close

  A new window opens which displays the updated service profile.

- To log off, click **Logout**.

If you are unable to use Online Activation of the License Key or have no internet access, contact the Matrix License Support Centre for assistance in generating the new License key.

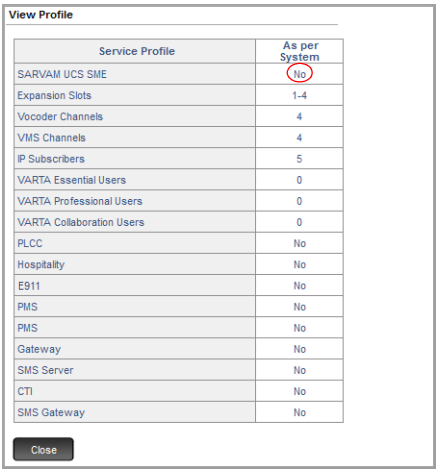
Instructions for Customers

To activate your License, you would need the License Voucher containing the 16-digit License PIN. Contact your Dealer/Distributor in this regard. Your License Voucher may be a paper or a protected PDF file.

- Open Jeeves.
- Log in as System Engineer.
- Under **Configuration**, click **License Management**. The License Management page opens.

- Note down the current **License Key** on this page.

  If you wish to view the features and functions currently available on your system, click **View Profile**.



Service Profile	As per System
SARVAM UCS SME	No
Expansion Slots	1-4
Vocoder Channels	4
VMS Channels	4
IP Subscribers	5
VARTA Essential Users	0
VARTA Professional Users	0
VARTA Collaboration Users	0
PLCC	No
Hospitality	No
E911	No
PMS	No
PMS	No
Gateway	No
SMS Server	No
CTI	No
SMS Gateway	No

A new window opens which displays the features and functionalities currently available to you.

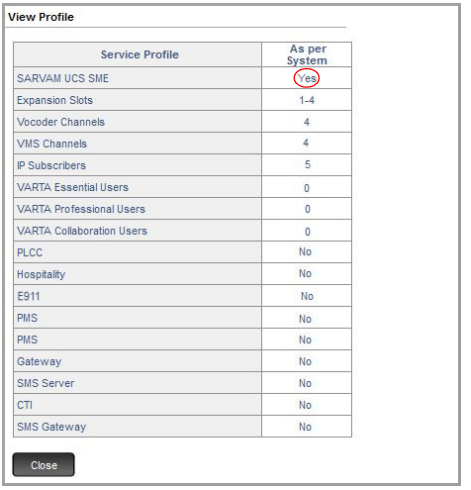
- Now, send your Current License Key and the License PIN (on the Voucher) to the Matrix License Support Centre.
- You will receive a new License Key.
- Open Jeeves again.
- Log in as System Engineer.
- Under **Configuration**, click **License Management**. The License Management page opens

- Click the **Enter License Key** button.

  A new window opens.

- In **Enter License Key,** enter the new License Key you obtained from Matrix.
- Click **Submit** button**.**

To view the status of the license activated by you, click the **View Profile** button again.



View Profile

Service Profile	As per System
SARVAM UCS SME	Yes
Expansion Slots	1-4
Vocoder Channels	4
VMS Channels	4
IP Subscribers	5
VARTA Essential Users	0
VARTA Professional Users	0
VARTA Collaboration Users	0
PLCC	No
Hospitality	No
E911	No
PMS	No
PMS	No
Gateway	No
SMS Server	No
CTI	No
SMS Gateway	No

Close

A new window opens which displays the updated service profile.

- To log off, click **Logout**.

The current License Key and Service Profile will remain unchanged when the system is set to default or the firmware is upgraded.

If you have not purchased the license and you wish to use the features on trial basis, you can use the Demo Provision. Demo Provision enables you to use the SARVAM UCS application, free of cost for a period of 60 days.

All the Universal Slots will be functional during the Demo period irrespective of the number of activated SARVAM EXP4 SME/ENT licenses.

During the Demo Provision you can access and use all the features and functionalities supported by the application.

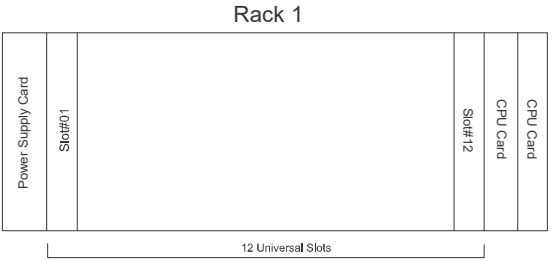
If you do not have the license for the SARVAM UCS SME Application and you do not start the Demo Period, the system will allow the configuration and making calls but the connected calls from any port will be disconnected after 60 seconds.

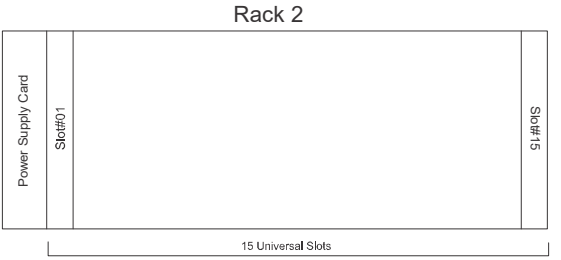
You may now configure the parameters of SARVAM UCS as per your requirement.

Appendix

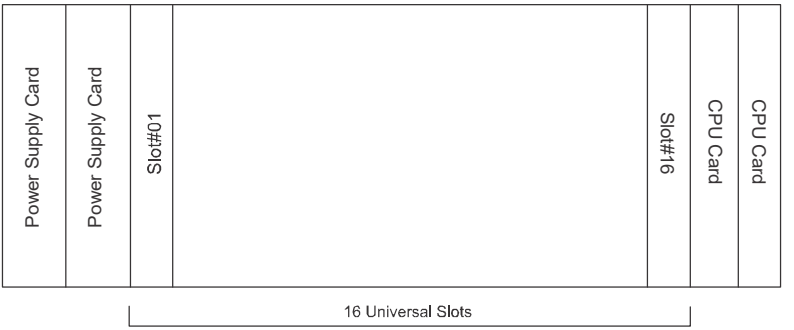
Universal Slots

ETERNITY LENX



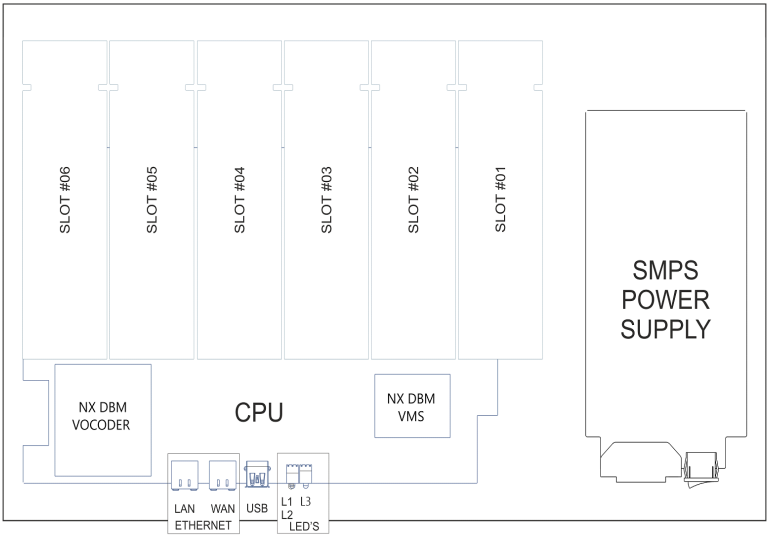


ETERNITY MENX



ETERNITY GENX

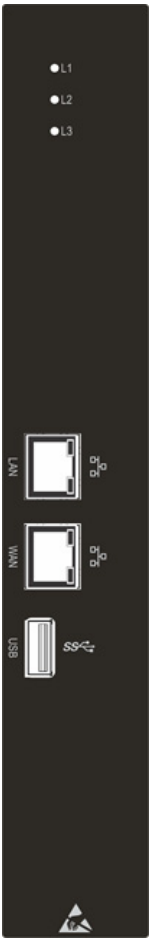
ETERNITY PENX



Cable Diagrams for ETERNITY LENX Cards

ETERNITY LENX supports ETERNITY LENX PS48VDC card, ETERNITY LE SLT48 card, ETERNITY LE ILC48 card and all other cards of ETERNITY MENX (except ETERNITY MENX Power Supply card). ETERNITY MENX-LENX CPU Card is common for both ETERNITY LENX and MENX.

ETERNITY MENX-LENX CPU Card



Ports and Connectors

Port	Connector	Description
LAN	RJ45	Used for connecting the Ethernet cable into LAN Port to connect to a PC or a LAN Switch.
WAN	RJ45	Used for connecting the Ethernet cable into WAN Port to connect to a Broadband Router/Modem.

Port	Connector	Description
USB	USB to COM Converter (Optional)	The External USB can be used as COM Port by connecting the USB to COM Converter. Used to: • set up and run software applications — PMS and CAS. • capture System Activity Log, System Fault log and Hotel Motel Activity logs. • generate SMDR reports.

ETERNITY LE Card SLT48/ILC48

Connector 1

Port Type	Port Number	Pin Number	Signaling	Wire Color
SLT	Port 1	1	Tip	White
		26	Ring	Blue
	Port 2	2	Tip	White
		27	Ring	Orange
	Port 3	3	Tip	White
		28	Ring	Green
	Port 4	4	Tip	White
		29	Ring	Brown
	Port 5	5	Tip	White
		30	Ring	Slate
	Port 6	6	Tip	Red
		31	Ring	Blue
	Port 7	7	Tip	Red
		32	Ring	Orange
	Port 8	8	Tip	Red
		33	Ring	Green
	Port 9	9	Tip	Red
		34	Ring	Brown
	Port 10	10	Tip	Red
		35	Ring	Slate
	Port 11	11	Tip	Black
		36	Ring	Blue
	Port 12	12	Tip	Black
		37	Ring	Orange

Port Type	Port Number	Pin Number	Signaling	Wire Color
SLT	Port 13	13	Tip	Black
		38	Ring	Green
	Port 14	14	Tip	Black
		39	Ring	Brown
	Port 15	15	Tip	Black
		40	Ring	Slate
	Port 16	16	Tip	Green
		41	Ring	Orange
	Port 17	17	Tip	Green
		42	Ring	Brown
	Port 18	18	Tip	Green
		43	Ring	Slate
	Port 19	19	Tip	Blue
		44	Ring	Orange
	Port 20	20	Tip	Blue
		45	Ring	Green
	Port 21	21	Tip	Blue
		46	Ring	Brown
	Port 22	22	Tip	Blue
		47	Ring	Slate
	Port 23	23	Tip	Orange
		48	Ring	Brown
	Port 24	24	Tip	Orange
		49	Ring	Slate
	Port 25	25	NC	Slate
		50	NC	Brown

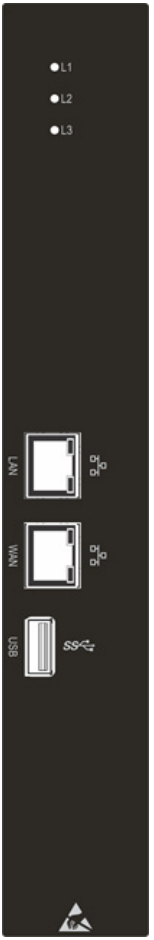
Connector 2

SLT	Port 25	1	Tip	White
		26	Ring	Blue
	Port 26	2	Tip	White
		27	Ring	Orange
	Port 27	3	Tip	White
		28	Ring	Green
	Port 28	4	Tip	White
		29	Ring	Brown
	Port 29	5	Tip	White
		30	Ring	Slate
	Port 30	6	Tip	Red
		31	Ring	Blue
	Port 31	7	Tip	Red
		32	Ring	Orange
	Port 32	8	Tip	Red
		33	Ring	Green
	Port 33	9	Tip	Red
		34	Ring	Brown
	Port 34	10	Tip	Red
		35	Ring	Slate
	Port 35	11	Tip	Black
		36	Ring	Blue
	Port 36	12	Tip	Black
		37	Ring	Orange
	Port 37	13	Tip	Black
		38	Ring	Green

SLT	Port 38	14	Tip	Black
		39	Ring	Brown
	Port 39	15	Tip	Black
		40	Ring	Slate
	Port 40	16	Tip	Green
		41	Ring	Orange
	Port 41	17	Tip	Green
		42	Ring	Brown
	Port 42	18	Tip	Green
		43	Ring	Slate
	Port 43	19	Tip	Blue
		44	Ring	Orange
	Port 44	20	Tip	Blue
		45	Ring	Green
	Port 45	21	Tip	Blue
		46	Ring	Brown
	Port 46	22	Tip	Blue
		47	Ring	Slate
	Port 47	23	Tip	Orange
		48	Ring	Brown
	Port 48	24	Tip	Orange
		49	Ring	Slate
		25	NC	Slate
		50	NC	Brown

Cable Diagrams for ETERNITY MENX Cards

ETERNITY MENX-LENX CPU Card



Ports and Connectors

Port	Connector	Description
LAN	RJ45	Used for connecting the Ethernet cable into LAN Port to connect to a PC or a LAN Switch.
WAN	RJ45	Used for connecting the Ethernet cable into WAN Port to connect to a Broadband Router/Modem.

Port	Connector	Description
USB	USB to COM Converter (Optional)	The External USB can be used as COM Port by connecting the USB to COM Converter. Used to: • set up and run software applications — PMS and CAS. • capture System Activity Log, System Fault log and Hotel Motel Activity logs. • generate SMDR reports.

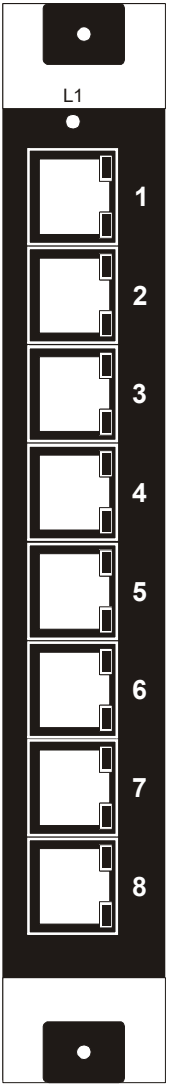
ETERNITY ME SLT8

Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White)	SLT	01
	Orange - (Orange & White)	SLT	02
	Green - (Green & White)	SLT	03
	Brown - (Brown & White)	SLT	04
RJ45-2	Blue - (Blue & White)	SLT	05
	Orange - (Orange & White)	SLT	06
	Green - (Green & White)	SLT	07
	Brown - (Brown & White)	SLT	08

ETERNITY ME SLT16

Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White)	SLT	01
	Orange - (Orange & White)	SLT	02
	Green - (Green & White)	SLT	03
	Brown - (Brown & White)	SLT	04
RJ45-2	Blue - (Blue & White)	SLT	05
	Orange - (Orange & White)	SLT	06
	Green - (Green & White)	SLT	07
	Brown - (Brown & White)	SLT	08
RJ45-3	Blue - (Blue & White)	SLT	09
	Orange - (Orange & White)	SLT	10
	Green - (Green & White)	SLT	11
	Brown - (Brown & White)	SLT	12
RJ45-4	Blue - (Blue & White)	SLT	13
	Orange - (Orange & White)	SLT	14
	Green - (Green & White)	SLT	15
	Brown - (Brown & White)	SLT	16

ETERNITY ME SLT32 / ETERNITY ME ILC32



Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	01 02 03 04
RJ45-2	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	05 06 07 08
RJ45-3	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	09 10 11 12
RJ45-4	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	13 14 15 16
RJ45-5	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	17 18 19 20
RJ45-6	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	21 22 23 24
RJ45-7	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	25 26 27 28
RJ45-8	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	29 30 31 32

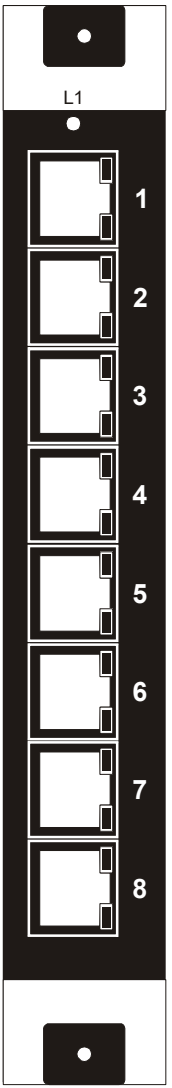
ETERNITY ME DKP8

Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White)	DKP	01
	Orange - (Orange & White)	DKP	02
	Green - (Green & White)	DKP	03
	Brown - (Brown & White)	DKP	04
RJ45-2	Blue - (Blue & White)	DKP	05
	Orange - (Orange & White)	DKP	06
	Green - (Green & White)	DKP	07
	Brown - (Brown & White)	DKP	08

ETERNITY ME DKP16

Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	DKP DKP DKP DKP	01 02 03 04
RJ45-2	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	DKP DKP DKP DKP	05 06 07 08
RJ45-3	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	DKP DKP DKP DKP	09 10 11 12
RJ45-4	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	DKP DKP DKP DKP	13 14 15 16

ETERNITY ME DKP32



Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White)	DKP	01
	Orange - (Orange & White)	DKP	02
	Green - (Green & White)	DKP	03
	Brown - (Brown & White)	DKP	04
RJ45-2	Blue - (Blue & White)	DKP	05
	Orange - (Orange & White)	DKP	06
	Green - (Green & White)	DKP	07
	Brown - (Brown & White)	DKP	08
RJ45-3	Blue - (Blue & White)	DKP	09
	Orange - (Orange & White)	DKP	10
	Green - (Green & White)	DKP	11
	Brown - (Brown & White)	DKP	12
RJ45-4	Blue - (Blue & White)	DKP	13
	Orange - (Orange & White)	DKP	14
	Green - (Green & White)	DKP	15
	Brown - (Brown & White)	DKP	16
RJ45-5	Blue - (Blue & White)	DKP	17
	Orange - (Orange & White)	DKP	18
	Green - (Green & White)	DKP	19
	Brown - (Brown & White)	DKP	20
RJ45-6	Blue - (Blue & White)	DKP	21
	Orange - (Orange & White)	DKP	22
	Green - (Green & White)	DKP	23
	Brown - (Brown & White)	DKP	24
RJ45-7	Blue - (Blue & White)	DKP	25
	Orange - (Orange & White)	DKP	26
	Green - (Green & White)	DKP	27
	Brown - (Brown & White)	DKP	28
RJ45-8	Blue - (Blue & White)	DKP	29
	Orange - (Orange & White)	DKP	30
	Green - (Green & White)	DKP	31
	Brown - (Brown & White)	DKP	32

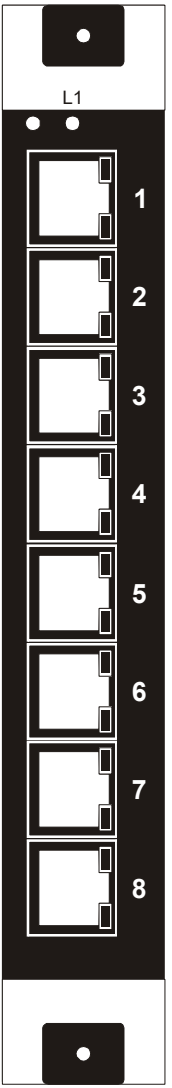
ETERNITY ME CO8

Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	CO CO CO CO	01 02 03 04
RJ45-2	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	CO CO CO CO	05 06 07 08
RJ45-3	Unused		
RJ45-4	Unused		

ETERNITY ME CO16

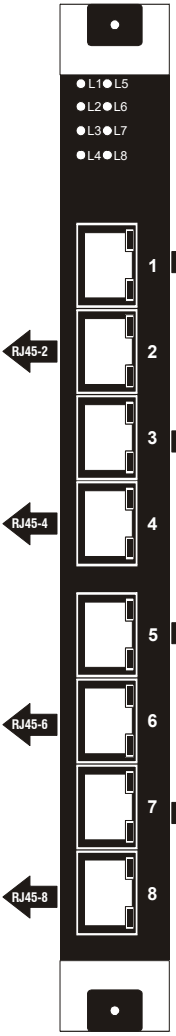
Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White)	CO	01
	Orange - (Orange & White)	CO	02
	Green - (Green & White)	CO	03
	Brown - (Brown & White)	CO	04
RJ45-2	Blue - (Blue & White)	CO	05
	Orange - (Orange & White)	CO	06
	Green - (Green & White)	CO	07
	Brown - (Brown & White)	CO	08
RJ45-3	Blue - (Blue & White)	CO	09
	Orange - (Orange & White)	CO	10
	Green - (Green & White)	CO	11
	Brown - (Brown & White)	CO	12
RJ45-4	Blue - (Blue & White)	CO	13
	Orange - (Orange & White)	CO	14
	Green - (Green & White)	CO	15
	Brown - (Brown & White)	CO	16

ETERNITY ME CO8+SLT24 (with and without PFT)



Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White)	SLT	01
	Orange - (Orange & White)	SLT	02
	Green - (Green & White)	SLT	03
	Brown - (Brown & White)	SLT	04
RJ45-2	Blue - (Blue & White)	SLT	05
	Orange - (Orange & White)	SLT	06
	Green - (Green & White)	SLT	07
	Brown - (Brown & White)	SLT	08
RJ45-3	Blue - (Blue & White)	SLT	09
	Orange - (Orange & White)	SLT	10
	Green - (Green & White)	SLT	11
	Brown - (Brown & White)	SLT	12
RJ45-4	Blue - (Blue & White)	SLT	13
	Orange - (Orange & White)	SLT	14
	Green - (Green & White)	SLT	15
	Brown - (Brown & White)	SLT	16
RJ45-5	Blue - (Blue & White)	SLT	17
	Orange - (Orange & White)	SLT	18
	Green - (Green & White)	SLT	19
	Brown - (Brown & White)	SLT	20
RJ45-6	Blue - (Blue & White)	SLT	21
	Orange - (Orange & White)	SLT	22
	Green - (Green & White)	SLT	23
	Brown - (Brown & White)	SLT	24
RJ45-7	Blue - (Blue & White)	CO	01
	Orange - (Orange & White)	CO	02
	Green - (Green & White)	CO	03
	Brown - (Brown & White)	CO	04
RJ45-8	Blue - (Blue & White)	CO	05
	Orange - (Orange & White)	CO	06
	Green - (Green & White)	CO	07
	Brown - (Brown & White)	CO	08

ETERNITY ME E&M8 - RJ45 Connector



RJ45-1

Pin No.	Connection	Colour	H/w Port Offset
01	Open	Gray	01
02	SB	Green-White	
03	M OUT	Green	
04	RX SPCH A	Orange-White	
05	SPCH A	Blue	
06	SPCH B	Blue-White	
07	RX SPCH B	Orange	
08	E IN	Brown-White	
09	BGND	Brown	
10	CCC	Gray-White	

RJ45-2

Pin No.	Connection	Colour	H/w Port Offset
01	Open	Gray	02
02	SB	Green-White	
03	M OUT	Green	
04	RX SPCH A	Orange-White	
05	SPCH A	Blue	
06	SPCH B	Blue-White	
07	RX SPCH B	Orange	
08	E IN	Brown-White	
09	BGND	Brown	
10	CCC	Gray-White	

RJ45-3

Pin No.	Connection	Colour	H/w Port Offset
01	Open	Gray	03
02	SB	Green-White	
03	M OUT	Green	
04	RX SPCH A	Orange-White	
05	SPCH A	Blue	
06	SPCH B	Blue-White	
07	RX SPCH B	Orange	
08	E IN	Brown-White	
09	BGND	Brown	
10	CCC	Gray-White	

RJ45-4

Pin No.	Connection	Colour	H/w Port Offset
01	Open	Gray	04
02	SB	Green-White	
03	M OUT	Green	
04	RX SPCH A	Orange-White	
05	SPCH A	Blue	
06	SPCH B	Blue-White	
07	RX SPCH B	Orange	
08	E IN	Brown-White	
09	BGND	Brown	
10	CCC	Gray-White	

RJ45-5

Pin No.	Connection	Colour	H/w Port Offset
01	Open	Gray	05
02	SB	Green-White	
03	M OUT	Green	
04	RX SPCH A	Orange-White	
05	SPCH A	Blue	
06	SPCH B	Blue-White	
07	RX SPCH B	Orange	
08	E IN	Brown-White	
09	BGND	Brown	
10	CCC	Gray-White	

RJ45-6

Pin No.	Connection	Colour	H/w Port Offset
01	Open	Gray	06
02	SB	Green-White	
03	M OUT	Green	
04	RX SPCH A	Orange-White	
05	SPCH A	Blue	
06	SPCH B	Blue-White	
07	RX SPCH B	Orange	
08	E IN	Brown-White	
09	BGND	Brown	
10	CCC	Gray-White	

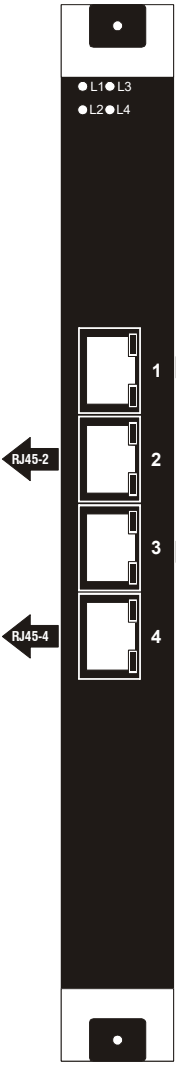
RJ45-7

Pin No.	Connection	Colour	H/w Port Offset
01	Open	Gray	07
02	SB	Green-White	
03	M OUT	Green	
04	RX SPCH A	Orange-White	
05	SPCH A	Blue	
06	SPCH B	Blue-White	
07	RX SPCH B	Orange	
08	E IN	Brown-White	
09	BGND	Brown	
10	CCC	Gray-White	

RJ45-8

Pin No.	Connection	Colour	H/w Port Offset
01	Open	Gray	08
02	SB	Green-White	
03	M OUT	Green	
04	RX SPCH A	Orange-White	
05	SPCH A	Blue	
06	SPCH B	Blue-White	
07	RX SPCH B	Orange	
08	E IN	Brown-White	
09	BGND	Brown	
10	CCC	Gray-White	

ETERNITY ME E&M4 - RJ45 Connector



Pin No.	Connection	Colour	H/w Port Offset
01	Open	Gray	01
02	SB	Green-White	
03	M OUT	Green	
04	RX SPCH A	Orange-White	
05	SPCH A	Blue	
06	SPCH B	Blue-White	
07	RX SPCH B	Orange	
08	E IN	Brown-White	
09	BGND	Brown	
10	CCC	Gray-White	

Pin No.	Connection	Colour	H/w Port Offset
01	Open	Gray	02
02	SB	Green-White	
03	M OUT	Green	
04	RX SPCH A	Orange-White	
05	SPCH A	Blue	
06	SPCH B	Blue-White	
07	RX SPCH B	Orange	
08	E IN	Brown-White	
09	BGND	Brown	
10	CCC	Gray-White	

Pin No.	Connection	Colour	H/w Port Offset
01	Open	Gray	03
02	SB	Green-White	
03	M OUT	Green	
04	RX SPCH A	Orange-White	
05	SPCH A	Blue	
06	SPCH B	Blue-White	
07	RX SPCH B	Orange	
08	E IN	Brown-White	
09	BGND	Brown	
10	CCC	Gray-White	

Pin No.	Connection	Colour	H/w Port Offset
01	Open	Gray	04
02	SB	Green-White	
03	M OUT	Green	
04	RX SPCH A	Orange-White	
05	SPCH A	Blue	
06	SPCH B	Blue-White	
07	RX SPCH B	Orange	
08	E IN	Brown-White	
09	BGND	Brown	
10	CCC	Gray-White	

ETERNITY ME BRI4/BRI8

BRI04/BRI08 CARD (Lower MDF Connector)			
Port	Port	Port	Color
BRI01 TxA, TxB	Blue-White	BRI05 TxA, TxB	Blue-White
BRI01 RxA, RxB	Orange-White	BRI05 RxA, RxB	Orange-White
BRI01 V-, V+	Green-White	BRI05 V-, V+	Green-White
BRI02 TxA, TxB	Brown-White	BRI06 TxA, TxB	Brown-White
BRI02 RxA, RxB	Grey-White	BRI06 RxA, RxB	Grey-White
BRI02 V-, V+	Blue-Red	BRI06 V-, V+	Blue-Red
BRI03 TxA, TxB	Orange-Red	BRI07 TxA, TxB	Orange-Red
BRI03 RxA, RxB	Green-Red	BRI07 RxA, RxB	Green-Red
BRI03 V-, V+	Brown-Red	BRI07 V-, V+	Brown-Red
BRI04 TxA, TxB	Grey-Red	BRI08 TxA, TxB	Grey-Red
BRI04 RxA, RxB	Blue-Black	BRI08 RxA, RxB	Blue-Black
BRI04 V-, V+	Orange-Black	BRI08 V-, V+	Orange-Black

ETERNITY ME Magneto8

Port	Color
Magneto1 (Pin01 Ring - Pin 19 Tip)	Blue-White
Magneto2 (Pin02 Ring - Pin 20 Tip)	Orange-White
Magneto3 (Pin03 Ring - Pin 21 Tip)	Green-White
Magneto4 (Pin04 Ring - Pin 22 Tip)	Brown-White
Magneto5 (Pin05 Ring - Pin 23 Tip)	Grey-White
Magneto6 (Pin06 Ring - Pin 24 Tip)	Blue-Red
Magneto7 (Pin07 Ring - Pin 25 Tip)	Orange-Red
Magneto8 (Pin08 Ring - Pin 26 Tip)	Green-Red

ETERNITY ME Card Radio8

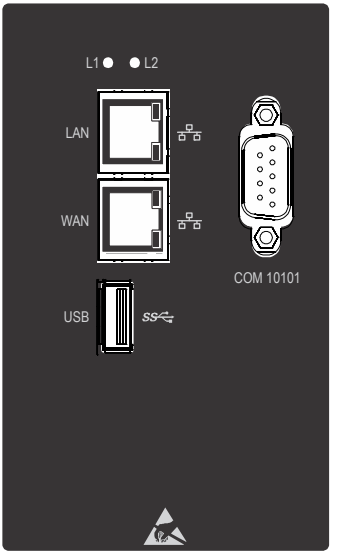
Connector	Color	Pin Number	Signaling	H/w Port Offset
RJ45-1 to RJ45-8	Orange & White	1	PTT	01 to 08
	Orange	2	PTT_RTN	
	Green & White	3	Rx-	
	Blue	4	Tx+	
	Blue & White	5	Tx-	
	Green	6	Rx+	
	Brown & White	7	Unused	
	Brown	8	Unused	

ETERNITY ME Card Radio4

Connector	Color	Pin Number	Signaling	H/w Port Offset
RJ45-1 to RJ45-4	Orange & White	1	PTT	01 to 04
	Orange	2	PTT_RTN	
	Green & White	3	Rx-	
	Blue	4	Tx+	
	Blue & White	5	Tx-	
	Green	6	Rx+	
	Brown & White	7	Unused	
	Brown	8	Unused	

Cable Diagrams for ETERNITY GENX Cards

ETERNITY GENX CPU Card



Ports and Connectors

Port	Connector	Description
LAN	RJ45	Used for connecting the Ethernet cable into LAN Port to connect to a PC or a LAN Switch.
WAN	RJ45	Used for connecting the Ethernet cable into WAN Port to connect to a Broadband Router/Modem.
USB	USB to COM Converter (Optional)	The External USB can be used as COM Port by connecting the USB to COM Converter. Used to: • set up and run software applications — PMS and CAS. • capture System Activity Log, System Fault log and Hotel Motel Activity logs. • generate SMDR reports.

Port	Connector	Description
COM	DB-9	Used to: • set up and run software applications — PMS and CAS. • capture System Activity Log, System Fault log and Hotel Motel Activity logs. • generate SMDR reports.

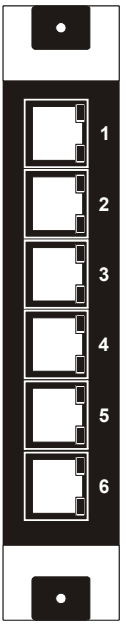
ETERNITY GE SLT8

Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	01 02 03 04
RJ45-1	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	05 06 07 08

ETERNITY GE SLT16

Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	01 02 03 04
RJ45-2	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	05 06 07 08
RJ45-3	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	09 10 11 12
RJ45-4	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	13 14 15 16

ETERNITY GE SLT20 / ETERNITY GE ILC20

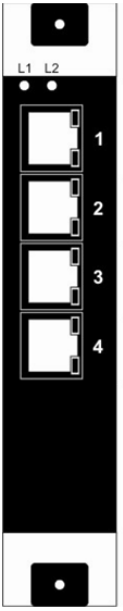


Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	01 02 03 04
RJ45-2	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	05 06 07 08
RJ45-3	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	09 10 11 12
RJ45-4	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	13 14 15 16
RJ45-5	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT - -	17 18 - -
RJ45-6	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT - -	19 20 - -

ETERNITY GE DKP8

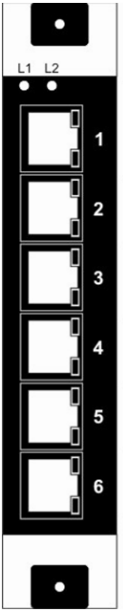
Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	DKP DKP DKP DKP	01 02 03 04
RJ45-2	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	DKP DKP DKP DKP	05 06 07 08

ETERNITY GE DKP16



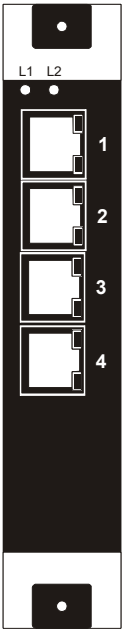
Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	DKP DKP DKP DKP	01 02 03 04
RJ45-2	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	DKP DKP DKP DKP	05 06 07 08
RJ45-3	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	DKP DKP DKP DKP	09 10 11 12
RJ45-4	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	DKP DKP DKP DKP	13 14 15 16

ETERNITY GE DKP4+SLT16



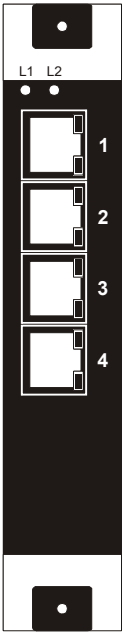
Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	01 02 03 04
RJ45-2	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	05 06 07 08
RJ45-3	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	09 10 11 12
RJ45-4	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	13 14 15 16
RJ45-5	Blue - (Blue & White) Orange - (Orange & White)	DKP DKP	01 02
RJ45-6	Blue - (Blue & White) Orange - (Orange & White)	DKP DKP	03 04

ETERNITY GE CO8



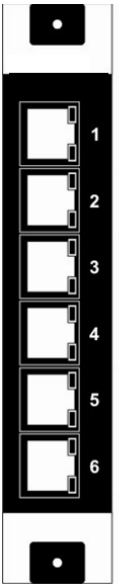
Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	CO CO CO CO	01 02 03 04
RJ45-2	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	CO CO CO CO	05 06 07 08
RJ45-3	Unused		
RJ45-4	Unused		

ETERNITY GE CO16



Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	CO CO CO CO	01 02 03 04
RJ45-2	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	CO CO CO CO	05 06 07 08
RJ45-3	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	CO CO CO CO	09 10 11 12
RJ45-4	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	CO CO CO CO	13 14 15 16

ETERNITY GE CO2+DKP2+SLT16



Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	01 02 03 04
RJ45-2	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	05 06 07 08
RJ45-3	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	09 10 11 12
RJ45-4	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	13 14 15 16
RJ45-5	Blue - (Blue & White) Orange - (Orange & White)	DKP DKP	01 02
RJ45-6	Blue - (Blue & White) Orange - (Orange & White)	CO CO	01 02

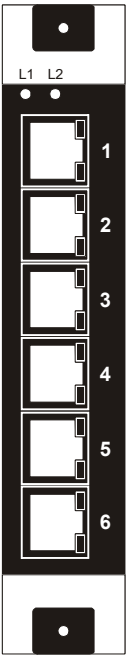
ETERNITY GE CO4+DKP2+SLT12 (with and without PFT)

Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	01 02 03 04
RJ45-2	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	05 06 07 08
RJ45-3	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	09 10 11 12
RJ45-4	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	CO CO CO CO	01 02 03 04
RJ45-5	Blue - (Blue & White) Orange - (Orange & White)	DKP DKP	01 02
RJ45-6	Unused		

ETERNITY GE CO4+DKP2+SLT8 (with PFT)

Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	01 02 03 04
RJ45-2	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	05 06 07 08
RJ45-3	Unused		
RJ45-4	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	CO CO CO CO	01 02 03 04
RJ45-5	Blue - (Blue & White) Orange - (Orange & White)	DKP DKP	01 02
RJ45-6	Unused		

ETERNITY GE CO4+SLT16

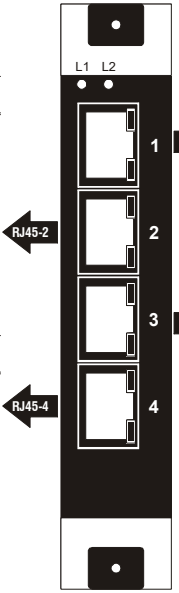


Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	01 02 03 04
RJ45-2	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	05 06 07 08
RJ45-3	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	09 10 11 12
RJ45-4	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	SLT SLT SLT SLT	13 14 15 16
RJ45-5	Blue - (Blue & White) Orange - (Orange & White)	CO CO	01 02
RJ45-6	Blue - (Blue & White) Orange - (Orange & White)	CO CO	03 04

ETERNITY GE BRI4

BRI Port in TE Mode			BRI Port in NT Mode		
Pin	Color	Connection	Pin	Color	Connection
1	Orange-White	Not connected	1	Orange-White	Not connected
2	Orange	Not connected	2	Orange	Not connected
3	Green-White	TxA	3	Green-White	RxA
4	Blue	RxA	4	Blue	TxA
5	Blue-White	RxB	5	Blue-White	TxB
6	Green	TxB	6	Green	RxB
7	Brown-White	V-	7	Brown-White	V-
8	Brown	V+	8	Brown	V+

ETERNITY GE E&M4



Pin No.	Connection	Colour	H/w Port Offset
1	Open	Gray	01
2	SB1	Green-White	
3	M1 OUT	Green	
4	RX1 SPCH A	Orange-White	
5	SPCH1 A	Blue	
6	SPCH1 B	Blue-White	
7	RX1 SPCH B	Orange	
8	E1 IN	Brown-White	
9	BGND	Brown	
10	CCC1	Gray-White	

Pin No.	Connection	Colour	H/w Port Offset
1	Open	Gray	02
2	SB2	Green-White	
3	M2 OUT	Green	
4	RX2 SPCH A	Orange-White	
5	SPCH2 A	Blue	
6	SPCH2 B	Blue-White	
7	RX2 SPCH B	Orange	
8	E2 IN	Brown-White	
9	BGND	Brown	
10	CCC2	Gray-White	

Pin No.	Connection	Colour	H/w Port Offset
1	Open	Gray	03
2	SB3	Green-White	
3	M1 OUT	Green	
4	RX3 SPCH A	Orange-White	
5	SPCH3 A	Blue	
6	SPCH3 B	Blue-White	
7	RX3 SPCH B	Orange	
8	E3 IN	Brown-White	
9	BGND	Brown	
10	CCC3	Gray-White	

Pin No.	Connection	Colour	H/w Port Offset
1	Open	Gray	04
2	SB4	Green-White	
3	M4 OUT	Green	
4	RX4 SPCH A	Orange-White	
5	SPCH4 A	Blue	
6	SPCH4 B	Blue-White	
7	RX4 SPCH B	Orange	
8	E4 IN	Brown-White	
9	BGND	Brown	
10	CCC4	Gray-White	

ETERNITY GE Magneto4

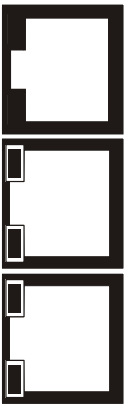
Connector	Color	Connection	H/w Port Offset
RJ45-1	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	Magneto - - -	01 - - -
RJ45-2	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	Magneto - - -	02 - - -
RJ45-3	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	Magneto - - -	03 - - -
RJ45- 4	Blue - (Blue & White) Orange - (Orange & White) Green - (Green & White) Brown - (Brown & White)	Magneto - - -	04 - - -

ETERNITY GE Radio

Connector	Color	Pin Number	Signaling	H/w Port Offset
RJ45-1 to RJ45-4	Orange & White	1	PTT	01 to 04
	Orange	2	PTT_RTN	
	Green & White	3	Rx-	
	Blue	4	Tx+	
	Blue & White	5	Tx-	
	Green	6	Rx+	
	Brown & White	7	Unused	
	Brown	8	Unused	

Cable Diagram for ETERNITY PENX Cards

ETERNITY PENX SLT4



Connector	Color	Connection	H/w port Offset
RJ45-1	Blue - (Blue & White)	SLT	01
	Orange - (Orange & White)	SLT	02
	Green - (Green & White)	SLT	03
	Brown - (Brown & White)	SLT	04
RJ45-2			
RJ45-3			

ETERNITY PENX SLT8

Connector	Color	Connection	H/w port Offset
RJ45-1	Blue - (Blue & White)	SLT	01
	Orange - (Orange & White)	SLT	02
	Green - (Green & White)	SLT	03
	Brown - (Brown & White)	SLT	04
RJ45-2	Blue - (Blue & White)	SLT	05
	Orange - (Orange & White)	SLT	06
RJ45-3	Blue - (Blue & White)	SLT	07
	Orange - (Orange & White)	SLT	08

ETERNITY PENX DKP8

Connector	Color	Connection	H/w port Offset
RJ45-1	Blue - (Blue & White)	DKP	01
	Orange - (Orange & White)	DKP	02
	Green - (Green & White)	DKP	03
	Brown - (Brown & White)	DKP	04
RJ45-2	Blue - (Blue & White)	DKP	05
	Orange - (Orange & White)	DKP	06
RJ45-3	Blue - (Blue & White)	DKP	07
	Orange - (Orange & White)	DKP	08

ETERNITY PENX DKP2+SLT6

Connector	Color	Connection	H/w port Offset
RJ45-1	Blue - (Blue & White)	SLT	01
	Orange - (Orange & White)	SLT	02
	Green - (Green & White)	SLT	03
	Brown - (Brown & White)	SLT	04
RJ45-2	Blue - (Blue & White)	SLT	05
	Orange - (Orange & White)	SLT	06
RJ45-3	Blue - (Blue & White)	DKP	01
	Orange - (Orange & White)	DKP	02

ETERNITY PENX CO8

Connector	Color	Connection	H/w port Offset
RJ45-1	Blue - (Blue & White)	CO	01
	Orange - (Orange & White)	CO	02
	Green - (Green & White)	CO	03
	Brown - (Brown & White)	CO	04
RJ45-2	Blue - (Blue & White)	CO	05
	Orange - (Orange & White)	CO	06
RJ45-3	Blue - (Blue & White)	CO	07
	Orange - (Orange & White)	CO	08

ETERNITY PENX CO2+DKP2+SLT4

Connector	Color	Connection	H/w port Offset
RJ45-1	Blue - (Blue & White)	SLT	01
	Orange - (Orange & White)	SLT	02
	Green - (Green & White)	SLT	03
	Brown - (Brown & White)	SLT	04
RJ45-2	Blue - (Blue & White)	CO	01
	Orange - (Orange & White)	CO	02
RJ45-3	Blue - (Blue & White)	DKP	01
	Orange - (Orange & White)	DKP	02

ETERNITY PENX CO4+SLT4

Connector	Color	Connection	H/w port Offset
RJ45-1	Blue - (Blue & White)	SLT	01
	Orange - (Orange & White)	SLT	02
	Green - (Green & White)	SLT	03
	Brown - (Brown & White)	SLT	04
RJ45-2	Blue - (Blue & White)	CO	01
	Orange - (Orange & White)	CO	02
RJ45-3	Blue - (Blue & White)	CO	03
	Orange - (Orange & White)	CO	04

ETERNITY PENX CO2+SLT6

Connector	Color	Connection	H/w port Offset
RJ45-1	Blue - (Blue & White)	SLT	01
	Orange - (Orange & White)	SLT	02
	Green - (Green & White)	SLT	03
	Brown - (Brown & White)	SLT	04
RJ45-2	Blue - (Blue & White)	SLT	05
	Orange - (Orange & White)	SLT	06
RJ45-3	Blue - (Blue & White)	CO	01
	Orange - (Orange & White)	CO	02

Ports and Connectors of ETERNITY PENX

Port	Connector	Description
LAN	RJ45	Used for connecting the Ethernet cable into LAN Port to connect to a PC or a LAN Switch.
WAN	RJ45	Used for connecting the Ethernet cable into WAN Port to connect to a Broadband Router/Modem.
USB	USB to COM Converter	The External USB can be used as COM Port by connecting the USB to COM Converter. The USB be COM Port can be used to: • set up and run software applications — PMS and CAS. • capture System Activity Log, System Fault log and Hotel Motel Activity logs. • generate SMDR reports.
Power	3-PIN Power Cord	Used to connect Power Adapter
ON/OFF	Switch	Used to Switch ON/OFF Power.

Pre-activated Licenses

Pre-activated Licenses	Systems purchased on January 1, 2021 and later	Systems purchased before January 1, 2021
SARVAM UCS SME	Yes	No
SARVAM UCS ENT	Yes	No
SARVAM UCS SMB	Yes	No
IP SUBSCRIBERS (SIP EXTENSIONS)	5 (SME,ENT & SMB)	5 (SME,ENT & SMB)
VOCODER CHANNELS	4 (SME,ENT & SMB)	4 (SME,ENT & SMB)
VMS CHANNELS	4 (SME,ENT & SMB)	4 (SME,ENT & SMB)
VARTA USERS	0 (SME,ENT & SMB)	0 (SME,ENT & SMB)
EXPANSION SLOT	4 - SME 8 - ENT NA - SMB	4 - SME 8 - ENT NA - SMB

For more information see the topic *License Management* in the SARVAM UCS System Manual.

Modified default parameter values for Firmwares later than V1R6.7

Page Name	Feature/Parameter	Old Default Value	New Default Value	Impact on behavior after update
Station Basic Feature Template [1-50]	Call Privilege ->Toll Control Level-0 (WH)	All Calls	No Calls	Extension Users will not be able to make external calls.
Station Basic Feature Template [1-50]	Call Privilege ->Toll Control Level-0 (BH)	All Calls	No Calls	Extension Users will not be able to make external calls.
Station Basic Feature Template [1-50]	Call Privilege ->Toll Control Level-0 (NH)	All Calls	No Calls	Extension Users will not be able to make external calls.
Station Basic Feature Template [1-50]	Call Privilege ->Toll Control Level-1	Local Calls	No Calls	Extension Users will not be able to make external calls.

Station Basic Feature Template [1-50]	Call Privilege ->Toll Control Level-2	National Calls	No Calls	Extension Users will not be able to make external calls.
Station Basic Feature Template [1-50]	Call Privilege ->Toll Control Level-3	No Calls	No Calls	Extension Users will not be able to make external calls.
Class of Service [1-20]	Closed User Group (CUG)	Enable	Disable	Extension Users will not be able to access this feature by default.
Class of Service [1-20]	Global Directory Part-1	Enable	Disable	Extension Users will not be able to access this feature by default.
Class of Service [1-20]	Trunk-Trunk Transfer	Enable	Disable	Extension Users will not be able to access this feature by default.
Logical Partition	VoIP-to-VoIP	Enable	Disable VoIP has been split into SIP Trunk and SIP Extension	Users will not be able to make SIP Trunk calls from SIP Extension. Logical Partition Table will be set to default for all regions respectively
OG Trunk Bundle Groups	OG Trunk Bundle Members	1,2,3,4	0	Extension Users will not be able to make eternal calls from their extensions.
OG Trunk Bundle	Trunk Port -Type	CO, Mobile, BRI, T1E1 and SIP Trunk	None	Extension Users will not be able to make eternal calls from their extensions.
SIP Trunk Parameter	Accept anonymous calls?	Enable	Disable	Anonymous Calls will not be accepted.
Mobile Trunk Parameter	Accept Anonymous Call	Enable	Disable	Anonymous Calls will not be accepted.
Call Duration Control for Table-1	Apply CDC for incoming calls received from trunk	Disable	Enable	CDC will be applied on All trunks and Extensions for external calls.
Call Duration Control for Table-1	Apply CDC for outgoing calls made from trunk	Disable	Enable	CDC will be applied on All trunks and Extensions for external calls.
Call Duration Control for Table-1	CDC Timer (sec)	160	300	CDC will be applied on All trunks and Extensions for external calls.

Call Duration Control for Table-1	Disconnect Call after CDC Timer	Disable	Enable	CDC will be applied on All trunks and Extensions for external calls.
Call budget	For All Trunk	None	Minutes (300 minutes)	Budget will be applied on all the Trunks.

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