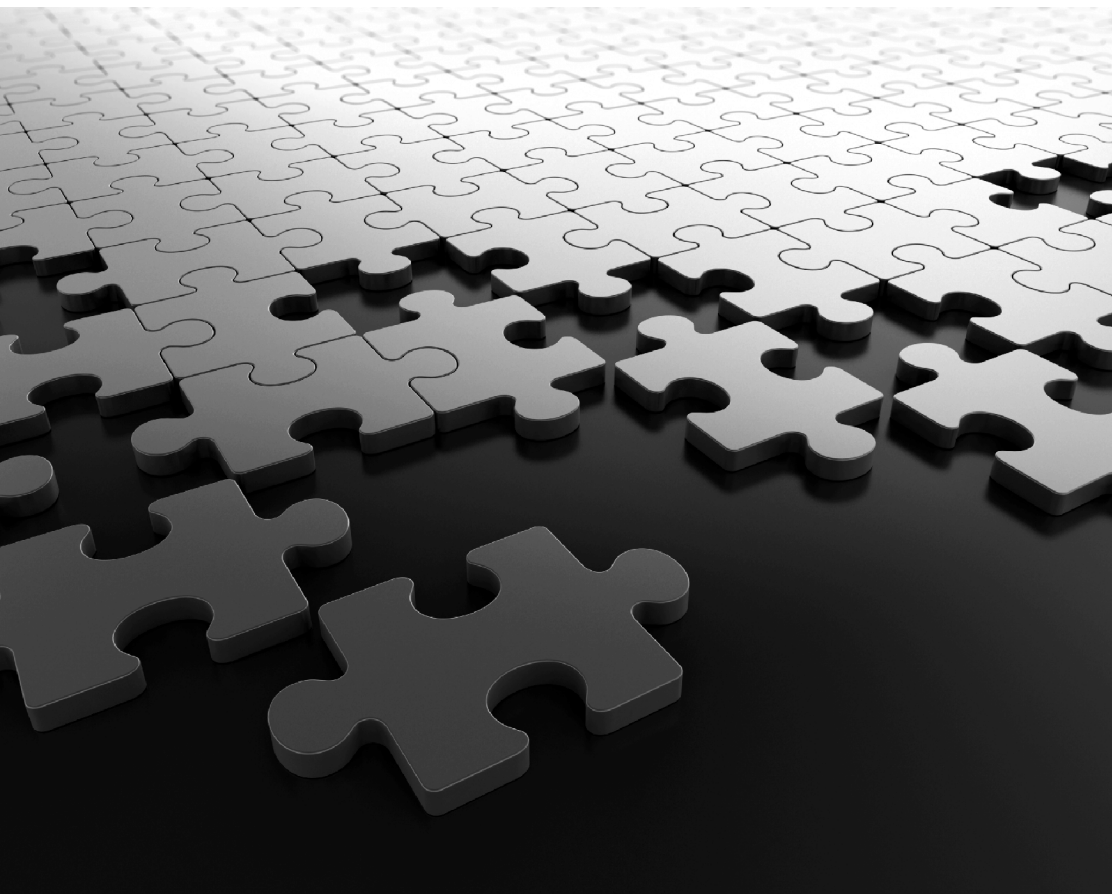


SETU VG

Quick Start



SETU VG

Multi-Port VoIP to GSM Gateway

Quick Start



Documentation Disclaimer

Matrix Comsec reserves the right to change, at any time, without prior notice, the product design, specifications, components, as engineering and manufacturing may warrant.

This is a general documentation for all models/configurations of the product. The product may not support some of the features/facilities described in this document.

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Know Your SETU VG

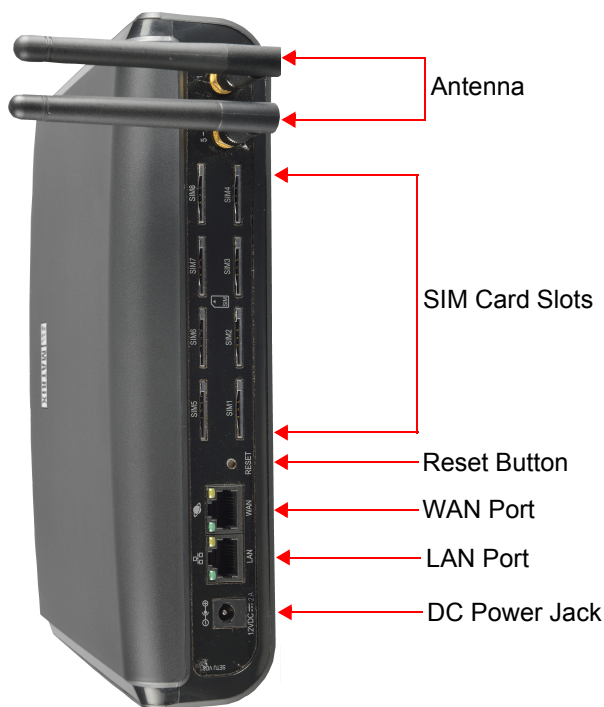
Thank you for choosing the Matrix SETU VG. Please read the instructions in this Quick Start to install and operate SETU VG.

This Quick Start is meant to help you install and configure the basic parameters of the system. For Advanced configuration and feature description, please refer the *SETU VG System Manual* available Online. To download, click <https://www.matrixtelesol.com/product-manuals.html>

You can also view and download this document 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>


Overview



SETU VG is available in two configurations:

- **SETU VG8** with 9 SIP Trunks and 8 Mobile Ports.
- **SETU VG4** with 9 SIP Trunks and 4 Mobile Ports.

Ports and Connectors

Port	Connector	Description
	SMA (Male)	To connect Antenna for the Mobile Ports.
SIM Card Slots (SIM1 to SIM8)	---	To connect to GSM/UMTS network ^a .
Reset Button	---	To restart the system or to restore the default LAN IP Address.
WAN Port	RJ45	To connect to the IP network over a DSL Modem or Router or a LAN Switch.
LAN Port	RJ45	To connect a computer or a LAN Switch.
12VDC-2A	DC Jack	To connect 12VDC, 2A Power Adapter.

- a. When the 3G module is installed in the system, you must disable Call Waiting on the SIM before inserting it into the system to prevent current calls from being disconnected.

LEDs

SETU VG has a **Power LED (PWR)**, a **Status LED (STS)** and eight **Port LEDs**. By default,

- In SETU VG8, the Port LEDs M1 to M8 are assigned to Mobile Port 1 to Mobile Port 8 respectively.
- In SETU VG4, the Port LEDs M1 to M4 are assigned to Mobile Port 1 to Mobile Port 4 respectively. The LEDs M5 to M8 cannot be assigned to any port.

The LEDs indicate the status of the ports and various events occurring on the ports, including errors.



If required, to each port LED—M1 to M8 in SETU VG8 and M1 to M4 in SETU VG4—you may re-assign a port of your choice. To know more, see [Port LED](#) topic under Maintenance in the System Manual.

SETU VG is easy to install and operate. The built-in web server, *Jeeves*, allows you to configure the system parameters and features On-site as well as from a remote location.

Installing SETU VG

Before You Start

Before you begin to install and set up the hardware of SETU VG, make sure you have the following ready:

- A suitable location to install SETU VG.
- Power supply.
- A SIP Account from an ITSP to test VoIP connectivity.
- A standalone computer or a computer connected in a LAN to access Jeeves, the web-based configuration tool of SETU VG.
- Appropriate cables and connectors to set up and test the WAN interface of SETU VG and the LAN connection.
- A SIM Card to test Mobile connectivity.



- Do not install this product near any area where,
 - it is exposed to direct sunlight, heat, excessive cold or humidity, dust, oil, corrosive fumes.
 - there is a water source (wash basin, tub, shower, pool, sprinkler, etc.)
 - there is source of electromagnetic noise such as radio equipment, heavy transformers, faulty electric chokes of tube-lights, device having a faulty coil.
- Ensure proper electrical earth and telecom earth for the safety of the product and persons handling it.
- Always wear an electro static discharge preventive wrist wrap or belt and use a grounding mat when handling the product and its parts.
- SETU VG contains a 3VDC/18mAh (Li-Al) alloy-Manganese Dioxide Coin Battery (ML 1220 - Rechargeable) of diameter 12.5mm and height 2.0mm. Battery should be replaced only by authorized dealers of Matrix. There is a risk of explosion if the Battery is replaced in an incorrect manner. Please dispose-off used Batteries.

Getting Started

- Select an appropriate site to install the SETU VG, considering the safety precautions listed earlier in this chapter.
- Unpack SETU VG and verify the package contents. The Package of SETU VG8 contains:
 - SETU VG Unit
 - Power Adapter - 12VDC, 2A (Country Specific)
 - Universal Converter Plug 2 PIN

- Interchangeable Plug EU
- Two¹ GSM Antenna with SMA Connector
- Ethernet Cable (RJ45)
- Two M7/30 Screws with grips
- Wall Mounting Template
- A Warranty Card set

If any of these items is missing or damaged, please contact the dealer/reseller from whom you purchased the system.

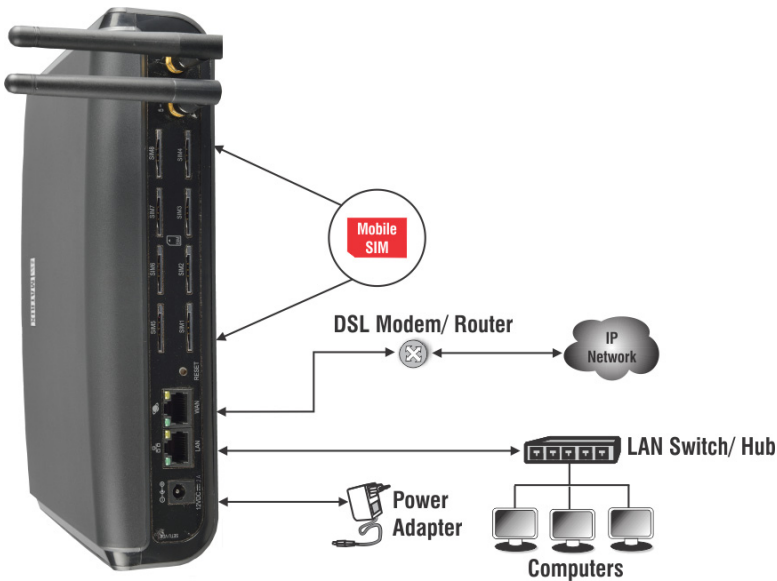
- Place the system at the selected site.

If you are mounting the system on a wall, refer to the mechanical dimensions of the product and use the mounting template for drilling holes on the wall.

1. *The Package of SETU VG4 contains only one GSM Antenna with SMA Connector.*

Connecting SETU VG

SETU VG8 has a WAN Port, a LAN Port, a Reset Button, 8 Mobile Ports, 9 SIP Trunks, a Power Jack and 10 LEDs.



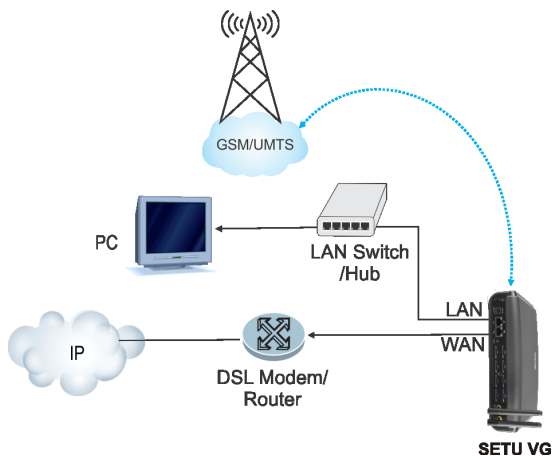
If you are connecting a GSM Cable Antenna to the SETU VG, make sure the Antenna cable is at least 4 inches away from the LAN and the WAN cables. It is recommended that you do not pass the Antenna cable through the duct, as it will degrade the signal strength.

Connecting to the IP Network

- Connect the **WAN Port** of SETU VG to the IP Network—a DSL modem/router or a LAN Switch—using the Ethernet cable supplied for the port.

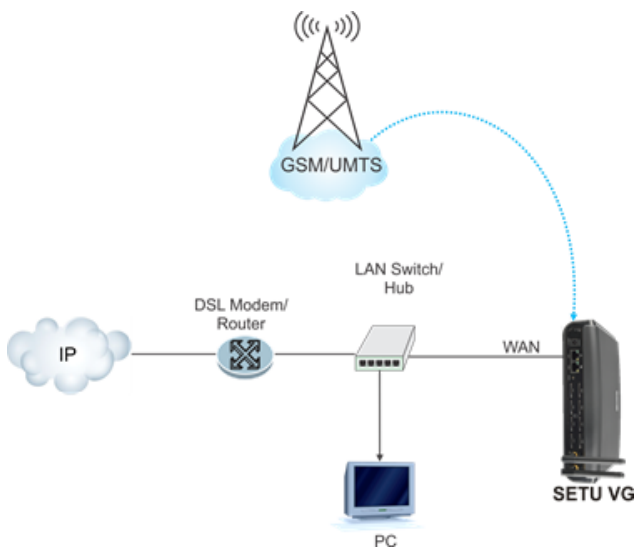
If connecting to the Public IP Network,

- Plug one end of the Ethernet cable into the WAN Port of SETU VG and the other end into the DSL modem/Router.



If connecting to a Private Network (Behind a NAT Router),

- Plug one end of the Ethernet cable into the WAN Port of SETU VG and the other end into the LAN Switch/Hub.



The default IP Address of the WAN Port is: **192.168.1.100**

The default Subnet Mask of the WAN Port is: **255.255.255.0**

Connecting to the Mobile Network

Make sure the site you have installed the system has sufficient network signal strength.

Enabling SIM PIN Protection

Protect the SIM Card from unauthorized use with a Personal Identification Number (PIN) on the SIM (in consultation with the customer/owner of the SIM).

To enable SIM PIN protection,

- Get a mobile handset. Insert the SIM Card into the mobile handset.
- From the mobile handset enable PIN Protection.
- Assign a value as the SIM PIN.
- Remove the SIM Card from the mobile handset.



- If you do not want to use PIN Protection, insert the SIM card in the mobile handset and disable PIN protection. Remove the SIM Card from the mobile handset and insert it in the SIM Slot of the SETU VG.
- If your SETU VG has a 3G module, you must disable Call Waiting in the SIM Card before inserting it into the SIM Slot. This will prevent current calls from being disconnected whenever there is a waiting call on the Mobile Port.

Inserting the SIM Card

- Insert the SIM Card into the desired SIM Slot, with its contact side facing down.
- Push the SIM Card backwards into the slot. The SIM Card will be locked inside the slot.



To unlock the SIM Card, push the protruded portion of the SIM Card backwards again.

- Repeat the same steps to insert another SIM Card.
- Connect the Antenna to the Antenna Connector.



- SETU VG supports WWAN over the Mobile Port. To use WWAN over the Mobile Port 1, you must have a 3G module installed in the system and Internet services activated on the SIM.
- At every power on, it takes about 3 minutes for the Mobile Ports to get registered with the network. Once registration with the mobile network is completed, the Mobile Port can be used.

Power ON SETU VG

- Connect the **Power Adapter** into the Power Jack, and plug it into a Power Outlet.
- Switch ON the power supply and observe the reset cycle.

LED Indication

At Power ON, Power LED will turn ON (Continuous Green). Other LEDs will follow the sequence summarized in the table below, during initialization.

System Status	Color	STS	M1	M2	M3	M4	M5	M6	M7	M8	Time in MS
Kernel UP		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	
Application and LED Driver Loaded	Green	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	
Few Initialisation (i.e SysConfig, Resolver, SysLog etc.)	Green	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	
Few Initialisation (i.e WebJvs, CallManager, PortCnfg etc.)	Green	OFF	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	
VOPP Program Download Success	Green	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF	
	Green	ON	ON	ON	ON	ON	ON	ON	ON	ON	1000 ms
	Red	ON	ON	ON	ON	ON	ON	ON	ON	ON	1000 ms
All Init Done, System goes Live		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	1000 ms
	Green	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	1000 ms
		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	1000 ms
(Continuous Green blinking as given in last 2 steps)											

During initialization, System LED (STS) will display following error/events/status:

LED Status	Color	Comment
1 sec On (Red) 1 sec On (Green) (Continuous)	Red and Green	VoPP program download fail.
500 ms On - 500ms Off	Green	Modules not detected.
1sec On - 1sec Off	Green	SETU VG started successfully. Network link is Up. SIP stack is Up. CDR buffer is not full.
500 ms On - 500ms Off - 500 ms On - 500ms Off - 500 ms On - 500ms Off - 500 ms On - 500ms Off (4 Blinks)	Green	Network link is down. SIP stack is down. CDR buffer is not full.
500 ms On - 500ms Off - 500 ms On - 500ms Off - 500 ms On - 1500ms Off (3 Blinks)	Green	Network link is Up. SIP stack is down. CDR buffer is not full.
500 ms On - 500ms Off - 500 ms On - 500ms Off - 500 ms On - 500ms Off - 500 ms On - 500ms Off (4 Blinks)	Red	Network link is down. SIP stack is down. CDR buffer is full.
1sec On - 1sec Off	Red	Network link is up. SIP stack is down. CDR buffer is full.
500 ms On - 500ms Off - 500 ms On - 500ms Off - 500 ms On - 1500ms Off (3 Blinks)	Red	Network link is up. SIP stack is up. CDR buffer is full.

During initialization, the Mobile Port LEDs will indicate the following error/event/status:

LED Status	Color	Event/State/Status
500ms On- 500ms Off	Green	GSM Initialization
500ms On - 500ms Off	Red	PUK required
500ms On- 500ms Off - 500ms On-500ms Off- 500msOn-1500ms Off (3 Blinks)	Red	SIM PIN Required
500ms On - 500ms Off - 500ms On - 2500ms Off (2 Blinks)	Red	SIM PIN Wrong
500ms On - 3500ms Off (1 Blink)	Red	SIM Absent
1sec On - 1sec Off	Red	GSM network absent

During normal functioning, Mobile Port LEDs will display following error/events/status:

LED Status	Color	Event/State/Status
Continuous OFF	---	Port Idle/Disable
400ms On - 200ms Off - 400ms On - 3000ms Off (2 Blinks)	Red	Incoming Ring Event
Continuous On	Red	Off-hook Event
Continuous On	Green	Speech
Continuous On	Green	Sending SMS/ Processing Balance Inquiry / Processing Balance Recharge

You can assign any of the port status LEDs to SIP Trunks. To know more, see [Port LED](#) topic under Maintenance in the System Manual.

When an LED is assigned to a SIP Trunk, it will display the following error/event/status:

LED Status	Color	Event/State/Status
Continuous Off	-	SIP Disable
Continuous On	Green	SIP Registered
Continuous On	Red	SIP Registration Failed
200ms On - 200ms Off - 200ms On - 3400 Off (2 Blinks)	Red	SIP Authentication Failed

When the Reset Cycle is completed, you may configure the system using the embedded web server, *Jeeves*.

Accessing Jeeves (GUI)

SETU VG provides an embedded web server with a Graphic User Interface (GUI), *Jeeves*, for configuration.

To access Jeeves, you will need to connect a computer to SETU VG.

Connecting a Computer

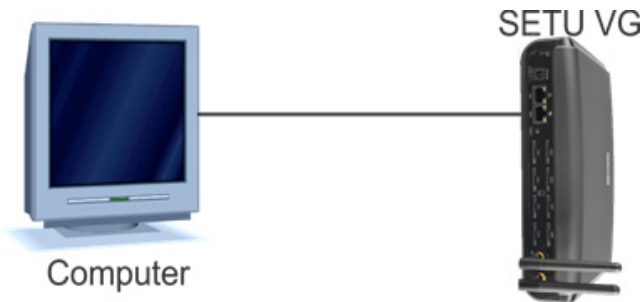
You may connect a standalone computer to SETU VG or grab any computer connected in the same LAN as SETU VG.



- Connect a standalone computer to SETU VG, when installing the system for the first time. You may connect it to the LAN after you have finished installation and configuration of the system.
- If the computer for accessing Jeeves is connected in a LAN Switch and the WAN Port of SETU VG is connected behind a NAT router, make sure that both the LAN and WAN connections are in different Subnets.

To connect a standalone computer,

- Plug one end of the Ethernet cable supplied with the system into the LAN Port of SETU VG. Plug the other end into the LAN Port of the computer.



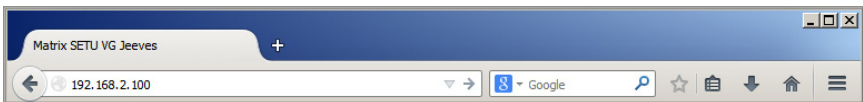
- Make sure the IP Address of the computer and the LAN Port of SETU VG do not conflict, and that both are in the same Subnet.

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

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

Change the Subnet of the computer, if necessary.

- Make sure a Web-browser, either Internet Explorer version 7 or later or Mozilla Firefox version 3.5 or later, is installed on the computer.
- Open the browser on the computer.
- In the address bar of the browser, enter the default IP address of the LAN Port:
192.168.2.100



- The **Login** page will open.
- In **Login Password**, enter **1234**, the default Password.
- Click the **Login** button.

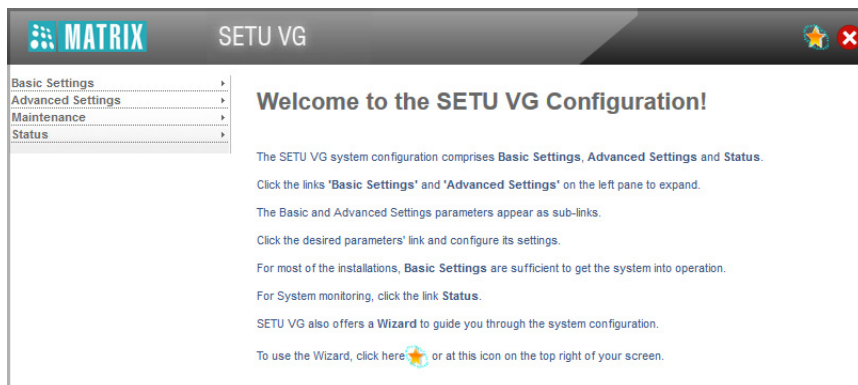


On successful login, the **Home** page of Jeeves opens.



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

The left navigation bar displays the links **Basic Settings**, **Advanced Settings**, **Maintenance** and **Status**.



Basic Settings break down the complexities of configuration and are sufficient to get your system into operation.

Advanced Settings enable you to configure the advanced features and facilities of SETU VG.

Maintenance allows you to carry out system maintenance and monitoring activities like uploading/upgrading firmware and configuration, system debug, system restart.

Status allows you to view the system details and the status of all the ports.

You may now configure the Basic Settings of SETU VG.

Configuring SETU VG


There are two ways to do the basic system configuration using Jeeves:

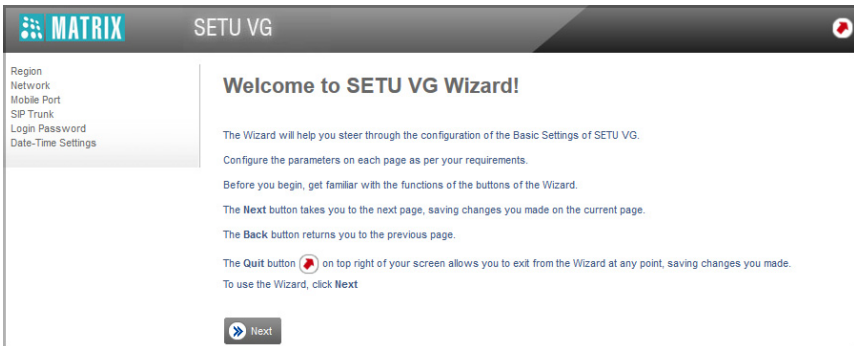
- using the *Wizard*.
Or
- through Selective Configuration of basic settings.




Using the Wizard


The configuration Wizard leads you step-by-step through the configuration of the basic settings.

To use the Wizard,

- Click the **Wizard** icon , on the top right of your screen. The Home page of the Wizard opens.



- To navigate the Wizard pages use the **Next** and **Back** buttons.
- When you press the **Next** button, the changes on the current page are saved and the Wizard takes you to the next page.
- When you press the **Back** button, you will be prompted to save changes made on the current page.
- The **Expand** button , expands a link on the page to display all parameters under the link.
- The **Collapse** button , collapses a link, hides all the parameters under a link on the page.
- The **Settings** icon , enables you to configure / edit the settings of a parameter further.




- The **Default** button assigns factory set values to all the parameters on the page.
- The **Add** button enables you to add a new record/entry.
- The **Delete** button enables you to delete a record/entry.
- The **Close** button enables you to exit a window.
- You may exit the Wizard at any time by clicking the **Quit** button . The changes you made before you exit will be saved.


Using Selective Configuration

You can choose the parameters you want to configure, and the order in which you want to configure. To do this,

- Click the **Basic Settings** link.
- The parameter sub-links appear on the left navigation bar.



- Click the parameter sub-link you wish to configure.
- The respective parameter page opens.
- Get familiar with the buttons and icons listed below before you begin to change the settings of the parameters on each page.
 -  **Expand:** expands a link to display all parameters under the link.
 -  **Collapse:** collapses a link; hides all parameters under the link.
 -  **Settings:** enables you to configure / edit the settings of a parameter further.

 **Logout:** enables you to exit Jeeves.

The **Default** button assigns factory set values to all the parameters on the page.

The **Add** button enables you to add a new record/entry.

The **Delete** button enables you to delete a record/entry.

The **Close** button enables you to exit a window.

- Set the parameters on the page to the desired values and click the **Submit** button to save.

You may use the Wizard or selectively configure the Basic Settings pages, whichever works best for you. Read the *SETU VG System Manual* for detailed instructions.



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