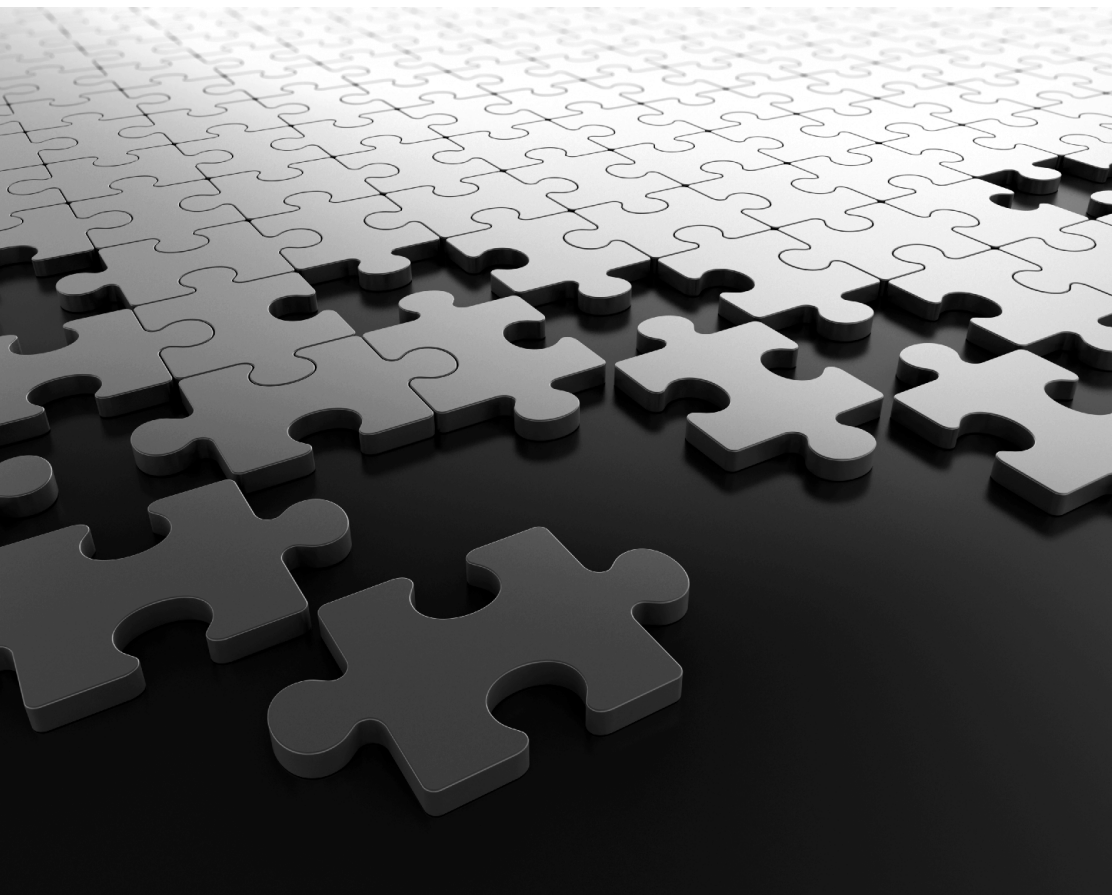


SETU VFX

Quick Start



SETU VFX

Low-Density Multi-Port VoIP-FXO-FXS 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 VFX

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

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 System Manual. To download, click <https://www.matrixtelesol.com/product-manuals.html>

You can also view and download the 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>

Overview

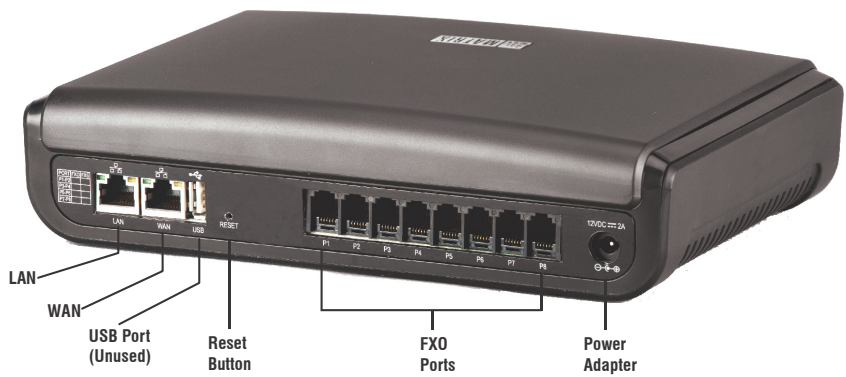
SETU VFX is available in the following configurations:

Sr. No.	Configuration	Voice Channels	FXO Ports	FXS Ports	WAN Port	LAN Port	Lifeline Port
1	SETU VFX880	8	8	0	1	1	0
2	SETU VFX808	8	0	8	1	1	1
4	SETU VFX440	4	4	0	1	1	0
3	SETU VFX404	4	0	4	1	1	1

This is the common document for all the above mentioned configurations.

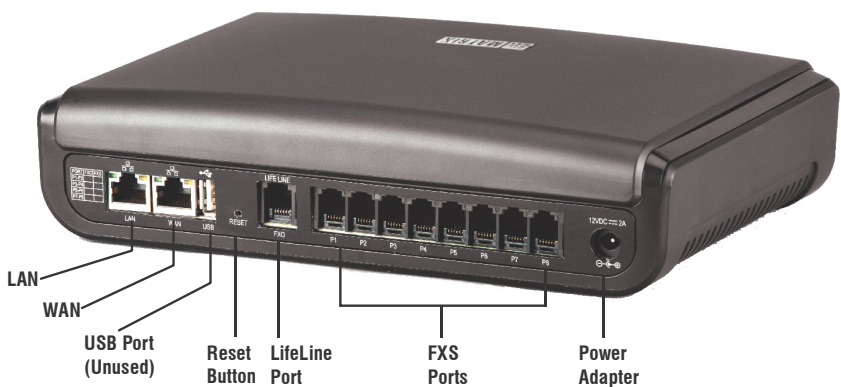
SETU VFX880 (VoIP-FXO Gateway)

SETU VFX880 has a WAN Port, a LAN Port, a USB Port, a Reset button, 8 FXO Ports, 9 SIP Trunks, a Power Socket.



SETU VFX808 (VoIP-FXS Gateway)

SETU VFX808 has a WAN Port, a LAN Port, a USB Port, a Reset button, a Lifeline Port, 8 FXS Ports, 9 SIP Trunks, a Power Socket.



Ports and Connectors

Port	Connector	Description
12VDC-2A	DC Jack	To connect 12VDC, 2A Power Adapter.
P1 to P8 (FXO ^a)	RJ11	To connect PSTN lines or a PBX.
P1 to P8 (FXS ^b)	RJ11	To connect standard Telephone Instruments, or a Fax Machine or a PBX.
LifeLine Port ^c	RJ11	To access PSTN line during power failure/emergency conditions.
Reset Button	---	To restart the system or to restore the default LAN IP Address.
USB Port	---	Unused
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.

- a. FXO Port is available only in VoIP-FXO Gateway.
- b. FXS Port is available only in VoIP-FXS Gateway.
- c. Life Line Port is available only in VoIP-FXS Gateway.

LEDs

SETU VFX has total 10 LEDs. One for Power (PWR), one for Status (STS) and eight Port LEDs (P1 to P8). The LEDs indicate the status of the ports and various events occurring on the ports, including errors.



To each LED, except Power and Status, you can assign a port of your choice. So, if required, you can assign some or all of these LEDs to SIP Trunks. To know more, see **Port LED** topic under Maintenance in the System Manual.

SETU VFX 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 VFX

Before You Start

- Keep the following ready:
 - 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 VFX.
 - Appropriate cables and connectors to set up and test the WAN interface of SETU VFX and the LAN connection.
 - An Analog Trunk Line from the CO/PSTN to connect to the FXO Port, if applicable.
 - At least one standard telephone instrument to connect to the FXS Port, if applicable. You can also connect a fax machine or a PBX.
 - Necessary telecom wiring for the lines and devices to be connected to the FXS and FXO Ports.
 - Standard, good quality, twisted pair telephone cables with 0.5mm conductor diameter and RJ11 plugs for the FXS and FXO Ports.



- 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 VFX 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 VFX, considering the safety precautions listed earlier in this chapter.
- Unpack SETU VFX and verify the package contents:

- SETU VFX Unit
- Power Adapter - 12VDC, 2A (Country Specific)
- Ethernet Cable (RJ45)
- Line Cord (RJ11)¹
- Two Screws M7/30 with grips
- Mounting Template
- Warranty Card Set

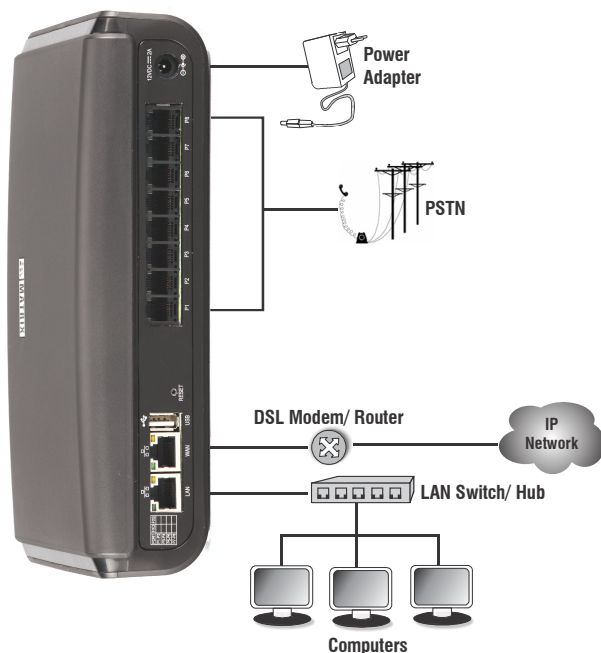
If any of these items is missing or damaged, please contact the dealer/reseller from whom you purchased the system.

- 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.

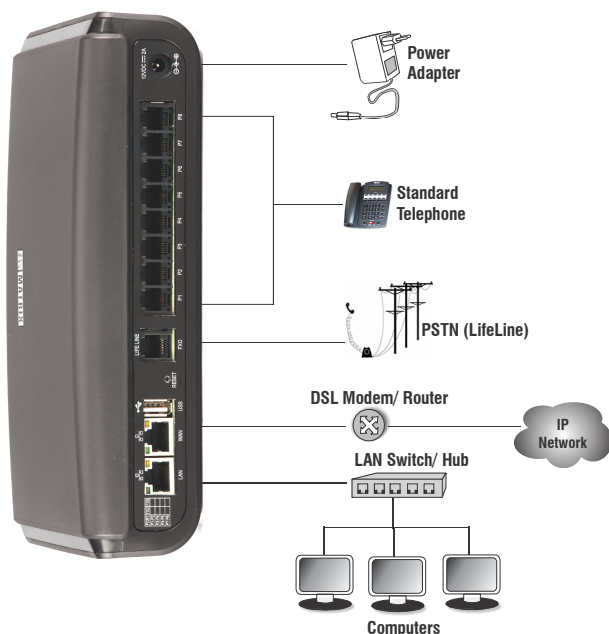
Connecting SETU VFX

SETU VFX880 (VoIP-FXO Gateway)



1. Applicable only for VoIP-FXS Gateway.

SETU VFX808 (VoIP-FXS Gateway)

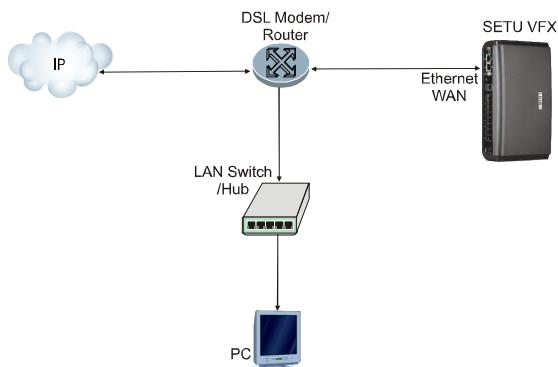


Connecting to the IP Network

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

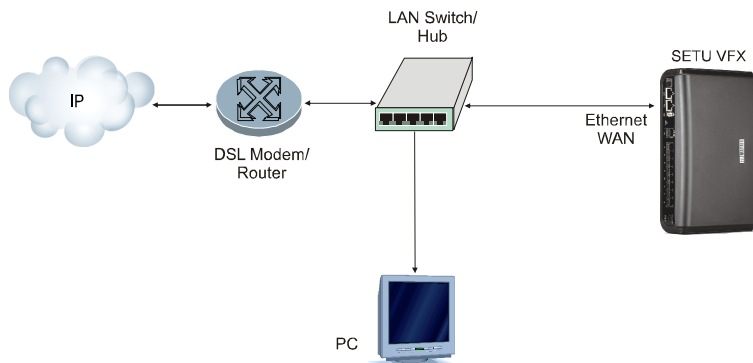
If connecting to the Public IP Network,

- Plug one end of the Ethernet cable into the WAN Port of SETU VFX 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 VFX 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 CO Network²

- To the **FXO Ports**, connect the Analog Trunk lines from your CO Network/PSTN.

You may also connect a PBX to the FXO Port.

Connecting Telephone instruments³

- To the **FXS Ports**, connect standard single line telephones using standard telephone cables with RJ11 plugs.

You may also connect a Fax machine or a PBX to the FXS Port.

Power ON SETU VFX

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

2. *Applicable only for VoIP-FXO Gateway.*

3. *Applicable only for VoIP-FXS Gateway.*

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	P1	P2	P3	P4	P5	P6	P7	P8	Time in MS
Power ON - UBOOT	Red	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	
Kernel UP	Red	ON	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	
All Init Done, System goes Live	Green	ON	ON	ON	ON	ON	ON	ON	ON	ON	1000 ms
	Red	ON	ON	ON	ON	ON	ON	ON	ON	ON	1000 ms
		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
Continuous On	Red	VoPP program download fail.
2000 ms On (Red) 5000 ms On (Green)	Red and Green	Modules not detected.
1sec On - 1sec Off	Green	SETU VFX 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 normal functioning, FXS/FXO 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



During Off-hook state, FXS Port LED glows continuous Red. However, if the system is in programming mode, the LED of the port from which you entered the programming mode will glow continuously Green. After exiting the programming mode, the LED will turn Red again (displaying Off-hook event).

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 VFX 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 VFX.

Connecting a Computer

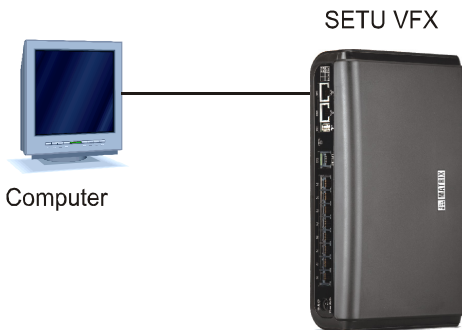
You may connect a standalone computer to SETU VFX or grab any computer connected in the same LAN as SETU VFX.



- Connect a standalone computer to SETU VFX, 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 VFX 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 VFX. Plug the other end into the LAN Port of the computer.



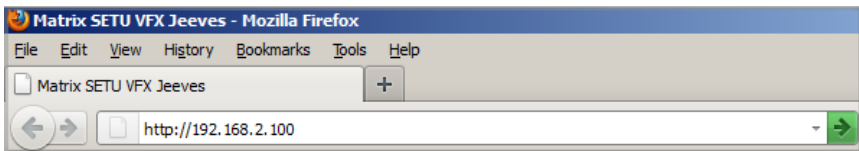
- Make sure the IP Address of the computer and the LAN Port of SETU VFX do not conflict, and that both are in the same Subnet.

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

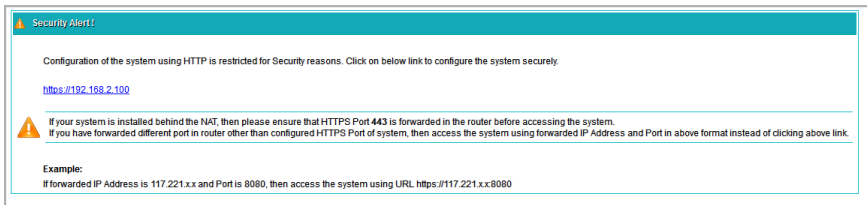
The default Subnet Mask of the LAN Port of SETU VFX is: **255.255.255.000**

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



- You will be redirected to the HTTPS protocol for security reasons.




- Click the <https://192.168.2.100> link.
- The **Login** page will open.
- In **Login Password**, enter **1234**, the default SE Password.
- Click the **Login** button.



MATRIX SETU VFX

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Login Password 

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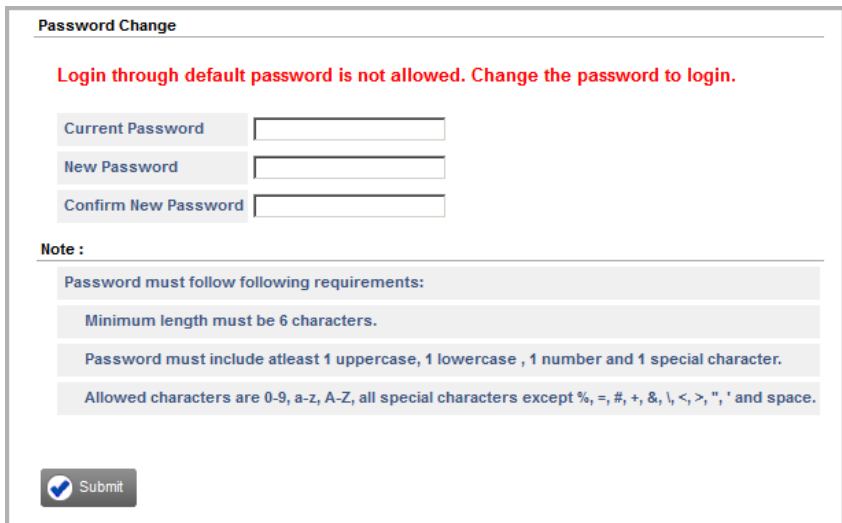
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 This web interface is hosted using GoAhead Webserver.



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

- You will be prompted to change the default SE Password.



Password Change

Login through default password is not allowed. Change the password to login.

Current Password


New Password

Confirm New Password

Note :

Password must follow following requirements:

- Minimum length must be 6 characters.
- Password must include atleast 1 uppercase, 1 lowercase , 1 number and 1 special character.
- Allowed characters are 0-9, a-z, A-Z, all special characters except %, =, #, +, &, \, <, >, ", ' and space.

 Submit

- 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 16 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.
- In **Login Password**, enter the new password.



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. See **Login Password** topic in the System Manual for instructions.
- On successful login, the **Home** page of Jeeves opens.

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 VFX.

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 status of the ports - FXO Ports (if applicable), Network and SIP Trunks.

You may now configure the Basic Settings of SETU VFX.

Configuring SETU VFX


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

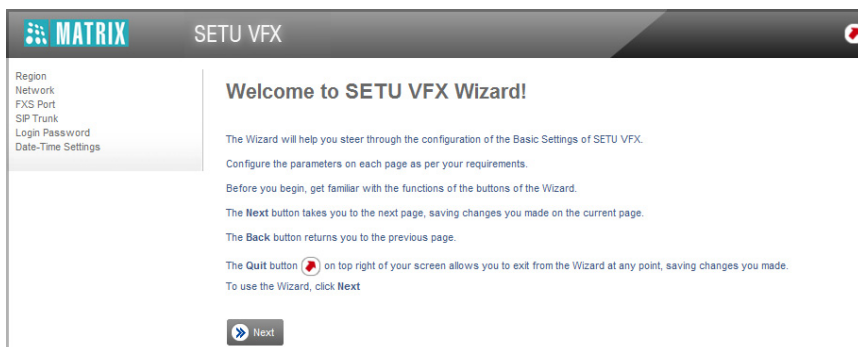
- using the *Wizard*.
Or
- through Selective Configuration of basic settings.




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 VFX System Manual* for detailed instructions.



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