










## MATRIX MULTI-PORT VoIP-FXO-FXS GATEWAYS



Matrix Multi-port VoIP-FXO-FXS Gateways combines VoIP and POTS networks to provide the benefits of scalability, security and cost savings. Ideal for multi-locational organizations and branch offices, Matrix Gateways enables them to seamlessly connect and make cost-effective calls.

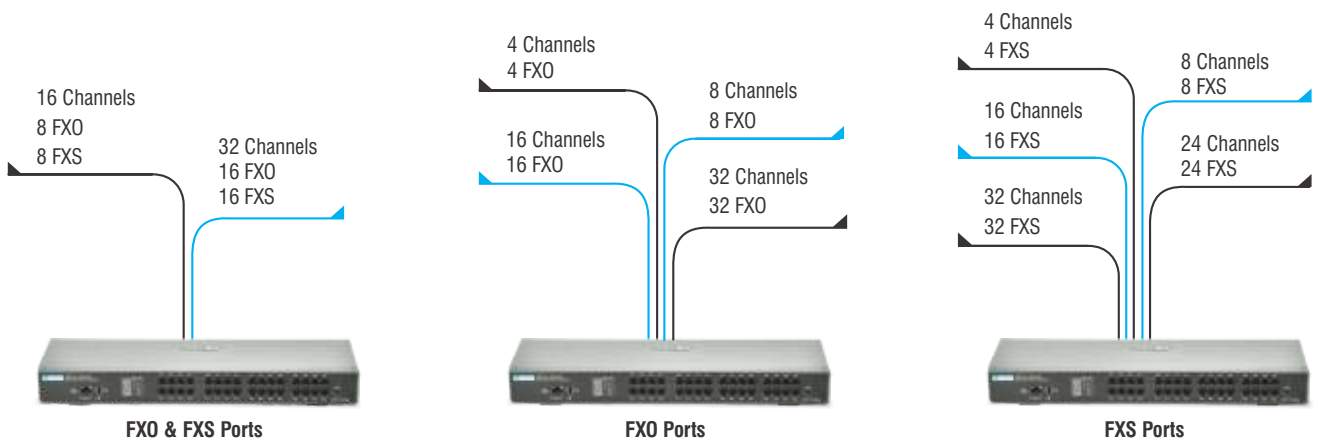


## Key Features

 <p><b>Allowed and Denied List</b> Avoids misuse and restricts unproductive calls</p>	 <p><b>Group Call Pickup</b> Provides flexibility to answer calls ringing on another phone</p>
 <p><b>Auto PSTN Fallback</b> Maintains Business continuity even during IP outages</p>	 <p><b>Message Wait Indication</b> Allows easy retrieval of voice messages</p>
 <p><b>Auto Provisioning</b> Automates remote management for mass deployments</p>	 <p><b>Peer-to-Peer Calls</b> Helps placing calls between multiple locations using IP</p>
 <p><b>Call Detail Record</b> Records call details of up to 2000 calls</p>	 <p><b>SNMP Monitoring</b> Monitors usage and health of network entities</p>
	 <p><b>SRTP/TLS</b> Ensures VoIP call security over IP network</p>

## THE WIDE BASKET SETU VFX FAMILY

### FXO-FXS-VoIP CHANNELS



## Configurations

FXO+FXS			
Model Name	VoIP Channels	FXO	FXS
SETU VFXTH0808	16	8	8
SETU VFXTH1616	32	16	16



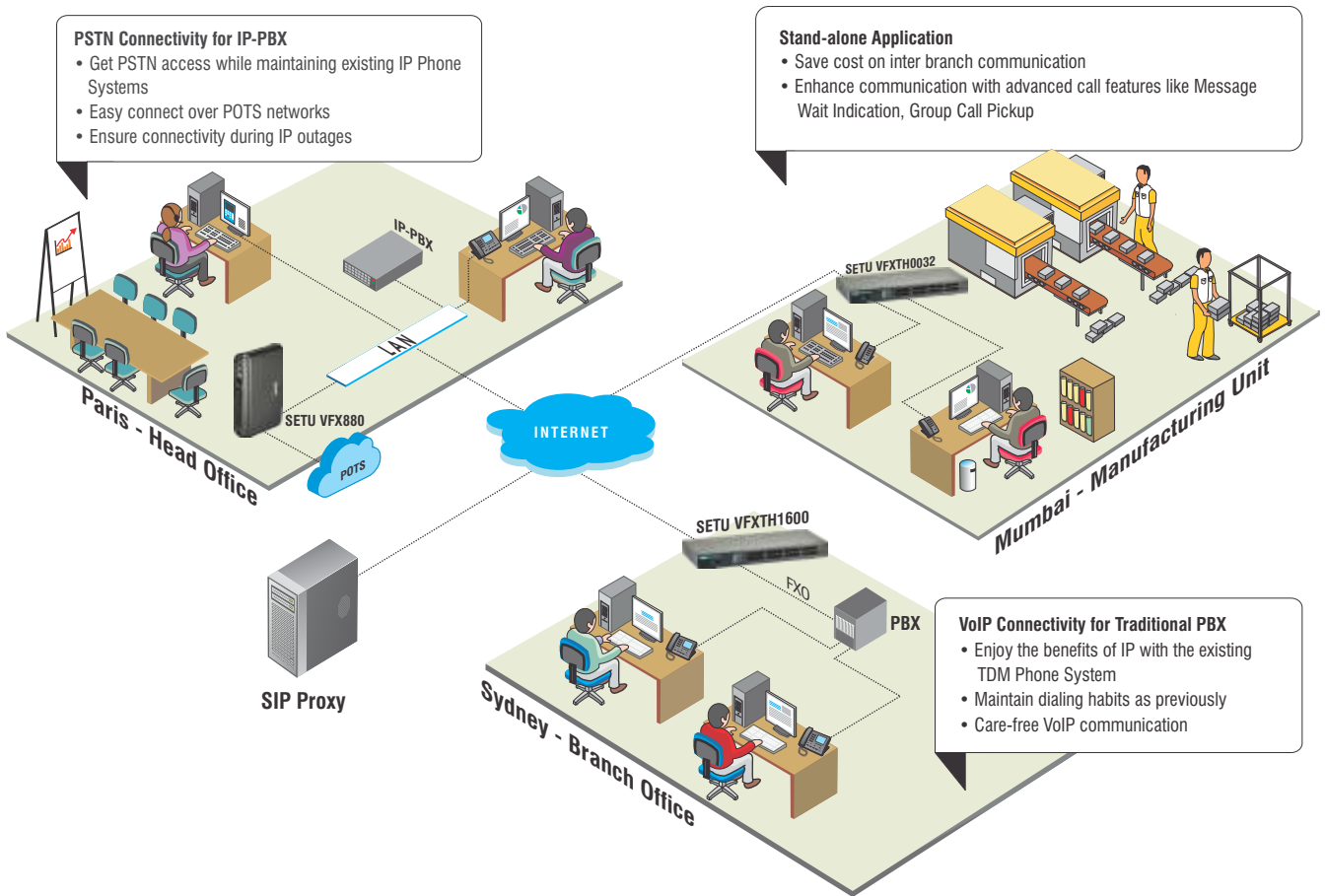
FXO		
Model Name	VoIP Channels	FXO
SETU VFX440	4	4
SETU VFX880	8	8
SETU VFXTH1600	16	16
SETU VFXTH3200	32	32

FXS		
Model Name	VoIP Channels	FXS
SETU VFX404	4	4
SETU VFX808	8	8
SETU VFXTH0016	16	16
SETU VFXTH0024	24	24
SETU VFXTH0032	32	32

## Application Scenario

### Multi-Site Connectivity

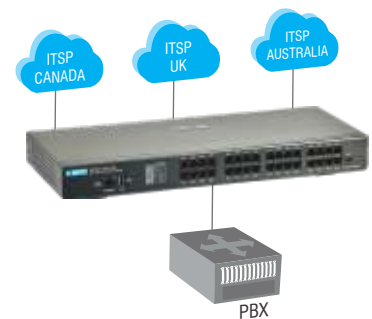
Offices spread across multiple locations need to transparently integrate workforce and centralize administration; the gateway can connect sites, save costs and secure voice communications to provide such benefits.



### SIP Trunking for TDM-PBX

Organization with old-fashioned phone systems need low cost long distance calling from different service providers, SETU VFX can provide VoIP to connect customers, suppliers and partners.

- Place cost-effective VoIP calls anywhere across world
- Easy migration to IP while maintaining Traditional Systems
- Interoperable with industry leading analog/IP-PBX Systems
- Compatible with leading SIP Service Providers
- Ensure superior voice quality



## Feature List

- Allowed and Denied List
- Alphanumeric Password
- Auto Provisioning for Mass Deployments
- Auto PSTN Fallback
- Automatic Number Translation
- Call Detail Record
- Call Progress Tones Rings
- Caller Line Identification and Presentation
- Day Light Saving
- Digest Authentication
- Do Not Disturb
- Emergency Number Dialing
- Hotline
- Message Wait Indication (MWI)
- Port Forwarding and DMZ
- SNMP Monitoring
- SRTP/TLS over SIP
- System Activity Log Client
- VLAN Tagging
- Web based Management
- PBX Functionality
  - ▶ Call Wait
  - ▶ Call Hold
  - ▶ Call Transfer
  - ▶ Call Forward
  - ▶ Call Transfer
  - ▶ Call Pickup
  - ▶ Conference

## Specifications

VoIP	SETU VFXTH	SETU VFX
SIP Accounts	32	9
Data Network	1 Port 10/100 Base-T (RJ45)	2 Port 10/100 Base-T (RJ45)
VoIP Protocol	SIPv2, SDP, RTP (RFC 2833)	
Network Protocol	IPv4, TCP, UDP, PPPoE, DHCP Server & Client, SNTP, NAT, STUN, HTTP, DynDNS, Port Forwarding and DMZ	
Voice Codecs	G.711 A/ $\mu$ -Law, G.723.1, G.729AB, iLBC, GSM-FR	
Line Echo Cancellation	G.168 with 128ms Tail Length	
Voice Processing Techniques	Dynamic Jitter Buffer (Adaptive)	
	Comfort Noise Generation (CNG)	
	Voice Activity Detection (VAD)	
Fax over IP (FoIP)	T.38 and Pass-Through	
Quality of Service (QoS)	Layer 3 DiffServ and ToS	
Security	SRTP/TLS over SIP	
<b>FXO</b>		
Signaling	Loop Start	
Connector	RJ11	
Life Line Support	1 (SETU VFX404 and SETU VFX808)	
Loop Limit	1200 $\Omega$	
DTMF Dialling & Reception	ITU-T Q.23 and Q.24	
CLI Reception	DTMF, FSK ITU-T V.23 and FSK Bellcore 202, TEL URI	
Return Loss	>18dB	
Call Maturity	Delay and Polarity Reversal	
<b>FXS</b>		
Signaling	Loop Start	
Connector	RJ11	
Loop Limit	1800 $\Omega$ (Max.) Excluding Telephone Set	
DTMF Dialing & Reception	ITU-T Q.23 and Q.24	
CLI Reception	DTMF, FSK ITU-T V.23 and FSK Bellcore 202	
Return Loss	>18dB	

POWER SUPPLY (Input)	
SETU VFXTH	24V DC, 2.5A
SETU VFX	12V DC, 2A

POWER CONSUMPTION (Typical)	
SETU VFXTH	60W
SETU VFX	15W

MECHANICAL (Dimension W x H x D)	
SETU VFXTH	48.3 x 5.1 x 17.2cms
SETU VFX	23 x 5.5 x 16.3cms

WEIGHT	
SETU VFXTH	1.6Kgs (3.52lbs)
SETU VFX	0.8Kgs (1.76lbs)

OPERATING TEMPERATURE	
SETU VFXTH	-10°C to +50°C
SETU VFX	-10°C to +50°C

STORAGE TEMPERATURE	
SETU VFXTH	-40°C to +85°C
SETU VFX	-40°C to +85°C



### ABOUT MATRIX

An ISO 9001 Company, Matrix is a leader in Telecom and Security solutions for modern businesses and enterprises. An innovative, technology driven and customer focused organization; the company is committed to keep pace with the revolutions in the telecom and security industries. With around 30% of its human resources dedicated to the development of new products, Matrix has launched cutting-edge products like IP-PBX, Universal Gateways, VoIP Gateways and Terminals, GSM Gateways, Access Control and Time-Attendance Systems, Video Surveillance System and Fire Alarm Systems. These solutions are feature-rich, reliable and conform to the international standards. Having global foot-prints in Asia, Europe, North America, South America and Africa through an extensive network of more than 500 channel partners, Matrix ensures that the products serve the needs of its customers faster and longer. Matrix has gained trust and admiration of more than 3,500,000 customers representing the entire spectrum of industries. Matrix has won many international awards for its innovative products.



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