





## **MATRIX RANGE of Media Gateways**

Bridging Networks that Bridge Businesses to Success





# WHY **MATRIX** FIXED MEDIA GATEWAYS?



**Unified  
Communication**



**Legacy and New-age  
Network Connectivity**



**High Mobility**

# WHY **MATRIX** FIXED MEDIA GATEWAYS?



**Integration with  
Existing  
Infrastructure**



**Seamless Corporate  
Collaboration**



**Anytime and Anywhere  
Connectivity**

# WHY **MATRIX** FIXED MEDIA GATEWAYS?



**Convenient  
Communication Mobility**



**Reduced Company  
Telephony Costs**



**Simplified  
Communication  
Architecture**

# MATRIX FIXED MEDIA GATEWAY

## PRODUCT RANGE



Up to 32  
**VOIP**  
CALLS

**VoIP**  
SECURITY

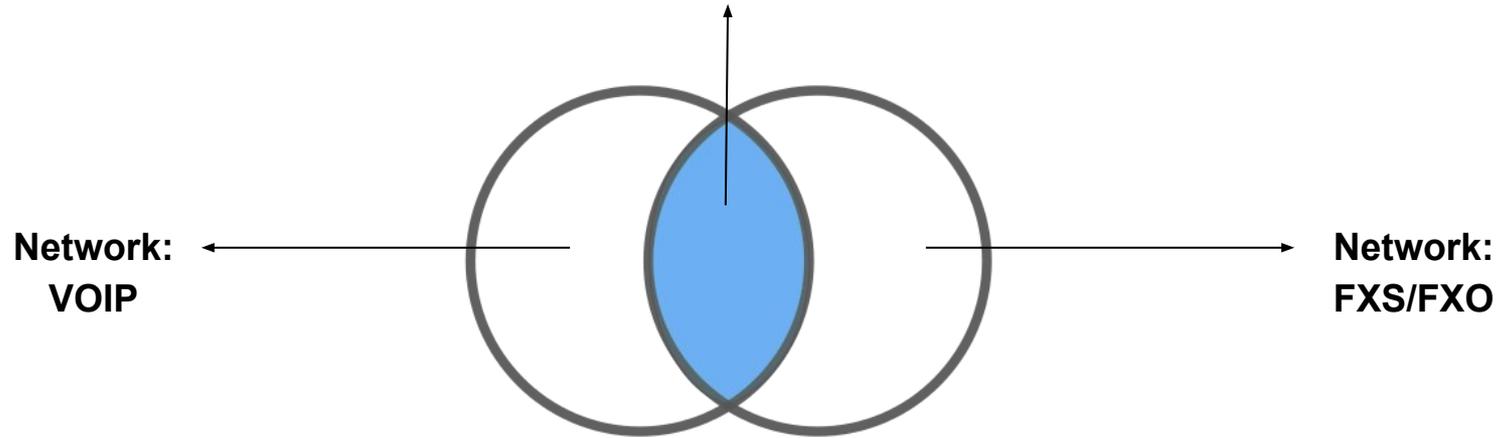
**AUTO**  
Provisioning

**STAND**  
**ALONE**  
Application

Built-in  
**PBX**  
Functionalities

**SIP**  
Interoperability

# MATRIX FIXED MEDIA GATEWAY PRODUCT RANGE



**MATRIX SETU VFXTH**

# SETU VFXTH APPLICATION SCENARIO



- ❖ Maintain Vital Business Continuity during IP Network Failure
- ❖ VOIP Access to Traditional Analog Systems
- ❖ Cost-effective Inter-branch Office Communication

# SETU VFXTH MODEL VARIANTS

Model	Specifications
SETU VFX404	VOIP-FXO-FXS Gateway with Four VOIP, Four FXS, and One FXO (Pass-through) Ports
SETU VFX440	VOIP-FXO-FXS Gateway with Eight VOIP and Four FXO Ports
SETU VFX808	VOIP-FXO-FXS Gateway with Eight VOIP, Eight FXS, and One FXO (Pass-through) Ports
SETU VFX880	VOIP-FXO-FXS Gateway with Eight VOIP and Eight FXO Ports



# SETU VFXTH MODEL VARIANTS

Model	Specifications
SETU VFXTH0808	VOIP-FXO-FXS Gateway with 16 VOIP, Eight FXO, and Eight FXS Ports
SETU VFXTH3200	VOIP-FXO-FXS Gateway with 32 VOIP and 32 FXO Ports
SETU VFXTH0016	VOIP-FXO-FXS Gateway with 16 VOIP and 16 FXS Ports
SETU VFXTH0024	VOIP-FXO-FXS Gateway with 24 VOIP and 24 FXS Ports
SETU VFXTH0032	VOIP-FXO-FXS Gateway with 32 VOIP and 32 FXS Ports



# SETU VFXTH TECHNICAL SPECIFICATIONS

FXS Port Particulars	
Connector	RJ11
Dialing and Reception	Pulse and DTMF Dialling
CLIP	DTMF and FSK CLI Presentation
Call Maturity	Polarity Reversal for Call Connect/Disconnect Signalling

VoIP Port Particulars	
Protocol	SIPv2, SDP, RTP (RFC 2833)
Connector	Ethernet (RJ45)
SIP Accounts	Up to 32
Echo Cancellation	G.168 with up to 128 ms Tail length
Voice Codecs	G.711 (A/μ Law), G.723.1, G.729AB, GSM-FR and iLBC

FXO Port Particulars	
Connector	RJ45
Dialing and Reception	DTMF and Pulse Dialling
CLIP	DTMF, FSK ITU-T V.23 and FSK Bellcore 202A CLI
PSTN Pass-Through	One (SETU VFX404 and SETU VFX808)

# SETU VFXTH TECHNICAL SPECIFICATIONS

<b>Power Supply</b>	
Input	SETU VFX: 12VDC @2A through External Adaptor SETU VFXTH: 24VDC @2.5A through External Adaptor
Power Consumption (Typical)	SETU VFX: 5W SETU VFXTH: 60W

<b>Other</b>	
Dimension	SETU VFX: 15.5 x 22.0 x 3.5cm (6.10"x8.7"x1.4") SETU VFXTH: 40.7 x 17.2 x 5.1 cm (16.10"x6.8"x 2.0")
Mounting Options	Wall Mount and Table Top
Operating Temperature	0°C to +45°C (34°F to +113°F)

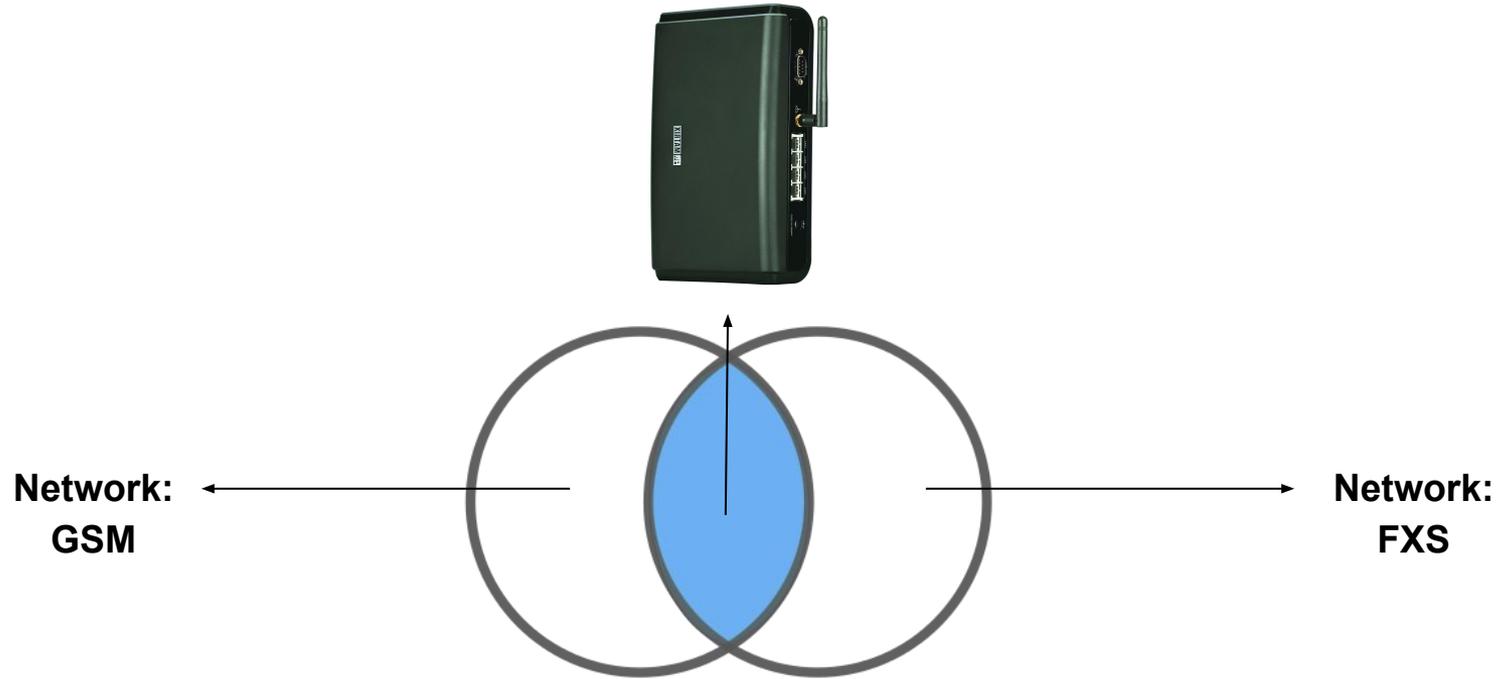
# SETU VFXTH KEY FEATURES

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- Call Detail Records of 2,000 Calls
- Caller ID Presentation on Analog Station
- Emergency Number Dialling
- Fax Over IP (T.38 and Pass-through)
- Hotline Extension Setting
- Make and Receive Calls using Analog Terminals over the IP Network
- Port Forwarding and DMZ
- PSTN Pass-through Port to make Calls Over POTS during IP Network Outage
- Restrict Unwanted Calls with a List of Denied Numbers
- SNMP Monitoring
- TR-069 Auto-configuration
- VOIP Security Over SRTP/TLS Encryption
- Web-based Configuration and Management
- Centralized Management and Monitoring
- Remote Access to Call Management Features of Main Office IP-PBX System
- Peer-to-peer and Proxy Calling between Distant Locations
- Enhance Connectivity of Existing TDM PBX
- Maintain Existing Dialling Habits and Business Communication Patterns

# MATRIX FIXED MEDIA GATEWAY **PRODUCT RANGE**

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**MATRIX SIMADO GFX44**

# SETU VFXTH APPLICATION SCENARIO



- ❖ Easy Integration with Existing Telephony Interfaces and Devices
- ❖ Automated Call Route Selection based on Least Cost Algorithms
- ❖ Fixed-line Alternate/Backup for Remote Office Sites and Call Shops
- ❖ Up to Four GSM/3G SIM Support

# SIMADO GFX44 MODEL VARIANTS

Model	Specifications
SIMADO GFX44	GSM to Analog Voice Gateway with Four GSM SIM and Four FXS Ports
SIMADO GFX44 3G	3G to Analog Voice Gateway with Four 3G SIM and Four FXS Ports



# SIMADO GFX44 TECHNICAL SPECIFICATIONS

<b>Mobile Port Particulars</b>	
Frequency Bands	Quad-band GSM850, EGSM900, DCS1800, PCS1900 Tri-band WCDMA 850/1900/2100 MHz or Tri-band WCDMA 900/1900/2100 MHz
Compliance	ETSI GSM Phase2/2+
SIM Interface	1.8, 3V SIM Interface
Antenna	1.8/2.5 *dBi, 50, SMA (Male) Connector, Fixed Omni Directional Swivel Antenna1.8/3.0 *dBi, 50, SMA (Male) Connector, Omni Directional with a Cable Three Meters Long

<b>Power Supply Particulars</b>	
Input	External Power Adaptor Input: 90-265VAC, 47-63Hz Output: 12VDC@2A
Power Consumption	8W (Typical)

<b>Environmental Particulars</b>	
Operating Temperature	0° C to +45° C (32° F to +113° F)
Storage Temperature	-20° C to +70° C (-4° F to +158° F)
Operating Humidity	5-95% RH (Non-condensing)
Storage Humidity	0-95% RH (Non-condensing) at 40° C

# SIMADO GFX44 TECHNICAL SPECIFICATIONS

## FXS Port Particulars

Physical Connector	RJ11
Dialing	DTMF and Pulse (10/20PPS)
CLI Presentation	DTMF, FSK ITU-T V.23 and FSK Bellcore 202A CLI
Call Maturity	Polarity Reversal

## Regulatory Compliances Particulars

IEC 60950-1, RoHS, FCC Part15, CE

## Mechanical Particulars

Dimensions (WxHxD)	23.1 X 5.5 X 16.2 cm (9.09"x2.16"x6.37")
Unit Weight	1.00 kg (2.21 lbs) Approx.
Shipping Weight	1.83 kg (4.03 lbs) Approx.
Mounting Options	Wall Mount and Table Top

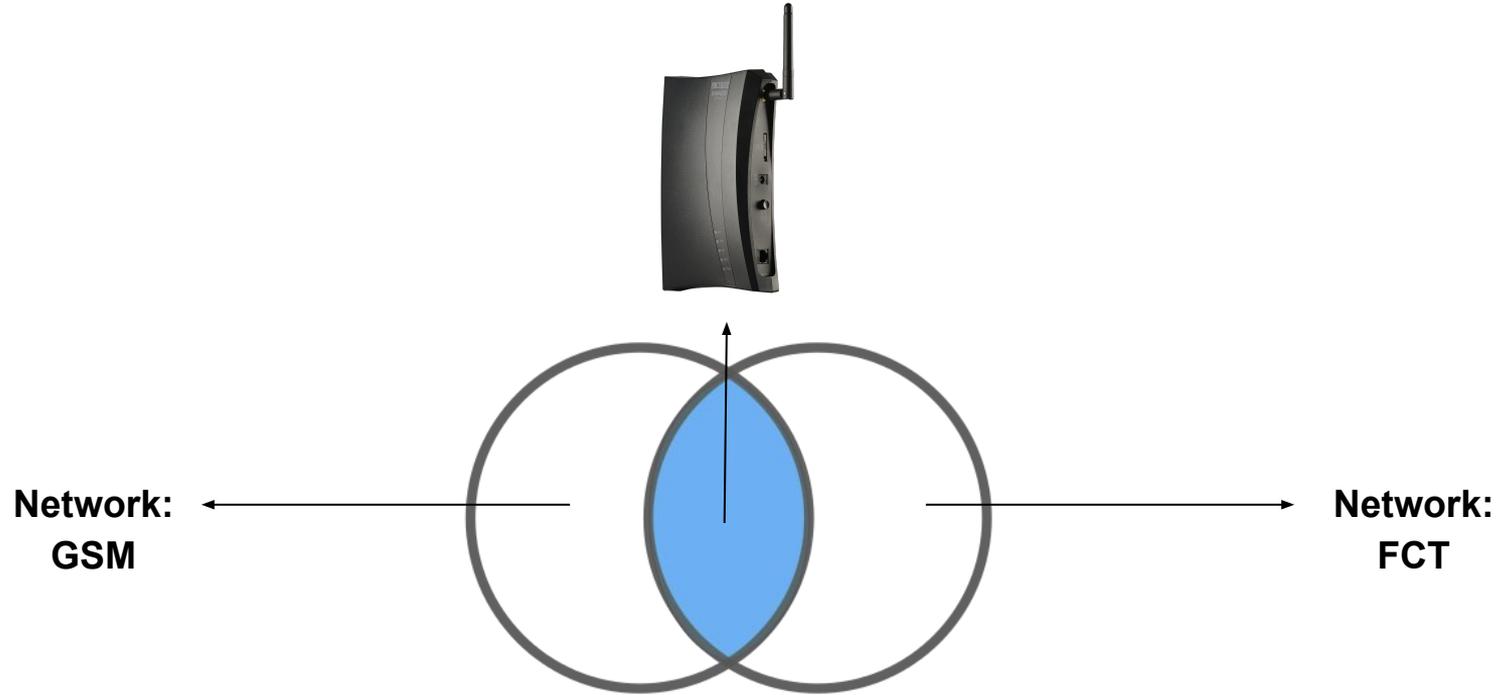
# SIMADO GFX44 KEY FEATURES

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- Make Mobile Calls from Existing Telephone Instruments
- Single Antenna for Four GSM SIMs
- Quad-band GSM Network Operation
- Tri-band 3G Network Operation
- Time/Number based Call Routing
- Direct Number Dialling on the Cellular Networks with Automatic Number Translation
- Restrict Unwanted Calls with a List of Denied Numbers
- CPC Signalling to Prevent Port Blockages and Accurate Billing
- Caller ID Presentation on Analog Phones
- Hotline Extension Setting
- Emergency Number Dialling on GSM/3G Networks
- Dial Emergency Numbers even in the Absence of SIM
- Easy Programming Interface

# MATRIX FIXED MEDIA GATEWAY **PRODUCT RANGE**

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MATRIX **SIMADO GFX11**

# SIMADO GFX11 APPLICATION SCENARIO



- ❖ Fixed-to-Mobile Call Cost Reduction
- ❖ Compatible with all Industry Leading PBXs
- ❖ CPC Signalling to Prevent Port Blockages and Accurate Billing

# SIMADO GFX11 MODEL VARIANTS

Model	Specifications
SIMADO GFX11	GSM FCT for Voice Applications
SIMADO GFX11/4G	4G FCT for Voice Applications



# SIMADO GFX11 TECHNICAL SPECIFICATIONS

Mobile Port Particulars	
GSM/4G SIM Cards	1
Frequency Bands	Quad-band GSM850, EGSM900, DCS1800, PCS1900, UMTS850, UMTS900, UMTS1900, UMTS2100, PCS1900 Tri-band WCDMA 850/1900/2100 MHz or Tri-band WCDMA 900/1900/2100 MHz
SIM Interface	1.8, 3V SIM Interface
Compliance	ETSI GSM Phase2/2+

FXS Port Particulars	
Physical Connector	RJ11
Dialing	DTMF and Pulse (10/20PPS)
CLI Presentation	DTMF, FSK ITU-T V.23 and FSK Bellcore 202A CLI
Call Maturity	Polarity Reversal

Other Particulars	
Dimension	13.35 x 19.8 x 4.46 cm (5.26" x 7.80" x 1.76")
Mounting Options	Wall Mount and Table Top
Operating Temperature	0°C to +45°C (34°F to +133°F)

Power Supply Particulars	
Input	External Power Adaptor 100-240 VAC, 47-63Hz Output: 12VDC@1.25A
Power Consumption	5W (Typical)

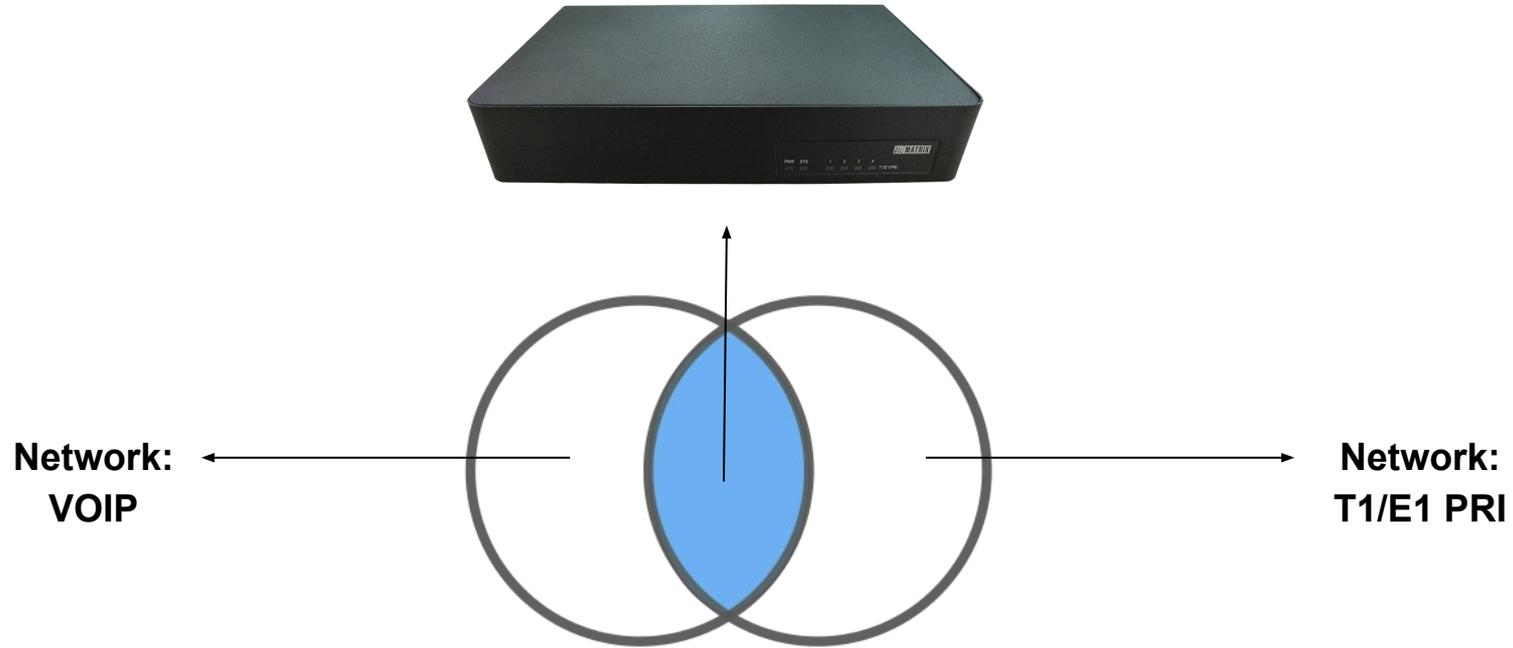
# SIMADO GFX11 KEY FEATURES

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- Make and Receive Mobile Calls from Conventional Analog Phones
- Quad-band GSM and Tri-band/4G Network Operation
- Restrict Unwanted Calls from Calling with List of Denied Numbers
- Hotline Extension Dialling
- Country Specific Programmable Call Progress Tones like Dial Tone, Ring Back Tone, Busy Tone, etc.
- Direct Number Dialling on the Cellular Networks with Automatic Number Translation
- CPC Signalling to Prevent Port Blockages and Accurate Billing
- Caller ID Presentation on Analog Extension
- Emergency Number Dialling, even in Absence of a SIM Card
- Make Mobile Calls from Analog Extensions
- Fixed-to-Mobile Call Cost Reduction
- Maintain Existing Dialling Habits and Communication Pattern
- Compatible with all Industry Leading PBXs

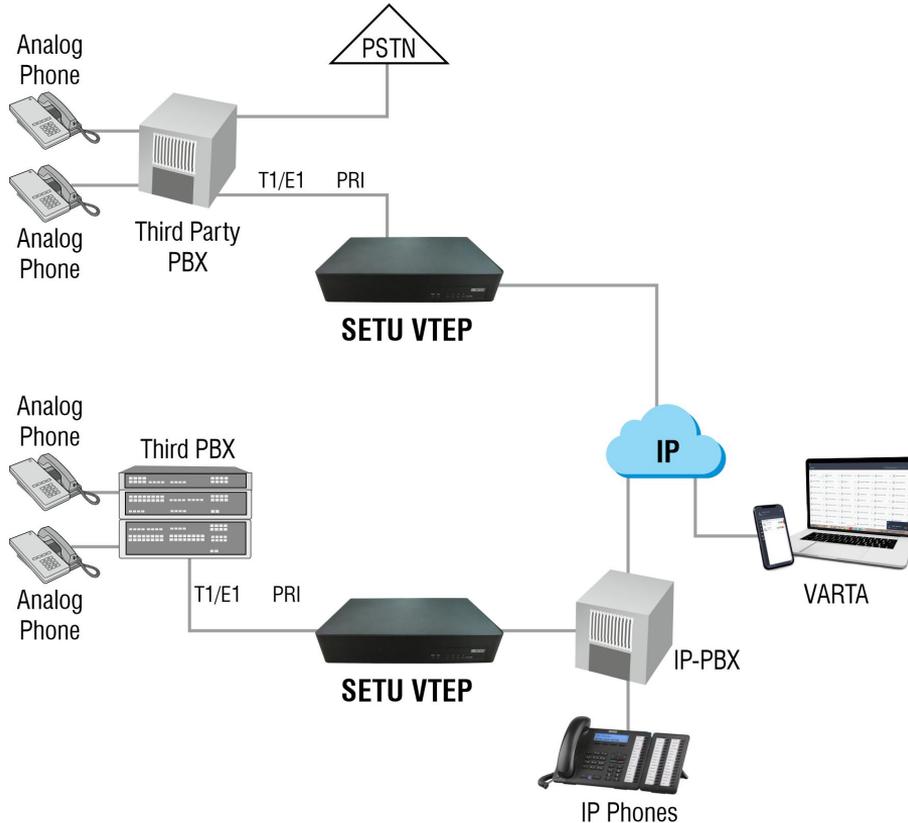
# MATRIX FIXED MEDIA GATEWAY PRODUCT RANGE

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MATRIX SETU VTEP 4P/3P/2P/1P

# SETU VTEP 4P/3P/2P/1P APPLICATION SCENARIO



- ❖ Inculcation of VoIP ensures Asset Retention
- ❖ Keep Business Dialling Habits Unaltered
- ❖ Multiport Nature to Enrich Connectivity
- ❖ Rapid Deployment and Ease of Use

# SETU VTEP 4P/3P/2P/1P MODEL VARIANTS

Model	Specifications
SETU VTEP 4P	ISDN PRI to SIP Gateway with Four T1/E1 PRI Ports
SETU VTEP 3P	ISDN PRI to SIP Gateway with Three T1/E1 PRI Ports
SETU VTEP 2P	ISDN PRI to SIP Gateway with Two T1/E1 PRI Ports
SETU VTEP 1P	ISDN PRI to SIP Gateway with One T1/E1 PRI Port



# SETU VTEP 4P/3P/2P/1P TECHNICAL SPECIFICATIONS

PARTICULARS	SETU VTEP 4P	SETU VTEP 3P	SETU VTEP 2P	SETU VTEP 1P
SIP Trunks	125	125	125	125
No. of simultaneous calls (VoIP to PRI)	120	90	60	30
No. of Built-in VoIP Modules	2	2	1	1
LAN Port	1 X 10/100/1000 Mbps Gigabit Interface			
WAN Port	1 X 10/100/1000 Mbps Gigabit Interface			
VoIP Protocols	SIP V2, SDP, RTP (RFC 2883)			
Network Protocols	IPV4, TCP, UDP, DHCP, SNTP, STUN, HTTP			
NAT	STUN and NAT Keep-Alive			
Voice Codecs	G.723, G.729, iLBC 30ms & 20ms, GSM-FR, G.711 A-Law & $\mu$ -Law, GSM-EFR			

# SETU VTEP 4P/3P/2P/1P TECHNICAL SPECIFICATIONS

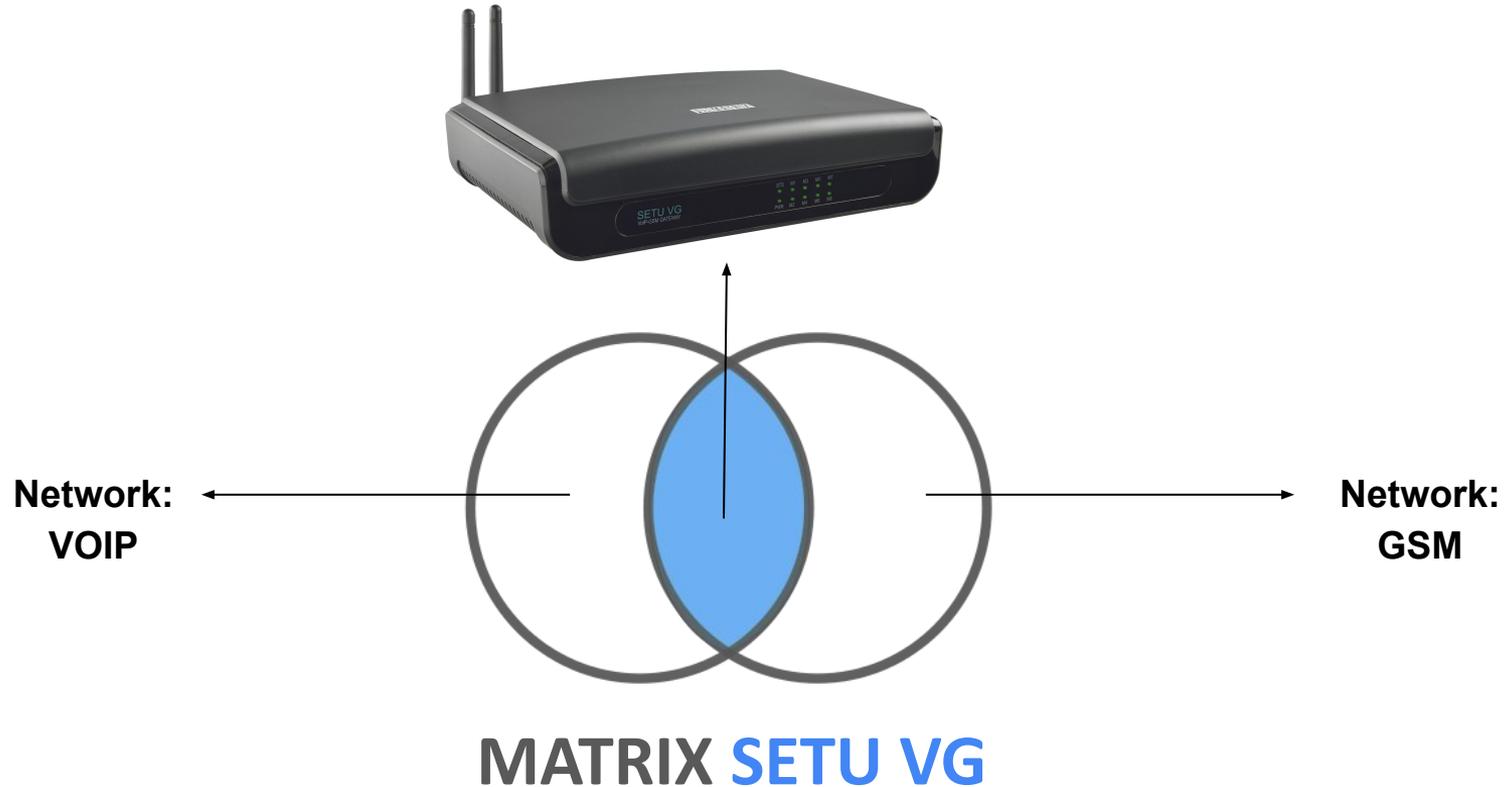
PARTICULARS	SETU VTEP 4P/3P/2P/1P
Call Progress Tone	Dial Tone, Ring Back Tone, Busy Tone, and Error Tone
FAX	T.38 UDPTL and Pass-Through
Power Supply	12V DC, 2A
Power Consumption	22.37 Watt (Max.)
Dimensions (W X H X D)	250.6 X 155.7 X 46 MM (Without Side Clamp) 491 X 155.7 X 46 MM (With Side Clamp)
Mounting	1U Rack Mount & Table-Top
Operating Temperature	0°C to 45°C
Operating Humidity	5-95 RH, Non-Condensing
Storage Temperature	-20°C to +70°C
Storage Humidity	0-95% RH, Non-Condensing

# SETU VTEP 4P/3P/2P/1P KEY FEATURES

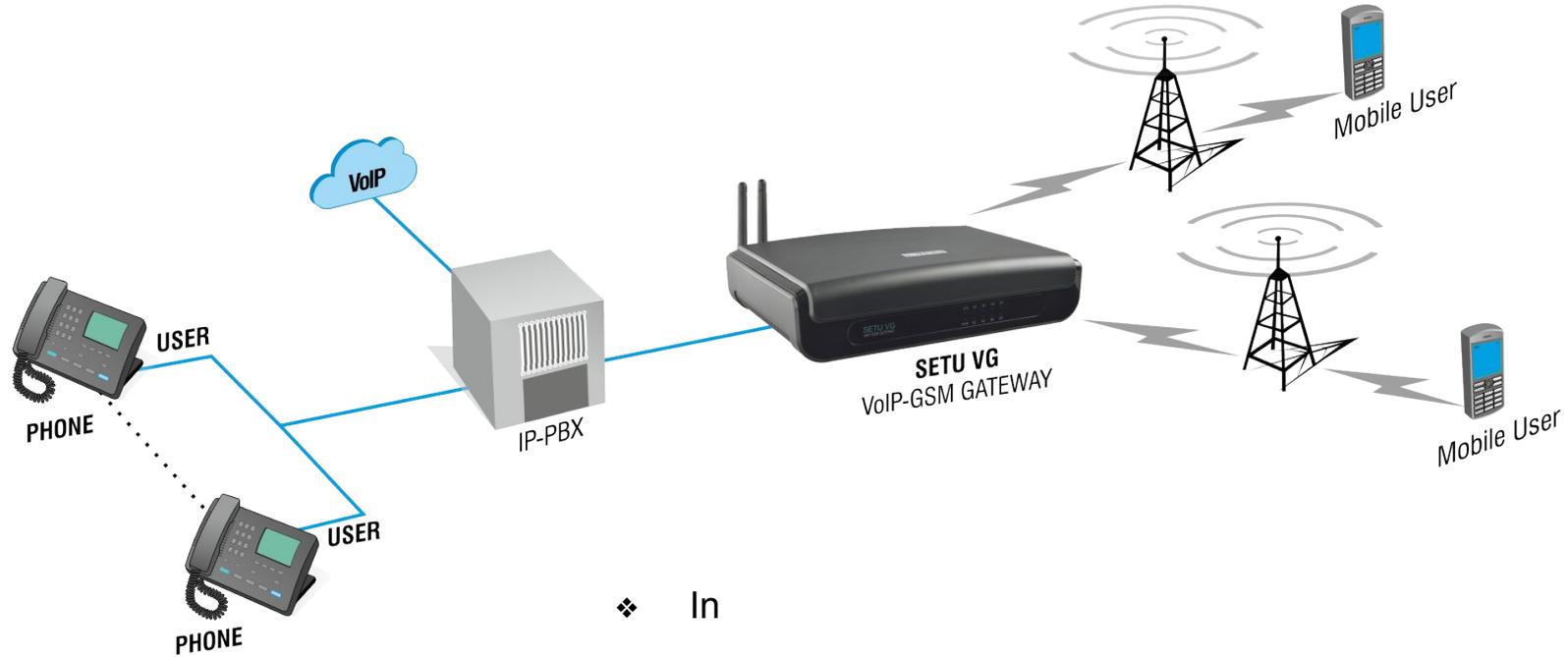
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- Access Codes
- Digest Authentication
- PCAP Trace
- Allowed and Denied Numbers
- Dynamic DNS
- Peer-To-Peer Calling
- Automatic Number Translation
- Emergency Number Dialing
- Return Call to Original Caller
- Call Detail Records (CDR)
- Web-Based Programming
- Daylight Saving Mode
- NAT and STUN Support
- Number Lists
- Static Routing
- Routing Group
- Certificate Manager
- IP Dialing
- PIN Authentication
- Making a New Call using Access Code
- Fax over IP
- VLAN Tagging
- Call Progress Tone
- Least Cost Routing
- Firmware Upgrade
- System Fault Log
- Manual Call Test
- Configuration Upgrade
- Simple Network Management Protocol (SNMP)

# MATRIX FIXED MEDIA GATEWAY PRODUCT RANGE



# SETU VG4/VG8 GSM APPLICATION SCENARIO



# SETU VG4/8 KEY FEATURES

- 3G Internet over First SIM
- (DL/UL - 14.4/5.76 Mbps)
- Access Codes - Making a New Call,
- Disconnect Call
- Allowed and Denied List
- Automatic Number Translation
- Backup Configuration
- Blacklist Callers
- Block ICMP on WAN
- Block PING on WAN
- Call Detail Record (CDR) - 2000
- Numbers
- Call Minutes - Configurable Up to
- 9999 Minutes
- Call Minutes – Balance Alarm,
- Scheduled Date
- Call Progress Tones
- Call Waiting
- Caller ID Presentation
- CDR Filters - SIP Trunks, GSM Ports,
- Time, Date, PIN
- Certificate Manager
- Clone MAC Address
- Daylight Saving Time
- Dial Plan
- Digest Authentication
- Dynamic DNS
- Emergency Numbers
- Fax over IP (FoIP)

# SETU VG4/8 KEY FEATURES

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- Firmware upgrade by HTTP/TFTP
- G.168 Line Echo Cancellation
- Gain/Volume Adjustment -
- Microphone/Speaker
- Quad-Band GSM and Pentaband
- 3G/UMTS Support
- Hotline
- Hot Swapping for SIM Cards
- IMEI Number
- Message Wait Indicator
- Mobile Network/Band Selection -
- Auto/Manual
- Multiple Language Support -
- English, Italian, Spanish, French,
- German, Portuguese
- Multi-Stage Dialing
- NAT/STUN Support
- Password Protection
- PCAP Trace
- Peer-to-Peer Calling
- PIN Authentication
- QoS (Layer 3 Diffserv and TOS)
- Selective IP Address for Web Server
- Access
- Selective WAN Access -
- Web Server, FTP, Telnet
- Signal Strength Indication
- SIM PIN

# SETU VG4/8 KEY FEATURES

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- Single Antenna per 4 GSM/3G Ports
- SMS Notification - WAN Link Down,
- Change of IP Address, Calling
- Minutes, Data Usage, SIM Balance
- SNMP Monitoring
- Soft Restart
- Static Routing
- System Debug
- TLS/SRTP Security
- TR-069 Auto Configuration
- USSD
- Web based Management
- SIM Balance and Recharge
- White List IP Address

# MATRIX FIXED MEDIA GATEWAY

## INDUSTRY APPLICATIONS



### Industries:

- Hotels and Hospitality Sector
- Hospitals and Healthcare Centers
- Manufacturing Industries
- BSFI
- Power Utilities
- Modern Corporate Offices
- R&D Labs
- Educational Institutes
- Call Centres
- Retail Chains
- Defense
- Government Sector

### Applications:

- Diverse Network Integration
- Futurize Legacy Telecom Equipment
- Multi-Site Connectivity
- Low-Cost Business Broadening

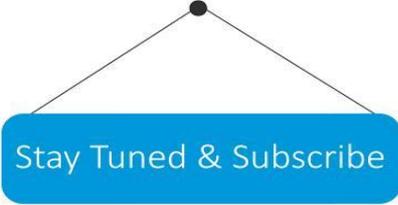
# Who Are We

**1 Million+**  
Customers

**2,500+**  
Partners

**60+**  
Products

**50+**  
Countries



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