



## SIMADO GFX11

Fixed Cellular Terminal for Voice Applications

In addition to the obvious advantage of mobility, the GSM network offers significant cost advantage to the subscribers. This motivates organizations to switch to mobile networks. They want to use the GSM networks for making and receiving calls even during office hours from their desks using their existing PBX infrastructure.

Presenting Simado GFX11, a compact and intelligent terminal that satisfies all your voice communication needs using the GSM line. The FXS port of the Simado GFX11 can be interfaced to the trunk (CO) port of any PBX. This allows all users of the PBX to make and receive calls through the GSM line.

Let Matrix Simado GFX11 be the bridge between your PBX and the GSM networks and add a competitive edge to your business by reducing telephone costs!



## ■ IMPORTANT APPLICATIONS AREAS

### Service Providers

GSM operators can increase their revenue by replacing existing analog lines and offering customers to switch to their GSM networks.

### Offices

Simado GFX11 helps in reducing company's telecommunication cost by up to 30%. By connecting Simado to the Company's PBX, all call made to the mobile phones from the company will be diverted through Simado GFX11.

### Payphones (PCO)

Simado GFX11 can be connected to a payphone thus allowing it to be used anywhere within GSM coverage area. It provides Battery Polarity Reversal on its FXS port to activate the payphone metering mechanism.

■ Matrix Simado GFX11 is a gateway to interface GSM and Plain Old Telephone System (POTS) networks. On the GSM side, it supports quad-band operation allowing it to work with any GSM network. On the POTS side, the FXS port can be connected to any existing PBX.

Incoming calls on the GSM port are routed to the FXS port to reach the operator or any extension of the PBX. For outgoing calls, the PBX users continue dialing the numbers as if dialing on the normal trunk (CO) lines. Thus, the existing PBX users can avail the low tariff of GSM networks by connecting Simado GFX11 with the PBX without changing their existing infrastructure.

Matrix Simado GFX11 can also be used without a PBX in a stand-alone mode.

Access to long distance and international dialing can be controlled by programming Allowed and Denied Lists. This logic allows flexibility of allowing access to certain numbers while restricting to all others.

Number Translation feature automatically adds area code as prefix to a number before dialing it out on the GSM. Moreover, features like Hotline, Signal Strength Indication and Location Information Indication and Network Selection are also supported.

GSM Phase II features like Conference, Call Hold, Call Divert, Call Swap, etc. are also made available in Simado GFX11.

The Matrix Simado GFX11 finds its applications in corporate offices, factories, call centers, hotels, residences and such other establishments.



## APPLICATION OF SIMADO GFX11



Simado GFX11 in Stand-alone Mode



Simado GFX11 in PBX Application

## KEY FEATURES

### Allowed and Denied Lists

Simado GFX11 offers 5 programmable numbers of 16 digits each separately in Allowed and Denied Lists. This is a very useful feature to avoid unnecessary long distance and international numbers while allowing the required numbers.

### Network Selection

Simado GFX11 provides flexibility to user to select the network manually or automatically. Simado GFX11 can be programmed to work only with selected networks, preventing it from registering with other costly networks. This is useful when the installation is close to a state or national border where local and foreign GSM networks are simultaneously available but registration must happen only with the desired network. Maximum 4 networks can be programmed.

### Call Options

Simado GFX11 offers a flexibility to put the person you are talking to, on hold and attend a new incoming call or dial out a new number. It also allows you to alternatively speak to two parties or setup a conference where multiple parties can converse. This feature should be supported by the service provider.

### Calling Party Control (CPC)

Simado GFX11 can send Calling Party Control call release signal on its FXS ports. This signal is then sensed by PBX or other equipment to release the ports when a call is terminated by the party on the GSM side of the network. This prevents ports getting stuck.

### Call Progress Tones and Rings

Programmable Call Progress Tones like Dial Tone, Ring Back Tone and Busy Tone etc. Are offered by Simado GFX11. This allows Simado GFX11 to match the tones of the country standard, where it is getting installed. Similarly, Ring cadences can also be selected.

### Emergency Number Dialing

Simado GFX11 allows user to dial emergency numbers for services like Police, Fire Brigade or Ambulance without SIM or without network registering. Maximum 4 emergency numbers can be programmed.

### Hotline

If a particular phone number is dialed frequently, it can be programmed as a hotline number. Whenever a user reaches Simado GFX11, it waits for some time for the user to dial a number of his choice. If user does not dial any number, the Simado GFX11 dials out the hotline number automatically.

### International Mobile Equipment Identity (IMEI) Number

International Mobile Equipment Identity (IMEI) number provided on Simado GFX11 GSM engine is a unique 15 digit code to identify an individual GSM port. This number can be used to associate and tie the equipment with a particular GSM network.

### LED Indications

Status of the Power, SIM card, Network and FXS are displayed on the LEDs provided on the product.

### Location Information Indication

Simado GFX11 gives the information of the location where it is installed. This feature is useful for people on move e.g. transportation and logistic vehicles

### .Short Message Services (SMS)

Matrix Simado GFX11 can receive SMS. The user can read the received messages on the LCD display of the Phone. The user is notified about the receipt of new message in the form of ring signal on the phone.

### Signal Strength Indication

The Simado GFX11 gives the indication of signal strength available for communication. Thus the possibility of network availability can be found. The signal strength indication is shown on the LCD of the telephone instrument supporting FSK CLIP.

### SIMPIN

Simado GFX11 allows user to program 4 digits PIN number (Personal Identification Number) which prevents the SIM against unauthorized use. User has to enter PIN for making any operations. User can change the SIM PIN as and when required. SIM gets blocked if PIN is entered wrongly thrice in a row.

### SIMPUK

PUK (Personal Unlock Key) number provided by service provider can be entered in Simado GFX11. It is an 8-digit number which is assigned to the SIM card. The SIM PUK is required to unlock the SIM which gets blocked on entering SIM PIN wrongly thrice in a row.

Simado GFX11



## FEATURES

### Hardware Features

- Compact and Sturdy Design
- LED Indications
- Quad-band Operation
- SMT Technology
- Wall and Table-top Mounting

### Software Features

- Allowed and Denied Lists
- Automatic Number Translation
- Call Divert
- Call Duration Display
- Call Hold
- Call Maturity (Reversal)
- Call Progress Tones
- Call Swap
- Call Waiting

- Calling Line Identification and Presentation (CLIP)
- Calling Line Identity Restriction (CLIR)
- Calling Party Control (CPC)
- Conference
- Distinctive Rings
- Emergency Number Dialing
- Hotline
- IMEI Number
- LED Indications
- Location Information Indication
- Network Selection
- Programming through the FXS port
- Signal Strength Indication
- SIMPIN
- SIMPUK
- SMS (Receive and Delete)
- System Password

## ■ TECHNICAL SPECIFICATIONS

### GSM Port

GSM Band	: Quad Band: GSM850, EGSM900, DCS1800, PCS1900
Compliant	: ETSI GSM Phase2/2+
SIM Card	: One SIM
SIM Interface	: 1.8V, 3V
Transmission Power	: Class 4 (2W) at GSM 850 and EGSM900 MHz band Class 1 (1W) at DCS1800 and PCS1900 MHz band
RF Sensitivity	: Better than -106 dBm
External Antenna	: 2.5dBi, 50Ω, TNC (Male) Connector, Fixed Omni Directional Swivel Antenna,
Speech Gain (Transmit and Receive)	: Programmable in step of 1 dB

### FXS (SLT) Port

Connection	: RJ11
Off Hook Impedance	: 600Ω
Loop Limit	: 270Ω (Max) Excluding Telephone Set
Loop Feed	: 39mA (Max)
Ringing Voltage	: 55Vrms @25Hz, 3REN
Pulse Dialing	: 10 PPS and 20PPS @ 1:2, 2:3 and 1:1
DTMF Dialing and Reception	: ITU-T Q.23 and Q.24
Caller ID Presentation (CLIP)	: DTMF, FSK ITU-T V.23 and FSK Bellcore 212A
Call Maturity	: Polarity Reversal
LED Indications	: Power Supply, Network, SIM and FXS
Protection	: Solid state (Over Voltage and Over Current) built-in Secondary Protection

### Power Supply

Input	: 12VDC @1.25A Through External Adaptor (90- 265VAC, 47-63Hz)
Power Consumption	: 5W (Typical)
Connector	: DC Power Jack

### Mechanical

Dimensions (WxHxD)	: 13.4x19.9x4.6cm (5.3"x7.8"x1.8")
Unit Weight	: 0.45Kgs (1.0lbs) Approx.
Shipping Weight	: 1.1Kgs (2.4lbs) Approx.
Material	: ABS Plastic
Installation Mounting	: Wall and Table-Top

### Environmental

Operating Temperature	: -10°C to +50°C (-14°F to +122°F)
Storage Temperature	: -40°C to +85°C (-40°F to +185°F)
Operating Humidity	: 5-95% RH (Non-Condensing)
Storage Humidity	: 0-95% RH (Non-Condensing) at 40°C

#### Compliances

##### EMI/EMC

Conducted Emission	: CISPR 22 Class A
Radiated Emission	: CISPR 22 Class A
Harmonic Current Emission	: IEC 61000-3-2
Voltage Flicker	: IEC 61000-3-3
Electro-static Discharge	: IEC 61000-4-2
Radiated Susceptibility	: IEC 61000-4-3
Electrical Fast Transient	: IEC 61000-4-4
Surge	: IEC 61000-4-5
Conducted Immunity	: IEC 61000-4-6
Power Frequency Magnetic Field	: IEC 61000-4-8
Voltage Interruption & Dips	: IEC 61000-4-11

##### FCC

Conducted Emission	: FCC Part 15 Sub Part B Class A
Radiated Emission	: FCC Part 15 Sub Part B Class A

##### EC Directives

R&TTE 1999/5/EC  
LVD 73/23/EEC  
EMC 89/336EEC

##### Safety

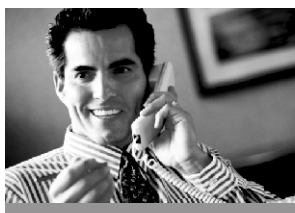
IEC 60950 3rd Edition (1999)



## GSM PRODUCTS FROM MATRIX

Simado GDT11	GSM FCT for Data Applications with 1- GSM port and 1- RS232C port
Simado GFX11	GSM FCT for Voice Application with 1- GSM port and 1- FXS port
Simado GFXD1111S	GSM FCT Router for Voice and Data Application with 1- GSM port, 1- FXS port, 1- FXO port, 1- RS232C port and External Power Supply Adaptor
Simado GFXD1111	GSM FCT Router for Voice and Data Application with 1- GSM port, 1- FXS port, 1- FXO port, 1- RS232C port, Built-in Battery and Internal Power Supply
Simado GFX44	GSM-POTS Gateway with 4 - GSM ports and 4 - FXS ports
Simado GFX888	GSM-POTS Gateway with 8 - GSM ports, 8 - FXS ports and 8 - FXO ports
Simado GBR42	GSM-ISDN BRI Gateway with 4 - GSM ports and 2 - ISDN BRI ports
Simado GDS1284	GSM-DS1 (ISDN PRI/T1/E1) Gateway with 72 - GSM ports and 4 - PRI/T1/E1 ports

## ABOUT MATRIX



An ISO 9001 Company, Matrix is a leader in the VoIP, GSM, Key Phone System and PBX market. An innovative, technology driven and customer focused organization; the company is committed to keep pace with revolutions in the telecom industry. This has resulted in bringing forth cutting edge products like Digital and ISDN Key Phone Systems, Voice Messaging Products, GSM Gateways, VoIP Gateways, VoIP PBXs, Intercom Security Products and PLCC Switches. With over 1,000,000 line units installed and growing by over 1000 line units per day, the installed base of Matrix connects over 10,000,000 calls everyday. Thus, Matrix has gained the trust and admiration of users representing the entire spectrum of industries. Matrix has won many awards for its innovative products.



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