

QUICK INSTALLATION GUIDE



SINGLE CHANNEL

PlugCell GT 111 – Quick Installation Guide

Dear User,

We would like to congratulate you for choosing the **PlugCell GT111** cell interface and welcome you to a set of facilities that will be provided by this equipment.

Basic operation

The **PlugCell GT111** does not require a mobile phone; instead, it requires a chip enabled by a GSM mobile operator. This equipment is already fitted with a module that replaces the mobile phone and a Sim Card connector, into which the enabled chip is to be inserted. It is possible to utilize the **PlugCell GT111** with the CDMA technology, providing that an enabled module compatible with the interface is installed. In this case, one need not utilize the chip.

Warning

Some precautions are required for maintaining the proper operation of the equipment you have just purchased. Therefore, please read this manual carefully and do not neglect any information contained therein, and give due consideration to the instructions below:

- Check if the local power network voltage is within the range acceptable for the **PlugCell GT111**.
- Do not open or install the **PlugCell GT111** module and do not touch its internal components when it is plugged into the power outlet.
- Do not place another device or other objects directly on top the **PlugCell GT111**.
- Use only accessories recommended and/or supplied by the manufacturer.
- Observe the recommended temperature for its proper operation.
- Keep it away from liquids.
- Repairs to or reallocations of the device should not be carried out by the user.

Parts of the Single Channel PlugCell GT111

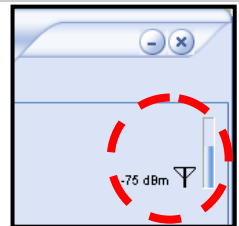
	<p>A - Single Channel PlugCell GT111 Cabinet: It is the main part of the equipment where the electronic interface, other components and the enabled mobile module are fixed.</p> <p>B - Antenna Amplifies the mobile operator signal on the module.</p> <p>C - Telephone cable⁽¹⁾ Connects the equipment to the PBX.</p> <p>D - Power adapter Supplies 12V voltage to the equipment.</p> <p>E - Signaling LED's Signal some information on PlugCell GT111.</p> <p>F - Female Jack Connector Employed to connect the power adapter.</p> <p>G - Telephone cable connector (RJ-11) Employed for connection to the PBX</p> <p>H - Antenna connector Place where the antenna is to be connected to amplify the mobile operator's signal on the module.</p> <p>I - Connector for serial cable (RS-232) Used to connect the serial cable⁽²⁾ for data transmission and software programming.</p> <p>J - Sim Card Connector Place where the chip⁽³⁾ enabled by a mobile operator is to be inserted.</p> <p>¹ Not supplied with the equipment ² Not supplied with the equipment (optional). ³ Not supplied with the equipment</p>
Picture 1	
Parts of the Single Channel PlugCell GT111	

Selecting an appropriate site

Knowing the best position/site for installing the **PlugCell GT111** requires that some signal tests be conducted. The better the signal, the better will be the communication level. The signal can be measured by observing the signal bar of a mobile device employing the same technology (GSM or CDMA) as that of the module to be used, or through a specific test to be conducted by a specialized technician. The minimum signal for good communication must exhibit two-thirds of its total as a minimum.

To check operator's signal level using the GT 111 Manager Software, observe the indication appearing at the right upper corner of the <Configuration> Tag encircled in Picture 2.

Zênite disclaims responsibility for communication failure arising out of low signal from the mobile operator at the **PlugCell GT111** installation site.



Picture 2

Connecting the Chip

Where GSM technology modules are utilized, the mobile line chip must be inserted into Sim Card connector (Picture 3). To access the Sim Card Connector drawer, press the yellow button at the right of the Sim Card connector (Picture 3.1) and then insert chip into Sim Card connector (Picture 3.2).



Picture 3.1: Sim card Connector



Picture 3.2: Inserting chip into connector

Picture 3: Sim card Conector - Chip

Where a module with CDMA technology is employed, the chip is not required. However, the module must be enabled for the desired operator.



TIP:

Type # (number) twice (##) to redial the last number dialed .



NOTE:

The **PlugCell GT111** automatically recognizes digits dialed by DTMF tones or decade pulses. No programming is required.

Connecting the Antenna

For the operation of the **PlugCell GT111** not to be impaired, the antenna that goes with the product must be properly secured to the **PlugCell GT111** antenna connector. (Picture 4).



Antenna connector

Picture 4.1: Antenna Connector

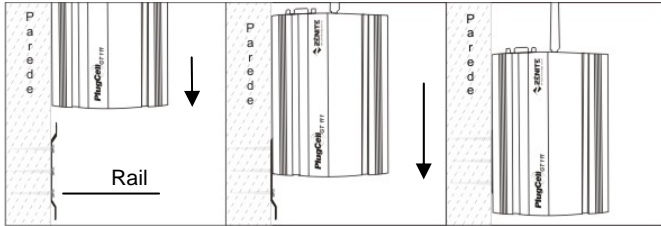


Picture 4.2: Antenna Plug-in

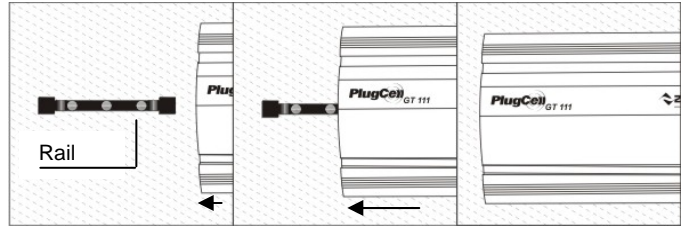
Picture 4: Connecting the Antenna

Fastening the PlugCell GT111 on the wall

With the aid of the template supplied with the equipment, attach the Rail with Bushing and Screw No. 5 and then fit the **PlugCell GT111** into the Rail. Fastening can be either lateral or frontal as shown on Picture 5.



Picture 5.1: Lateral fastening



Picture 5.2: Frontal fastening

Picture 5: Fastening on wall

Supply voltage

The Single Channel **PlugCell GT111** is supplied with an external power adapter provided with automatic switching. Thus, it may be switched on with any input voltage from 100 to 240 V AC, 50-60 Hz.

Connecting to PBX

To connect the **PlugCell GT111** to a PBX, one employs a telephone cable with a pair of wires and an RJ11 male connector that must be connected to the **PlugCell GT111** RJ11 female connector (Picture 6).

The **PlugCell GT111** must be connected to an analog trunk line input (external line) available at the PBX. In case no free trunk is available, the PBX technician must be requested to provide a trunk to the system, or an additional trunk board must be installed. It is important to remember to program the PBX with a number for accessing the **PlugCell GT111** line.

To connect the **PlugCell GT111** to the conventional telephone, it will be enough to connect the cable provided with the appropriate connector directly to the telephone device.



Picture 6

Signaling LED's

Three signaling LED's are provided on the **PlugCell GT111**, as explained below:

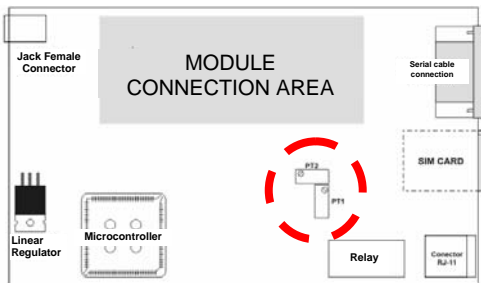
LED	FUNCTION	BEHAVIOR			
		On	Off	Blinking	
RED	Module Status(NET)	S4: Motorola module is operating. (when a Motorola module is used)	Motorola module isn't operating. (When a Motorola module is used)	S1: searching for network	
			Is accessed	Is not been accessed	S2*: Finds the network
				**	S3: During the cal
YELLOW	Access (USE)	Is accessed	Is not been accessed	**	
			PlugCell Status (ST)	Concluded initialization	During Initialization
TWO-COLOR	Green	Switches from voice to data		Inoperative equipment	**
	Red		**		

- Signaling 2 also occurs during the call when the module employed is the Simcom.

Signaling Table		
S1	Signaling 1	
S2	Signaling 2	
S3	Signaling 3	
S4	Signaling 4	

PlugCell GT111 settings (if required)

The **PlugCell GT111** is equipped with a base board with an adjustment for ECHO (PT1) control and an adjustment for output audio volume (PT2) control. Refer to Picture 7 to spot where adjustments are to be provided.



Picture 7



IMPORTANT:

For the GSM module to properly operate with the **PlugCell GT111**, some precautions should be taken regarding **PIN** (Personal Identity Number). Either of the procedures below may be adopted:

- Disable request for PIN on the chip using a mobile device. The **PlugCell GT111** is factory-programmed to not insert the PIN. If maintaining this option is selected, this procedure must be adopted.
- Program the **PlugCell GT111** to automatically insert the **PIN** (see Programming Menu – Menu-11). The code for manual programming is #7764##11#1# **PIN number#**.

This functionality can be activated by the **GT111 Manager Software**, <Connection\General\PIN > (Code 11)

Using the Plugcell GT 111

Making a call	Answering a call
<p>Connected to a conventional Phone:</p> <ol style="list-style-type: none"> 1. Take the phone off hook; 2. You will hear the line tone from PlugCell GT111; 3. Dial the desired telephone number. 4. Wait for 4 seconds (or 8 seconds for numbers made up of less than 6 digits), or press # to complete the call right away; 5. To hang up, just place the phone on hook. 	<p>Connected to a conventional Phone:</p> <ol style="list-style-type: none"> 1. When the mobile module connected to the PlugCell GT111 receives a call, the call is routed to the conventional telephone device connected to the PlugCell GT111; 2. The telephone set will ring; 3. To answer, take the phone off hook; 4. To hang up, just place the phone on hook.
<p>Connected to the PBX:</p> <ol style="list-style-type: none"> 1. Take the phone off hook; 2. Type the code for access to the trunk where the PlugCell GT111 is installed. 3. You will hear the line tone generated by the PBX. 4. Dial the desired phone number. 5. Wait for 4 seconds (or 8 seconds for numbers with less than 6 digits) or press # to complete the call right away; 6. To hang up, just place the phone on hook. 	<p>Connected to the PBX:</p> <ol style="list-style-type: none"> 1. When the mobile module connected to the PlugCell GT111 receives a call, the call is routed to an extension line, group or sequence of extension lines programmed on the PBX; 2. The destination terminal will ring; 3. To answer, just take the phone off hook; 4. To hang up, just place the phone on hook.



NOTE:

In case that the PBX has a lower cost route and if it is programmed to access the **PlugCell GT111** where applicable, steps 2 and 3 of section "Making a Call" should be disregarded.

Programming the Plugcell GT 111 using the Software GT111 Manager

Communication can be established between **PlugCell GT111** and the Microcomputer (Picture 8). This functionality can also be used to perform programming through the "**PlugCell GT111 Manager**" (Picture 9) software, available for download on site www.zenitetecnologia.com.br.

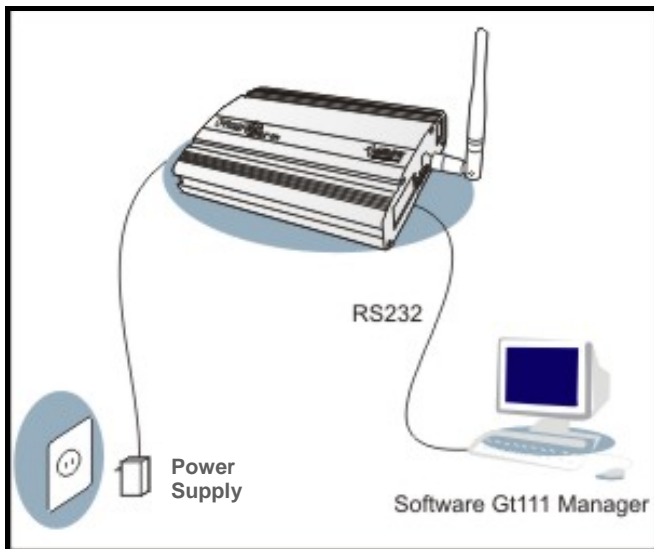
For communication between the **PlugCell GT111** and the personal computer (PC) to take place, the following requirements are to be met:

- Windows 98/98SE/2003/2000/XP/NT Operating System
- 01 RS-232 serial port available on the Microcomputer;
- 01 RS-232 serial cable with DB-9 Female connector at one end and one DB-9 Male connector at the other end.
- "**PlugCell GT111 Manager**" software installed on the Microcomputer.

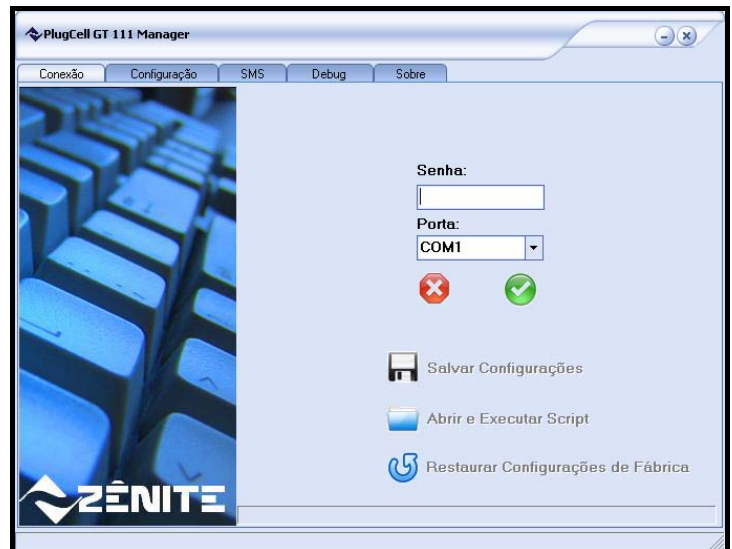


NOTE:

The Data Cable pinning is point-to-point i.e. it is similar to a cable used as extension cord.



Picture 8: communication between the **PlugCell GT111** and the Microcomputer



Picture 9: Initial screen "**PlugCell GT 111 Manager**"

Technical information

Supply voltage (Input)	100 a 240 VAC 50/60Hz	Dial-up	Pulso / Tom (trunk)
Supply voltage (Output)	12VCC 1A +→- -	Temperature	0 a 40°C
Consumption at rest	4 W	Signaling tone	425 Hz, -19dBm, senoidal
Consumption in communication	12 W	Maximum loop resistance	600 Ohms
Terminal loop voltage	48 VCC ±10%	Dimensions	137 x 190 x 41 mm
Terminal loop voltage under load	7,5 VCC ±5%	GSM Band	850/900/1800/1900 MHz
Short-circuit loop current	33 mA	CDMA Band	800/1900 MHz
Loop current under load	26 mA	Antenna Impedance	50 Ohms
Call signal (Ring)	75 VRMS ±10%, 25 Hz	Antenna Connector	SMA (Male)

Zênite Customer Service

For facilities clarification and programming resources, access our website.

Please contact us to: resolve doubts, express your opinion and get updated information on **PlugCell GT111**.

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