Xcom-GSM / Xcom-LAN

Remote communication sets for Xtender and VarioTrack systems

User Manual

CONTENTS

1 INTRODUCTION

1.1 REMOTE COMMUNICATION SET FOR XTENDER AND VARIOTRACK SYSTEMS

The remote communication sets Xcom-LAN or Xcom-GSM allow you to view, configure and control Xtender and VarioTrack systems from anywhere in the world. With a simple Internet access on a Smartphone, a tablet or a notebook, your installation is accessible through a virtual remote control on Studer's dedicated web portal. This virtual remote control's interface is designed to resemble the standard remote control RCC-02/-03 and offers the same functionality as if on-site. By keeping the same interface as the RCC-02/03, managing the system is easy and familiar.
All information and warning messages are listed on the server and can be used as a trigger to send messages by E-mail or SMS. Access to the web portal can easily be given to a third part if assistance is needed to analyse or configure a system.

Two solutions are provided to access the virtual remote control:

Xcom-LAN, for systems connected to a wired Local Area Network giving access to the internet WEB
Xcom-GSM, for systems with no available LAN but access to the GSM network, either by GPRS (worldwide) or by 3G (WCDMA).

The present manual is valid for both the Xcom-LAN and Xcom-GSM remote communication sets. Before installation of the communication system, carefully read this user manual and proceed thereafter with the installation and configuration as explained in the following chapters.
For further information on the different devices of these sets, please refer to the respective user manuals.

1.2 CONVENTIONS

	This symbol is used to indicate the presence of a dangerous voltage that is sufficient to constitute a risk of electric shock.
	This symbol is used to indicate a risk of material damage and/or the cancellation of the guarantee.
	This symbol is used to indicate a procedure or function that is important for a safe and correct use of the equipment. Failure to respect these instructions may lead to the cancellation of the guarantee or to a non-compliant installation.

1.3 WARRANTY AND LIABILITY

1.3.1 Warranty and liability

During production and assembly, each Xcom-232i undergoes several controls and tests which strictly comply with established procedures. Each Xcom-232i is given a serial number allowing a perfect follow-up of the controls, in conformity with the specific data of every device. For this reason, it is very important to never remove the descriptive sticker bearing the serial number. The production, assembling and tests of each Xcom-232i are entirely carried out in our factory in Sion (CH). The warranty for this product depends on the strict application of the instructions in this manual.

1.3.2 Exclusion of warranty

No warranty claims will be accepted for damages caused by handling, operation or actions that are not described in this manual. Damages arisen from the following events are excluded from the warranty:

- Overvoltage on the device.
- Liquid in the device or oxidation due to condensation.
- Damage resulting from a fall or a mechanical shock.
- Modifications carried out without the explicit authorization of Studer Innotec SA.
- Nuts or screws partially or insufficiently tightened during installation or maintenance.
- Damage due to atmospheric overvoltage (lightning).
- Damage due to inappropriate transport or packaging.
- Disappearance of original identification marks.

1.3.3 Exclusion of liability

Installation, commissioning, use and maintenance of this device cannot be supervised by Studer Innotec SA. For this reason, we do not accept any liability for damage, costs or losses resulting from an installation that does not comply with the instructions, by a faulty operation or by inadequate maintenance. The use of this device is under the responsibility of the end-user. This device is neither designed nor guaranteed for the supply of life support applications or any other critical application with potential risks for human beings or for the environment. We shall assume no liability for patent infringement or other third party rights involved in the use of this device.

1.3.4 Compatibility

Studer Innotec SA guarantees the compatibility of the software updates with the hardware for one year, starting from the date of purchase. The updates are no longer guaranteed beyond this date and a hardware upgrade may be required. Please contact your reseller for any additional information on compatibility.

1.4 SAFETY PRECAUTIONS

1.4.1 Generalities

Do read carefully all safety instructions before proceeding to the installation and commissioning of the device. Not respecting these instructions might constitute a lethal physical danger but can also damage the functionalities of the device. Therefore do keep this manual close to the device.
Do, for any installation, follow strictly the local and national norms and regulations in force.

1.4.2 Warnings

- The installation and commissioning of the communication sets must be entrusted to skilled and qualified personnel perfectly aware of the safety precautions and local rules in force.
- All components connected to this device must be conforming to the laws and regulations in force. The persons without a written authorization from Studer Innotec SA are forbidden to do any change, modification or repair whatsoever. Regarding authorized modifications and replacements, only genuine components shall be used.
- This device is meant for indoor use only and must under no circumstances stand in the rain, the snow or any other humid or dusty environment.
- In case of use in motor vehicles this device must also be protected against vibrations by absorbing components.

2 MOUNTING AND INSTALLATION

Both the Xcom-GSM and the Xcom-LAN are powered through the Studer proprietary bus. The distance between the Xcom-232i and the device supplying it (Xtender or VarioTrack) should not exceed 10m in order to avoid excessive voltage drop in the wire which could affect the functionality.

2.1 INSTALLATION OF THE XCOM 232I

Follow the Xcom-232i instruction manual.
When the Xcom-232i has been installed correctly according to the procedures mentioned in its manual, the remaining installation procedure depends on the chosen remote communication set.

⚠	If a Xcom-232i is connected to another compatible device (Xtender, VarioTrack, BSP, RCC) with the same communication bus, it is highly recommended to make a software update in order to guarantee all functionalities of the system.

ℹ	Configuration of the Xcom-232i will be carried out after the installation of the selected gateway (GSM or LAN) in accordance with chapter 4.

3 WIRING

3.1 XCOM-GSM SET

In order to install the Xcom-GSM set, there need to be sufficient GSM network coverage on the site of the Xtender or VarioTrack system. The network also has to conform to one of the following standards: GSM / GPRS / EDGE / UMTS / HSDPA on these frequencies 850 / 900/ 1800 / 1900 / 2100 MHz.
The GSM modem "E-lins M400" supplied by Studer Innotec requires the installation of a SIM card (not provided) that allows data transfer from a local service provider. Please refer to the chap. 3.1.3 when installing the SIM card.
The volume of data transferring via the communication system to Studer's server will depend on its utilisation (frequency and duration of use) but it will necessitate at least 2MB data per month. When the remote communication is in use, the volume of data transferred is approximately 30kB per minute. When the data logger function is activated, the additional volume of daily data may represent up to 1MB per day, depending on the number of devices present on the Studer communication bus.

ℹ	The system will not function properly with any other modems than the ones stated above, even if they are correctly connected to the Xcom-232i.

3.1.1 Contents of the remote communication set Xcom-GSM

The remote communication set Xcom-GSM is delivered with the material listed below:

- 1 Xcom-232i
- 2m communication cable
- 1 MicroSD with adaptor
- 1 M400 cellular modem
- 1 external antenna
- 0.25m serial cable
- 0.5m power supply cable RJ45-Jack
- 1 Xcom-232i user manual
- 1 M400 series cellular modem datasheet
- 1 Xcom-GSM/Xcom-LAN user manual

3.1.2 Mounting place

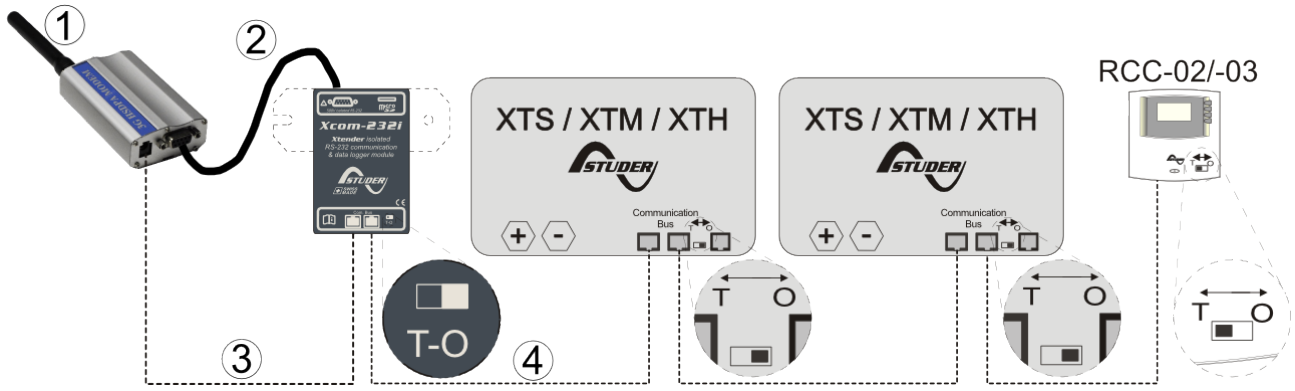
The GSM modem should be mounted close to the Xcom-232i, maximum 20cm apart, and fixed with two separate sliding pins into the rail of the GSM enclosure.

3.1.3 Installing the SIM card

Eject the small drawer close to the antenna connector by pushing the yellow button next to it, place the SIM card in the slot and reinsert the drawer.

3.1.4 Connecting the GSM modem

1) Connect the antenna to the modem
2) Connect the serial cable between the modem and the Xcom-232i
3) Connect the power cable between the modem and the Xcom-232i
4) Connect the Studer communication cable between the Xcom-232i and the installation



The termination switch next to the 2 RJ 45 connectors on the Xcom-232i must be set in position T.

3.2 XCOM-LAN SET

3.2.1 Contents of the remote communication set Xcom-LAN

The remote communication set Xcom-LAN is delivered with the material listed below.

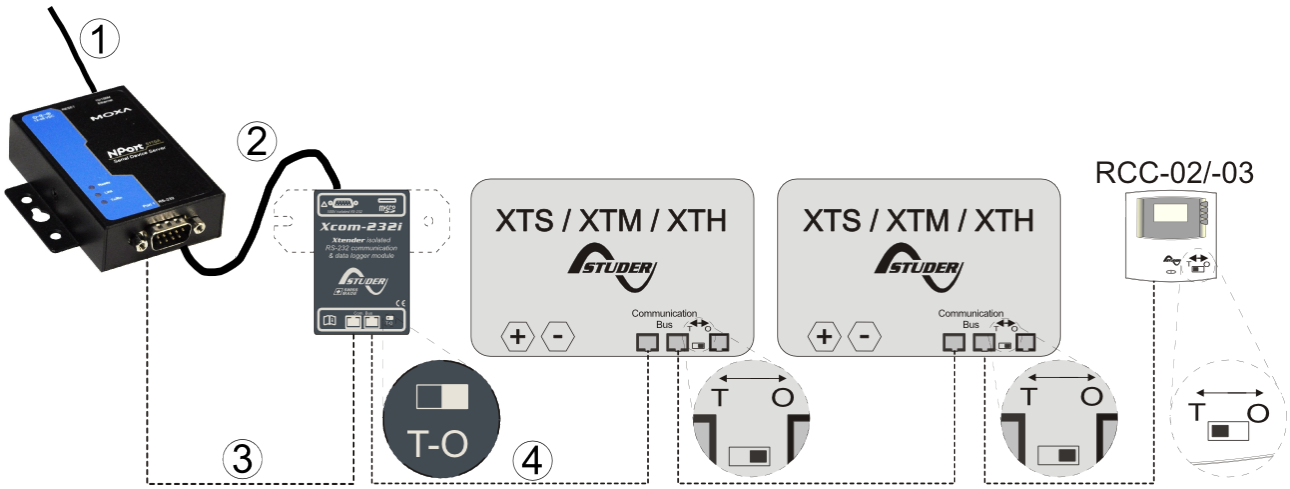
- 1 Xcom-232i
- 2m communication cable
- 1 MicroSD with adaptor
- 1 NPort 5110A Ethernet gateway
- 3m Ethernet cable
- 0.25m serial cable
- 0.5m power supply cable RJ45-Jack
- 1 NPort 5110A series quick installation guide
- 1 Xcom-GSM/Xcom-LAN user manual

3.2.2 Mounting place

The Ethernet gateway should be mounted on a smooth surface using the mounting holes as shown in the "NPort 5110A series quick installation guide".

3.2.3 Connecting the Ethernet gateway

1) Connect the Ethernet cable between the Ethernet gateway and the router
2) Connect the serial cable between the Ethernet gateway and the Xcom-232i
3) Connect the power cable between the Ethernet gateway and the Xcom-232i
4) Connect the Studer communication cable between the Xcom-232i and the Xtender or VarioTrack installation



ℹ	The termination switch next to the 2 RJ 45 connectors on the Xcom-232i must be set in position T.

4 CONFIGURING THE XCOM-232I

For the installation to function properly, the Xcom-232i must first be configured as shown, step-by-step, in this chapter.

> The use of a RCC-02/03 will facilitate the installation of the Xcom-232i. It will show messages in case of error.

4.1 DOWNLOAD THE SOFTWARE

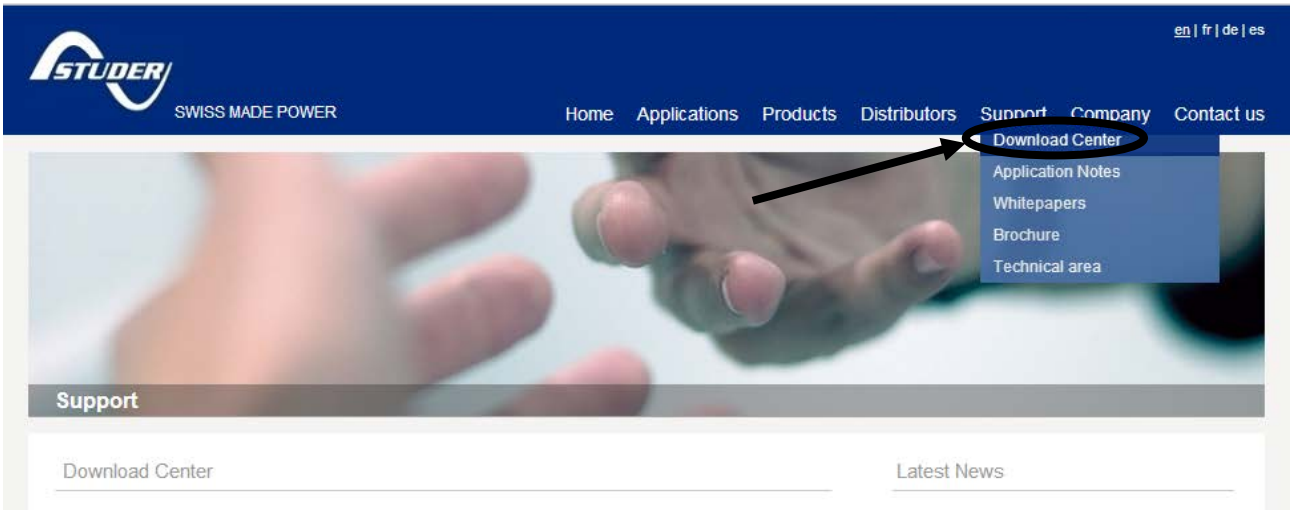


Figure 4.1 : Studer Innotec SA website

Go on the Studer Innotec website:
http://www.studer-innotec.com -> Support -> Download Center -> Softwares and Updates

Download the package "Xcom Configurator".

4.2 INSERT THE SD CARD

Insert the SD card into your PC and run the "XCOM Configurator".

4.3 SELECT THE SD CARD DRIVE

Choose the drive where the SD card is situated.

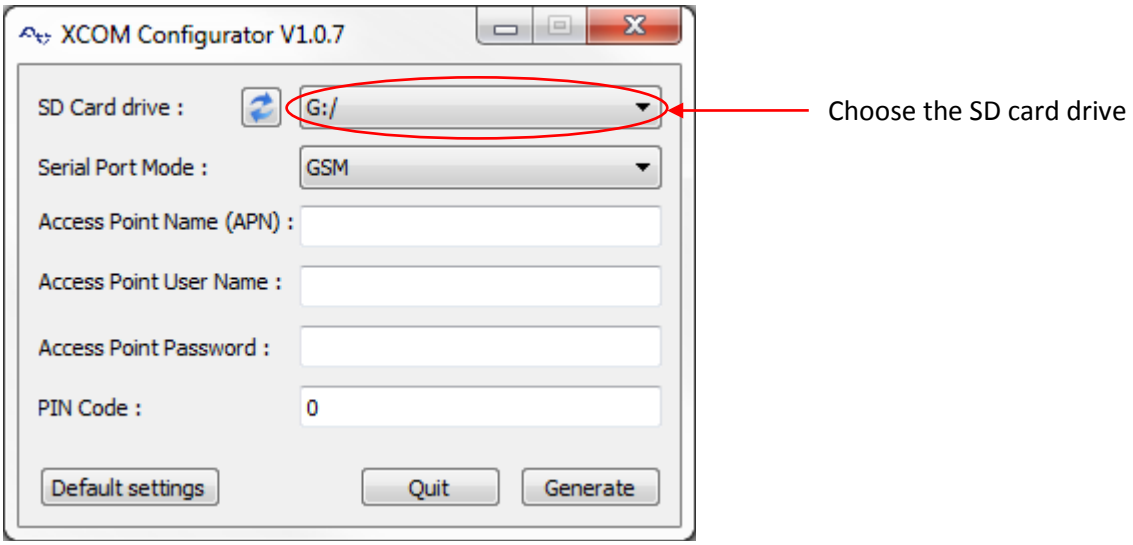


Figure 4.2 : Choose the drive

4.4 SET THE PARAMETERS

4.4.1 For Xcom-LAN

To use the Xcom-232i with the Ethernet gateway, choose ”LAN” as serial port mode. No others parameters are required. The gateway is already configured. Press “Generate” to save the parameter settings.

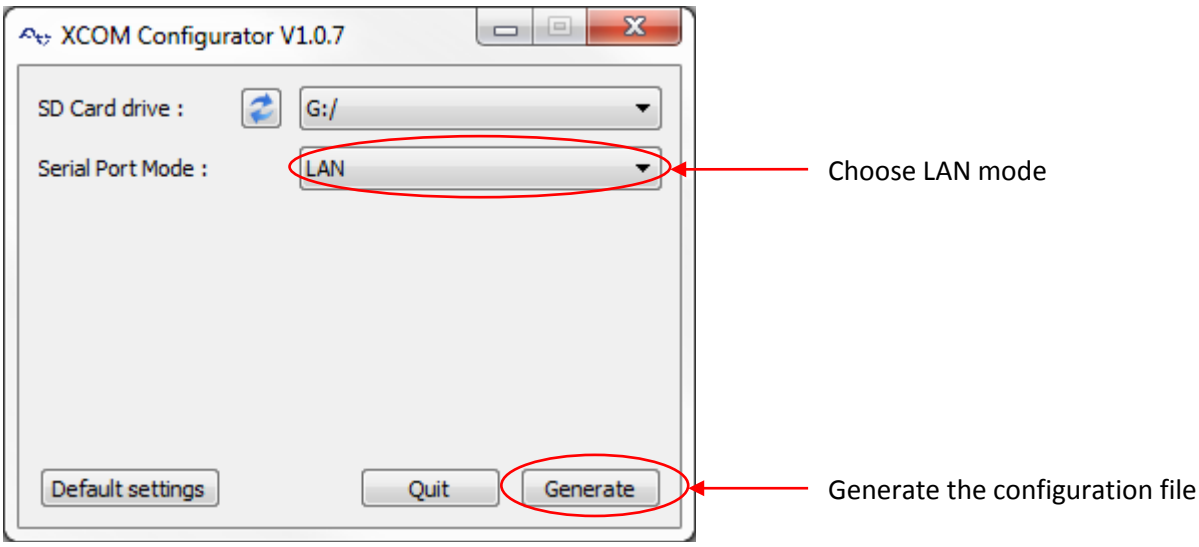


Figure 4.3 : Choose Ethernet mode

4.4.2 For Xcom-GSM

To use the Xcom-232i with the GSM modem, choose “Modem” as serial port mode.
Then enter the "Access Point Name" (APN) of the internet service provider (ISP). If the ISP requires a username and a password, use them to fill in the fields "Access Point User Name" and "Access Point Password". If no password is required, leave the fields blank.
If the SIM card has a PIN code, use it to fill in the field "PIN Code". If there is no PIN code, put a “0” in the field. Press “Generate” to save the parameter settings.

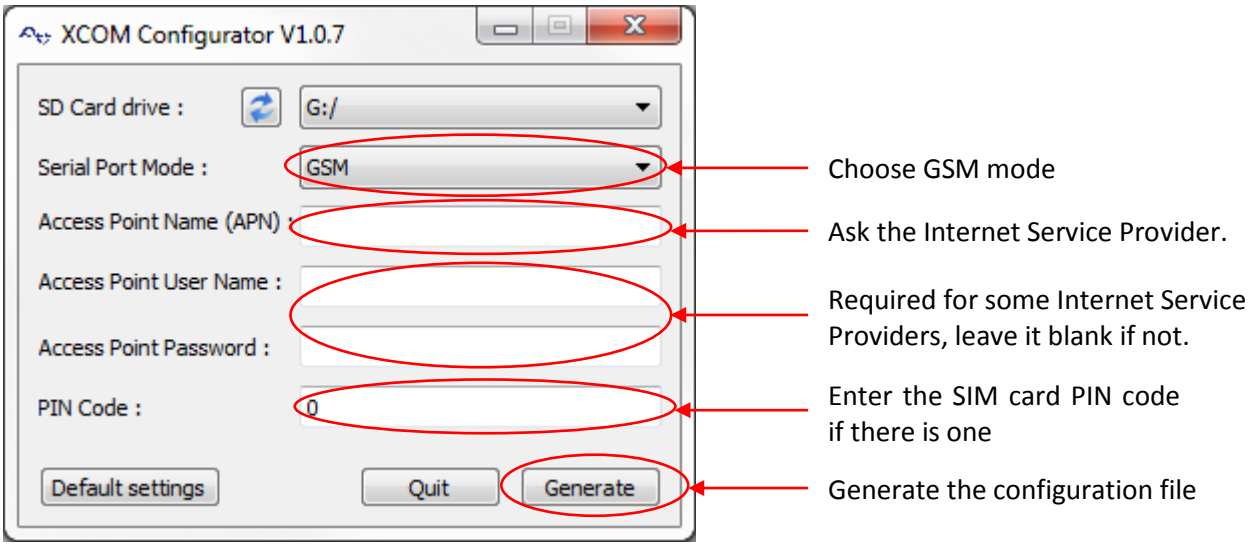


Figure 4.4 : Choose Modem mode

Example for Swisscom in Switzerland:

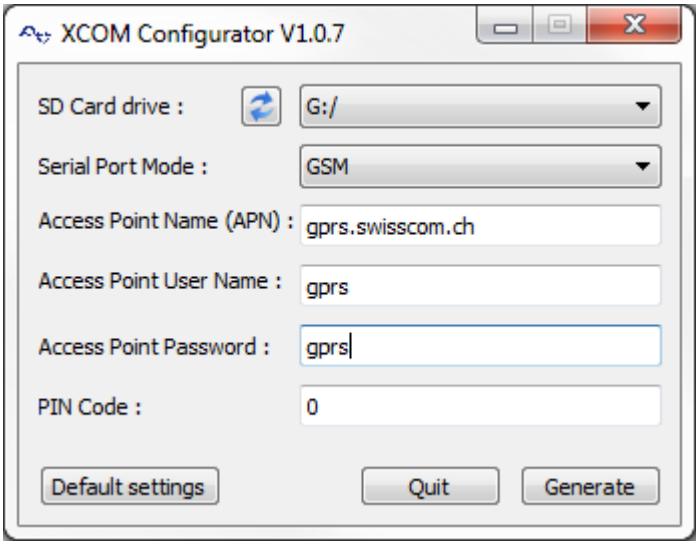


Figure 4.5 : Example with parameters for Swisscom

4.5 GENERATE THE CONFIGURATION FILE

If the parameters were successfully set, this message box will appear:

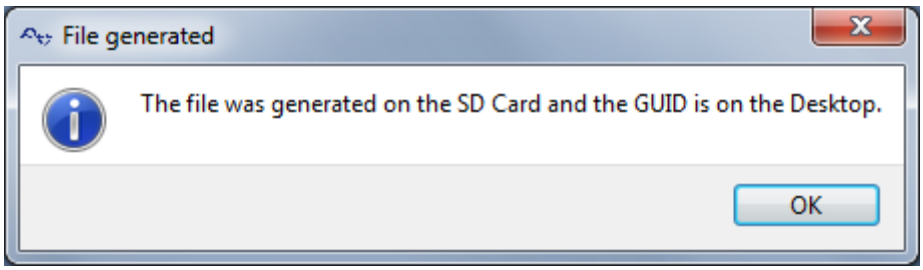


Figure 4.6 : Parameters set and successful generation of GUID

Close the message box and a text file with your GUID will appear. This file is saved on your Desktop.

	KEEP IT SAFE! The GUID is required for your authentication on the Xcom Website.

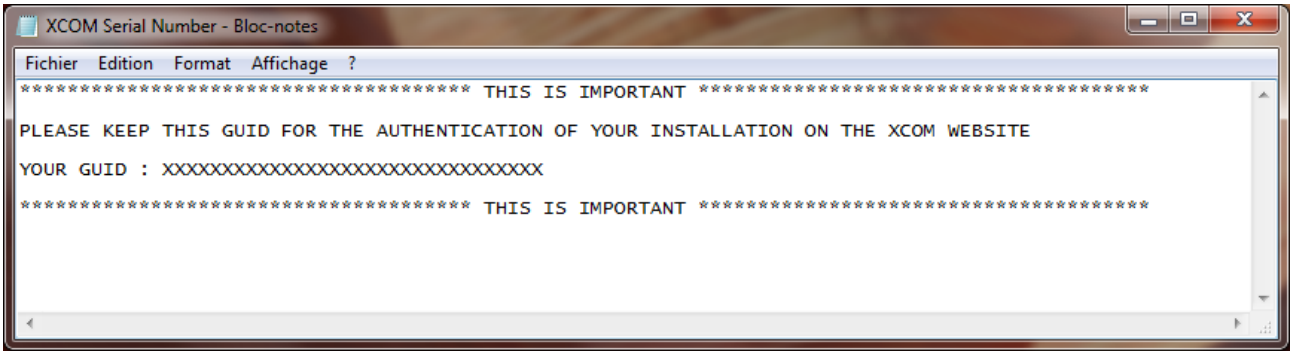


Figure 4.7 : Generated GUID file

If an error occurs during the GUID generation, this message box will appear. Please verify that the selected drive for the SD card is correct. If an adaptor is used for the SD card, please verify that there is no lock protection.

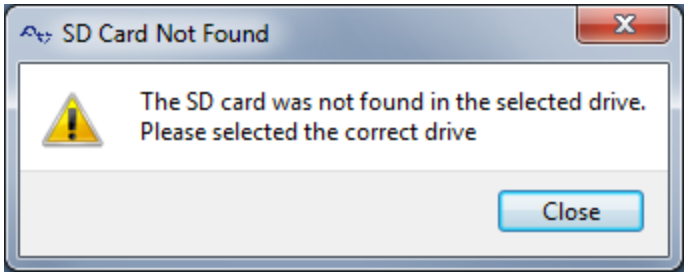


Figure 4.8 : SD card not found

4.6 REMOVE THE SD CARD

Remove the SD card from the PC.

4.7 SETUP THE PARAMETERS IN THE XCOM-232I

Insert the SD card into the Xcom-232i and wait for the update to finish. The updating process normally takes 1 second. When the LED stops blinking red, the update is finished.

Figure 4.9 : Inserting the SD card

4.8 CREATION OF YOUR ACCOUNT

To access the installation remotely, the web portal https://xcom.studer-innotec.com is provided free of charge.

To set up a user account on this web portal, please follow the instructions below. If a user account already exists, please proceed to chapter “4.9 Registration of installation”.

On the first page, click on the link "Create an account".

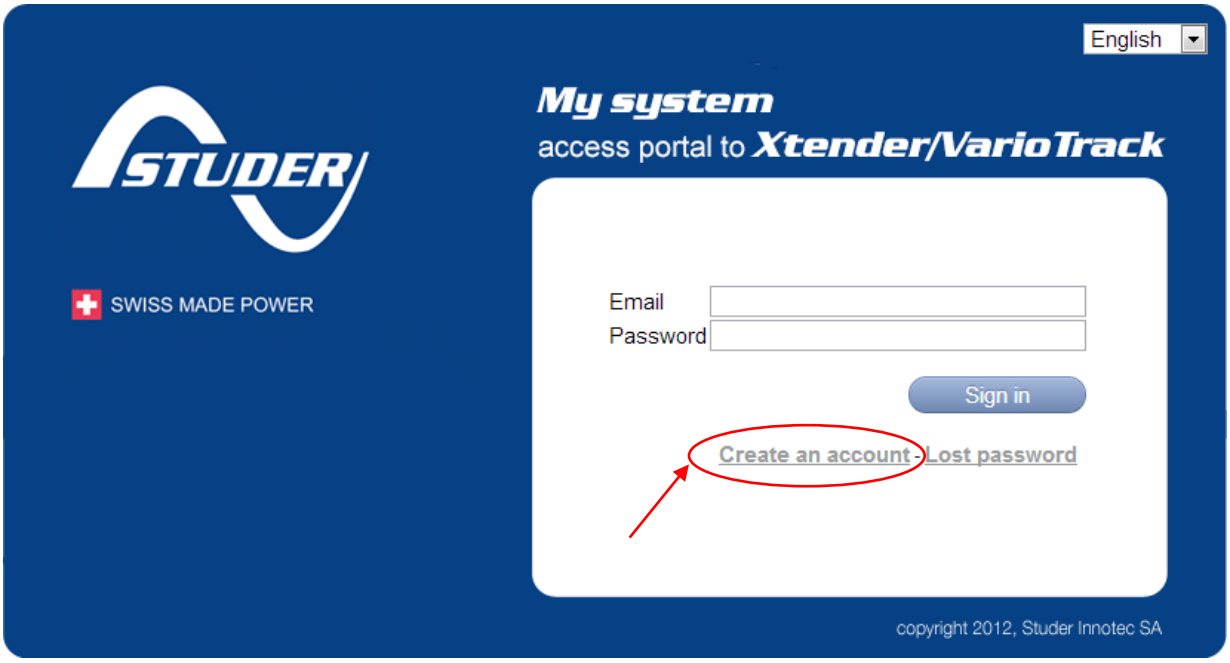
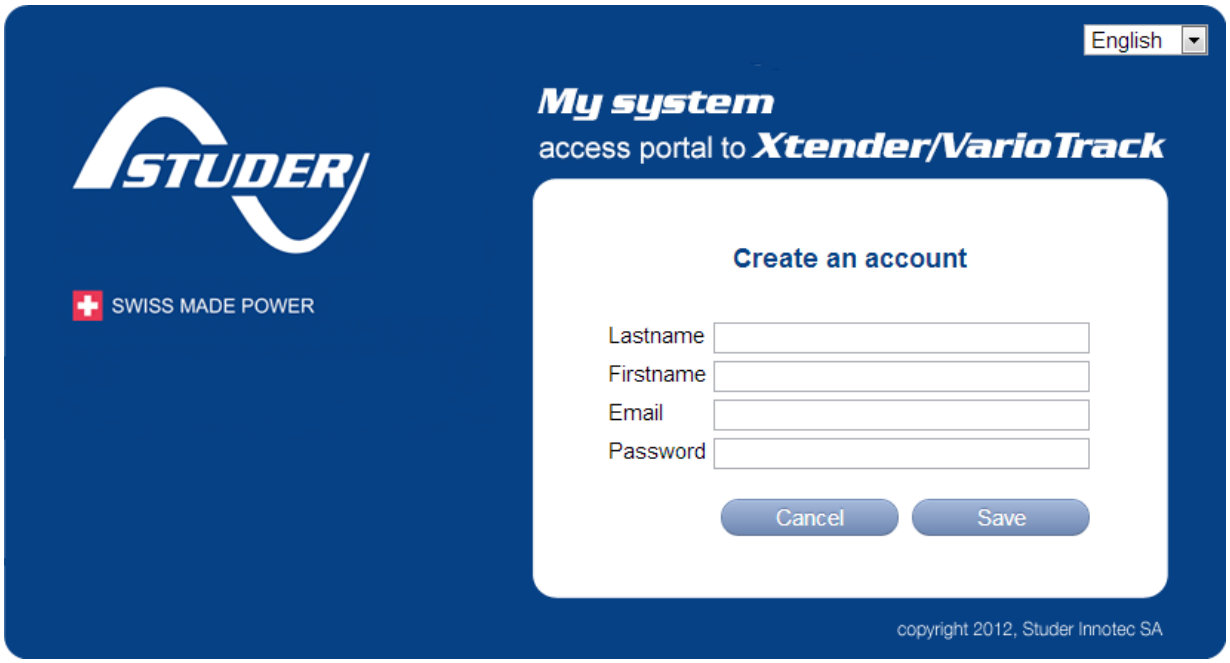


Figure 4.10 : Link "Create an account"

1. Enter your last name, first name, email address and the password of your choice.



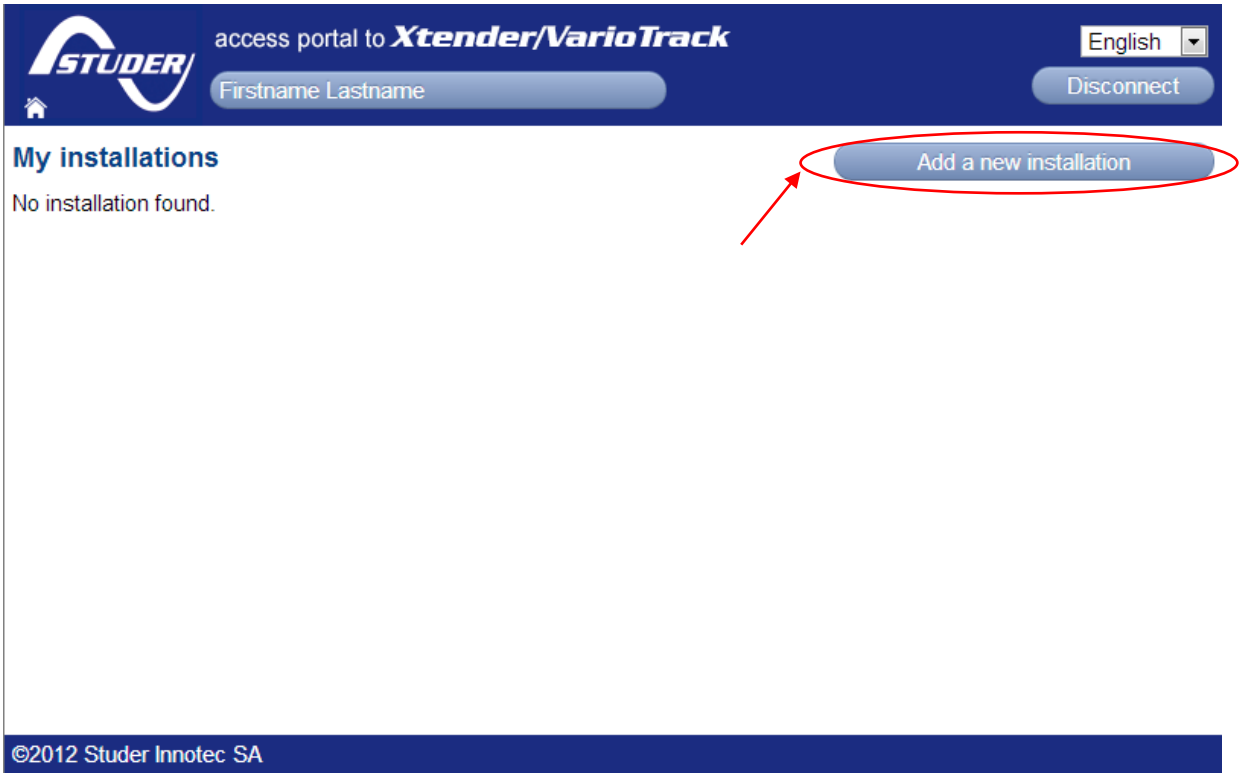
4.11 : Insert account information

2. Click on the button « Save », to register your information and your user account will be created.

4.9 REGISTRATION OF INSTALLATION

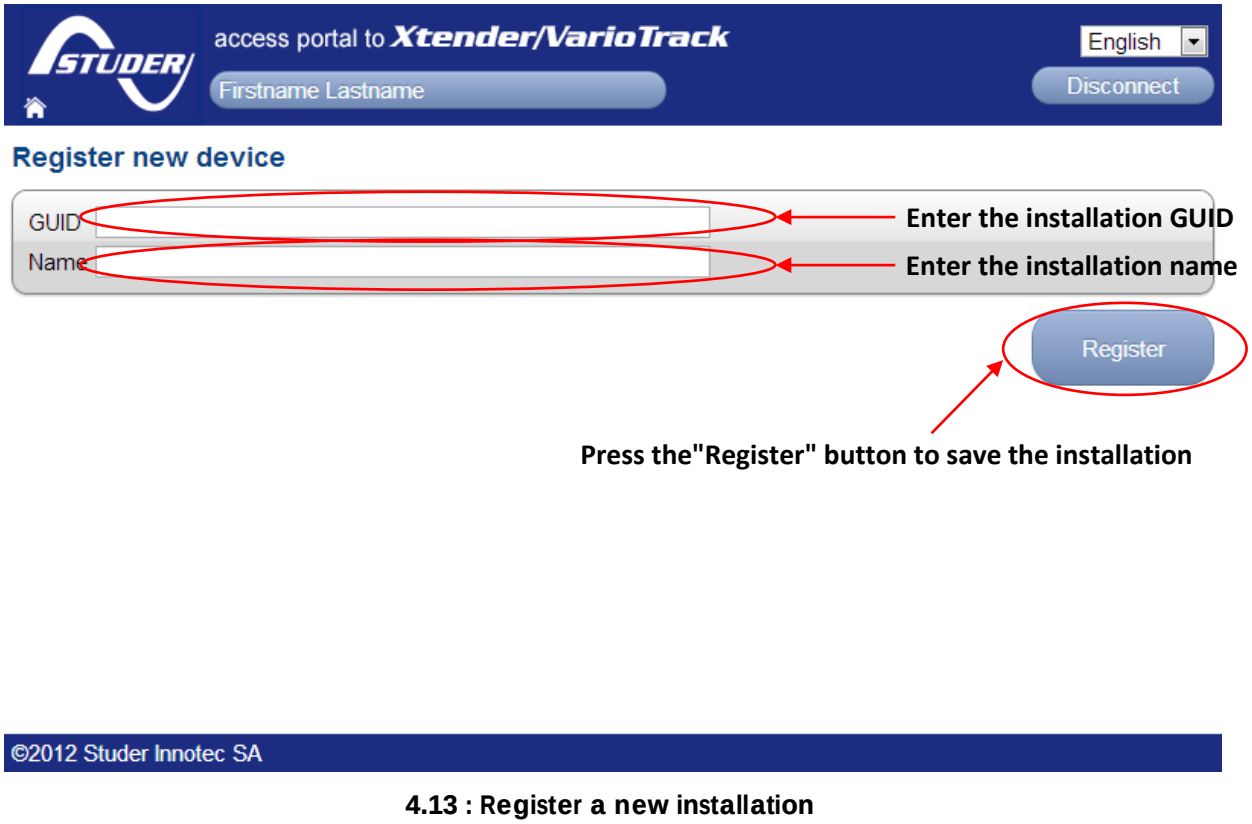
In order to access the installation you need to enter the GUID previously generated for your installation, see chapter 4.5.

1. Click on the button "Add a new installation".



4.12 : "Add a new installation" button

2. Enter the previously generated GUID as well as the name of the installation and press register to save the information.



4.13 : Register a new installation

4.10 INSTALLATION COMPLETED

The installation is now completed and you can access your system from anywhere with internet access through Studer's web portal https://xcom.studer-innotec.com

5 XCOM PORTAL

The user interface has been conceived to be simple and intuitive.

5.1 HOME PAGE

The home page lists all available installations to the logged-in user divided into two categories.

- **My installations**; the installations that the logged-in user has added to the system.
- **My shared installations**; the installations to which the logged-in user has been granted access.

Find a specific installation by scrolling the list or by using the search-field. Access the facility page by pressing the "Manage" button. An installation can also be deleted by pressing the "Delete" button. The delete button is only available for the installations under "My installations".

5.2 FACILITY PAGE

This page is divided into five tabs whose functions are described below:

5.2.1 Installation

This tab contains a detailed description of the facility, including its featured components, specific settings or other information to indicate its expected behaviour, in order to easily identify the system.

5.2.2 Remote Control

This tab allows direct access to the facility. The interface is identical to the remote control RCC-02/-03 and access to the system will be exactly the same as if you used a RCC-02/03.

Due to variations in communication speed, a greater or lesser delay may appear and prompt the user to wait for the return call display before making the next command. It is also possible that the screen refresh is done in two refreshments, slowing all navigation procedures. This response variable is normal and will require some practice.

5.2.3 Sharing

This tab allows you to give access to your installation to additional persons registered at the Xcom portal (it is possible for everyone to register to the Xcom portal). The access can be set to partial or full access.

5.2.4 Messages

This tab shows all messages from the Xcom-232i. These messages reflect the historical performance of your installation and are not necessarily alarms or alerts.

5.2.5 Notifications

This tab allows you to generate alerts via SMS or email depending on configurable criteria. Generation of SMS alerts requires the provision of SMS credit from a supplier of this type of service (e.g. Clickatell, Esendex, Sms Factor, Text Magic).

6 NOTES

Studer Innotec SA
Rue des Casernes 57
1950 Sion – Switzerland
Tel. : +41(0) 27 205 60 80
Fax : +41(0) 27 205 60 88

info@studer-innotec.com
www.studer-innotec.com