

Inova-bg Ltd

SIGI

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1. Main features

Inova-bg SIGI is a communication device with the main purpose to transmit data on RS232 channel, using IP network and/or GPRS mobile network as a transmission channel. The device has an HTML server for easy configuration and status check, protected with a username and a password.



On the front panel there is RS232 and Ethernet connectors and four LED indicators:

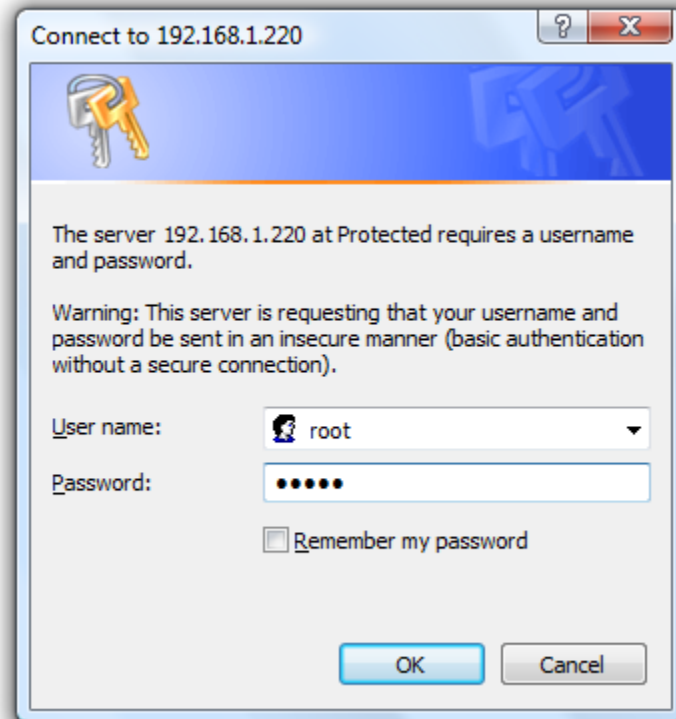
- P – 12V DC Power
- M – Mobile network status
- G – GPRS Server connection status
- I – IP Server connection status



On the back are the connectors for 12V DC power supply, test button, SIM card push-in holder and GPRS mobile network antenna connector.

2. Start working with SIGI

The default IP address is 192.168.1.220. To access the web server for configuration use Internet Explorer (Chrome, Firefox, Opera or any other web browser) and enter the SIGI's address - **http://192.168.1.220/** (or the new one if you already change it). If the device is accessible from that computer a connection will be established and you will be prompt to enter username and password:



The default settings (which will be recovered after hardware reset) are:

IP Address:	192.168.1.220
Username:	root
Password:	admin

If you enter the right credentials you will have access to the web page for configuration.

3. Homepage

The screenshot displays the Inova-bg SIGI homepage. At the top left is the logo "Inova-bg Ltd". To its right is a blue header bar with the text "Inova-bg SIGI - RS232 to GPRS & Ethernet". On the left side, there is a vertical menu with blue buttons labeled "Home", "Device Config", "Login Config", "About", and "Reboot". The main content area features a welcome message "Welcome to Inova-bg SIGI home page!". Below this, there are four sections of information:

- Device Information:**
 - Device Name: Inova-bg SIGI
 - Device MAC: 00:04:A3:49:00:00
 - Firmware version: 1.0
- Connection Status:**
 - Ethernet: Not Connected
 - GPRS: Connected
- RS232 Buffer Status:**
 - RX Buffer: 0%
 - TX Buffer: 0%
- GPRS Current Status:**
 - GPRS Operator: vivacom
 - GPRS Signal: ●●●● -53 dBm

Below the GPRS Current Status section, there is a box containing the text "GPRS network connected". At the bottom of the page, a copyright notice reads: "Copyright © 2015 Inova-bg, Ltd. SIGI, ver: 1.0".

On the homepage you can find main information about the device and the current status of the connections and also the status of the GPRS network connection and the signal strength.

4. Configuration of the main parameters

Inova-bg SIGI Configuration

This page allows to configure Inova-bg SIGI network settings.

General Settings
Device Name:

Network Settings
☐ Obtain an IP address automatically via DHCP
☒ Use the following IP address:
IP Address:
Gateway:
Subnet Mask:

IP Server Settings
IP Address:
Port:

GPRS Server Settings
IP Address:
Port:

RS232 Settings
Baudrate:

GPRS Settings
SIM PIN Code:
APN:
APN Username:
APN Password:

To configure the main parameters of SIGI use **Device Config** menu.

Device Name – Enter the name of the device. This value is used only for user convenience – to identify devices if you have more than one connected to one network.

Obtain an IP address automatically via DHCP – IP address is received automatically from a DHCP server in the current network. If you select this mode but after reboot the device cannot find a DHCP server for more than 10 seconds – SIGI will load the last saved static address. In this case easy way to access the web-server is by entering the following address: **<http://inovasigi/>**

Use the following IP address – IP address and network parameters are set to static

IP Address – IP address

Gateway –Gateway address.

Subnet Mask – Subnet mask of the IP network.

IP and GPRS Servers:

IP address and **TCP Port** of the receiving server. This parameters could be the same for IP and GPRS or different – depends on the receiving server network.

Baudrate – the baudrate used for the RS232 communication.

In the GPRS Settings, the parameters of the mobile operator must be entered. If only IP network is used these fields can be empty.

In **SIM PIN** Code the PIN code must be entered. If the SIM card doesn't use PIN code, this field has no role (empty or not).

APN (Access Point Name), **APN Username**, **APN Password** are parameters of the mobile network. The mobile operator must provide them.

When you click the **Save Config** button a validation check is performed. If there is invalid data in one or more fields – they will be colored in red. Additionally under the button **Save Config** a field will be generated – **Error List** – which describes in details the errors and how to fix them. If all the input data are correct SIGI will save the parameters and will reboot with the new configuration.

5. Username and password configuration

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Inova-bg SIGI - RS232 to GPRS & Ethernet

Home
Device Config
Login Config
About
Reboot

Login Configuration

This page allows to configure Login Username and Password.

CAUTION: You will need this information to access this page. Use the "Hard Reset" button if you can't remember your Login information. After Reset default Username and Password will be recovered.
Default Username: **root** Password: **admin**

CAUTION: Enter desired configuration and click **Save Config**. This will cause the device to reboot with the new settings.

Enter the new Login settings below (**maximum 11 symbols**):

Login Settings	
User Name:	<input type="text" value="root"/>
Password:	<input type="text" value="admin"/>

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SIGI, ver: 1.0

In Login Config menu you can change the username and password used to access the web-server. Maximum length for both fields is 11 symbols. If you forget your credentials you can perform a hardware reset to recover default settings:

Username: root Password: admin

When you click the **Save Config** button a validation check is performed. If there is invalid data in one or more fields – they will be colored in red. If all the input data are correct SIGI will save the parameters and will reboot with the new configuration.

6. Reboot

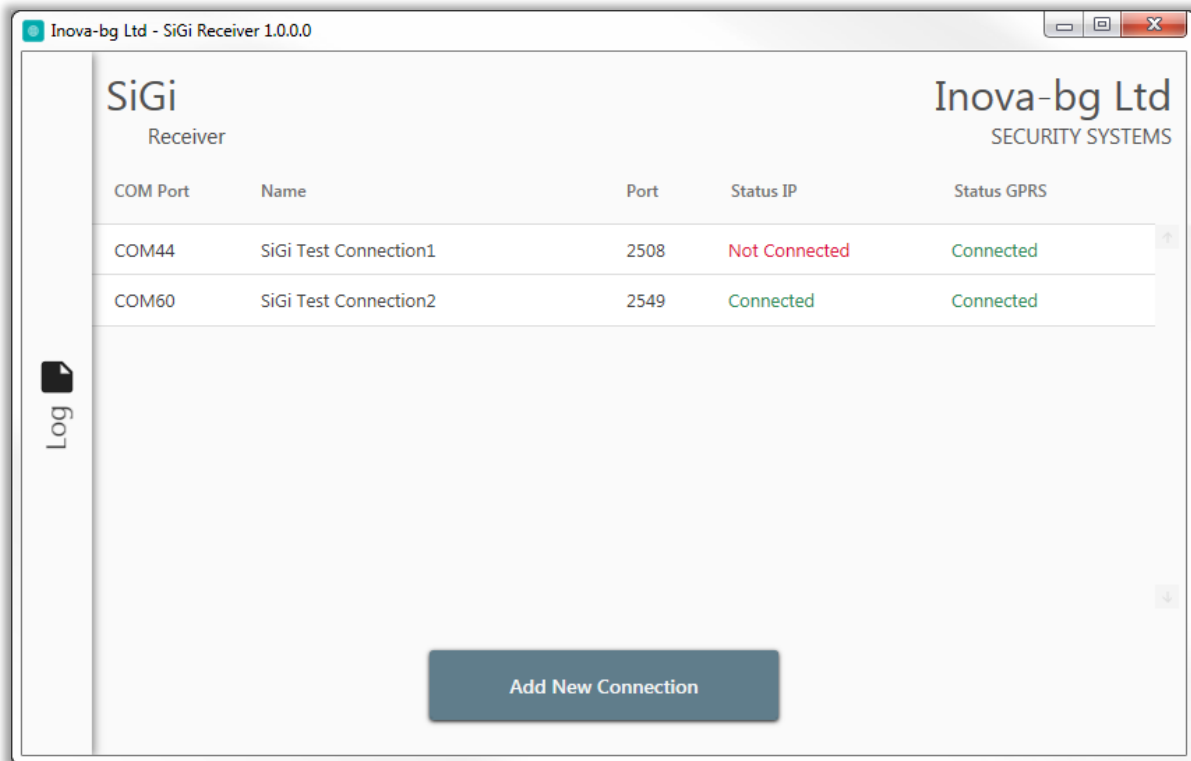
If you choose the Reboot menu this will cause the device to restart.

7. Hardware reset

In case you changed the settings and can't reach the device or if you forgot your username or password, SIGI is capable to return to its factory defaults. For this purpose you must disconnect from power supply, push and hold the button for hardware reset and reconnect to the power supply. Hold the button for 5 seconds until the yellow LED (G) is blinking. Once the LED goes constantly ON you can release the button and connect to the device.

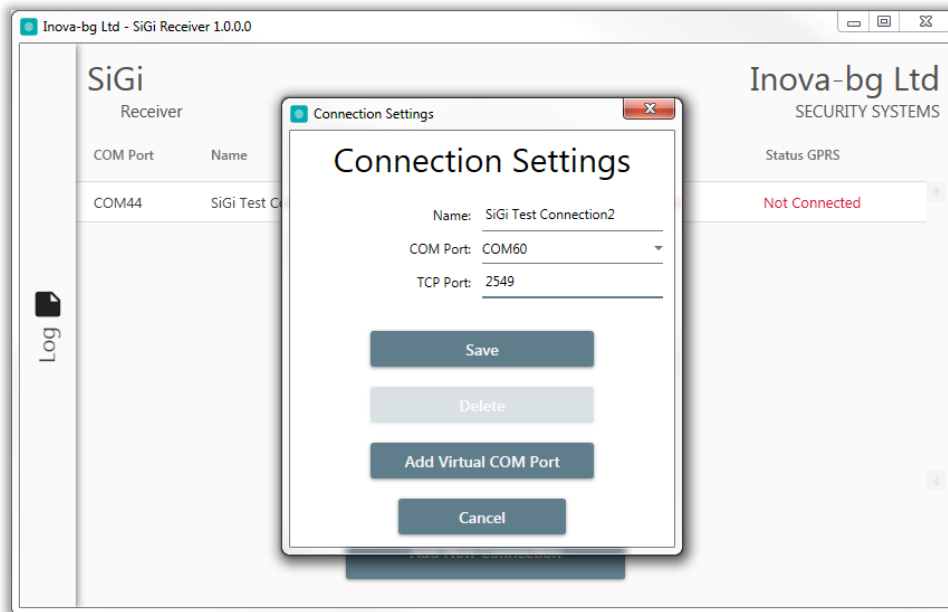
8. SiGi Receiver Software

SiGi Receiver Software receives the data from the SIGI devices.

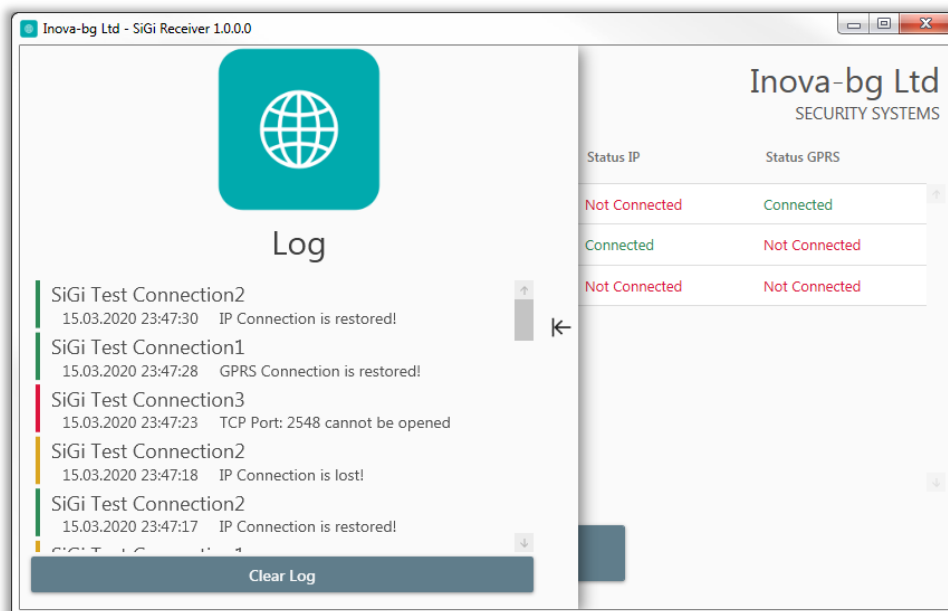


On the main window all the devices are shown – parameters and status. A new device could be added from the button – “Add New Connection”.

Double-Click on an existing connection to edit its parameters.



Each device can be set to use Real or Virtual COM port. To add new virtual COM port – press the **“Add Virtual COM Port”** Button.



In the **Log** slider tab there is a log of all the events that happened while the software was running – receiver initialization, connection status changes and etc.

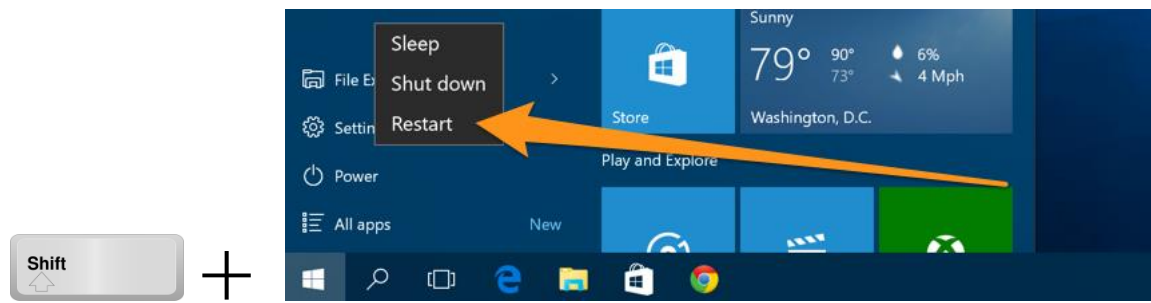
9. Installing Virtual Serial Port Driver

(For Windows 7 skip to step *Driver Installation (Automatic)*)

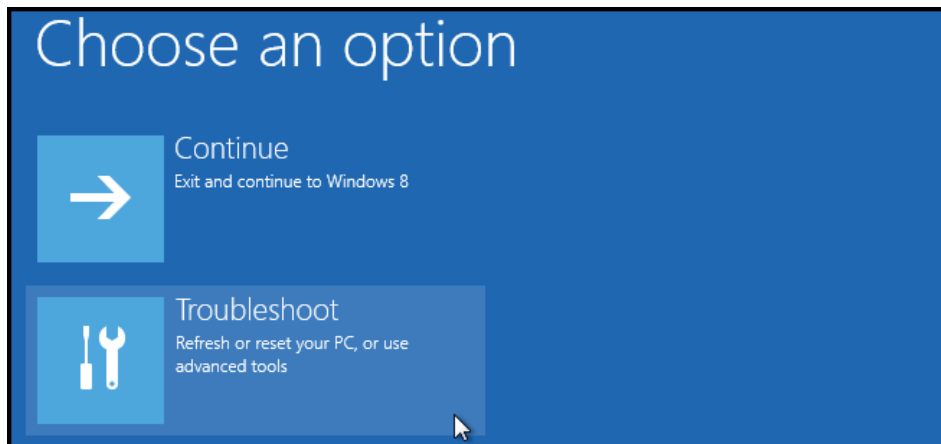
9.1 Windows 8.1/10 x64 unsigned driver installation

64-Bit editions of Windows 8.1 / Windows 10 require digitally signed drivers. To disable driver signature verification use the following steps:

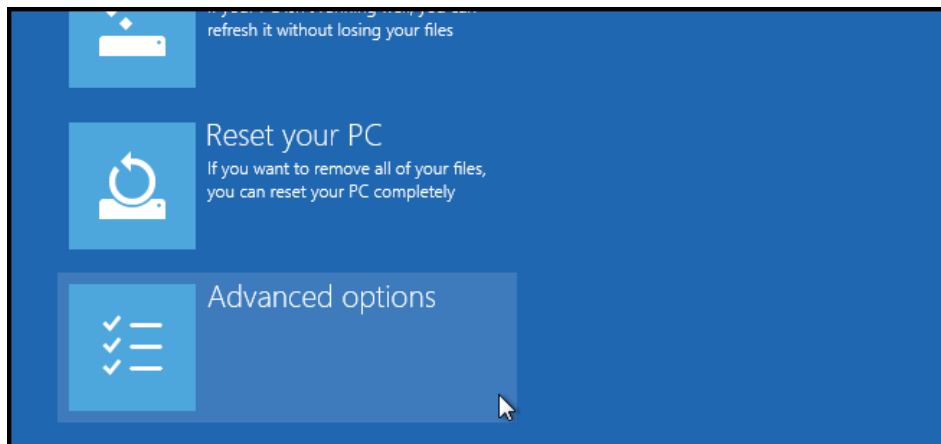
Hold the shift key and press restart:



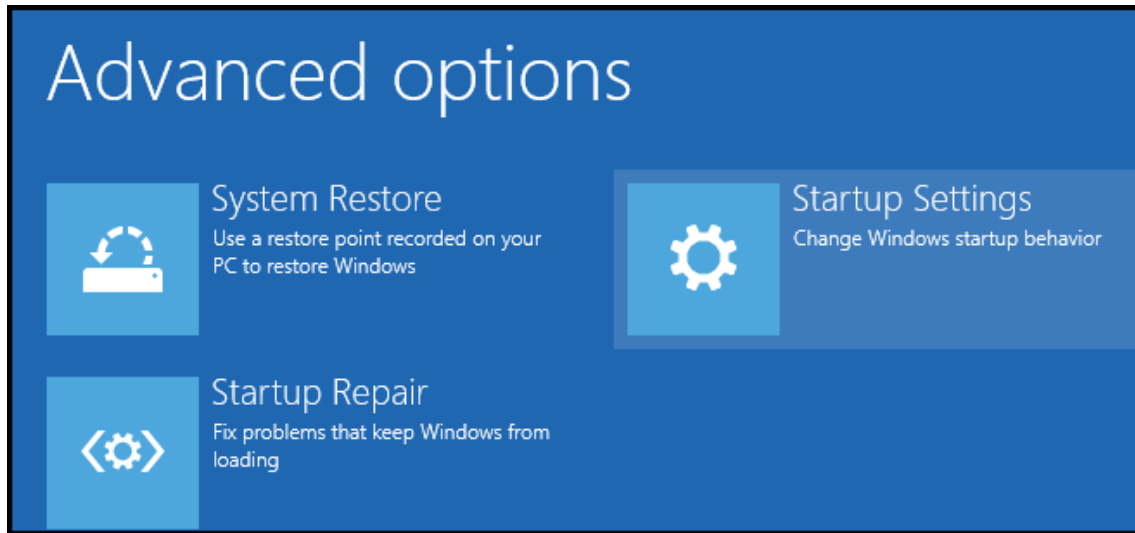
Once your computer has rebooted you will be able to choose the Troubleshoot option.



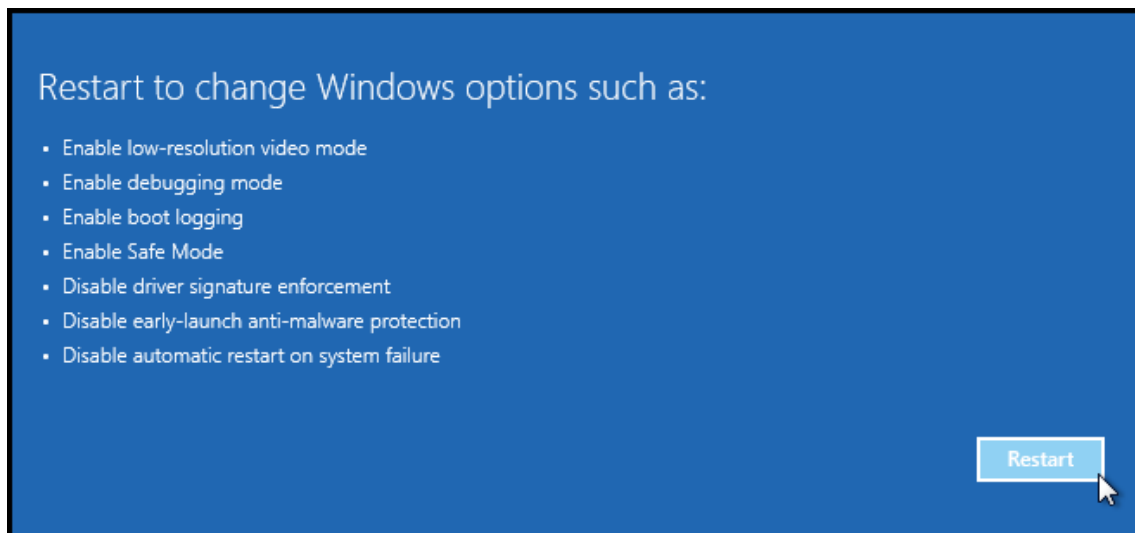
Then head into Advanced options.



Then Startup Settings.



Since we are modifying boot time configuration settings, you will need to restart your Computer one last time.



Finally, you will be given a list of startup settings that you can change. The one we are looking for is “Disable driver signature enforcement”. To choose the setting, you will need to press the F7 key.

Startup Settings

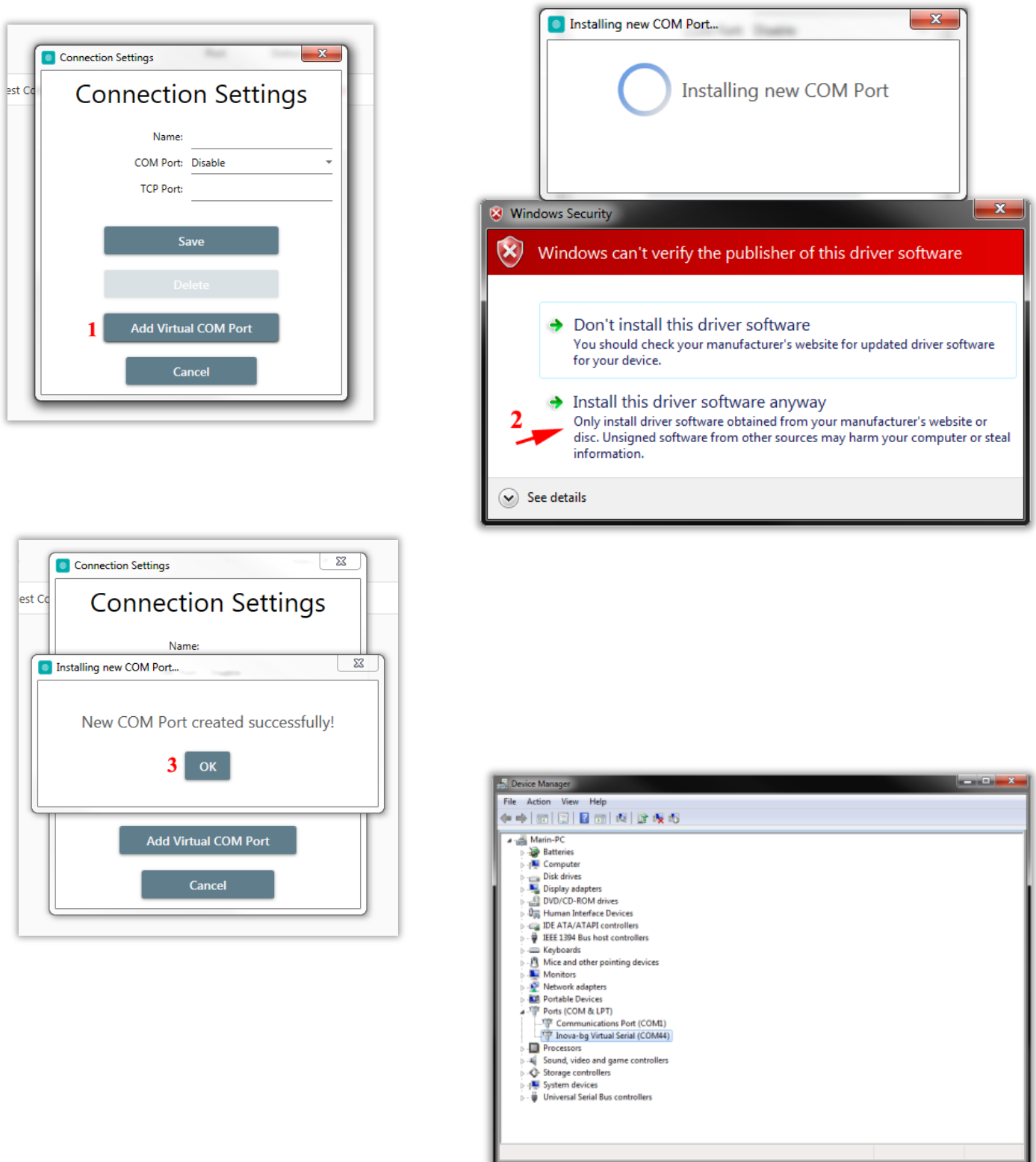
Press a number to choose from the options below:

Use number keys or functions keys F1-F9.

- 1) Enable debugging
- 2) Enable boot logging
- 3) Enable low-resolution video
- 4) Enable Safe Mode
- 5) Enable Safe Mode with Networking
- 6) Enable Safe Mode with Command Prompt
- 7) Disable driver signature enforcement
- 8) Disable early launch anti-malware protection
- 9) Disable automatic restart after failure

9.2 Driver Installation (Automatic)

Start the SiGi Receiver as Administrator and follow the steps:



9.3 Driver Installation (Manual)

If automatic installation cannot successfully install the driver please try to install it manually by following the steps:

