Inova-bg Ltd.

Server Tau

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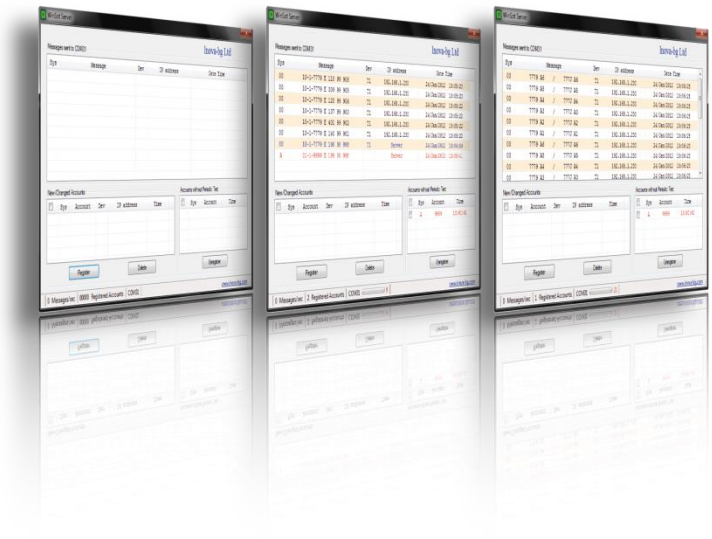
1. Main Features

Server Tau is server software designed to receive alarm messages by IP and GSM/GPRS communication networks.



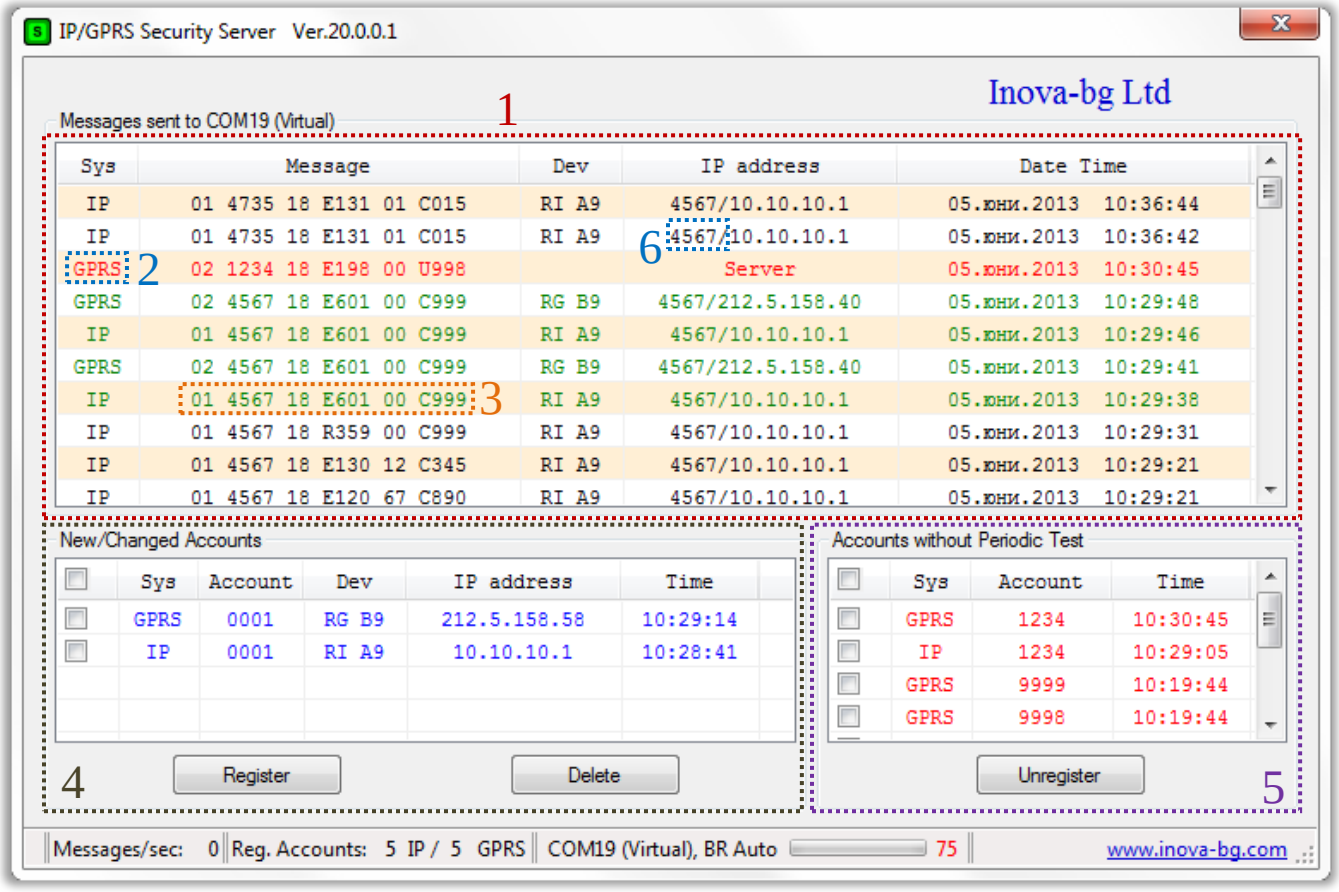
Features:

- Supported protocols: Ademco Contact ID
- Capability to combine monitoring and server stations on one computer
- Data processing - encryption, decryption, check of authenticity
- Maximum managed security sites - 65535
- Check for received test messages from every security site. Generates messages for missing and recovered test
- Check for messages from new or preconfigured security sites. Generates alarm messages in those conditions

- Redirect accepted messages by IP, GSM/GPRS to virtual or real serial port on Sur-Gard CID or Ademco 685 CID protocol for connection with monitoring software
- Buffer for the serial connection with monitoring station. If the serial connection fails last messages (up to 100000) will be buffered and send immediately after reconnection of the serial connection. Visual information for the condition of the buffer
- User-friendly interface for working and configuring
- Service more than 1000 connections in a second
- Operating system: Windows XP SP3, Windows Vista x86/x64, Windows 7 x86/x64, Windows 10, Microsoft .NET Framework 4.0

2. Working window of Server Tau software

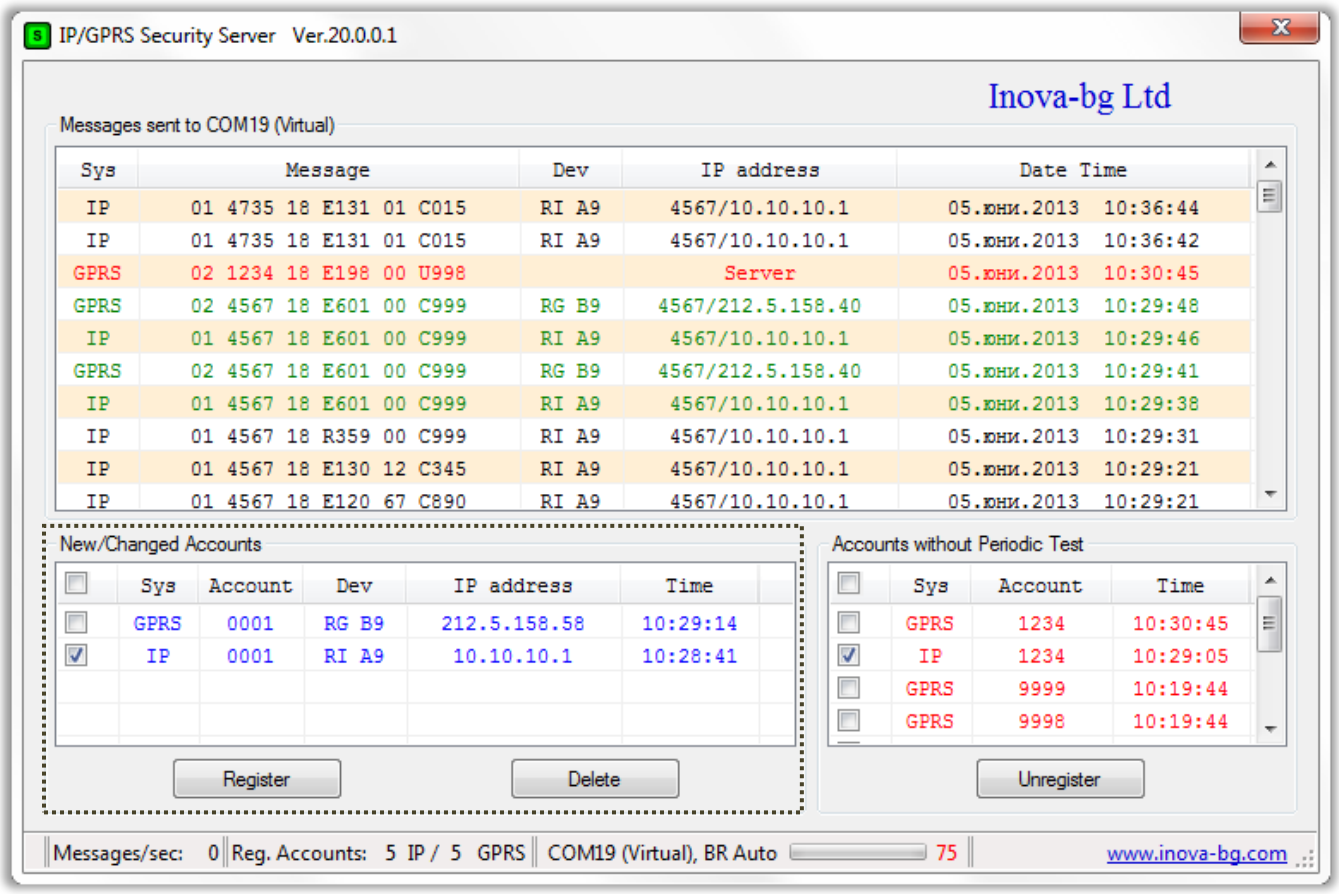
The window of the server software looks as follows::



1. This field contains all of the data that is sent to the monitoring software. Every row is a separate message.
2. Communication type.
3. Account number and contents of the received message (alarm, test, etc.).
4. This field contains data for new accounts or accounts with changed communication modules. This accounts must be registered once, using the buttons below.
5. This field contains data for accounts from which a test message was not received.
6. Account system number – this is the number of the device. The number received from communicator/dialer of the device could differ from the device system number.

3. Workflow

3.1. Registration of a new account

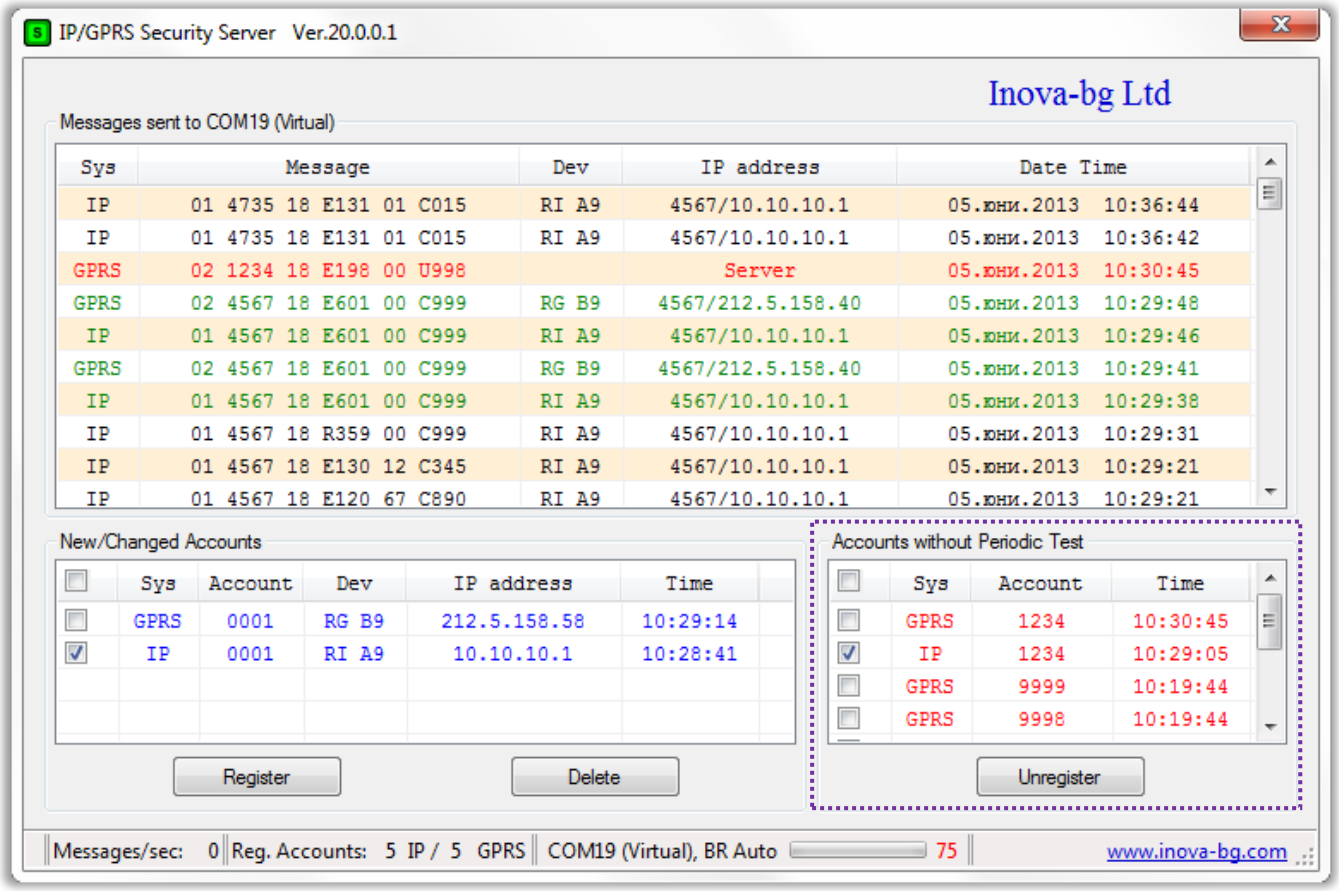


The field **New/Changed Accounts** contains data for new accounts or accounts with changed communication modules. Register them in the server by selecting the corresponding checkbox to the left of the data and pressing the button – **Register**. Multiselect can be used to register several/all accounts with one click.

If an account is not registered, its messages won't be sent to the monitoring software and the server won't check for test messages for this account! This protects from the possibility of sabotaging the system by sending data from unauthorized accounts. This field also contains accounts with duplicate numbers or changed communication modules - this protects from attempts of changing or duplicating with another device. In this case the duplicated accounts are shown, but cannot be registered - this can be done only after the existing account with the same number is deregistered.

With the **Delete** button a record from this field can be deleted.

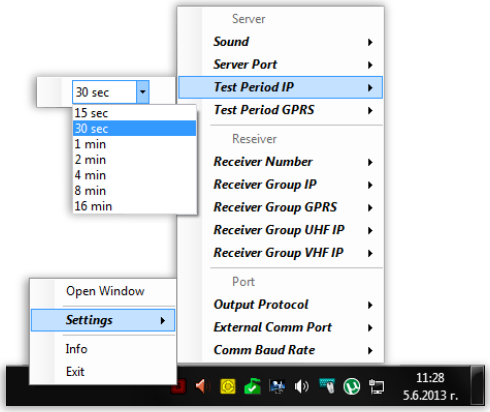
3.2. Deregistration of an existing account



Deregistration of accounts is done in the field **Accounts without Periodic Test**. Here are shown all the accounts with missing test message. To remove an account from the database of the server, first its transmitter should be physically switched off, which means that its test messages will be interrupted. This minimizes the opportunity of manipulation of the received data.

To unregister an account, select the corresponding checkbox to the left of the data and press the button – **Unregister**. Multiselect can be used to unregister several/all accounts without periodic test, with one click.

3.3. Configuration of the test period



The server software automatically recognizes which messages are received by the IP network and which by GSM/GPRS. This means that the test period can be different depending on the communication network which delivers the data.

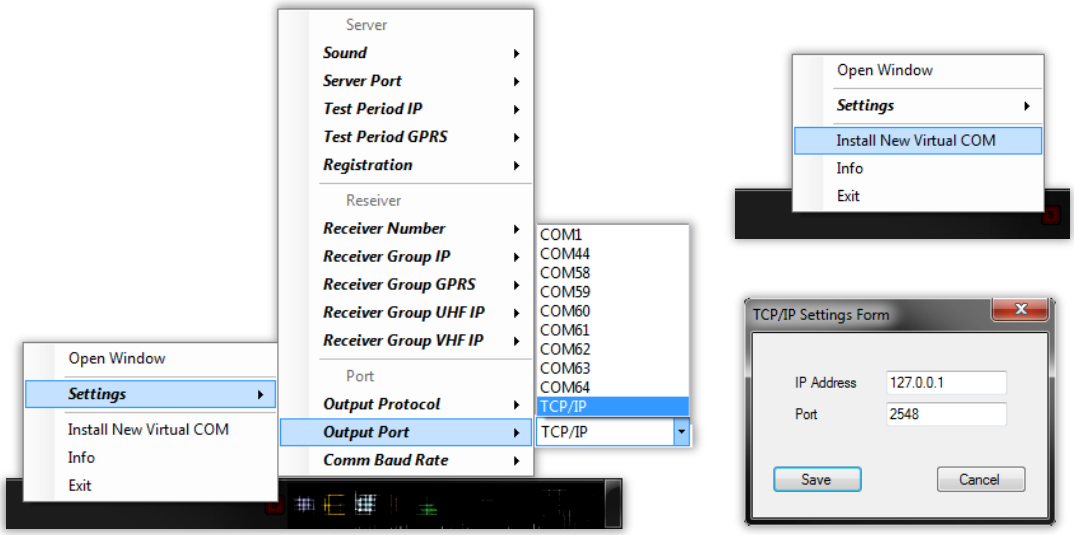
The test period can be set by right-clicking on the software's icon in the system tray and choosing the sub-menu – **Settings → Test Period IP**, for the accounts which use the IP network, and **Settings → Test Period GPRS**, for the accounts which use the GSM/GPRS network. The test period set in the server should be slightly longer than the one set in the transmitters. This prevents situations in which unnecessary missing test alarms are generated caused by delays in the communication environment. (Example: if the test period set in the transmitters is 10 seconds, the recommended test period set in the server is 15 seconds).

Test messages from the accounts are not sent to the monitoring software! A message is generated and sent to the monitoring software only when the period test is missing or restored. This helps not to overload the monitoring software, because in the IP networks the test period can be set to even a few seconds.

The messages generated by the server are as follows (also shown in the **Info** menu):

E199 - IP Test Loss (Only IP)
R199 - IP Test Restored (Only IP)
E198 - GPRS Test Loss (Only GPRS)
R198 - GPRS Test Restored (Only GPRS)
E197 - IP Test Loss (IP if available,GPRS as Backup)
R197 - IP Test Restored (IP if available,GPRS as Backup)
E196 - GPRS Test Loss (IP if available,GPRS as Backup)
R196 - GPRS Test Restored (IP if available,GPRS as Backup)
E195 - UHF IP Test Loss (Only IP)
R195 - UHF IP Test Restored (Only IP)
E194 - VHF IP Test Loss (Only IP)
R194 - VHF IP Test Restored (Only IP)
E190 - New account is registered
R190 - Unregistered account

4. Connecting the Monitoring software

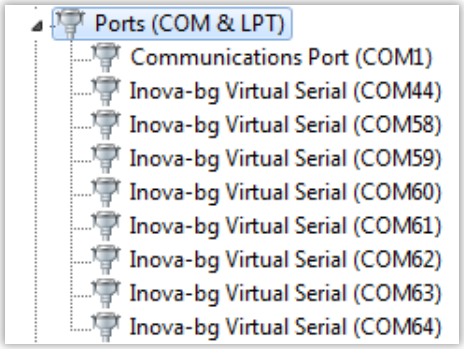


Server Tau can be connected through standard Com Port to each monitoring software which supports this type of communication. Both real and virtual port can be used. The virtual is suitable if the monitoring software is installed on the same computer. The external port is suitable if the monitoring software is installed on a separate computer. The Com Port selection can be done by the menu **Settings → External Comm Port**. When using external Com Port the Baud Rate can be changed by the menu **Settings → Comm Baud Rate**.

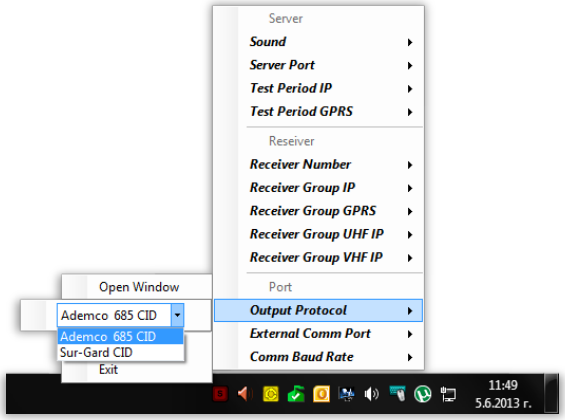
Server Tau can also work with TCP/IP communication or with Virtual COM Port Driver.

If TCP/IP is selected in the "Output Port" menu – a new window will appear. Valid IP address and Port should be entered.

Another option is to "Install New Virtual COM". To install drivers Server Tau should be run as administrator. After a successful installation – the monitoring software can open the virtual COM port and receive all the data from the server. Please refer to *Installing Virtual Serial Port Driver* for more details about virtual serial port driver installation.



5. Output Protocol



Supported output protocols are: Sur-Gard CID and Ademco 685 CID. The selection can be done by the menu **Settings → Output Protocol**.

When a message is received from a transmitter by IP network the Receiver Group which is sent to the monitoring software can be set by the menu **Settings → Receiver Group IP**. When a message is received by GPRS/VHF/UHF - **Settings → Receiver Group GPRS/VHF/UHF**. This way the communication environment, by which each signal is received, can be easily and quickly reported. The Receiver number can be set by the menu **Settings → Receiver number**.

The output data looks as follows:

Sur-Gard CID:

Data protocol:

5RRLs18AAAAQXYZGGCCC[DC4]

Where, 5 : Protocol number.
RR : Receiver number.
L : Line number.
s : Space.
18 : Contact-ID format identifier.
AAAA : Four digit account codes.
Q: Qualifier, E = New event or opening, R = New restore or closing, P = Previous event
XYZ : Class code and event code.
GG : Group number.
CCC : Zone codes or user ID.
[DC4] : Terminator,14 Hex

Heartbeat protocol:

1011sssssssssss@ssss[DC4]

Where, s : Space Character.
@ : Supervisory Signal.
[DC4] : Terminator, 14 Hex.

Ademco 685 CID:

Data protocol:

LFRGsAAAAs18sQXYZsGGsFCCCsCR

Where, LF : Header (ASCII Line Feed – Hex 0A).

R : Receiver number.

G : Receiver Group number.

s : Space.

AAAA : Four digit account number.

s : Space.

18 : Contact-ID format identifier.

Q: Qualifier, E = New event or opening, R = New restore or closing, P = Previous event

XYZ : Event Definition Code.

s : Space.

GG : 2-digit Group number.

s : Space.

F : Defines CCC. C = Contact, U = User

CCC : 3-Decimal digits representing Contact or User.

s : Space.

CR : Terminator (ASCII Carriage Return – Hex 0D).

Heartbeat protocol:

LF00sOKAYs@CR

Where, LF : Header (ASCII Line Feed – Hex 0A).

00 : 2-digits 0

s : Space

OKAY: 4-symbols

s : Space

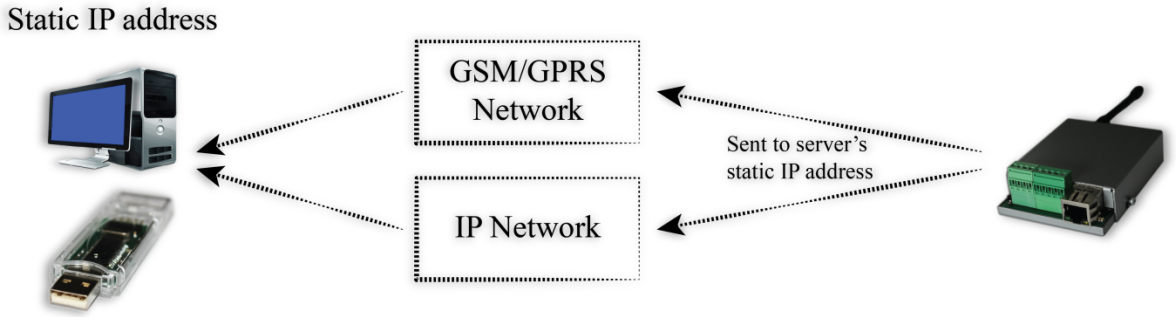
@ : Supervisory Signal.

CR : Terminator (ASCII Carriage Return – Hex 0D).

6. Working in IP network

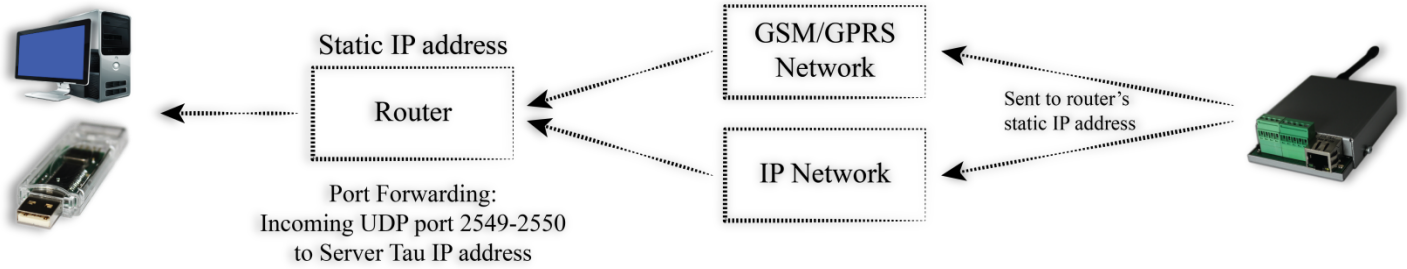
6.1. Server Tau with a static IP address

One way to connect Server Tau is directly, with a static IP address and internet access. In this case this static IP address must be entered in each transmitter, as Server's IP. If a firewall is activated at the server, the software must have access to UDP ports 2549 and 2550.



6.2. Server Tau in local network behind router

One other way to connect Server Tau is behind a router, in a local network. The router's IP address must be static. In this case the static IP address of the router must be entered in each transmitter, as Server's IP. The router must be configured to do port forwarding of UDP ports 2549 and 2550 to the Server Tau's IP address in the local network. If a firewall is activated at the server and/or the router, the software must have access to UDP ports 2549 and 2550.



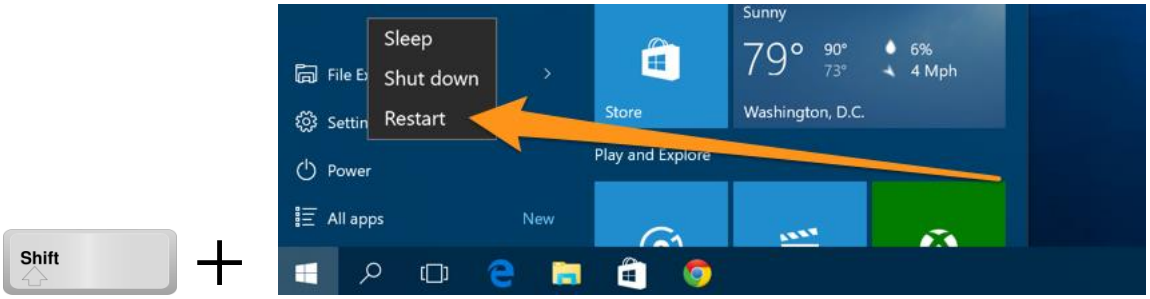
7. Installing Virtual Serial Port Driver

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

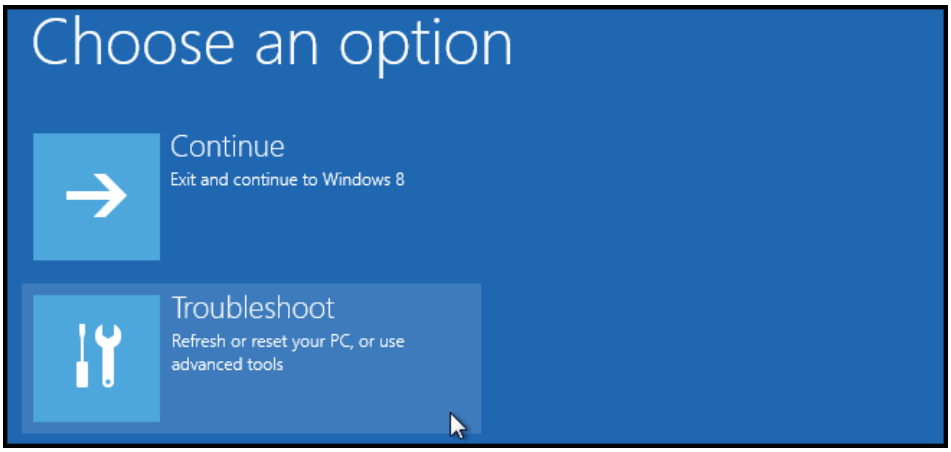
7.1. Windows 8.1/10 x64 unsigned driver installation

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

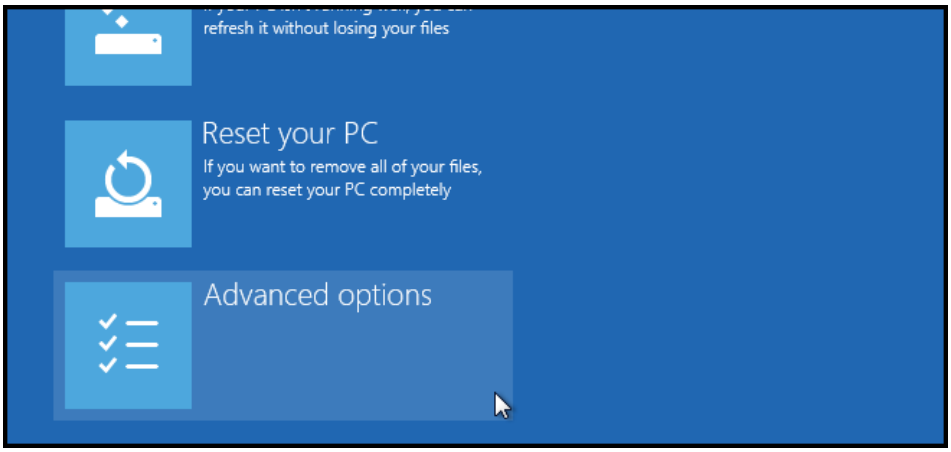
Hold the shift key and press restart:



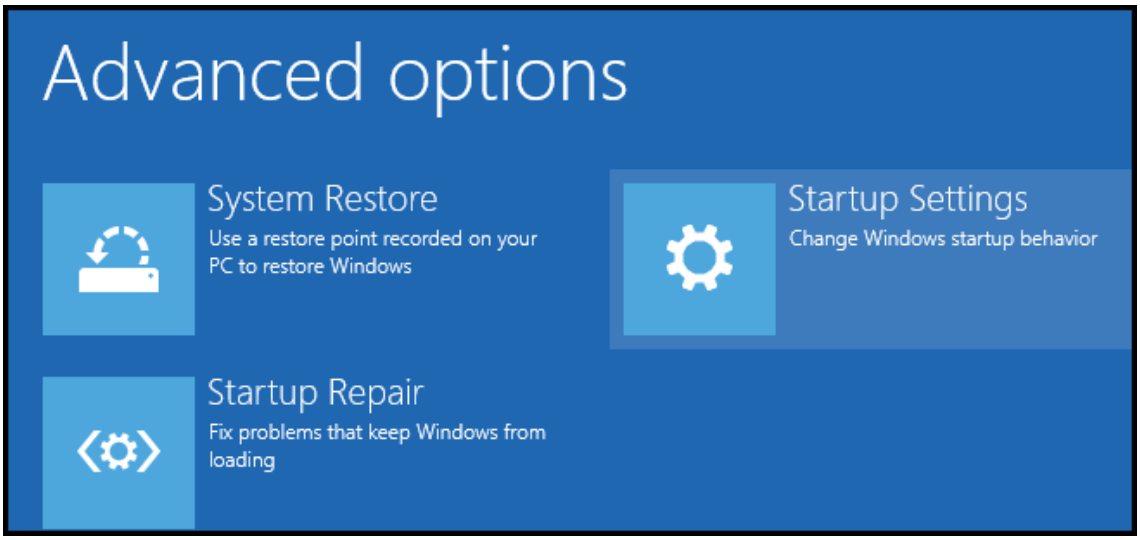
Once your computer has rebooted you will be able to choose the Troubleshoot option.



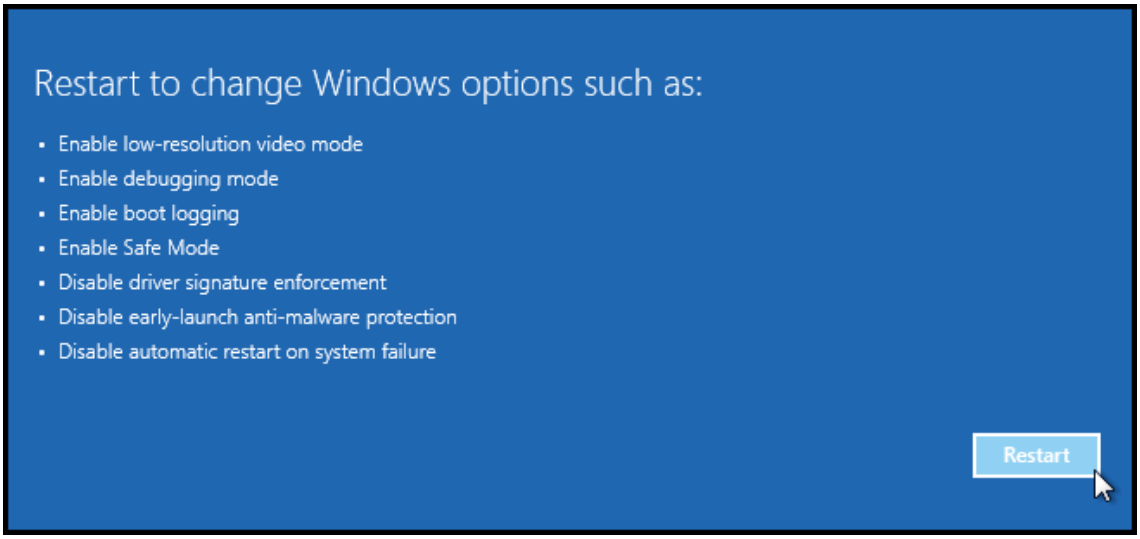
Then head into Advanced options.



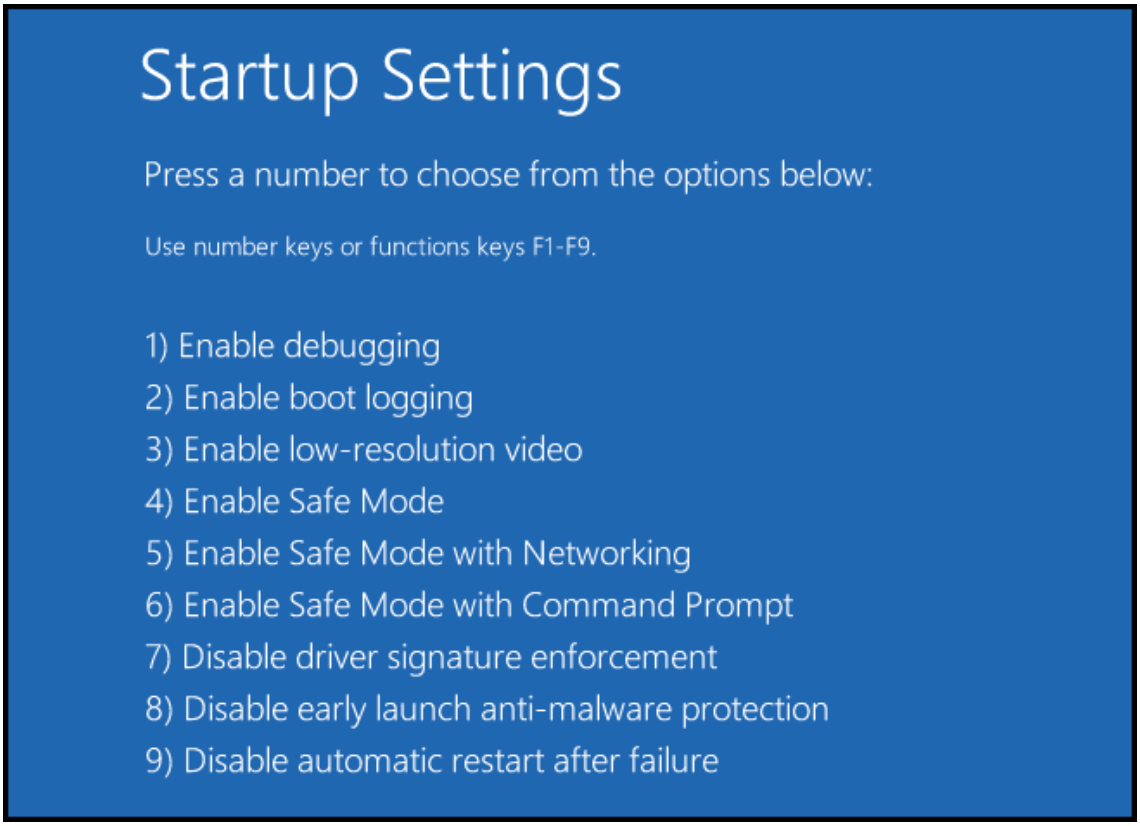
Then Startup Settings.



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

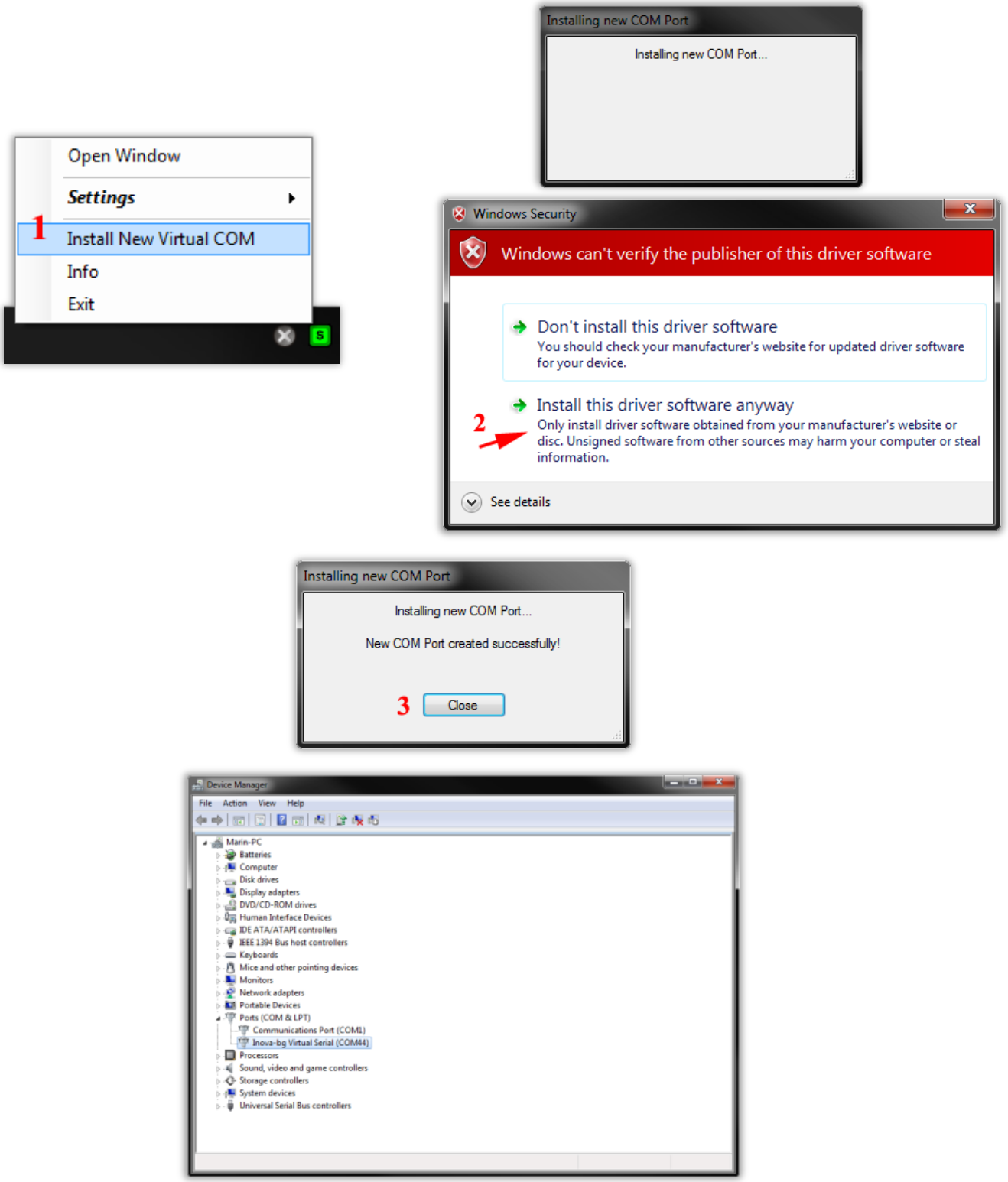


Finally, you will be given a list of startup settings that you can change. The one we are looking for is “Disable driver signature enforcement”. To choose the setting, you will need to press the F7 key.



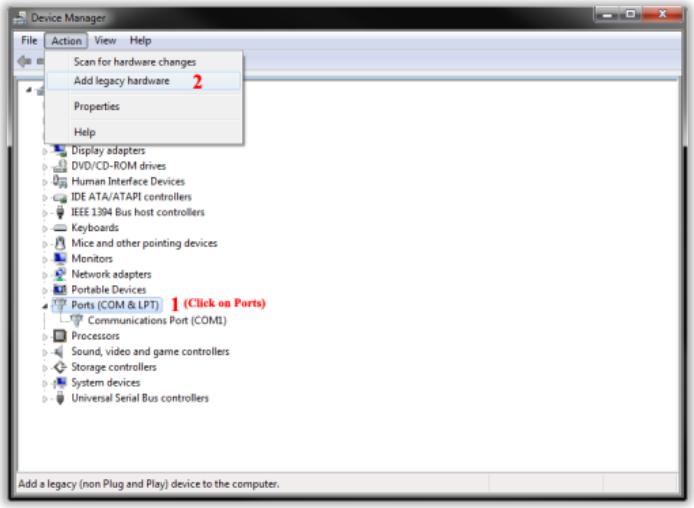
7.2. Driver Installation (Automatic)

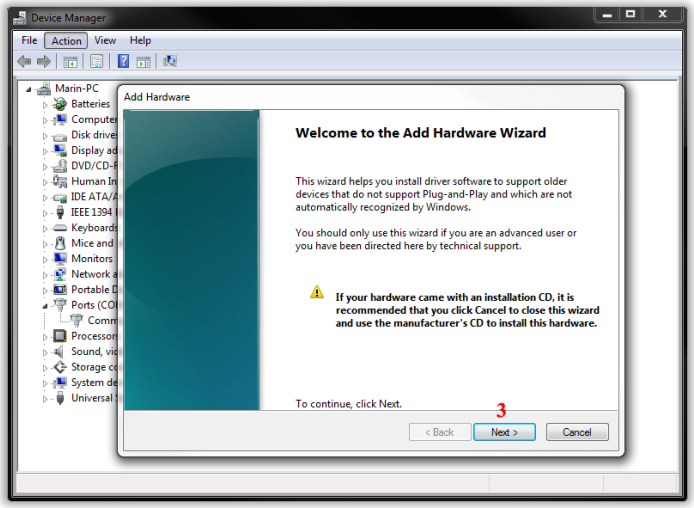
Start the Server tau as Administrator and follow the steps:

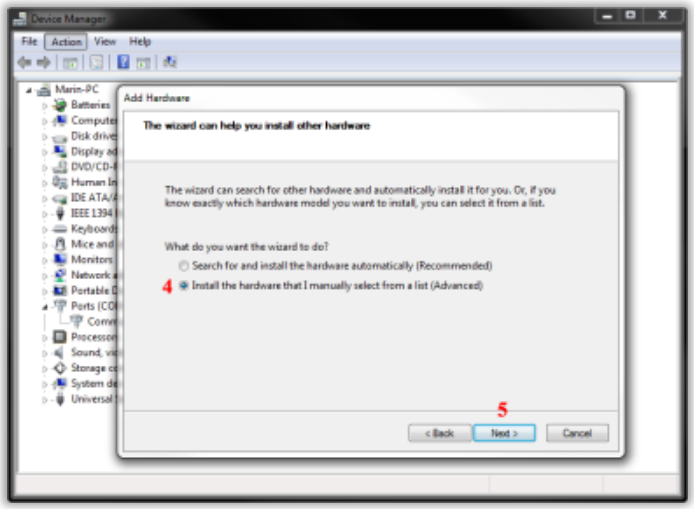


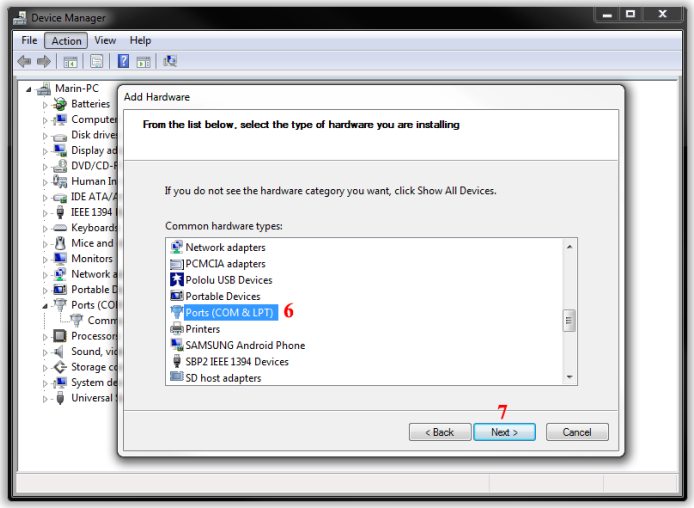
7.3. Driver Installation (Manual)

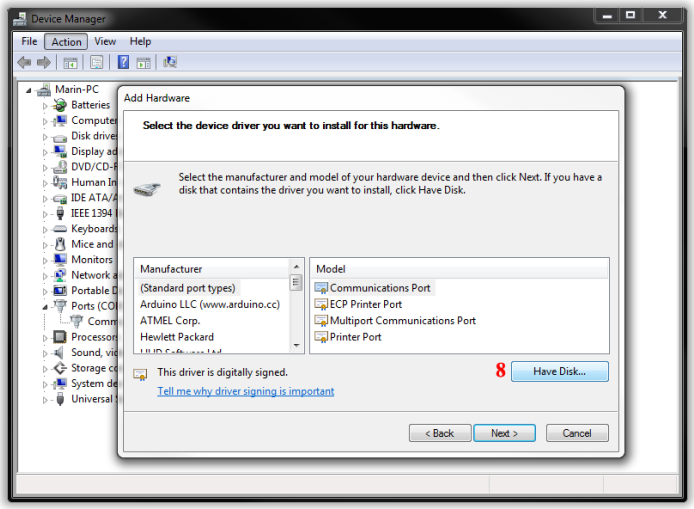
If automatic installation cannot successfully install the driver please try to install it manually by following the steps:

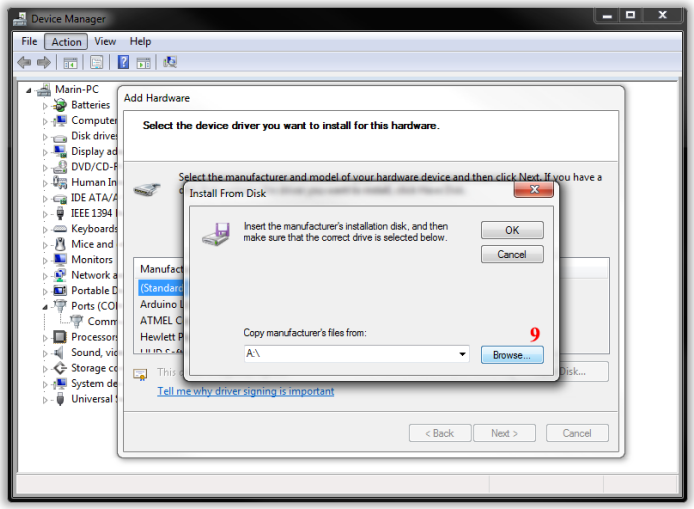


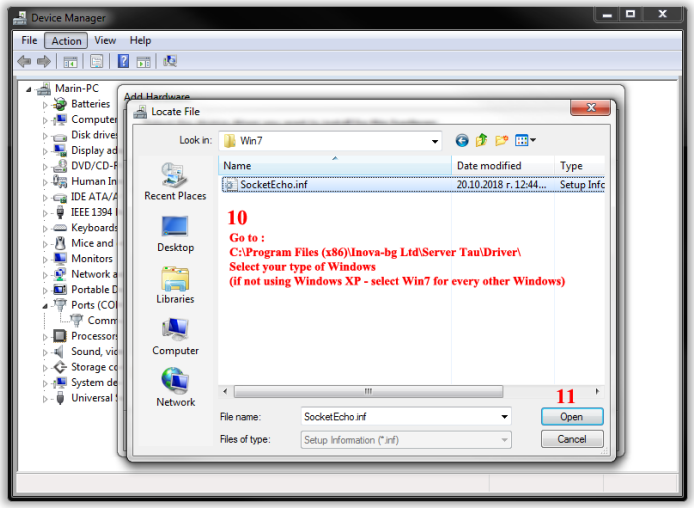


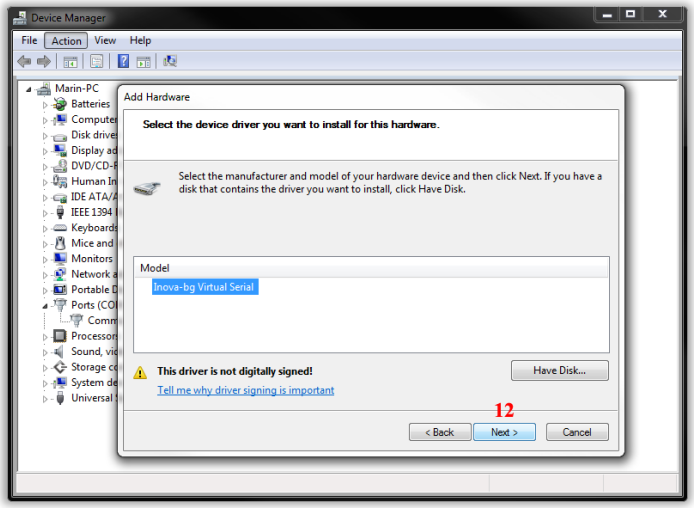


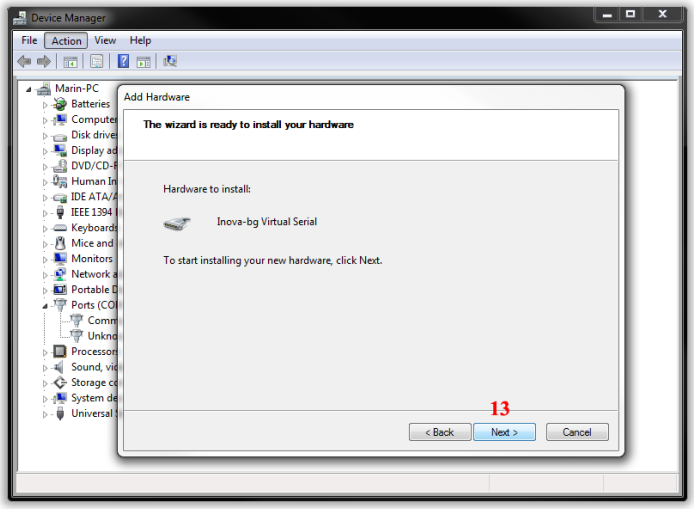


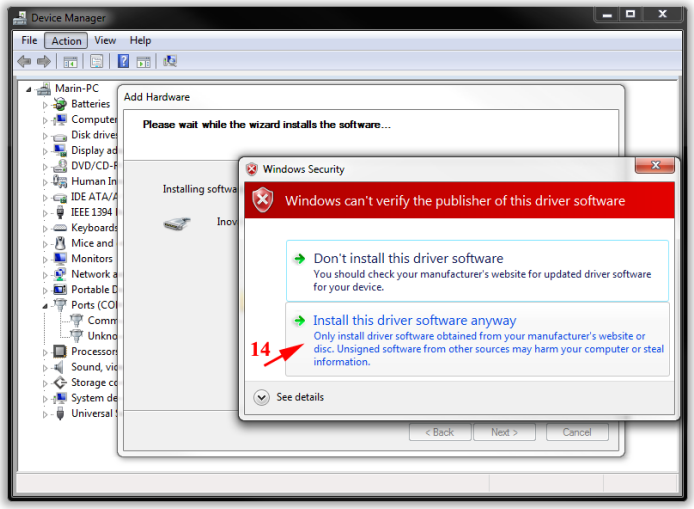


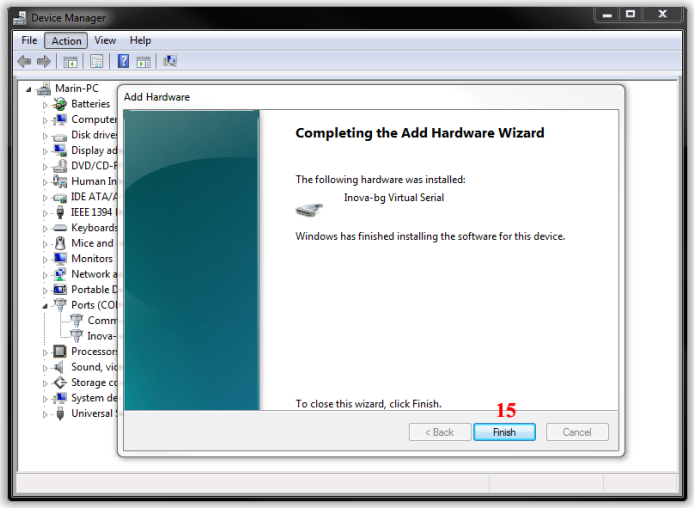


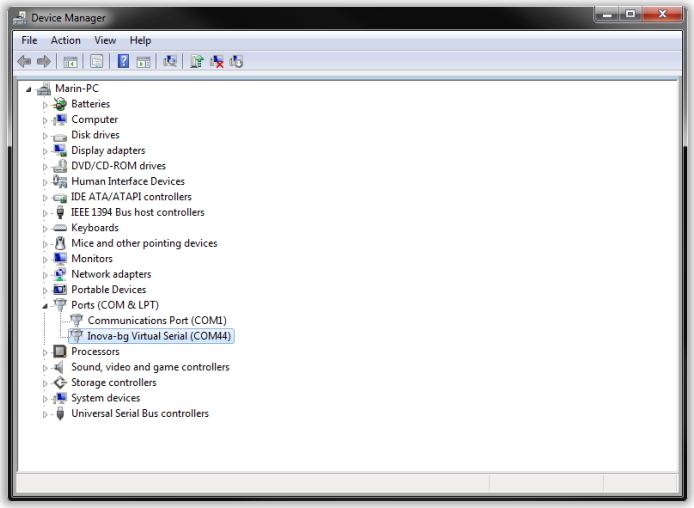

Device Manager
Locate File
Win7
SocketEcho.inf
10
Go to :
C:\Program Files (x86)\Inova-bg Ltd\Server Tau\Driver\
Select your type of Windows
(if not using Windows XP - select Win7 for every other Windows)
11
Open
Cancel


Device Manager
Add Hardware
Select the device driver you want to install for this hardware.
Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.
Model
Inova-bg Virtual Serial
This driver is not digitally signed!
Tell me why driver signing is important
Have Disk...
12
< Back
Next >
Cancel


Device Manager
Add Hardware
The wizard is ready to install your hardware
Hardware to install:
Inova-bg Virtual Serial
To start installing your new hardware, click Next.
13
< Back
Next >
Cancel


Device Manager
Add Hardware
Please wait while the wizard installs the software...
Windows Security
Windows can't verify the publisher of this driver software
Don't install this driver software
You should check your manufacturer's website for updated driver software for your device.
Install this driver software anyway
Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information.
14
See details


Device Manager
Add Hardware
Completing the Add Hardware Wizard
The following hardware was installed:
Inova-bg Virtual Serial
Windows has finished installing the software for this device.
To close this wizard, click Finish.
15
< Back
Finish
Cancel


Device Manager
Marin-PC
Batteries
Computer
Disk drives
Display adapters
DVD/CD-ROM drives
Human Interface Devices
IDE ATA/ATAPI controllers
IEEE 1394 Bus host controllers
Keyboards
Mice and other pointing devices
Monitors
Network adapters
Portable Devices
Ports (COM & LPT)
Communications Port (COM1)
Inova-bg Virtual Serial (COM44)
Processors
Sound, video and game controllers
Storage controllers
System devices
Universal Serial Bus controllers