

# TECHNICAL NOTE

## TruPortal 1.5 Upgrade Troubleshooting Guide

Release Date: 11/27/2013

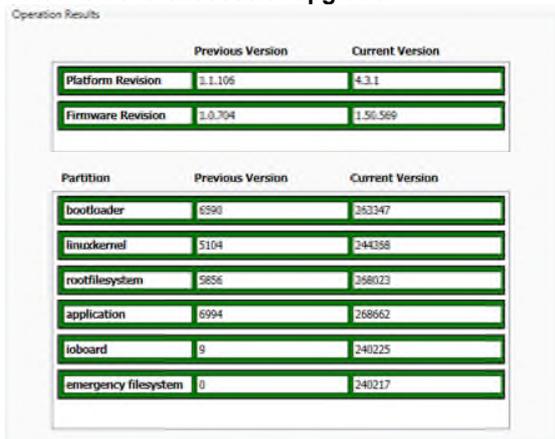
### Subject

This document describes how to troubleshoot and resolve unsuccessful firmware upgrades from TruPortal 1.0 to TruPortal 1.5, or from goEntry 3.0 to TruPortal 1.5. Alternatively to following the steps outline here, you may contact Technical Support.

### Overview

Although great care has been taken to make the process of upgrading from TruPortal 1.0 or goEntry 3.0 to TruPortal 1.5 as easy and smooth as possible via the “Panel Upgrade Wizard”, there are situations when the Upgrade Wizard fails to complete all steps. Possible reasons include failure to carefully follow the upgrade instructions, sudden loss of network connectivity or unexpected loss of power during the upgrade.

#### Indication of a successful upgrade:

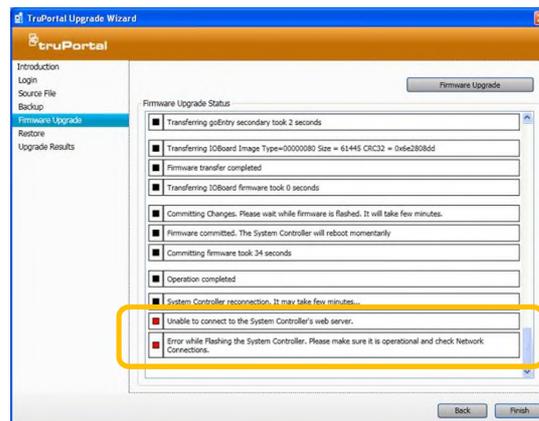


	Previous Version	Current Version
Platform Revision	3.1.106	4.3.1
Firmware Revision	1.0.704	1.50.569

Partition	Previous Version	Current Version
bootloader	6398	263347
linuxkernel	5104	244398
rootfilesystem	5656	268023
application	6994	268662
ioboard	9	240225
emergency filesystem	0	240217

#### Signs of an unsuccessful upgrade (example):



After an unsuccessful upgrade, one or more of the following symptoms are typically observed:

- The System Controller can no longer be reached via its original static IP address that was configured on LAN Port #1, or via the built-in IP address of 169.254.1.200 via LAN Port #1 or #2.
- The System Controller does respond to “ping” and to <http://ip-address> or <https://ip-address> requests, but the web page displayed in the browser is not the expected TruPortal user interface.

**Note:** Lack of LED activity is not necessarily a sign of an unsuccessful upgrade. Starting with TruPortal 1.5, the LEDs on the System Controller circuit boards are only active when the enclosure tamper is active, i.e. when the Controller’s enclosure door is open, and the tamper switch not “jumpered” to mask this condition.

Recovery from unsuccessful upgrades is possible and involves the following steps. Note: these steps are not a substitute for using the new Panel Upgrade Wizard. The steps are not effective on systems where the Upgrade Wizard has never been used. **Please read the detailed instructions before proceeding. If you are not comfortable with carrying out the detailed steps, please contact Technical Support for assistance.**

**Step 1:** Follow the USB flash drive method explained below. You will need a FAT32-formatted USB flash drive.

**Step 2:** Follow the steps below to manually install the “default license” file. You will use the windows command prompt.

**Step 3:** Restore data and adjust IP address settings.

## Detailed recovery instructions:

Before you begin, read all steps and make sure you have all the required information and setup.

### Step 1 – perform firmware upgrade via USB Flash

- Use a USB flash drive, formatted for FAT32
- Copy the latest TruPortal 1.5 NGP.bin firmware file to the flash drive. This NGP.bin file is part of the TruPortal 1.5 firmware upgrade file package (e.g. TruPortal\_v1.50.0569\_Firmware\_and\_v521\_CD.zip)
- Power off the System Controller (disconnect the 12VDC battery backup, if applicable)
- Insert flash drive into one of the two USB ports.
- Press and hold the “Test” button on the small controller daughter board – the button is located right above the Ethernet address label.
- Power up the Panel. **It is critical that there is no sudden power loss after this point.**
- Wait until the red “SOM Status” LED turns on.
- 10 seconds later, release the “Test” button
- During the upgrade, there will be various LED activity. Specifically,
  - Green SOM Status LED: pattern of 2 quick flashes, followed by a pause.
  - Orange SOM Status LED: slow flash (1 second on, 1 second off)
  - Red SOM Status LED: off
  - SNAPP/RS485 LEDs: first one and then multiple, with a pattern of 2 quick flashes, followed by a pause
- At the end of this process (after about 5 minutes), the controller will reboot.
- The process (including reboot) is complete when the controller resumes normal LED activity (see additional note below):
  - Green SOM Status LED: on
  - Orange SOM Status LED: slow flash (1 second on, 1 second off)
  - Red SOM Status LED: off
  - Each SNAPP/RS484 LEDs: short flash once per second (cascade pattern)
- At this point, the IP address settings of your controller are typically as follows:
  - Ethernet Port 1: DHCP
  - Ethernet Port 2: 169.254.1.200 for upgrades from goEntry; 169.254.1.101 or 169.254.1.200 for upgrades from TruPortal 1.0; in some cases Port 2 may also be set for DHCP – see “IP addressing options” on page 4.

**Note:** Lack of LED activity is not necessarily a sign of an unsuccessful upgrade. Starting with TruPortal 1.5, the LEDs on the System Controller circuit boards are only active when the Controller is in an enclosure tamper condition, i.e. when the Controller’s enclosure door is open. If the enclosure tamper switch has been “jumpered” to mask this condition, all LEDs will be off.

## Step 2 – install the “default license” file

- To carry out this license file installation step, you must be able to communicate with your controller over Ethernet. Therefore, you must first determine which IP address can be used to reach the controller, and configure your PC/Laptop for a compatible address and netmask – see “[IP addressing options](#)” below.
- You will use the “ngpupgrade.exe” utility for this step. Locate the Panel Upgrade Wizard files, specifically the “PanelUpgradeWizard” folder. You need to know the exact location for the next steps. This may be a folder on your PC if you extracted files from the .ISO image, or this may be a specific drive letter that corresponds to the DVD drive in your PC.
- Locate the NGP.bin file (for example, “C:\temp\NGP.bin”). You need to know the exact location for the next steps.
- Open a windows command prompt: Press Start => select “Run...” => type *cmd* => press <enter>
- Once the command prompt window is open, navigate to the PanelUpgradeWizard folder.
- This typically involves a sequence of commands like the following in the case of a physical CD:
  - F:\ <enter>
  - cd PanelUpgradeWizard <enter>
- If your files are located inside a folder on your desktop rather than CD, this might involve the following steps:
  - C:\ <enter>
  - cd “c:\users\joe\desktop\TruPortal\_v1.50.0569\_Firmware\_and\_v521\_CD\PanelUpgradeWizard” <enter>
- Now run the following command – substitute IP address and path information according to your situation:
  - ngpupgrade -p <ip\_address> -l TruPortal\_def\_license.asc -f “<path\_to\_NGP.bin>”
  - Example:
    - ngpupgrade -p 169.254.1.101 -l TruPortal\_def\_license.asc -f “c:\temp\NGP.bin”
- This step is complete after the controller reboots and resumes normal LED activity. (Note: it takes approximately 3 minutes for the controller to complete its boot sequence)
- At this point, the IP address settings of your controller are still the same as prior to Step 2.

For sample output from the windows command prompt, please refer to the example at the end of this document.

### Step 3 – Restore data and adjust IP address settings

- Using the IP address that was used for Step 2, open the TruPortal web browser UI (<http://ip-address>)
- Confirm that the login dialog displays version 1.50.0569.
- Login as admin/demo
- Under System Administration => Backup/Restore, carry out a “Restore Database” operation and let the controller reboot for 3 minutes (if you are upgrading a new controller that did not have any cardholder or other information configured prior to the upgrade, you do not need to restore any database). **Make sure you know the admin password associated with this backup file that you are using.**
- Open the TruPortal web browser UI (<http://ip-address>) and login.
- The IP address of your controller is still the same as at the beginning of Step 3 (for example, DHCP on Ethernet Port 1 and 169.254.1.101 on Ethernet Port 2). However, the admin password as well as possible TCP port configuration is based on the database that was just restored (if applicable).
- If you do not get the login screen, close the browser, wait 1 minute and try again.
- If you have restored the database from a previous backup, confirm that there are no card formats configured where the number of bits on the card is the same, but the type of format is different. (Example: “26-bit RAW” and “26-Bit Wiegand w/ Facility Code” must not be active at the same time). Eliminate card formats which are not in use.
- If necessary, adjust the time zone and the date/time settings
- Now adjust the IP address settings according to the customer requirements, i.e. assign the correct static IP address. This only affects Ethernet Port 1 of the controller. Be sure to avoid IP addressing conflicts. After applying the changes the controller will reboot (3 minutes).
- If applicable, connect the controller’s Ethernet Port 1 back to the to the actual network infrastructure.
- To reconnect to the TruPortal web browser UI, you must adjust the IP address settings of your PC/Laptop so that it has a compatible IP address and netmask.

### IP addressing options

In order to carry out Steps 2 and 3 above, your PC/Laptop must be able to communicate with the controller. The controller’s original network settings (e.g. a specific static IP address configured for Ethernet Port 1) are lost as a consequence of Step 1 above (USB flash method), but the controller is always reachable via one of the following addresses / Ethernet ports

- 169.254.1.101 on Ethernet **Port 2** - PC configured for 169.254.1.1, netmask 255.255.0.0
- 169.254.1.200 on Ethernet **Port 2** – PC configured for 169.254.1.1, netmask 255.255.0.0
- Temporary IP address 192.168.0.251 on Ethernet **Port 1** – PC configured for 192.168.0.1, netmask 255.255.0.0

To enable the temporary 192.168.0.251 address, you must carry out the following steps. The temporary address will be valid only for the duration of one boot cycle. Every time the controller reboots (e.g. at the end of Step 2 above, or after the database restore operation during Step 3), the Ethernet Port 1 settings go back to their prior state, and the steps below must be carried out again to re-enable the temporary address. These additional reboot cycles make use of this temporary address less convenient and it should therefore be only a last resort. Use of one of the 169.254 addresses on Ethernet Port 2 is preferred.

- Power off the controller (including 12VDC backup battery, if applicable)
- Press & hold the “Config” button located in the corner of the small controller daughter board
- Power on the controller
- Wait for the red SOM Status LED to start flashing slowly
- Wait for the red SOM Status LED to start flashing rapidly – now release the “Config” button
- Let the controller finish its boot cycle (3 minutes)

Sample output from Step 2 (example assumes CDROM drive is located at f:\ and panel can be reached on

```
C:\>f:
F:\>cd PanelUpgradeWizard
F:\PanelUpgradeWizard>ngpupgrade.exe -p 169.254.1.101 -f "c:\temp\NGP.bin" -l TruPortal_def_license.asc
cygwin warning:
MS-DOS style path detected: c:\temp\NGP.bin
Preferred POSIX equivalent is: /cygdrive/c/temp/NGP.bin
CYGWIN environment variable option "nodosfilewarning" turns off this warning.
Consult the user's guide for more details about POSIX paths:
http://cygwin.com/cygwin-ug-net/using.html#using-pathnames

NGP.bin FW VERSION      = 4.3.1 - 1310141609 : R.26.0

goEntry FW VERSION      = 3.50 - 569 : D.0.0

Partition      bootloader:   Size = 114940, Version = 263347, CRC = 0xd4d47782, Offset = 0x00000200 CRC Is OK
Partition      kernel:       Size = 2244260, Version = 244268, CRC = 0x22736ec5, Offset = 0x0001c400 CRC Is OK
Partition      rootfs:      Size = 9830400, Version = 268023, CRC = 0x9913819e, Offset = 0x00240400 CRC Is OK
Partition      application: Size = 2490368, Version = 268662, CRC = 0xa774999b, Offset = 0x00ba0400 CRC Is OK
Partition      goentry:     Size = 8650752, Version = 0, CRC = 0xbaa6f22a, Offset = 0x00f4e000 CRC Is OK
Partition      io board:   Size = 61445, Version = 240225, CRC = 0x6e2808dd, Offset = 0x00e00400 CRC Is OK
Partition      emergency rootfs: Size = 1294336, Version = 240217, CRC = 0xc1276f00, Offset = 0x00e0f600 CRC Is OK
Partition      bootstrap:  Size = 10336, Version = 240214, CRC = 0xde9b2289, Offset = 0x00f4b600 CRC Is OK
Partition      goentry aux: Size = 15859712, Version = 0, CRC = 0xe39eeba2, Offset = 0x0178e000 CRC Is OK

Connecting to System Panel 169.254.1.101... Connected to Panel 169.254.1.101.
Connected in 0 seconds

Initiating FW update for: Panel License

Firmware update initiated
FW initialize took 8 seconds

Transferring License File Type=00000400 Size = 449 CRC32 = 0x270873e4
Firmware transfer completed
Transferring license took 1 seconds

Committing Changes. Please wait while firmware is flashed. It will take few minutes.
Firmware committed. The System Controller will reboot momentarily
Committing firmware took 0 seconds

Operation completed

F:\PanelUpgradeWizard>
```