

Procedure to update the controller firmware for PWR-ICE2



CAUTION ! Switch off and unplug all the audio equipments from the PWR-ICE2 before updating the firmware to avoid accidental damage to the equipments during the update process.

This file describes the steps required to update the firmware to the controller IC (not the DSP) for PWR-ICE2 device.

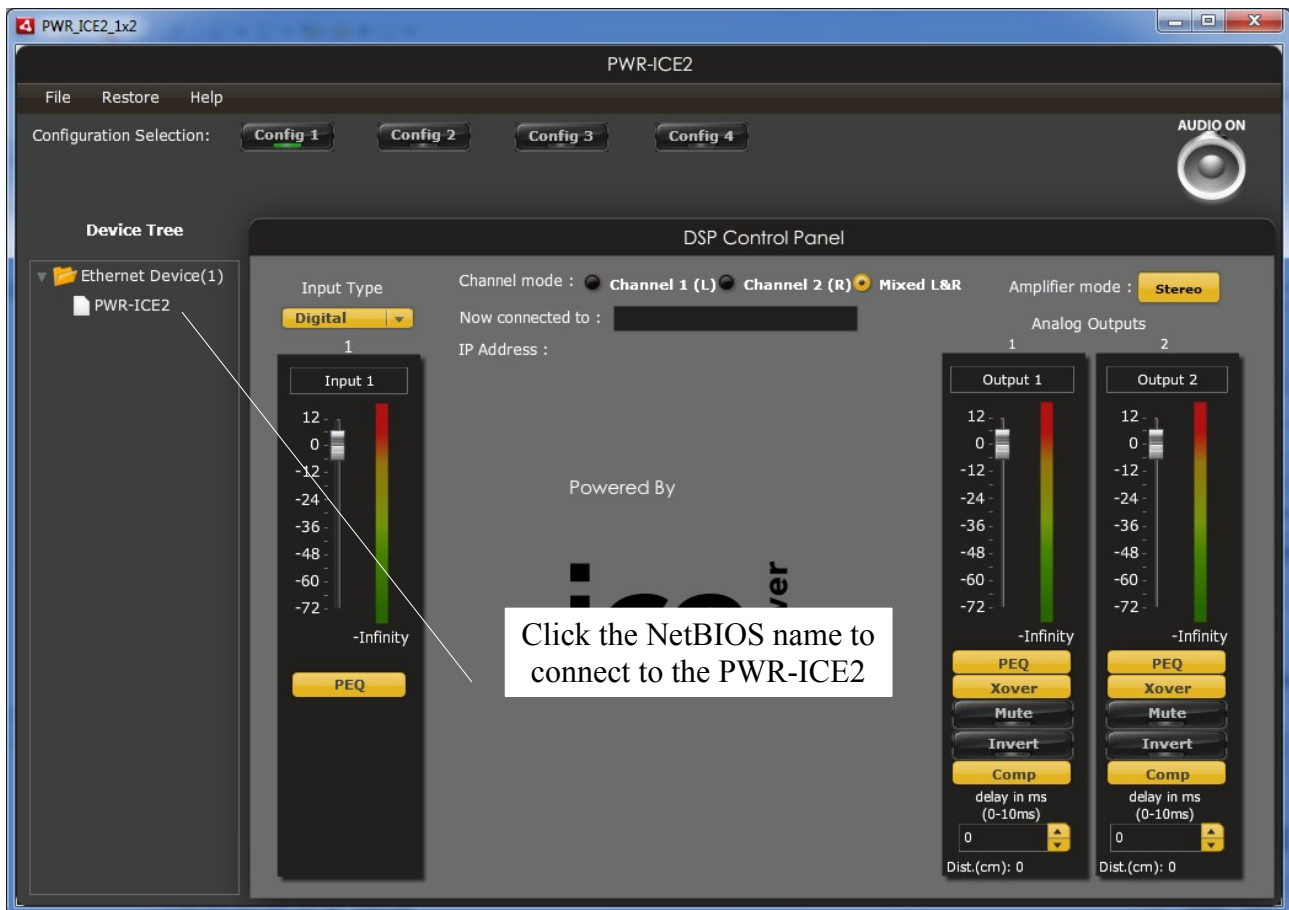
A tftp client is required in the PC to download the firmware. Most operating systems come with a TFTP client built in.

In Microsoft Windows or Mac OS X, this utility is named tftp

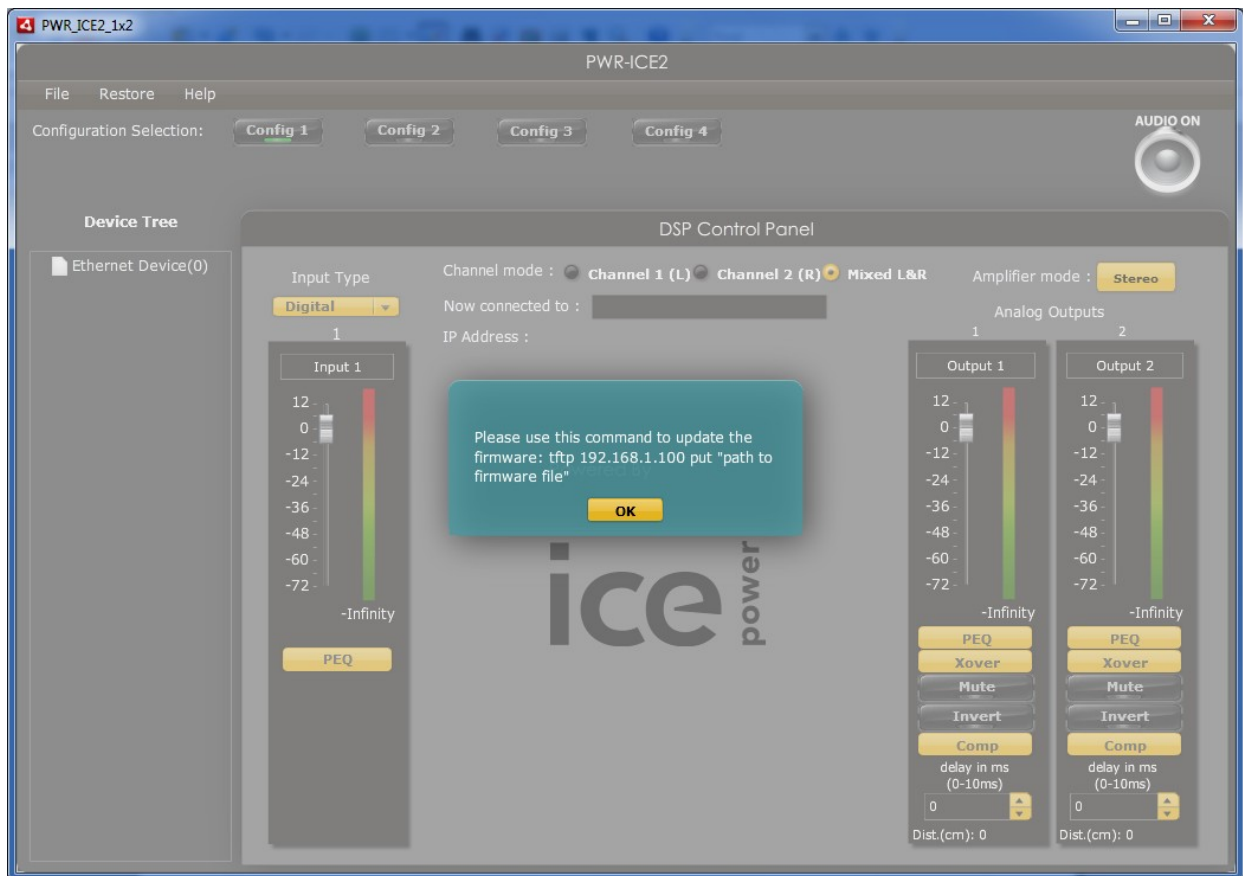
This utility is a very simple console application which can be used to download .hex file over the network to the device.

Tftp utility is disabled in Windows 7 by default, to turn it on, select: Control Panel -> Programs and Features -> Turn Windows features on or off -> TFTP Client (Note: check the checkbox to enable TFTP Client utility). Then, click the OK button.

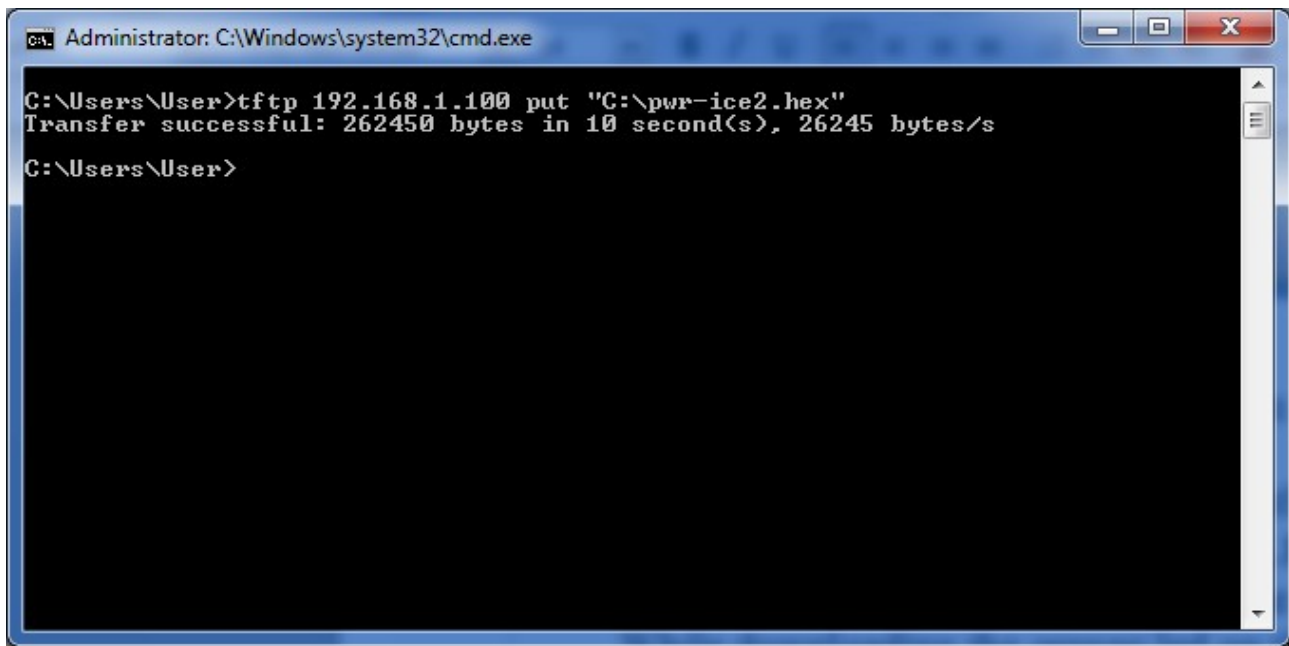
1. Connect the PWR-ICE2 device to the network through ethernet cable.
2. Power on the PWR-ICE2 device.
3. Open the PWR_ICE2 plugin installed on the PC. The PC should also be connected to the same network domain and DHCP should be used to assign ip address to PC and PWR-ICE2 device.
4. The NetBIOS name of the PWR-ICE2 will appear as an Ethernet Device under the Device Tree in the plugin. (If the name doesn't appear, click the Ethernet Device folder to expand it. The name will appear under the ethernet device folder)
5. Click the NetBIOS name listed under the ethernet device folder to connect to the device. (e.g. Click the name: PWR-ICE2 as shown in the below example)



6. The PWR-ICE2 device will be connected with its NetBIOS name and IP address displayed at the middle of the plugin.
7. On the menu bar, select Restore -> Upgrade Firmware, the device will go into bootloader mode with green led on the LAN port flashing.
8. The device will be disconnected and a pop-up showing: *Please use this command to update the firmware: tftp* will be displayed as shown below.



9. (For Mac users, please go to page 4, Using Mac OS X command-line Terminal to update firmware , step 9 – 12 here is for windows only) Open the command prompt and type in the command word as displayed in the pop-up in previous step.
path to firmware file is the absolute path to the firmware file located in the PC. For this example, type: **tftp 192.168.1.100 put "C:\pwr-ice2.hex"**
 And then hit Enter key to download the firmware to PWR-ICE2 device. While downloading, both green and orange led on the LAN port should light up.
10. The command prompt will output *Transfer successful* after 9~10 seconds, indicating the firmware was downloaded successfully.



```
Administrator: C:\Windows\system32\cmd.exe
C:\Users\User>tftp 192.168.1.100 put "C:\pwr-ice2.hex"
Transfer successful: 262450 bytes in 10 second(s), 26245 bytes/s
C:\Users\User>
```

11. Power off the PWR-ICE2 device. Wait for a few seconds until all leds (including led on the LAN port) go off. Then, power on the device again.
12. The NetBIOS name of the PWR-ICE2 should re-appear as an Ethernet Device under the Device Tree in the PWR-ICE2 plugin. Click the NetBIOS name to connect to it again.

Using Mac OS X command-line Terminal to update firmware

1. Download the firmware file (.hex file) and put it in your user folder (/Users/yourusername/).
2. Copy & paste the following text (for this example only, you should use correct IP address and hex file name for your setup) into a text editor:

```
connect 192.168.1.100
binary
rexmt 1
timeout 60
put pwr-ice2.hex
```

3. Open Applications > Utilities > Terminal , in the Terminal enter:

```
tftp
```

4. A "tftp>" command prompt will appear, on the tftp command line in Terminal, paste (Cmd+v) the text you copied. Hit Enter key to execute. After a while the prompt will print out the message: *Sent XX bytes in XX seconds*, which means the update is successful.

```
tftp> connect 192.168.1.100
tftp> binary
tftp> rexmt 1
tftp> timeout 60
tftp> put pwr-ice2.hex
Sent 262450 bytes in 12.0 seconds
```

5. Type "quit" in the command prompt and hit Enter key to exit tftp utility.

```
tftp> quit
```

6. Power off the PWR-ICE2 device. Wait for a few seconds until all leds (including led on the LAN port) go off. Then, power on the device again.
7. The NetBIOS name of the PWR-ICE2 should re-appear as an Ethernet Device under the Device Tree in the PWR-ICE2 plugin. Click the NetBIOS name to connect to it again.