SIS1100-eCMC
PCIe Configuration EEPROM
Modification Writeup

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Revision Table:

Revision	Date	Modification
1.00	15.03.2016	created

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1 Introduction

The SIS1100-eCMC card uses the PLX chip PEX 8311 as PCIe bridge. The PEX 8311 chip causes blues creen or “freezing” on many new platforms under Windows at boot time. This behavior can be observed on some pcie-slots but not on all pcie-slots.

PLX, now Avago Technologies (a Broadcom Limited Company), recommends a change of the default Power Management Capability configuration by a modification to the PEX 8311 register configuration read from the EEPROM.

This document will explain how to modify the EEPROM contents accordingly.

2 Required Software

The PLX SDK (Software Development Kit) is required. Any version starting from 6.31 is sufficient. The PLX SDK can be downloaded from Avago Technologies (now a Broadcom Limited Company) after free registration.
This instruction uses the PLX SDK version 6.5 (PLX_SDK_v6_50_Final_2011-09-30.exe), which you will get on the Struck DVD together with the PCIe Configuration file sis1100_pcie_eeprom_v3.eep.

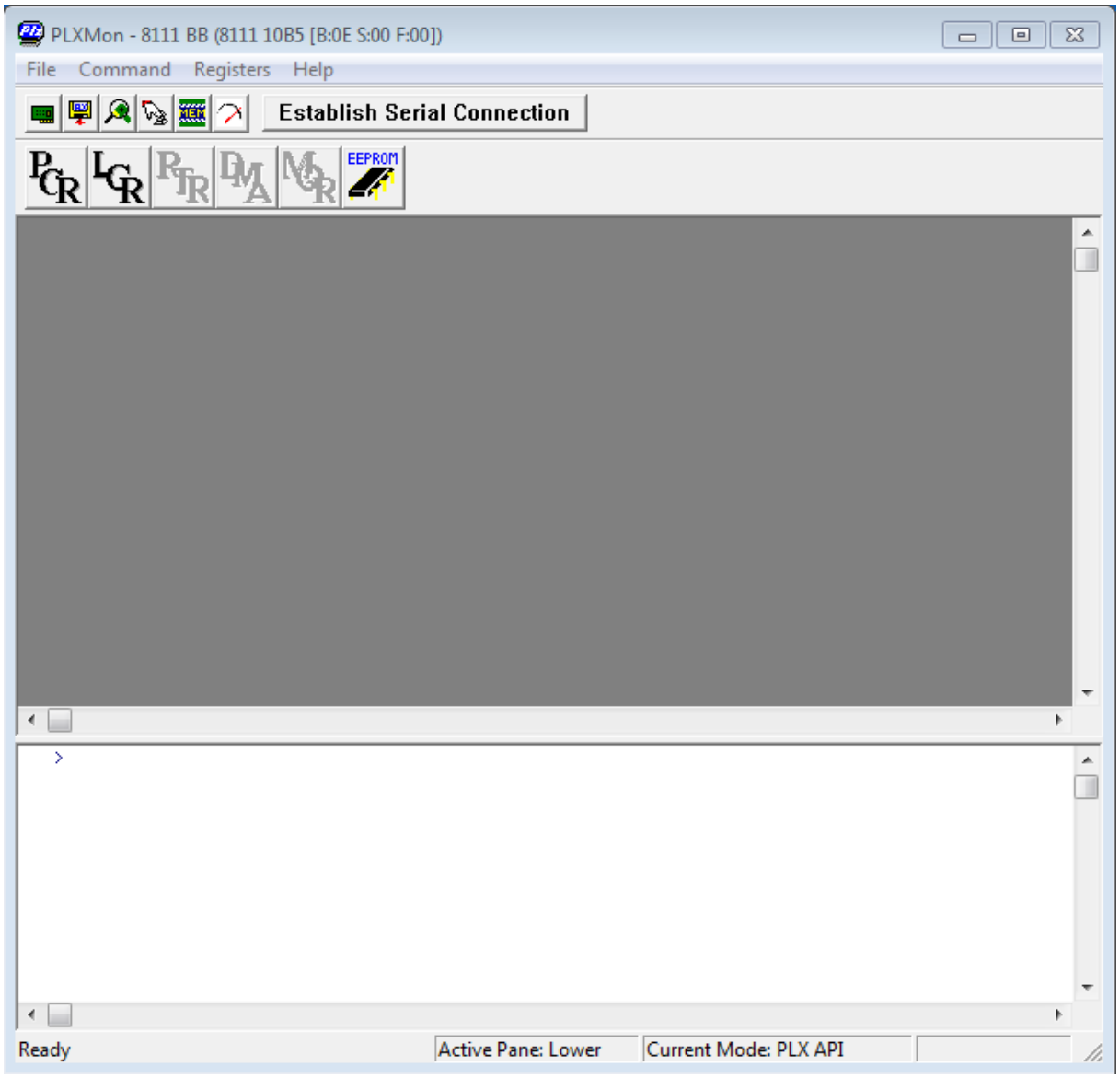
3 Installation

Install the SIS1100-eCMC card in a free PCIe Slot. In case that the PC shows a blue screen or freezes after power up you have to install the SIS1100-eCMC in the next free working PCIe slot.
Install PLX SDK (for example PLX_SDK_v6_50_Final_2011-09-30.exe).
We recommend to install the PLX SDK not on the PC which will be used later to operate the SIS1100-eCMC.
When asked for a license key, skip the dialog. No licence is required for modifications to the EEPROM.

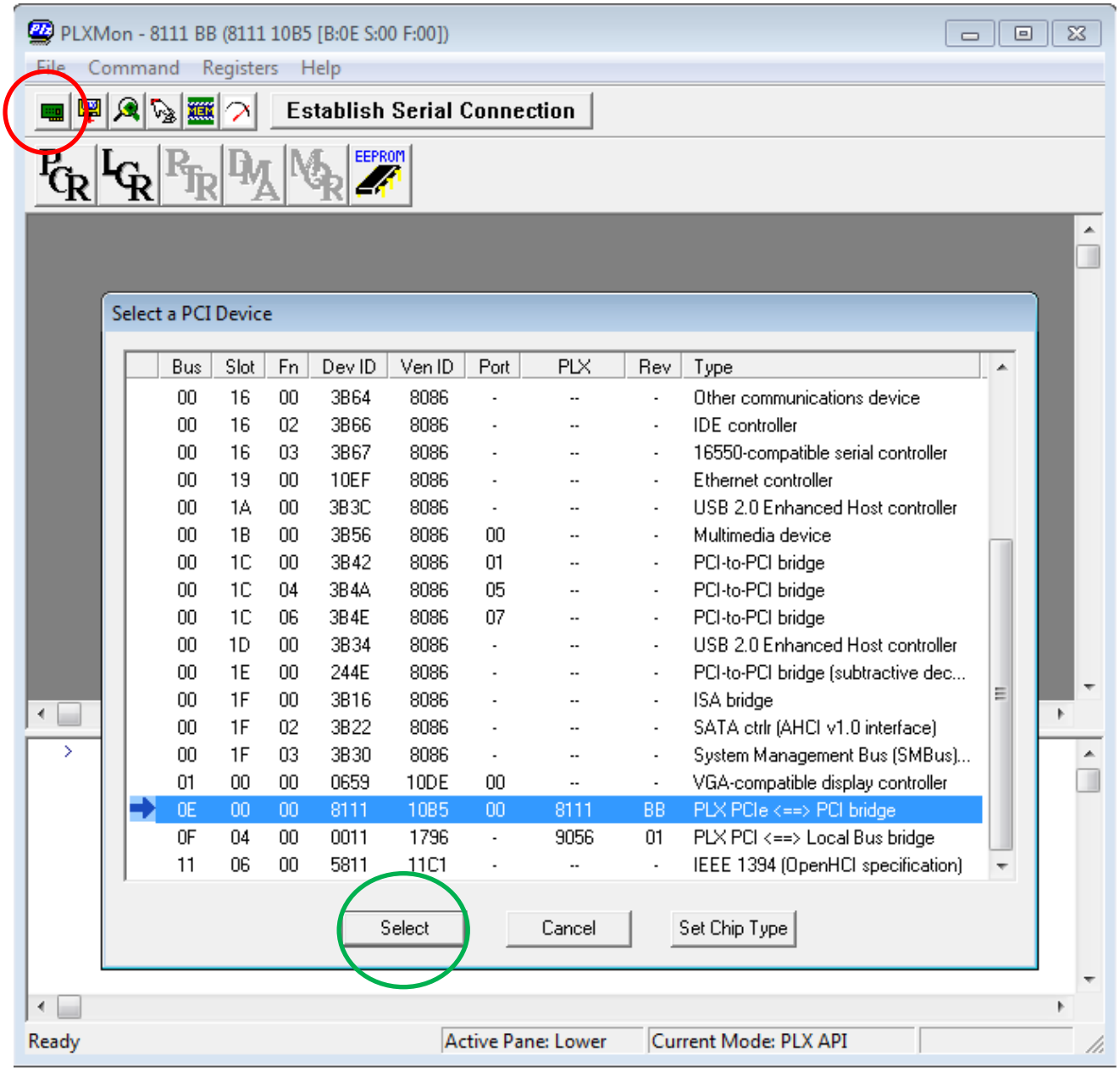
4 EEprom Modification

Start the ‚PlxMon' tool via the start menu.
Start -> Programs -> PLX SDK<version> -> PlxMon.

You should see a window like in the screen dump below:

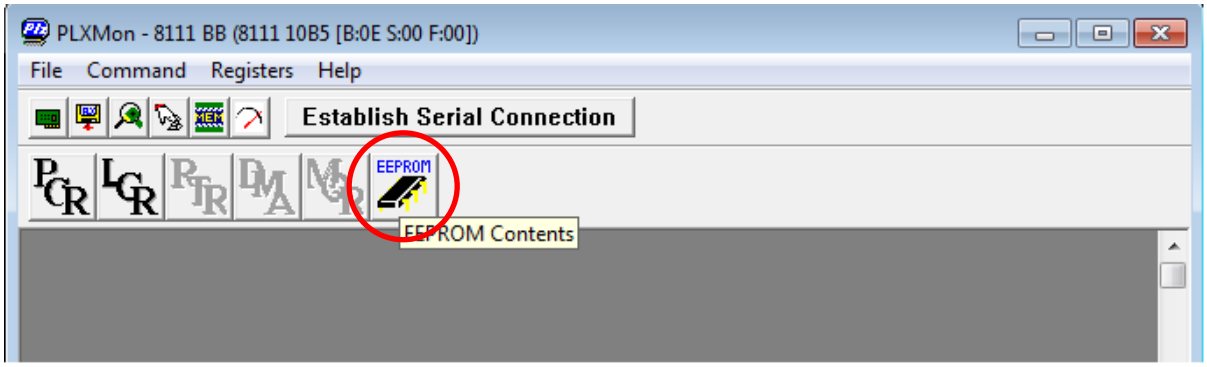


Select the SIS1100-eCMC PCIe bridge (PLX 8111), via the card selector dialog (red circle):

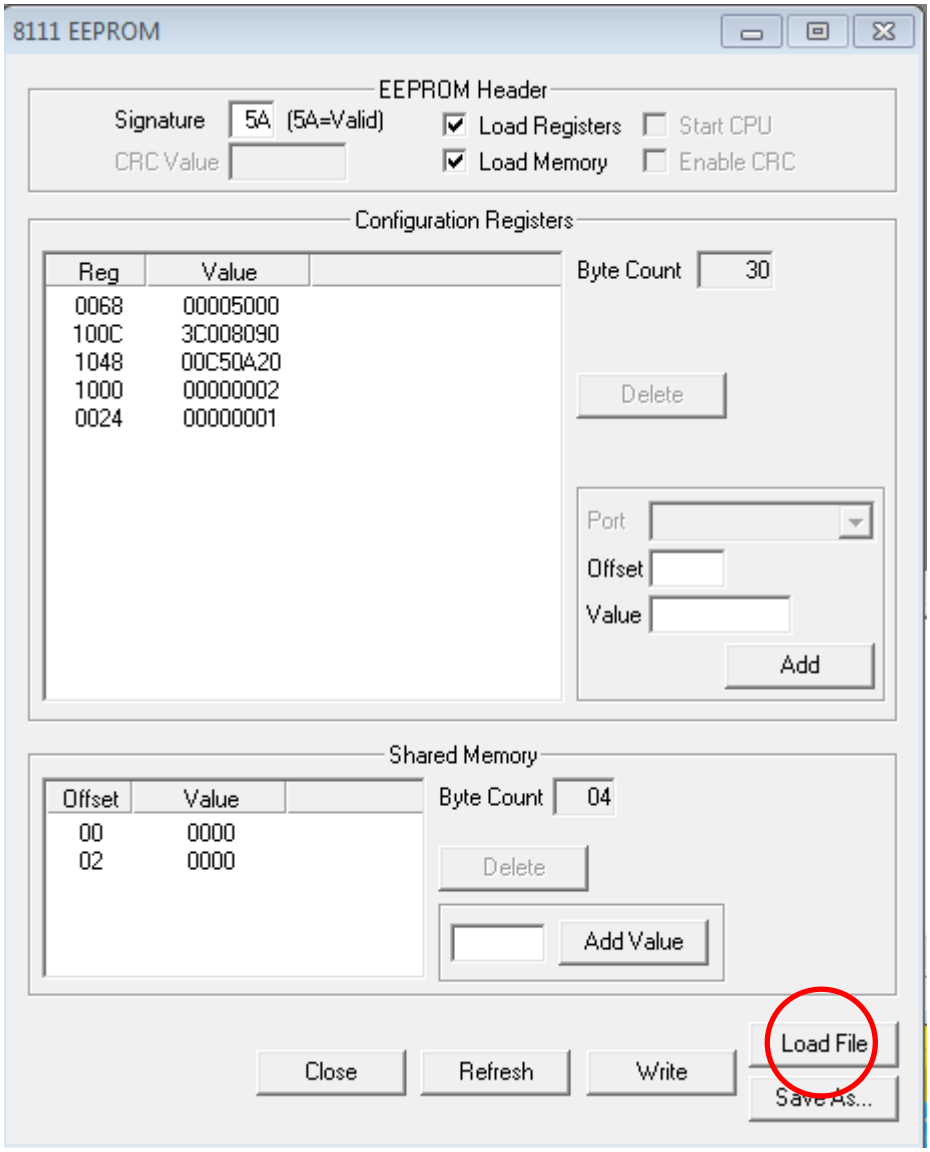


You will get a “Select PCI Device” window. Look for an entry with the ‘PLX’ attribute set to ‘8111’ (marked blue) and klick “Select” (green circle).

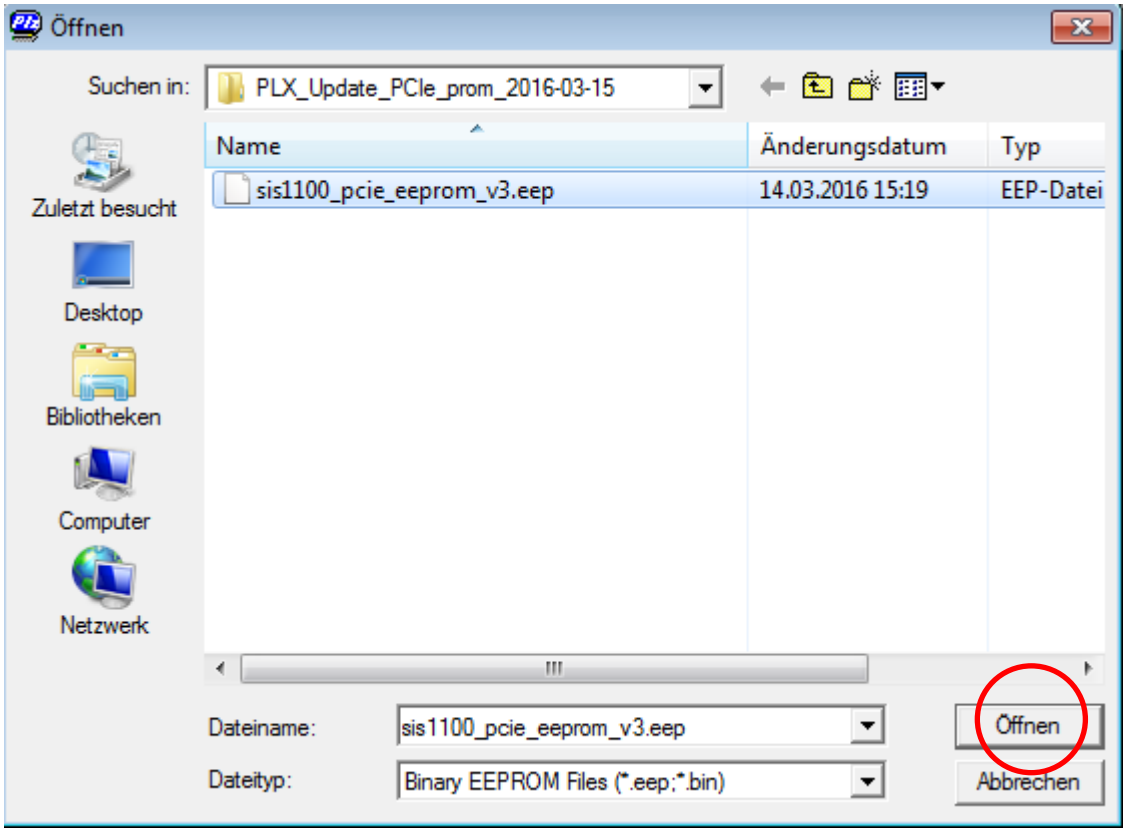
The “Select PCI Device” window will disappear.
Klick the ‘EEPROM’ button (red circle) to open the “8111 EEPROM” window:



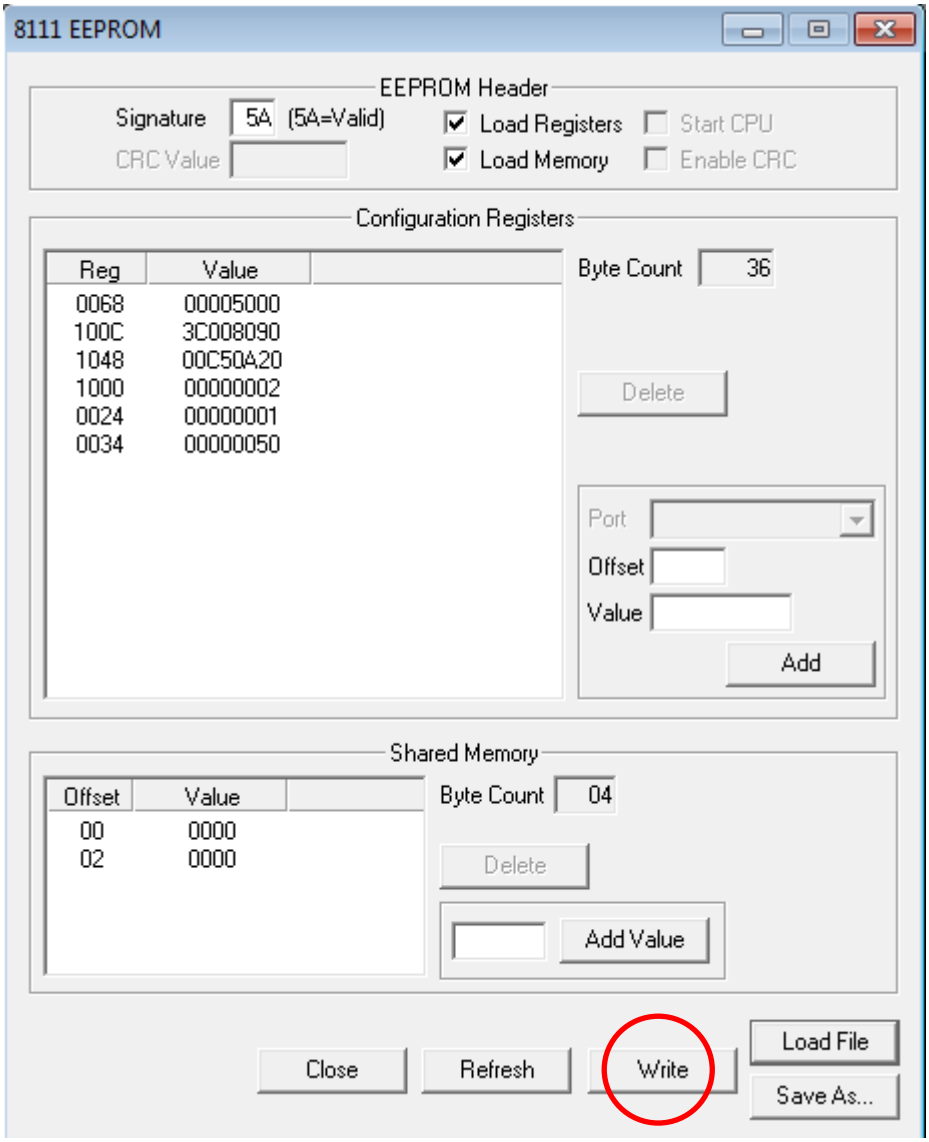
The “8111 EEPROM” window will open.
Klick the ‘Load File’ button (red circle) to load the EEPROM file sis1100_pcie_eeprom_v3.eep:



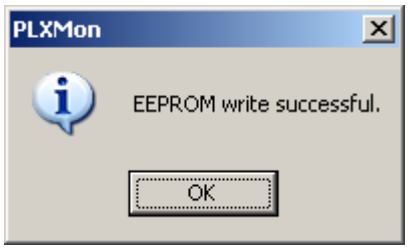
Select and open the EEPROM file sis1100_pcie_eeprom_v3.eep:



You will see the modified configuration list. The register " 0034" entry is new.
Klick the 'Write' button (red circle) to write the configuration list to the EEPROM.



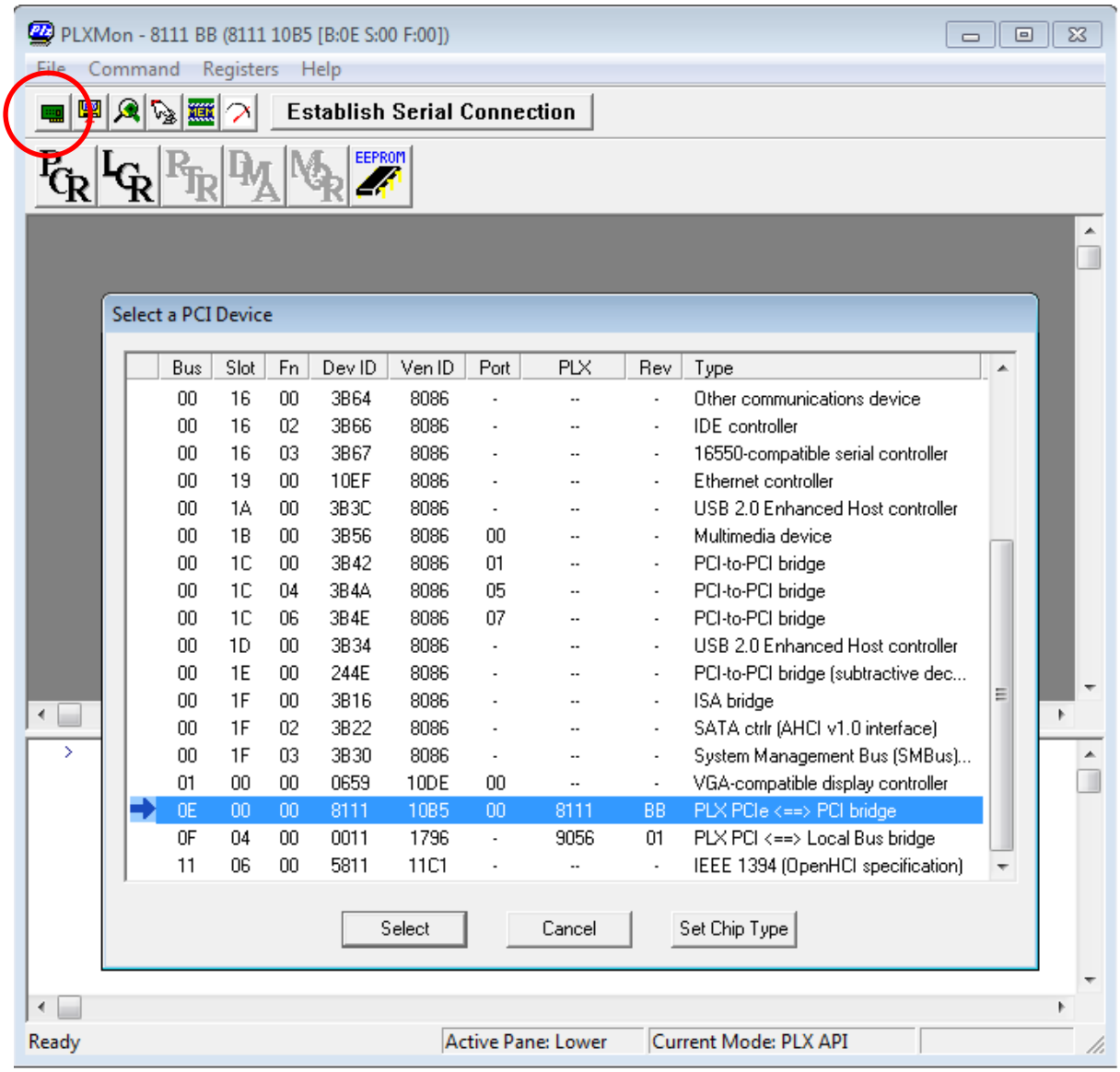
A confirmation dialog should appear:



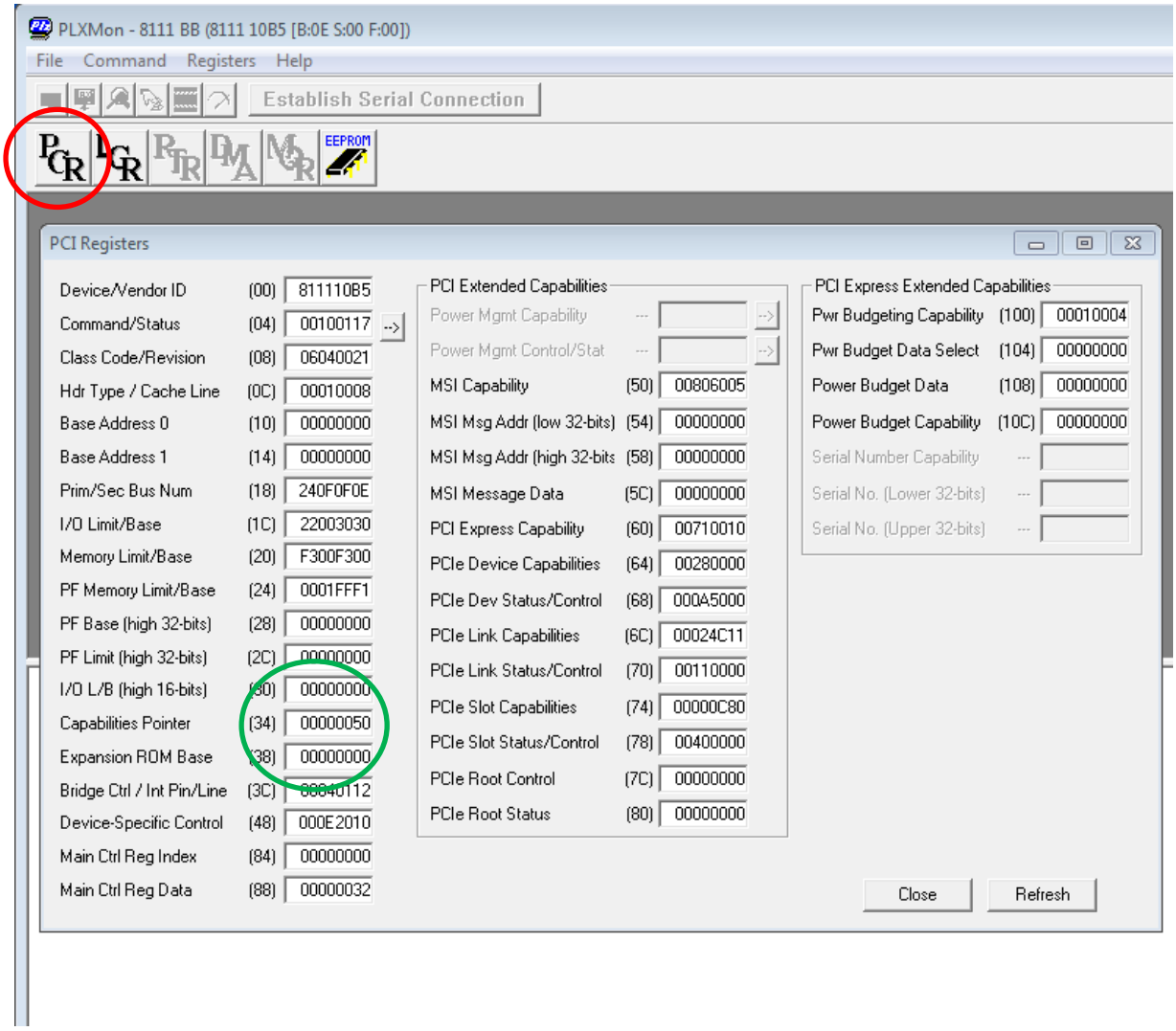
Reboot the system.

Start the ‚PlxMon' tool again after reboot to check the correct setting of the register 0x34.

Select the SIS1100-eCMC PCIe bridge (PLX 8111) as before:



Klick the ‘PCR’ button (red circle) to open the “PCI Registers” window and check the value of register 34 (green circle). The value must read 50.



Congratulations, your SIS1100-eCMC is ready for use now.