Xilinx / zynqmp-pspcie-epdma Public

snegi1983 Update README.md	c5c40e2 on Mar 17	5 commits
apps	Merge branch master of github.com/Xilinx/zynqmp-pspcie-epdma from …	7 months ago
common	Merge branch master of github.com/Xilinx/zynqmp-pspcie-epdma from …	7 months ago
driver	Merge branch master of github.com/Xilinx/zynqmp-pspcie-epdma from …	7 months ago
COPYING	Merge branch master of github.com/Xilinx/zynqmp-pspcie-epdma from …	7 months ago
LICENSE	Merge branch master of github.com/Xilinx/zynqmp-pspcie-epdma from …	7 months ago
Makefile	Merge branch master of github.com/Xilinx/zynqmp-pspcie-epdma from …	7 months ago
README.md	Update README.md	7 months ago
include.mk	Merge branch master of github.com/Xilinx/zynqmp-pspcie-epdma from …	7 months ago

README.md

##

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          Xilinx ZynqMP PS-PCIe End Point DMA Software README
```

##

The files in this directory provide Xilinx ZynqMP PS-PCIe End Point DMA drivers,and test application for testing DMA Transfers and Programmable Input Output functionality .

Operating System Support:

Operating System :

Distributor ID: Ubuntu

Description: Ubuntu 20.04.4 LTS

Release: 20.04

Codename: focal

HW Patform -X86

HW Requirement:

ZynqMP PS-PCIe End Point devices.

Directory and file description:

- driver/: This directory contains the ZynqMP PS-PCIe End Point DMA kernel module driver files.Source code in this directory is licensed under GNU General Public License.
- common/: This directory contains include file that is needed for compiling driver.Source code in this directory is licensed under BSD-style license and the GPL license (found in the COPYING file in the root directory of this source tree). You may select, at your option, one of the above-listed licenses.
- apps/: This directory contains example application software files to test the provided kernel module driver for DMA Transfers and Programmable Input Output functionality . Source code in this directory is licensed under BSD-style license.
    - pci_pio_test.c : This application enable the user to test the Programmable Input Output functionality .
    - sync_test.c : This application enable the user to test Synchronous DMA Transfer functionality.
- LICENSE : This file contains BSD license.
- COPYING : This file contains GNU GPL license.

Usage:

- Clone the directory on ubuntu machine to which ZynqMP PS-PCIe End Point card is connected. git clone git@github.com:Xilinx/zynqmp-pspcie-epdma.git
- Change directory to the cloned directory.

  cd zynqmp_ep_ps_pcie_dma
- Compile kernel module driver and application.

  make
- install the kernel module driver.

  sudo make insert
- Change permission ps_pcie* nodes ,so that application can run without sudo permission

  sudo chmod 777 /dev/ps_pcie*
- Test App - DMA Transfers Application

  cd apps

  ./simple_test -c 0 -a 0x100000 -l 1024 -d s2c

  ./simple_test -c 1 -a 0x100000 -l 1024 -d c2s

  ```
  -c option specifies channel number.
  -a option specifies end point address.
  -l option specifies packet length.
  -d option specifies transfer direction. It can be either s2c or c2s.
  ```
- Test App - Programmable Input Output

  cd apps

  ./pio_test -o 0x0 -l 64

  ```
  -o option specifies offset at PCI BAR 2.
  -l option specifies length of data to be written and read back.
  ```
- Uninstall the kernel module

  sudo make remove
- Clean Driver and Application

  make clean

Frequently Asked Questions

```
Q: How do I modify the PCIe Device IDs recognized by the kernel module driver?
A: The driver/ps_pcie_dma.c file constains the pci_device_id struct that identifies
   the PCIe Device IDs that are recognized by the driver in the following format:
   { PCI_DEVICE(<VENDOR ID> , <DEVICE ID>), },
   Add, remove, or modify the PCIe Device IDs in this struct as desired.
   Then uninstall the existing kernel module, compile the driver again, and re-install the driver.
```

About

No description, website, or topics provided.

Readme

Unknown, GPL-2.0 licenses found

0 stars

0 watching

0 forks

Releases

No releases published

Packages

No packages published

Contributors 2

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Languages

C 97.6% Makefile 2.4%