



PSL Checkpoint Files for the CAPI SNAP Design Kit

Readme File

CAPI

Advance

Version 1.1
26 February 2018



© Copyright International Business Machines Corporation 2016, 2018

Printed in the United States of America February 2018

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at "Copyright and trademark information" at www.ibm.com/legal/copytrade.shtml.

The OpenPOWER word mark and the OpenPOWER Logo mark, and related marks, are trademarks and service marks licensed by OpenPOWER.

Other company, product, and service names may be trademarks or service marks of others.

All information contained in this document is subject to change without notice. The products described in this document are NOT intended for use in applications such as implantation, life support, or other hazardous uses where malfunction could result in death, bodily injury, or catastrophic property damage. The information contained in this document does not affect or change IBM product specifications or warranties. Nothing in this document shall operate as an express or implied indemnity under the intellectual property rights of IBM or third parties. All information contained in this document was obtained in specific environments, and is presented as an illustration. The results obtained in other operating environments may vary.

While the information contained herein is believed to be accurate, such information is preliminary, and should not be relied upon for accuracy or completeness, and no representations or warranties of accuracy or completeness are made.

Note: This document contains information on products in the design, sampling and/or initial production phases of development. This information is subject to change without notice. Verify with your IBM field applications engineer that you have the latest version of this document before finalizing a design.

This document and the files listed in this document as components, if any, are intended for development of technology products compatible with Power Architecture®. You may use this document and any files listed in this document as components, for any purpose (commercial or personal) and make modifications and distribute; however, modifications to this document or any files listed in this document as components may violate Power Architecture and should be carefully considered. Any distribution of this document or the files listed in this document as components, if any, or their derivative works shall include this Notice page including but not limited to the IBM warranty disclaimer and IBM liability limitation, and all copyright notices, intellectual property notices, acknowledgments of contributions, and confidentiality notices of any party. No other licenses (including patent licenses), expressed or implied, by estoppel or otherwise to any intellectual property rights are granted by this document.

THE INFORMATION CONTAINED IN THIS DOCUMENT IS PROVIDED ON AN "AS IS" BASIS. IBM makes no representations or warranties, either express or implied, including but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement, or that any practice or implementation of the IBM documentation will not infringe any third party patents, copyrights, trade secrets, or other rights. In no event will IBM be liable for damages arising directly or indirectly from any use of the information contained in this document.

IBM Systems
294 Route 100, Building SOM4
Somers, NY 10589-3216

The IBM home page can be found at ibm.com®.

Version 1.1
26 February 2018



Software License Agreement

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of IBM nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL IBM BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Revision Log

Each release of this document supersedes all previously released versions. The revision log lists all significant changes made to the document since its initial release. In the rest of the document, change bars in the margin indicate that the adjacent text was modified from the previous release of this document.

Revision Date	Pages	Description
25 February 2018	—	Version 1.1.
	5	Updated the Xilinx Vivado software version to 2017.4 in the <i>Description</i> .
	5	Updated the URL for CAPI and SNAP information in the <i>Description</i> .
14 April 2017	—	Initial release (version 1.0).



Description

Most computational accelerator systems use PCI Express (PCIe) to connect to the main processor units via the I/O subsystem. The IBM® Coherent Accelerator Processor Interface (CAPI) provides an alternative that removes the complexity and overhead of the I/O subsystem to enable higher system performance.

The CAPI storage, network, analytics programming (SNAP) enablement framework further simplifies FPGA accelerator development. Developed by members of the [OpenPOWER Accelerator Working Group](#), this framework:

- Enables application programmers to embrace FPGA acceleration and all of CAPI's technology benefits.
- Places the accelerated compute engines, or FPGA “actions,” closer to the data to provide higher performance.

The SNAP framework will soon be available as an open-source enablement environment on GitHub at <https://github.com/open-power/>

The PSL checkpoint files provided by IBM are binary input. The files must be used with Xilinx Vivado software version 2017.4. They are intended for accelerators built using the SNAP framework and an FPGA card supported for CAPI and SNAP on OpenPOWER systems.

For more information about CAPI and SNAP, see:

<https://developer.ibm.com/linuxonpower/capi/snap/>

Components

PSL checkpoint (.dcp) files	The checkpoint files provided by IBM are found in the same location as this readme file.
-----------------------------	--

SNAP framework	Soon, the SNAP framework environment can be freely cloned from https://github.com/open-power/
----------------	--

For early access to SNAP, contact capi@us.ibm.com.

Note: The SNAP README.md describes where to put the PSL checkpoint file for a particular FPGA card and how to tell SNAP which checkpoint to use.