

## The SOC PCIe-X-8K PCIe Card

### Product Description

The SOC PCIe-X-8K board is a versatile FPGA PCIe card that is equipped with two Zynq-7045 FPGAs, and 40Gb of DDR3 memories. A SOC SoM module with another Zynq-7045 or Xilinx Ultrascale FPGA can also be added to the PCIe-X-8K to increase the FPGA and DDR capacity.

The PCIe-X-8K board has a PCIe connector that supports up to 4 PCIe 3.0 lanes with a total bandwidth of 34Gbps. The PCIe-X-8K also has a large number I/O ports, which make it adaptable for many different applications, especially PCIe accelerations, video/audio, Internet, and Ethernet communications.

The PCIe-X-8K can be used with or without SOC I/O drivers, but, the SOC driver firmware makes the board ready to use (plug-and-play) which saves a tremendous amount of times for developers. The SOC PCIe FPGA firmware and host PCIe driver is a complete system which enables the data communications between the host and the FPGAs on the PCIe-X-8K card.

While the PCIe-X-8K can be used to develop and deliver applications related to PCIe, such as acceleration card for AI applications, SOC has developed acceleration PCIe cards for H.264/H.265/MPEG2 encoding, decoding, and transcoding applications. SOC also customizes the acceleration cards to meet the customer requirements.

### Key Features

- Two Xilinx Zynq—7045 FPGAs
- 40Gbit DDR3 Memory
- SOC SoM or MPEG Codec Module
- Two HDMI inputs and one output
- 4x12G SDI ports for either inputs or outputs
- Tri-Speed Ethernet (10/100/1000Mbps)
- 4 lanes of PCIe

### Applications

- PCIe acceleration card
- Video compression and transmission for 8K resolution or multiple HD/4K channels
- Video receiver and decompression
- Video transcoding
- Others

### SOC Video Acceleration Card

- H.264/H.265 Encoder PCIe acceleration card
- H.264/H.265 Decoder PCIe acceleration card
- H.264/H.265 Transcoder PCIe acceleration card
- Others, please contact SOC

### PCIe-X-8K Top View

