

EX-700

EX-Series Backplane (PCIe, Gen 3)

OVERVIEW

The EX-700 Backplane is based on a fully-switched 8GB/s, x16 PCI Express Gen 3 Bus from the host, with x8 PCIe Gen 3 buses to each AC-series module mounted on the board. The EX-700 accommodates up to six single-wide AC-Series modules and forms the foundation of Pico Computing's scalable and upgradeable architecture.

APPLICATIONS

Use a single EX-700 backplane as a server or workstation accelerator card, or scale up multiple EX-700 backplanes in Pico Computing's SC6 cluster for massively parallel computing performance.

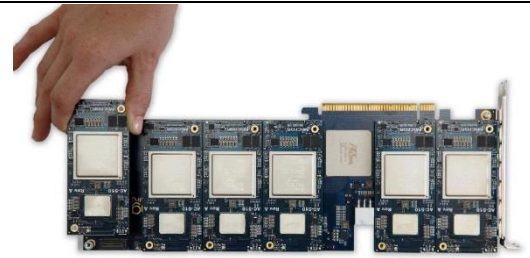


EX-700 Backplane shown with a single AC-510 module (purchased separately) attached for illustration purposes.

SPECIFICATION SUMMARY

- *Accepts up to six single-width M-Series FPGA modules*
- *Fully Switched Architecture:*
 - *x16 PCIe Gen 3 interface to host*
 - *x8 PCIe Gen 3 interface to each M-Series module*
- *FPGA power supplied separate from PCIe bus*
- *Separate FPGA loading bus*
- *Low signal noise design*
- *Air Cooled*

EX-700



Specifications

MECHANICAL

- 4.383 x 12.289 (inches)
- 111.315 x 312.128 (mm)
- Double-slot width with heatsink
- x16 PCIe slot required
- Holds up to six M- or AC-Series modules (M-505, M-506, AC-510)

ELECTRICAL

- x16 PCIe Gen 3
- Input Power: 12.0V 6-pin PCIe power connector

ENVIRONMENTAL

- Operating temperature: 0°C – 85°C
- Storage temperature: -20°C – 100°C

STATUS LEDs

- Upstream Host PCIe link indicator
- Downstream endpoint PCIe link indicators
- PCIe Switch Fatal Error indicator
- 13 tri-color status LEDs

QUALITY

- Manufactured to IPC610-Class 2 standard
- Designed and Supplied to ISO9001 certification
- RoHS compliant

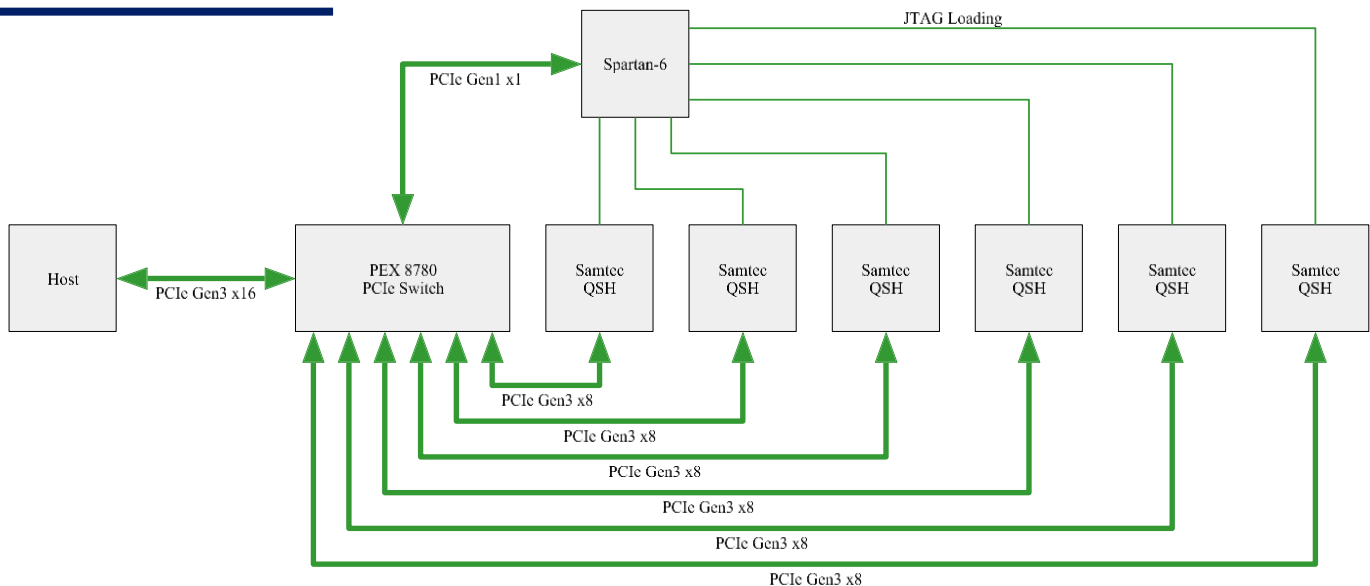
COOLING

- Delivered with custom heatsink
- Forced air cooling required

RUGGEDIZATION

- BGA underfill and conformal coating upon request

Configuration



NOTES:

1. FPGAs communicate via PCIe switch.
2. Host may access each FPGA individually.
3. PCIe switch enables FPGA-to-FPGA communication without host involvement.
4. The same or unique bitfile(s) may be loaded into each FPGA mounted on the EX-700.