XpressGX S10-FH800G Stratix® 10 FPGA PCIe board

- Full height PCIe board using Intel® Stratix® 10 GX 2800 KLE FPGA
- Designed for Acceleration and Low Latency Applications
- PCIe Gen3 x16

- 4 independent memory banks compatible DDR4 and QDR2+
- 4 QSFP-DD optical cages, 10/25/40/100 GbE
- Board Management Controller (BMC)
- 3 Ultraport Slim SAS connectors for storage solution

TECH SPEC

FPGA Configuration
- Stratix® 10 GX, H-tile
- USB2.0 Micro connector for JTAG, UART and BMC
- 1x NOR Flash 1GB quad SPI FPGA AS configuration

Memory
- On board memory module with mix memory type DDR4 or QDRII
- 0 to 4 banks DDR4, 8GBytes each, x72bits, up to 2400MT/s
- 0 to 4 banks QDRII+ 576Mbits each, x36bits, up to 550MHz

Communication Interfaces
- PCI Gen3 x16
- 4x QSFP-DD optical cage (4 x 8 XCVR : 28 Gb/s capable per XCVR link)
- QSFP-DD compatible with QSFP28 transceivers
- 3x Ultra port slim SAS connector (NVMe interface capable, SFF-8654, 1 interface 28 Gb/s capable 8 XCVR)

Operating Range : 0°C to 40°C
Storage Temp Range : 0°C to 70°C

Board Dimensions : 254mm x 111.15mm

Power
- Max 200W, delivered with a custom 1 slot PCIe passive heat-sink
- Powered by the PCIe slot and a 8-pins ATX eternal connector (additional power)

Other resources
- Programmable PLL oscillators (Si5342 & Si5344), output clocks frequency between 0.0001 MHz to 750 MHz to manage memory and transceivers clock frequency
- High precision oscillator, clock accuracy 20MHz- 0.05ppm for Precision Time Protocol (PTP) IEEE 1588
- One coax connector for PPS (pulse per second)
- Max10 USB Blaster on board, UART over USB interface
- Board Management Controller (BMC) for monitoring, NOR Flash and clock programming
- PMBus

Standards and compliance
- RoHS/REACH compliant
- UL certified
- ISO9001 Facility