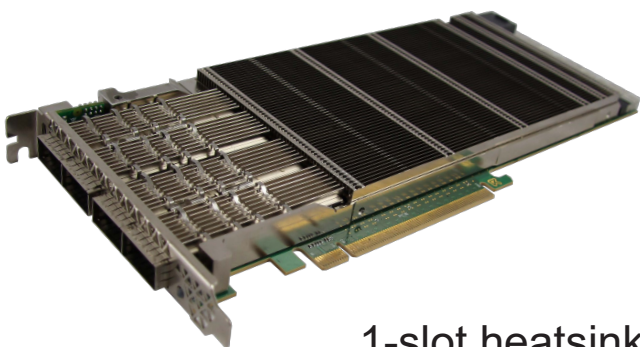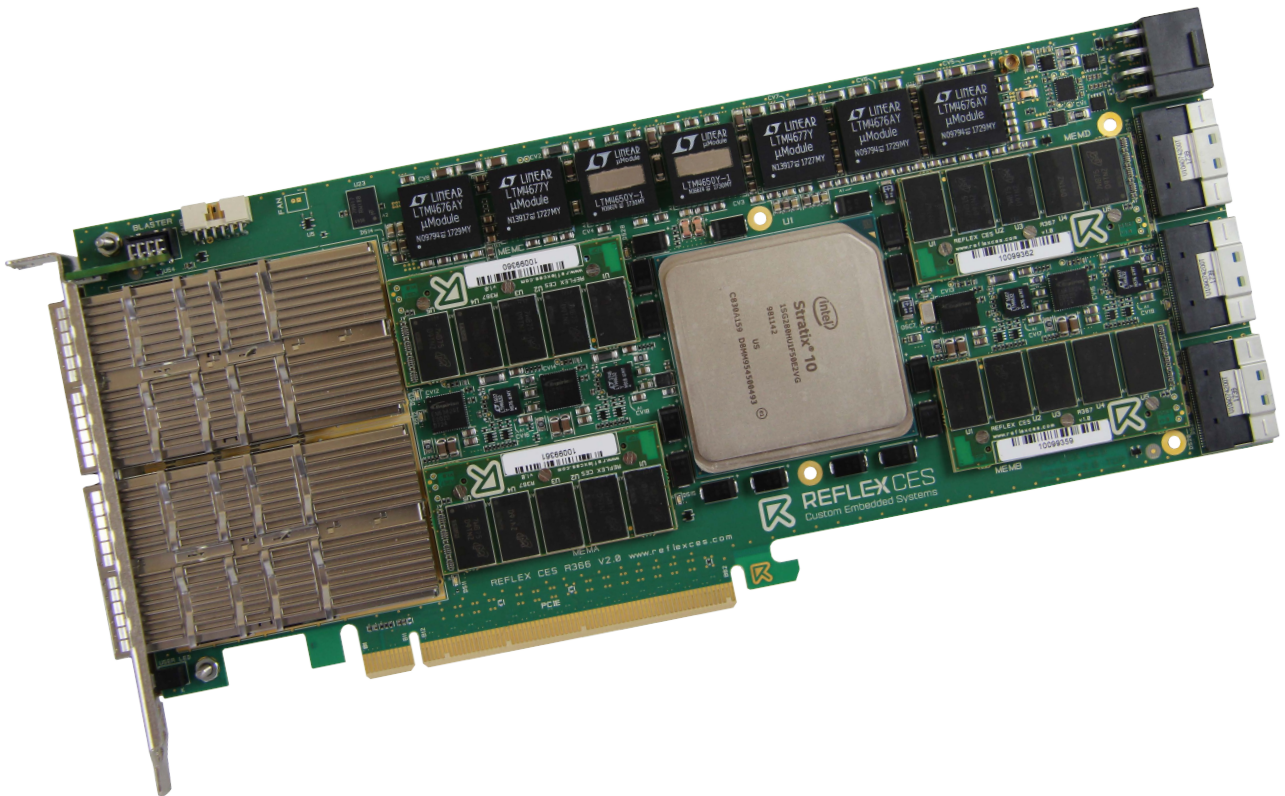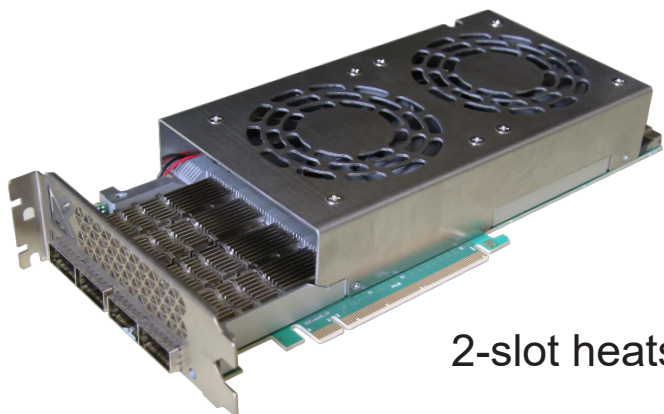# XpressGX S10-FH800G

Full height profile PCIe Network Processing FPGA board
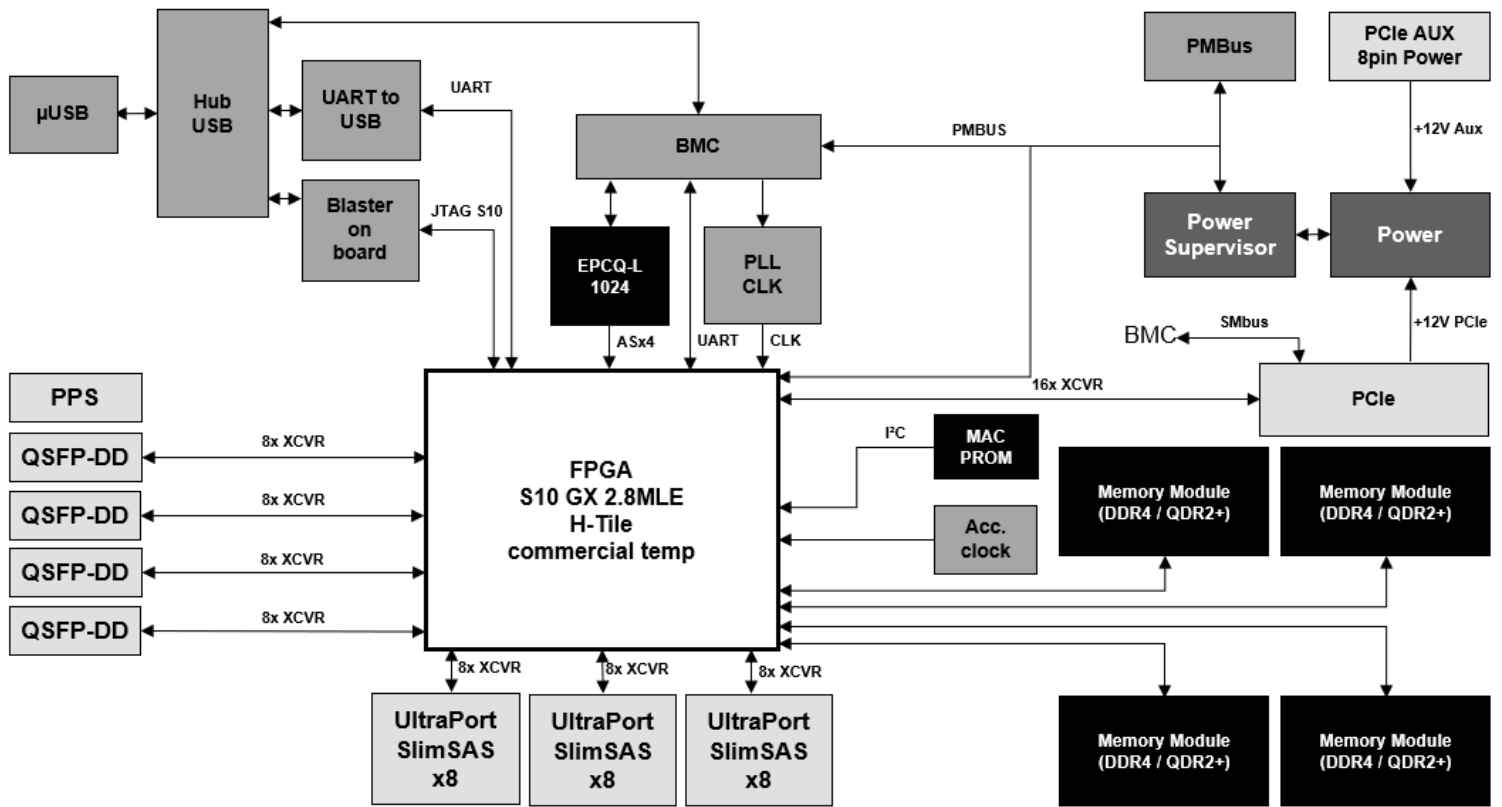

1-slot heatsink

2-slot heatsink

| Intel® Stratix® 10 GX 2800 KLE PCIe Gen3 x16 | ▪ 4x200 GbE ▪ 4x DDR4 or 4x QDR2+ ▪ Board-to-board connection | ▪ Networking Acceleration ▪ Security ▪ High Performance Computing |

Full Specifications

FPGA Configuration	• Stratix 10 GX, H-tile • USB2.0 Micro connector for JTAG, UART and BMC • 1x Nor Flash 1GBytes quad SPI FPGA AS configuration	**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 UltraPort SlimSAS connector (NVMe interface capable, SFF-8654, 1 interface 28 Gb/s capable 8 XCVR)
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	**Other Resources**	• Programmable PLL oscillators (Si5342 & Si5344), output clocks frequency between 0.0001 MHz to 750 MHz • 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 • PMBus interface
Power	• Max 200W • Powered by the PCIe slot and a 8-pins PCIe Aux ATX external connector (additional power)		
Operating Range	0°C to 40°C		
Storage Temp Range	0°C to 70°C	**SDK & Toolkit**	The reflex cesToolkit is provided with every board purchased, to be a link between the reflex ces board and the host system. It is a suite of software development tools, including drivers, libraries, utilities and example projects.
Board Dimensions	254mm x 111.15mm, single slot PCIe		
Board Management Controller	• FPGA monitoring • NOR Flash and clock programming	**Standards and Compliance**	• RoHS/REACH compliant • UL certified • ISO9001 certified

Deliverables

- Full height 1 slot PCIe board with passive heat-sink and PCIe bracket
- Board Support Package (Manuals, HDL reference designs)
- 4 memory modules DDR4 or QDRII+ (depends on the board version)

- DWF/STEP models and 2D drawing (upon request)
- LTPowerPlay project
- Online support at support.reflexces.com
- WinDriver™ PCIe device driver from Jungo

Ordering information

• XpressGXS10H-FH800GT	=	Intel Stratix 10 GX H-Tile (1SG280HU1F50E2VG), 4 banks DDR4, 1-slot PCIe passive heatsink
• XpressGXS10H-FH801GT	=	Intel Stratix 10 GX H-Tile (1SG280HU1F50E2VG), 4 banks QDRII+, 2-slot PCIe active heatsink
• XpressGXS10H-FH802GT	=	Intel Stratix 10 GX H-Tile (1SG280HU1F50E2VG), without memory, 1-slot PCIe passive heatsink

reflex ces Toolkit

The reflex ces Toolkit makes it **fast and easy** to get started with our XpressGXS10-FH800G !

- Fully customizable Toolkit
- Fast and easy start

- Quick configuration of a design and programmation of the board, to test all the interfaces available

- Generation of a complete HDL project, including IP and test modules selected by the user through the graphical interface