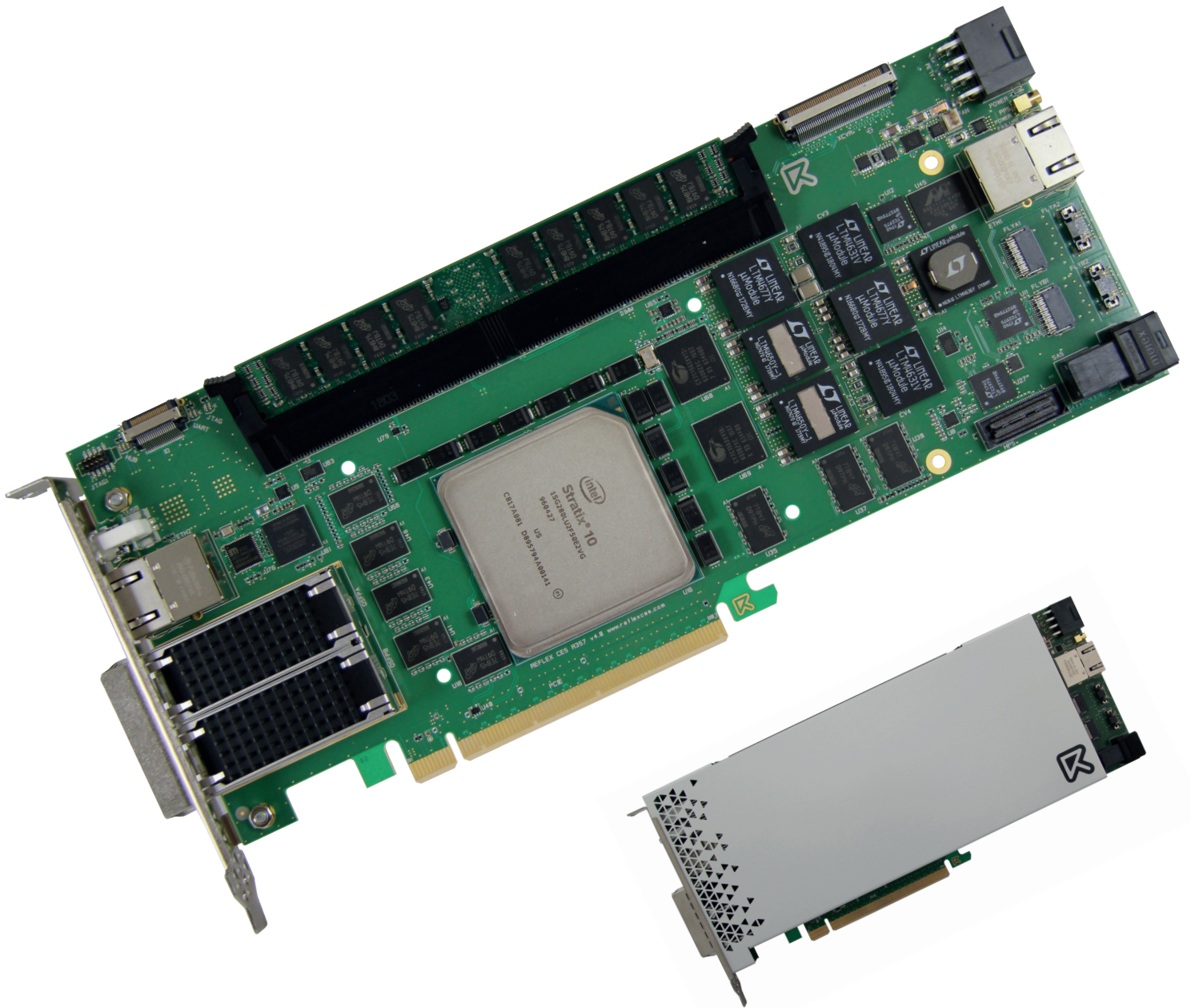




# XpressGX S10-FH200G

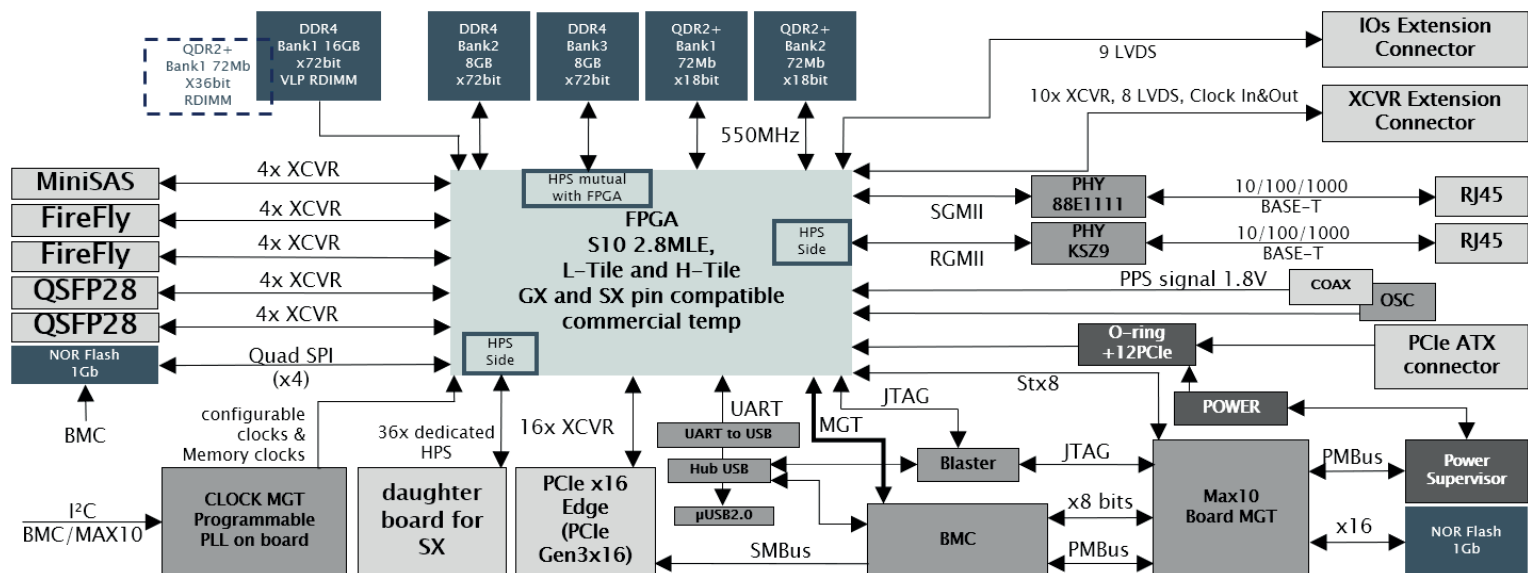
Full height profile PCIe Network Processing FPGA board  
Featuring 200G Ethernet



Intel® Stratix® 10 GX  
2800 KLE  
PCIe Gen3 x16

- 2x100 GbE
- 3x DDR4, 2x QDR2+Xtrem
- Board-to-board connection

- Networking Acceleration
  - Finance
- High Performance Computing



## Full Specifications

<b>FPGA Configuration</b>	<ul style="list-style-type: none"> <li>Stratix 10 GX, L-tile and H-tile compatible</li> <li>10M16SAU169I7G MAX10 CPLD</li> <li>USB2.0 Micro connector for JTAG, UART and BMC design</li> <li>1x Nor Flash 1GB quad SPI FPGA AS configuration</li> <li>1x Nor Flash 1GB for configuration mode ST8</li> </ul>	<b>Communication Interfaces</b>	<ul style="list-style-type: none"> <li>PCI Gen3 x16</li> <li>2x QSFP28 quad optical cage (2 x 4 XCVR : 17 Gb/s, 26 Gb/s or 28 Gb/s per link) connected to 100 Gb/s Ethernet HIP</li> <li>2x FireFly SAMTEC quad connector (17 Gb/s or 28Gb/s each XCVR)</li> <li>1 FireFly connected to 100 Gb/s Ethernet HIP</li> <li>MiniSAS quad connector (1 HD SAS, 4 SATA HDD, NVMe interface capable)</li> <li>GPIO extension connector : 9 LVDS usable as 18 LVCMOS</li> <li>XCVR extension connector : 10 XCVR, 8 LVDS, Clock In&amp;Out</li> <li>36 dedicated HPS IO connector (SX support on request, daughter board)</li> </ul>
<b>Memory</b>	<ul style="list-style-type: none"> <li>1x bank DDR4 VLP RDIMM 25° socket , 16GBytes, x72bit, up to 2400MT/s</li> <li>OR 1x bank QDR2+ Xtrem 2 chips 72Mbit, x36bit, up to 550MHz, custom RDIMM on request</li> <li>1x bank DDR4, x72bit, 8GBytes @2400MT/s</li> <li>1x bank DDR4, x72bit, 8GBytes @2400MT/s (HPS bank mutual with FPGA)</li> <li>2x banks QDR2+ Xtrem 72Mbit each x18bit, up to 550MHz</li> </ul>	<b>Other Resources</b>	<ul style="list-style-type: none"> <li>Programmable PLL oscillator (Si5341), output clocks frequency between 0.0001 MHz to 750 MHz</li> <li>High precision oscillator, clock accuracy 20MHz- 0.05pp for Precision Time Protocol (PTP) IEEE 1588</li> <li>One coax connector for PPS (pulse per second)</li> <li>Max10 USB Blaster on board, UART over USB interface</li> </ul>
<b>Power</b>	<ul style="list-style-type: none"> <li>Max 240W, Delivered with a custom 1 slot PCIe passive heat-sink</li> <li>8-pin ATX Power supply connector with Oring protection</li> </ul>	<b>SDK &amp; Toolkit</b>	The REFLEX CES Toolkit 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.
<b>Operating Range</b>	0°C to 40°C	<b>Standards and Compliance</b>	<ul style="list-style-type: none"> <li>RoHS/REACH compliant</li> <li>UL certified</li> <li>ISO9001 certified</li> </ul>
<b>Storage Temp Range</b>	0°C to 70°C		
<b>Board Dimensions</b>	254mm x 111.15mm		
<b>Board Management Controller</b>	<ul style="list-style-type: none"> <li>FPGA monitoring</li> <li>NOR Flash and clock programming</li> </ul>		

## Deliverables

- Full height 1 slot PCIe board with passive heat-sink and PCIe bracket
- VLP RDIMM DDR4 16GB 2400 MT/s
- Board Support Package (Manuals, HDL test Designs, Extension connectors FPGA pinout connection)
- Online support at [support.reflexces.com](http://support.reflexces.com)

## Ordering information

- XpressGXS10L-FH201GT = Intel Stratix 10 GX 26G L-Tile version (1SG280LU2F50E2VG)
- XpressGXS10H-FH200GT = Intel Stratix 10 GX 28G H-Tile version (1SG280HU1F50E2VG)