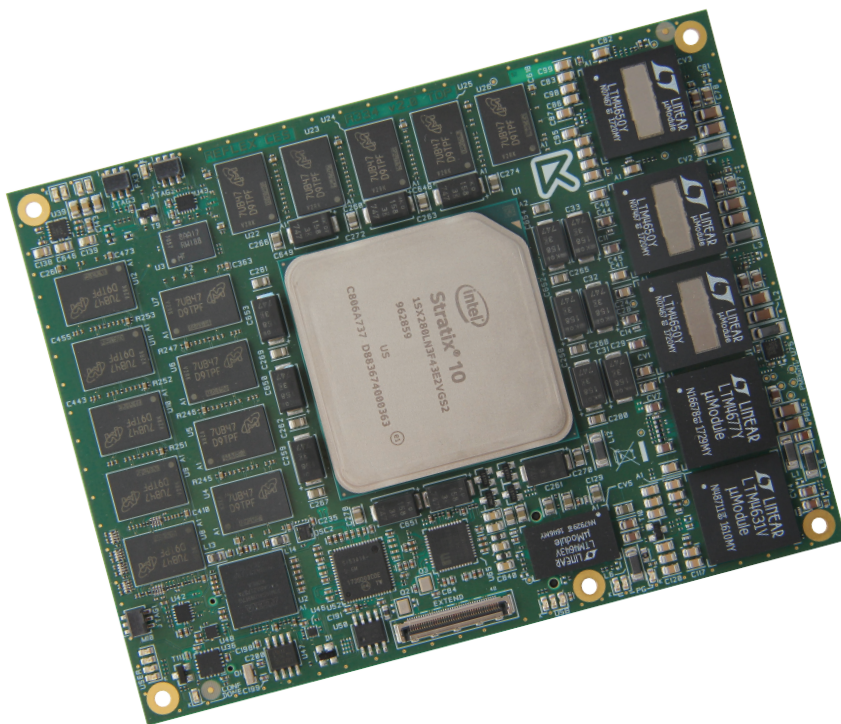




COMXpressSX Stratix 10

Basic form factor, Type 7 standard

- **COM Express Basic form factor Module**
- **Intel Stratix 10 SX Technology**
- **Designed for High Performance Computing and Acceleration**
- **32 PCI Express lanes, Type 7 standard**
- **On board 56GB DDR4 + ECC**
- **IO and Transceiver extended connector**



Target applications:

High Performance Computing
& Analytics
Acceleration
Intelligent vision
Video processing

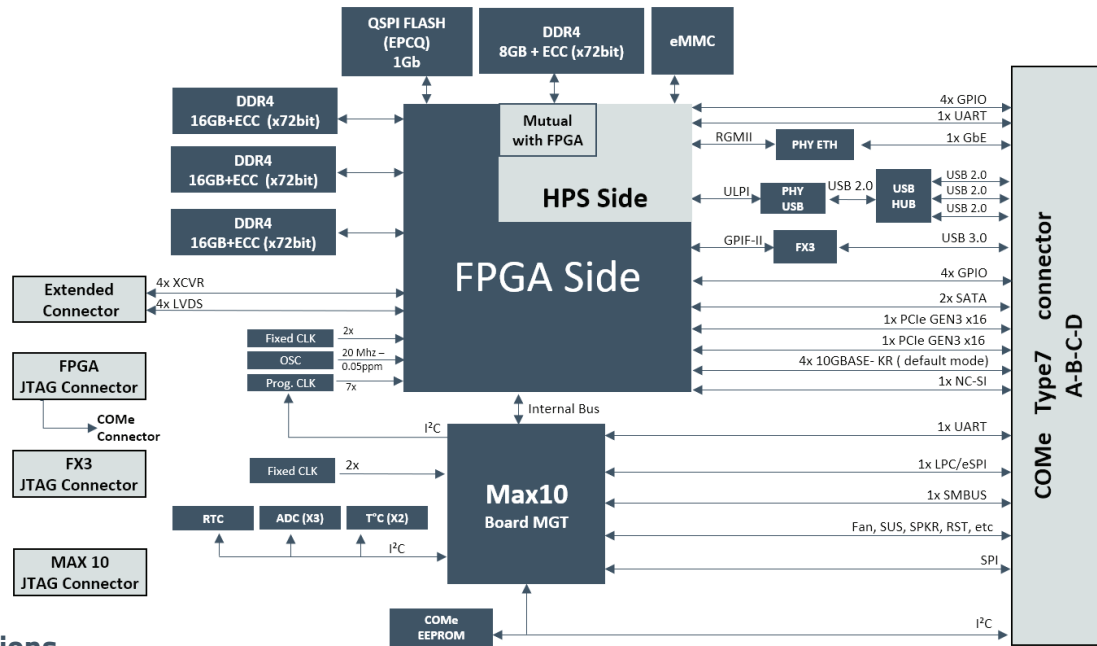


Contact :

Europe Sales Office
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Full Specifications

FPGA and Configuration Modules

- Stratix 10 SX with ARMV8 (Integrated quad-core 64 bit ARM CortexA53 hard processor system up to 1.5 GHz embedded)
- MAX10 CPLD with board management control
- JTAG connector for external USB cable
- eMMC 32GBytes (HPS) / with U-boot, Linux kernel & Rootfs
- Nor Flash for quad SPI (x4) FPGA configuration mode

Communication Interfaces

- Ethernet 10/100/1000 Base-T (HPS)
- 4x 10GbE base KR (default)
- 2x Serial SATA revision 3.0, 6Gb/s
- 4x XCVR lane connected to extension connector (DisplayPort/SDI capable)
- 3x USB2.0 HOST 1x USB3.0 1x SMB, I²C, UART
- 8 GPIOs (4 FPGA + 4 HPS)
- 2x PCI Express x16 (Gen 1, 2 or 3), root complex, end-point supported
- eSPI interface multiplexed over Intel Low Pin Count (LPC) Interface
- Network Controller Sideband Interface (NC-SI) supported (and optional)

Power

- +12V primary power supply input, 120W max
- +5V standby and 3.3V RTC power supply inputs

Deliverables

- Stratix 10 SX COMe Basic module type 7 with cooling solution
- Delivered with a custom heatsink
- Board Support Package (Reference Manual, Design Carrier Guideline, HDL test Designs, ComExpress connectors FPGA pinout connection)

Ordering information

- COMXpressSX10L-2800T = FPGA Intel Stratix 10 SoC «17G L-Tile» version, Production

Please contact the sales team to know the speed grade core and speed grade transceiver for each Stratix 10 FPGA part used on REFLEX CES products

Operating Range : 0°C to 40°C

Storage Temp Range : 0°C to 70°C

Memory

- 4 memory banks on board DDR4:
 - 3 x banks 16GB + ECC, x72bit @2400MT/s (FPGA)
 - 1 x bank 8GB + ECC, x72bit @2133MT/s (used by HPS), @2400MT/s (used by FPGA)

Other resources

- Extension connector : Interfaces (4x transceivers Rx/Tx and 4xLVDS interface)
- Programmable PLL (Si5341), output clocks frequency 0.0001MHz to 750MHz
- High precision on board oscillator, clock accuracy 20MHz-0.05ppm for Precision Time Protocol (PTP) IEEE 1588

Board Dimensions

- Length : 125mm (4.92inches) Width : 95mm (3.74 inches)
- Height without heatspreader/heatsink :
 - Module overall height : 10.16mm
 - Module height on baseboard (COMe 5mm/8mm connector) : 11.91mm / 14.91mm

Standards and compliance

- RoHS/REACH compliant UL certified ISO9001 Facility

- Kernel Linux support, U-boot bootloader and comprehensive user documentation
- JTAG adapter cable for external USB blaster probe.
- Evaluation PCIe Carrier Board available (optional extra)
- Mechanical package (under request)