



Instant-DevKit Stratix® 10 GX FMC+ IDK



The Stratix® 10 GX FMC+ Instant-Development Kit provides to developers the best Out-Of-The box experience, combining the Best-In Class compact hardware platform and the most efficient intuitive software environment.

DevKitInvasion



ALARIC
Arria 10 SoC FMC IDK



ACHILLES
Arria 10 SoC SoM IDK

Target markets:

High Performance Computing
IP & Asic Prototyping

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SARGON Instant-DevKit

Stratix® 10 GX FMC+ IDK

Full specifications

Stratix® 10 GX 2800 KLEs

FPGA configuration

- Intel® Stratix® 10 GX 2800 KLEs
- PCIe Gen3 x16
- Max10 USB Blaster on board, UART over USB interface
- 1x Nor Flash 1GB quad SPI FPGA AS configuration
- 1x Nor Flash 1GB for configuration mode ST8
- Board Management Controller (BMC) for monitoring, NOR Flash and clock programming
- 1x FMC+ (VITA57.4) with 24 XCVR, 20 XCVR up to 28Gb/s, 4 XCVR up to 17.4Gb/s, 2x Hard IP 100G transceivers blocks capable
- 2x banks DDR4 vertical RDIMM, 16GBBytes each (32GBBytes capable), x72bit, up to 2400MT/s. The RDIMM are not provided.
- 1x bank DDR4 soldered on PCB, bus x72, 8GBBytes up to 2400MT/s (HPS bank mutual with FPGA)

Power : Max 240W including FMC board, delivered with active heat-sink

Operating Range : 0°C to 40°C

Storage Temp Range : 0°C to 70°C

Communication Interfaces

- 2x FireFly™ Samtec quad connector (28Gb/s each XCVR)
 - 1 FireFly™ connected to 100G IP
- MiniSAS quad connector (1 HD SAS, 4 SATA HDD, NVMe interface capable)
- GPIO extension connector : 9 LVDS usable as 18 LVCMOS
- XCVR extension connector : 10 XCVR, 8 LVDS, Clock In&Out
- 48 dedicated HPS IO connector (daughter board for SX)
- 1x Ethernet SGMII interface (to FPGA), Marvel PHY 88E11

Clock Circuitry

- Programmable PLL oscillator (Si5341), output clocks frequency between 0.0001 MHz to 750 MHz
- High precision oscillator, clock accuracy 20MHz- 0.01ppm for Precision Time Protocol (PTP) IEEE 1588
- One coax connector for PPS (pulse per second)

Board dimensions : 254mm x 111.5mm , Dual slot PCIe

Standards and compliance

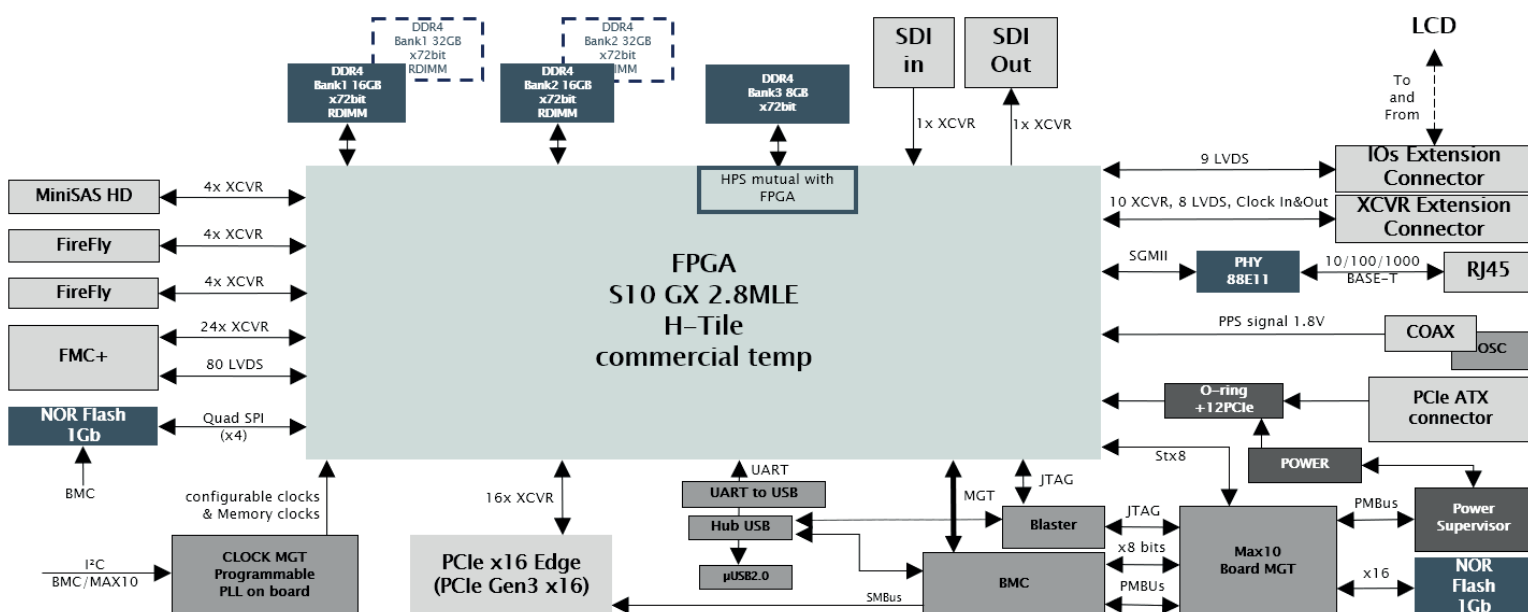
- RoHS/REACH compliant
- UL certified
- ISO9001 Facility

Kit Content

- Sargon Stratix® 10 GX FMC+ DevKit
- Power adapter (US, UK, EU, JP) and Micro USB2.0 cable
- PDF Documentation (Starter Guide, Hardware Reference Manual)
- FMC Interface Control Excel sheet
- Board test design files available under FTP after the creation of a user account (Quartus Prime Pro software required)
- Under request on the online support support.reflexces.com :
 - Quartus Prime Pro DKE
 - Mechanical files (DWF/STEP models and 2D drawing)

Ordering information

- RXCS10X280HPF50-IDK10A = Development Kit, Intel® Stratix® 10 GX, H-Tile version (1SG280HU1F50E2VG)
- RXC16GB-RDIM10A = 1x 16GB DDR4 VLP RDIMM - to purchase separately



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