



## Instant-DevKit Stratix® 10 GX FMC+ IDK



The Stratix® 10 GX FMC+ Instant-Development Kit provides developers the best Out-Of-The box experience and Best-In Class compact hardware platform.

## 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

### FGPA 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, x72bit, up to 2400MT/s.
- The RDIMM are not provided but can be purchased separately.
- 1x bank DDR4 soldered on PCB, bus x72, 8GBBytes up to 2400MT/s

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

**Operating Range :** 0°C to 40°C

**Storage Temp Range :** 0°C to 70°C

### Kit Ordering information

#### Part number

- RXCS10X280HPF50-IDK10A
- RXC16GB-RDIM10A

#### 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 Interconnect pinout file)

### 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
- 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

### Version

- Development Kit, Intel® Stratix® 10 GX, H-Tile version (1SG280HU1F50E2VG)
- 1x 16GB DDR4 VLP RDIMM - to purchase separately
- PDF Mechanical drawings, 3D step, PDF assembly files
- HDL test designs (Quartus projects)
- Online support at support.reflexces.com :
  - Quartus Prime Pro DKE under request at support.reflexces.com

