

## Stratix 10 SX SoC Development Kit

The Intel® Stratix® 10 SoC Development Kit offers a quick and simple approach for developing custom ARM® processor-based SoC designs. The Stratix 10 SoCs offer full software compatibility with previous generation SoCs, a broad ecosystem of ARM software and tools, and the enhanced FPGA and digital signal processing (DSP) hardware design flow.

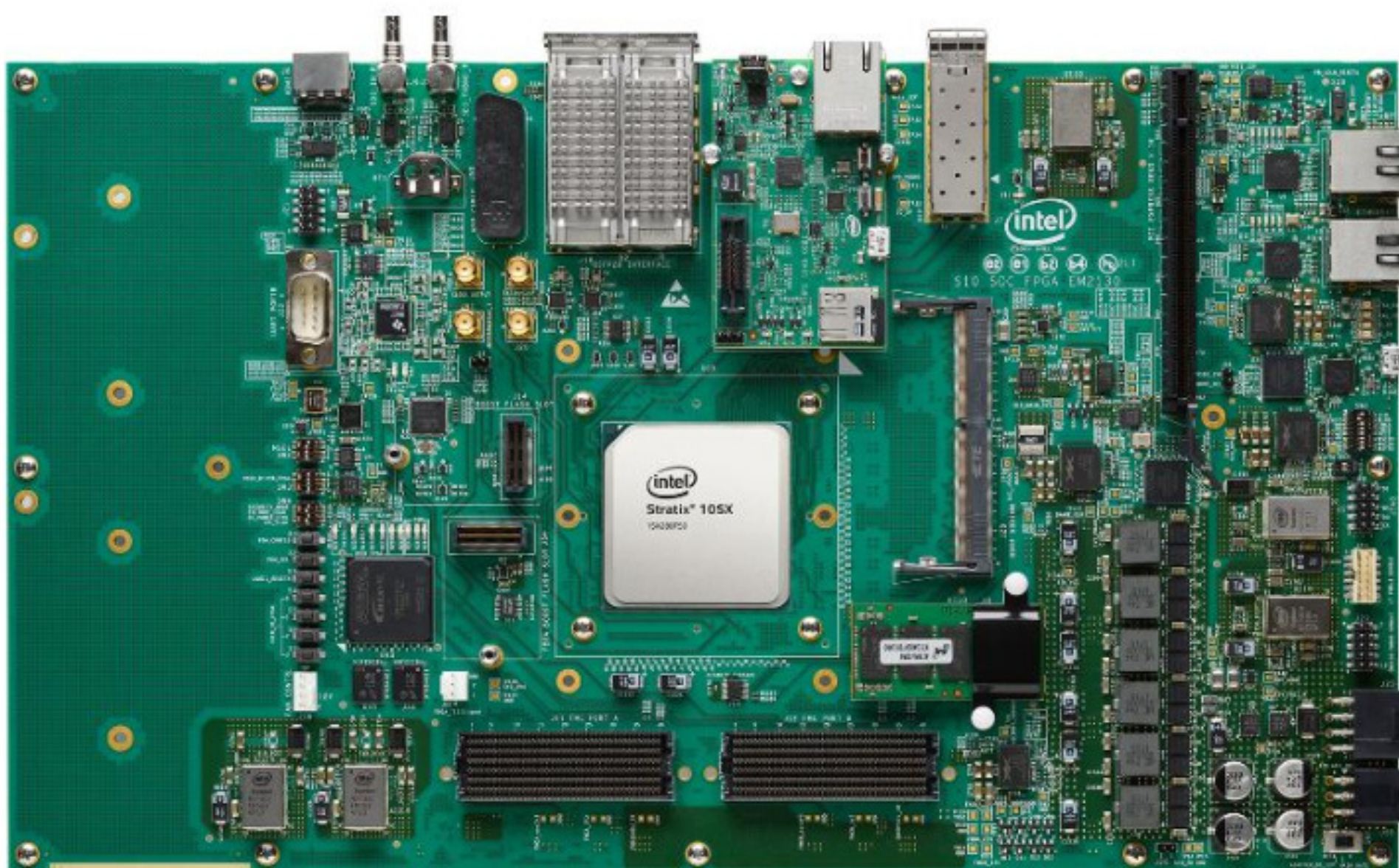


Figure 1. Stratix 10 SX SoC Development Kit

You can use this development kit to:

- › Evaluate Stratix 10 SoC device features and performance
- › Begin development of your hardware and software design
- › Use as a platform for target reference designs, OS/BSP, and tools

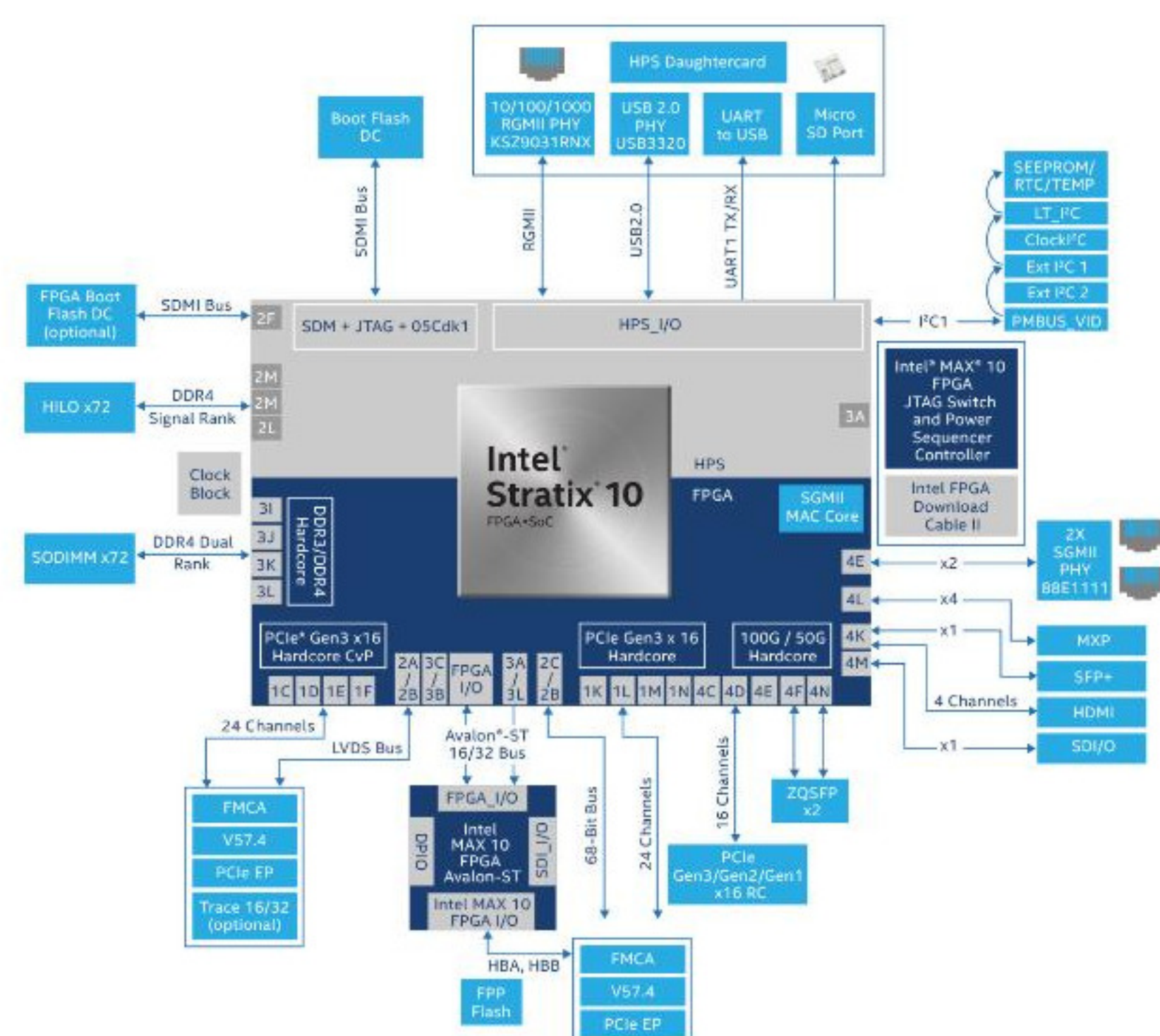


Figure 2. Stratix 10 SX SoC Development Kit Block Diagram

Table 1. Ordering Information

Ordering Code	Price	Stratix 10 Device	Ordering Information
DK-SOC-1SSX-L-0ES		1SX280LU2F50E2VGS2	<p>Please contact Intel sales for availability.</p> <p>This development kit features a device and a one-year license for the Quartus® Prime design software</p>
DK-SOC-1SSX-L-A		1SX280LU2F50E1VG	<p>Please contact Intel sales for availability.</p> <p>This development kit features a device and a one-year license for the Quartus® Prime design software</p>

Buyer represents that it is a product developer, software developer or system integrator and acknowledges that this product is an evaluation kit that is not FCC authorized, is made available solely for evaluation and software development, and may not be resold.

### Table 2. Development Kit Contents

Hardware	Software <sup>1</sup>
<ul style="list-style-type: none"><li>› Stratix 10 SX SoC Development Board<ul style="list-style-type: none"><li>› Review Table 1 for featured Stratix 10 device</li></ul></li><li>› One HiLo DDR4 memory card (4 GB)</li><li>› One DDR4 SODIMM memory card (16GB dual rank)</li><li>› Two HPS peripheral daughter cards (OOBE and NAND)</li><li>› Two FMC loopback cards supporting transceiver, LVDS and single-ended I/Os</li><li>› Two quad small-form-factor pluggable (QSFP28) and one SFP+ port</li><li>› Two FMC+ low-pin count (LPC + 15 transceivers) connector</li><li>› One SFP+ interface</li><li>› PCIe x16 edge connector (via cable - not included)</li><li>› AC adapter power cables</li><li>› Ethernet and USB cables</li></ul>	<ul style="list-style-type: none"><li>› Design examples</li><li>› Board Update Portal design</li><li>› Board Test System (BTS) design</li><li>› Documentation</li><li>› Stratix 10 SX SoC Development Kit User Guide</li><li>› Board design files</li><li>› Design software<sup>2</sup></li><li>› Quartus Prime software (required)</li><li>› Nios® II processor (optional)</li><li>› MegaCore® intellectual property (IP) library (optional)</li><li>› Mentor Graphics® ModelSim®-Intel software (optional)</li></ul>

1. Download and unzip Stratix 10 SoC Development Kit installer first. Install the Stratix 10 SoC Board Test System.
2. A one-year license for Quartus® Prime design software is available upon purchase of the kit. License activation [instructions](#) and [FAQs](#).

### Table 3. Stratix 10 SoC Development Kit Downloadable Content

Files	Description
<a href="#">Stratix 10 SX SoC Package Installer ES (18.0 or higher)</a> <a href="#">Production (18.0.1 or higher)</a>	A single installation file containing: <ul style="list-style-type: none"><li>› <a href="#">Stratix 10 SoC Development Kit board design files, documents, and examples including the BTS installation files</a></li></ul>
<a href="#">User Guide</a>	Documentation about setting up the Stratix 10 SoC Development Kit and using the included software
<a href="#">Quick Start Guide</a>	Documentation summarizing the usage of the development kit and its features
<a href="#">Board Schematic</a>	Latest version of the board schematic
<a href="#">Stratix 10 GSRD (Golden System Reference Design)<sup>1</sup></a>	The <a href="#">Stratix 10 GSRD (Golden System Reference Design)</a> page on <a href="#">Rocketboards.org</a> has instructions for getting started on hardware and software designs that utilize the HPS (hard processor system) on Stratix 10 SoC.
<a href="#">SoC EDS Installer</a>	SoC EDS installer which includes ARM Development Studio 5 (ARM DS-5*) for Intel SoC FPGAs
<a href="#">Qsys and Quartus Tools</a>	The Quartus Prime design suite provides the provides the necessary tools used for developing hardware and software for Intel FPGA devices. Included in the Quartus Prime design suite are the Quartus Prime software, the Nios II EDS, and the Intel FPGA IP Library.

<sup>1</sup> Please refer to the [GSRD compatibility matrix](#) to pick the correct GSRD version for your board.