

## Arria 10 GX Transceiver Signal Integrity Development Kit

### Introduction

Altera's Transceiver Signal Integrity Development Kit, Arria® 10 GX Edition helps you thoroughly evaluate the signal integrity of Arria 10 GX transceivers. This development kit delivers a complete design environment that includes all hardware and software you need to start taking advantage of the performance and capabilities available in Arria 10 GX FPGAs.

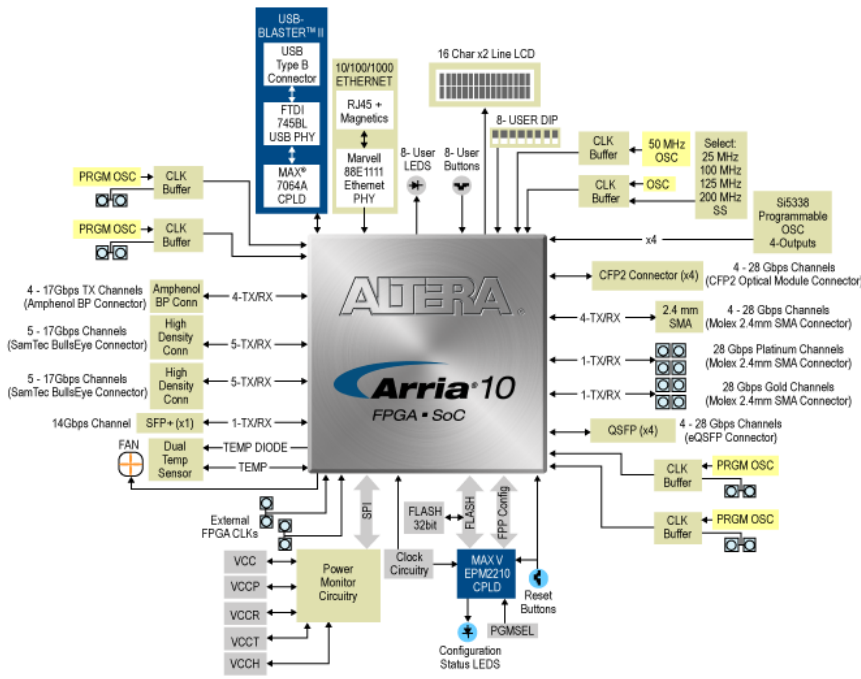
Figure 1. Arria 10 GX Transceiver Signal Integrity Development Kit



With this kit, you can:

- Evaluate transceiver performance from 1 Gbps up to 17.4 Gbps (GX)
- Generate and check pseudo-random binary sequence (PRBS) patterns via an easy-to-use GUI
- Dynamically change differential output voltage (VOD), pre-emphasis, and equalization settings to optimize transceiver performance for your channel
- Perform jitter analysis
- Verify physical medium attachment (PMA) compliance to PCI Express®(PCIe®), Gbps Ethernet (GbE), XAUI, CEI-6G, Serial RapidIO®, high-definition serial digital interface (HD-SDI), and other major standards

Figure 2. Arria 10 GX Transceiver Signal Integrity Development Kit Block Diagram



**Table 1. Ordering Information**

Ordering Code	Ordering Information
DK-SI-10AX1155-A	This development kit features a 10AX11552F45I15G device and a one-year license for the Quartus® II design software.

**Notes:**

- Please contact Altera for shipping availability

**Table 2. Development Kit Contents**

Hardware	Software <sup>1</sup>
<ul style="list-style-type: none"> <li>- Arria 10 GX Transceiver Signal Integrity Development board running on Arria 10 GX 10AX11552F45I15G FPGA</li> <li>- Six full-duplex transceiver channels with 2.4 mm SMA connectors</li> <li>- Four full-duplex transceiver channels to Amphenol Xcede+® backplane connector</li> <li>- Four full-duplex transceiver channels to CFP2 optical interface</li> <li>- Four full duplex transceiver channel to QSFP+ optical interface</li> <li>- Single transceiver channel to SFP+ optical interface</li> <li>- Ten full-duplex transceiver channels to Samtec Bullseye high-density connector</li> <li>- Character LCD</li> <li>- Ethernet PHY</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>- Arria 10 GX Transceiver Signal Integrity Development Kit User Guide</li> <li>- Board design files</li> <li>- Design software2</li> <li>- Quartus II software (required)</li> <li>- Nios® II processor (optional)</li> <li>- MegaCore® intellectual property (IP) library (optional)</li> <li>- Mentor Graphics® ModelSim®-Altera software (optional)</li> </ul>

**Notes:**

- Download and install Arria 10 GX FPGA Development Kit installer first
- A one-year license for Quartus II development software ships with the development kit