SC200 Streaming Controller

Model Number: SC200

Features

- Streaming Controller for P8192 and D8192
- Allows user to send pixel data to PLV/DPM module via PCIe interface during run time.
- Operates as master or slave for synchronization of images to user equipment.
- API Libraries provided for Windows and Linux

Description

The Streaming Controller is a PLV/DPM controller card utilizing FPGA and LVDS interface chip to send pixel data to the module. The FPGA is customized with a PCIe Interface, two external DDR4 memory banks and a PLV/DPM interface. The PCIe interface can write into one of the DDR4 memory bank while the internal sequencer is reading memory from the other and sending the pixel data to the module . Each line update can be synchronized with an external or internal trigger. The internal sequencer can loop through all (or subset of) lines in memory. The sequencer can be programmed for a finite number of loops or run continuously until stopped. The sequencer can send pixel data from the DDR4 memory to the module at the maximum col rate. The high bandwidth PCIe interface along with the dual DDR4 memory pixel memory bank opens opportunities to some real time applications.

User Interface

PCIe Gen3 x 4: For writing pixel data to the RTC's pixel memory & for control over the module
Trigger In: Column & Frame trigger inputs
Trigger Out: Column & Frame trigger outputs
Power Input: No extra power supply needed. Powered through the PC.

Application Software

Windows and Linux API Libraries are provided for initializing the device and writing pixel data to the module

Streaming Controller Board Specifications	
Modulation Frequency	Refer to module spec
Pixel Memory (Two banks)	512k set of pixel data per bank
Propagation Delay	20us*
Minimum Delay between PCIe Transaction	1ms*

* Tested with an OS, it can be shortened if you can send directly via PCIe without an OS in the loop.