

SC100 Streaming Controller for HSB & LPLV

Model Number: SC100

Features

- Streaming Controller for HSB & LPLV.
- Allows user to send pixel data to GLV module via PCIe interface during run time.
- Operates as master or slave for synchronization of GLV images to user equipment.
- API Libraries provided for Windows and Linux



Description

The Streaming Controller is a GLV controller card utilizing FPGA and LVDS interface chip to send pixel data to the GLV module. The FPGA is customized with a PCIe Interface, embedded dual-port memory and a GLV interface. The PCIe interface can write to the dual-port memory while the internal sequencer is reading the memory and sending the pixel data to the GLV. 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 dual-port memory to the GLV at the maximum col rate. The high bandwidth PCIe interface along with the dual-port pixel memory 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 GLV module and writing pixel data to the GLV module

Cosmo Controller Board Specifications

Modulation Frequency	Refer to module spec
Pixel Memory	512 set of pixel data
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.