

# CoaXpress® Camera Side IP core

## Functions

This IP core complies with CoaXpress V1.1. This standard uses coaxial cable up to 6.25Gbps (Actual rate 5Gbps) per lane. Data rate can be increased up to 25Gbps (Actual rate 20Gbps) with a 4 lane set up. Cable length can vary from 40 ~ over 100m, therefore equipment installation is scalable. This IP core implements parts in need of performance as hardware and parts that require flexibility as software on CPU in FPGA, satisfying both needs effectively.

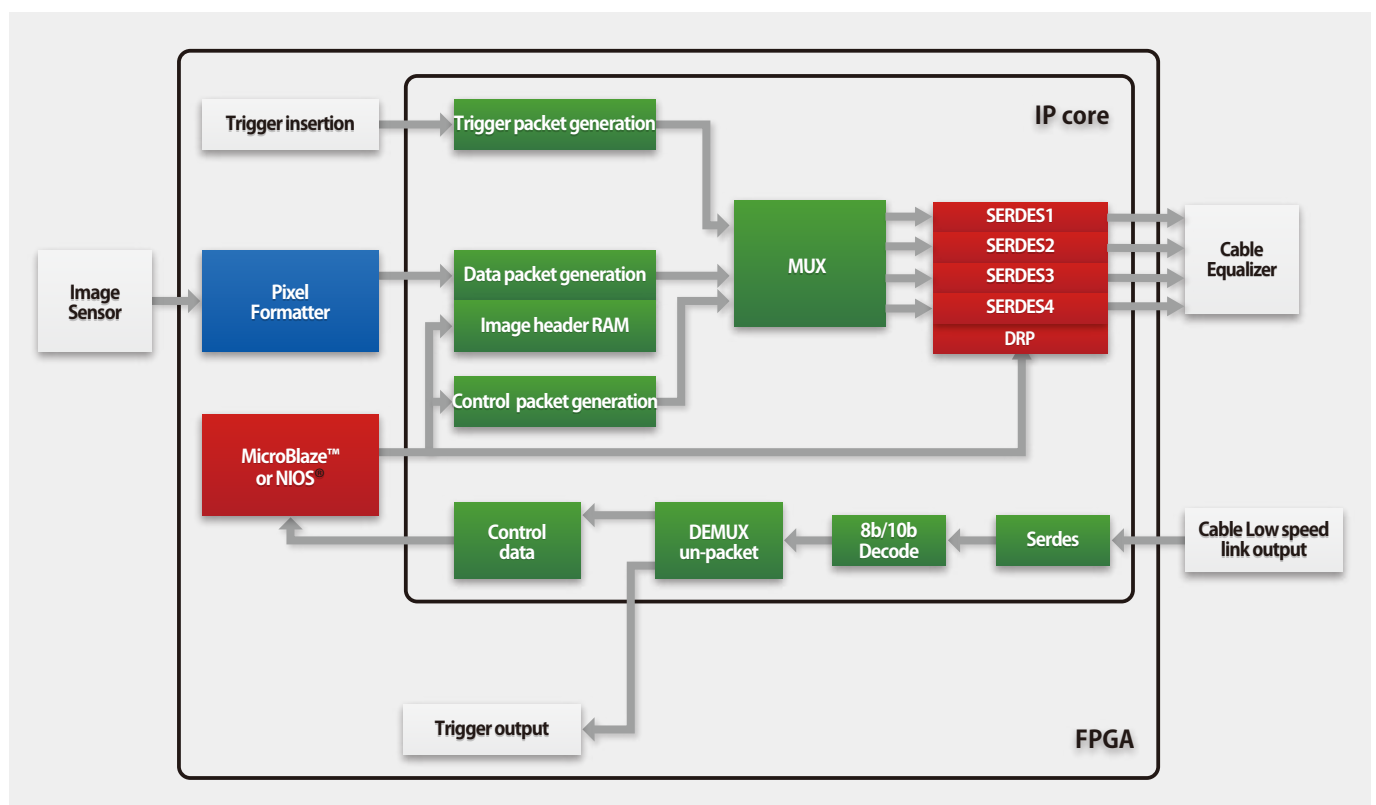
## Features

- Supports sending stream packet, sending/receiving control packet, receiving trigger packet.
- Auto idle insertion realizes image sending without frame buffer.
- Using high speed transceivers in FPGA reduces PCB size.
- Minimum resources (4000LCs at 1 lane).
- Link speed can be changed from 1.25Gbps to 6.25Gbps dynamically.
- Supports 1, 2, 4 lanes.

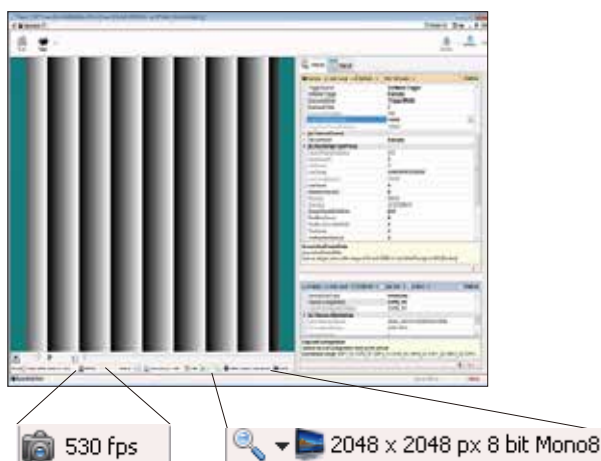
## Support FPGA

Xilinx®: Spartan®-6LXT, Kintex®-7, Virtex®-7, Artix®-7

Altera®: Cyclone® IV, Cyclone® V, Arria® II, Arria® V, Stratix® IV, Stratix® V



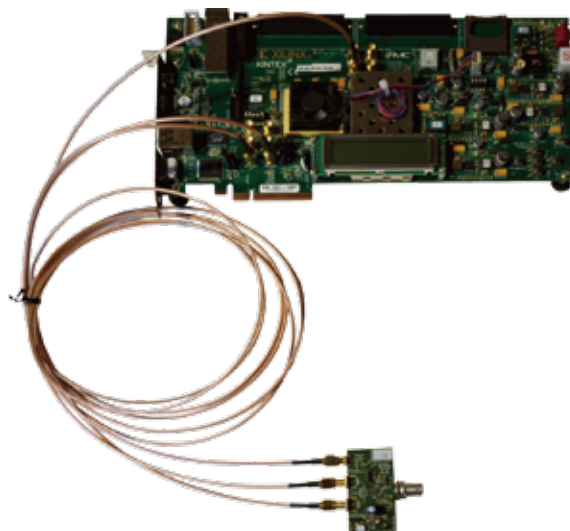
## Performance



6.25Gbps × 4 lanes  
Aval Data Frame Grabber APX-3664  
2048 × 2048 8bit monochrome image sending continuously  
2048 × 2048 × 8bit × 530fps = 17.78Gbps

## Evaluation platform

Evaluation and development is possible by using KC705, SP605, etc. Please inquire for more details.



## Product number, licensing

This IP is provided by netlist site license or source code site license. Both licenses have permanent usage rights with limited update support.

Product includes : VHDL source code or netlist, reference design with VHDL source and MicroBlaze or NIOS design, simulation model and simulation vector.

Permanent netlist site license  
Netlist is provided  
Device family is limited  
6 month update support

DC-CXP-L1-NET-XXX 1 lane implementation  
DC-CXP-L4-NET-XXX 4 lane implementation

※XXX is replaced device family name.  
Example : For Kintex-7, product number is DC-CXP-L1-NET-K7. Please inquire for more details.  
This license can be used for any devices in the same family.

Permanent source code site license.  
Source codes are provided.  
1 year update support.

DC-CXP-L4-SRC 4 lane implementation

※1 lane and 2 lane implementation are not sale in this license. Source codes for all supported devices will be provided. Please inquire for unsupported devices.

DC-CXP-SUPPORT-1Y : 1 year update support.  
Customized orders are available.

### Contact information

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