

USB3 Vision Device Package

Under
development

High-speed image data transfer complying with USB3 Vision standard

Overview

The USB3 Vision Device Package is an IP package to transfer image data complying with USB3 Vision standard. The IP transmits image data from the image sensor to the host computer in real time. High-speed transmission is possible because of USB 3.0 adoption for the communication interface. In addition, any commercially available GenICam compatible applications can control the IP because of its GenICam compliance.

Perfect for high-resolution, high-reliability machine vision cameras, medical imaging systems, and other applications that demand maximized USB 3.0 performance.

Features

- Compliant with USB3 Vision Standard Version 1.01.
- Reference XML file containing camera description based on EMVA GenICam Standard Version 3.0.1 is packaged. Users can start evaluation by using their third-party GenICam applications immediately after purchase. (available soon)
- USB 3.0 Protocol Stack Macnica developed, USBDMacs™ is integrated, which creates a highly reliable USB 3.0 environment.

USB
VISION

USBD
mAcS

Specifications

- Compliant with USB3 Vision Standard Version 1.01
- Compliant with EMVA GenICam Standard Version 3.0.1
(A middleware for Windows Macnica developed and named “BetelmaGiCs GenICam Software” complying with the GenICam standard is also available from Macnica.)
- Image data (RAW, YUV, RGB, etc.) and chunk data transfer

Supported Devices

- Cyclone V + Cypress EZ-USB® FX3™
- (* Please contact Macnica sales department for information about other devices.)

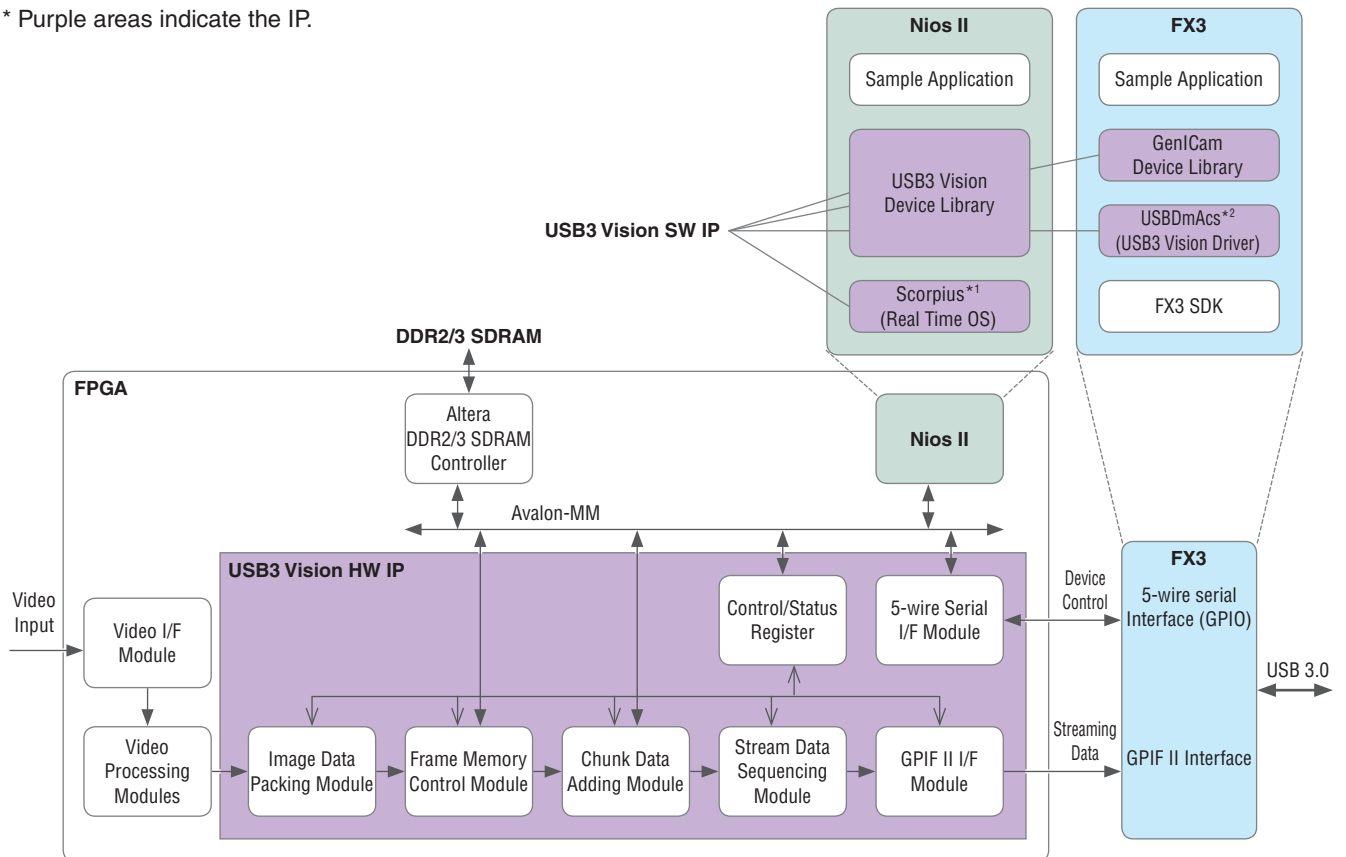
Deliverables

- Encrypted RTL (Verilog HDL)
- USB3 Vision Device FW Library for Nios II processor
- USB 3.0 Protocol Stack “USBDMacs” for Cypress EZ-USB FX3
- Reference environment (sample hardware design, firmware application, XML file)
- User’s manual

(* Please contact Macnica sales department for information about other deliverables.)

Overall Configuration Diagram

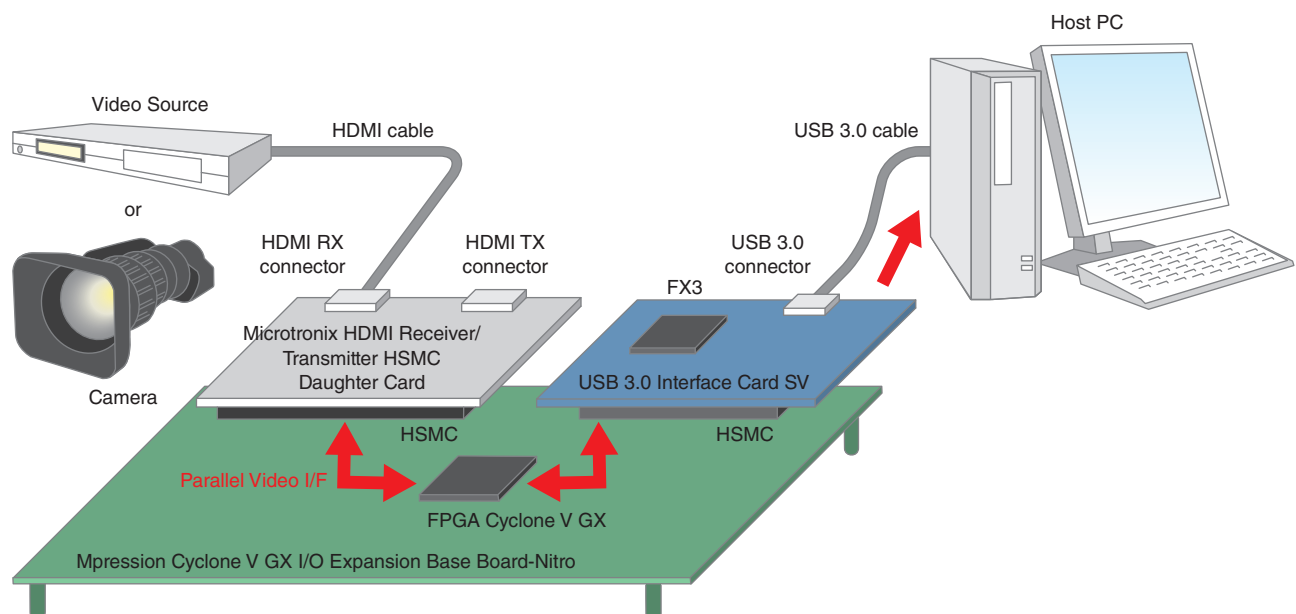
* Purple areas indicate the IP.



*1 Scorpius: Macnica's lightweight and high-speed Real Time OS

*2 USBmAcS: Macnica's protocol stack that provides USB 3.0 device functions

Evaluation Environment



Category	Product Name	Vendor
Base Board	Nitro – Cyclone V GX I/O Expansion Base Board	Mpression
Daughter Card	USB 3.0 Interface Card SV	Mpression
Daughter Card	HDMI Receiver/Transmitter HSMC Daughter Card (Option)	Microtronix