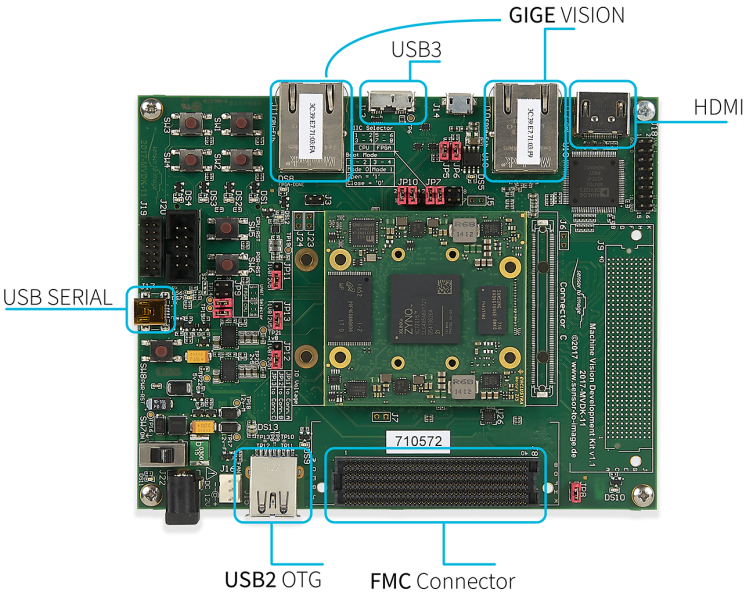
MVDK

MACHINE VISION DEVELOPMENT KIT



AT A GLANCE

- All major machine vision interfaces available on a single development board
- GigE Vision, CoaXPress and USB3 Vision compliant platform
- Sony IMX Pregius evaluation platform
- GigE Vision up to 10 Gb/s. CoaXPress up to CXP-12
- Support for Enclustra Mercury FPGA modules with Xilinx and Intel FPGAs

Sensor to Image MVDK (Machine Vision Development Kit) is a hardware platform that eases the evaluation and development of products based on S2I's IP Cores and using any major industrial vision interface. The MVDK base board is highly configurable through the use of FMCs (FPGA Mezzanine Cards). It provides an interface to vision sensors and enables the development of GigE Vision, USB3 Vision and CoaXPress cameras (devices), as well as the design of GigE Vision and CoaXPress hosts.

The MVDK is delivered with an Enclustra Mercury FPGA module and an FMC interface board . They come along with a reference design for the selected transport layer interfaces. Together, they minimize development time and allow for top-notch performance at a small footprint, while leaving enough flexibility to customize the design.

For CoaXPress development

The MVDK delivered for CoaXPress development includes an FMC with two or four CXP-6 or CXP-12 links for device (camera) or host (frame grabber) design. The device and host reference designs are fully CoaXPress compliant and certified by the JIIA.

For USB3 Vision development

The MVDK available for USB3 Vision development is based on the 5-Gbit/s technology of standard USB3 components and allows for the most cost-effective high-speed camera design today. The USB3 Vision IP Core development kit is fully compliant with Genicam and certified by the AIA. This is the easiest way to start the design of a new USB3 Vision camera. The USB3 Vision interface is implemented using an FMC designed by Sensor to Image that uses a Cypress FX3 USB3 chip.

For GigE Vision development

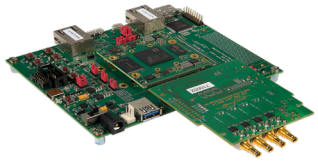
The MVDK delivered for GigE Vision development supports the design of camera and host applications compliant with the AIA GigE Vision specification with a speed of up to 10 Gbit/s. 2.5, 5 and 10 Gbit/s applications require a Sensor to Image NBase-T FMC module.

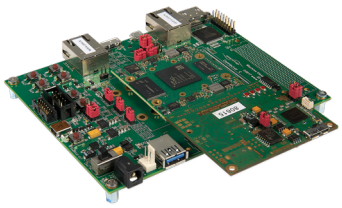
For IMX Pregius development

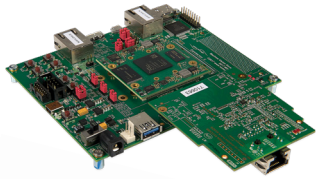
Sensor to Image MVDK is compliant with Sony's IMX Pregius sensor series, a widely used, high-quality CMOS series of imagers. Sensor to Image supports these sensors with dedicated IP to read data from and control the sensors. The reference design consists of the IMX IP Core together with a GigE Vision compliant output.

For MIPI CSI-2 development

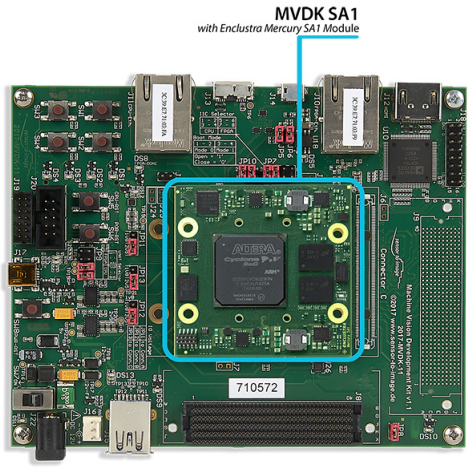
The MVDK delivered with the MIPI CSI-2 receiver IP Core supports the design of cameras with the widely used, high-quality imagers compliant with MIPI CSI-2 standard. Sensor to Image supports reading data from and control the sensors. The reference design consists of the MIPI CSI-2 receiver IP Core together with a GigE Vision compliant output.







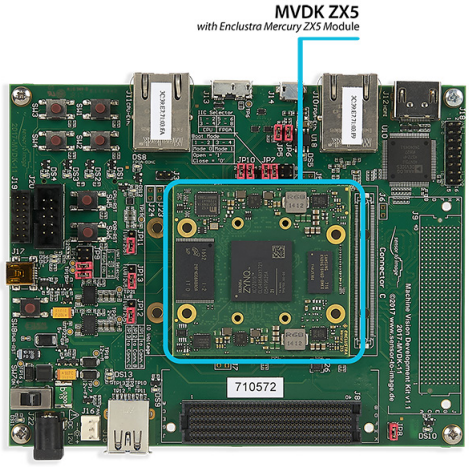
MULTIPLE ENCLUSTRA MERCURY MODELS AVAILABLES:



MVDK SA1

MVDK BOARD WITH ENCLUSTRA MERCURY SA1 MODULE

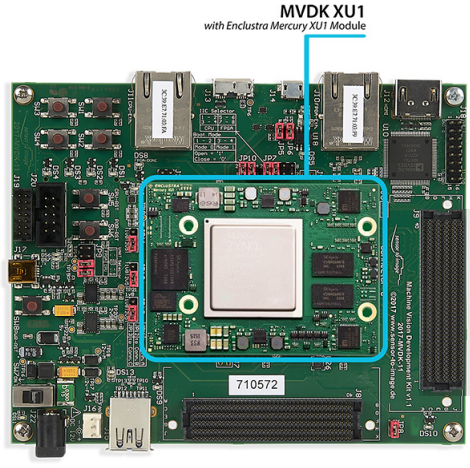
Altera Cyclone V ARM Processor-based SoC FPGA
1 GByte DDR3L SDRAM
64 MB quad SPI Flash
10/100/1000 Ethernet PHY
Five 3.125 Gb/s transceivers



MVDK ZX5

MVDK BOARD WITH ENCLUSTRA MERCURY ZX5 MODULE

Xilinx Zynq-7000-series SoC FPGA 7015
1 GB DDR3 SDRAM
512 MB NAND Flash
64 MB quad SPI Flash
10/100/1000 Ethernet PHY
Four 6.25 Gb/s transceivers



MVDK XU1

MVDK BOARD WITH ENCLUSTRA MERCURY+ XU1 MODULE

Xilinx Zynq Ultrascale+ MPSoC XCZU6
2 GB DDR4 ECC SDRAM
64 MB quad SPI Flash
16 GB eMMC Flash
10/100/1000 Ethernet PHY
8+3 16 Gb/s transceivers (using both FMC connectors)

**note: please ask for other configurations*