

HYBRID PROCESSING / IMAGE SENSOR BOARD



OVERVIEW

Nexvision's CAMGURU+ smart camera is a complete video camera
On-board video pre-processing, PIXIP™ (FPGA Xilinx Kintex 7)

HIGHLIGHTS

Extra high resolution video : 10.8 megapixels (Aptina AR1011HS)
On-board dedicated video enhancement image pipe
USB3.0 or CoaxPress

APPLICATIONS

- Industrial inspection / Machine vision
- Quality assurance
- Microscopy
- Medical technology
- Embedded systems

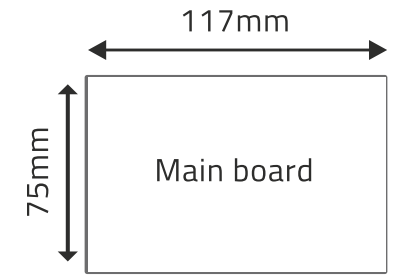
FEATURES

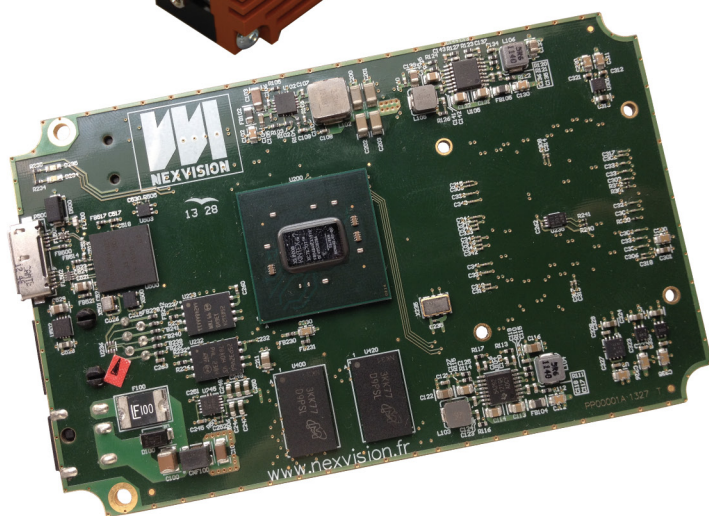
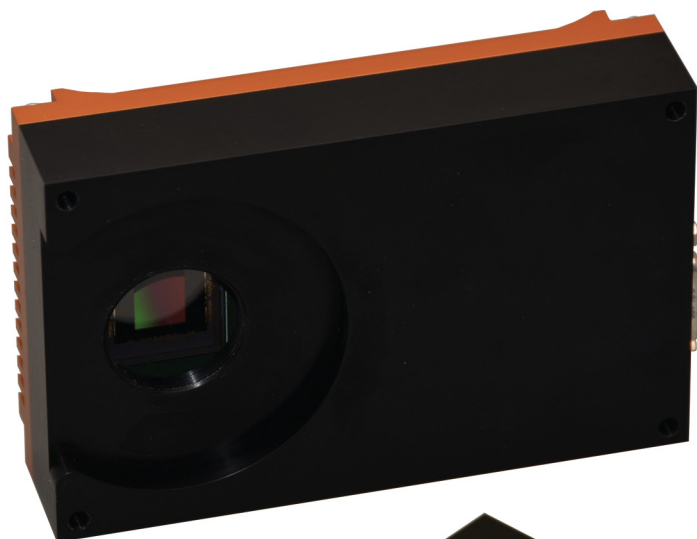
- High resolution 10.8 megapixel (Pixel size : 3.4µm x 3.4µm) :
 - > RAW : 3984*2712 pixels (12bpp) @ 20 FPS
 - > Preview : 1992*1356 pixels (24bpp) @ 45 FPS
- On-board high-end FPGA with one DDR3 SDRAM banks, dedicated to video enhancement and advanced video processing
- SPI Flash for reprogrammable FPGA configuration storage via USB3 or CoaxPress
- Image pre-processing (PIXIP™ Library) examples :
 - > Fixed pattern noise correction
 - > Colour correction matrix
 - > Gamma
 - > Sharpness
 - > ROI (Region of interest)
 - > Or other define



XILINX KINTEX7 FPGA
+ APTINA AR1011HS SENSOR
+ USB3 or CoaxPress VIDEO OUT

PHYSICAL DIMENSION





VIDEO OUTPUT

- 1 x USB3* – Cypress FX3
- 1 x CoaxPress* CXP6 – MCX connector (Power-over-Coax input with 24V)
- * USB3 or CoaxPress by hardware assembly

SYSTEM

- FPGA : NexVision's IP video pre-processor front-end with 512MB dedicated DDR3-SDRAM banks
- Integrated hardware watchdog

STORAGE

- Spi Flash 512Mbits
- Spi Flash 32Mbits

GENERAL PURPOSE I/O

- DB15 connector : 4 inputs (2 opto-isolated) + 4 outputs (2 opto-isolated) + power input

USB

- 1 x USB3.0 Device (3Gb/s) for high speed video output – Micro B type connector

POWER SUPPLY

- 10 – 28VDC@1A max on DB15 connector
- or
- 24VDC Power over CoaxPress (PoCXP) compliant (13W max)

PHYSICAL DIMENSION

- Main board : 117mm (L) x 75mm (l) x 30mm (h)
- Temperature : 0 to +50 °C (-40°C to +85°C optional)
- Humidity : 10~90% non-condensing