

# DragonEYE

FRAME GRABBER & FPGA-BASED IMAGE PROCESSING



Integrated vision processor / Multi-camera system

## APPLICATIONS

- Multi-camera system
- Deep-learning
- High-speed production line
- High-performance Machine Vision

## BENEFITS

- Easy-to-program
- Versatile
- Cost-effective
- Open FPGA
- Programmable by user

## KEY FEATURES

- Vision processor
- Up to 4 GigE Vision cameras
- Data-acquisition PCIe board
- Image processing modules included
- FPGA-based processing
- Real-time processing
- GigE Vision switches
- SDK & API included
- Xilinx Vivado HLS webpack (free)
- Matrix or Linescan cameras

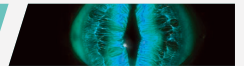


Machine Vision applications process an ever-increasing amount of information that must not be limited by the processing capabilities of computers. To exceed this bandwidth limit, TECHWAY has developed a multi-camera acquisition board equipped with a processor unique of its kind.

Indeed, the DragonEYE, thanks to its Vision Engine (FPGA technology), allows to unload the computers by offering the possibility to integrate the image pre-processing directly.

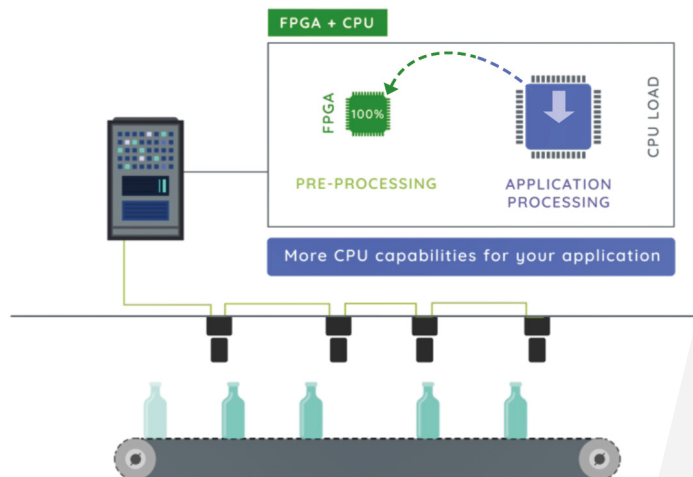
This powerful and complex technology is offered in a ready-to-use format accessible to all image developers. It allows them to focus on their applications by pushing the limits of their equipment.

## DragonEYE Lite



The DragonEYE Lite board, thanks to its Vision Engine Xilinx Artix FPGA technology, allows to acquire up to 4 GigE Vision streams and to pre-process each stream in real-time. The user can easily integrated its pre-processing in the open FPGA.

## Offload CPU to gain processing capabilities



INDUSTRY



Patent pending #1908759

# DragonEYE

FRAME GRABBER & FPGA-BASED IMAGE PROCESSING



## SOFTWARE

- Windows & Linux drivers
- API C++ :
  - PCIe access management
  - Camera management
  - Processing configuration
  - Memory management

## FIRMWARE

- IP GigE Vision 4 channels
- Xilinx Vivado HLS compliant :
  - Edge detection
  - Convolution
  - Morpho Math
  - Debayering
- Customized solutions (on demand)

## HARDWARE

- PCIe x4 Gen2 format
- 4 GigaEthernet ports
- 4 GPIO
- FPGA Artix 200

## ORDERING INFORMATION

- DragonEYE-Lite-2 :  
Frame grabber, Artix based

## KEY CHARACTERISTICS

### Open FPGA

- Processing unit: Filter, Bayer, ...
- Real-time
- Low latency

85%

Open resources

Dedicated for your application

I/O optocoupled

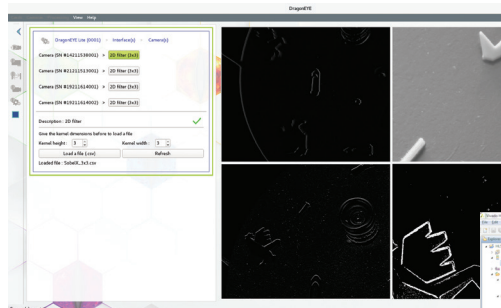
PCIe board

GigE Vision switches

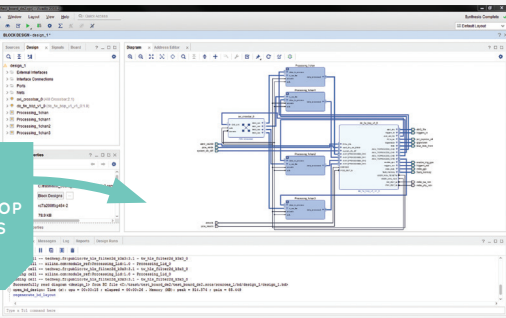
4 GigE Vision cameras

## INCLUDED DEVELOPMENT KIT

User-friendly starting GUI



IP integrator: Xilinx block-based IP Integration tool



DRAG & DROP IP BLOCKS



Vivado HLS interface: Xilinx IP creation accelerator (C and C++)



Information and photos subject to change without

