

DragonEYE

FRAME GRABBER & FPGA-BASED IMAGE PROCESSING



Integrated vision processor / Multi-camera system

APPLICATIONS

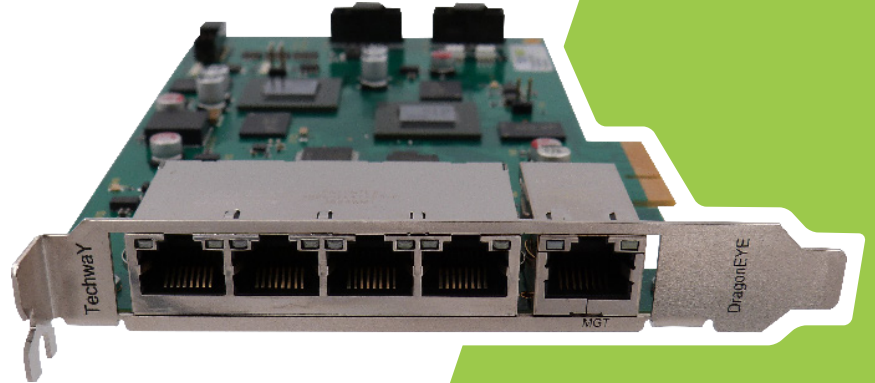
- Multi-camera system
- Deep-learning
- High-speed production line
- High-performance Machine Vision

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
- AMD (Xilinx) Vivado HLS webpack (free)
- Matrix or Linescan cameras

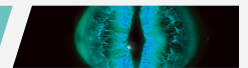


Machine Vision applications process an ever-increasing amount of information that must not be limited by the processing capabilities of computers. To exceed this bandwidth limit, TECHWAY has developed a multi-camera acquisition board equipped with a processor unique of its kind.

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.

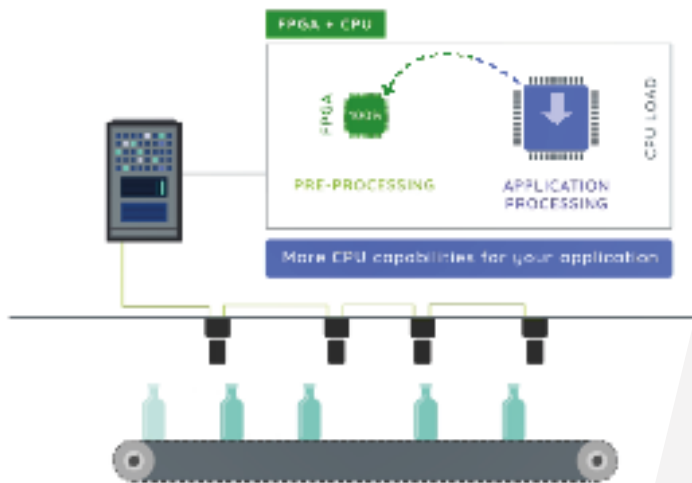
This powerful and complex technology is offered in a ready-to-use format accessible to all image developers. It allows them to focus on their applications by pushing the limits of their equipment.

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
- AMD 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

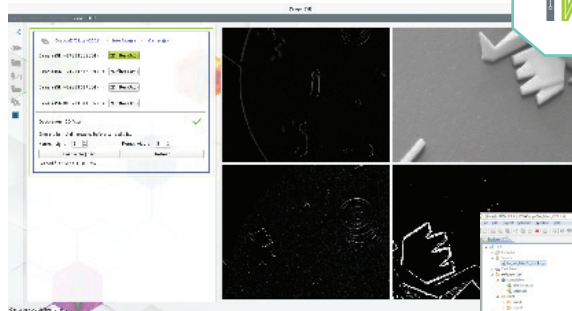
PCIe board

GigE Vision switches

4 GigE Vision cameras

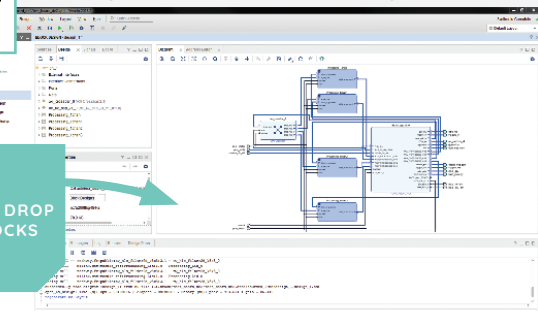
INCLUDED DEVELOPMENT KIT

User-friendly starting GUI



IP integrator: AMD block-based IP Integration tool

DRAG & DROP IP BLOCKS



Adaptive Computing Partner

ELITE CERTIFIED



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

Information and photos subject to change without

