



# OVMed<sup>®</sup>-0093 Advanced Class Medical Image Processing Unit product brief



available in  
a lead-free  
package

## Compact IPU With High Image Quality for Endoscope CCUs

OmniVision's OVMed<sup>®</sup>-0093 Image Processing Unit (IPU) is an FPGA-based, imaging solution featuring advanced automatic exposure and gain control, RGB noise reduction, edge enhancement and RAW 8/10/12 image output. The OVMed<sup>®</sup>-0093 IPU interfaces with our high-performance medical image sensors and can fit into an endoscope's camera control unit (CCU).

This IPU allows medical designers to leverage the benefits of our extremely small image sensors with easy integration into their systems, enabling a short time to market with high image quality.

Find out more at [www.ovt.com](http://www.ovt.com).



## Applications

- Medical and Veterinary Endoscopes
- Security and Surveillance System
- Industrial Processing Cameras

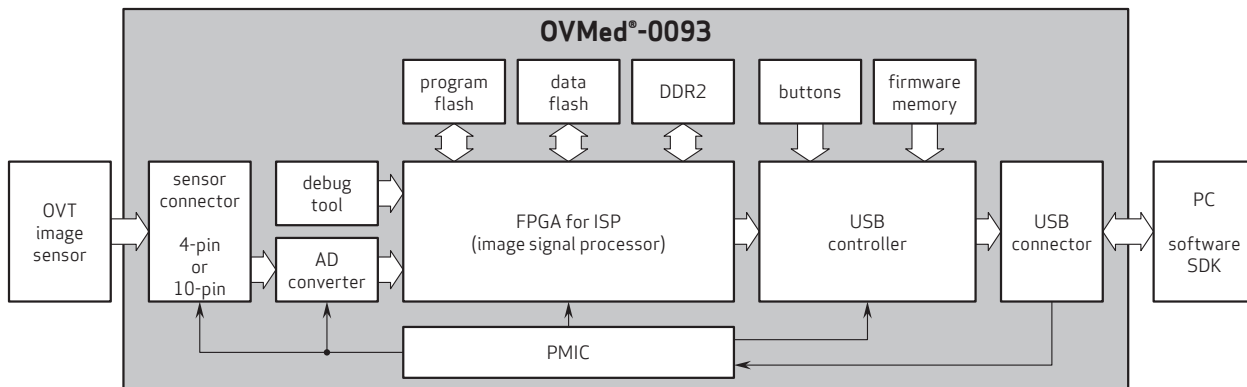
## Product Features

- Integrated design: sensor, processor bridge, ISP, and PC interface
- Small form factor to fit space-constrained equipment
- Easily adjustable system parameters with pre-defined buttons
- Advanced ISP delivers high quality images
- Ready-to-use Software Development Kit (SDK) to facilitate IP integration
- Seamless evaluation and build with customer equipment
- Market-ready, end-to-end solution
- Software compatibility with Windows, Linux, and Android platforms

## Product Specifications

- Supports image size: 400 x 400
- Image output formats: RGB, RAW, and YUV
- Sensor interface to 4 pin OV6946 mixed signal interface
- Output interface USB2.0 interface
- USB 5V power supply
- Current 300 mA (min >30 mA; max <500 ma)
- Supports AEC/AGC/AWB control
- Supports manual white balance
- Supports brightness/contrast adjustment
- Supports saturation adjustment
- Supports sharpness adjustment.
- Supports deFPN and de-noise function

## Functional Block Diagram



# OVMed<sup>®</sup>-0093



## Ordering Information

- **OV00000-EG00-0093**  
OVMed<sup>®</sup> ISP (advanced) with USB output (E3)

- Package Includes:
- OmniVision camera AA module with OV6946 image sensor
  - PCB board for OV6946 interface, OV426 A/D converter and ISP
  - USB cable with USB mini connector
  - CD-ROM containing:
    - Installation program
    - OVMed\_SDK\_Install\_Guide
    - OVMed\_SDK\_User\_Guide
    - Demo programs with source code



## Software Development Kit (SDK)

- The OVMed<sup>®</sup>-0093 IPU comes with a Software Development Kit (SDK), a ready-to-use integration tool that enables customers to develop applications as needed. The SDK also provides a C++ callable function library. The SDK's main features include:
  - Provides system initialization and load setting
  - Provides interface for image output formats (RAW, YUV, RGB)
  - Provides interface for system controls for settings such as brightness, contrast, saturation, sharpness, and de-noise
- Auto white balance (AWB) and Manual white WB control.
- Customizable development of new Graphical User Interfaces (GUIs) and applications
- No hardware modification or registration required
- Supports customer-defined function buttons
- Provides tutorial for API use with executable source code
- Library provided in binary (DLL) format
- Supports Windows OS, MacOS and Linux OS<sup>\*</sup> platforms

## Mechanical Specifications

- Size L: 86 mm W: 35 mm
- Power switch: 1
- Pre-defined adjustment buttons: 7
- Input connector: 4-pin OmniVision AA Module; 10-pin Hirose connector
- Output USB connector: Mini USB

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