



OVMed[®]-0119 Advanced Class Medical Image Processing Unit product brief



Compact IPU With Video Recording, Graphics and Storage for Endoscope CCUs



available in
a lead-free
package

OmniVision's OVMed[®]-0119 Image Processing Unit (IPU) is an FPGA-based, imaging solution featuring snapshot, video recording, graphics overlay and memory for storage. The OVMed[®]-0119 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 combine the benefits of our extremely small image sensors with a feature-rich ISP for easy integration into their systems, enabling a short time to market with high image quality.

Find out more at www.ovt.com.



Applications

- Medical Endoscopes and Catheters
- Industrial Video Scopes
- Veterinarian Endoscopes
- Security and Surveillance Monitoring Systems

Product Features

- Integrated design:
 - Sensor
 - Processor bridge
 - ISP
 - Display interface
- Small form factor fits standard medical equipment
- Easily adjustable system parameters with pre-defined buttons
- Advanced ISP delivers high-quality images
- Works stand-alone; no computer needed
- Software tool for customer setting adjustments
- Market-ready, end-to-end solution with pre-defined buttons
- Compatible with HDMI monitors

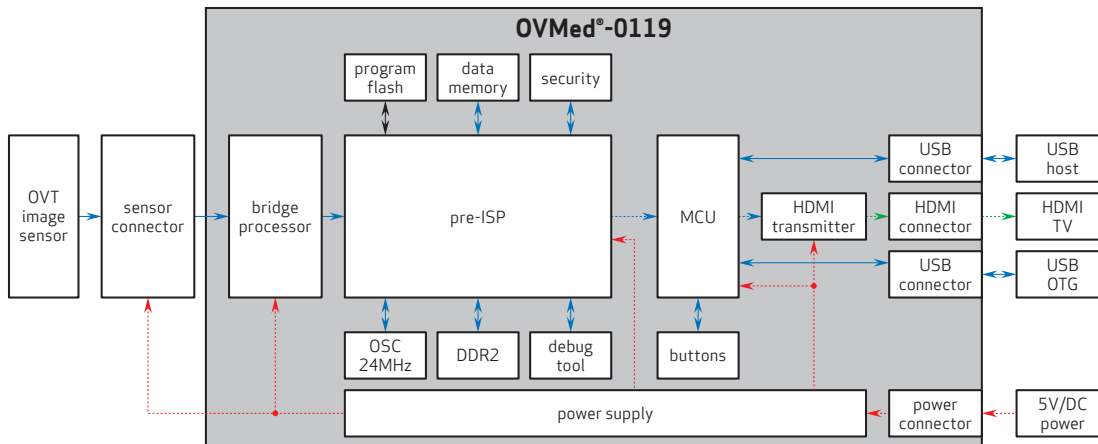
Product Specifications

- Supports image sizes: 400 x 400 and 200 x 200
- Image output formats: RGB, RAW and YUV
- Image capture rate: 30 fps
- Display resolution: 720p and 1080p at 60 fps
- 4-pin mixed-signal interface for OmniVision medical image sensors
- Output interfaces: HDMI
- Standard 5V power supply
- Supports AEC/AGC/AWB control
- 8 hardware buttons support adjustments, including brightness, contrast, saturation and others
- Reconfigurable buttons and settings via USB port connection to a PC

Mechanical Specifications

- Size: Length: 132 mm, Width: 106 mm
- Power switch: 1
- Input connector: 4-pin OmniVision AA module; 10-pin connector
- Output USB connector: mini USB
- Output to display: HDMI

Functional Block Diagram



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OVMed[®]-0119



Ordering Information

- **OH00000-EG04-1A-0119**
Complete SDK evaluation kit (advanced) for OV6946-based medical camera

- Package includes:
- OmniVision camera AA module/daughter board with OV6946 image sensor
 - PCB motherboard with OV6946 interface
 - USB power adapter
 - USB cable with USB mini connector
 - HDMI cable for HD monitor
 - CVBS cable for TV monitor
 - CD-ROM containing:
 - Setup program
 - Install guide
 - User guide



Software Development Kit (SDK)

The OVMed[®]-0119 board comes with a software tool that can be loaded onto any Windows[®] PC, to help customers redefine the board's buttons and change its default settings. This software uses the USB port on the OVMed[®]-0119 board to communicate with the Windows PC. Running the OVMed[®]-0119 Tool software, designers can change the definitions of eight hardware buttons. For example, they can define Button 1 as "Brightness" and Button 6 as "Sharpness." Designers can also use the software tool to choose the default settings for their imaging product. The default settings will be stored on the OVMed[®]-0119's on-board memory. During system boot-up, the default settings will be used in the system settings. This software tool's main features include:

- Utilizes Windows-based GUI
- Easily redefine 8 hardware buttons to adjust: brightness, contrast, sharpness, saturation, DNS, AWB, and lens correction
- Predefine the number of levels that users can select for each button (e.g., the number of brightness levels)
- Select display format: 1280 x 720 or 1920 x 1080
- Choose output port: HDMI or USB
- Check and select all default settings
- Save selected default settings onto board's memory; during next boot-up, system will load those settings
- Check board and firmware information

