OVMed™-B1 USB System product brief

OVMed-B1 USB System is an Easily Integrated USB System for Medical Imaging

available in
a lead-free
package

OmniVision's OVMed-B1 USB system is a compact image output board solution with stand-alone image signal processor (ISP) system-on-a-chip (SoC). Designed specifically to pair with the high-performance OV6946 medical image sensor, the OVMed-B1 USB system integrates a digital signal processor (DSP) solution with an ISP, analog-digital conversion and support connection with host device. The OVMed-B1 USB system allows customers to quickly and easily integrate

OV6946 into the medical imaging device, and use the many performance and imaging capabilities the ultra-compact sensor has to offer without extending time-to-market.

Find out more at www.ovt.com.

OmniVision.

Applications

- Medical Endoscopes
- Industrial Video Scopes
- Security and Surveillance Monitory Systems

OVMed™-B1

Product Features

- Integrated design: sensor, processor bridge, ISP, and PC interface
- Compact 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
- YUV image format
- Sensor interface to 4-pin OV6946 mixed signal interface
- Output interface to USB2.0 interface
- Supports AEC/AGC/AWB control
- Supports brightness adjustment
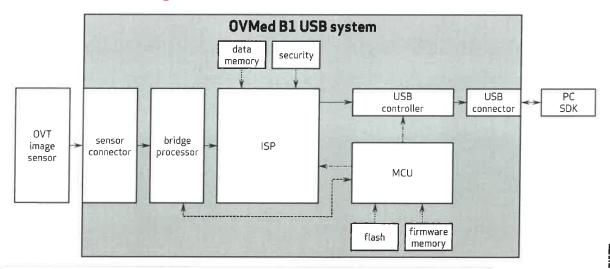- Supports saturation adjustment
- Supports sharpness adjustment

Software Development Kit (SDK)

- The board comes with SDK. It can help customers develop their own applications. The SDK provides a C++ callable function library.

- Main features:
  - Provides system initialization
  - Provides interface to capture image
  - Provides interface for system control: brightness/saturation/sharpness / AWB, etc.

- Main features (continued):
  - Easy for customers to develop their own GUI and applications
  - Users don't need to modify hardware or registers
  - Provides demo program to show how to use the APIs
  - All demo programs come with executable and source code
  - Library is provided in binary (DLL) format
  - Supports Windows OS, MacOS and Linux OS

Mechanical Specifications

- Size: L:60 mm, W:16 mm
- Power switch: 1
- Predefined adjustment button: 7
- Input connector: 4-pin OmniVision AA Module; 10-Pin connector
- Output USB connector: Micro USB

Functional Block Diagram

OVMed B1 USB system: OVT image sensor → sensor connector → bridge processor → ISP → USB controller → USB connector → PC SDK. data memory, security, MCU, flash, firmware memory.

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