PHOTON VISION SYSTEMS, INC.

P.O Box 509
Cortland, NY 13045
Phone 607-756-5200
Fax 607-756-5319
http://www.photon-vision.com
sales@photon-vision.com

High Performance PC Camera Image Processing and Compression Chip for the PVS VGA CMOS Image Sensor

Advanced Technical Data (Preliminary)
Part Number: IPC-2001

Provides a single chip solution for a high performance, high image quality embedded camera.

Applications include:

VGA and CIF PC Camera
High Performance PC Video Conferencing Camera
Security and Surveillance Cameras
PDA, Cell Phone or other Handheld Imaging Applications

Description:

When coupled with the PVS VGA CMOS Image Sensor, the IPC-2001 provides a full system solution for Embedded Digital Cameras. Its low cost, single chip implementation allows it to be ideal for portable devices, and its high quality image processing and high frame rate capabilities allow it to be the optimum choice for a wide range of applications. The IPC-2001 provides all of the image path, image compression, and digital interface functions required for a complete camera design.

All necessary image processing functions are provided including Bayer pattern interpolation, Auto Exposure and White Balance, and Color Space Transformation to YcbCr (YUV). In addition, many image processing parameters are programmable to enable maximum flexibility. The hardware-based JPEG compression engine enables programmable quantization for bandwidth and image quality tuning.

A development system is available (the ASIP-2000) which provides all of the image processing functions of the IPC-2001 as well as a PVS VGA sensor and lens.

Features:

- PVS High Quality, Fully Programmable, Image Processing Algorithms
  - Bayer Interpolation
  - Auto White Balance
  - Auto Exposure
  - Gamma Correction
  - Color Space Transform
  - Defect Removal
- Bandwidth and quality scalable JPEG Compression with Programmable Q-Tables.
- 60, 30, and 15 fps output at VGA and other resolutions.
- Directly supports the PVS VGA CMOS Image Sensor

Block Diagram