PAC7512 HD-720p USB 2.0 Camera SoC

General Description

The **PAC7512** HD-720p PC Camera SoC is a highly integrated and cost-effective solution for USB applications. It is fully compliant with USB Video Class and operates with native drivers in Windows operating system.

UVC defined image processing functions are supported by sensor's ISP engine. The **PAC7512** integrates CMOS image sensor, color image processing engine, regulator, USB2.0 transceiver and MCU (Micro controller unit) into single chip. It is designed to outputs YUV422 and motion JPEG (MJPEG) image format, and output resolution from QQVGA (160x120) to HD (1280x720) size.

System Features

- 3.3V and 1.5V power input
- Built-in oscillator, external crystal is not needed.
- 5 GPIO, including KEY and LED
- Flash/EEPROM Serial Peripheral Interface (SPI) Compatible

USB Features

- USB 2.0 and USB video class 1.0 compliance.
- 3 Endpoints: CONTROL, Interrupt IN, and Isochronous IN

Micro Controller Features

- Built-in micro controller with 1K bytes SRAM data memory
- 24K bytes mask ROM and 4K bytes SRAM for program memory
- Software controlled connection to USB bus for re-enumeration and soft reset.
- Firmware is upgradeable from PC via USB connection

Key Specification

Resolution	1280 (H) x 720 (V)
Optical Format	1/6.5"
Pixel Size	1.75um x 1.75um
Chief Ray Angle	28.4 degree
Sensitivity	1075 mV/lux-sec
Max. Frame Rate	720p (MJPEG): 30fps 720p (YUV422): 10fps VGA (YUV422): 30fps
Color Filter	RGB Bayer Pattern
Scan Mode	Progressive
Supply Voltage	3.3V ± 10%
S/N Max	39dB
Dynamic Range	65dB
Power Consumption	460 mW

Ordering Information

Part number	Package Type	Package Size
PAC7512LT	50 ball CSP	4.68mm x 4.32mm

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