1. Introduction

EJ511 is an USB 3.1 Gen1 capture IC supporting 1080p/60fps full high definition videc inputs. When EJ511 connects to USB 2.0 platform, it can support MJPEG compressio quality on USB 2.0 limit bandwidth.

EJ511 can record original contents from various sources such as smart device, camco player and game console.

EJ511 uses OS native UVC and UAC drivers and is compatible with Microsoft Window can fit in different media capture and streaming applications. It is the optimal solution fc videos and postproduction.

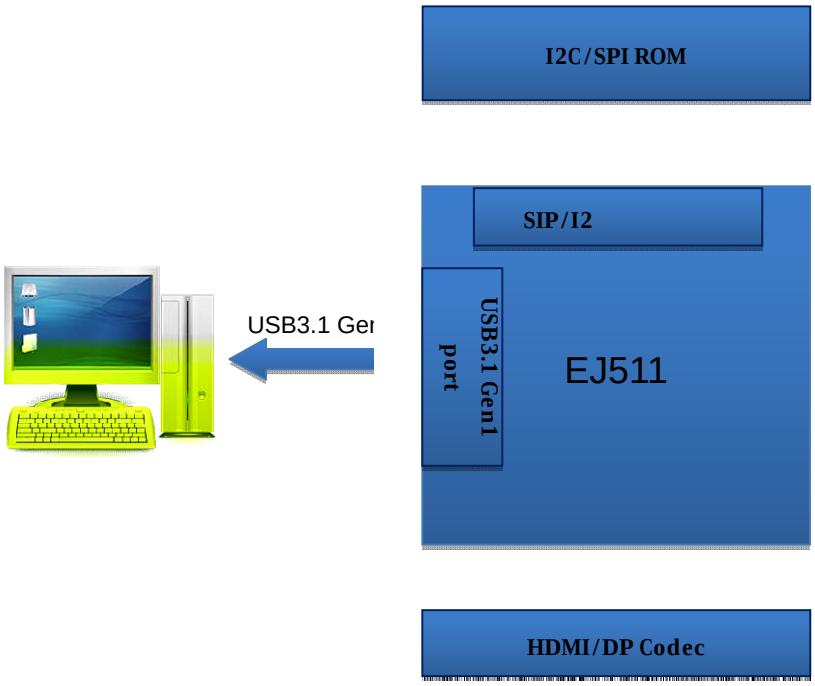


Figure 1-1. Application Diagram

2. Features

- Support USB3.1 Gen1 Specification
- Support standard USB Video Class (UVC)
- Support standard USB Audio Class (UAC)
- Support MJPEG and YUY2 (YUV4:2:2) format
- Support video output YUY2 format and resolution up to 1920x1080p @60Hz in USB3.1 Gen1
- Support video output MJPEG format and resolution up to 1920x1080p @60Hz in USB2.0 or USB3.1 Gen1
- Support 44.1KHz and 48KHz PCM stereo audio output
- Support digital video input interface: RGB 24-bit, Hsync, Vsync, Data Enable
- Support digital audio input interface: I^2S, Data formats of 16-bit, 16-bit stereo (Two channels)
- Support SPI / I2C interface
- Supports In System Programming (ISP) Firmware Update by USB port
- It is compatible with Windows 7, 8, 8.1, 10 or later, Linux OS, Mac OS

3. Specifications

- Host Interface
  - USB3.1 Gen1 : 300 ~ 350MB/s transfer bandwidth
  - USB2.0 : 40MB/s transfer bandwidth
- Audio and Video capture
  - Complies with UVC (USB video class) specifications
  - Complies with UAC (USB audio class) specifications
- Video Receiver Interface
  - RGB 24-bit,
  - Hsync
  - Vsync
  - Data Enable
  - Pixel Clock : 150MHz (Max)
- Audio Receive interface
  - I2S interface
  - Data formats of 16-bit
  - 16-bit stereo (Two channels)
- ROM interface
  - SPI or I2C interface
- Output color space
  - YUY2 (YUV 4:2:2)
- Compression
  - Hardware Motion JPEG (MJPEG) compression
- Resolution / Frame rate
  - Resolution up to 1920x1080p
  - Frame rate up to 60Hz
- Upgrade Firmware
  - Upgradeable by USB
- Operating System : x86 and x64
  - Windows 7, 8, 8.1, 10 and later …
  - Linux
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