VC0358 is a high performance USB 2.0 camera processor targeting high quality stand-alone PC Cameras. It comes with a high quality Image Signal Processing (ISP) unit, and an MJPEG compression engine. Its flexible sensor interface can support most common CMOS image sensors in the market. It is also fully compliant with UVC and UAC standards.

KEY FEATURES

Standards

Built-in USB2.0 HS & FS transceiver
Supports ISO IN pipe for video streaming
Compliant with USB Video Class 1.1
Compliant with USB Audio Class 1.0

MCU

Built-in 8051 micro controller
Supports external SPI flash for program code
Built-in 64KB RAM for program code running
Built-in 4KB RAM for program data
Supports EEPROM for setting and code

Sensor Interface

Supports CMOS Image Sensors
Supports sensors with RAW / YUV output
Supports 10-bit parallel interface
Programmable sensor clock output (parallel)
Supports I2C for sensor configuration

ISP / IPP

Supports 10-bit ISP
Supports AE/AWB/AF
Gamma / Brightness adjustment
Contrast / Sharpness adjustment
Edge Enhancement
Backlight compensation
Lens Shading Compensation
Advance DPD&DPC
Noise management

Video capability

Standard	Resolution	YUY2	MJPEG
VGA	640x480	30fps	60fps
HD-720	1280x720	12fps	30fps
SXGA	1280x1024	7fps	30fps
2.0M	1600x1200	4fps	30fps
HD-1080	1920x1080	4fps	30fps

Audio capability

Built-in PDM interface for digital audio mic.
Support up to 2 digital audio microphones
Built-in I2S interface for audio codec chip
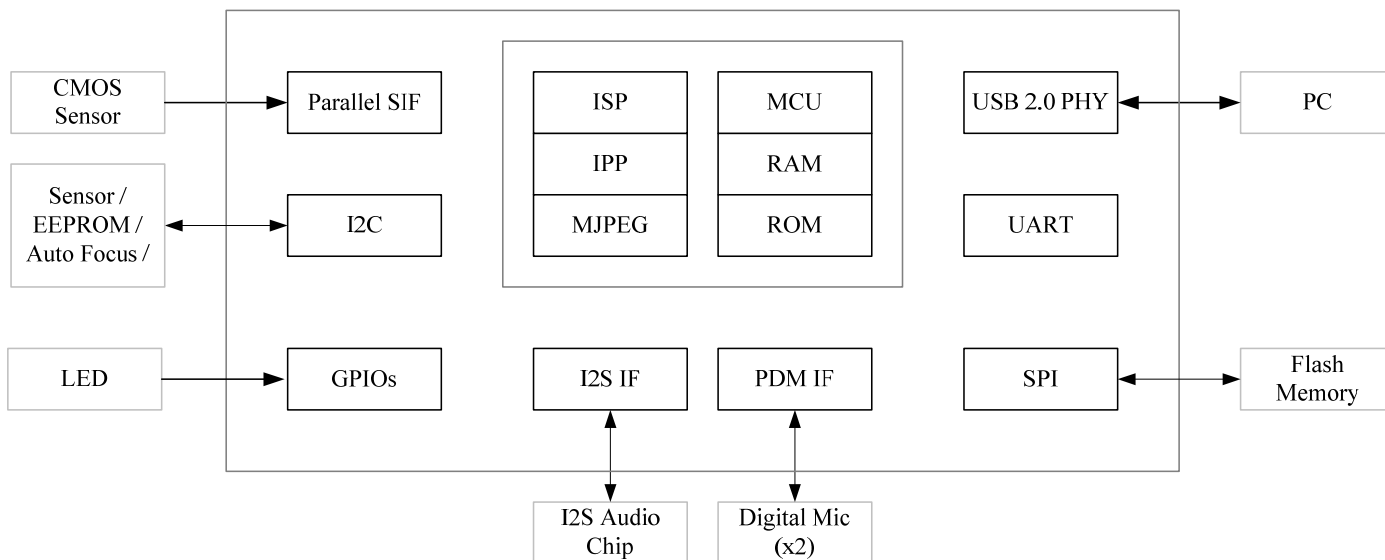Support 2 audio microphones & 2 speakers
Quantization noise reduction

I/O

USB 2.0 High Speed (Device)
GPIO / PWM / UART / I2C / PDM
SPI (for Flash Memory)
I2S (for Audio Codec)

Package Information

Part Number	VC0358PQNB
Package Type	LQFP-80pins
Size	12x12mm

Chip Block Diagram

Application Diagram