

## DESCRIPTION

The VX7000 provides a low-cost, high performance chip solution to the audio/video compression & capture application. VX7000 can accept NTSC/PAL video in 8-bit YUV 4:2:2 format (CCIR656). Built-in high performance compression algorithm provides good quality 30 frames per second in 704x480 (NTSC) or 25 frames per second in 704x576 (PAL) resolution. VX7000 provides AC 97 serial interface for audio sampling & capture function. On-chip memory controller is used to interface to 16 bits data bus SDRAM, which provides frame memory and bit stream buffer. The compressed data can be easily access through on-chip transaction unit. Bit stream can be accessed direct by Micro-P through host I/F. VX7000 also provides direct pass through paths. Specially designed PCI interface and hardwired TCP/IP protocol handler can handle handshaking with Ethernet chip without a powerful CPU plus RTOS. For connection with USB chip, VX7000 provides a split DMA bus. EPP I/F provides another path to access bit stream. By using adaptive frame rate methodology plus bandwidth limitation factor, VX7000 can auto balance to transmission bandwidth and CPU processing capability.

## FEATURES

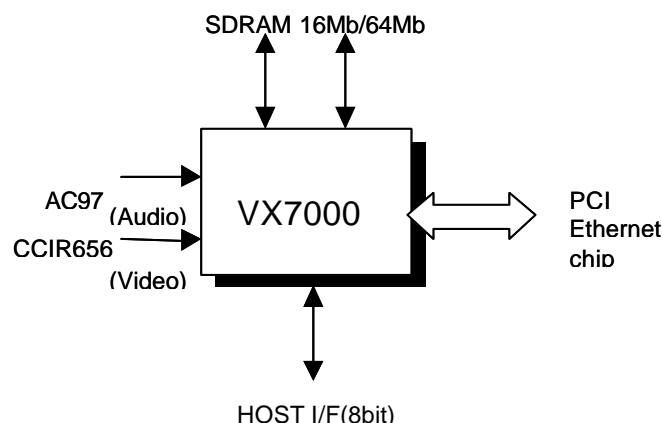
- Support CCIR656 YUV 4:2:2 image inputs from video decoder chips.
- High speed compression support real time image output.
- Encodes in 704x480(NTSC) / 704x576(PAL) picture format at 30 / 25fps.
- Support AC 97 serial interface using audio codec.
- Professional snapshot mode: Programmable frames, 24bits true color BMP files, resolution up to 704x480(NTSC) / 704x576(PAL),
- SDRAM interface: 16Mb or 64Mb, 16 bits data bus.
- Host interface: X86 8 bit local bus (ISA).
- Provides PCI interface to access Ethernet chip directly.
- Provides DMA/EPP interface to access USB 1.1/2.0 chip directly.
- Provides hardwired TCP/IP handler for LAN.
- Adaptive frame rate and bandwidth for transmission / network.
- 3.3V power supply.

## APPLICATIONS

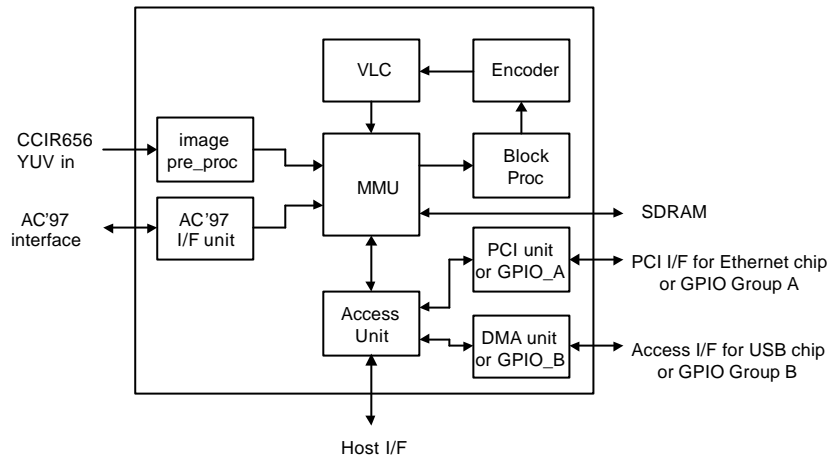
- High Quality PC Theater
- PC Based DVR
- Transfer VHS/V8/Hi8/D8 tapes to VCD/DVD
- Surveillance
- Web Camera or Net Meeting

## PACKAGE

- 160 pin PQFP



## FUNCTIONAL BLOCK DIAGRAM



## BLOCK DESCRIPTION

- AC 97 Interface Unit: Provides AC 97 digital access interface.
- Image Pre-Process Unit: Transfer line based image to block based image; built in video filter provides two modes setting for quality adjustment.
- MMU: Memory management unit, handle SDRAM access.
- Block Proc Unit: Analysis characteristic of image block , motion detection and configurable quantization function.
- Encoder Unit: Provides image compression function.
- VLC Unit: Provides variable length coding function.
- Access Unit: Handle host and access interface for registers setting & bit stream access.
- PCI Unit: Provides PCI interface for ethernet chip control and packet handle. It also can be configured to GPIO function when PCI I/F was unnecessary.
- DMA Unit: Provides DMA function for USB chip. It can be configured to EPP interface for other applications. It also can be configured to GPIO function when DMA or EPP I/F was unnecessary.