The H264-ULL-PMC is a ultra low latency, dual channel, H.264 encoder on a PMC Mezzanine form factor board. The H264-ULL-PMC provides a powerful and flexible solution for capturing and compressing up to 2 analog video inputs at up to 1080p HD resolution to the H.264/MPEG-4 AVC (Part 10) standard.

The H264-ULL-PMC is ideal for time-critical applications as it offers Ultra Low Latency encoding of below 40ms across the entire capture resolution range. The H264-ULL-PMC can do dual H.264 encodes at resolutions up to 1080p30 or a single encode at 1080p60. The H.264 encoding can be flexibly configured to suit a range of bandwidth and storage requirements.

The H264-ULL-PMC has two analog HD video input channels. Each channel can be independently configured for analog YPbPr HD or analog RGsB (Sync on Green).

The H264-ULL-PMC is supported by a set of well-documented and established SDKs that minimize development risk and shorten time to market for applications requiring video recording or streaming.

PRELIMINARY INFORMATION (Rev A.02)
Subject to change without notification
Ideal for -
Hi-Res Surveillance
Remote Platform Real-time control
Gaming
Simulation

Applications
Remote moving platforms
Remotely guided vehicles
UAVs
Vehicle cameras
Remote video surveillance
Electronic news gathering
Multi-camera systems
Traffic monitoring and control
Solid-state digital video recorder
Intranet/Internet video streaming
Advanced bit rate control modes enhance bandwidth and storage capacity

**Features**

Dual channel encode at up to 1080p30

Single channel encode at up to 1080p60

Dual Analog HD inputs (YPbPr, RGB Sync on Green)

Ultra Low Latency encoder (below 40ms)

H.264/MPEG-4 AVC (Part 10) encoder

Intra-refresh to improve bandwidth utilization

Motion detection with motion vector information

PMC (PCI Mezzanine Card) Mezzanine form factor

Drivers for WinXP-E and Linux
**PMC Mezzanine Interface**
- PICMG-2.0 Rev 2.1
- IEEE 1386.1 standard
- Single +5 V supply
- 32 bit PCI at 33MHz

**Ultra Low Latency Technology**
- Less than 40 ms encode latency

**Video inputs**
- 2 x high definition Analog video input ports
- Analog HD from: YPbPb, RGsB (Sync on Green)

**Video capture resolutions**
- Flexible capture resolutions, 16x16 pixel granularity.
- Standard resolutions supported include:
  - 1080p60, 1080i60, 1080p50, 1080i50
  - 720p60, 720i60, 720p50, 720i50
  - 480p60, 576p50

**Video Encoding**
- H.264 ISO/IEC 14496-10 baseline and Main Profile up to L4.2
- Interlaced and progressive video encode support
- Real-time multi stream H.264 Ultra Low Latency capture
- Dual channel encode at up to 1080p30
- Single channel encode at up to 1080p60

**Bit rate control**
- Constant bit rate (CBR)
- Variable bit rate (VBR)

**Motion detection**
- Motion detection at macroblock granularity
- Motion vector information

**Pre- and post-processing**
- Trans-rating and trans-sizing
- Selective blocking of video input regions

**Configuration support per stream**
- Frame rate
- Resolution
- Bit rate control
- Key frame interval
- Intra-refresh mode

**System Requirements**
- X86 PC-Compatible Host Computer with 33MHz PMC site
- 5V from PMC mezzanine site

**Mechanical**
- Standard 2.91 x 5.87 in Single PMC Mezzanine form factor

**Operational characteristics**
- Operating temperature 0˚C to 60˚C
- Extended temperature -40˚C to +85˚C (option)

**Software**
- Drivers for Windows-XP, Linux
- Comprehensive video recording SDK
- Sample video recording application in C/C++ source code

**Related Products**
- H264-ULL-PMC-VStream RTSP Video Streaming SDK

**Ordering Information**
- H264-ULL-PMC Video Encoder (0 to 60˚C)
- H264-ULL-PMC-Ext Video Encoder (-40˚C to +85˚C)