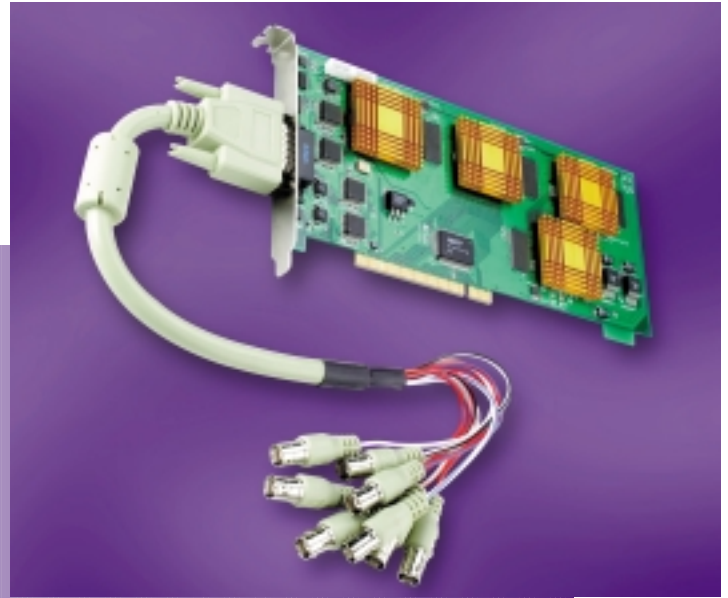**μTECH**
MuTech Corporation

FalconEye Series

FalconEye Series
FalconEye-MP MPEG-4
Video Compression Engine

Features
- Video Input: 4 Ports
- Audio Input: 0 or 4 Ports
- NTSC/PAL Standard Video
- Video Compression
- MPEG-4 Compression H264
- Variable Bit Rate: 70 kbps – 1000 kbps
- Real Time (30 fps - NTSC, 2F5 fps - PAL)
- Resolution: CIF (352 x 240 or 352 x 288)
- Audio Compression
- G.729 Format, Real Time
- 8 kbps, Fixed Bit Rate
- Synchronized Audio and Video
- Motion Detection with User Specified Area and Sensitivity
- Supports Time and Logo Overlay
- Supports Multiple Boards in a System
- Device Driver Automatically Detects & Identifies the FE – MP Boards
- Windows 2K/XP Support
- Software Development Kit Available
- 3/4 Sized PCI Board
- PCI 2.1 Compliant, 5V Board

Applications
- Security
- Video Surveillance
- Video Sequence Recording
- Traffic Control/Monitoring
- Digital Video Recorder (DVR) /Personal Video Recorder (PVR)

Description / Summary
The FalconEye-MP, provides 4 video ports and 4 compression engines on a single PCI plug-in board. The compressed video/audio data may be transmitted to a local/remote location through LAN, WAN or Internet. The FalconEye-MP supports color (NTSC/PAL) or monochrome (RS-170/CCIR) video sources. The on board compression engines are capable of processing 30 CIF frames per second for each of the 4 video sources simultaneously.

Video and Audio Sources
Up to 4 video sources may be connected to the 4 Video Ports of the FalconEye-MP. Both NTSC and PAL standard video are supported. On the included Standard Cable, there are 4 Female BNC connectors for the video inputs. No video switch is used on the board. All video sources can be continuously monitored and recorded. Brightness, Contrast, Hue and Saturation are independently adjustable by software.

Up to 4 audio sources may be connected to

the audio channels. The audio is in the format of Line In. There are also 4 Female BNC connectors on the Standard Cable. The user can select one or more audio sources to be recorded. An optional No Audio Version of the FalconEye-MP is available for areas where audio recording is limited by law.

Compression
The FalconEye-MP uses the MPEG-4 video compression to provide low bit rate and high video quality. The video/audio compression is done by 4 hardware Media Processors on board. Compared with the MPEG 1/2, the MPEG-4 generates much lower bit rate, important for recording and transmission of compressed video. On FalconEye-MP, the compressed video quality (the bit rate of the codes), the frame rates (up to 30/25 fps) are programmable.

Audio is also compressed by the Media Processors on board. It uses the G.729 standard to compress the audio signals to fixed bit rate (80 kbps). This is better than MP3 compression. The compressed audio

is synchronized with the video signal.

Preview and Motion Detection
The FalconEye-MP supports video preview in real time. As the video and audio are compressed and the codes are DMAed to the system memory, the video signal (uncompressed) can also be DMAed to the Display Memory for preview (up to a reasonable number of video sources). The user can add the time/date and a user provided logo to the previewed video as well as to the compressed video. The original audio can be DMAed to a sound card in the system to be monitored. Since the compression and DMA are all done by the FalconEye-MP very little CPU resource is used in the system. Most of today's systems are able to support more than 16 channels of video and audio.

The Media Processors on board also support detection of motion on the video. The area to be detected as well as the sensitivity of the detection can both be controlled by the user.

FalconEye Series FalconEye-MP MPEG-4 Video Compression Engine

Software

The FalconEye-MP MPEG-4 Video Compression Engine is delivered with the Windows Device Drivers and 2 Demonstration programs, one for the server side, the other for the client side. No board is needed at the client side, the software can monitor, search and display the information from the server side.

The drivers and the DEMO Utilities work under Windows 2K/XP.

The FalconEye-MP Software Development Kit (SDK) for the Windows Platforms is available, allowing OEMs to develop different tailored applications.

FalconEye - MP Series Technical Specifications

FalconEye – MP: 4 Port Video, 4 Port Audio

FalconEye – MPV: 4 Port Video, No Audio

Video Input
- Composite Video, NTSC/PAL
- 1Vp-p into 75 Ohms
- Connector: 4 Female BNC on Standard Cable

Audio Input
- Line In, Mono
- 2Vp-p into 600 Ohms
- Connector: 4 Female BNC on Standard Cable
- Volume Control Range: 83 dB

Compression Technology
- Video – Proprietary Optimized MPEG-4
- Variable Bit Rate: 70 kbps – 1 mbps
- User Selectable Bit Rate
- Audio – G.729 Standard
- Fixed Bit Rate: 8 kbps
- Audio is Synchronized with Video
- Recording File Format: Proprietary

Motion Detection and Preview
- Time/Date and/or Logo Overlaid on Video
- Motion Detection – Area & Sensitivity Programmable
- Preview of Recording Video Available on both Server Site and Client Site
- Client Software Works through TCP/IP

Miscellaneous and Software
- Dimensions - 230 x 107 (mm)
- Power Consumption: <= 12 W (+5V)
- PCI V2.1 Compliant
- OS Supported: Windows 2K/XP
- Software Included –
  – Windows Device Driver
  – FalconEye – MP Server DEMO Utility
  – FalconEye – MP Client DEMO Utility
- Software Available –
  – FalconEye – MP Software Development Kit (including sample code)
- Cable: Standard Cable Included

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