

mini dvr proTM

*Battery powered, go anywhere
high resolution
portable video recorder*

IDE or Compact Flash

Using integrated Motion JPEG, the **mini dvr PRO** provides scalable compression with high quality video inputs and outputs to maximize image quality at an outstanding 720 x 486 pixel image resolution.

The **mini dvr PRO** offers broadcast quality video in a standalone DVR only 3.5 x 5.7 inches and 1.2 inches thick.

Two **mini dvr PRO** models are available, providing a choice of storage options. Small enough to fit in the palm of your hand, slip into a pocket, or hang on a belt, the **mini dvr PRO** records to ATAPI/IDE or Solid State drives. The compact flash model provides easy removal and transfer of recorded video.

ATAPI hard drives are available in robust 2.5 inch sizes ranging from 20 to 80 GB capacities, or in a shockproof, solid state style with capacities of 1 to 34 GB.



PRODUCTS

TECHNOLOGY

INNOVATION

Based upon Fast Forward Video's 15 year history of broadcast industry standard digital video products, the **mini dvr PRO** offers unique advantages in remote, portable and mobile applications, including

- **Compression Ratios from 4:1 to 20:1**
- **Analog Composite and Y/C in/out**
- **NTSC and PAL**
- **Real Time Clock**
- **Loop Record**
- **Push button control or RS-232 interface**
- **Pre-event Record**
- **Internal battery or external AC/DC**
- **USB 2.0 Port**
- **Optional Windows Control Software**

SPECIFICATIONS

VIDEO INPUT

Analog Input: Composite and Y/C
Levels: 1.0Vp-p, 75 ohms
Standards: 525/60 (NTSC) or 625/50 (PAL)

VIDEO OUTPUT

Analog Output: Composite and Y/C
Horizontal Resolution: 550 TV lines (at 5:1 compression)
Levels: 1.0Vp-p, 75 ohms
Standards: 525/60 (NTSC) or 625/50 (PAL)
Connections: Multi-pin for component

VIDEO INPUT DECODER

Format: Digital 4:2:2 YCrCb
60 fields per second NTSC
50 fields per second PAL
YUV
Digital Color Space: 13.5 MHz
Sampling: 720 x 486 pixels (525/60)
Pixel Resolution: 720 x 576 pixels (625/50)
S/N Ratio: 50 dB
Bandwidth: 7 MHz (-3 dB)
Differential Gain: 2%
Differential Phase: 2 deg.
ADC Differential Linearity: +/- 0.7 LSB
ADC Integral Linearity: +/- 1.0 LSB

VIDEO OUTPUT ENCODER

Digital Color Space: Digital 4:2:2 YCrCb
Analog Bandwidth: Y: 6.75 MHz
C: 1.3 MHz
Composite: 4.5 MHz (NTSC)
5.0 MHz (PAL)
DAC Resolution: 10 bits x 3
S/N Ratio: 60 dB

VIDEO COMPRESSION

Codec: Zoran
Method: JPEG (Joint Photographic Experts Group)
Compression Ratio: Variable down to 4:1

MEMORY

Multi-port Frame Buffer: 8 MB DRAM
Aggregate Bandwidth: Greater than 45 MB/second

ATA/IDE DISK CONTROLLER

Optional: ATA/IDE or Solid State drive
Maximum Data Rate: 16.6 MB/Sec
Supported Hard Drives: Hitachi Travelstar
BitMicro Solid State

COMPACT FLASH

Optional: Multiword (DMA) direct memory access, only. Sandisk or equivalent.

MICROPROCESSOR

Type: Intel 80386EX
Clock Speed: 40 MHz
Local ROM/EPROM: 1 MB Flash EEPROM
Local SRAM: 1 MB 0 wait state

COMMUNICATIONS INTERFACE

RS-232 Interface: Conforms to Sony Remote (9 pin) protocol. 38400 baud, 8 data bits, odd parity, 1 stop bit

AUDIO SPECIFICATIONS

Resolution: 16 bits
Channels: 2 in, 2 out
Dynamic Range: 80 dB
Total Harmonic Distortion: 0.22%, -73 dB
Intermodulation Distortion: 90 dB
Crosstalk: -80 dB
Interchannel Gain Mismatch: +/- 0.5 dB
Input Voltage: 1 VRMS nominal, 3V p-p max
Input Impedance: 20k ohms
Input Programmable Gain Span: 22.5 dB
Full Scale Output Voltage: 0.707 VRMS, 2.0V p-p
Output Impedance: 600 ohms
Output Attenuation Range: 94.5 dB
Sampling Rate, FS: 8.0 KHz to 52 KHz
Passband: 045 FS
Passband Ripple: +/- 0.1 dB

SOFTWARE

Optional: Playback control software. Runs on Windows 9x/2000, XP.

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