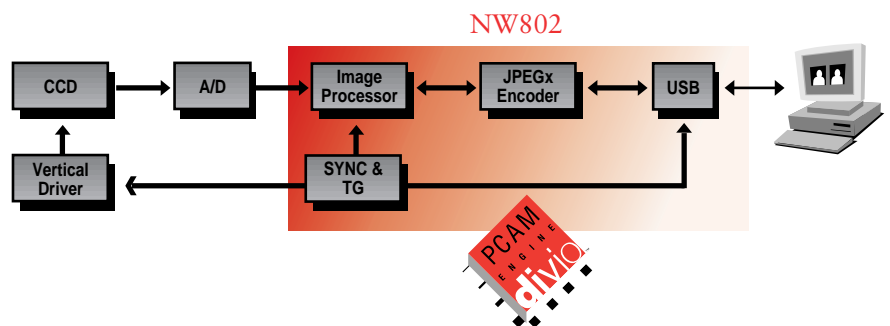# divio™

USB
UNIVERSAL SERIAL BUS

divio remains on the cutting-edge of digital video technology with the NW802, the industry's first single-chip PC Camera engine. The NW802 enables a new class of low-cost, high-performance USB-based PC Cameras. Leveraging divio's patented JPEG-lite technology, the NW802 provides real-time, full-motion digital video capture across a standard USB interface. divio's dynamic-bit-rate control automatically adjusts the camera's video compression rate to guarantee the highest video performance under any given bandwidth conditions. Next-generation PC Cameras powered by the NW802 make possible new applications including video capture, video e-mail, video conferencing, and still image capture at affordable prices.

The NW802 replaces the complex, costly chip sets used in current PC Camera designs. The NW802's fully integrated design integrates a number of functions into a single-chip - JPEG-lite™ encoder, image processing, auto-exposure, timing and sync generator, USB interface, and support for off-the-shelf CCD sensors.

To simplify implementation and reduce time to market, a PC Camera manufacturing kit with full functionality is also available. The kit includes all of the hardware, software and documentation necessary to quickly and easily develop low-cost, high-performance PC camera designs.

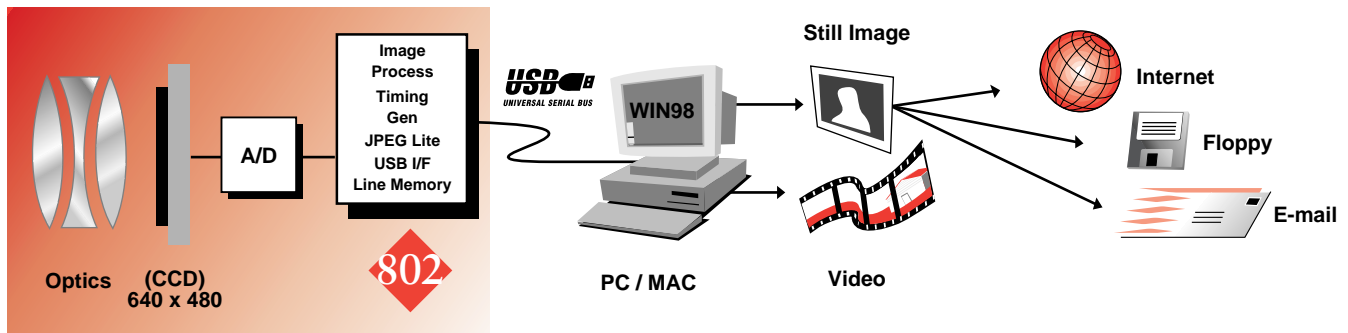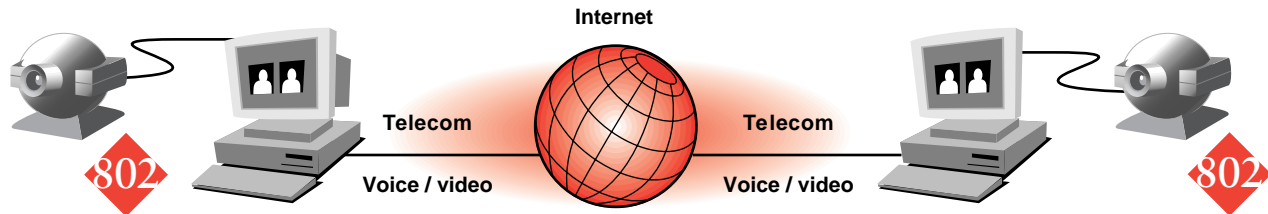divio is leading the way to superior digital video on the PC at an affordable price.

Features and Benefits

High Quality Video and Still Image Capture
- Real-time, full-motion digital video capture
  - 30 frames/sec at CIF resolution (352 x 288)
  - 15 frames/sec at VGA resolution (640 x 480)
- Patented JPEG-Lite compression technology
  - Faster frame rates and larger frame images
  - Based upon DCT compression algorithm
- Dynamic-bit-rate control for maximum throughput

Superior Image Processing
- Auto exposure and white balancing
- Edge detection and enhancement
- User-selectable gamma correction
- User-selectable hue, saturation and contrast control
- Color space conversion-RGB to YUV 4:2:2
- Missing pixel interpolation
- Down sampling support

Standard Output Format Support
- 640 x 480 / 320 x 240 / 160 x 120 VGA
- 352 x 288 CIF
- 176 x 144 QCIF

CCD Sensor Support
- 640 x 480 pixel resolution, progressive scan (non-interlaced) color

CCD
- Support for off-the-shelf CCDs
- Panasonic / Sharp / Sony / Fuji

Standard Block Diagram

NW802

NW802

802 - PCAM™

Capture - Edit - Distribute in Realtime

Videoconference / chat

PC Camera Manufacturing Kit

Board Components
- divio NW802LQ PC Camera engine
- 640 x 480 Color CCD
- USB Interface
- Fast f/1.6 aperture, 5.7mm lens

Kit Contents
- divio NW802P PC Camera reference board
- Windows 98 software drivers
- Schematics / Gerber files
- Technical Manuals

Software Driver Support
- TWAIN Driver
- Quicktime
- Direct Show

Applications
- Video Capture and Editing
- Video E-mail and Video Postcards
- Videoconferencing
- Still Digital Photography
- Surveillance

Minimum System Requirements
- Intel Pentium-class Processor (233MHz or higher)
- 32MB system memory or higher
- Windows 98 operating system
- Apple Mac
- USB interface

Sales Information

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divio™