divio

NW701

DAAD™
Digital to Analog;
Analog to Digital

divio introduces the NW701, the world's first single-chip DV codec. Fully DV-SD "BlueBook" compliant and designed with divio's patented compression technology, the NW701 delivers unrivaled video quality, performance and functionality. With a single-chip design and glueless interface to standard video components, divio's DV codec will replace current multi-chip solutions and enable a new generation of cost-effective digital video products including camcorders, desktop PCs, VTRs, and stand-alone applications. In addition to the standard 25Mb/s data rate, the NW701 provides low bit-rate modes for video capture to a variety of low-cost storage devices.

divio has created NW701-DAAD™ (D⟷A; A⟷D) manufacturing kits with expanded functionality to simplify the implementation process and reduce time-to-market. divio supplies all of the hardware, software and documentation necessary to develop low-cost, high-perfomance product designs.

The NW701 provides an unprecedented feature-set that delivers the essential digital video engine to empower real-time DV performance and quality.

Features and Benefits

High-Quality, Enhanced Blue Book Features
- Fully "Blue Book" DV-SD compliant
- Optional Low Data-Rate Modes: 3.0, 2.4, 1.8, and 1.5MB/s
- Integrated multi-tap video filter for 4:2:2 to 4:1:1, or 4:2:2 to 4:2:0 conversions

Low System Cost
- Integrated single-chip design including audio and video I/O processing and video compression.
- Glue-less interface to standard video components, processors, and memory
- Integrated shuffle memory logic
- Requires only one 256K x 32 EDO DRAM

Real-Time Performance
- High speed (33MB/s) throughput
- Double Clock Option: Capable of operation up to 54MHz for dual stream applications

Comprehensive Video and Audio Support
- NTSC (4:1:1) and PAL (4:2:0 and 4:1:1) processing
- Popular I^2S audio interface
- 48, 44.1, and 32 kHz (12- and 16-bit) audio support
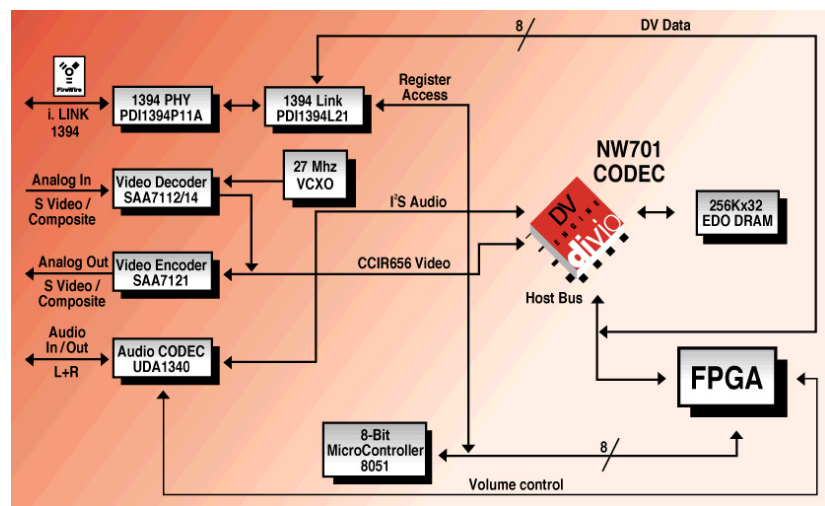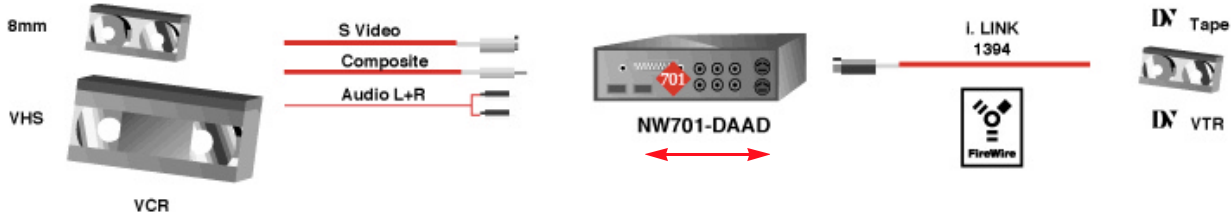
Simple Host Bus Connectivity
- Single 16-bit Asynchronous Host Bus interface
- 512 Byte DV FIFO for ease of integration
- 3 interrupt pins for enhanced system control

System Block Diagram

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Content Convertion : 8mm, VHS,etc… ← to / from → DV (Digital Video)

Analog Video to PC / MAC

Digital Video to TV / Projector

701-DAAD™ Manufacturing Kit

Board Components
- divio NW701LQ DV–SD Codec
- Video Decoder (SAA7112/14)
- Video Encoder (SAA7121)
- 8051/FPGA
- Audio Codec (UDA1340)
- 1394 Link (PDI1394L21)
- 1394 PHY (PDI1394P11A)

Manufacturing Kit Contents
- divio NW701-DAAD Reference Design
- Application Software
- Schematics / Gerber Files
- Technical Manuals
- FPGA + Firmware

Sales Information

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Performance Summary
- Supports NTSC & PAL
- Input / Output: S Video, composite, audio L+R & 1394
- Bus powered or external power source
- Compatible with DV editing card & SW
- Small form factor

Ordering Information

Part Number	Description
NW701LQ	DV-SD Codec
NW701-DAAD	Manufacturing Kit

divio™