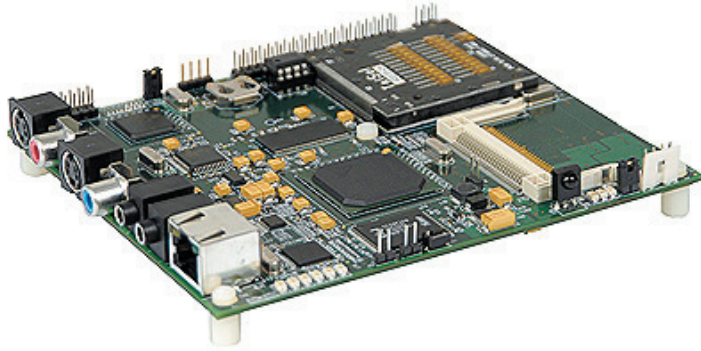


Streaming Networks Television Module for Recording, Playback and Time-Shift

www.streaming-networks.com

ODM reference design for Disk and Disk Less media Recording/Playback



OVERVIEW

Streaming Networks offers SNTV (Streaming Networks TV), an ODM ready reference design that provides TV with PVR functionality. The form factor of the SNTV board allows it to be directly embedded in TV's or can be used as a set-top-box. SNTV is a disk based or diskless networked module that can use home network (via Ethernet or 802.11g Wi-Fi) to record and playback using storage devices provided by PC's anywhere in the house. It can also use the onboard system RAM, locally attached hard disk (HDD) and various removable flash disks such as Compact Flash (CF), Memory Stick (MS), Secure Digital (SD), Smart Media (SM) and Multimedia Card (MMC) for media access and storage. A configurable user interface provides flexibility for designing your own GUI (Graphical User Interface)

HARDWARE

The hardware consists of a compact single board using the latest media processor from Philips, the PNX1502 (300 MHz). The board has memory stick, removable flash and IDE interfaces alongwith 128 MB of SDRAM. It also has 16 MB of onboard flash for the software application. A removable Hard Disk Drive (HDD) provides unlimited storage flexibility. It also includes LAN, CVBS Video IN/OUT, SVideo IN/OUT, stereo audio IN/OUT, real-time clock and an IR Receiver. All major video formats (PAL/NTSC/SECAM) are supported.

VIDEO / AUDIO FEATURES

The SNTV software is based on MPEG4 video technology. It does video and audio compression / decompression, program stream multiplexing, recording/playing, time-shifting and system control functions all using a single PNX1500.

It allows you to record and play movies using MPEG4 standard. Pause TV when you need or instantly replay an action again and again. Use of ISO compliant video, audio and recording standards allows the streams to be played by commercially available players and on PC's.

INSTANT REPLAY

While real-time TV broadcast is being watched, it also gets recorded in the background in system RAM to provide up to 60 seconds of instant replay. The recording is at highest quality and full D1 resolution. This replay on demand feature is particularly useful when watching sports event, replaying the action again and again. Live TV broadcast can still be watched in PIP while doing instant replay. All trick modes are available during replay.

RECORDING & PLAYBACK FEATURES

Recording and playback from the HDD (local or remote) and removable Flash media. The time-shift feature permits you to watch TV programs at your convenience. If you need to go to the kitchen or attend a telephone call, just press the PAUSE button, and upon resuming you can start watching the TV program from where you left. Time-Shift supports all trick modes, can be viewed in PIP with live TV as main or vice versa and displays live and play back time. Skip through the commercials or uninteresting bits while catching up on the live broadcast.

Easily jump between recorded playbacks and live TV, list files with thumbnails, playback at 2x along with audio, scale video size and enjoy multiple previews by Picture-in-Picture playback. Fast-forward/backward, use slow motion or just play to enjoy the clip again. "Instant reply" gives you the flexibility to instantly rewind back to replay and analyze the action again. Special features like thumbnail pre-view of recorded files, timer recording, play-list with date and time for easy selection makes Streaming Network's SNTV offering an extremely attractive solution.

SUPPORTED PERIPHERALS

Besides broadcast TV programs, video input can come from a camcorder, VCD/DVD player or VHS tape. Audio input can come from CD player, cassette tape, DVD or PC. CVBS IN/OUT, S-Video IN/OUT, stereo audio IN/OUT, LAN interface and infra-red (receiving) are also supported. Favorite shows can be archived to a PC's, DVD-RW drives.

On a Single PNX-1500

- Instant replay during real-time TV broadcasts
- Full D1 recording / playback
- 2/3 D1 Time-Shift

Media Supported

- Local HDD, MS, CF, SD, MMC
- PC HDD/Storage media via wired or wireless home network

KEY FEATURES

HARDWARE:

- 300 MHz PNX 1502 processor
- 128 MB SDRAM at 200 MHz
- 16 MB bootable Flash
- IDE Interface for ATA/ATAPI devices
- Supported Media: Memory Stick (MS), Compact Flash (CF), Secure Digital (SD), Smart Media (SM), Multimedia Card (MMC), Hard Disks
- LAN Interface 10/100 Mb/sec, 802.11 g Wi-Fi
- CVBS IN/OUT, S-Video IN/OUT (PAL/NTSC/SECAM)
- Stereo Audio IN/OUT
- Infra-Red (IR) Receiver, real-time clock

SOFTWARE:

- Video / Audio formats supported
 - MPEG4, MPEG2 and other MPEG4 dialect's
 - MPEG1 layer II Audio, MP3
 - Various file format multiplexing like AVI, ASF and MPG
- Video resolution and Quality Modes
 - Up to Full D1 recording and playback
 - 2/3 D1 and CIF Time-Shift
 - Five Quality modes Super fine, Extra fine, Fine, Normal, Economy,
- MP3 Audio Recorder/Player, WAV Player
- JPEG, GIF Image Players with Pan/Zoom and Rotate/Flip
- Recording Features
 - Instant replay during real-time TV broadcasts
 - TV Pause (Memory or stable storage based), Record Pause, Jump from recording to live TV modes
- Playing Features
 - Time-Shift with all trick modes and PIP
 - Play, stop, pause, reverse
 - Fast forward (2x,3x,30x), fast rewind (2x,3x,30x)
 - Slow forward, Slow rewind (1/2x, 1/4x, 1/8x)
 - Instant replay, Skip, A-B repeat
- File Systems
 - FAT 12/16/32
- General Features
 - PIP, PlayList, Thumbnail preview, Scheduled recording
 - Configurable user interface (skins)
 - Media browser - List your movies, photos, music
 - Media copying - Copy music, movie and photo to different media
 - Video on Demand - Watch your movies as you desire with trick modess
 - PC-SNTV - Record your favorite programs onto your PC HDD or play from it

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