

System 2722

Audio/Video Record & Playback Data Acquisition System with Large Archive and Multi-Access Capability

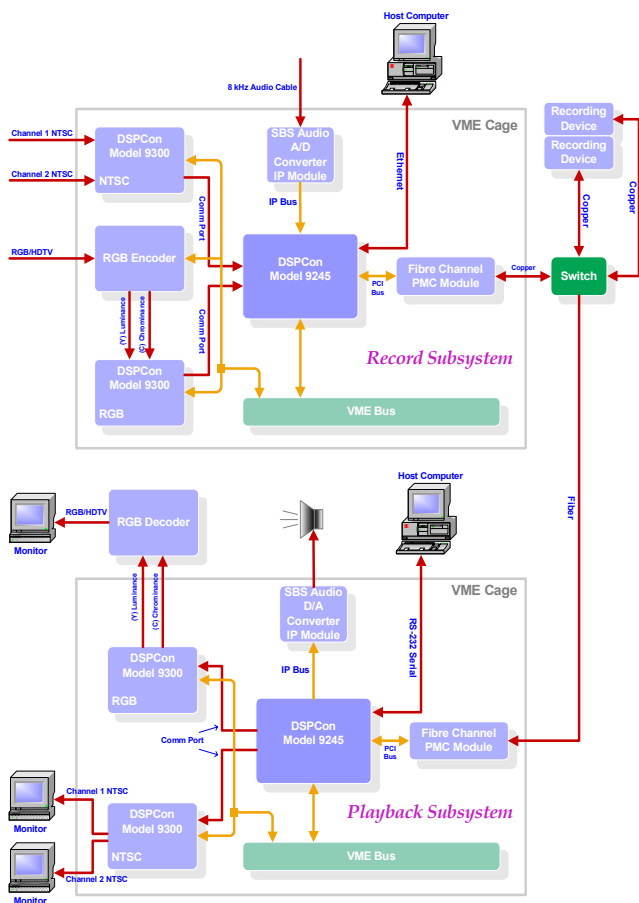


System 2722 is capable of recording and playing back multiple NTSC video sources, multiple 1280 x 1024 RGB video sources and one audio source per video channel.

DSPCon, the Leader in Digital Signal Processing, now offers audio and video data acquisition and replay with accessibility from a remote or local desktop computer. Data can even be accessed via the Internet or a wide area network!

Real-time audio and video data acquisition and playback with resolution not yet seen in the industry. With up to 10 TeraBytes of storage, 20 Mbits/second/signal RGB, audio sampling of 16-bit and signal compression of 5 Mbits/second/signal, the requirements for applications such as flight simulation, combat training and hi-end Internet have been met.

Block Diagram



Consisting of three subsystems: the Record Subsystem, the Playback Subsystem, and the Storage Area Network (SAN), DSPCon's System 2722 is designed to capture and record large amounts of audio and video data and to allow simultaneous playback of that data to multiple sources. This versatile system allows the user to record the audio and video in the field and then digitally load the data through a Fibre-networkable interface onto an internal network or even to the Internet. From there, any number of users can access the archived data for viewing and listening at any point on the globe. The functionality is similar to that of a general recorder system, where operators have control over the record, playback, rewind, etc. functions. Because this system is digital, however, the functions happen nearly instantaneously. In addition, these users can skip to user-defined segments of audio and video to eliminate tedious searching through an entire archive.

Integrated with DSPCon hardware, System 2722 contains two DSPCon Model 9245 DSP Baseboards and four DSPCon Model 9300 video compression/decompression



Model 9245 DSP Baseboard
Data Streaming Engine



Model 9300 Video
Encoder/Decoder



Acquiring, Processing and Managing the World's Data.

www.dspcon.com

Version 3

System 2722

How System 2722 Works

The Record Subsystem

The record subsystem is capable of recording multiple 1280 x 1024 RGB video sources, multiple NTSC video sources and synchronized audio sources for each video input. Analog data is digitized, compressed, and formatted for recording by the subsystem's hardware and then the formatted data is recorded to one of two JBOD or RAID arrays, via the storage area network. An operator control workstation (PC), connected to the record subsystem, via Ethernet, runs a GUI that allows access to the record subsystem control functions.

The Playback Subsystem

Each playback subsystem is capable of replaying multiple 1280 x 1024 RGB video sources, multiple NTSC video sources and synchronized audio sources for each video input. Formatted data is read from the JBODs, uncompressed, converted to analog and output from the system. An operator control workstation (PC), connected to the playback subsystem, via an RS-232 serial port, runs a GUI that allows access to the playback system control functions.

The Storage Area Network

The SAN includes a Fibre channel network and two 10-disk JBODs and provides up to 10 TeraBytes of data storage. This network allows for simultaneous access to the JBOD resources by the record and playback subsystems. While the primary data flow is from the record subsystem to the JBOD and from the JBOD to the playback subsystem(s), the storage area network is also used to pass status data between the record and playback subsystems.

Features and Benefits

Features

- 100% COTS Hardware
- DSPCon developed software
- Up to 10 TeraBytes of JBOD/RAID storage
- Compression of 5 Mbits/second/signal
- 20 Mbits/second/signal 1280 x 1024 RGB
- Simultaneous audio sampling of 16-bit
- RS-170 and RS-170A supported
- Both 4 wire and 5 wire RGB compression supported

Benefits

- Provides cost-effective, COTS-intensive solution
- Minimizes custom-software development
- Streams data accurately and with ease
- Provides user-friendly graphical user interface for operator command and control of the record and playback functions from a local or remote location
- Provides an inexpensive, large storage capacity for both audio and video data
- Results in a high-quality image for playback
- Sharp color enhances image quality
- High resolution audio is synchronously recorded and played back with video

Software

System 2722 is delivered with DSPCon's developed software, which provides a multi-tasking Graphical User Interface and data-streaming engine. This comprehensive, user-friendly software links the I/O and DSP hardware with Ethernet and SCSI connected devices, and provides a GUI interface to DSP processes and data handling, including all operator control of the record and playback functions.

