

MPEG Data Broadcasting Test System

► AD960



► Features & Benefits

In-depth Off-line Analysis of MPEG-2, DVB and ISDB Transport Streams Containing DSMCC Data Broadcast Protocols Including IP, Data and Object Carousels Lets You Fully Verify Product, System Design and Performance

Powerful Tools to Capture, Manipulate and Play Out Transport Streams Containing Data Broadcasting Protocols Helps You Build and Apply Sophisticated Test Sequences To Extensively Exercise All Design and Performance Parameters

High Performance Processing Power Combined With a Large Collection of Input/Output Interfaces Offers the Flexibility Needed for Use in a Wide Range of Design and Manufacturing Applications

► Applications

Interactive Television

Software Development

MHP Set Top Box Design

Carousel Multiplexing

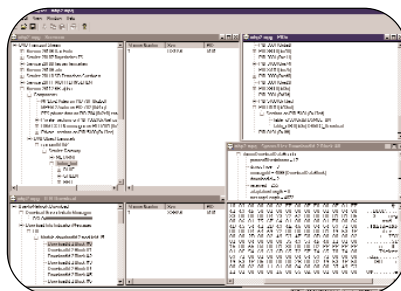
Data Broadcasting Systems Installation and Integration

Equipment Design and Verification

The Solution for High Performance Data Analysis of MPEG-2, DVB and ARIB Transport Streams.

Stream Analysis

- DVB data and object carousel analysis
- Bit rate and repetition rate display of blocks, modules, objects, UN messages, SI tables and video/audio PIDs
- BIOP, DSI, DII, DDB and DSM-CC section display and interpretation
- Display of MHP AIT table
- ARIB B15/B24 Data Carousel Analysis*¹
- MPE analysis including syntax of datagram sections
- Display of PSI/SI/PSIP tables with Huffman decoding
- Transport stream packet content
- PCR timing information
- Real-time MPE sessions (M+ option)

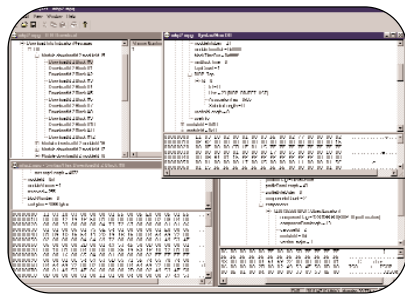


Stream Creation

- Multiplexer/Demultiplexer to create multi-program transport streams with custom SI for both DVB and ATSC
- Import of transport packets containing DSM-CC sections

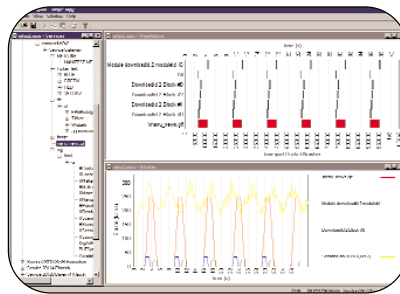
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Stream Manipulation

- ▶ Stream cutter
- ▶ Packet editor
- ▶ PSI/SI/PSIP editor



Stream Playout and Recording

- ▶ Record, play at 90 Mb/s
- ▶ Continuous playout of looped streams with automatic updating of timestamps
- ▶ Simultaneous play and record (optional)

Hardware

- ▶ Fast, Pentium III platform with 17" monitor and DVD/CD-ROM
- ▶ SCSI hard disk for stream storage (9 GB expandable) with sample test streams
- ▶ Wide range of interfaces including: DVB-SPI, ASI, DHEI, M2S, SMPTE 310M, L-Band, etc.

*1 Under development.

▶ Characteristics

Product Specifications

Record

Maximum Record Time at the Rate of 60 Mb/s with Standard Hard Disk – 18 minutes.

Maximum Data Rate – 90 Mb/s.
(Trig Rec/Monitor: 60 Mb/s.)

Minimum Data Rate – 250 kb/s.

Playout

Maximum Playout Time at 60 Mb/s – 18 minutes.

Maximum Data Rate – 90 Mb/s.

Minimum Data Rate –

Using internal clock: 2.5 Mb/s.

Using external clock: 250 kb/s.

Bit Rate Resolution – 1 bit/s.

Frequency Resolution – 0.03 Hz.

Clock Accuracy – ±1 ppm.

Aging and Drift – <1 ppm per year.

Physical Characteristics

AD960 (tower)

Dimensions	cm	in.
Width	23.5	9.3
Height	44	17.3
Depth	43	16.9
Weight (system unit)	kg	lb.
Net	16.9	37.3

AD960P (portable)

Dimensions	cm	in.
Width	36.6	14.4
Height	19.2	7.6
Depth	46.5	18.3
Weight	kg	lb.
Net	14	30.9

▶ Ordering Information

AD960

Platform

AD960 MPEG Data
Broadcasting Test SystemETH – Ethernet interface card with
BNC/AUI connectors.MICS – MIC 1.1S (with accurate clock circuit)
only for applications mentioned below.

ASI – ASI/M2S Interface.

LBND – L-Band + card.

GPSI – GPSI II Card (SMPTE 310M, RS422 Serial,
DVB SSI, DHEI REC).

GP/PL – GPSI II+ Card (DHEI TX & REC).

MPLUS – DVB/ATSC/ARIB Monitor Plus. (Only series
II machines!)DU – Duplex Operation Player/Monitor or
Player/Recorder – (Only series II machines!)
Excluding portables.IN – ES Analyzer with AAC Player and 608 CC and
708 CC (V6.3 minimum).

AA – AAC Player stand alone – no ES Analyzer.

CC – CC stand alone – no ES Analyzer.

BA/ZB – DVB/ATSC Buffer analyzer software.

PA/ZP – DVB/ATSC PES analyzer.

SM/ZM – DVB/ATSC Recorder/Monitor software.

IX – BS Digital Multiplexer (JAPAN).

VI – Viaccess analysis. Approved customers only.

OP – Open TV analysis. Approved customers only.

XS – XSI Analysis software.

EX7 – Internal 7 GB Exabyte Tape Drive.

18GB – Internal 18 GB Disk Drive (REPLACE
CURRENT DRIVE).18GBA – Internal 18 GB Disk Drive (in addition
to standard drive).36GB – Internal 36 GB Disk Drive (REPLACE
CURRENT DRIVE).36GBA – Internal 36 GB Disk Drive (in addition
to standard drive).

DAT – Internal DAT drive.

CDW – Internal CD ROM Writer plus adaptec
Easy CD Creator software – excluding portables.

FCT – Flight Case for AD960 (tower version).

FCP – Flight Case for AD960P (portable version).

▶ Options

Interface Card Options	Modes	Bit Rate	Connector	Tolerance
GPSI Interface	SMPTE310M	19.392 Mb/s and 38.785 Mb/s (support for 8 VSB & 16 VSB)	BNC in BNC out	±2.8 ppm
	DHEI	to 48 Mb/s		
GPSI-II (DHEITX/RX)	ECL (AC) I	To 50 Mb/s	26 Way High Density D	
	ECL (DC)	To 50 Mb/s		
GPSI-II + (DHEITX/RX)	RS422 differential	20 Mb/s	26 Way High Density D	Clock & data recovery
	SSI (DVB serial)	1 to 44 Mb/s		
L-Band/RF input	See separate data sheet	15 to 30 Msymb/s	F-Type	
ASI and M2S (DIVICOM)	Data, packet burst	270 Mb/s tx rate 0 to 90 Mb/s data rate 100 Mb/s transmission rate	0 to 90 Mb/s data rate	

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