MPEG Recorder and Player

▶ MTX100

Product Information

The MTX100 MPEG-2 Recorder and Player offers a flexible, affordable solution for design evaluation and conformance testing of digital video products using MPEG-2 technology. The MTX100 records and plays out MPEG-2 transport streams compliant with ATSC, DVB, and ISDB standards at the high data rates needed to verify and troubleshoot designs for high-performance video products and systems. The large internal storage, CD-ROM, and Ethernet download capability help you build and maintain a large library of test streams.

The MTX100 offers continuous, error free transport stream looping for long duration playout, and PCR jitter insertion for stressing your designs. You can continuously loop all sample streams, including updating of all timestamps, continuity counters, and time tables (TDT or STT), without fear of buffer under- or overflow.

New ethernet network remote control functionality enables control of functions such as Play, Record, Clock Rate, and Jitter Insertion using the SCPI (Standard Control for Programmable Instruments) command set.

The MTX100 can play any TS files, including custom transport streams created with off-line multiplexers in Tektronix MPEG Analysis Tools. In addition, the MTX100 can play data files in other formats, including elementary streams and files in DSS format.

▶ Features & Benefits

High Capacity Storage and High Data Rate Recording and Playout of MPEG Transport Streams Let You Build, Maintain, and Use a Large Local Library of Test Streams

Real-time Updating of Timestamps and Time Tables for Error-free Looping

PCR Jitter Insertion to Help You Fully Stress Your Product or System Design

Remote Control via Ethernet with Standard Command for Programmable Instruments (SCPI) Command Set

Sample Transport Streams Provided to Get You Started Quickly

Easy Integration With Tektronix MPEG Analysis Tools for Transport Stream Creation to Support Compliance and Stress Testing of Video Products Using MPEG-2 Technology

CD-ROM and 100Base-T Ethernet Download of Transport Streams for Optimal Flexibility in Storing and Managing Transport Stream Libraries

Color Hierarchical Display of Transport Stream Components For Quick and Easy Interpretation of Complex Structures

A Full Suite of Electrical Interfaces Lets You Address a Wide Range of Applications

▶ Applications

IRD/STB Design and Manufacturing Test

Evaluation of Professional MPEG Equipment

Performance Verification of MPEG Systems

Tektronix
Enabling Innovation

MPEG Recorder and Player

▶ MTX100

▶ Characteristics

System Characteristics

MPEG Stream Source Characteristics –
Supports MPEG-2, DVB, ATSC, and ISDB protocols. Records and plays out MPEG streams in multiple formats. Error-free looping. PCR jitter insertion.

Packet Length – 188, 204, or 208 bytes and Non-TS.

Maximum Data Rate –
Memory: 200 Mbps.
Disk: 120 Mbps.

Minimum Data Rate – 1 Kbps.

Number of Input/Output Interfaces – One DVB SPI I/O standard with a second I/O available.

Available Optional Interfaces – Asynchronous Serial Interface (ASI/M2S), Universal Parallel/Serial Interface, BNC Serial Interface, DHEI (GI-Digicypher), IEEE1394 (Firewire), SMPTE310M.

Internal Storage Capacity – 40 GB.

Internal Reference Clock – 27 MHz ±1 ppm.

External Reference Input – 27 MHz ±1 ppm (recommended).

Transport Stream Interfaces

DVB Synchronous Parallel Interface (Standard) –
Connector: 25 pin D-sub, Maximum data rate: 25 Mbps.

Asynchronous Serial Interface (Option 01) –
Connector: BNC, Maximum data rate: 200 Mbps, User selectable burst and non-burst transmission format.

Universal Parallel/Serial Interface (Option 02) –
Parallel, Serial, and Event Output Modes.
Parallel Mode – Connector: 25 pin D-sub, Maximum Data Rate: 25 Mbps, Output Levels: ECL, LVDS, and TTL with/without termination, Single End Input Levels: ECL and TTL with termination.
Serial Mode – Connector: 25 pin D-sub, Maximum Data Rate: 40 Mbps, Output Levels: ECL, LVDS, and TTL, Differential Input Levels: ECL and TTL with/without termination, Single End Input Levels: ECL and TTL with termination.
Event Output – Connector: BNC.

BNC Serial Interface (Option 03) –
Connector: BNC (Psync, Dvalid, Clock, Data), Maximum Data Rate: 40 Mbps, Output Levels: ECL and TTL, Input Levels: ECL and TTL with termination.

DHEI – GI-Digicypher (Option 04) –
Connector: 26-pin D, Maximum data rate: 40 Mbps.

IEEE1394 / ASI Interface (Option 05) –
IEEE1394 Connector: 4 pin standard, Data Rate: 40 Mbps; ASI Connector: BNC, Maximum Data Rate: 200 Mbps.

SMPTE310M / ASI Interface (Option 06) –
SMPTE310M Connector: BNC, Data Rate: 19.39 Mbps; ASI Connector: BNC, Maximum Data Rate: 200 Mbps.

Platform Characteristics

Operating System – Windows 2000.

Disk Space – System: 5 GB, MPEG Storage: 35 GB.

RAM – 768 MB.

CD-ROM Drive – 24x.

Display – LCD, 640x480.

Character Input – Keypad.

Keyboard and Mouse – Standard.

Interfaces – VGA output, Printer port, Serial port, USB, Ethernet, SCSI.

Environmental Characteristics

Temperature –
Operating: +5 ºC to +40 ºC.
Nonoperating: –20 ºC to +60 ºC.

Humidity –
Operating: 20% to 80% (noncondensing).
Nonoperating: 5% to 90% (noncondensing).

Altitude –
Operating: Up to 4.5 km.
Nonoperating: Up to 15 km.

Certifications

EMC – Certified to the EMC directive 89/336/EEC.

Safety – UL3111-1, CAN/CSA C22.2 No. 1010.1, EN61010-1.

Australia Declaration of Conformity – Meets AS/NZS 2064.

Power Requirements

Mains Voltage Range – 100 to 240 VAC.

Mains Frequency – 50/60 Hz.

Power Requirements – 120 VA Max.

Physical Characteristics

Dimensions	mm	in.
Height	132	5.2
Width	214	8.4
Depth	435	17
Weight	**kg**	**lbs.**
Net	6.0	13.3

▶ Ordering Information

When ordering, please consider the following guidelines:

▶ When considering the purchase of Option 05 (Firewire), the MTX100's Option 05 interoperability with the target device should be verified prior to order placement

▶ Interoperability of Option 05 (Firewire) with a given model of a manufacturer's product does not guarantee interoperability with other models from the same manufacturer

▶ Interoperability of Option 05 (Firewire) with a given model of a manufacturer's product does not guarantee interoperability with that same model employing new software or firmware

MTX100 Recorder and Player

Includes: Stream capture and playout with error-free looping and PCR jitter insertion, 768 MB RAM, 40 GB MPEG stream storage, sample streams, USB Keyboard and Mouse, Front Cover, and User Manual.

Please specify power plug when ordering.

MTX100 Options

Interface Options

Opt. 01 – Add ASI Interface Module.

Opt. 02 – Add Universal Parallel/Serial Interface Module.

Opt. 03 – Add BNC Serial Interface Module.

Opt. 04 – Add DHEI Interface Module.

Opt. 05 – Add IEEE1394 / ASI Interface Module.

Opt. 06 – Add SMPTE310M / ASI Interface Module.

Service

Opt. C3 – Calibration Service 3 Years.

Opt. D1 – Calibration Data Report.

Opt. D3 – Calibration Data Report 3 Years (with Option C3).

Opt. R3 – Repair Service 3 Years.

Power Plug Options

Opt. A0 – North America Power.

Opt. A1 – Universal EURO Power.

Opt. A2 – United Kingdom Power.

Opt. A3 – Australia Power.

Opt. A4 – 240 V, North America Power.

Opt. A5 – Switzerland Power.

Opt. AC – China Power.

Optional Accessories

070-A835-00 – Service Manual.

WFM7F05 – Rackmount Kit.

1700F06 – Blank Panel.

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Our most up-to-date product information is available at:
www.tektronix.com

Product Area Assessed:
The planning, design/development and
manufacture of electronic Test and
Measurement instruments.

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