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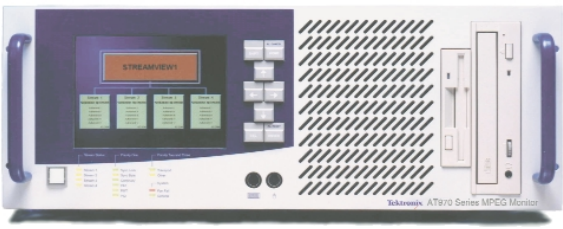
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Find the *Tektronix AT970-1* at our website: *Click HERE*

ATSC MPEG Transport Stream Monitor

▶ AT970



▶ Features & Benefits

1 to 4 Streams Monitored in Real Time Giving ATSC Instant Status of All Inputs

Integrated, Modular Design Allows Non-Expert Users to Perform High Level Monitoring and Experts to Drill Down Using Detailed Analysis Tools

Scalable, Flexible Design Expands to Meet Your Changing Monitoring Needs

Range of Interfaces Enables Plug and Play Connectivity

Enhanced Broadcast Transmission Quality Control

Provides Lower Operating Costs and Enhanced Bandwidth Utilisation

Remote Control Via Web Browser Using Industry Standard SNMP on Ethernet

Error Logging

Analysis of PSI/PSIP with Graphical Display

Template Checks

Configurable Alarm Outputs

Comprehensive Error Checking

The System Solution for ATSC Digital Video Multiple Stream Real Time Monitoring

AT970, The System Solution Designed for the Broadcast Environment

AT970 has been specifically designed to meet the exacting requirements of DTV real-time monitoring in a transmission environment. Following the FCC's mandate for a rapid deployment of digital terrestrial and cable television, it is now necessary to ensure that digital broadcasts can be decoded by subscribers' set top boxes (IRDs) and that pictures are of optimum quality. AT970 helps to achieve this by continuously monitoring up to four transport streams in real time, verifying that they conform to the MPEG-2 and ATSC specifications.

In a modern broadcast environment, transport streams originate from a variety of sources, including contribution links and pre-encoded material. These sources need to be monitored in real time prior to the final multiplex and transmission.

AT970 is designed to meet your complete real-time monitoring requirement, forming part of a network control system solution. AT970 provides you with a cost effective, flexible and upgradable monitoring architecture.

Put simply, AT970 future proofs and protects your investment in network monitoring.

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Transmission Quality Control

Through continuous monitoring at multiple points in the broadcast chain, stream errors and equipment failures can be quickly detected and rectified.

Comprehensive Error Checking

AT970 detects errors like PSIP failures, which cannot be detected by a wall of picture monitors.

Lower Operating Costs

Incorporated into a networked monitoring system, multiple AT970 units can be linked to a central monitoring point for efficient management.

Reduced Operator Training

AT970 has been designed to be used by operators who are not MPEG/ATSC experts. The intuitive GUI presents error status in a simple, powerful format which is easily understood.

Increased Equipment Reliability

AT970 provides a detailed fault log which can be used to pinpoint regular failures, allowing remedial action to be taken.

Technical Overview

AT970 integrates seamlessly into a monitoring and control network, allowing the entire broadcast chain to be monitored from a single point, thus reducing manpower requirements. An intuitive graphical user interface (GUI) provides at-a-glance status information for the entire broadcast network. Its simplicity reduces the need for operator training. Further in-depth error reporting is available for each individual transport stream.

AT970 provides continuous real-time monitoring of up to four DTV transport streams simultaneously, performing essential ATSC and MPEG measurements as well as monitoring the bit rate of each service against user-defined limits. All test limits are user configurable.

AT970 also supports template checking, which fills the monitoring gap left by syntax tests. A template enables the broadcaster to define certain transport stream (TS) properties, such as the number of programs within a multiplex, the value of the transport_stream_id, etc. The AT970 unit extracts these values from the TS it is monitoring and checks that they match the template defined by the broadcaster. Using template tests, the broadcaster can be certain that the correct TS is being broadcast and that it is complete.

AT970 performs all measurements in real time and displays PSI/PSIP table information from each TS.

AT970 is supplied ready to mount in a 19" rack.

Features

Key AT970 Features:

- TS error status available at a glance
- Complete remote control
- Configurable alarm outputs, TTL and closed contact relay
- Multiple industry standard TS interfaces available

▶ Characteristics

Monitoring

Max. Data Rate – 60 Mb/s*[1].

Min. Data Rate – 250 kb/s.
Flexible monitoring capability. Up to four transport streams per AT970.

Network Interfaces

Ethernet interfaces allowing remote control and monitoring via SNMP or Windows NT.

Transport Stream Interfaces

SMPTE310M Serial Interface – Accepts 188, 204 or 208 byte MPEG-2 transport streams.

Synchronous Parallel Interface (SPI) – Accepts 188, 204 or 208 byte MPEG-2 transport streams.

Asynchronous Serial Interface (ASI) –
ASI Input: Buffer allowed to remove ASI transmission aperiodicity: <1 transport packet.

L-Band – With support for SCPC and MCPC (for details refer to L-Band data sheet).

DHEI.

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Real Time Measurements

▶ Measurements

- TS_sync_loss
- Sync_byte_error
- PAT_error
- Continuity_count_error
- PMT_error
- PID_error
- Transport_error
- CRC_error
- PCR_error
- PCR_accuracy_error
- PTS_error
- CAT_errror
- MGT_error
- STT_error
- RRT_error
- TVCT_error
- CVCT_error
- ETT_error
- Unreferenced_PID
- EIT_error

▶ Additional Measurements

- Template Checking
- Bit rate testing – on a transport stream and per PID basis

Physical Characteristics

AT970

Dimensions	**cm**	**in.**
Width (19" mount)	43.5	17.13
Height (4U)	17.4	6.85
Depth	60	23.62
Weight (system unit)	**kg**	**lb.**
Net	14	30.87

*1 The maximum bit rate of the monitored stream depends on the information content of the transport stream.

▶ Ordering Information

AT970-1

ATSC Single Stream Monitor System

Options

Opt. ASI – ASI/M2S Interface.

Opt. LBND – L-Band + Card.

Opt. GPSI – GPSI II Card (SMPTE310M, RS422 Serial, DVB SSI, DHEI REC).

AT970-2

ATSC Two Stream Monitor System

Options

Opt. ASI – ASI/M2S Interface.

Opt. LBND – L-Band + Card.

Opt. GPSI – GPSI II Card (SMPTE310M, RS422 Serial, DVB SSI, DHEI REC).

AT970-3

ATSC Three Stream Monitor System

Options

Opt. ASI – ASI/M2S Interface.

Opt. LBND – L-Band + Card.

Opt. GPSI – GPSI II Card (SMPTE310M, RS422 Serial, DVB SSI, DHEI REC).

AT970-4

ATSC Four Stream Monitor System

Options

Opt. ASI – ASI/M2S Interface.

Opt. LBND – L-Band + Card.

Opt. GPSI – GPSI II Card (SMPTE310M, RS422 Serial, DVB SSI, DHEI REC).

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Contact Tektronix

ASEAN Countries (65) 356-3900

Australia & New Zealand 61 (2) 9888-0100

Austria, Central Eastern Europe, Greece, Turkey, Malta & Cyprus +43 2236 8092 0

Belgium +32 (2) 715 89 70

Brazil and South America 55 (11) 3741-8360

Canada 1 (800) 661-5625

Denmark +45 (44) 850 700

Finland +358 (9) 4783 400

France & North Africa +33 1 69 86 81 81

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Hong Kong (852) 2585-6688

India (91) 80-2275577

Italy +39 (2) 25086 501

Japan (Sony/Tektronix Corporation) 81 (3) 3448-3111

Mexico, Central America & Caribbean 52 (5) 666-6333

The Netherlands +31 23 56 95555

Norway +47 22 07 07 00

People's Republic of China 86 (10) 6235 1230

Poland (48) 22 251 5340

Republic of Korea 82 (2) 528-5299

South Africa (27 11) 254-8360

Spain & Portugal +34 91 372 6000

Sweden +46 8 477 65 00

Switzerland +41 (41) 729 36 40

Taiwan 886 (2) 2722-9622

United Kingdom & Eire +44 (0)1344 392000

USA 1 (800) 426-2200

For other areas, contact: Tektronix, Inc. at 1 (503) 627-1924



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