The TANDBERG TT4010 Transport Stream Analyzer combines advanced error detection and monitoring capabilities in an easy to use portable form.

TANDBERG Television’s TT4000 Transport Stream Monitoring family is designed to fulfill the increased need for monitoring and analysis of MPEG-2 networks and higher up-time expectations of service providers. The TT4010 portable unit can be used in any MPEG-2 head-end where an ASI signal is available, or out in the field to monitor the actual QAM network.

**BASE UNIT FEATURES**

**TT4010 with ASI or QAM input (TT4010/BAS, TT4010/BAS/QAM)**

The TANDBERG TT4010 is a unique portable tool for monitoring of MPEG-2 transport streams. Its ability to display stream contents and detect errors in real-time makes it ideal for use during system installation and testing. The web-based user interface allows access to the probe from any computer supporting a web browser.

The TT4010 can be easily carried around and connected at any point in a TS transmission chain in any digital TV network to help operators locate errors and ensure consistent Quality of Service.

**Features include:**

- Highly portable probe with external DC power supply
- User-friendly graphical interface via a standard WEB browser
- Supports both DVB and ATSC specifications
- DVB ASI and optional QAM Annex A input interface options
- Error detection according to ETR290 specification
- Bit-rate alarms
- TS/Service/PID analysis
- PSI/SI (DVB) and PSIP (ATSC) table analysis
- Ethernet (TCP/IP) remote control interface
- Internal alarm/event logging
# TT4010 Transport Stream Analyzer

## Specifications

### Inputs
- **DVB ASI / M2S Connector BNC (female)**
  - Max 50 Mbps
- **QAM Demodulator (Annex A)**
  - Connector: F-type (female), 75 ohm
  - Connector: F type (female), 75 ohm
  - Channel bandwidth: 8 MHz
  - Tuner frequency range: 50 - 860 MHz
  - Input signal level/channel: 30 - 1000 uV

### Outputs
- **DVB ASI / M2S (active loop-through from input)**

### Features
- Error detection according to DVB ETR290 specification for real-time monitoring of MPEG-2/ DVB TS
- Internal alarm/event logger
- TS analysis
- Shows all present PIDs
- Monitoring of total and effective bit-rate
- Detection of DVB ASI packet length
- Service Analysis
  - Shows Service IDs, names and components (based on PSI/SI or PSIP analysis)
  - Graphical view of service bit-rates including detection of min/max values dynamic updating
  - Service oriented alarm reporting

### PID Analysis
- Graphical view of individual PID bit-rates including detection of min/max values dynamic updating
- Scrambling detection
- Decodes PSI/SI/PSIP tables (shows fully decoded table syntax and hex tables)

### PCR Analysis
- PCR jitter measurements, including real-time graphical view of PCR jitter distribution
- DVB Type 2 and 3 PCR
- Configurable alarm relay
- Remote monitoring
- QAM constellation diagram

### Control
- 10 BaseT Ethernet interface
- TCP/IP protocol support
- Remote control from Internet Explorer/Netscape Web Browser (must support JAVA)

### Physical and Power
- **Dimensions (W x D x H)**
  - 170 x 290 x 43mm (6.7 x 11.4 x 1.7 inches)
- **Input Voltage**
  - External power, 12V/2A DC (PSU included)

### Environmental Conditions
- **Operating Temperature**
  - 0°C to +45°C (32°F to 113°F)
- **Storage Temperature**
  - -20°C to +70°C (-4°F to 158°F)
- **Relative Humidity**
  - 5-95% (non condensing)

### QAM Spec
- **Signal Format**
  - QAM-4, QAM-16, QAM-32, QAM-64, QAM128 and QAM-256 mode

### Compliance
- CE marked in accordance with Low Voltage Directive (LVD) 73/23/EEC and EMC directive 89/336/EEC

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**SCREEN SHOT SHOWING PCR JITTER**

![QAM constellation diagram](image)

- with QAM signal input
- without QAM signal input

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