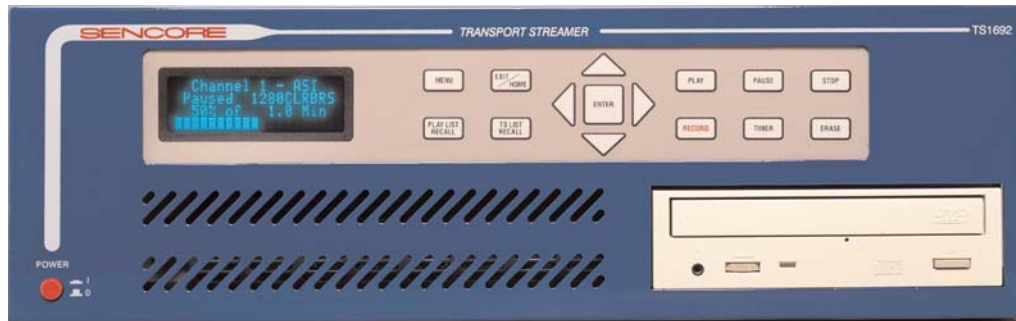


# Transport Streamer

## TS 1691A and TS 1692A

Play and record multiple transport streams at high bitrate.



The TS 1691A and TS 1692A are the fastest and most powerful MPEG-2, DVB, ATSC, ISDB player/recorder in the industry

### HIGH SPEED

The Transport Streamer is capable of playing and recording a high speed MPEG-2 data stream up to 212Mbits/s. The TS1692A can stream out and record multiple transport streams with a total bandwidth of 320Mbits/s. For example, the TS1692A can simultaneously play and record 4 ATSC transport streams at 19.39Mbits/s making this streamer the most powerful on the market.

### FLEXIBLE

The TS 1691A and TS 1692A support many standards

- ASI: Asynchronous Serial Interface
- SMPTE310M: ATSC interface at 19.39Mbits/s
- DVB Parallel LVDS
- DHEI

The modular design of the Transport Streamer offers full flexibility and ensures that this product will meet many streaming requirements and provide many years of usage.

### SCALABLE

From 1 to 4 input/outputs pairs provides up to 4 players and 4 recorders simultaneously. When configured with 4 inputs and outputs, the TS 1692A acts as 4 separate streamers, offering a very cost efficient solution for multi-streaming. This architecture allows this product to grow by simply adding streaming channels to meet your needs. The TS 1691A can play and record simultaneously.

### SMART LOOPING

The Transport Streamer offers smart looping. This feature allows one transport stream to be played in a continuous mode without discontinuity. The TS 1692A and TS 1691A can update the MPEG-2 continuity counters, PCR, PTS/DTS as well as the DVB (TDT, TOT) or ATSC (STT) tables. This feature results in the decoders staying locked at all times and the audio and video staying perfectly in sync, providing the MPEG-2 streaming equivalent to a known and controlled live source.

## TRIGGERS

Each input or output of the system can be controlled using the external trigger input signals. This enables you to record automatically or play out an emergency signal source.

## PREVIEW

Before selecting a Transport Stream for play out on the optional client software, the preview lets you quickly check that you are playing out the right transport stream, the right video format and the right audio format.

## APPLICATIONS

### System integration

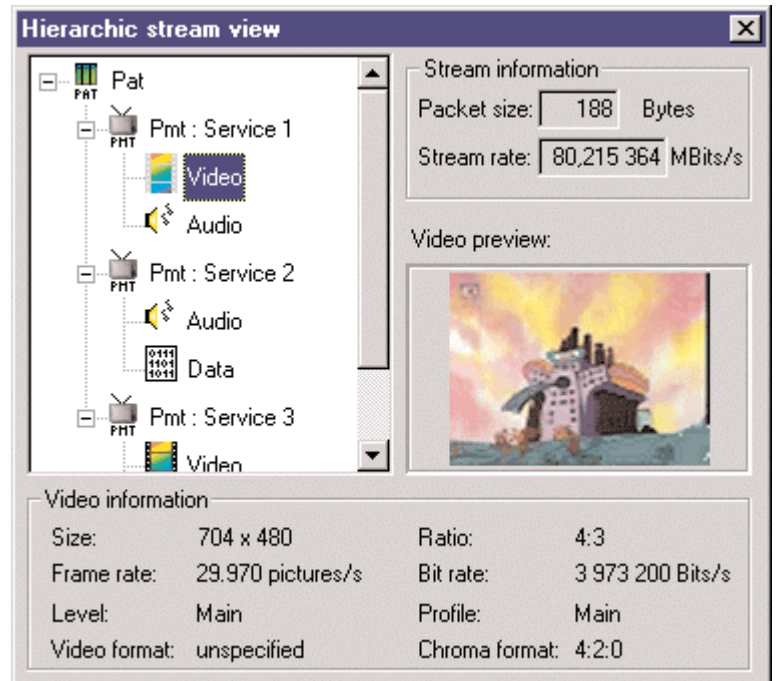
The TS 1691A is designed for signal path testing as it can simulate a well-known error free transport stream output. Due to the numerous supported standards, you can be sure that the TS 1691A will be compatible with the equipment that is being deployed in digital facilities.

### Standby signal source

With complex DTV equipment, failures can happen. The TS 1691A is designed to provide a backup signal source that will drive your digital transmitter in case of failure. With trigger input capabilities, the TS 1691A can automatically switch over when a failure occurs. The optional remote client can also let the broadcast engineer provide loop programming if the repair will take more than a few minutes.

## STORAGE

The TS 1691A and TS1692A comes standard with 36GB of storage allowing 4 hours of storage at 19.39Mbits/s.



Preview window

### Development

The TS 1692A is designed to serve DTV labs. With the capability of playing and recording 4 TS streams simultaneously, it can provide 4 different known and controlled TS sources that will help you fast forward your design. The optional remote clients can control, right from the designer desk, each pair of streaming channels, providing each individual with their personal player/recorder.

### Manufacturing

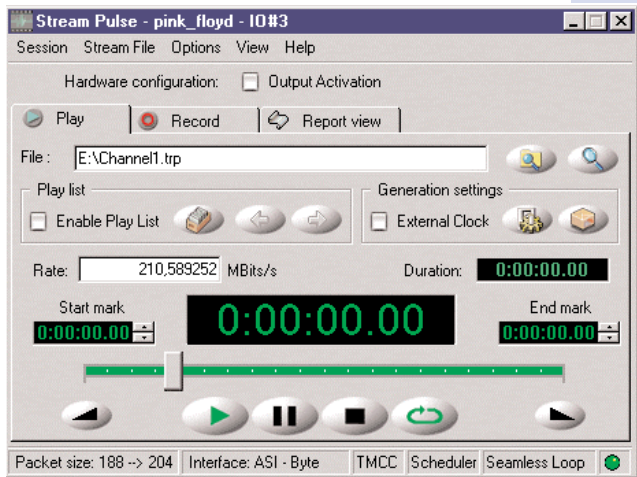
The TS 1691A and TS 1692A are suitable for manufacturing/QA and repair facility as it provides a fixed, well known, easy to operate TS signal source used to verify that the products under test operate as desired. The networking capabilities of the Transport Streamers allow the engineer to upload test content to the manufacturing line without having to physically be present.



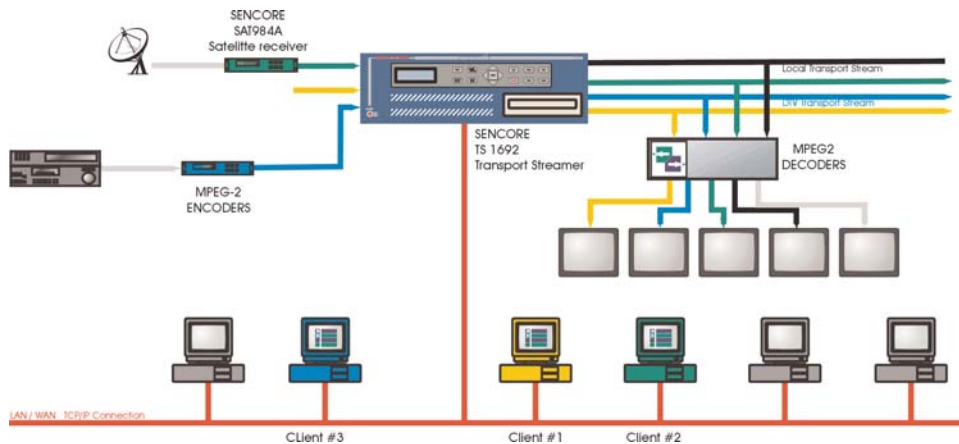
## OPTIONAL REMOTE CLIENTS

The architecture of the TS 1691A and TS 1692A allows for the use of multiple remote clients simultaneously that can take control of parts of the unit. This feature allows the use of the unit by many people in a lab. Coupled with multiple I/O cards this remote

feature makes this unit equivalent to multiple streamers at a much lower cost. Each PC on the network can take control of one or more I/O pairs for its own use.



**Remote User interface**



**Remote user architecture**

## OPTIONAL STREAM CREATOR

Sencore offers STREAM CREATOR, a companion software to the Transport Streamers. STREAM CREATOR is a software multiplexer and table editor that lets the user customize a transport stream by modifying its bitrate, number of programs and PSIP/SI information. The STREAM CREATOR can decompose and recompose streams, add and remove video and audio, and customize SI/PSIP tables. This is very useful when testing a set top box navigation system for example. The STREAM CREATOR supports MPEG-2, ATSC and DVB standards.



# Specifications

## Input / Outputs:

The maximum total TS input and output bandwidth is 320Mbits/s.

The number and type of inputs depends on the configuration of the unit.

The TS 1692A can have 2 different Channels cards each with 2 pairs of connectors for a total of 4 players and 4 recorders. The TS 1691A only offers one pair of connectors with one play and one record.

## Interfaces specifications:

ASI	188-204-208	212
SPI(Parallel)	188-204-208	80
SMPTE310M	188	19.392658 or 38.785317
DHEI	188-192-204-208	44

## External Clock and trigger inputs:

Byte clock input TTL on BNC connector. One clock and one trigger input per interface pair (1 player/recorder).

## Program Storage:

Total hard drive space for Transport stream: 36GB HD

Equivalent to 4 Hours of storage at 19.39Mbits/s

## Data compatibility:

MPEG-2, DVB, ATSC

## General Specifications:

- Line Power: 100-240 Vac, 50-60 Hz
- 4 lines x 20 Character Vacuum Fluorescent Display
- Dimensions: 19" W x 20.5" D x 5.25" H (3U rack mount chassis)

## Control Specifications:

- Front panel display with keypad and local UI
- 10BaseT Ethernet connections control through optional client softwares.

## Ordering information:

### TS 1691A Transport Streamer:

TS 1691A 3U player with maximum 1 Input/output pair

### TS 1692A Transport Streamer (multi channels):

TS 1692A 3U player with maximum 4 Input/output pair

### Choose one or more (TS 1692) I/O channel

TSASI-1**	ASI Single I/O channel
TSASI-2	ASI Double I/O channels
TS310M-2*	SMPTE310M Double I/O channels
TSDHEI-2*	DHEI Double I/O channels
TSLVDS-2*	LVDS Parallel Double I/O channels

\* I/O channels can also be fitted in the TS1691 but only 1 I/O pair available

\*\* Only available with the TS1691

### Options for both Transport Streamers:

TSREMOTE Remote control clients (Unlimited seats per Transport Streamer)

### Stream Creation softwares:

MSC1920 MPEG Stream Creator

ISDB TOOLS ISDB creation tools

**For more information call:**  
**1-800-Sencore (1-800-736-2673)**  
**or 1-605-339-0100**  
**Ask for ATSC product group**

**Sencore Inc**  
**3200 Sencore Drive**  
**Sioux Falls, SD 57107**  
**U.S.A.**