

VARIANT

Automation
of television
processes

TV content delivery solution
across unpredictable networks
(MediaStream TS Cast)

Product description

VARIANT company presents **MediaStream TS Cast** software for TV content delivery (multicast UDP/RTP streams) across unpredictable networks, such as the Internet. The product is based on open source transport technology - SRT protocol.

MediaStream TS Cast combines all the advantages of IP delivery (flexibility, simplicity, no restrictions on number of streams, bit rate, etc.), it is free from disadvantages of switched (L2) communication channels (the difficulty of connecting to Internet exchange point, the relatively high cost of connection and maintenance, loss of packages and the inability to restore them).

Efficiency, reliability, low cost, ease of implementation and maintenance make it possible to use MediaStream TS Cast software for both large and small companies. TS Cast is applied to contribution and distribution endpoints as part of a video stream workflow to deliver the best quality and lowest latency video at all times.

Key Features.

- built-in error recovery mechanism minimizes packet loss with relay technology, as well as error correction (FEC);
- maintaining synchronization of video and audio streams;
- lack of binding to L2 communication channels, TV content delivery across unpredictable networks;
- compensate for jitter and bandwidth fluctuations due to congestion over noisy networks, short-term interruptions in a communication channel (up to several seconds);
- stream security through AES 128/256 bit encryption;
- flows easily pass through firewalls.



Main characteristics

- parameters, characteristics of restored by TS Cast client UDP / RTP (+ FEC) multicast stream are identical to parameters of the source (incoming to the server) stream (IAT, jitter, MLR, ETR, bitrate, other parameters);
- simplicity in setup and configuration. Software management is carried out through a convenient and functional WEB interface;
- client-server architecture provides delivery of UDP / RTP (+ FEC) multicast SPTS, MPTS streams from server to client and vice versa in the Push and Listen modes. Unlimited number of clients can be connected to the server;
- a packet buffer from 120 to 8000 milliseconds (on server or client side) allows you to adapt the service to real-time network conditions between two endpoints, compensate for long interruptions, as well as packet loss;
- lack of restrictions on the number of processed streams. Server and client performance depends on the speed of IP channel, network interfaces;
- TS Cast runs on Windows OS (from version Windows7);
- automatic servers and streams backup is provided. In case of loss of communication with a server or stream, the client automatically switches to backup server, stream;
- in case of “drop” of IP channel, the client automatically reconnects.

Application options

Reservation of communication channels, Internet exchange points.

Reservation of satellite and/or terrestrial telecommunication channels. In combination with L2 channel, it allows minimizing packet loss for critical services - satellite communications station, studio. TSCast can be used to improve the quality and reliability of direct connections, provide temporary connections, on-line broadcasts, etc.

Improving the quality of service, content.

TSCast delivery technology does not have restrictions on the number of transmitted services / TV channels, as well as the bitrate of transmitted services/streams.

Expansion of content delivery methods, content distribution capabilities both domestically and abroad.

The solution complements content delivery technology such as satellite and IP broadcasting.

The solution of "last mile" problem.

Using the solution does not require connecting to **Internet exchange points**, providing L2 channels. To use the service, it is enough to have a stable Internet channel.

Build your own network of IP distribution / delivery of TV content.

The solution allows you to organize your own network for delivering TV content, organize an internal network for delivering content to headends, studios, etc.

How to start the service

- contact with **Variant** to purchase or receive demo version of MediaStream TS Cast. Demo version has no functionality limitations. The term of its use is 1 month.
- the same MediaStream TS Cast distribution is used to configure server and/or client.
- prepare hardware (or virtual) server with Windows OS (version 7 or higher). It is recommended that you use Intel or Broadcom network adapter.
- install and configure software:
 - download demo version http://variant.digital/variant.digital/ftp_share/presentation/srt/;
 - independently (with instructions) install and configure software. The instruction file with installation guide is located in SRT product folder;
 - ask for assistance of Variant technical team to install and configure software. Send a request from company's website <http://variant.digital/index.php/en/contact-eng>.
 - if you configure TS Cast as a server, it is necessary to forward (NAT) a UDP port (s) of TS Cast server to an external IP address or assign an external IP address to TS Cast server. A server with client software can be located inside a local network with an internal IP address.
 - check the operation of service, the parameters of multicast streams.

TS Cast price list

Nº	SW	Qty	Price, \$
1	MediaStream TS Cast Server (with 5 SRT streams)	1	500
2	License for MediaStream TS Cast Server for additional 5 SRT streams	1	200
3	MediaStream TS Cast Client (no limit with the number of received streams)	1	400

MediaStream TS Cast Server in basic configuration (p. 1) generates up to 5 SRT streams. Increasing the number of streams, requires to purchase a license(-s) for additional streams (p. 2). Software validity is not limited. Technical support is provided within 1 year from the date of purchase of the software.

MediaStream TS Cast Client (p.3) has no restrictions on the number of processed streams, bitrate, it can receive streams from several MediaStream TSCast servers, as well as from SRT servers of other manufacturers. Technical support is provided within 1 year from date of purchase of the software.

It is possible to refine the software functionality to the requirements of the Customer.



About VARIANT

Variant is software company was founded in 1999, focused on development SW products for automation of television and radio broadcasting technological processes:

- seamless TV content insertion and adaptation of TV content (IP and SDI signals), logo/graphics insertion;
- content processing - coding, encoding, multiplexing remultiplexing, reservation (changoover), FEC formation;
- content delivery (SRT), restoration of TS streams, signal delay generation;
- forming, arranging, detecting visible/invisible makrs in TV content (watermarking);
- monitoring, recording, archiving TV content;
- intellectual analysis of video and audio content for recognition (scrobbling) of individual frames, clips, graphic displays, sound signals, etc .;
- for IP and OTT providers - the formation of HLS / MPEG-DASH streams with a given number of profiles, compression format, packetizer, scrambler, add-inserter.

The functionality of each of the products can be modified according customer requirements.

The software developed by Variant is used in Ukraine, Belarus, Russia, Kazakhstan and other countries. Detailed product information can be found on Variant website <http://variant.digital>



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