IP/DVB encapsulator/multiplexer
MediaSputnik 1102 series

Basic configuration

1.	- ASI Tx up to 10 Mbps; - External 27 MHz input; - Internal 27 MHz (10^{-7} ppm) ; - Recovered receive clock ; - MPE; - MPEG 2 and DVB service table generator; - PAT/PMT service template tables; - Unicast/Multicast; - section packing; - bit rate control for ASI Tx; - supporting transport stream forming on ASI Tx in “burst” and “no burst” modes; - supporting DVB-S2 in CCM modes; - traffic statistics; - WEB	• High-speed hardware for IP packets in MPEG 2 TS and DVB networks. Encapsulation is processed in MPE mode in compliance with ETSI EN 301 192 (MPE) and RFC 1112 notes. Encapsulator provides DVB-S2 with CCM standard and further extension to ACM and VCM modes. • MPEG 2 TS packets synchronization is provided by internal and external generators, including “Recovered receive clock” technology (synchronization on input MPEG2 TS) • Encapsulator provides “burst” mode to work correctly with external multiplexers and monitors. • Encapsulator has built-in oscillator of MPEG 2 TS and DVB service tables. There are base PAT/PMT tables and optional included templates of service tables in “Basic” configuration. • Section packing provides increasing of payload as much as possible.

Optional configurations

2.	ASI Tx up to 30 Mbps	• The option allows increasing bit rate for ASI Tx up to 3 0 Mbps.
3.	ASI Tx up to 90 Mbps	• The option allows increasing bit rate for ASI Tx up to 90 Mbps.
4.	ASI Rx multiplexing MPEG 2 TS Rx and IP/MPEG2 TS	• The option includes additional ASI Rx input and allows multiplexing of external ASI Rx stream and internal transport stream. • Providing input stream PID filtering. • PCR restamping maintains quality of MPEG 2 TS – current PCR jitter none the worse than base.
5.	2 ASI Rx; multiplexing MPEG 2 TS 2Rx and IP/MPEG2 TS	• The option includes two additional input ASI Rx and allows multiplexing of external ASI Rx stream and internal transport stream. • Providing input stream PID filtering. • PCR restamping maintains quality of MPEG 2 TS – current PCR jitter none the worse than base.
6.	5 ASI Rx; multiplexing MPEG 2 TS 5Rx and IP/MPEG2 TS	• The option includes five (4+1) additional input ASI Rx interfaces and allows multiplexing of external ASI Rx stream and internal transport stream. • Providing input stream PID filtering. • PCR restamping maintains quality of MPEG 2 TS – current PCR jitter none the worse than base.
7.	ULE (Unidirectional Lightweight Encapsulation)	• The option maintains advanced mode of encapsulation ULE (Unidirectional Lightweight Encapsulation). It is developed in compliance with RFC 4326 in 2005 by ESA and TIA-1073 in 2006. • ULE provides increasing of payload up to 8-10% in comparison with MPE encapsulation.
8.	MPE/LLC-SNAP encapsulation	• The option provides MPE/LLC-SNAP encapsulation.
9.	VLAN (802.1q)	• The option provides VLAN tag encapsulation for maintenance of virtual networks.

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10.	DVB Service Tables Insertion	• The option extends and generate DVB service tables. Is used to support different DVB services.
11.	DVB-RCS Service Tables Insertion	• The option extends and generate DVB-RCS service tables (RMT, SPT, TIM, SCT, FCT, TCT, CMT). Is used for synchronization and control of management of DVB-RCS hosts including modems.
12.	Analyzer of PSI/SI service tables(for one MPEG 2 TS or MPEG2 TS/IP)	• The option allows network operators to analyze service tables for input transport stream. Is used as additional utility for monitoring critical TS. • PSI/SI analyzer reduces costs on monitoring MPEG2 TS features.
13.	2 x ASI Tx	• The option is used for additional ASI Tx. It provides built-in splitter and closely used in redundancy system on MPEG 2 TS monitoring.
14.	2 ASI Tx	• Special option for HUBs with 2 independent IP/DVB interfaces. For example: 72 (36+36) MHz satellite transponders. • Encapsulator has pre-installed versions: - two independent IP streams on one chassis; - duplication (or cross-redundancy) of one or partial IP/DVB streams.
15.	MPEG 2 TS/IP decapsulation for ASI Tx (DVB Gateways)	• The option provides decapsulation of MPEG 2 TS from IP packets for transparent IPTV MPEG 2 TS.
16.	IP output (IP/MPEG2 TS/IP encapsulation)	• The option process two encapsulation stages: IP/MPEG 2 TS and MPEG 2 TS/IP, for encapsulator compatibility with facilities that provides MPEG2 TS/IP processing (multiplexers, modulators, etc.).
17.	NCR/PCR inserter (DVB-RCS)	• The option provides NCR/PCR packets in MPEG2 TS for network synchronization of DVB-RCS.
18.	Redundancy system	• The option for redundancy system provides real-time control of redundancy procedures including saving and entering various actual customs and data parameters.

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