COD 980ASI
DTV Server Remultiplexer Crypton

Application:

DTV Server Remultiplexer COD980ASI is a remultiplexer equipped with the functions of DVB scrambler and subscriber service server of conditional access system "Crypton". ASI interface of input and output DVB transport streams is employed in COD 980ASI.

8 ASI inputs are available in COD980ASI. Transport streams of digital TV-programs selected for being multiplexed are fed on each of 8 ASI inputs. Transport streams can be scrambled in arbitrary order by the dynamically changing keys, which are unique for each program. Subscriber Message System allows to having 16 million subscribers maximum.

COD980ASI is mainly applied in head-end stations of digital cable, MITRIS, MMDS- and LMDS-networks.

Scope:

⟁ **Employing of 8 ASI inputs.** Digital TV-programs, selected for being remultiplexed come at the multiplexer input in order to be integrated into one multiprogrammed transport stream. Professional satellite receivers with transport stream output in ASI format (according to EN 50083-9) are usually appear to be a signal source.

⟁ **Estimation of aggregate input stream** is provided for each channel. It is also possible to estimate the maximum aggregate rate of TV-programs' stream fed to the multiplexer. The COD980ASI performs a signaling when there is a redundant rate of input data by concurrently and automatically reducing a bit rate of some programs, according to the set priorities.

⟁ **Service information edit and program clock reference correction** provide a high quality generation of a new multiprogrammed transport stream by bringing additional networking functions useful for ultimate customer.

⟁ **Open channel for subscribers' data transfer.** It is possible to arrange an open channel of data transfer from the service provider server to the DVB-compatible subscriber terminal via active TCP/IP communication. Electronic Programme Guide, news, weather forecast, Internet and etc., may be transmitted via open channel.

⟁ **Conditional Access System.** If the content needs to be protected, COD980ASI provides an independent scrambling of the TV-channels in accordance with DVB-CAS and effective subscribers' management of pay-TV network. Subscribers' management is done via port of control with PC.

⟁ **Digital ASI input.** Signal at the output of COD980ASI can be fed to the channel modulator, supporting ASI interface.
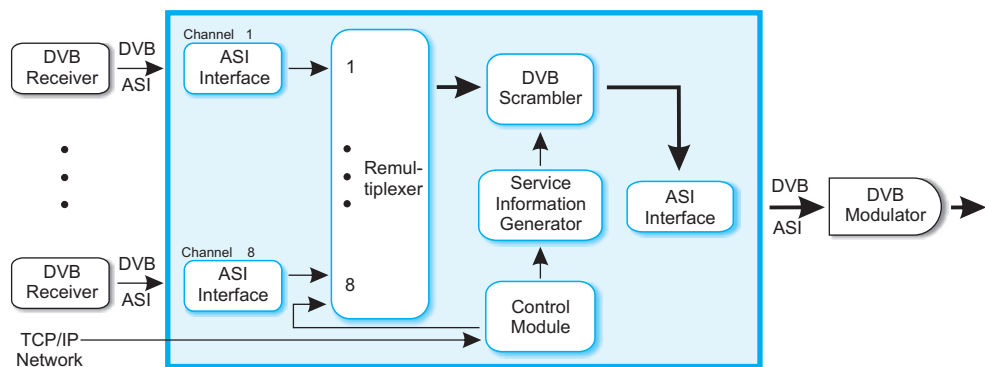
⟁ **Control.** The network devices' control is done on PC via TCP/IP communication.

⟁ **Reliable software.** "Crypton DTV Master" software package fulfills the control and monitoring tasks of the network devices status condition.

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Functional block diagram COD980ASI:

Concise description of COD910ASI units:

ASI interface - input and output interface of digital stream transmission according to EN 50083-9.

Remultiplexer. 8 (by one program from each channel) independent digital TV-programs could be fed to the multiplexer inputs. Subscribers' data, coming into device via open channel could be additionally fed to the multiplexer inputs. There are the mechanisms of program clock reference correction and PSI/SI tables edit and filtering.

DVB Scrambler. The scrambler performs a selective scrambling of digital TV-programs. The main purpose of scrambling is to exclude unauthorized viewing of the TV-programs.

Service information generator. The Crypton Service Information Generator performs the insertion of control messages, required for switching on/switching off any subscriber of pay-TV network.

Control module. The Control Module is used for performing the subscribers' management and the device diagnostics via active TCP/IP.

Technical characteristics

Input	**DVB ASI (in accordance with EN50083-9)** •Quantity: 8-multiprogrammed inputs •Type: electric	•Rate: Up to 54 Mbps on each input •Connector: BNC
Processing	**Remultiplexer** •Maximum quantity of multiplexed streams: 8 •PID swapping •PCR correction •PSI/SI automatic tables generator •PSI/SI tables processing and insertion according to ETS300468	**Conditional access** •Built-in DVB-compatible scrambler •Conditional Access System: "Crypton" complies with ETR-289, DVB Simulcrypt •Maximum quantity of service packs being scrambled: 8 •Maximum quantity of programs being scrambled: 24
Output	**DVB ASI (according to EN50083-9)** •Quantity: 1 •Type: electrical	•Output bitrate: 54 Mbs/sec •Connector: BNC
Control and monitoring	•Ethernet (TCP/IP)	•Software «CryptOn DTV Master»
Physical characteristics	**Size** •2U(19" rack) •93mm x 482,6mm x 300mm •3.65" x 19" x 13.25" •Weight: 4,0 kg	**Power** •90-260V AC 50/60 Hz •Power consumption: 50W max
Environmental conditions	**Operation** •Temperature 0 °C - +45 °C •Humidity: 5-85 % (non-condensing)	**Storage and transportation** •Temperature: -40 °C - +70 °C •Humidity: 0% - 85% (non-condensing)