

# DATASHEET



**COD912ASI**  
Multifunctional server of digital television services

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## 2. Preface

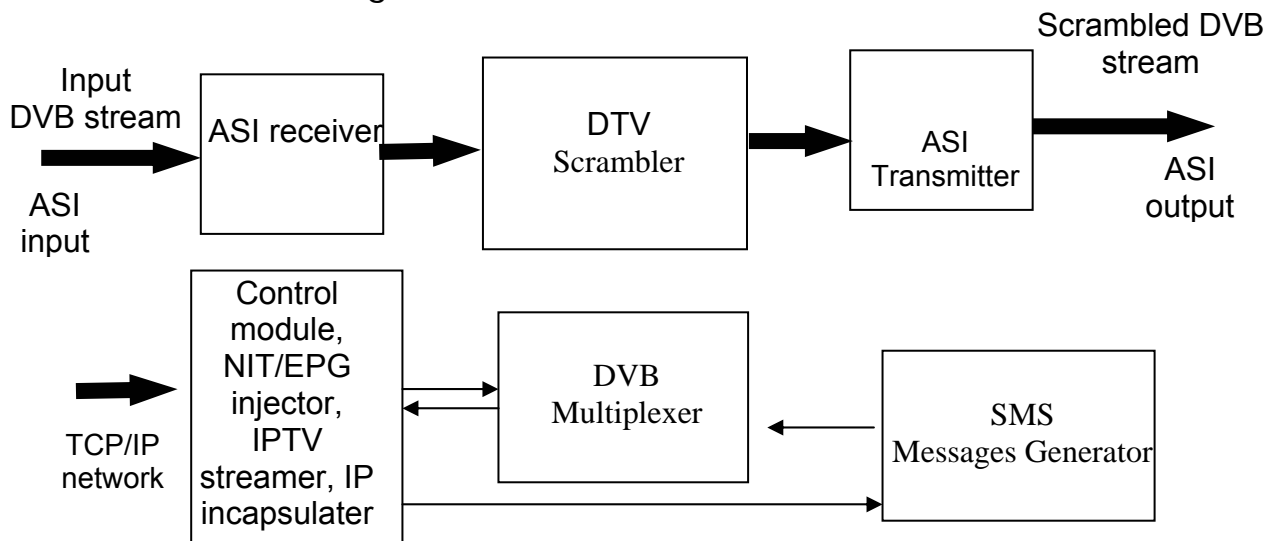
COD 912 ASI - is a multifunctional server of digital television services. It is designed to operate in digital DVB and IPTV broadcast networks. The following functions are envisaged:

- DVB ASI format converter;
- DVB scrambler and service information generator CAS Crypton;
- NIT, EPG injector;
- IPTV-streamer.

### 3. Scope

- **ASI-interface.**  
DVB ASI interface is used as input and output interface for digital transport stream transmission according to EN 50083-9. The ASI input/output different choice of adjustment allows COD912 to integrate with the majority of DVB broadcast devices given in the market.
- **High-performance 100Mbit/s TCP/IP port.**  
Mainly designed for transmission of high-bit-rate subscriber information, in CAS Crypton coder mode, and NIT/EPG data. The above-mentioned port is used for transmission of audio/video streams or Internet in IPTV streamer mode or IP-encapsulater.
- **Up to 24 digital TV or radio programs.**  
Input stream can be composed of 24 programs, which can be processed according to one or another current task. The PCR, DTS and PTS correction envisaged in COD 912, is provided to save to the output stream the high-quality characteristics of input stream.
- **Up to 8 service groups.** The 24 TV-channels arriving at the input of COD 912 can be arranged into 8 service groups of encryption each having its independent scrambling key and the list of subscribers allowed watching at current time.
- **DVB scrambler CAS Crypton.**  
The scrambler is a realization of Common Scrambler Algorithm, described in DVB-CAS ETR-289 specification.
- **NIT/EPG injector.** Allows to enter additional network information and Electronic Programme Guide for 7 days/24 channels, at the same time the maximum tables transmission rate can be run up to 100 mBit/s. Operator by aid of computer and "DTV Manager" program is able to download a schedule of Electronic Programme Guide via active TCP/IP connection.
- **IPTV streamer.** Provides a multicast/unicast broadcast function of multiprogrammed and single-programmed streams in IP-networks.
- **Re-loaded software.**  
It is possible by aid of DTV-Master's corresponding functions to download the new versions of software. To do this, it is necessary for operator to have a program's code and licensed key.

### 4. Functional block diagram



Pic. 1. The COD912ASI functional block-diagram

Pic.1 shows The COD912ASI functional block-diagram.

#### The principal units concise description

**ASI receiver.** A special-purpose ASI signal receiver is used to convert input stream arriving at ASI interface into internal parallel interface.

**DVB Scrambler.** The scrambler used in COD912ASI is a DVB-compatible and complies with DVB-CAS ETR-289 specification. It provides a selective scrambling of digital TV-channels. The main purpose of scrambling is to exclude an unauthorized viewing of TV-channels.

**Service Information Generator.** Service Information Generator inserts CAS Crypton controlling messages, and according to these messages the subscriber receiver provides an authorized access to the channels of digital TV-network.

**Control module.** It functions an intercommunication of COD 912 functional modules with the controlling network software installed on PC of digital TV-network's operator through TCP/IP connection.

**NIT/EPG injector.** Designed to transmit a network information and weekly TV-channels schedule to a digital multiprogrammed transport stream according to DVB specification (EN300468). Schedule is made and stored to device by "EPG Editor" utility, included into "Crypton Software Suite" software kit.

**IPTV streamer.** Special version of software will allow you to use COD 912 as IP television streamer which is able to transmit digital TV-channels of DVB input transport stream by IP-networks both in multicast and unicast modes.

**DVB multiplexer.** DVB multiplexer is used in COD 912 with the purpose of adding additional information (SMS messages, EPG, IP and etc.) into input transport stream.

**ASI transmitter.** Special-purpose ASI transmitter is used to convert output stream from internal parallel interface into DVB ASI. ASI modes both the output and input can be assigned by program which controls the Crypton devices. It allows using COD 912 as DVB ASI interface modes converter that in a number of cases needed for interfacing with equipment of different manufacturers.

### 5. Technical characteristics

| Parameter                                  | Parameter value                 | Note   |
|--|---------------------------------|--|
| Input                                      | 1 multiprogrammed DVB ASI input | EN 50083-9 specification, BNC connector (75 ohm) |
| Output                                     | DVB-ASI                         | EN 50083-9 specification, BNC connector (75 ohm) |
| Maximum stream rate                        | 54Mbit/s                        |  |
| Maximum quantity of programmes scrambled   | 24                              |  |
| Maximum quantity of encryption groups      | 8                               |  |
| Maximum quantity of subscribers in network | 500тыс.                         |  |
| Maximum size of EPG                        | 7 days, 24 channels             | EN300468   |
| Device control                             | 100 Mbit Ethernet, TCP/IP       | RJ45 connector                                   |
| Software                                   | «Crypton Software Suite»        |  |
| Supply voltage, V                          | 90 - 260                        | Alternating voltage by frequency of 50/60 Hz     |
| Power consumption, W (no more than)        | 40                              |  |

### 6. Abbreviations

|               |   |
|---------------|---|
| <b>ASI</b>    | - Asynchronous Serial Interface                   |
| <b>CAS</b>    | - Conditional Access System                       |
| <b>CSA</b>    | - Common Scrambler Algorithm                      |
| <b>DTV</b>    | - Digital TeleVision                              |
| <b>DVB</b>    | - Digital Video Broadcasting                      |
| <b>LMDS</b>   | - Local Multipoint Distribution Service           |
| <b>MMDS</b>   | - Multichannel Multipoint Distribution System     |
| <b>PSI</b>    | - Program Specific Information                    |
| <b>SI</b>     | - Service Information                             |
| <b>SMS</b>    | - Subscriber Management System                    |
| <b>TCP/IP</b> | - Transmission Control Protocol/Internet Protocol |
| <b>UTP</b>    | - Unshielded Twisted Pair                         |