

# DATASHEET



**COD912ASI**  
**CAS Crypton Scrambler**

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## 2. Overview

COD912ASI is a DVB scrambler and CAS Crypton SMS generator for Pay TV application. Additional embedded DVB EPG, NIT and other DVB SI injection modules let you build the DTV distribution network with minimum expenses and maximum efficiency. All Crypton devices control, CAS subscribers management, EPG control etc., are performed from a single host PC located within the same Ethernet network as the controlled "Crypton" device.

TCT/IP network protocol is used for communication reliability.

Crypton Software Suite is a set of device and CA control software utilities that once installed on the host PC makes your broadcast network resources management easy and comfortable.

Application: DVT Cable Networks;  
DTV MMDS;  
DTV LVDS;  
IPTV.

### 3. Features

- **ASI input.** Transport stream from different sources (for example from DVB multiplexer) is received to ASI input.
- **Service information editing.** To achieve an extra flexibility when generating a new multiprogramm transport stream the service information editing function is applied in COD912ASI.
- **DVB NIT/EPG support.** COD912ASI can support DVB NIT/EPG. NIT/EPG subsystem is fully corresponds to DVB specifications and can be received by any subscriber receiver supporting the functionality.
- **Conditional Access System.** DVB scrambler and CAS Crypton SMS generator let you employ COD912ASI for providing Conditional access in digital television broadcast networks. It is important to mention that high-reliable CA operation is achieved due to a simultaneous CAS Crypton SMS generator embedded into each device and only periodic host PC intrusion is required to update subscriber information or EPG data. Up to 24 programs can be arranged into 8 scrambling control groups each having its independent scrambling key and list of subscribers who are allowed to preview the program at the present time.
- **ASI output.** COD912ASI DVB ASI output supports «byte/packet», «188/204 byte» operation modes according to EN50083-9.
- **TCP/IP control.** All Crypton devices are controlled via TCP/IP network with software package “Crypton Software Suite” installed on a host PC.
- **Reloadable Software.** Address device firmware update can be made with a special FW update module of “DTV Master”, the basic control program of “Crypton Software Suite.

### 4. General description

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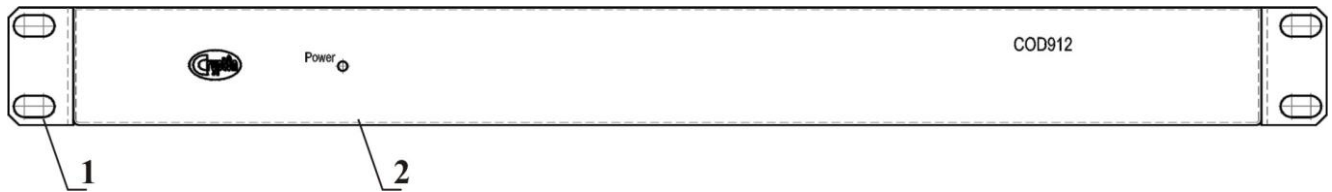


Fig. 1 Front panel

1. Mounting holes;
2. Power on LED.

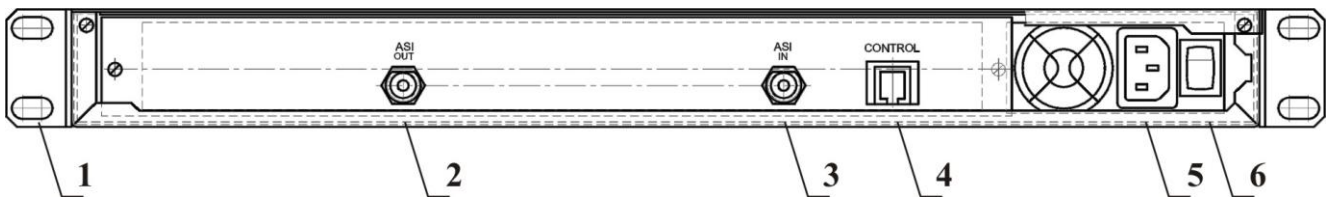


Fig. 2 Rear panel

1. Mounting holes;
2. ASI output;
3. ASI input;
4. TCP/IP control port;
5. Power socket, 90...260 V, 50/60 Hz;
6. Power switch

### 5. Functional block diagram

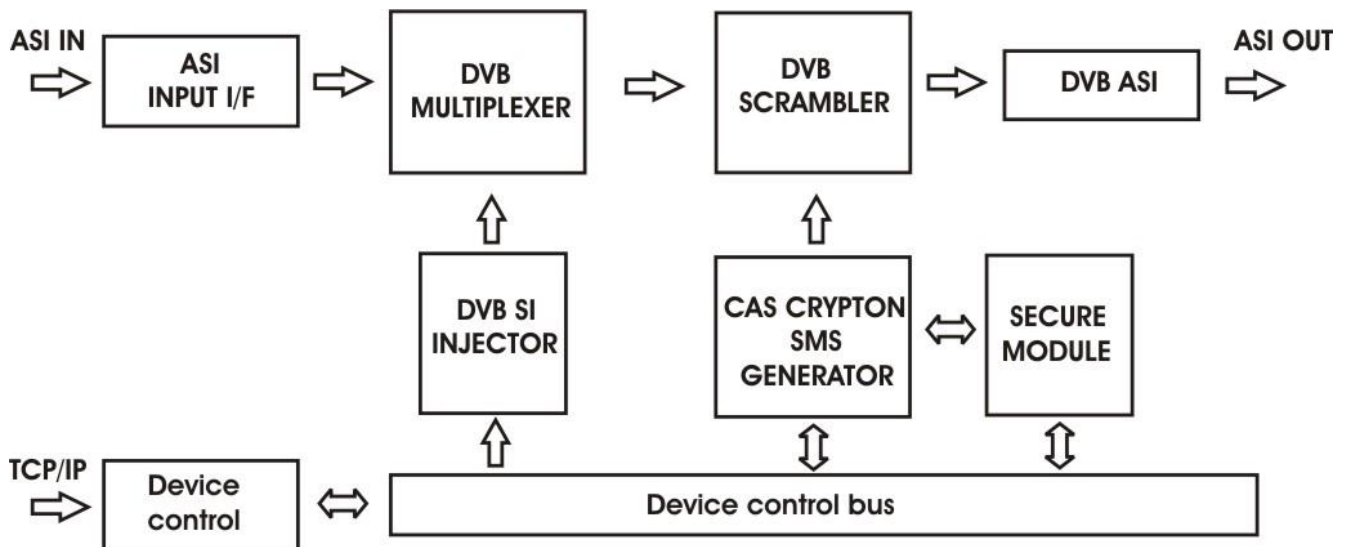


Fig. 3. COD912ASI functional block diagram.

**ASI INPUT I/F.** DVB ASI interface is used as input and output interface of digital transport stream transmission according to EN 50083-9. All basic modes are supported: byte/packet, 188/204 byte. The source mode is determined automatically by ASI inputs.

**DVB Multiplexer.** DVB multiplexer is used to manage the TS stream content. Service information editing is also supported on COD912ASI according to EN300468 specification.

**DVB Scrambler.** The scrambler used in COD912ASI is a DVB-compatible in accordance with DVB-CAS (ETR-289). DVB services can be scrambled selectively. Scrambling technology prevents non-permitted subscribers from watching TV-programs.

**CAS Crypton SMS Generator.** CAS Crypton SMS messages are generated locally from the subscriber lists (lists of subscribers permitted to watch the program) for each of up to 8 scrambling control groups assigned to each of the devices in your network.

**DVB SI INJECTOR.** Service information injector is designed for embedding service tables such as SDT, NIT, EIT (EPG), TOT into the output transport stream.

**Device Control.** Device control module is used for managing COD912ASI by aid of “Crypton Software Suite” installed on PC of network operator.

## 6. Technical specification

Parameter	Parameter value	Notes
<b>Input</b>	DVB ASI	EN 50083-9 specification, BNC connectors (75 Ohm)
<b>Conditional Access</b>		
Scrambling technology	DVB-CAS	ETR289
Conditional Access System	CAS Crypton	
Maximum number of programs being scrambled	24	
Maximum number of scrambling control groups	8	
<b>Service Information</b>	SDT, TOT, TDT, EIT, NIT	EN300468
<b>Output</b>	DVB ASI	EN 50083-9 specification, BNC connector (75 Ohm)
Maximum bitrate of output stream Mbps	54	
<b>Device control</b>	100Mbps Ethernet, TCP/IP	RJ45 type connector
<b>Control software</b>	Crypton Software Suite	
<b>Power supply, V</b>	90 - 260	50/60 Hz
<b>Power, W &lt;</b>	60	
<b>Nominal temperature</b>	10 – 30	°C
<b>Size</b>		
Width, mm	485	

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Depth, mm	406	50/60 Hz
Height, mm	44	



## 7. Abbreviations

<b>DVB</b>	-	Digital Video Broadcasting
<b>DTV</b>	-	Digital Television
<b>SI</b>	-	Service Information
<b>QPSK</b>	-	Quaternary Phase Shift Keying
<b>MMDS</b>	-	Multichannel Multipoint Distribution System
<b>SMS</b>	-	Subscriber Management System
<b>FEC</b>	-	Forward Error Correction