

# ***CAS Crypton*** ***DVB-over-IP scrambling*** ***setting up***



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## **1 General system description**

In comparison with DVB-ASI new DVB-over-IP technology allows more flexible routing of multiple DTV transport streams. It also makes it possible to use modern high performance equipments interfacing over 1Gbit Ethernet. COD912IPE is a 4 channel DVB-CAS scrambler capable to operate on central stations deploying DVB-over-IP technology. The device is a core unit of IP adapted CAS Crypton. System employes base DVB SimulCrypt architecture and slightly functionally extended for more convenient management of subscribers in accordance with CAS Crypton. Logically it can be parted to the following functionally independent modules:

- a) CAS Crypton DVB-over-IP scramblers;
- b) CAS Crypton subscriber messages generator;
- b) CAS Crypton subscriber data base.

This document describes basic interaction between system functional modules. It is intended to acquaint users with operation principles of DVB-over-IP adapted CAS Crypton.

Please refer to user manuals for more detail information about each of the modules operation.

## 2 System components

### 2.1 Functional block diagram

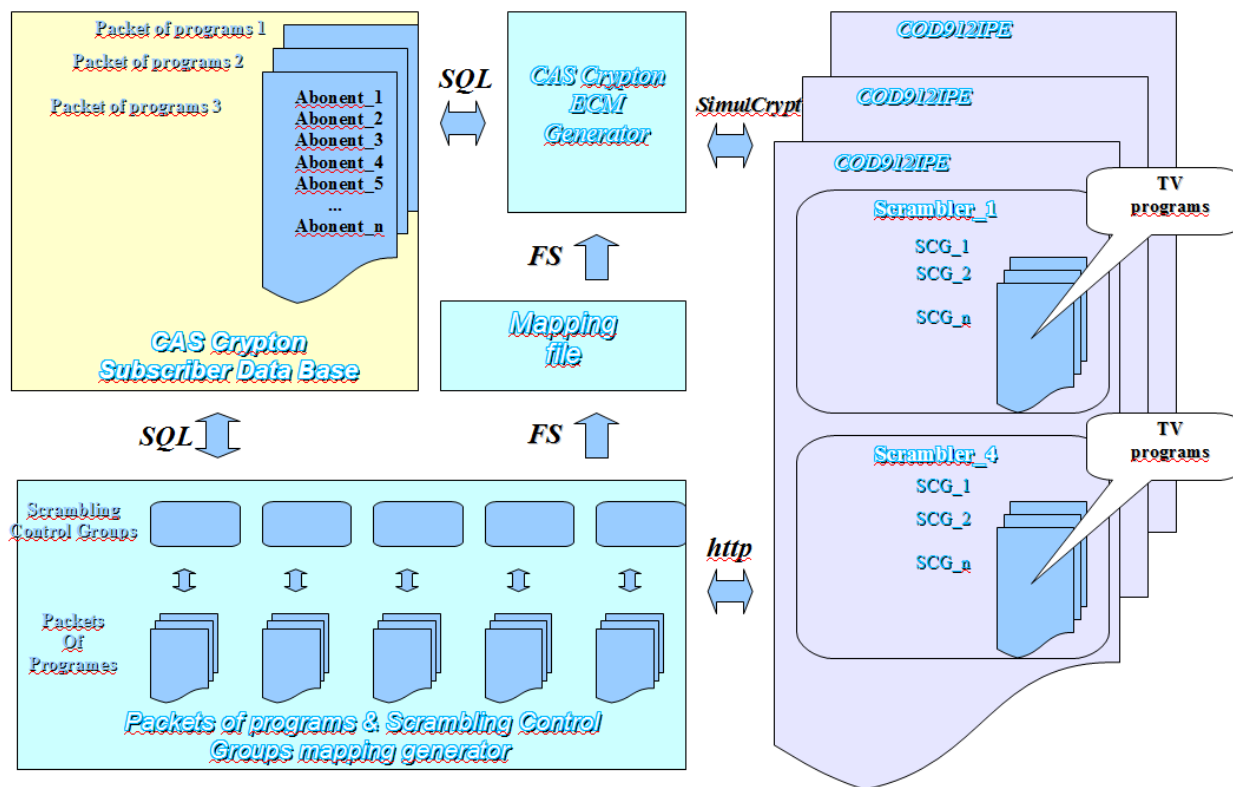


Fig. 1 Functional block diagram of CAS Crypton DVB-over-IP scrambling

Different colors on functional block diagram identify DVB-over-IP CAS modules:

- a) yellow - CAS Crypton subscriber data base;
- б) green - CAS Crypton SMS generator;
- в) серый - 4 channel DVB scramblers COD912IPE.

## 2.2 Definitions and abbreviations

<b>Scrambler</b>	Hardware modules that convert unscrambled TS data into scrambled in accordance with ETR289 specification. COD912IPE contains four independent DVB-CAS scramblers .
<b>Scramble Control Group (SCG)</b>	One or more TV programs scrambled with the same code word (CW) that use the same ECM stream in accordance with DVB SimulCrypt. Each of COD912IPE four scrambler support up to 16 scramble control groups.
<b>TV Program</b>	Group of A/V services scrambled within the same scrambling control group.
<b>DVB SimulCrypt.</b>	Standard data exchange protocol between CAS and DVB scrambler for coding of DTV transport streams.
<b>http</b>	Standard data exchange protocol between WEB server and http client over TCP/IP network.
<b>Packet of programs</b>	Group of TV programs who that are permitted to preview to a certain group abonents.
<b>Abonent</b>	Person who make subscription to TV programs.
<b>CAS Crypton ECM Generator</b>	Program module that produces and transmits ECMs to scrambler in accordance with DVB SimulCrypt.
<b>Maping file</b>	File that contains information of correspondence of SCGs and packets of (mapping) that CAS Crypton ECM generator uses to provide propper ECM responce to scramblers.
<b>Mapping file generator</b>	User program that is used to make mapping file.