

# Operating instructions

## TWIN SAT-Streamer

DVB-S/-S2 → 2 x CI → IP & ASI



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## SSI 108

## Part N°: 9740.01

## 1. Safety and operating instructions



When assembling, starting-up and adjusting the modules, it is necessary to consider the system specific references in the manual instruction!



The modules may only be installed and started up by authorized technical personnel!



When assembling the modules into the receiving points, the adherence of the EMC regulations is to be secured!



The assembly and wiring have to be done without voltage!



All active modules may only be operated with the Headend Controller HCB x00 or Bus Extender BEB x00!



The main voltage and the operating voltage of the modules working by DC have to be in compliance to the operating parameters described in the technical data.



With all work the defaults of the DIN EN 50083 have to be considered! Especially the safetyrelevant execution of the DIN EN 60728-11 [6] is necessary!

## 2. Device variants

SSI 108    9740.01    DVB-S/-S2 → 2 x CI → IP & ASI

### Minimum software requirements for HCB x00:

9650.03:    version 2.34\*

9650.04/05: version 3.25\*

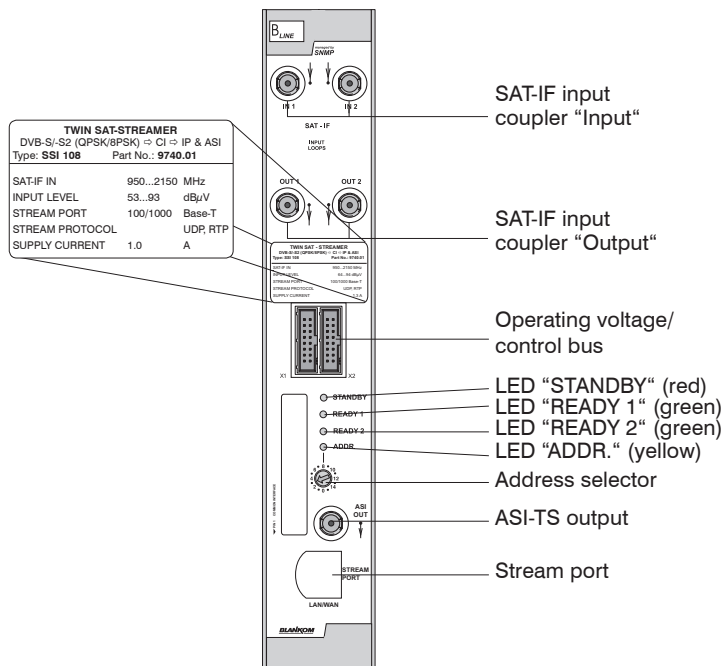
9652.01:    version 3.25\*

\*) Updates: [www.blankom.de](http://www.blankom.de)

## 3. General

The TWIN SAT Streamer SSI 108 is a module of the head end system B-LINE, which is conceived as a complete system for middle sized networks. The SSI 108 demodulates DVB-S/-S2 signals (8PSK, QPSK) into 2 transport streams, which are sent out over IP. A Common Interface slot enables the use of CA-Modules for the reception of scrambled SAT signals/programmes. Additionally the processed transport streams with the descrambled services are available on the ASI output, and the max. 16 IP transport streams too. All the components are programmed via a central control unit and will function independently thereafter. The status of the modules are displayed via LED's (see chapter 7 „Meaning of the status LED`s on front panel“).

## 4. Front view



managed by  
**SNMP**

## 5. Functional description

The SAT-IF input signal is fed to the DVB-S/-S2 front end, where the selection of a transponder and its QPSK or 8PSK demodulation are done. The data stream is routed by a switching matrix either to the Common Interface or directly to the IP module. A respective CA module with smart card, which is supported by the device, has to be used for descrambling.\* Multi service decryption is possible if there are not any restrictions by the CAM itself or by the service provider. The decryption of MPEG-4 services is supported. With this module its possible to choose elementary streams of a service for decryption. So the resources of the respective CAM/ smart card combination can be used optimally. The SI and PSI tables affected (i.e. the PAT, PMT, SDT, EIT) are automatically corrected. 16 of all programs contained in both transport streams can be selected and transmitted via IP. This is supported by different protocols. Address and port selection are not restricted, but should be orientated itselfs according recommendations of IANA. The module allows the output of one single program transport stream (SPTS) per IP connection, but also the output of one of both multi program transport streams (MPTS), that can be decrypted. For monitoring there is an ASI output to check one of the 16 stream channels.

\* The design of the Common interface of this module is done according to DVB standards. Because of the dependencies in interaction of the DVB signals, CA modules and smart cards we can not assure a general functional capability for all application possibilities. Please contact our service department for further assistance!

## 6. Adjustments

### 6.1 Adjustment with the Headend Controller

- Adjustment of the addresses at the Bus Extender BEB x00 and at the modules
- Activation of the programming mode on each module by selecting the line (BEB x00) and the module position (01... 15) at the Headend Controller(HCB x00)
  - yellow LED illuminates until the beginning of the parameter adjustment
- Adjustment of the SSI 108 parameters (see chapter 10) → green LED is switched on
- After the programming the SSI 108 will be automatically switched into the operating mode
  - yellow LED flashes shortly/ green LED is switched on

### 6.2 Adjustment with the PC/ laptop

- Prerequisite for the remote programming is an "online-connection" according the IP-standard and an ethernet connection at the PC/ laptop
- Adjustment of the line/ position addresses at the Bus Extender BEB x00 as well as at the modules
- At the Headend Controller HCB x00 input IP address (e.g. 192.168.001.001)
- For "direct connection" between a PC and HCB x00 use crossover cable (RJ 45)
- For connection over a HUB use a normal straight through patch cable
- Start-up HTML-browser and put in IP address as target address
- If connected correctly the web interface will be opened on the pc and a blue LED (LINK) at the HCB x00 will be lit up.
- All adjustments of the modules are specified on the web interface.

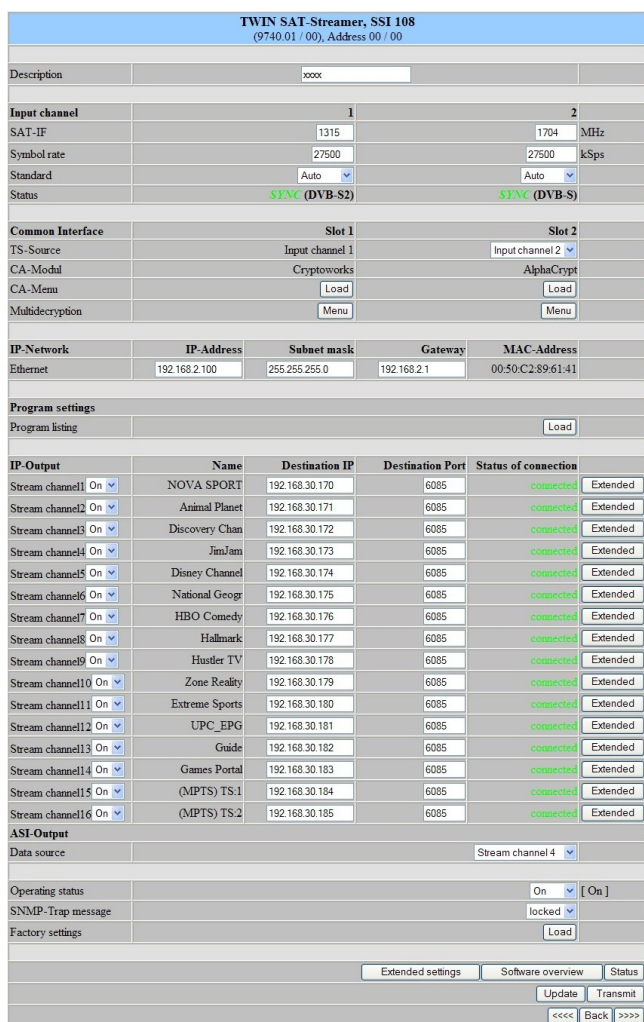
**The manual instructions of the Headend Controller HCB x00 and the Bus Extender BEB x00 have to be considered!**

## 7. Meaning of the status LED`s on front panel

Designation (Colour)	Status	Meaning of display
STANDBY (red)	permanently on	Module is in standby
	flashing	Module faulty (hardware error)
READY 1/ 2 (green)	permanently on	Module working properly
	flashing	Error warnings, depending on signal: - tuner 1/ 2 not synchronized (e.g. there is no input signal) - Error of decryption - stream channel to the receiver is broken
ADDR. (yellow)	illuminated/ flashing	remote control connection/ data being exchanged

## 8. Programming by web server\*

### 8.1 Main menu



Name of device, item number, address in head end

Description Name of programme (max. 30 characters)

**Input channel**  
SAT-IF adjustment range: 950 ... 2150 MHz  
Symbol rate adjustment range: 1000 ... 45000 kSps  
Standard selection: Auto, DVB-S, DVB-S2  
Status displays whether **SYN**chronization or **noSYN**chronization with input and the format of transmission

**Common Interface**  
TS-Source slot 1 always input channel 1 assigned, slot 2 - selection: input channel 1 or 2  
CA-Module displays the type of the CA module per slot  
CA-Menu see menu 2  
Multidecryption see menu 3

**IP-Network**  
Ethernet input of IP address, subnet mask and Gateway, display of the MAC address

**Program settings**  
Program listing see menu 1

**IP-Output**  
per stream channel (1 ... 16) :  
- selection: On/ Off (of the channel)  
- displays the name  
- input of the destination IP  
- input of the destination port  
- displays the status of connection  
- routing to the menu 7 (extended set tings)

**ASI-Output**  
Data source selection: stream channel 1... 16, TS1,TS2

Operating status selection: On, Off, Reset  
SNMP-Trap message On/Off, if SNMP option in HCB x00 is enabled, otherwise "locked" is displayed  
Factory settings see menu 9

Routing to the appropriate adjustment menu:  
Extended settings see menu 8  
Software overview see menu 11  
Status see menu 10

\* For further details see the HCB manual

## 8.2 Loading the programme list (menu 1)

TWIN SAT-Streamer, SSI 108 (9740.01 / 00), Address 00 / 00																	
Input channel 1		Stream channel															
Service ID	Program name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
225	PHILIPS DOWNLO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
226	PHILIPS DOWNLO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
227	NAGRA DOWNLOAD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
228	HUMAX DOWNLOAD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20301	NOVA SPORT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20302	Animal Planet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20303	Discovery Chan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20304	JimJam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20305	Disney Channel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20306	National Geogr	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20307	HBO Comedy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20308	Hallmark	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20309	Hustler TV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20310	Zone Reality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20311	Extreme Sports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20499	UPC_EPG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20500	Guide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20498	Games Portal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20497	Game 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20496	Game 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20495	Game 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20494	UPC Direct Rad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*****	(MPTS) TS:1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Input channel 2		Stream channel															
Service ID	Program name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
225	PHILIPS DOWNLO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
226	PHILIPS DOWNLO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
227	NAGRA DOWNLOAD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
228	HUMAX DOWNLOAD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20301	NOVA SPORT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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20303	Discovery Chan	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20304	JimJam	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20305	Disney Channel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20306	National Geogr	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20307	HBO Comedy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20308	Hallmark	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20309	Hustler TV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20310	Zone Reality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20311	Extreme Sports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20499	UPC_EPG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20500	Guide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20498	Games Portal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20497	Game 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20496	Game 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20495	Game 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20494	UPC Direct Rad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
*****	(MPTS) TS:2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Disable program		Stream channel															
Service ID	Program name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
0	empty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

This menu contains a list of all services available in the data stream. In the matrix there is a selection of the services per stream channel. Settings are adopted or changed by clicking the "Transmit" button.

### 8.3 CA menu (menu 2)

**TWIN SAT-Streamer, SSI 108**  
(9740.01 / 00), Address 00 / 00

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**AlphaCrypt 3.19 (c) Mascom GmbH**

Module Hauptmenu  
 1/ Information  
 2/ Smartkarte  
 3/ Nachrichten  
 4/ Jugendschutz  
 5/ Einstellungen  
 6/ Zurück  
 Bitte wählen Sie mit OK

Select Menu 1-6:

---

---

Name of device, item number, address in head end

On these pages all menus implemented in the CA module are offered. The available menus are selected individually or are invoked one-by-one to do necessary settings or to get all informations about the CA module.

### 8.4 Multi-decryption menu (menu 3)

**TWIN SAT-Streamer, SSI 108**  
(9740.01 / 00), Address 00 / 00

Program name	Decoding settings	Status
<b>NOVA SPORT</b> dec.PID's:2	- with MPEG1/2 audio language:1	stored
<b>Animal Planet</b> dec.PID's:4	Service completely	stored
<b>Discovery Chan</b> dec.PID's:2	- with MPEG1/2 audio language:2 - without subtitling streams	stored
<b>National Geogr</b> dec.PID's:2	- with MPEG1/2 audio language:1 - without subtitling streams - without VBI data	stored

dec.PID's total:10

Clear entries

When calling this menu the selection of the services of the adjusted transponder, which were selected for decryption and whose decryption was successfully, appears. Indicated are the programme name with the number of the decoded PID's, the decryption settings and the status of the programme. "Stored" means, that the service was successfully decrypted and saved in the CA-service-list. Using the check box "Clear entries" and the "Transmit / Back" button the entire selection will be deleted and no services are decrypted afterwards. By using the "Selection" button and the appropriate selection of the services in the multi-decryption selection menu (menu 4) the list of the services to decrypt can be changed. Using the "Testing selection" button calls the test menu (menu 5), in which the decryption state of all programmes in the CA-service-list will be tested again and possible occurring errors will be listed.

**8.5 Multi-decryption selection (menu 4)**

TWIN SAT-Streamer, SSI 108 (9740.01 / 00), Address 00 / 00								
Program selection			Decoding settings					
Selection	Program name	Status	private Streams	other Audio Streams	MPEG1/2 Audio Streams	Subtitling Streams	VBI Data Streams	PID-Drop list
<input type="checkbox"/>	PHILIPS DOWNLOAD 1.1	free	<input type="checkbox"/>	<input type="checkbox"/>	no	no	<input type="checkbox"/>	
<input type="checkbox"/>	PHILIPS DOWNLOAD 1.2	free	<input type="checkbox"/>	<input type="checkbox"/>	no	no	<input type="checkbox"/>	
<input type="checkbox"/>	NAGRA DOWNLOAD	free	<input type="checkbox"/>	<input type="checkbox"/>	no	no	<input type="checkbox"/>	
<input type="checkbox"/>	HUMAX DOWNLOAD	free	<input type="checkbox"/>	<input type="checkbox"/>	no	no	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	NOVA SPORT	coded	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	eng	all	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	Animal Planet	coded	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	all	all	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	Discovery Channel	coded	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	eng	no	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	JimJam	coded	<input type="checkbox"/>	<input type="checkbox"/>	no	no	<input type="checkbox"/>	
<input type="checkbox"/>	Disney Channel	coded	<input type="checkbox"/>	<input type="checkbox"/>	no	no	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	National Geographic	coded	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	eng	no	<input type="checkbox"/>	
<input type="checkbox"/>	HBO Comedy	coded	<input type="checkbox"/>	<input type="checkbox"/>	no	no	<input type="checkbox"/>	
<input type="checkbox"/>	Hallmark	coded	<input type="checkbox"/>	<input type="checkbox"/>	no	no	<input type="checkbox"/>	
<input type="checkbox"/>	Hustler TV	coded	<input type="checkbox"/>	<input type="checkbox"/>	no	no	<input type="checkbox"/>	
<input type="checkbox"/>	Zone Reality	coded	<input type="checkbox"/>	<input type="checkbox"/>	no	no	<input type="checkbox"/>	
<input type="checkbox"/>	Extreme Sports	coded	<input type="checkbox"/>	<input type="checkbox"/>	no	no	<input type="checkbox"/>	
<input type="checkbox"/>	UPC_EPG	free	<input type="checkbox"/>	<input type="checkbox"/>	no	no	<input type="checkbox"/>	
<input type="checkbox"/>	Guide	free	<input type="checkbox"/>	<input type="checkbox"/>	no	no	<input type="checkbox"/>	
<input type="checkbox"/>	Games Portal	coded	<input type="checkbox"/>	<input type="checkbox"/>	no	no	<input type="checkbox"/>	
<input type="checkbox"/>	Game 1	coded	<input type="checkbox"/>	<input type="checkbox"/>	no	no	<input type="checkbox"/>	
<input type="checkbox"/>	Game 2	coded	<input type="checkbox"/>	<input type="checkbox"/>	no	no	<input type="checkbox"/>	
<input type="checkbox"/>	Game 3	coded	<input type="checkbox"/>	<input type="checkbox"/>	no	no	<input type="checkbox"/>	
<input type="checkbox"/>	UPC Direct Radio	coded	<input type="checkbox"/>	<input type="checkbox"/>	no	no	<input type="checkbox"/>	

Reset CA-Modul

Simultaneous decoding of several programs depends on CA-Module and Smartcard!

In this menu all services of the adjusted transponder and their CA status are listed. The services are selectable for decryption. For each of this selected services one can determine, what streams or PID's are to be decrypted. That's important because the maximum number of the decryptable PID's is limited and this limit has a different size per CA module.

In the selection boxes "MPEG 1/ 2 Audio Streams" respective "Subtitling Streams" all, no or individual streams are selectable. If one wants to select more than one stream, but not all, the selection field "all" in the box is to be selected and in the column "PID-Drop list" all PID's have to be entered, that shall not be decrypted.\*

In the column "PID-Drop list" all PID's are listed, that shall not be decrypted. The PID's can be given in decimal or hexadecimal format and have to be separated by a semicolon. The maximum number of PID's is 10.\*\*

Individual CA modules have to be initialized once again before the CA services will be sent to the module. To do so the option "Reset CA-Modul" can be activated.

\* "Other Audio Streams" includes all AC3-, DTS- and AAC-Streams. „Private Streams" selects all streams which are not captured by the other selection fields.

\*\* Particularly Pid's can be given here, which are active only at times and no authorisation for decryption is available for them.

### 8.6 Multi-decryption test (menu 5)

Check program: NOVA SPORT

First all services, which are saved in the CA-service-list, will be tested for the current decryption status.

TWIN SAT-Streamer, SSI 108 (9740.01 / 00), Address 00 / 00		
Program name	Decoding settings	Status
<b>NOVA SPORT</b> dec.PID's:2	- with MPEG1/2 audio language:1	OK Info
<b>Animal Planet</b> dec.PID's:4	Service completely	OK Info
<b>Discovery Chan</b> dec.PID's:2	- with MPEG1/2 audio language:2 - without subtitling streams	OK Info
<b>National Geogr</b> dec.PID's:2	- with MPEG1/2 audio language:1 - without subtitling streams - without VBI data	OK Info
dec.PID's total:10		
<input type="checkbox"/> Clear entries		
<input type="button" value="Selection"/> <input type="button" value="Testing selection"/> <input type="button" value="Transmit / Back"/>		

After the end of the test the multi-decryption menu (menu 3) appears, where in the "Status"-column the test result of the respective service is stated by using the "Info" button, the relevant information page of the test (menu 6) is displayed. By clicking of the "Transmit / Back" button all settings are transmitted. The "Selection" button routes back to menu 4 to correct input values, e.g. too much PID's were selected.

### 8.7 Multi-decryption test information (menu 6)

TWIN SAT-Streamer, SSI 108 (9740.01 / 00), Address 00 / 00		
Service Information:		
Service ID	CA Information	Test result
20301	coded with CAM support	Test OK
Information about elementary streams:		
PID / Typ	CA Information	Test result
101 / Video	coded with CAM support	Test OK
112 / Audio	coded with CAM support	Test OK
<input type="button" value="Back"/>		

Name of device, item number, address in head end

On this page informations about the test result of the selected service are displayed. First the final result of the test with service ID and CA information is listed, than for each requested PID the type, the CA information and the test result.

### 8.8 Extended settings of the stream channels 1 ... 16 (menu 7)

TWIN SAT-Streamer, SSI 108 (9740.01 / 00), Address 00 / 00																	
<b>Stream channel 1</b>																	
Operating status	On ▾																
Destination IP	192.168.30.170																
Destination Port	6085																
<b>configuration</b>																	
Transmit protocol	RTP ▾																
FEC-Mode L	5 ▾																
FEC-Mode D	7 ▾																
Set stream data rate to	User defined ▾																
User defined data rate	47800 Kbps																
Change TS-Identification	On ▾																
TS-ID	1																
Network-ID	100																
EIT-Mode	Present/following ▾																
<input type="checkbox"/> Use configuration for all stream channels (without TS-ID)																	
<b>Service settings</b>																	
TS-Source	Input channel 2 ▾																
Streaming mode	SPTS(single program) ▾																
Service ID	20301																
Name	NOVA SPORT																
Update Transmit																	
Stream channel:																	
<table border="1" style="display: inline-table;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td> </tr> </table>		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
Back																	

Name of device, item number, address in head end

**Stream channel x** displays the channel, that will be adjusted  
 Operating status selection: On/ Off  
 Destination IP input of the destination IP number  
 Destination Port input of the destination port

**configuration**  
 Transmit protocol selection: RTP, UDP  
 FEC-Mode L selection: Off, 1 ... 20  
 FEC-Mode D selection: Off, 4 ... 20  
 Set stream data rate to selection: User defined, TS-Data rate, Service data rate

User defined data rate input of the data rate in kbps (only if "Set stream data rate to user defined")

Change TS-Identification selection: On/ Off  
 TS-ID input of the TS-ID\*\*  
 Network-ID input of the network ID\*\*  
 EIT-Mode selection: EIT completely\*, present/ following

Use configuration for all stream channels if box is clicked, all configuration settings are adopted for the other 15 stream channels

**Service settings**  
 TS-Source selection: input channel 1 or 2  
 Streaming Mode selection: SPTS (one programme), MPTS (all programmes)  
 Service ID adjustment range: 0..65535\*\*\*  
 Name service name (max. 30 characters)

Stream channel routing to the next stream channel, that should be adjusted!

\* only selectable if "Change TS-Identification Off"  
 \*\* input only if "Change TS-Identification On" is selected  
 \*\*\* input only if "Streaming mode SPTS" is selected

The manual configuration of service settings is necessary only if the requested service is not available in the programme list. Normally all settings of the service are adopted when the service is selected in the list.

### 8.9 Extended settings (menu 8)

TWIN SAT-Streamer, SSI 108 (9740.01 / 00), Address 00 / 00		
<b>CA-Configuration</b>		
	Slot 1	Slot 2
SDT/PMT-Processing	On ▾	On ▾
Mode CA-PMT-Update	CA-PMT-Entry ▾	CA-PMT-Entry ▾
Update Transmit		
Back		

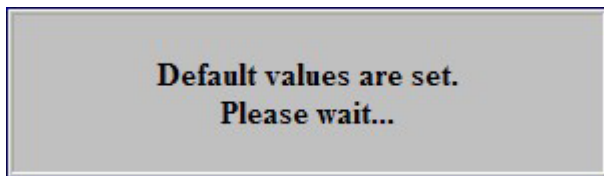
Name of device, item number, address in head end

**CA-Configuration** datas per slot  
 SDT/PMT-Proc. selection: On/ Off  
 Mode  
 CA-PMT-Update selection: CA-PMT-Entry, CA-PMT-Listing

### 8.10 Factory settings (menu 9)



When this menu item is requested, at first a security query whether it really set all parameters to the factory default settings pops up.



Affirming the query, all settings stored in the EEPROM will be deleted and replaced by the default settings. The module will go back to these default values. In particular all network settings (IP address, subnet mask, gateway and destination IP per channel) are set on address 0.0.0.0. Once the setting process is over, there will be an automatic return to the main menu. It takes about one minute.

### 8.11 Status of the device (menu 10)

TWIN SAT-Streamer, SSI 108 (9740.01 / 00), Address 00 / 00		
<b>Input channel</b>		
	1	2
Status	SYNC (DVB-S2)	SYNC (DVB-S)
Set values	Sat ZF:1315 Symbolrate:27500	Sat ZF:1704 MHz Symbolrate:27500 kSps
RF-Input level	45	48 dBμV
BER/PER	0 E-6	< 1 E-6
<b>Common Interface</b>		
	Slot 1	Slot 2
Decoder status	No messages available	No messages available
<b>IP-Output</b>		
	Status	Data rate
Stream channel 1	To be running	37300 Kbps
Stream channel 2	To be running	37400 Kbps
Stream channel 3	To be running	37500 Kbps
Stream channel 4	To be running	37600 Kbps
Stream channel 5	To be running	37700 Kbps
Stream channel 6	To be running	37800 Kbps
Stream channel 7	To be running	37900 Kbps
Stream channel 8	To be running	38000 Kbps
Stream channel 9	To be running	38100 Kbps
Stream channel 10	To be running	38200 Kbps
Stream channel 11	To be running	38300 Kbps
Stream channel 12	To be running	38400 Kbps
Stream channel 13	To be running	38500 Kbps
Stream channel 14	To be running	38600 Kbps
Stream channel 15	To be running	38700 Kbps
Stream channel 16	To be running	38800 Kbps
<b>Information</b>		
System status	No messages available	
Temperature	100 °F	
Device number	0000000	
Device index	00	
Update Back		

Name of device, item number, address in head end

**Input channel** displays datas for channel 1 and 2  
**Status** displays whether **SYNC**hronization or **noSYNC**hronization with input and the format of transmission  
**Set values** displays adjusted SAT IF and symbol rate  
**RF-Input level** displays in dBμV  
**BER/ PER** bit error rate (DVB-S)/ packet error rate (DVB-S2)

**Common Interface** displays per slot  
**Decoder status** displays available messages

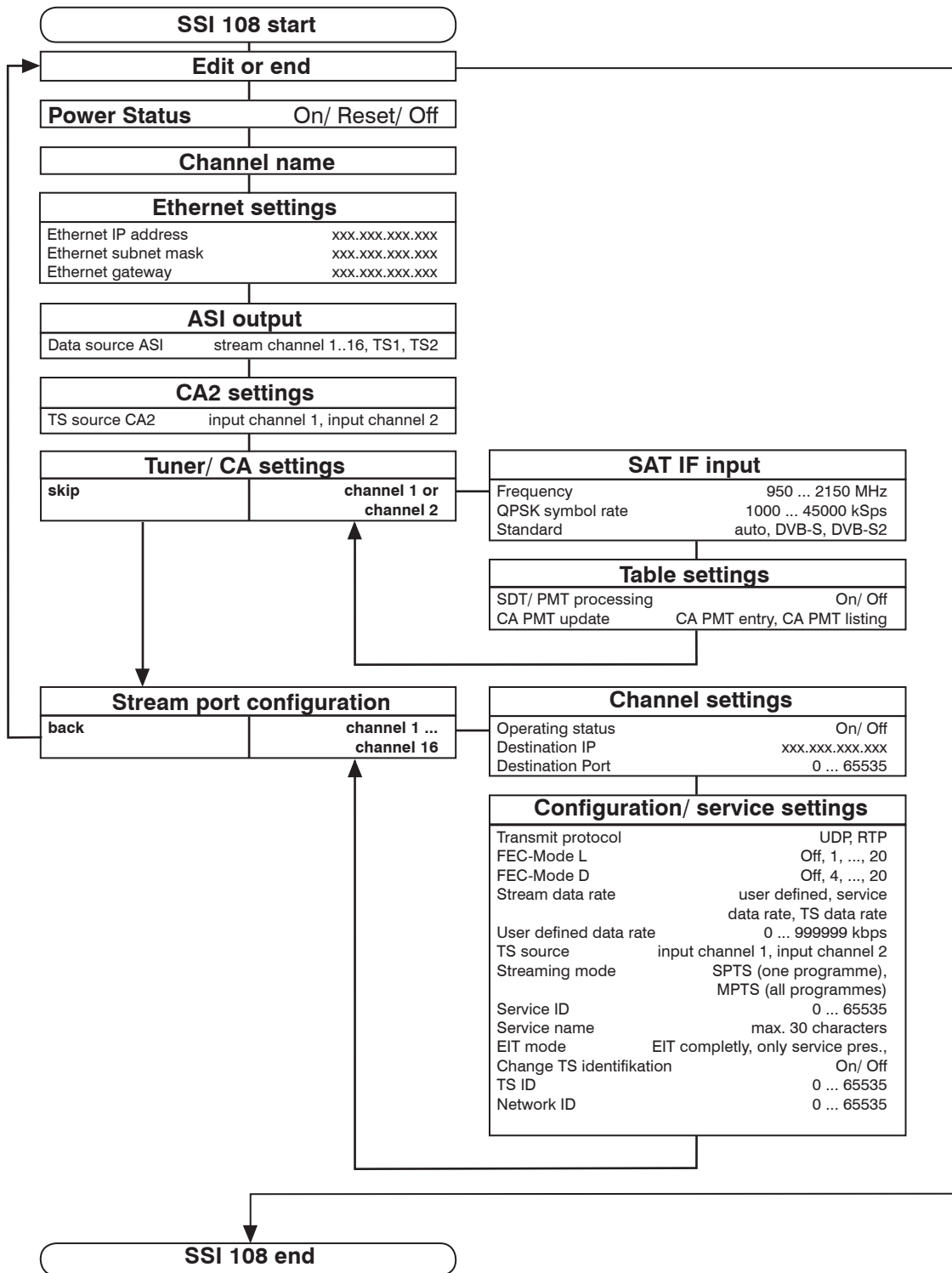
**IP-Output** displays status and data rate per stream channel

**Information**  
**System status** displays available messages  
**Temperature** temperature of terminals board  
**Device number** display of the device number  
**Device index** display of the device index (hardware)

**8.12 Software overview (menu 11)**

TWIN SAT-Streamer, SSI 108 (9740.01 / 00), Address 00 / 00		Name of device, item number, address in head end
<b>Version</b>		<b>Software versions</b>
		Displays the software versions for the controllers as follows:
AP-Controller	9740.01-81.01 Steuercontroller Anschluß-LP V1.01 13.11.2009 JR	- Controller of terminals board
DVB-S/S2 Frontend1	9619.05-88.02 S2-NIM-Controller H2V1.10 28.07.2009 SS	- Controller DVB-S/ S2 frontend 1
DVB-S/S2 Frontend2	9619.05-88.02 S2-NIM-Controller H2V1.10 28.07.2009 SS	- Controller DVB-S/ S2 frontend 2
CA Bootcontroller	9730.01-88.01 FPGA Boot Controller(2) V1.01 11.11.2009 JR	- CA-Bootcontroller
CA FPGA-Image	9740.01-87.02 FPGA CA-Controller V0.02 04.09.2009 WE	- FPGA CA-Controller
CA NIOS-Application	9740.01-90.03 TS-CA-Manager V1.00b 25.09.09 SS	- TS-CA-Manager
IP Bootcontroller	9730.01-88.01 FPGA Boot Controller(2) V1.01 11.11.2009 JR	- IP-Bootcontroller
IP FPGA-Image	9740.01-87.01 Test V1.00 23.09.2009 JR	- FPGA IP-Controller
IP NIOS-Application CPU1	9740.01-90.01 Control CPU V1.00 28.10.2009 JR	- IP-CPU
IP NIOS-Application CPU2	9740.01-90.02 TS-CPU V1.00 28.10.2009 JR	- TS-CPU
<input type="button" value="Back"/>		

## 9. Manual menu control at the Headend Controller (HCB x00)

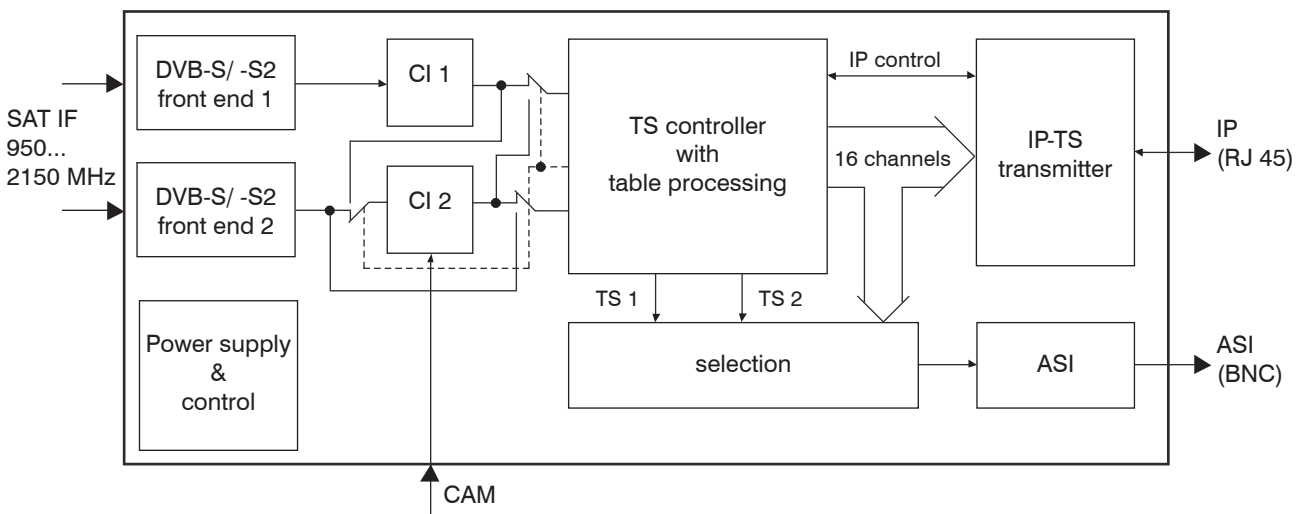


## 10. Trap messages

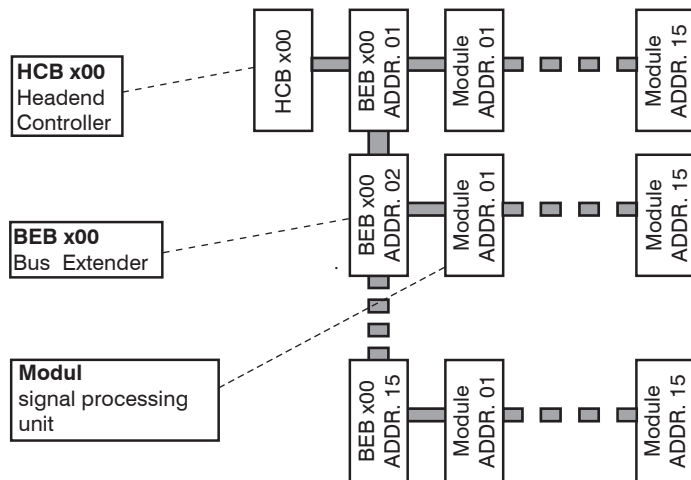
Item	Message	Message Type	Explanation
01	Input sync	INFORMATION	input synchronized
02	Input not sync	WARNING	input not synchronized
03	IIC error	CRITICAL	IIC bus or hardware error
04	System reset	WARNING	reset by internal error
05	Internal controller reset	WARNING	error when accessing internal controller

Item	Message	Message Type	Explanation
06	Power fail	CRITICAL	power supply error
07	Communication CA-Controller lost	WARNING	error when accessing CA controller
08	Communication IP-Controller lost	WARNING	error when accessing IP controller
09	IP-Streamer fail	WARNING	error in IP streamer
10	IP-Streamer ok	INFORMATION	IP streamer working properly
11	Decoding of service ... fail	WARNING	error on descrambling of service...
12	Decoding of service ... ok	INFORMATION	descrambling of service ... ok

### 11. Block diagram

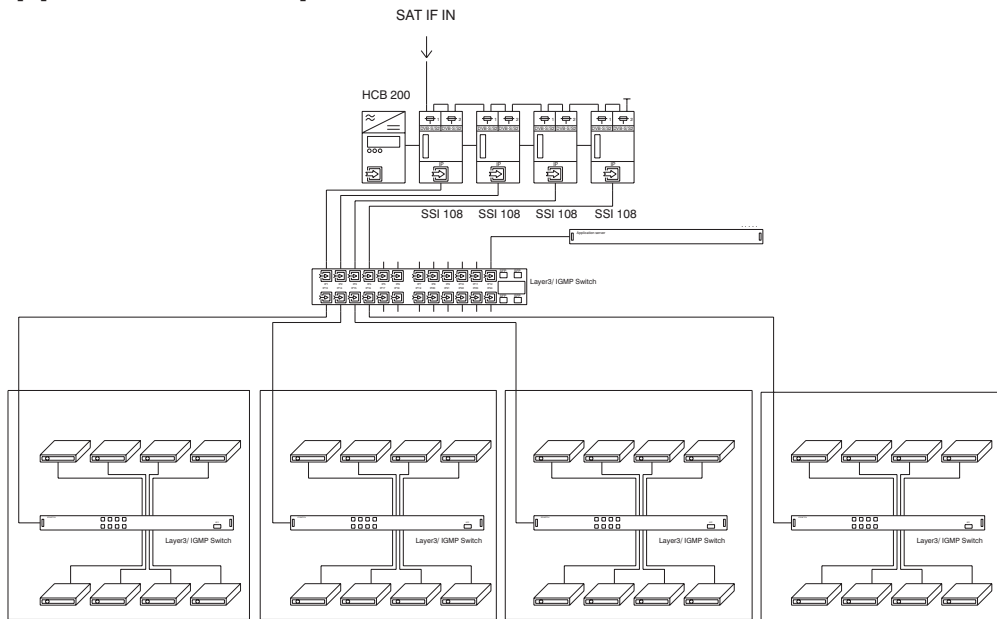


### 12. Head end bus structure



The number of the possible module connections (00 ... 15) to a BEB x00 depends on the total power consumption of this line!

### 13. Application example



### 14. Technical data

#### SAT IF input

Frequency range	950 ... 2150 MHz
Frequency step	1 MHz
AFC range	± 3 MHz (SR < 10 MSps) ± 5 MHz (SR ≥ 10 MSps)
AGC level range	53 ... 93 dBμV
Connector	F socket
Impedance	75 Ω

#### DVB-S demodulator (QPSK)

Symbol rate	1 ... 45 MSps
Code rate	1/2, 2/3, 3/4, 5/6, 7/8
Roll-off	35 %
Signal processing	EN 300 421 (DVB-S) [1]

#### DVB-S2 demodulator (QPSK, 8PSK)

Symbol rate	QPSK	5 ... 36 MSps
	8PSK	5 ... 30 MSps
Code rate	QPSK	1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
	8PSK	3/5, 2/3, 3/4, 5/6, 8/9, 9/10
Roll-off		35 %
Signal processing		EN 302 307 (DVB-S2) [2]

#### ASI output

Data rate	270 Mbps
Polarity	normal
Mode	burst
TS data rate	according symbol rate and coding
TS mode	188 Bytes
Output voltage	800 mV <sub>ss</sub> ± 10 %
Connector	BNC socket
Impedance	75 Ω
Signal processing	EN 50083-9 [3]

#### Decryption interface

Common Interface	PCMCIA-Slot according EN 50221 [4]
Operating voltage	5 V
Multi-Service decryption	24 services max.

#### IP output

Network connection (LAN/WAN)	Ethernet, 10/100/1000 Base-T
Plug connection	RJ 45
Protocols	UDP, RTP, ARP
Additional error correction	pro-MPEG Code of practise 3 rev. 2
Encapsulation	according ETSI TS 102034 [5]

#### Operating parameters

Voltage/ current (w/o CAM)	12 V (± 0.2 V)/ 1 A
Residual ripple of supply voltage	≤ 10 mV <sub>ss</sub>

#### Environmental conditions

Temperature range	-10 ... +55 °C
Temperature range for data keeping	5 ... 45 °C
Relative humidity	≤ 80 % (non condensing)
Method of mounting	vertical
Location of mounting	splash-proof and drip-proof

#### Miscellaneous

Dimensions (l x w x h)	
without 19" - adapter	50 x 276 x 148 mm
with 19" - adapter	50 x 301 x 148 mm
Weight	1.350 g

#### Delivery content

1 x bus connector
2 x F connecting cable 140 mm

## 15. Glossary

8PSK	<b>8 Phase Shift Keying</b>
AAC	<b>Advanced Audio Coding</b>
AC3	<b>Adaptive Transform Coder 3</b> (multi channel audio system of company Dolby)
AP	<b>Anschlussplatte</b> (front terminal board)
ARP	<b>Address Resolution Protocol</b>
ASI	<b>Asynchronous Serial Interface</b>
BER	<b>Bit Error Rate</b>
CA	<b>Conditional Access</b>
CAM	<b>Conditional Access Module</b>
CI	<b>Common Interface</b>
CCIR	<b>Comité Consultatif International des Radiocommunications</b>
CATV	<b>Cable Television</b>
DTS	<b>Digital Theater Systems</b> (multi channel audio system of company with the same name)
DVB	<b>Digital Video Broadcasting</b> (-C Cable, -S Satellite, -S2 Satellite 2, -T Terrestrial)
EIT	<b>Event Information Table</b>
FEC	<b>Forward Error Correction</b>
FPGA	<b>Field Programmable Gate Array</b>
HTML	<b>Hypertext Markup Language</b>
HTTP	<b>Hypertext Transfer Protocol</b>
IANA	<b>Internet Assigned Numbers Authority</b>
ID	<b>Identifier</b>
IIC	<b>Inter-Integrated Circuit</b> (I <sup>2</sup> C-Bus, data bus within device)
IP	<b>Internet Protocol</b>
LED	<b>Light Emitting Diode</b>
MC	<b>Microcontroller</b>
MIB	<b>Management Information Base</b>
MPEG	<b>Moving Picture Experts Group</b>
MPTS	<b>Multi Program Transport Stream</b>
QPSK	<b>Quadrature Phase Shift Keying</b>
PAT	<b>Program Association Table</b>
PCR	<b>Program Clock Reference</b>
PER	<b>Packet Error Rate</b>
PID	<b>Packet Identifier</b>
PMT	<b>Program Map Table</b>
PLL	<b>Phase-locked loop</b>
RTP	<b>Realtime Transport Protocol</b>
SDT	<b>Service Description Table</b>
SMATV	<b>Satellite Master Antenna Television</b>
SNMP	<b>Simple Network Management Protocol</b>
SPI	<b>Serial Peripheral Interface</b>
SPTS	<b>Single Program Transport Stream</b>
TS	<b>Transport Stream</b>
TV	<b>Television</b>
UDP	<b>User Datagram Protocol</b>

## 16. Bibliography

- [1] EN 300 421: Digital Video Broadcasting (DVB): Framing structure, channel coding and modulation for 11/12 GHz satellite services
- [2] EN 302 307: Digital Video Broadcasting (DVB): Second generation framing structure, channel coding and modulation systems for Broadcasting, Interactive Services, News Gathering and other broadband satellite applications
- [3] EN 50083-9: Cabled distribution systems for television, sound and interactive multimedia signals, part 9: Interfaces for CATV/SMATV head ends and similar professional equipment for DVB/MPEG-2 transport streams
- [4] EN 50221: Common interface specification for conditional access and other digital video broadcasting decoder applications; German version EN 50221:1997 + Corrigendum:2000
- [5] ETSI TS 102034: Digital Video Broadcasting (DVB); Transport of MPEG-2 TS Based DVB Services over IP Based Networks, Ver. 1.4.1, 2009-08-04
- [6] EN 60728-11: Cable networks for television signals, sound signals and interactive services Part 11: Safety (IEC 60728-11:2005); German version EN 60728-11:2005
- [7] RFC 1157 Request for Comments (RFC): RFC Database URL: <http://www.rfc-editor.org/rfc.html>

## 17. Document history

Version	Date	Modification	Author
1.00	03.11.2009	Basic document	Häußer

Options available upon request! Subjects to changes due to technical progress.

# Declaration of Conformity

## The Manufacturer

BLANKOM Antennentechnik GmbH · Hermann-Petersilge-Str. 1 · 07422 Bad Blankenburg · Germany

herewith declares the conformity of the product

**Product name:** TWIN SAT-Streamer

**Type:** SSI 108

**Product number:** 9740.01

according to the following regulations

EN 50083-2

EN 60728-11 (as far as relevant)

and additional device-specific regulations, enclosed above, which this product is subjected to.

**Date:** 03.11.2009

**Signature:**



(Managing Director)