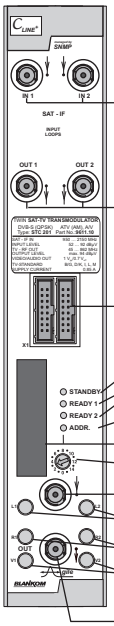
STC 201

TWIN SAT - TV TRANSMODULATOR

DVB - S (QPSK) ATV(AM), AV
Standard B/G, D/K, I, L, M



SAT - IF - Input coupler "Input"
SAT - IF - Input coupler "Output"
Operating voltage / Control Bus
LED "STANDBY" (red)
LED "READY" (green)
LED "ADDR." (yellow)
TWIN CI - slot
Address selection switch
Output coupler "Input"
Audio - Ausgang L 1,2
Audio - Ausgang R 1,2
Video - Ausgang 1,2
Output coupler "Output"

managed by SNMP

Pic. 01

DEVICE VARIANTS

STC 201	9611.10	SAT-ZF	VHF / UHF [45 ... 862 MHz], AV

Minimum software requirements for HCB 100 (Headend Controller)

9650.03:	Version 2.34
9650.04/.05:	Version 3.18

GENERAL

The TWIN SAT-TV-Transmodulator STC 201 is a module of the C-LINE+ head end system, which is conceived as a complete system for small and middle sized network. The STC 201 converts 2 TV programs from DVB-S channels into 2 analogue Cable-TV channels. The module can be programmed and adjusted via a central control unit Headend Controller HCB 100 manually or remotely and operate after programming autarkic.
The status of the module is displayed via colored LEDs:

• Red	- permanent	Modul in Standby mode
	- flashing	Hardware error
• Green	- permanent	Module ok
	- flashing	Signal error
• Yellow	- permanent	Remote access
	- flashing	Data transfer

FUNCTION DESCRIPTION

The module converts 2 services from DVB-S channels into 2 analogue CATV channels. This device variant provides the possibility of additional audio and video output (monitoring purpose). The digital SAT IF signal (transponder) will be transported to the frontend, where it will be selected and demodulated to the transport stream level. The transport stream will be fed directly to the DVB module or via the Common interface.*
The DVB – module consists of the demultiplexer and the MPEG decoder. The DVB module generates an analogue Video- and Audio signal. The STC 201 supports services like Teletext, VPS, WSS, optional test lines, the flash of subtitles and BISS decryption.
The analogue signals feed the IF modulators. After IF filtering follows the conversion into the wanted output channels.
Two independent adjustable channels (output frequency and level) are available at the output. In and outputs are performed in loop-through technology therefore distribution and combining are realized within the module.A permanent 12 V voltage for LNC - supply is available at the SAT- inputs.

* The design of the Common interface of this module is done according to DVB compliant standards. According to the dependencies in interaction of DVB signals, CA-modules and smartcards we can not assure a general functional reliability for all application possibilities. Please contact our Service-Department for further assistance!

ADJUSTMENT POSSIBILITIES

Adjustment with the Headend Controller

Adjustment of the addresses at the Bus Extender BEB 100 and at the modules
Activation of the programming mode of the individual modules by selecting the line (BEB 100) and the module position (01 - 15) at the Headend Controller (HCB 100)
yellow LED is lit up til the beginning of the parameter adjustment
Adjustment of the STC 201 parameter (see Pic. 03) green LED is lit up
After the programming, the STC 201 will be automatically switched into the operating status
yellow LED light up briefly / green LED is lit up

Adjustment with PC / Laptop

Condition for the remote programming is an "online - connection" after IP - standard and an ethernet connection at the PC / Laptop
Adjustment of the line / position addresses at the Bus Extender BEB 100 as well as at the modules
At the Headend Controller HCB 100 IP - address input (e.g. 192.168.001.001)
For "direct connection" between a PC and HCB 100 use a crossed patch cable (RJ 45)
For connection over a deviation use an uncrossed patch cable
HTML - browser start-up and put in IP - address as target address
If connected correctly the HTML - control surface at the PC will open up and a blue LED (LINK) at the HCB 100 will be lit up
All adjustment of the modules are specified at the control surface

The manual instructions of the Headend Controller HCB 100 and the Bus Extender BEB 100 have to be considered!

TECHNICAL DATAS

SAT - IF input

Frequency range	950 … 2150 MHz
Frequency step	MHz
AFC range	±3 MHz
AGC level range	52 … 92 dBµV
Connectors	F socket
Impedance	75
Through loss	1.5 dB
LNC remote supply	12 V / 400 mA

QPSK demodulator / decoder

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

Decryption - Interface

1 Common Interface per channel	PCMCIA - Slot according to EN 50221
Operating voltage	5 V

TV - Output

TV - Standards	B/G, D/K, I, L, M
Sound procedure (B/G, D/K)	FM - dual carrier
Sound (B/G, D/K)	mono / stereo / dual / auto
Sound (I, L, M)	mono
Max. output level	94 dBµV
Level adjustment range	20 dB (0.5 dB - steps)
Impedance	75
Connector	F socket
Through loss	1.5 dB
Output frequency range	45 … 862 MHz
Tuning step	125 kHz
Audio Output	0.7 V_{eff} / 10 k
Connector	MCX socket
Video Output	1 V_{ss} / 75
Connector	MCX socket

Operating parameters

Voltage / current	12 V (0,2 V) / 850 mA (without CA modul)
Residual ripple of the supply voltage	10 mV_{pp}

Environmental conditions

Temperature range	-10 … +55 °C
Relative humidity	80 % (not condens.)
Mounting	vertically
Mounting location	splash-proof and drip-proof

Physical information

Dimensions (W x H x L)	
without 19" - Adapter	50 x 276 x 148 mm
with 19" - Adapter	50 x 301 x 148 mm
Weight	1130 g

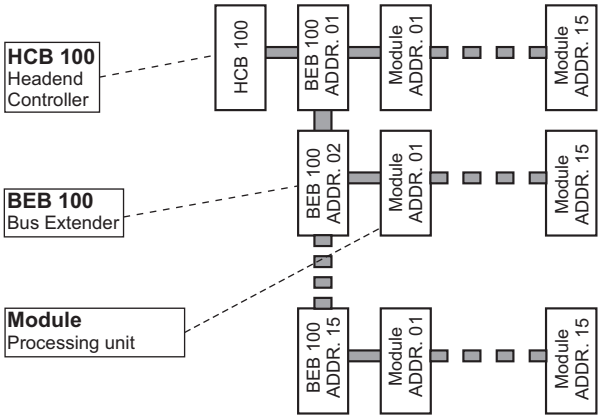
Delivery content

1 x BUS connector
3 x F connection cable 140 mm
1 x Programming
6 x MCX - BNC - cable

Software options

Test lines	CKB 101 9650.51
Subtitling	CKB 102 9650.52
BISS decryption	CKB 104 9650.54

HEADEND BUS STRUCTURE



The number of the possible module connections (00 ... 15) to a BEB 100 depends on the total power consumption of this line!

Pic. 02

SECURITY AND OPERATING INSTRUCTIONS

STOP 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 100 or Bus Extender BEB 100!

⚠ The main voltage and the operating voltage of the modules working by DC have to be in complience to the operating parameters described in the technical datas.

⚠ With all work the defaults of the DIN EN 50083 have to be considered! Especially the safety relevant execution of the DIN EN 50083/1is necessary!

Options and other TV standards available upon request!

Changes due to technical progress possible.

Part n°: 9611.10

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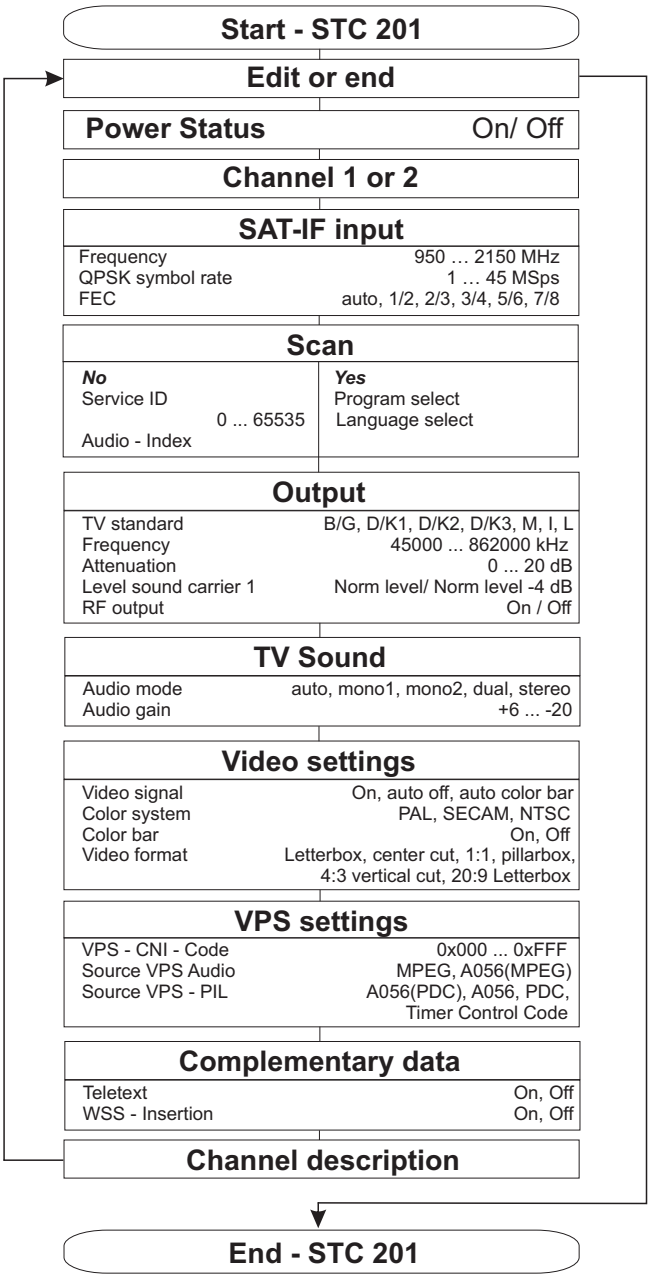

Pic. 03

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