

# Technical Specification



## MTC 5-16 CT CI

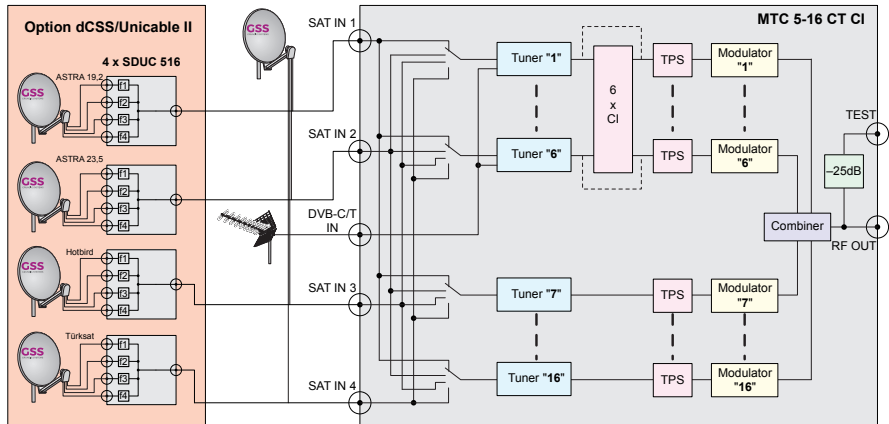
**Default access data (HTML + SFTP):**  
192.168.0.120  
User: admin  
Password: geheim

## DESCRIPTION

The head-end station converts 16 transponders modulated acc. to DVB-S/DVB-S2 standard (up to 32 APSK) into 16 DVB-C or DVB-T modulated transponders. The tuners 1 to 6 can also receive DVB-T / T2 / C as an option. In conjunction with specially programmed multi-switches up to 4 satellites can be received.

An integrated MediaPlayer enables the output of a video stream (max. data rate 10MBit/s) in a loop instead of transponder 16.

## BLOCK DIAGRAM



## DESIGN TYPE

Version ..... GSS.compact classic  
 Stainless steel housing 341 x 282 x 105 mm ..... wall mounting  
 Weight: ..... 7 kg  
 Permissible ambient temperature: ..... 0 ... +50 °C  
 Cooling ..... passive, fanless

## FEATURES

### IN-/OUTPUTS

SAT IF inputs..... 4 (inputs 1...4)  
 LNB power supply 14V/18V optionally 14V fix; switchable..... max. 500 mA  
 dCSS/Uncable II operation <sup>1)</sup> ..... max. 4 satellites with 4 levels each  
<sup>1)</sup> in conjunction with specially programmed multi-switches

DVB-C/T/T2 input..... 1 (input 5)  
 Antenna supply 5V; switchable ..... max. 500 mA

DVB-C/T output ..... 1  
 DVB-C/T test output (-25 dB)..... 1  
 LAN control input..... 1

## INPUT SIGNAL PROCESSING

Individual input designation (inputs 1...4).....adjustable; e.g. satellite/level  
Individual input signal name..... for input lines 1...16

**Input lines 1...6** .....DVB-S/S2/C/T/T2; inputs 1...5 selectable  
Display of frequency offset and C/N with reserve  
6 CI slots for CA modules

**Input lines 7...16** .....DVB-S/S2; inputs 1...4 selectable  
Display of frequency offset and C/N with reserve  
Integrated **MediaPlayer** for one transport stream format file (max. 10MBit/s) optionally for line 16.

## FILTER & CA

Station filter ..... lines 1...16  
PID filter ..... lines 1...16  
TS/ON ID Remapping..... for output lines 1...16  
6 CI slots for CA modules..... lines 1...6  
Display of the current/maximum possible <sup>3)</sup> total output data rate .....  $\Sigma$  Output lines 1...16  
Display of the current output data rate ..... Output lines 1...16  
Display of peak value of output data rate reached so far ..... Output lines 1...16  
Display of maximum possible output data rate <sup>3)</sup> ..... Output lines 1...16  
<sup>3)</sup> depending on the output settings

## OUTPUT SIGNAL PROCESSING

Output lines..... 16  
Output signal form ..... RF  
Display of the current/maximum possible <sup>3)</sup> output data rate ..... for output lines 1...16  
<sup>3)</sup> depending on the output settings

**RF output signals** ..... suitable for adjacent channels  
Output modulation adjustable for the complete station ..... **QAM or COFDM**  
Output lines can be switched off individually ..... RF output lines 1...16  
Total output level adjustable.....0...-31dB

### QAM

Frequency/Channel; Symbol rate; Modulation, Spectrum, Level (0...-10dB) individually adjustable for each output line.

### COFDM

Frequency/Channel; Spectrum; Modulation; Code rate; Guard interval; Bandwidth; Level (0...-10dB) individually adjustable for each output line

### NIT

Renew; delete; add transponder; import NIT of other devices; export NIT

NIT modes: Output of the displayed NIT (user); alternatively, transmission of the input NIT (original); alternatively, no NIT (deactivate).

Note in case of faulty NIT

### LCN

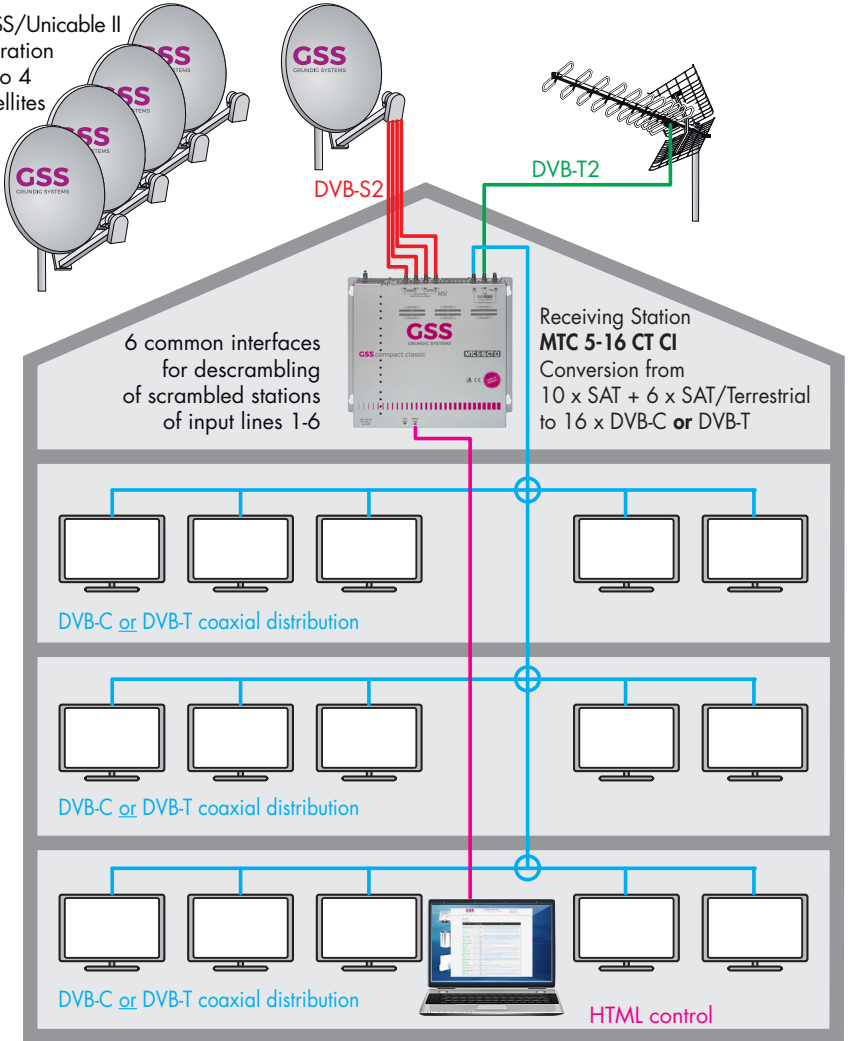
Generation of an LCN list (programme location number preassignment)

## SYSTEM

User interface .....	HTML
Logbook.....	Display of warnings and events
Response times adjustable.....	for input signal and data overflow errors
Notification in case of errors .....	via mail <sup>4)</sup>
	<sup>4)</sup> Internet connection required
Network interfaces .....	adjustable
OpenVPN connection .....	world wide access to the head-end station <sup>4)</sup>
	<sup>4)</sup> Internet connection required
Safety.....	Password protection
Number format for IDs .....	switchable decimal or hexadecimal
Backup the configuration.....	Backup and restore
Manager.....	several configurations can be stored in the device
Network diagnostic tool .....	Ping
Factory reset (via menu "Firmware") .....	all settings except password and IP address!
Reset button.....	only network settings and password
Assembly instruction (offline; PDF) .....	in menu Help

# APPLICATION EXAMPLE

dCSS/Uicable II  
operation  
up to 4  
Satellites



## TECHNICAL DATA

The devices meet the EU directives 2011/65/EU, 2014/30/EU and 2014/35/EU.  
The product fulfils the guidelines and standards for CE labelling.

Unless otherwise noted all values are specified as "typical".

### RF input DVB-S/S2 (ETSI 300 421)

Frequency range:	950 ... 2150 MHz
DVB-S mode:	QPSK
DVB-S2 modes:	QPSK, 8PSK, 16APSK, 32APSK
Symbol rate DVB-S:	QPSK: 1 ... 45 MSymb/s
Symbol rate DVB-S2:	
QPSK	4.5 ... 45 MSymb/s
8PSK	4.5 ... 45 MSymb/s
16APSK	4.5 ... 39 MSymb/s
32APSK	4.5 ... 32 MSymb/s
Maximum data rate/tuner	83 MBit/s
Level range:	60 dB $\mu$ V ... 80 dB $\mu$ V
Input impedance:	75 $\Omega$
LNC supply:	14 V/18 V max. 500 mA

### RF input DVB-T/T2/T2 HD/C acc. to EN 302755 v1.3.1/300429

Channels	C5...C12, S21...S41, C21...C69
Frequency range:	42 ... 866 MHz
Input level:	60 dB $\mu$ V ... 80 dB $\mu$ V
Antenna supply:	5 V max. 500 mA

### RF output QAM (suitable for adjacent channels; symbol rates and modulation individually adjustable)

Frequency range:	42.0 MHz ... 868.0 MHz
Types of modulation:	QAM 4, 16, 32, 64, 128, 256
Output level:	80...96 dB $\mu$ V
Dynamic phase error:	< 0.2 °
MER:	> 45 dB
Output impedance:	75 $\Omega$
Symbol rate:	1000...7500 kBd

### RF output COFDM (suitable for adjacent channels; modulation individually adjustable)

Frequency range:	42.0 MHz ... 868.0 MHz
Types of modulation:	QPSK, 16 QAM, 64 QAM
Transmission modes	2k
Code rates	1/2, 2/3, 3/4, 5/6, 7/8
Guard intervals	1/4, 1/8, 1/16, 1/32
Output level:	80...96 dB $\mu$ V
Output impedance:	75 $\Omega$

### Connections

SAT inputs:	4 F sockets
Terrestrial input:	1 F socket
RF output:	1 F socket
Test output (-25 dB):	1 F socket
LAN (for control) 100-BASE-T:	1 RJ 45 socket
Common Interfaces	6

**General**

Mains voltage:.....	200...240V~, 50/60 Hz
Power consumption without LNC/CI.....	46 W
Maximum Power consumption: .....	75 W
Admissible ambient temperature: .....	0 ... +50 °C
Cooling .....	passive, fanless
Dimensions (WxHxD): .....	341 x 282 x 105 mm
Weight: .....	7 kg

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