

## Head-End Station

### Multi tuner + MPTS + SPTS → Multiplex to MPTS + DVB-C or DVB-T

#### Features

6 x DVB-S2/S2X/C/T/T2 mit CI + 10 x DVB-S2/S2X + 16 x MPTS + 128 x SPTS  
 → 16 lines MPTS + DVB-C/T

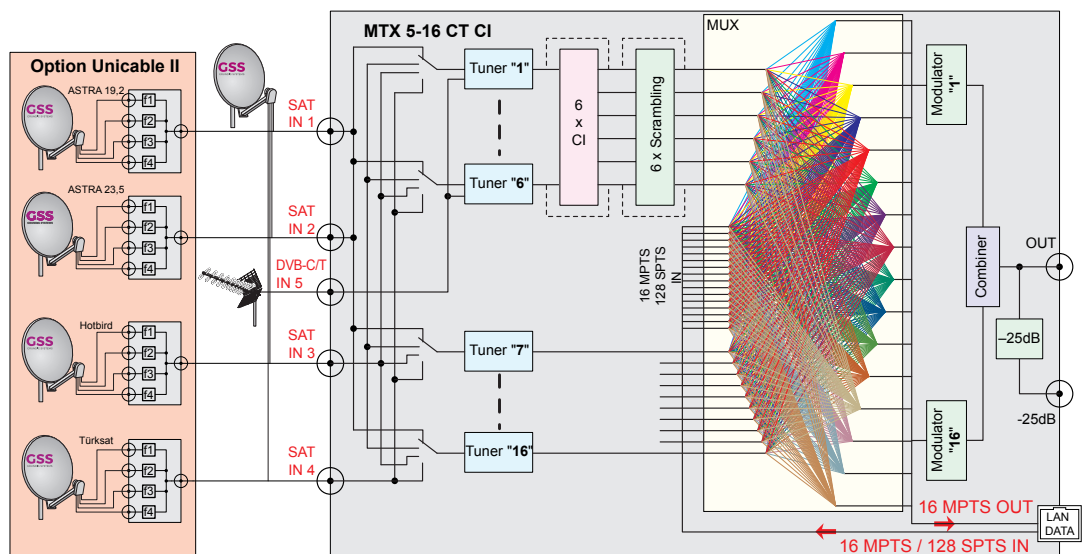
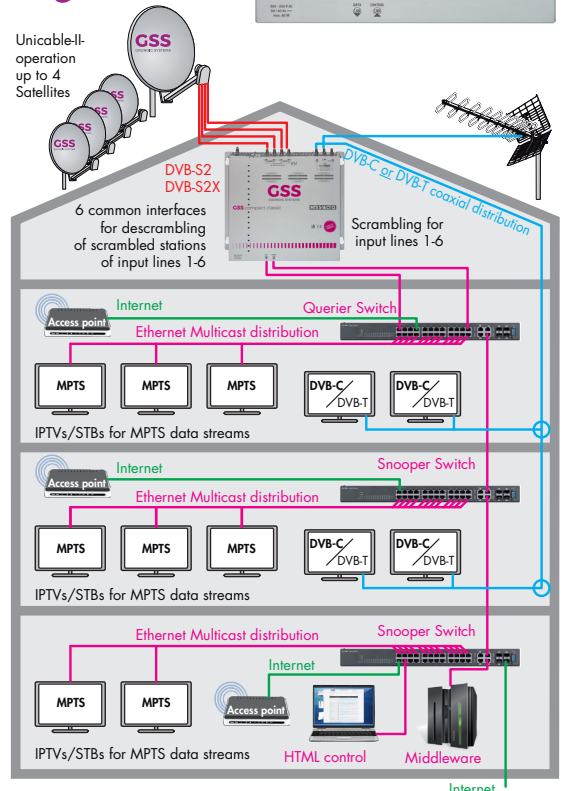
**Input** (Overall input data rate max. 900 Mbit/s):

- 4 SAT IF inputs with integrated multiswitch
- Up to 4 satellites with each 4 levels...  
... with specially programmed Unicable II multi-switches
- 1 terrestrial input
- 6 DVB-S2/S2X/T/T2/C tuners + 10 x DVB-S2/S2X tuners
- 16 x MPTS und 128 x SPTS
- 6 CI slots for CA modules (for tuners 1 – 6)
- Scrambling of selected Services (for tuners 1 – 6)

**Output** (Overall output data rate max. 900 Mbit/s):

- SID and TS-/ON-ID remapping
- Multiplex to 16 output lines
  - The services of the 160 input lines can be assigned arbitrarily to the 16 output lines (depending on the maximum possible data rates/line and over all).
  - Max. 256 Services / max. 256 PCR corrections / max. 256 EIT.
- Multiplex to 16 x MPTS
  - Free adjustable Multicast IP addresses.
  - Automatic M3U list generation (for e.g. Panasonic IP TVs)
- Multiplex to 16 full band modulators - QAM or COFDM
  - suitable for adjacent channels
  - symbol rates and modulation individually adjustable
- HTML user interface
- World wide access via OpenVPN connection
- Notification in case of data overflow or transponder failure

**MULTIPLEX**  
**DVB-S2X**



## 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".

### Data input

MPTS streams .....	16
SPTS streams .....	128
Protocols: .....	UDP (User Data Protocol), RTP (Real-Time Transport Protocol)

### RF input DVB-S2/S2X

Frequency range: .....	910 ... 2150 MHz
DVB-S modes: .....	QPSK 1/2, 2/3, 3/4, 5/6, 7/8
DVB-S2 modes: .....	QPSK 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 16APSK 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 32APSK 3/4, 4/5, 5/6, 8/9, 9/10
DVB-S2X modes: .....	QPSK, 8PSK, 8APSK-L, 16APSK(-L), 32APSK(-L)
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 .....	83MBit/s
Level range: .....	60 dB $\mu$ V ... 80 dB $\mu$ V
Input impedance: .....	75 $\Omega$
LNC supply: .....	14 V/18 V; maximum total output of 500 mA

### RF input DVB-T/T2/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

### Input data

Maximum over all input data rate (MPTS + SPTS + DVB-S/S2x/T/T2/C): .....	900 MBit/s
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### Output data

Data rate: .....	$\leq$ 900 MBit/s
Remapping: .....	SIDs, TS-/ON-IDs
Services: .....	max. 256
PCR Corrections: .....	max. 256
EIT: .....	max. 256

### IPTV Output

MPTS .....	16
Protocols: .....	UDP (User Data Protocol), RTP (Real-Time Transport Protocol)

### 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 $^{\circ}$
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
LAN (for control/cascading) 100-BASE-T: .....	2 RJ45 socket
LAN (for data) 1000-BASE-T: .....	1 RJ45 socket

### General

Supply voltage .....	200...240 V $\sim$ , 50/60 Hz
Power consumption: .....	46 W (without LNC supply; without CI); max. 75 W
Ambient temperature: .....	0...+50 $^{\circ}$ C
Cooling .....	passive, fanless
Dimensions (W x H x D): .....	341 mm x 282 mm x 105 mm
Weight: .....	7 kg