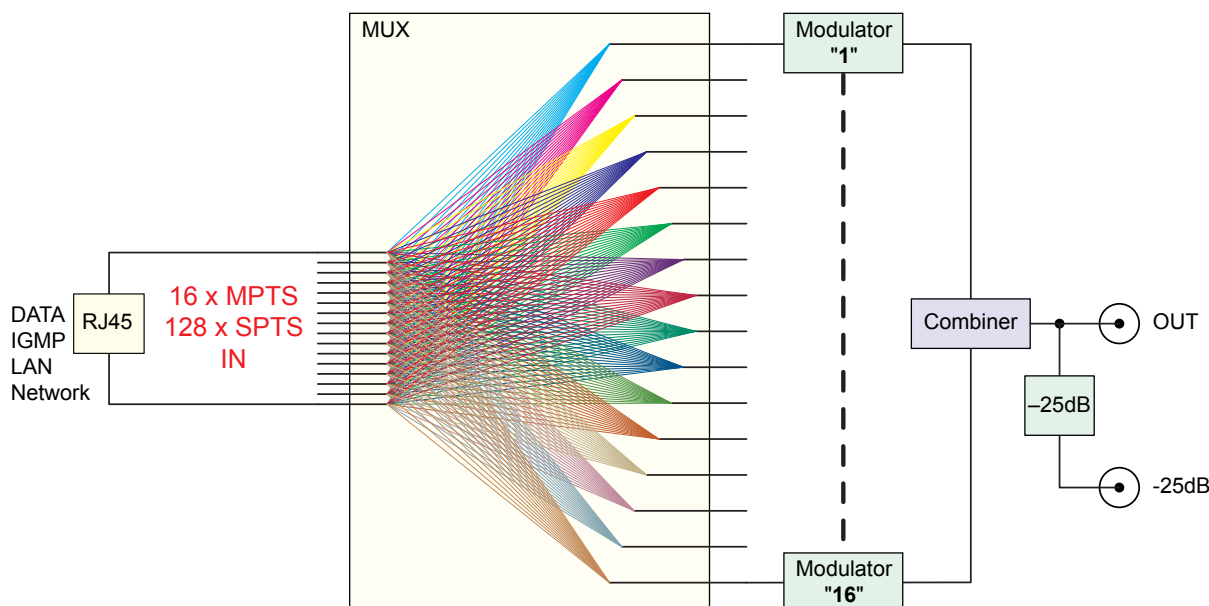


## Modulator

16 x MPTS + 128 x SPTS → 16 x QAM oder COFDM

### Features

- Direct Conversion
- 1 Gbit LAN input
  - Stream IPs are freely adjustable
  - RTP, UDP
- 16 full band modulators - QAM **or** COFDM
  - Electronically adjustable output level
  - suitable for adjacent channels
  - Symbol rates and modulation individually adjustable
- HTML user interface
- World wide access via OpenVPN connection...
  - ... by PC, tablet or smart phone with Internet access
- Redundant power supply
  - Two fully satisfying mains units
  - Half load operation
  - For UPS and mains or two-phase operation
  - Can be replaced separately during operation
  - Audible warning when one power supply fails
- Fan cooling
  - Fans can be replaced separately during operation.
- Warning e-mail in case of transponder, fan or power supply failure



**IPTV**

**DVB**  
Digital Video  
Broadcasting

multi  
**MD**  
digital®

LOW  
WATT

REMOTE  
**RC**  
CONTROL

REMOTE  
**RU**  
UPDATE

KLASSE  
**A**  
CLASS

**CE**



## 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
Over all user data rate:.....	≤ 900 MBit/s
Protocols: .....	UDP (User Data Protocol), RTP (Real-Time Transport Protocol)

### RF output QAM

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

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

LAN (for data) 1000-BASE-T: .....	1 RJ45 socket
LAN (for control) 100-BASE-T: .....	2 RJ45 sockets
RF output: .....	1 F socket
RF test output (-25 dB): .....	1 F socket

### General

Mains units: .....	2 (redundant; can be replaced separately during operation)
Supply voltage.....	100...240 V, 50/60 Hz
Power consumption: .....	50 W
Cooling fans: .....	3 (can be replaced separately during operation)
Ambient temperature: .....	0...+50 °C
Dimensions (W x H x D): .....	483 mm x 44.5 mm (1HU) x 490 mm