



## DVB Modulator MiniMod

### DVB-T Modulation According to ETSI-EN 300744 V1.5.1

- Constellations: QPSK, QAM16, QAM64
- FEC: 1/2, 2/3, 3/4, 5/6, 7/8
- Guard intervals: 1/4, 1/8, 1/16, 1/32
- IFFT modes: 2k
- Bandwidth: 6MHz, 7MHz and 8MHz
- I/Q upconverter to IF
- IF output between 288MHz and 1425MHz (depending on the VCO type)
- TS-processing (bitrate adaption, PCR correction)
- >35dB MER
- Serial port configuration

### Options

- Control panel
- Additional transfer of telemetry data (RS232)

### Further Information

- <http://www.sr-systems.de>

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## DVB Modulator MiniMod

MiniMod is a small, well-priced and universal modulator platform for creating a variety of common modulation constellations. Owing to the I/Q upconverter the signal output is modulated directly on transmission frequency. If you require output frequencies the MiniMod cannot supply directly, the integration of an additional upconverter is easily done.

The MiniMod provides further features:

- small dimensions of 80x100mm
- low power input of ~5W
- large flexibility thanks to the dynamic reconfiguration via control panel and RS232
- directly stackable with our MPEG2 encoder and various tuner modules

Thanks to the deliberate exclusion of the 8k modus, the unit becomes not only versatile but also extremely low priced.

### Supported Modulation Types

- DVB-T according to ETSI-EN 300744 V1.5.1
- DVB-C according to ETSI-EN 300429 V1.2.1
- DVB-S according to ETSI-EN 300421 V1.1.2
- ATSC according to A/53-2 (17.07.1999)

The modulation type can be changed and parameterised while running.

### Application Possibilities

- Converters from DVB-S, DVB-C and DVB-T to DVB-S, -C and -T. The MiniMod can control the tuner modules without additional hardware. Diversity receivers are also available.
- Portable single channel DVB-T modulator with built-in MPEG2 encoder
- Video and telemetry transmitter with encoder and RS232 inserter
- ASI-in-modulator conjuncted with ASI-in-adapter
- Ethernet bridge with tuner and ethernet adapter (more reliable than WLAN and cheaper than most commercial link systems)
- Construction of larger systems possible in combination with our multiplexers

## Technical specifications

DVB-T	
Constellations	QPSK, QAM16, QAM64
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard Intervals	1/4, 1/8, 1/16, 1/32
IFFT-Modes	2k
Bandwidth	6MHz, 7MHz, 8MHz
MER	>35dB
Output level	~100dB $\mu$ V@50 $\Omega$

DVB-C	
Constellations	QAM16, QAM32, QAM64, QAM128, QAM256
Symbol rate	1000-7000 ksymbols/s
MER	>40dB
Output level	~107dB $\mu$ V@50 $\Omega$

DVB-S	
Constellation	QPSK
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Symbol rate	1-45000 ksymbols/s
MER	>25dB
Output level	~110dB $\mu$ V@50 $\Omega$

ATSC	
Constellation	8VSB
Bandwidth	6MHz
Output level	~107dB $\mu$ V@50 $\Omega$

General information	
TS input	8 bit parallel + clock & sync (SPI), PCR correction included
Power input	7-24V, ~5W
Dimensions	100x80mm

Output frequencies	
MiniMod-0	575-712MHz, 1150-1425MHz
MiniMod-1	500-637MHz, 1000-1275MHz
MiniMod-2	400-565MHz, 800-1125MHz
MiniMod-3	388-512MHz, 775-1025MHz
MiniMod-4	315-455MHz, 625-910MHz
MiniMod-5	288-375MHz, 575-750MHz
MiniMod-6	250-330MHz, 500-660MHz