

**MK 12-13N DVB headend | 12 × DVB-S/S2/S2X into 12 × DVB-C/T | CI**



- ✓ 4 inputs for Quattro, Quad or Single cable LNB
- ✓ With integrated multiswitch
- ✓ Single cable reception I and II possible
- ✓ Transmodulates 12 × DVB-S/S2/S2X into 12 × DVB-C/T
- ✓ Output modulation configurable
- ✓ Optimized capacity management
- ✓ Remux | Crossmultiplex
- ✓ Decryption of encrypted program packages possible via CA modules (also high-speed modules)
- ✓ Flexible and efficient mapping of programs to CA modules
- ✓ NIT editing option (software extension required)
- ✓ PID Filtering (software extension required)
- ✓ Interface for CASimulcrypt Server (software extension required)
- ✓ Web-based configuration, remote maintenance (SMARTPortal)
- ✓ Supports SNMPv1 and SNMPv2c
- ✓ Can be used for wall mounting or as a 19" unit

**Order information**

Type	MK 12-13N
Order no.	MK01213N
GTIN	7611682400892
PE	1
VE	1
EU customs tariff number	85256000



**Technical data**

<b>Inputs</b>	
Connector	4 × F-female
Frequency range	950 ... 2150 MHz @ DVB-S/S2/S2X
Input level	43 ... 84 dBμV @ DVB-S/S2/S2X
LNB voltage	13/17 V; 22 kHz on/off; DiSEqC 1.x
Max. LNB current	250 mA per input 500 mA per device
<b>Input modulation</b>	
Type	QPSK/8PSK/16PSK/32PSK @ DVB-S/S2/S2X
Compliance	DVB-S = EN 300 421 DVB-S2 = EN 302 307-1V1.4.1 DVB-S2X = EN 302 307-2V1.1.1
Supported input transport streams	MPEG-2 ISO/IEC 13818   MPEG-4 ISO/IEC 14496
Symbol rate	1.5 ... 45 MS/s (< 40 MS/s in 32APSK) @ DVB-S/S2/S2X
<b>Transportstreams</b>	
Modifiable program information	Program name, SID remapping, PID remapping, PID filtering* TSID, ONID
LCN	Yes
NIT handling @ DVB-C	auto   off   manual*
Encryption	DVB-CSA*, DVB-CISSA*, ATIS-IDSA*, AES-ECB*, AES-CBC*
<b>Output</b>	
Number of channels	12 × DVB-C/DVB-T
Frequency range	109 ... 1006 MHz @ DVB-C 109 ... 862 MHz @ DVB-T
Channels selectable	S2 ... K87 @ DVB-C S2 ... K69 @ DVB-T
Channel bandwidth	7/8 MHz @ DVB-T
Possible frequency shift	-4 ... +4 MHz (0,5 MHz steps)
Connector	1 × F-female
Impedance	75 Ω
Output level adjustable	75 ... 95 dBμV
<b>Output modulation</b>	
Compliance	DVB-T (EN 300 744) DVB-C (EN 300 429/ITU-TJ.83 Annex A/C)
Type	QAM16, QAM32, QAM64, QAM128, QAM256 @ DVB-C QPSK, QAM16, QAM64 @ DVB-T

MER	≥ 40 dB @ DVB-C ≥ 36 dB @ DVB-T
Bit rate, max	50.87 Mbps @ DVB-C   31.668 Mbps @ DVB-T
FFT	2K mode @ DVB-T
FEC	1/2, 2/3, 3/4, 5/6, 7/8 @ DVB-T
Guard interval	1/4, 1/8, 1/16, 1/32 @ DVB-T
Symbol rate	1 ... 7.5 MBaud/s @ DVB-C
<b>Interfaces</b>	
Ethernet connectors	1 × RJ 45
Ethernet standards	IEEE 802.3, 100 Base-T @ Control
Supported configuration protocols	HTTP, SNMP v1, SNMP v2c, AXING SMARTPortal**
<b>General</b>	
Operating temperature range (acc. to EN 60065)	-10 °C ... +50 °C
Operating voltage	100 ... 240 VAC/50 ... 60 Hz
Equipotential bonding connection	4 mm <sup>2</sup>
Dimensions (W × H × D) appr.	480 × 253 × 47 mm
Comments	* with software extension only ** encrypted, cloud-based application for configuration, monitoring and remote maintenance

## Example of use



## Suitable products

[MKS 1-00 Software extension to edit a NIT](#)

[MKS 1-01 Software extension for PID filtering](#)

[MKS 1-02 Software extension for CASimulcrypt](#)

[QEW 4-20 Earthing angle | single-rowed | surge protection](#)