UPCONVERTER 1+1



Upconverter with 1+1 redundancy is designed to convert signals from 70 MHz IF to L-band for processing in satellite communication systems of L, S, C, X and Ku bands.

Upconverter with 1+1 redundancy is applied in large earth stations where cost-effective frequency converter solutions are required.
Lightweight, durable and compact design ensures that the upconverter with 1+1 redundancy is effective solution for mobile reporting stations.
Thanks to aluminum chassis and solid modular interior design, the upconverter with 1+1 redundancy can be installed on military targets. Upconverter with 1+1 redundancy have a large MTBF value, which is more than 120,000 hours.

Upconverter with 1+1 redundancy can be used in VSAT stations, SCPC networks, reporting stations of SNG type, DVB-RCS systems and hubs, and any other systems where compact backup systems are needed.

KEY FEATURES:

- Upconverter with 1+1 redundancy includes the separate frequency converter block, detector module, power supply and reference oscillator.
- Upconverter with 1+1 redundancy consists of two frequency converters, which are integrated in the case of 1RU and can be automatically replaced in “hot” mode (1+1 scheme).
- It is possible to replace a separate converter block with spare redundant unit without shutting down the chassis.

- Upconverter with 1+1 redundancy provides automatic (in case of failure of one of the blocks) or manual switching between the blocks of frequency converters.
- Each converter is a completely autonomous device, which is executed as a replacement block.
- Replacement blocks are frequency converters with dual conversion of 70 MHz / 2400 MHz / L.
- It has local control from the front panel, which has LCD, LEDs and buttons.
- Upconverter with 1+1 redundancy provides complete remote control via Ethernet interface connector located on the rear panel.

- Provides the signals frequency conversion from the range of 50 - 90 MHz to the L-band (950-2150 MHz) when working in stations of satellite communication and television (L, S, C, X and Ku frequency bands).
- Provides **automatic "hot" backup** of converter blocks, reference generators and power supply units according to the scheme 1+1.
- Provides automatic switching to the backup unit when one of the blocks is broken.
- Provides the gain factor adjusting either using buttons on the front panel or remotely.

Input parameters:	
Input operating frequency range, MHz	from 52 to 88
Uneven frequency response in the input operating frequencies range, dB, not more than	1.0
Frequency adjusting step, kHz	1
Frequency instability, ppm	0.01
Spectral density of phase noise power, dBc/Hz:	
100 Hz	-70
1 kHz	-90
10 kHz	-95
100 kHz	-95

1 MHz	-100
Impedance of radio frequency input, Ohm	50
Return losses at the input, dB	– 18
Maximum acceptable level of the input signal (at attenuation 20 dB), dBm	– 20
Output parameters:	
Frequency bandwidth at output, MHz	36
Unequal frequency response in the bandwidth 36MHz at the output range 950 – 2150 MHz, dB, not more than	5.0
The output power level at 1dB compression (P1dB), dBm, not less than	0
The value of the IMD3 in the presence of two output signals with a power of -13dBm, dBm, not more than	– 40
Maximum conversion gain, dB, not less than	50
Depth of the gain factor adjustment due to two attenuators, dB, not less than	– 50
Step of adjusting the gain factor, dB	1.0
Impedance of output, Ohm	50
Output VSWR	1.8:1
Spurious radiation in the working frequency range, dBc, not more than	– 55
Management and control:	
Management and control mode	Local and remote
Remote mode interface	Ethernet 10/100 Base T
Reference oscillator:	

Frequency of reference oscillator, MHz	10
Phase noise of the reference oscillator, dBc/Hz:	
10 Hz	-125
100 Hz	-140
1 kHz	-150
10 kHz	-155
Power supply:	
AC power supply voltage with frequency of 50 Hz, V	100 – 262
Power consumed in “hot” redundency mode (1+1), W, no more than	45
Mechanical:	
Overall dimensions (without connectors), mm	482 x 400 x 44
Weight, kg, no more than	7.0

Taking into consideration that we (UMT LLC) are developer and system integrator, also do not stop on our technical growth and improvement, know that view of all our devices and equipment including their technical parameters may be different from pictures presented on website and parameters listed on each device webpage. **Note!** All details customer has to confirm in advance during ordering and before payment. Those parameters that were not specified and / or were not agreed while ordering will be implemented as basic at the discretion of the manufacturer. Each our customer has 1.5 year warranty and 7 year aftersales support for whole range of our products.