

## TCKU2W



### Ku-band Frequency Transceivers – High-Performance RF Units for Satellite Uplink & Downlink by UMT LLC

**UMT LLC's Ku-band transceivers** are advanced **RF communication devices** designed for reliable **satellite uplink and downlink** in the **Ku-band frequency range (10.7–14.5 GHz)**. These **high-stability, low-phase-noise RF transceivers** combine upconverter and downconverter functionality in a compact unit, making them ideal for **VSAT systems, teleports, broadcasting hubs, and mobile satellite stations**. Featuring **PLL local oscillators, 50/75 Ohm I/O, and N- or SMA-type connectors**, they ensure seamless integration and precise frequency conversion.

BUC-Ku02-9.75 v2.0 is block up-converter with fixed output power P1dB **2 W** (ALC power: 200 mW) and LO of **9.75 GHz**.

Our BUC operates with up to **25 carriers** and has built-in reference of **10 MHz**;

and **ALC** with 25 dB range;

**IP Ctrl** (by order)

+ **LED status** indication at the rear side.

2 W Ku-band block up-converter with LO of 9.75 GHz BUC-Ku02-9.75-v2.0 is designed for MVDS TV broadcasting systems application in accordance with DVB-S/S2 or DVB-C standards (use "Customized" button to choose needed parameters) and operates with up to 25 carriers. BUC-Ku02-9.75-v2.0 has output flange of PBR120 type and can be used with regular radio-relay link ([directional](#)) or broadcast ([sector](#) and [OMNI](#)) antennas. BUC-Ku02-9.75-v2.0 supports all modulation types up to 32APSK and 256QAM (you may choose the modulation type while filling the "customized equipment" form). BUC-

Ku02-9.75-v2.0 has the best linearity parameters to ensure the stability of the output frequency and low IMD3 level (these parameters are very important for high quality modulation, therefore the local oscillator of BUC-Ku02-9.75-v2.0 is locked by PLL with internal frequency reference). BUC-Ku02-9.75-v2.0 provides 10.70 – 11.70 GHz output frequency range (bandwidth in Ku-band) for 950-1950 MHz input frequency range (bandwidth in L-band).

**LO:** 9.75 GHz    **IN:** 950 – 1950 MHz    **OUT:** 10.70 – 11.70 GHz

**KEY FEATURES:**

- Output flange: PBR120
- Output power (P1dB, min): 2 W
- Output frequency range: 10.70 – 11.70 GHz
- Input frequency range: 950 – 1950 MHz
- Gain (min): 53 dB
- Highly stable internal frequency reference
- LO is locked by PLL with internal frequency reference
- IMD3 level at ALC output power (the lowest value): -37 dBc max
- Operates with up to 25 carriers
- Supported modulation types: up to 32APSK and 256QAM

Input parameters:	
Input frequency range	950 – 1950 MHz
Input impedance	50 Ohm
Input level, max	-12 dBm
Input VSWR, max	1.5
Input interface	N-type Female
ALC range, min	25 dB
ALC threshold level	-30 dBm

Local oscillator:	
LO frequency	9750 MHz
LO phase noise:	
@1 kHz	-80 dBc/Hz
@10 kHz	-85 dBc/Hz
@100 kHz	-100 dBc/Hz
LO instability	± 2 ppm
Output parameters:	
Output frequency range	10700 – 11700 MHz
Output power @P1dB	2 W
ALC output power	200 mW
Gain, min	53 dB
IMD3 level at ALC output power, max	-37 dBc
Output interface	Waveguide WR75, Flange PBR120
Output VSWR, max	2
Frequency response:	
Flatness over Full Band	± 1.5 dB
Spurious:	
In-band @P1dB, max	-55 dBc
Out-Band, max	-30 dBm
LO leakage at ALC output power, max	-40 dBm

<b>Image rejection, min</b>	60 dB
<b>Power supply:</b>	
<b>Input voltage</b>	18 – 30 VDC, nominal 24 VDC
<b>Power consumption, max</b>	15 W
<b>Environmental:</b>	
<b>Operating temperature</b>	-40 to +50 ( -40 to +122 )
<b>Storage temperature</b>	-60 to +80 ( -76 to +176 )
<b>Operating humidity</b>	100%, non-condensing
<b>Mechanical:</b>	
<b>Dimensions (W x H x D)</b>	104x89x157 mm
<b>Weight</b>	1.15kg

*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.*