

# K100 Ka-Band Upconverter

The Ka-band upconverter uses a triple conversion and surface acoustic wave SAW filters to substantially reduce spurious responses and unwanted frequencies in the passband. The S-Band IF and 14 GHz VCO together provide tuning in 125 kHz steps from 27.5 to 31 GHz. Converter synthesizer frequency accuracy is obtained by utilizing a 10 MHz reference.

## Features

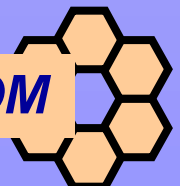
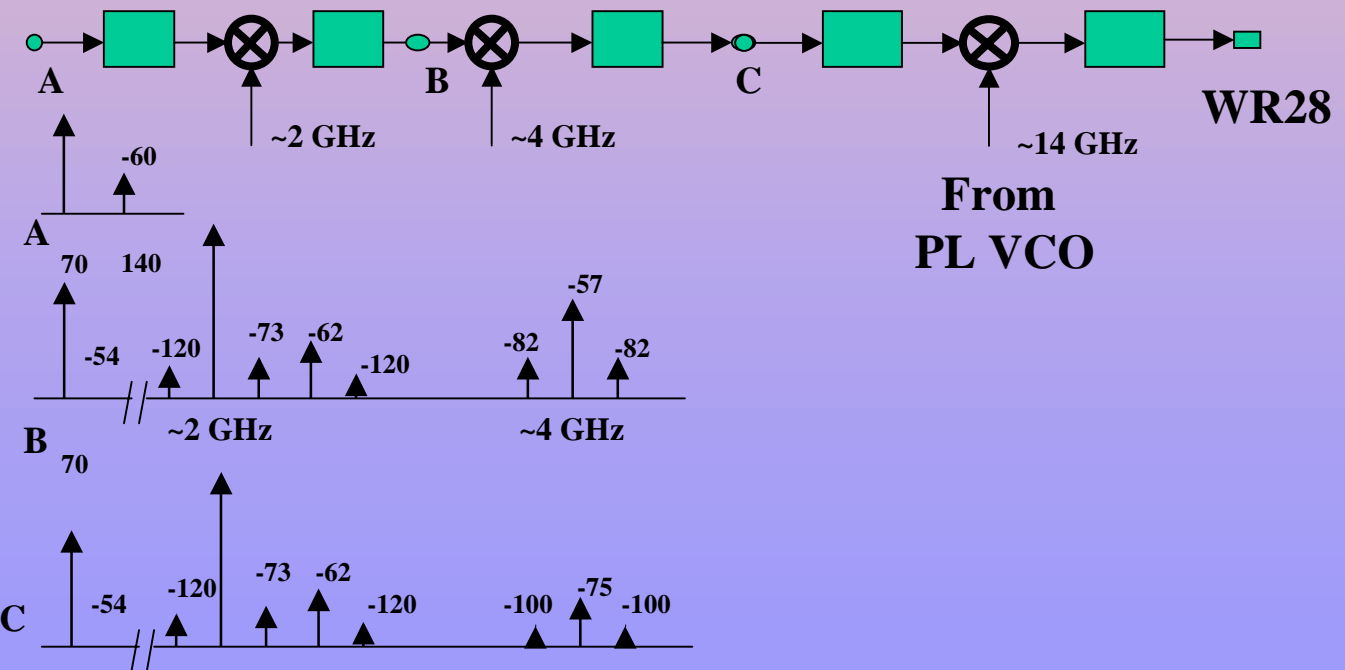
- 70 MHz to S-Band converter
- S to Ka-Band converter
- Tuning in 125 KHz steps from 27.5 to 31 GHz
- 10 MHz low phase noise high stability reference oscillator
- Monitor, Alarm, and Control
- Weatherized outdoor assembly with power supply

## Input

70 MHz +/- 18 MHz

## Output

Ka Band



# Specifications

<b>Input</b>	Frequency Range Impedance Input Power VSWR Max level	<ul style="list-style-type: none"> <li>• 70 +/- 18 MHz</li> <li>• N-type connector with a 50 Ohm impedance</li> <li>• Input power levels between -25 dBm and -5 dBm</li> <li>• 1.3:1</li> <li>• +20 dBm without damage</li> </ul>
<b>Output</b>	Frequency Range Frequency Steps Interface Output Power	<ul style="list-style-type: none"> <li>• 27.5 - 31.0 GHz</li> <li>• selectable, in steps of 125 kHz, across the entire RF frequency range</li> <li>• WR-28</li> <li>• +10 dBm min. (P1 dB)</li> </ul>
<b>Performance</b>	Phase Noise  In-band Spurious Out of band Spurious  Gain variation Gain flatness  Reference Oscillator Frequency Sense  Frequency Stability Aging	100 Hz      -47 dBc/Hz 1 KHz       -71 dBc/Hz 10 KHz      -76 dBc/Hz 100 KHz     -92 dBc/Hz 1 MHz       -98 dBc/Hz  Note: a PL VCO is used to achieve the 27.5 to 31 GHz output frequency. Improved phase noise performance is available with an alternative product using a DRO, or alternatively 4 selectable DROs for desired band coverage.  -65 dBc -55 dBc  +/-1.5 dB typ, 2 dB max. over temperature +/-2 dB over 36 MHz  10 MHz low phase noise, high stability non-inverting  +/-2 x 10 <sup>-8</sup> over temperature +/-1 x 10 <sup>-7</sup> / year
<b>Environmental</b>	Operating temperature  Humidity  Environmental	-30 to +50 C, other temperatures available (-40 to +65 C)  5 to 95% non-condensing  Environmental Protection IP66 weatherized enclosure suitable for operation in an outdoor environment. Specific mounting or environmental needs can be accommodated.
<b>Monitor, Alarm, and Control</b>		<ul style="list-style-type: none"> <li>• Microprocessor based</li> <li>• serial port interface (RS232 or RS422/485)</li> <li>• <b>Set</b> - Tx Frequency, TX Gain</li> <li>• <b>Report</b> - out of lock, over temp, internal temp, PLL ctl volt, serial number</li> <li>• Carrier mute if out of lock</li> </ul>
<b>Mechanical</b>	Weight Size	10 lbs 15" x 10" x 2"
<b>Power</b>	Voltage	120 VAC, 10 Watts, other voltages may be available upon request

**Intellicom Technologies, Inc..**  
 15916 Bernardo Center Drive  
 San Diego, CA 92127

**Tel: 858-676-7959**  
**Fax: 858-676-0450**  
**Email: hindemith@itccom.net**

**INTELLICOM**

