

# IFC™ SERIES KU-BAND UP/DOWN CONVERTER RACK MOUNT SYSTEM



The IRT Technologies Intelligent Frequency Converters (IFC™) Series shape the next-generation satellite transmission with its breakthrough leading edge technology, state of the art design, and unprecedented reliability with 3 years warranty for this product line!

IRT Technologies IFC™ series may combine up to 4 embedded converters in a single 1RU shelf with extensive monitor and control via front panel, serial ports EIA232/EIA485 and Ethernet.

Features Best in Class RF characteristic, Flexible reference with autosensing can lock to external 5/10 MHz reference or utilize built-in high stability reference oscillator.

## KEY FEATURES

- Superior RF performance:
  - Phase noise 8dB better than IESS308/309
  - In Band Spurious below -60dBc
  - Superior Gain flatness
- Up Converter Switchable LO option - standard and Extended Ku-Band in one unit
- User Friendly front panel with menu driven display
- 5 /10MHz external reference Autosense
- Up to 4 frequency converters in a single 1RU chassis (1.75" H x 19" W x 19" D)
- Full featured M&C Interface via serial EIA485, EIA232, Ethernet HTTP based GUI and SNMP:
  - 20dB Gain Control
  - Input and output power detectors
  - Automated level control (ALC) mode optional
- 1:N Redundant ready
- RF and L-Band monitoring optional
- 48VDC isolated power supply optional

## IFC™ SERIES KU-BAND UP/DOWN CONVERTER RACK MOUNT SYSTEM SPECIFICATION

Parameter	Up-Converter		Down-Converter	
<b>RF Performance</b>	Standard Ku	Extended Ku	Ku Sub-Band 1	Ku Sub-Band 2
RF Frequency Range-Available in/switched:	14-14.5GHz	13.75-14.5GHz	10.70-11.70GHz	11.70-12.75GHz
IF Frequency Range	950-1450MHz	950-1700MHz	950-1950MHz	950-2000MHz
LO Frequency	13.05GHz	12.8GHz	9.75GHz	10.75GHz
Input Return Lost	16 dB		18 dB	
Output Return Lost	18 dB		16 dB	
Noise Figure	5 dB Max			
Conversion	Single Conversion; non-inverting			
Output Power at 1dB compression point	10dBm min			
Conversion Gain	35dB			
Gain Flatness	+/-1dB max over full band; +/-0.5dB max over any 40MHz			
Gain Stability	+/-1.5dB over full temperature range			
Gain Control	20dB min			
External Reference Frequency	10MHz			
External Reference Required Phase Noise	-130dBc/Hz @ 100Hz	-140dBc/Hz @ 1kHz -155dBc/Hz @ 100 kHz	-150dBc/Hz @ 10kHz	
Phase Noise	-70dBc/Hz @ 100Hz; -80dBc/Hz @ 1kHz; -90dBc/Hz @ 10kHz -95dBc/Hz @ 100kHz; -115dBc/Hz @ 1MHz			
Spurious:	Signal related *		-55dBc	
	Non signal related		-60dBc	
<b>Monitor &amp; Control Features</b>				
<b>Interfaces:</b>				
	Serial - EIA485		DB9 Connector rear panel	
	Serial - EIA232		RJ45 or DB9 Front Panel	
	10/100 base-T Ethernet		RJ45 rear panel	
	Alarm and Control		DB9 Connector rear panel	
	Redundant protection interface		HD15 Connector rear panel	
<b>Controls:</b>				
	Gain Control		via Serial, Ethernet, Front panel	
	LO Select - Standard/Extended Ku Band Toggle		via Serial, Ethernet, Front panel	
	Mute Control		via Serial, Ethernet, Front panel, Red Int.	
	Local/Remote toggle		Serial(Ethernet)/Front panel toggle	
	Clear Alarm		via Serial, Ethernet, Front panel	
<b>Indicators:</b>				
	Lock Status		via Serial, Ethernet, Front panel	
	Gain Status		via Serial, Ethernet, Front panel	
	IF Power Detect		via Serial, Ethernet, Front panel	
	RF Power Detect		via Serial, Ethernet, Front panel	
	Temperature		via Serial, Ethernet, Front panel	
	Summary Alarm Status		via Serial, Ethernet, Front panel, Red Int	
	Mute Status		via Serial, Ethernet, Front panel, Red Int	
<b>Power Supply</b>		<b>Mechanical</b>		
Input Voltage	90 to 265VAC 50/60Hz PFC	Width	19" Rack	IF/RF Connectors
	48VDC Optional	Height	1RU	IF N-type (other options available)
<b>Environmental</b>		Depth	19"	RF N-type
Operating temperature	0 to 60 deg.C	Color	Metallic	10MHz Ref In/Out BNC (other options available)
Storage Temperature	-40 to +85 deg.C	Cooling	Forced air	

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