

IFC™ SERIES X-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
- 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)
- 10MHz and DC injected into L-Band interface optional
- 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

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

Parameter	Up-Converter	Down-Converter
RF Performance		
RF Frequency Range-Available in/switched:	7.9-8.4 GHz	7.25-7.75 GHz
IF Frequency Range	950-1450MHz	950-1450MHz
LO Frequency	7.05GHz	6.3 GHz
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 -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
Monitor & Control Features		
Interfaces:		
	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
Controls:		
	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
Indicators:		
	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
Power Supply		Mechanical
Input Voltage	90 to 265VAC 50/60Hz PFC	Width 19" Rack
	48VDC Optional	Height 1RU
Environmental		IF/RF Connectors
Operating temperature	0 to 60 deg.C	IF N-type (other options available)
Storage Temperature	-40 to +85 deg.C	RF N-type
	Color Metallic	10MHz Ref In/Out BNC (other options available)
	Cooling Forced air	

*Contact us for detailed ordering information at sales@irttechnologies.com

Rev.02

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