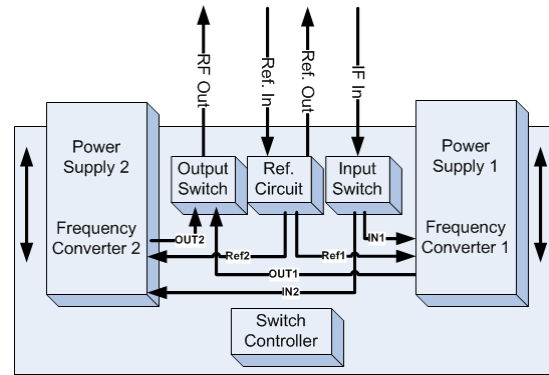


## IFC™ SERIES C-BAND UP/DOWN CONVERTER 1:1 REDUNDANCY RACK MOUNT SYSTEM

The IRT Technologies Intelligent Frequency Converters (IFC™) 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!

Features patent pending hot-swappable power supply and converter module shelf redundancy with embedded switch controller, embedded input and output switches and extensive monitor & control via front panel, serial ports EIA232/EIA485 and Ethernet.

IFC™ Series 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

- 1:1 Redundant patent pending real hot swappable in 1RU chassis with no need for additional external 1RU switch controller and external input/output switches
- Superior RF performance:
  - Phase noise 8dB better than IESS308/309
  - In Band Spurious below -60dBc
  - Superior Gain flatness
- Available in all C-Band options – standard, extended, Palapa and Insat;
- User Friendly front panel with menu driven display
- 5/10MHz external reference Autosense
- Full featured M&C Interface via serial EIA485, EIA232 and Ethernet:
  - Frequency Control with 1kHz step
  - 20dB Gain Control
  - Input and output power detectors
  - Automated level control (ALC) mode optional
- External Redundant Interface for higher level redundancy capability
- RF and L-Band monitoring optional
- 48VDC isolated power supply optional

**US PATENT PENDING # 61,777,082**

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## IFC™ SERIES C-BAND UP/DOWN CONVERTER 1:1 REDUNDANCY RACK MOUNT SYSTEM SPECIFICATION

Parameter	Up-Converter		Down-Converter
<b>RF Performance</b>	Stand C/Extended C	Palapa/Insat	C Band
RF Frequency Range-Available in/switched:	5.85-6.725GHz	6.725-7.025GHz	3.4-4.2GHz
IF Frequency Range	950-1825MHz	950-1550MHz	950-1750MHz
LO Frequency	4.9GHz	5.475GHz	5.15GHz
Input Return Lost		16 dB	18 dB
Output Return Lost		18 dB	16 dB
Noise Figure		5 dB Max	
Conversion	Single Conversion; non-inverting		inverting
Output Power at 1dB compression point	10dBm min		
Conversion Gain	35dB		
Gain Flatness	+/-1dB typ, +/-1.5dB 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; -155dBc/Hz@100 Hz		
Up-Converter Phase Noise	-70dBc/Hz@100Hz; -80dBc/Hz@1kHz; -90dBc/Hz@10kHz; -95dBc/Hz@100kHz; -115dBc/Hz@1MHz		
<b>Spurious</b>	Signal related*: -55dBc; Non signal related: -60dBc		
*For Up Extended C-Band signal related Spurious is -50dBc			
<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		
A/B redundancy 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		
Active/Stand by status	via Serial, Ethernet, Front panel		
Switch position/status	via Serial, Ethernet, Front panel		
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
	48VDC Optional	Height	1RU
		Depth	20"
		Color	Metallic
		Cooling	Forced air
			IF/RF Connectors
			IF N-type (other options available)
			RF N-type
			BNC (other options available)
<b>Environmental</b>			
Operating temperature	0 to 60 deg.C		
Storage Temperature	-40 to +85 deg.C		

\*Contact us for detailed ordering information at [sales@irttechnologies.com](mailto:sales@irttechnologies.com)

Rev.03

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