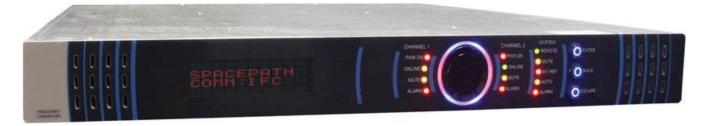


## IFC SERIES 70/140MHz to L-BAND Rack Mount Up/Down Converter





The SpacePath Communications Intelligent Frequency Converters (IFC<sup>™</sup>) shape the nextgeneration satellite transmission with its breakthrough leading edge technology, state of the art design, and unprecedented reliability with 3 years warrant for this product line!

The SpacePath Communications IFC<sup>™</sup> 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 characteristics, Flexible reference with autosensing can lock to external 5/10 MHz reference or utilize built-in high stability reference oscillator.

## Options

- IF and RF monitoring
- 10MHz and DC injected into L-Band ports
- 48VDC isolated power supply
- Built in BUC DC via IF power supply

## Features

- Super wide frequency band 950-2150 MHz
- Synthesizer frequency step of 1 kHz with optional 1Hz step size
- Superior RF performance:
  - Phase noise 15dB better than IESS308/309
  - In Band Spurious below –60dBc
  - Superior Gain flatness

- True RMS power detector for both IF and RF power
- 5 / 10 MHz external reference Autosense
- Single, dual, triple and quad band frequency converters in a single 1RU chassis (4.4cms H x 48cm W x 48cm D
- User Friendly front panel with menu driven display
- Full featured M&C Interface via RS-232 serial console, packet protocol RS-485 and user friendly HTTP based GUI and SNMP:
  - Frequency control with 1 kHz step
  - 25dB Gain Control (Optional 30dB)
  - Input and output power detectors
  - Automated level control (ALC) mode optional
  - 1:N Redundant ready



## IFC SERIES 70/140MHz to L-BAND Rack Mount Up/Down Converter

IFC<sup>™</sup> Series 70/140MHz to L-Band Up/Down Converter Rack Mount System Specification

Parameter		Up-Co	nverter	Down-C	Converter	
IF Characteristics		IF I	nput	IF O	utput	
Frequency Range			-		·	
70MHz IF				70MHz +/- 18MHz		
140MHz IF		140MHz +/- 60MHz				
Output Power @P1dB		٦	N/A	5dB	m min	
Max Input Level		10	ldBm	Ν	J/A	
Impedance		50 Ohm / 75 Ohm optional				
Return Loss		-18dB max				
RF Characteristics		RF Output RF Input				
Frequency Range		950-2150MHz				
Frequency Step				1kHz/1Hz		
Output Power @P1dB		15dE	3m min	Ν	J/A	
2 tone IMD at 0dBm Por	ut	-40d	Bc max	Ν	J/A	
Gain Control			25dB range 0.1dB step			
10MHz Reference Out		Multiplexed at RF out port optional				
Impedance		50 Ohm / 75 Ohm optional				
Return Loss		1.5				
Max Input Level		1	N/A	Operationa	ll up to 0dBm	
				No Damage up to 10dBm		
Transfer Charact	eristics					
Conversion Gain				30dB (Optional 35dB)		
Gain Adjustment		25dB with 0.1dB step (Optional 30dB)				
Gain Flatness 70MHz IF		+/- 1dB max over full band; +/-0.5dB max over any 36MHz				
Phase Noise		-70dBc @ 100Hz; -90dBc @ 1kHz; -95dBc @ 10kHz; -95dBc @ 100kHz; -115dBc @ 1MHz				
In Band Spurious		<-60dBc				
Reference						
				10MHz (Optional 5MHz)		
Frequency Int./Ext. Autosense				nt. clock locks on external reference		
Int./Ext. Autosense Frequency Stability		Short Term - 0.01ppb; Aging - +/-100ppb per year				
Phase noise		-125d				
Power Level at L-Band Port		-125dBc/Hz @ 10Hz; -140dBc/Hz @ 100Hz; -150dBc/Hz @ 1kHz; -155dBc/Hz @ 10kHz +5dBm (Optional +/-2dB)				
Monitor & Contro	of Features					
Interfaces:						
Serial – EIA485		DB9 Connector rear panel				
Serial – EIA232		RJ45 or DB9 Connector rear panel				
10/100 base-T Ethernet		RJ45 Connector rear panel				
Alarm and Control		DB9 Connector rear panel				
Redundant protection in	nterface			HD15 Connector rear panel		
Controls:						
Gain Control		via Serial, Ethernet, Front Panel				
Uplink / Downlink Freq Control		via Serial, Ethernet, Front Panel				
Mute Control		via Serial, Ethernet, Front Panel, Redundancy Interface				
Local / Remote Toggle		via Serial, Ethernet, Front Panel				
Clear Alarm				Via Serial, Ethernet, Front Panel		
Indicators:						
Uplink / Downlink Frequency		Via Serial, Ethernet, Front Panel				
Gain Status		Via Serial, Ethernet, Front Panel				
IF & RF Power Detect		Via Serial, Ethernet, Front Panel				
Temperature		Via Serial, Ethernet, Front Panel				
Summary Alarm Status		Via Serial, Ethernet, Front Panel, Redundancy Interface				
Mute Status			Via Serial,	Ethernet, Front Panel, Redundancy	Interface	
Power Supply		Mechanical		IF/RF Connectors		
Input Voltage	90-265VAC 50/60Hz PFC	Width	19" Rack	IF	BNC (other options available)	
	48VDC Isolated Optional	Height	1RU	RF	N-type (other options available	
Environmental	-	Depth	19"	10MHz Ref In / Out	BNC (other options available)	
Operating Temperature	0 to 60 deg. C	Cooling	Forced air	IF Monitoring (Optional)	BNC (other options available)	
	o to oo deg. c	cooning	i orceu an			
Storage Temperature	-40 to +85 deg. C			L-Band Monitoring (Optional)	N-type (other options available)	

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