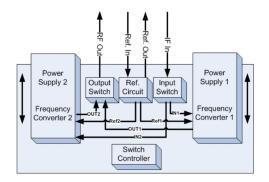


## IFC™ Series 70/140MHz to C-Band 1:1 Redundancy Rack Mount Up/Down Converter







The SpacePath Communications Intelligent Frequency Converters (IFC<sup>™</sup>) shape the next-generation satellite transmission with its breakthrough leading edge technology, state of the art design, and unprecedented reliability with 3 years warrant 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.

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
- 48VDC isolated power supply

## **Features**

- 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
- 5 / 10 MHz external reference Autosense

- 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
- 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 1kHz step
  - 20dB Gain Control
  - Input and output power detectors
  - Automated level control (ALC) mode optional
- External Redundant Interface for higher level redundancy capability

**US Patent Pending # 61,777,082** 

## IFC™ Series 70/140MHz to C-Band Up/Down Converter 1:1 Redundancy Rack Mount System Specification

IF Characteristics		IF	Input		IF Output	
Frequency Range:						
70MHz IF			701	ИНz +/-18МНz		
140MHz IF		140MHz +/-36MHz				
Output Power @P1dB			N/A		5dBm min.	
Max Input Level		1	0dBm		N/A	
Impedance		500hm (Optional 750hm)				
Return Loss				-18dB max.		
RF Characteristics		RF Output RF Input				
Frequency Range:		TKI .	Juipui		та трис	
· · · ·		F 0F	6.70ECH		2.4.4.2611	
Standard/Ext C			6.725GHz		3.4-4.2GHz	
Palapa/Insat Frequency Step		6.425-7.025GHz		· (O-r)  411-)	4.5-4.8GHz	
		45.		(Optional 1Hz)	N1/A	
Output Power @P1dB			Bm min. dBc max.		N/A	
2 tone IMD @ 0dBm Pout Gain Control		-400		0 1 dD	N/A	
10MHz Ref Out (Optional)				range 0.1dB step		
Impedance		Separate Connector  500hm (Optional 750hm)				
Return Loss		1.5				
Max Input Level		N/A Operational up to 0dBm				
max mput tever			11/0	•	amage up to 10dBm	
Transfer Characteri	stics					
Conversion Gain		30dB (Optional 35dB)				
Gain Adjustment		20dB with 0.1dB step (Optional 25dB)				
Gain Flatness 70MHz IF		+/-0.5dB				
Over full C-Band		+/-1.0 max.				
Over 36MHz		+/-0.5 max.				
Phase Noise		-68dBc/Hz @ 100Hz	; -78dBc/Hz @ 1kHz; -88dB		@ 100kHz; -115dBc/Hz @ 1MHz	
In Band Spurious				<-60dBc		
Reference						
Frequency			10MH:	z (Optional 5MHz)		
Int./Ext. Autosense		Int. clock locks on external reference				
Short Term Frequency Stability				0.01ppb		
Aging Frequency Stability			+/-1	00ppb per year		
Phase Noise		-125dBc/Hz @ 10Hz; -140dBc/Hz @ 100Hz; -150dBc/Hz @ 1kHz; -155dBc/Hz @ 10kHz				
Power at 10M out port		+/-5dBm (Optional +/-2dBm)				
			+/-Jubiii	(Optional +/-zubin)		
Monitor & Control	Features					
Interfaces:						
Serial – EIA485			DB9 Co	nnector 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 inte	rface		HD15 Co	nnector rear panel		
Controls:						
Gain Control			via Serial,	Ethernet, Front Panel		
Uplink/Downlink Frequency Control		via Serial, Ethernet, Front Panel				
Mute Control		via Serial, Ethernet, Front Panel, Redundancy Interface				
A / B Redundant Toggle		via Serial, Ethernet, Front Panel				
Local / Remote Toggle		via Serial, Ethernet, Front Panel				
Auto / Manual Toggle		via Serial, Ethernet, Front Panel				
Clear Alarm			Via Serial,	Ethernet, Front Panel		
Indicators:						
Uplink/Downlink Frequenc	γ		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				
Active / Standby Status			via Serial,	Ethernet, Front Panel		
Switch Position			via Serial,	Ethernet, Front Panel		
Summary Alarm Status			Via Serial, Ethernet, Fi	ont Panel, Redundancy In	terface	
Mute Status			Via Serial, Ethernet, Fr	ont Panel, Redundancy In	terface	
Power Supply		Mechanical		IF/RF Connector	rs	
Input Voltage 90-26	55VAC 50/60Hz PFC	Width	19" Rack	IF	BNC (other options available	
	C Isolated Optional	Height	1RU	RF	N-type (other options available	
Environmental		Depth	20"	10MHz Ref In / Out	BNC (other options available	
Operating Temperature	0 to 60 deg. C	Cooling	Forced air	IF Monitoring (Opt.)	BNC (other optional available	
	_	Cooling	Forced all			
Storage Temperature	-40 to +85 deg. C			RF Monitoring	N-type (other options available	
B				(Opt.)		