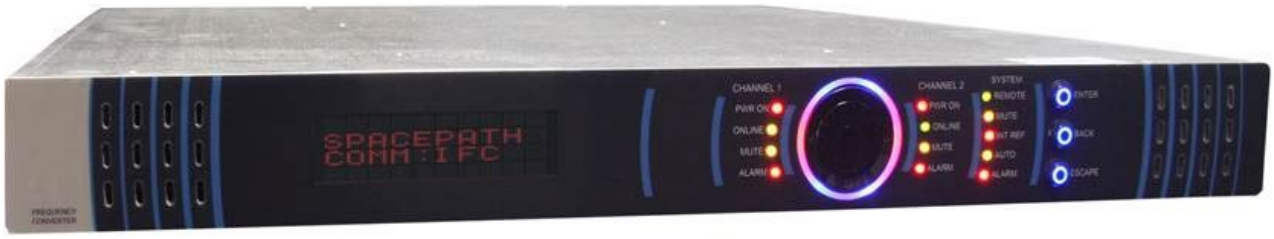
IFC™ Series 70/140MHz to C-Band Rack Mount Up/Down Converter



The SpacePath Communications 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 warrant for this product line!

The SpacePath Communications 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 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 –65dBc
  - Superior Gain flatness
- Available in all C-Band options—standard, extended, Palapa and Insat
- 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:
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  - Frequency Control with 1kHz step (Optional 1Hz)
  - 20dB Gain Control
  - Input and output power detectors
  - Automated level control (ALC) mode optional
- 1:N Redundant ready

Spacepath Communications Ltd. Unit 4 Bartley Point, Osborn Way, Hook, Hampshire RG27 9GX United Kingdom.
Telephone: +44 (0)1256 760525. e-mail: sales@space-path.com. Internet: www.space-path.com
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IFC™ Series 70/140MHz to C-Band Up/Down Converter Rack Mount System Specification

Parameter	Up-Converter	Down-Converter
IF Characteristics	**IF Input**	**IF Output**
Frequency Range:		
70MHz IF	70MHz +/-20MHz	
140MHz IF	140MHz +/-36MHz	
Output Power @P1dB	N/A	5dBm min.
Max Input Level	10dBm	N/A
Impedance	50Ohm (Optional 75Ohm)	
Return Loss	-18dB max.	
RF Characteristics	**RF Output**	**RF Input**
Frequency Range:		
Standard/Ext C	5.85-6.725GHz	3.4-4.2GHz
Palapa/Insat	6.425-7.025GHz	4.5-4.8GHz
Frequency Step	1kHz (Optional 1Hz)	
Output Power @P1dB	15dBm min.	N/A
2 tone IMD @ 0dBm Pout	-40dBc max.	N/A
Gain Control	20dB range 0.1dB step	
10MHz Ref Out (Optional)	Separate Connector	
Impedance	50Ohm (Optional 75Ohm)	
Return Loss	1.5	
Max Input Level	N/A	Operational up to 0dBm No Damage up to 10dBm
Transfer Characteristics		
Conversion Gain	30dB (Optional 35dB)	
Gain Adjustment	25dB with 0.1dB step (Optional 30dB)	
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; -88dBc/Hz @ 10kHz; -95dBc/Hz @ 100kHz; -115dBc/Hz @ 1MHz	
In Band Spurious	<-60dBc (Optional -65dBc)	
Reference		
Frequency	10MHz (Optional 5MHz)	
Int./Ext. Autosense	Int. clock locks on external reference	
Short Term Frequency Stability	0.01ppb	
Aging Frequency Stability	+/-100ppb per year	
Phase Noise	-125dBc/Hz @ 10Hz; -140dBc/Hz @ 100Hz; -150dBc/Hz @ 1kHz; -155dBc/Hz @ 10kHz	
Power at 10M out port	+/-5dBm (Optional +/-2dBm)	
Monitor & Control 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 interface	HD15 Connector 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	
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	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)
Storage Temperature	-40 to +85 deg. C			RF Monitoring (Opt.)	N-type (other options available)
Humidity	0 to 95% (non-condensing)				

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