



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!

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

- RF and L-Band 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:
 - 20dB Gain Control
 - Input and output power detectors
 - Automated level control (ALC) mode optional
- External Redundant Interface for higher level redundancy capability

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IFC™ Series C-Band Up/Down Converter 1:1 Redundancy Rack Mount System Specification

Parameter	Up-Converter		Down-Converter		
RF Performance	Standard C/Extended C	Palapa/Insat	C-Band	Insat Band	
RF Frequency Range-Available in / switched	5.85-6.425GHz	6.425-7.025GHz	3.4-4.2GHz	4.5-4.8GHz	
IF Frequency Range	950-1825MHz	950-1550MHz	950-1750MHz	950-1250MHz	
LO Frequency	4.9GHz	5.475GHz	5.15GHz	5.75GHz	
Input Return Lost	16dB		18dB	16dB	
Output Return Lost	18dB		16dB	16dB	
Noise Figure	5dB 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 @ 100kHz				
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			
*For Up Extended C-Band signal related Spurious is -50dBc					
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				
LO Select – Standard/Extended C-Band Toggle	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:					
Lock Status	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	N-type (other options available)
	48VDC Isolated Optional	Height	1RU	RF	N-type
Environmental		Depth	20"	10MHz Ref In / Out	BNC (other options available)
Operating Temperature	0 to 60 deg. C	Cooling	Forced air		
Storage Temperature	-40 to +85 deg. C				