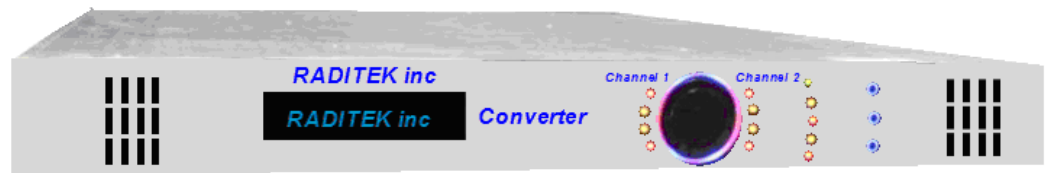


Up Converter IF 70/140MHz to C Band
 Down Converter C Band to IF 70/140MHz
 Standard C / Extended - Ce (5.85-6.725GHz)
 Palapa\Insat - Cz (6.425-7.025GHz), Indoor Unit



Up to 4 converter modules in a single 1RU shelf

Our Frequency Converters offer a new best in class for the Industry. Not only for ease of operation, but lowest cost too. They embody embedded redundancy options and extensive monitor and control via: front panel, serial ports (EIA232/EIA485) and Ethernet

There may be up to 4 converter modules in a single 1RU shelf, and they can be configured for various applications and bands. The reference with autosensing can lock to an external 5/10 MHz reference or utilize the built-in high stability, reference oscillator.

Hot-swappable shelf redundancy option and extensive monitor and control via front panel, serial ports EIA232/EIA485 and Ethernet

Key Features

- **Superior RF performance:**
 - Phase noise 8dB better than IESS308/309
 - In Band Spurious below -60dBc
 - Superior Gain Flatness
- **Switchable LO option - standard and Extended C-Band in one unit**
- **User Friendly front panel with menu driven display**
- **5 /10MHz external reference Autosense**
- ***Single, dual, triple and quad band frequency converters in a single 1RU chassis (1.75" H x 19" W x 19" D)**
- **Full featured M&C Interface via serial EIA485, EIA232 and Ethernet:**
 - 20dB Gain Control dynamic range
 - Input and output power detectors
 - Automated level control (ALC) mode available
- **1:N Redundant ready**
- **IF and RF monitoring optional**
- **48VDC isolated power supply optional**

Order Examples: RUC-IF-Ce-Nf-AC-IDU-i13

Description: (Upconverter, IF Band (70M±18MHz) to Ce(5.85~6.725GHz), N Female Connector, 90 to 265VAC, Indoor Unit)

Order Examples: RDC-Ce-IF-Nf-AC-IDU-i13

Description: (Downconverter, Ce(5.85~6.725GHz) to IF Band (70M±18MHz), N Female Connector, 90 to 265VAC, Indoor Unit)

Additional Options: (IF 140±18MHz) - Cz(6.425-7.025) - Type BNC Female – DC 48V - (or ER10M External Reference5MHz ER5M or 10MHz)

*Please specify number of 4 frequency converters and combinations at time of order.

Up and Down Converter family Rack Mount: IF 70/140MHz to C Band Standard C / Extended (5.85-6.725GHz), Palapa/Insat (6.425-7.025GHz) External Reference 10MHz, Indoor Unit

Parameter	Upconverter	Down converter	Monitor & Control Features	
IF Characteristics	IF Input	IF Output	Interfaces	
Frequency Range 70MHz IF 140MHz IF	70MHz+/-18MHz 140MHz+/-36MHz		Serial - EIA485	DB9 Connector rear panel
Output Power at P1dB	N/A	5dBm min	Serial - EIA232	RJ45 or DB9 Front Panel
Max Input Level	10dBm	N/A	10/100 base-T Ethernet	RJ45 rear panel
Impedance	50 Ohm / 75 Ohm optional		Alarm and Control	DB9 Connector rear panel
Return Loss	-18dB max		Redundant protection interface	HD15 Connector rear panel
RF Characteristics	RF Output	RF Input	Controls	
Frequency Range Stand/Ext C Ce Palapa/Insat Cz	5.85-6.725GHz 6.425-7.025GHz	3.4-4.2GHz 4.5-4.8GHz	Gain Control	via Serial, Ethernet, Front panel
Frequency step	1kHz/1Hz		Uplink\Downlink Frequency Control	via Serial, Ethernet, Front panel
Output Power at P1dB	15dBm min	N/A	Mute Control	via Serial, Ethernet, Front panel, Red Int.
2 tone IMD at 0dBm Pout	-40dBc max	N/A	Local/Remote toggle	Serial(Ethernet)/Front panel toggle
Gain Control	20dB range 0.1dB step		Clear Alarm	via Serial, Ethernet, Front panel
10MHz Ref Out (Optional)	Separate Connector		Indicators:	
Impedance	50 Ohm 75 Ohm (optional)		LO Status	via Serial, Ethernet, Front panel
Return Loss	1.5		Uplink\Downlink Frequency	via Serial, Ethernet, Front panel
Max Input Level	N/A Operational up to 0dBm No Damage up to 10dBm		Gain Status	via Serial, Ethernet, Front panel
Transfer Characteristics			IF & RF Power Detect	via Serial, Ethernet, Front panel
Conversion Gain	30dB (Optional 35dB)		Temperature	via Serial, Ethernet, Front panel
Gain Adjustment	25dB with 0.1dB step (Optional 30dB)		Summary Alarm Status	via Serial, Ethernet, Front panel
Gain flatness : 70MHz IF Over Full C Band Over 36MHz	+/-0.5dB +/-1.0 max +/-0.5 max		Mute Status	via Serial, Ethernet, Front panel
Phase Noise: @100Hz @1kHz @10kHz @100kHz @1MHz	-68dBc -78dBc -88dBc -95dBc -115dBc		Power Supply	
In Band Spurious	<-60dBc		Input Voltage	90 to 265VAC 50/60Hz PFC (-48VDC Optional)
Reference			Mechanical	Width 19" Rack Height: 1RU Depth: 20" Color: Metallic Cooling: Forced Air
Frequency	10MHz (5MHz optional)		IF/RF Connectors:	
Int/Ext Autosense	Int clock locks on external reference	0.01 ppb	IF	BNC (other options available)
Frequency stability Short term Aging	0.01 ppb +/-100 ppb per year		RF	N-Type (other options available)
Phase Noise @ 10Hz @100Hz @1kHz @10kHz	-125dBc/Hz -140dBc/Hz -150dBc/Hz -155dBc/Hz		10MHz Ref In/Out	BNC (other options available)
Power at 10M out port	+5dBm +/-2dB Optional		C-Band Monitoring (optional)	N-Type (other options available)
			Environmental	
			Operating Temperature:	0 to 60 °C
			Storage Temperature:	-40 to 85 °C
			Humidity	0 to 95% (non-condensing)