

Sri Sai Communications Private Limited

SatCom & Defense Communication Systems & Products

DATASHEET

X BAND UP CONVERTER

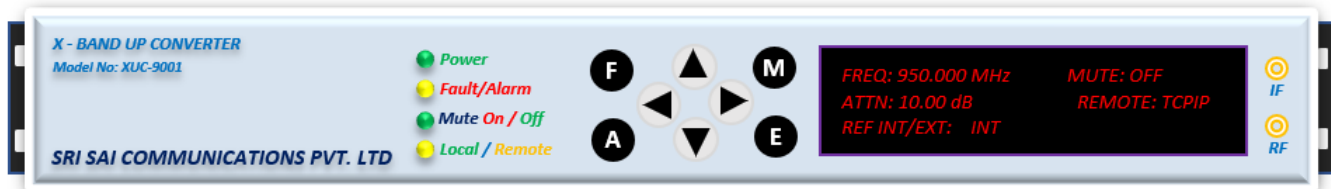
Model No : XUC-9001

Introduction

The unit receives the input signal in the range of 52 MHz to 88 MHz and converts the signal to the range of 8 GHz to 8.50 GHz or 9 GHz to 10 GHz through dual conversion without inversion. Main features related to Gain, gain flatness, phase noise, spurious levels etc., are highlighted in this data sheet. The unit is locally controlled and monitored on front panel and also remotely controlled and monitored through different protocols like TCP/IP, RS422 et., The unit is housed in a 1RU chassis with agile features to cater for reliability and mechanical stability. Unit operates on 230V AC input power and the environmental specs catered for use in indoor controlled operations.

Features

<ul style="list-style-type: none"> ▪ Excellent phase noise of Local Oscillators with OCXO internal reference ▪ Auto selectable Internal/External reference ▪ Very low in-band and out-of-band spurious ▪ M&C integration through TCP IP, RS422, etc., Integration Protocols ▪ Remote Management through Web Interface Console 	<ul style="list-style-type: none"> ▪ On-board state-of-the-art microcontroller <ul style="list-style-type: none"> ○ Auto selectable Int./Ext. Reference ○ Summary alarm with form-c for redundancy ○ Memory storage facility for data recall ▪ Parameters like gain, frequency, etc are varied and displayed either on front panel or remote frontend
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Specification	Values	Specification	Values
Input (IF)		M&C Features	
Input Frequency	70 MHz ±18 MHz	Front Panel	
Impedance	50 Ω	Controls	Frequency, Attenuation, Mute, Local / Remote Selections
Return Loss	18 dB Minimum	Monitoring	<ul style="list-style-type: none"> ▪ Frequency, Attenuation, Local / Remote, Ext/Int. on LCD Screen ▪ LED Status Indicators for Fault/Alarm, Power, Local/Remote
Typical Input Level	- 45 dBm	Remote Control & Monitoring	Through protocols like RS-485/422 or RS-232 or TCP IP Ethernet, etc
Connector	BNC (F)	Connectors	
Output (RF)		Output RF	N Type (F)
Frequency	8 GHz – 8.50 GHz As Required 9 GHz – 10 GHz As Required	Input IF	BNC (F)
Impedance	50 Ω	Sample	RF – SMA (F), IF - BNC (F)
Return Loss	> 18 dB	Physical Dimensions	Form Factor 1RU 19” Rack Mountable
Power output @1 dB compression	+10 dBm, Minimum	Environmental	Temp. 0 – 50° C, 0 – 95% relative humidity and 8000 ft MSL
Connector	N Type (F)	Power Input	Power Voltage 90-230 VAC, Frequency 47 - 63 Hz (Options Available)
Transfer Characteristics			
Type	Dual Conversion		
Frequency Sense	No inversion		
Attenuation Adjust	0-30 dB in .25 dB Steps		
Conversion gain	30 dB Min		
Spurious	<ul style="list-style-type: none"> ▪ Non Carrier -70 dBm ▪ Carrier -50 dBc @ 0dBm Output 		
LO Characteristics			
1 st Conversion Oscillator	Phase Locked Oscillator	Phase Noise	-70 dBc @ 100 Hz -75 dBc @ 1 KHz -85 dBc @ 10 KHz -95 dBc @ 100 KHz
2 nd Conversion Oscillator	Synthesizer with step size of 1 KHz		
10 MHz Int. / Ext. Ref	Auto select when external reference is fed		

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BLOCK DIAGRAM

