

# Sri Sai Communications Private Limited

SatCom & Defense Communication Systems & Products

DATASHEET

## L BAND UP CONVERTER

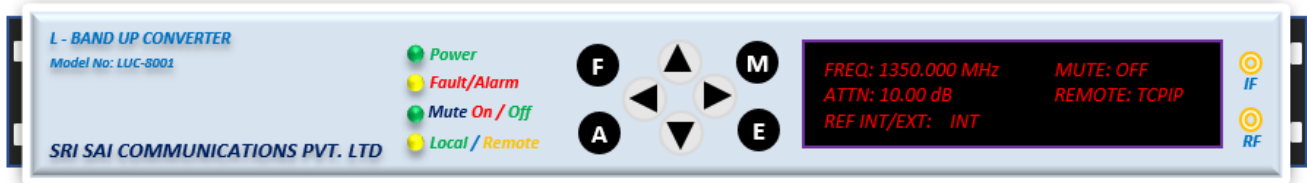
Model No : LUC-8001

### Introduction

The unit receives the input signal in the range of 52 MHz to 88 MHz and converts the signal to the range of 950 MHz to 1750 MHz or 950 MHz to 2150 MHz 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"> <li>▪ Excellent phase noise of Local Oscillators with OCXO internal reference</li> <li>▪ Auto selectable Internal/External reference</li> <li>▪ Very low in-band and out-of-band spurious</li> <li>▪ M&amp;C integration through TCP IP, RS422, etc., Integration Protocols</li> <li>▪ Remote Management through Web Interface Console</li> </ul>	<ul style="list-style-type: none"> <li>▪ On-board state-of-the-art microcontroller                             <ul style="list-style-type: none"> <li>○ Auto selectable Int./Ext. Reference</li> <li>○ Summary alarm with form-c for redundancy</li> <li>○ Memory storage facility for data recall</li> </ul> </li> <li>▪ Parameters like gain, frequency, etc are varied and displayed either on front panel or remote frontend</li> </ul>
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Specification	Values	Specification	Values
<b>Input (IF)</b>		<b>M&amp;C Features</b>	
Input Frequency	70 MHz ±18 MHz	<b>Front Panel</b>	
Impedance	50 Ω	<b>Controls</b>	Frequency, Attenuation, Mute, Local / Remote Selections
Return Loss	18 dB Minimum	<b>Monitoring</b>	<ul style="list-style-type: none"> <li>▪ Frequency, Attenuation, Local / Remote, Ext/Int. on LCD Screen</li> <li>▪ LED Status Indicators for Fault/Alarm, Power, Local/Remote</li> </ul>
Typical Input Level	-45 dBm		
Connector	BNC (F)	<b>Remote Control &amp; Monitoring</b>	Through protocols like RS-485/422 or RS-232 or TCP IP Ethernet, etc
<b>Output (RF)</b>		<b>Connectors</b>	
Frequency	950 MHz – 1750 MHz Or 950 MHz – 2150 MHz	Output RF	N Type (F)
Impedance	50 Ω	Input IF	BNC (F)
Return Loss	> 18 dB	Sample	RF – SMA (F), IF - BNC (F)
Power output @1 dB compression	+10 dBm, Minimum	<b>Physical Dimensions</b>	Form Factor 1RU 19" Rack Mountable
Connector	N Type (F)	<b>Environmental</b>	Temp. 0 – 50° C, 0 – 95% relative humidity and 8000 ft MSL
<b>Transfer Characteristics</b>		<b>Power Input</b>	Power Voltage 90-230 VAC, Frequency 47 - 63 Hz (Options Available)
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"> <li>▪ Non Carrier -70 dBm</li> <li>Carrier -60 dBc @ 0dBm Output</li> </ul>		
Intermod Products	-50 dBc @ 0 dBm (2 carrier output)		
<b>LO Characteristics</b>			
1 <sup>st</sup> Conversion Oscillator	Phase Locked Oscillator	Phase Noise	-70 dBc @ 100 Hz
2 <sup>nd</sup> Conversion Oscillator	Synthesizer with step size of 1 KHz		-80 dBc @ 1 KHz
10 MHz Int. / Ext. Ref	Auto select when external reference is fed		-88 dBc @ 10 KHz
			-100 dBc @ 100 KHz

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## BLOCK DIAGRAM

