

# Sri Sai Communications Private Limited

SatCom & Defense Communication Systems & Products

DATASHEET

## C BAND DOWN CONVERTER

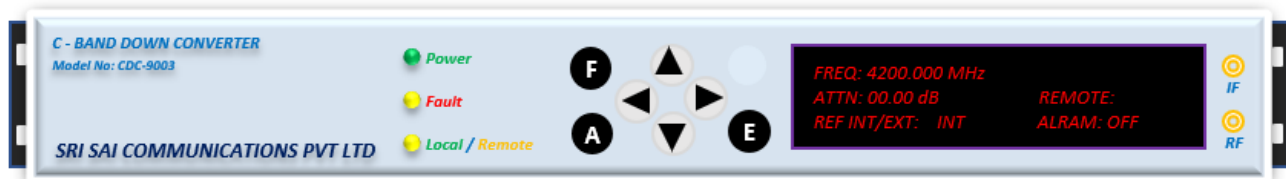
Model No : CDC-9003

### Introduction

The unit receives the input signals in the range of 3625 MHz to 4200 MHz and down converts through dual conversion without inversion to 70MHz. 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 etc., 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 (RF)</b>		<b>M&amp;C Features</b>	
Input Frequency	3625 MHz – 4200 MHz	<b>Front Panel</b>	
Impedance	50 Ω	<b>Controls</b>	Frequency, Attenuation, 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>
Noise Figure	Better than 12 dB	<b>Remote Control &amp; Monitoring</b>	Through protocols like RS-485/422 or RS-232 or TCP IP Ethernet, etc
Typical Input Level	- 45 dBm	<b>Connectors</b>	
Connector	N Type (F)	Input RF	N Type (F)
<b>Output (IF)</b>		Output IF	BNC Type (F)
Frequency	70 MHz ±18 MHz	Sample	RF – SMA (F), IF - BNC (F)
Impedance	50 Ω	<b>Physical Dimensions</b>	Form Factor 1RU 19” Rack Mountable
Return Loss	> 18 dB	<b>Environmental</b>	Temp. 0 – 50° C, 0 – 95% relative humidity and 8000 ft MSL
Power output @1 dB compression	+10 dBm, Minimum	<b>Power Input</b>	Power Voltage 90-230 V AC, Frequency 47 - 63 Hz (Options Available)
Connector	BNC, (F)		
<b>Transfer Characteristics</b>			
Type	Dual Conversion		
Frequency Sense	No inversion		
Attenuation Adjust	0-30 dB in .25 dB Steps		
Conversion gain	40 dB Min		
Spurious	<ul style="list-style-type: none"> <li>▪ Non Carrier -70 dBm</li> <li>▪ Carrier -60 dBc @ 0dBm Output</li> </ul>		
<b>LO Characteristics</b>			
1 <sup>st</sup> Conversion Oscillator	Synthesizer with step size of 1 KHz	Phase Noise	-70 dBc @ 100 Hz -80 dBc @ 1 KHz -88 dBc @ 10 KHz -100 dBc @ 100 KHz
2 <sup>nd</sup> Conversion Oscillator	Phase Locked Oscillator		
10 MHz Internal / External Reference	Auto select when external reference is fed	Intermod Products	-50 dBc @ 0 dBm (2 carrier output)

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## Block Diagram

