

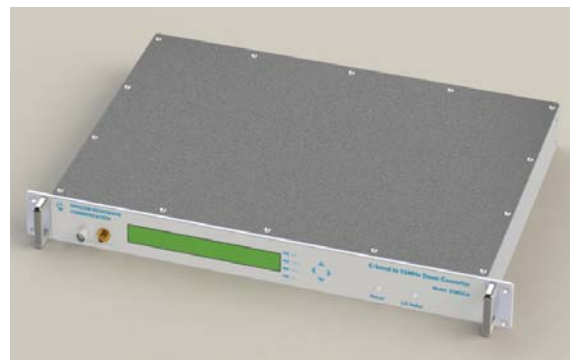
# 70MHz to C band Up Converter with Redundancy

SCMUC15003BN10-RM

(Rev. 01b)

## Features

- ◆ Unit with one hot swappable up converter
- ◆ Redundant kit option to be used in a 1+1 configuration
- ◆ M&C via Ethernet ( HTTP webpage, SNMP) and RS232/485



## RF Specifications

### Input Characteristics

Frequency	70 ± 18 MHz
Impedance	75Ω
Return loss	23dB minimum
Input damage level	+10dBm minimum
Input connector	BNC female
IF monitor	-20dBc nominal
IF monitor connector	BNC female, front panel

### Output Characteristics

Frequency	5850-6425MHz 6425-6725MHz 6725-7025MHz 5850-6725MHz
Impedance	50Ω
Return loss	18dB minimum
Output power (P1dB)	+17dBm minimum
Output connector	N type female
RF monitor	-20dBc nominal
RF monitor connector	SMA female, front panel

### Channel Characteristics

Conversion type	Dual conversion
Frequency sense	no inversion
Frequency step size	1kHz
Conversion gain	35dB minimum



**SINGCOM MICROWAVE  
COMMUNICATION**

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Gain flatness over full band	±1 dB
Gain flatness over 36 MHz	±0.5 dB
Gain slope	0.05dB/MHz maximum
Gain stability over temperature	±1dB maximum from 0°C to 50°C
Gain Stability over time	±0.25dB /day
Inter modulation (Two tones at Combined output power of 0dBm)	-50dBc maximum
AM to PM conversion	0.1deg/dB max at -5dBm output
Group delay	
Linear	0.03ns/MHz maximum
Parabolic	0.01ns/MHz <sup>2</sup> maximum
Ripple	1ns peak to peak maximum
Noise figure	12dB maximum (@ max gain)
Spurious	
Signal related	<-60 dBc @ 0dBm output
Signal independent	<-80 dBm
Carrier mute	<-70 dBc
Maximum Phase noise	
Frequency Offset	Phase noise
100 Hz	-75 dBc/Hz
1 kHz	-80 dBc/Hz
10 kHz	-90 dBc/Hz
100 kHz	-100 dBc/Hz
1 MHz	-110 dBc/Hz

### 10MHz Reference

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Internal 10MHz reference	
Frequency stability	±1×10 <sup>-8</sup> over operation temperature ±1×10 <sup>-9</sup> /day
Internal/External reference	Auto Select
External reference Level	0 ±5 dBm
External reference in connector	BNC female, rear panel



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## Monitoring and Controlling

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### Interface

Local	Front panel LED display and button input
Remote	RS232/485, DB9 Ethernet (HTTP webpage, SNMP), RJ45
Attenuation control	25dB range in 0.1dB step size
Output control	Manual on/off, auto off when LO is unlock
LED Indicators on front panel	Power, LO status, Mute on/off, fault, and Local/remote
Extra LED indicators for unit with redundant kit	Auto/manual mode, in circuit/standby, power on/fuse blown

## 1+1 Redundancy

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Switch speed	<150ms
Switch isolation	>60dB input to output
RF cables	include RF cables for rear panel link

## Power Supply

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Power supply	Dual power supply for unit with redundant kit
Operating voltage	90~250 VAC, 47 ~ 63Hz
Power consumption	20w Maximum
Input connector	Three pin plug with EMI filter and switch

## Environmental Conditions

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Operating temperature	0°C to +50°C
Storage temperature	-50°C to +70°C
Relative Humidity	Up to 95%
Altitude	10,000 feet MSL
MTBF	≥50,000 hours

## Mechanical

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Dimensions	19" Rack Mountable 1U; Depth: 450mm
Weight	4.5kg nominal

### Order information

Model SCMD15003BN10-RM-XX

XX 01: 5850-6425MHz without redundant kit

11: 5850-6425MHz with redundant kit

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02: 6425-6725MHz without redundant kit

03: 6750-7025MHz without redundant kit

03: 5850-6725MHz without redundant kit

12: 6425-6725MHz with redundant kit

13: 6750-7025MHz with redundant kit

14: 5850-6725MHz with redundant kit



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