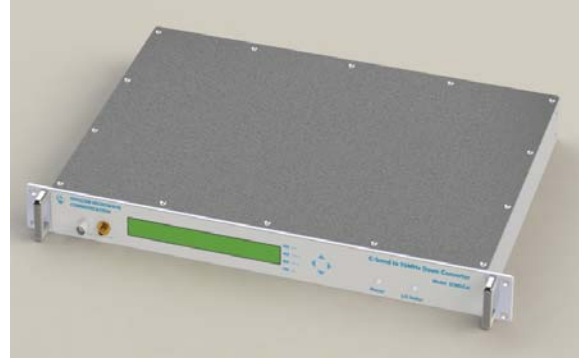


C to 70MHz Down Converter with Redundancy

SCMDC41006NB10-RM (Rev. 01b)

Features

- ◆ Unit with one hot swappable down 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	3400-4200MHz 3625-4200MHz 4500-4800MHz
Impedance	50Ω
Return loss	20dB minimum
Input damage level	+10dBm minimum
Input connector	N type female
RF monitor	-20dBc nominal
RF monitor connector	SMA female, front panel

Output Characteristics

Frequency	70 ± 18 MHz
Impedance	75Ω
Return loss	23dB minimum
Output power (P1dB)	+20dBm minimum
Output connector	BNC female
IF monitor	-20dBc nominal
IF monitor connector	BNC female, front panel

Channel Characteristics

Conversion type	Dual conversion
Frequency sense	no inversion
Frequency step size	1kHz
Conversion gain	40dB minimum
Gain flatness over full band	±1 dB
Gain flatness over 36 MHz	±0.5 dB



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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
Image rejection	80dB
Inter modulation (Two tones at Combined output power of 0dBm)	-60dBc maximum
AM to PM conversion	0.1deg/dB max at -5dBm output
Group delay	
Linear	0.03ns/MHz maximum
Parabolic	0.01ns/MHz ² maximum
Ripple	1ns peak to peak maximum
Noise figure	10dB maximum (@ max gain)
Spurious	
Signal related	<-60 dBc @ 0dBm output
Signal independent	<-80 dBm
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

Internal 10MHz reference	
Frequency stability	±1×10 ⁻⁸ over operation temperature ±1×10 ⁻⁹ /day
Internal/External reference	Auto Select
External reference Level	0 ±3 dBm
External reference in connector	BNC female, rear panel

Monitoring and Controlling

Interface	
Local	Front panel LED display and button input
Remote	RS232/485, DB9 Ethernet (HTTP webpage, SNMP), RJ45



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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 and Local/remote
Extra LED indicators for unit with redundant kit	Auto/manual mode, in circuit/standby, power on/fuse blown

1+1 Redundancy

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

Power Supply

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

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

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

Order information

Model SCMDC41006NB10-RM-XX

XX	01: 3400-4200MHz without redundant kit	11: 3400-4200MHz with redundant kit
	02: 3625-4200MHz without redundant kit	12: 3625-4200MHz with redundant kit
	03: 4500-4800MHz without redundant kit	13: 4500-4800MHz with redundant kit

