

Indoor L/S Band Up/Down Converter

SCMUD23001NN10-RM

(Rev. 01)

Features

- ◆ Ultra low phase noise
- ◆ Adjustable LOs
- ◆ 25dB gain control range in 0.1 dB step size
- ◆ Monitoring & Controlling Via RS232 Interface & Ethernet
- ◆ Low cost design
- ◆ Unit in standard 19" Rack Mountable 1U chassis



Up Converter RF Specifications

Input Characteristics

Frequency	950 - 1450MHz Option: 950 – 1750MHz
Impedance	50Ω
VSWR	1.5:1 maximum
Input Connector	N type female

Output Characteristics

Frequency	2000-2800MHz Option: 2000-3200MHz
Impedance	50Ω
VSWR	1.5:1 maximum
Output power (P1dB)	+10 dBm Min.
Output connector	N type female

Channel Characteristics

Frequency Sense	Inverting
Conversion Gain	25 dB nominal
Gain adjustable range:	25dB in 0.1 dB step size
Gain flatness over frequency	
Over full band	±1.5 dB
Over 36 MHz	±0.3 dB
Gain Stability over Temperature	±0.25dB maximum



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Up Converter RF Specifications

Channel Characteristics

Inter Modulation (Two tones at combined output power of -10dBm)
-60dBc

Spurious

In-band signal related	<-65 dBc @ 0dBm output
In-band Signal independent	<-70 dBm
Out of band	<-60 dBm

Phase Noise

Frequency Offset	Phase noise
1 KHz	-80 dBc/Hz
10 KHz	-90 dBc/Hz
100 KHz	-100 dBc/Hz
1MHz	-110dBc/Hz

Down Converter RF Specifications

Input Characteristics

Frequency	2000 - 2800MHz Option: 2000 - 3200MHz
Impedance	50Ω
VSWR	1.5:1 maximum
Input Connector	N type female

Output Characteristics

Frequency	950 - 1450MHz Option: 950 -1750MHz
Impedance	50Ω
VSWR	1.5:1 maximum
Output power (P1dB)	+10 dBm Min.
Output connector	N type female



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Down Converter RF Specifications

Channel Characteristics

Frequency Sense	Inverting
Conversion Gain	25 dB nominal
Gain adjustable range:	25dB in 0.1 dB step size
Gain flatness over frequency	
Over full band	±1.5 dB
Over 36 MHz	±0.3 dB
Gain Stability over Temperature	±0.25dB maximum
Inter Modulation (Two tones at combined output power of -10dBm)	-60dBc
Spurious	
In-band signal related	<-65 dBc @ 0dBm output
In-band Signal independent	<-70 dBm
Out of band	<-60 dBm
Phase Noise	
Frequency Offset	Phase noise
1 KHz	-80 dBc/Hz
10 KHz	-90 dBc/Hz
100 KHz	-100 dBc/Hz
1MHz	-110dBc/Hz

10MHz Reference

Internal 10MHz reference stability	+/-10 ppb over operation temperature
Internal/External reference	Auto Selection
External Reference Level	-5 to +5 dBm
External Reference in connector	BNC female



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Monitoring and Controlling

Interface	
Local	Front panel LCD display, Key pad control
Remote	RS232, Ethernet Optional
Gain Control	25dB range in 0.1dB step size
Power	Front panel green LED
LO Alarm	Front panel red LED
Input Monitoring	Front panel BNC female
Output Monitoring	Front panel SMA female

Power Supply

Operating voltage	100~240 VAC, 47 ~ 53Hz
Power consumption	30w Typical

Environmental Conditions

Operating temperature	0°C to +50°C
Relative Humidity	Up to 95%

Mechanical

Dimensions	19" Rack Mountable 1U; Depth: 430mm Max.
Weight	4.5kg Typ.
Color	Light Grey

