



DATASHEET



Norden Millimeter is the leading developer of microwave and millimeter wave products, creating standard and custom RF amplifiers, frequency multipliers, frequency converters, and custom assemblies.

NUDC2-18 / 1.3-2.3 FEATURES

RF Frequencies
2-18 GHz

IF Frequencies
1.3-2.3 GHz Internal LO Generation

Gain Control
50 dB

Tuning Speed
<20 μ S

Operating Temperature
-40 to +85 deg C



We developed a state of the art NUDC2-18/1.3-2.3 Wideband Microwave Transceiver in a low-SWaP 3U module. The NUDC2-18/1.3-2.3 is a dual conversion Transceiver providing 2-18 GHz operation in a versatile OpenVPX platform. The NUDC2-18/1.3-2.3 includes internal LOs which provide an instantaneous IF bandwidth of 1 GHz and exceptional Noise Figure.

- Down Converter NF = 6 dB max
- Up Converter NF = 17 dB max

Both the RF and IF paths include variable attenuation. The NUDC2-18/1.3-2.3 is digitally controlled by RS-485.

Norden's comprehensive line of products fulfills most applications in the 5G, test, and military markets. Norden Millimeter is also available for custom designed products. If you need a custom product, contact us at (530) 642-9123 for the design, development and manufacture of custom microwave products and subsystems.

We can provide custom designed and tested products with additional non-standard features and operation over the full military temperature range. Norden Millimeter is ISO 9001 and AS9100 Certified.

NUDC2-18 / 1.3-2.3

2-18 GHZ TRANSCEIVER

3U OPENVPX

SPECIFICATIONS

Parameter	Min	Max	Units	Notes
RF Frequency Range	2	18	GHz	
IF Out/In Frequency	1.3	2.3	GHz	
Tuning Step		100	MHz	Typical
DC Power (Input)		27	Watts	Typical
Max RF Input Power		20	dBm	Survival
RF Out to RF In Isolation	80		dB	
Tuning Speed		< 20	uS	Adjacent Frequencies
Baud Rate				Available with 115200 or 2 M.

Downconverter- Rx

RF Flatness		±2.5	dB	
IF Flatness		±2	dB	
Noise Figure		6	dB	0 dB attenuation
Output P1dB	10		dBm	0 dB attenuation
Attenuation Range	55		dB	Separate RF&IF Attn Control (31dB ea)
Attenuation step size		1	dB	Nom.
RX Gain	43		dB	Nominal @ 0 dB attenuation
Mixing spurious		-45	dBc	At 0 dBm output power, RF atten = 27dB
VSWR		2	:1	All RF Ports, 50 ohm
LO-RF Leakage		-80	dBm	

Upconverter- Tx

RF Flatness		±2.5	dB	@ 25°C
Gain control	50		dB	Separate RF&IF Attn Control (31dB ea)
Attenuation step size		1	dB	Nom.
Mixing Spurs		-45	dBc	Nom. within ±0.6GHz of output Tone A 0 dBm output power, Atten = 0 dB
RF Harmonics		-30	dBc	At 0 dBm output power, Atten = 0 dB
Gain	30		dB	Nominal @ 0 dB attenuation
Output P1dB	10		dBm	0 dB attenuation
Noise Figure		17	dB	0 dB attenuation
VSWR		2	:1	All RF Ports, 50 ohm
LO-RF Leakage		-60	dBm	

Environmental

Temp Range (Operating)	-40	85	°C	
External Reference Input		100	MHz	Nominal
Reference Input	-3	3	dBm	Sinewave
Size				3U, 1" Pitch, Primary Side Retainer
Cooling				Conduction
Command Connector				VPX backplane. P2
DC Power Conector				VPX backplane P0
Digital control signals				LVDS (MAX9122/9123)



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