

K470SDR

- 1. Features built-in digital up/down frequency conversion and interpolation extraction capabilities.
- 2. Supports 8-channel 14-bit transmission and 8-channel 14-bit reception
- 3. Supports frequency bands from 1 MHz to 6 GHz
- 4. Supports interpolation/extrapolation coefficients of 1x,2x,3x,4x,5x,6x,8x,10x,12x,16x,20x,24x, and 40x
- 5. basic configuration

	RF-ADC	RF-DAC
Number of channels	8	8
Tile	4 tile × 2 ADC	4 tile × 2 DAC
Resolution ratio	14-bit (DSP path: 16-bit)	14-bit (DSP path: 16-bit)
DDC/DUC per channel	1	1
Maximum sampling rate	5.8 GSPS	9.85 GSPS (High-Speed Mode)
Common/DUC operating sampling rate	1.0 ~ 5.8 GSPS	0.5 ~ 6.4 GSPS
Simulated bandwidth	RF input: up to 6 GHz	RF output up to 6 GHz;
Extraction / Interpolation (Gen 3)	1, 2, 3, 4, 5, 6, 8, 10, 12, 16, 20, 24, 40	1, 2, 3, 4, 5, 6, 8, 10, 12, 16, 20, 24, 40
DDC/DUC passband	80% passband, stopband approximately 89 dB	80% passband, stopband approximately 89 dB
Mixer	Coarse mixing at Fs/4 and Fs/2; fine mixing using a 48-bit NCO	

- 6. Sampling rates and bandwidths under different sampling modes

ExtractID	Post-extraction sampling rate <i>Fdata</i> <i>Fdata</i>	Output Nyquist frequency: <i>Fdata</i> /2 <i>Fdata</i> /2	Real numbers can be represented using E10.	Available BW for I/Q
1x	5800.000 MSPS	2900.000 MHz	2320.000 MHz	4640.000 MHz
2x	2900.000 MSPS	1450.000 MHz	1160.000 MHz	2320.000 MHz
3x	1933.333 MSPS	966.667 MHz	773.333 MHz	1546.667 MHz
4x	1450.000 MSPS	725.000 MHz	580.000 MHz	1160.000 MHz
5x	1160.000 MSPS	580.000 MHz	464.000 MHz	928.000 MHz
6x	966.667 MSPS	483.333 MHz	386.667 MHz	773.333 MHz
8x	725.000 MSPS	362.500 MHz	290.000 MHz	580.000 MHz
10x	580.000 MSPS	290.000 MHz	232.000 MHz	464.000 MHz
12x	483.333 MSPS	241.667 MHz	193.333 MHz	386.667 MHz
16x	362.500 MSPS	181.250 MHz	145.000 MHz	290.000 MHz
20x	290.000 MSPS	145.000 MHz	116.000 MHz	232.000 MHz
24x	241.667 MSPS	120.833 MHz	96.667 MHz	193.333 MHz
40x	145.000 MSPS	72.500 MHz	58.000 MHz	116.000 MHz

- 7. Synchronization error measured at 1.5 GHz

组别	频率\通道	0-1	0-2	0-3	0-4	0-5	0-6	0-7	1-2	1-3	1-4	1-5	1-6	1-7	2-3	2-4	2-5	2-6	2-7	3-4	3-5	3-6	3-7	4-5	4-6	4-7	5-6	5-7	6-7
1	1510M	5.7	358.9	132.1	353.6	353.4	352.5	354	353.2	126.5	347.9	347.7	346.8	348.4	132.2	354.7	354.4	353.5	355.9	221.5	221.3	220.3	223	359.8	358.8	1.5	359	1.7	2.6
	1515M	5.8	359.2	133	353.6	353.3	352.5	354	353.4	127.2	347.8	347.6	346.7	348.3	133.8	354.4	354.2	353.4	354.9	220.6	220.4	219.6	221.1	359.8	359	0.5	359.1	0.7	1.5
	1520M	4.7	359.1	133.2	353.5	353.3	352.4	354.1	353.2	127.4	347.6	347.5	346.5	348.3	134.1	354.4	354.2	353.4	355	220.3	220.1	219.2	220.8	359.8	359	0.6	359.1	0.7	1.6
2	1510M	5.9	359.3	132.8	353.8	353.6	352.8	354.1	353.3	126.9	347.9	347.6	346.7	348.2	133.5	345.6	354.3	353.4	354.9	221	220.8	219.9	221.3	359.7	358.9	0.3	359.1	0.6	1.4
	1515M	5.7	359.1	132.9	353.6	353.4	352.5	353.9	353.4	127.2	347.8	347.6	346.7	348.2	133.8	354.5	354.3	353.4	354.8	220.7	220.5	219.6	221	359.8	358.9	0.3	359.1	0.5	1.4
	1520M	5.7	359.1	133.3	353.5	353.4	352.3	353.9	353.4	127.6	347.8	347.7	346.6	348.2	134.2	354.4	354.3	353.2	354.7	220.2	220.2	219.1	220.6	360	359.9	0.4	359	0.4	1.5
3	1510M	5.7	359	132.5	353.6	353.4	352.5	354.1	353.3	126.8	347.9	347.8	346.8	348.4	132.5	354.6	354.5	353.5	355.1	221.1	221	220.0	221.6	359.9	359	0.5	359.1	0.6	1.6
	1515M	4.9	359.3	132	355.4	352.6	351.6	353.2	354.2	127.1	348.5	347.7	346.6	348.3	132.9	356.0	353.5	352.4	354	221.4	220.6	219.6	221.2	359.2	358.1	359.8	359	0.6	1.7
	1520M	4.7	355.7	132	356.3	352.4	351.3	352.9	352.7	127.4	348.7	347.6	346.6	348.2	135	355.3	355.2	354.1	355.8	220.3	220.2	219.1	220.8	359.9	358.8	0.5	358.9	0.6	1.7
4	1510M	5.7	359.1	132.5	353.6	354.9	352.4	353.9	353.4	126.8	347.8	348.9	346.7	348.2	133.4	354.4	354.3	353.2	354.8	221	220.9	219.8	221.4	359.9	358.8	0.4	358.9	0.5	1.5
	1515M	5.7	359.1	131.9	353.5	353.3	352.3	353.9	351.5	125.2	354.8	346.5	344.7	345.9	133.8	354.4	354.3	353.2	354.8	220.6	220.6	219.4	221.0	360	358.8	0.4	358.9	0.5	1.6
	1520M	5.6	359.1	132.4	353.5	353.3	352.4	354	353.4	127.5	347.8	347.9	346.6	348.2	134.1	354.3	354.8	353.2	354.8	220.3	220.4	219.1	220.7	0.4	358.9	0.5	358.4	0.4	1.6
5	1510M	6.1	359	133.7	352.1	353.4	352.8	354	352.8	127.5	346.3	347.3	345.7	347.9	134.7	354.2	354.5	352.9	355	219.4	219.7	218.2	220.3	0.3	358.7	0.9	358.4	0.6	2.1
	1515M	6.0	359	133.8	353.1	353.4	352.1	354.2	353.1	127.9	347.2	347.5	346.1	348.3	134.8	354.2	354.4	353.1	355.2	219.3	219.6	218.3	220.4	0.3	358.9	1	358.6	0.8	2.1
	1520M	6.0	359	134.1	353.1	353.4	352	354.2	353	128.2	347.2	347.4	346.1	348.3	135.2	354.2	354.5	353.1	355.3	219	219.3	217.9	220.1	0.3	358.9	1.1	358.6	0.9	2.2
30min	1520M	6.0	359.2	133.1	353.2	353.5	352	354.4	353.2	128	347.3	347.4	346.1	347.7	135.1	354.9	354.2	352.9	355	218.9	219.2	217.8	242.4	0.2	358.8	1	358.6	359.8	2.5