

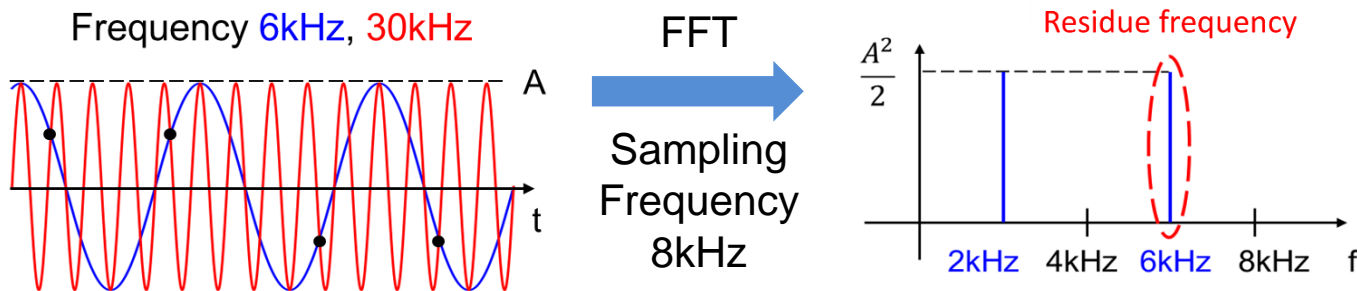
Frequency Estimation Circuit Using Residue Number System

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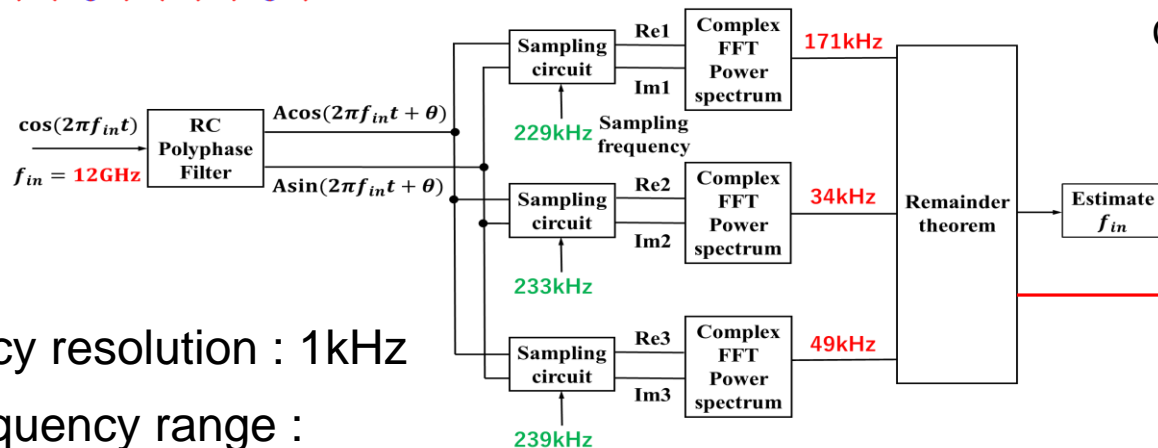
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Estimate high frequency using multiple low frequency samplers



Extract only residue frequency by complex FFT



Chinese Remainder Theorem

m1	m2	m3	k
0	0	0	0
1	1	1	1
2	2	2	2
⋮	⋮	⋮	⋮
169	32	47	11999998
170	33	48	11999999
171	34	49	12000000
172	35	50	12000001
173	36	51	12000002
⋮	⋮	⋮	⋮
226	230	236	12752320
227	231	237	12752321
228	232	238	12752322

Frequency resolution : 1kHz

Input frequency range :

0 ~ 12.752322GHz ← product