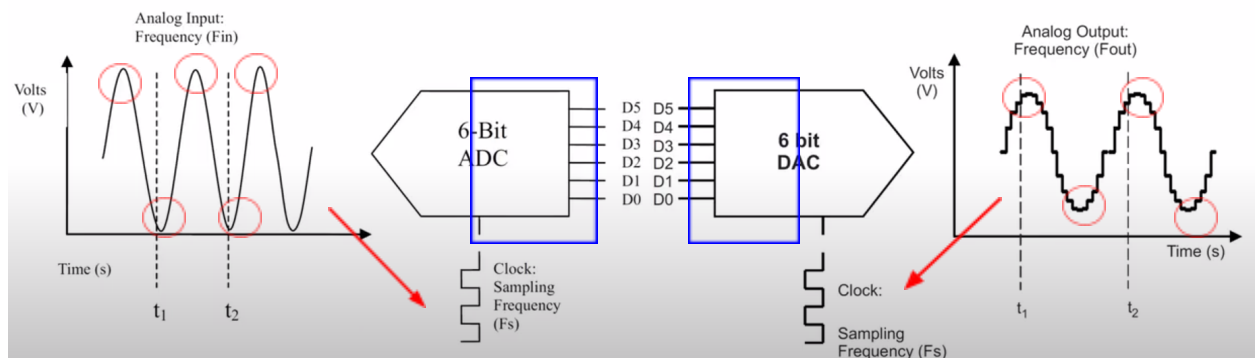


Sample Rate vs Data Rate

Sampling rate

Sampling rate is the speed at which the data converter is sampling an analog input (ADC) or sending out an analog output (DAC). This rate is usually an external clock rate that is supplied to these converters, as seen per the image below in red color.



Data rate

Data rate is the rate of the digital output data from an ADC or digital input data rate to a DAC, as represented by the blue box in the image above.

Sampling rate is **NOT** Data rate

Application example:

- 16 bit, dual ADC with sample rate 100 kS/s
- Decimate by 2 mode, data output rate = sample rate / 2 = 50 kS/s

Source:

[TI-Decimation-explained](#)
[Sampling vs. data rate TI](#)