

1. The frequency of the Fixed-freq output (outputSel=100,101 and 110) is equal to:
2.  $F = 500 / (\text{sampDivisor}[11:0] + 1)$  KHz
3. The sample rate (per 8 bit or 10 bit sample) of the D/A (outputSel=001 or 010)
4. is equal to:
5.  $F = 1000 / (\text{sampDivisor}[8:0] + 1)$  KHz

由F反推divisor分别为

```
sampDivisor = 500 * 1000 / F - 1
```

```
sampDivisor = 1000 * 1000 / F - 1
```

但ThreadX SDK的audio driver中使用的确实如下设定

```
1. #define SAMPLE_RATE_POS 0
2. #define AUDIO_OUTPUT_SAMPLE_FREQ(f) (((1000/(f/1000))+1) << SAMPLE_RATE_POS)
3. #define AUDIO_OUTPUT_FIXED_FREQ(f) (((500 * 1000) / f)+1) << SAMPLE_RATE_POS)
```

即

```
sampDivisor = 500 * 1000 / F + 1
```

```
sampDivisor = 1000 / (F / 1000) + 1
```

这里 $1000 * 1000 / F$ 与 $1000 / (F / 1000)$ 是等价的。

显然ThreadX SDK中的设定在+1与-1上搞错了。