

90°

Quadrature Encoder

Phase A

Phase A

Phase B

Phase B

Quadrature decoder

LED

led_period

led_polarity=1

led_polarity=0

spl_period

QDEC work at 1MHz = $XCLK/(div+1)$ XCLK select 32MHz^m div is 31⁸

spl_period:

0: 32 us/sample
 1: 64 us/sample
 2: 128 us/sample
 3: 256 us/sample
 4: 512 us/sample
 5: 1 ms/sample
 6: 2 ms/sample
 7: 4 ms/sample
 8: 8 ms/sample
 9: 16 ms/sample
 A: 32 ms/sample
 B: 65 ms/sample
 C: 131 ms/sample

Report period in [us/report] = spl_period * rpt_period

led_period:

[8:0] us at 1MHz