Mr. Yoder please excuse me for my smartphone picture but I tried my best to document what I was doing. Unfortunatly, i didn't had my USB drive with me to take proper screenshots like I would usually do.
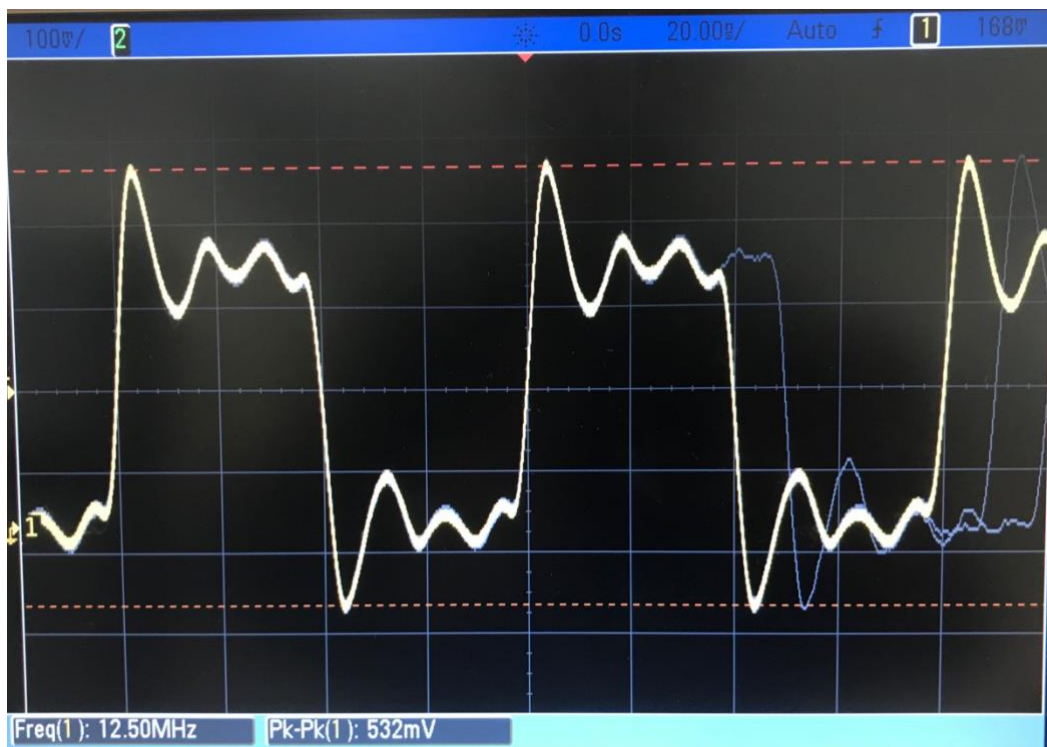
2.6 Blinking an LED:

Show several figures with different delays: delay(0), delay(50000), delay(5000000)

Max toggle speed: 12.50MHz
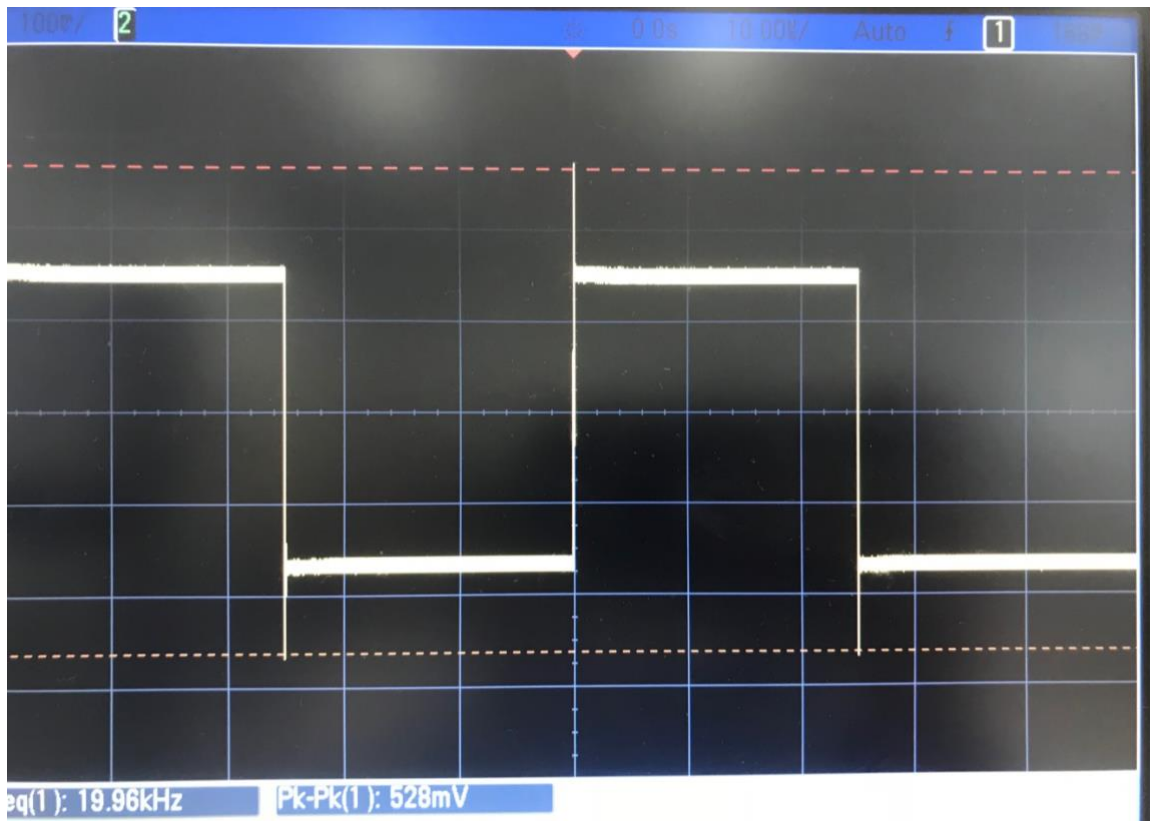
Jitter is there
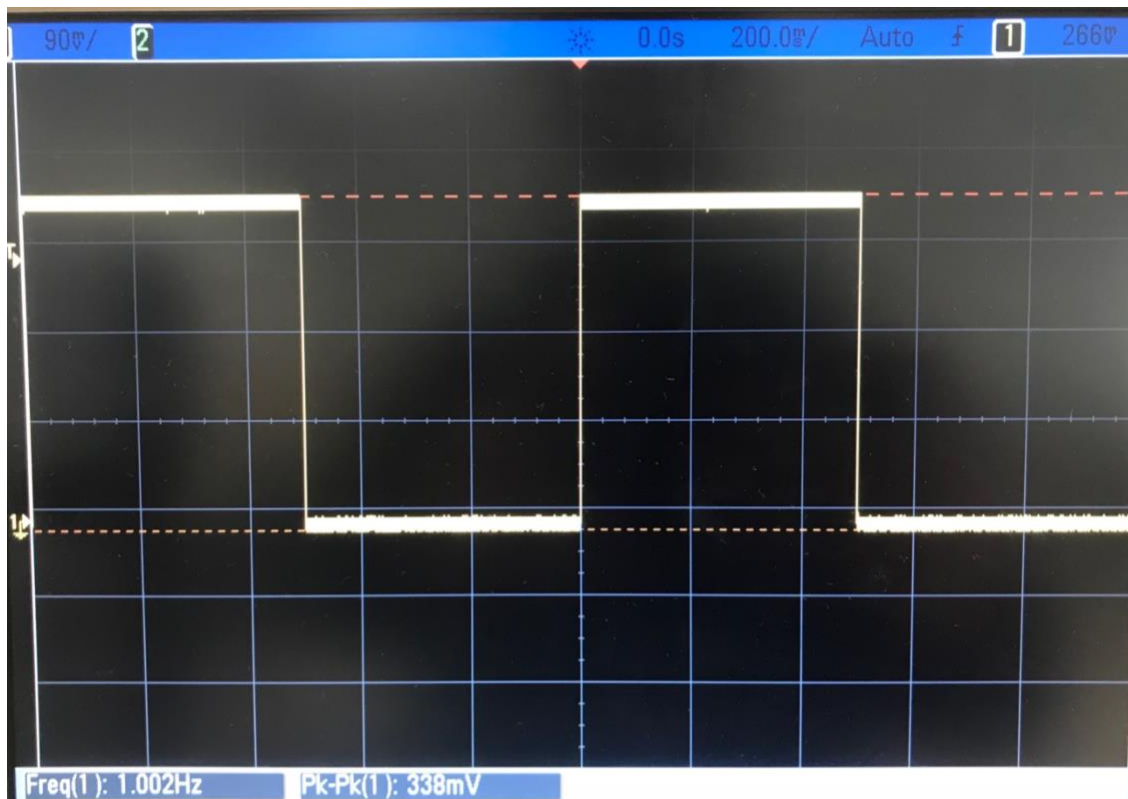
Stability is quit good

Delay(0):

With a Std Dev of 4MHz

Delay(50000):

you can still see peaks

Delay(5000000):
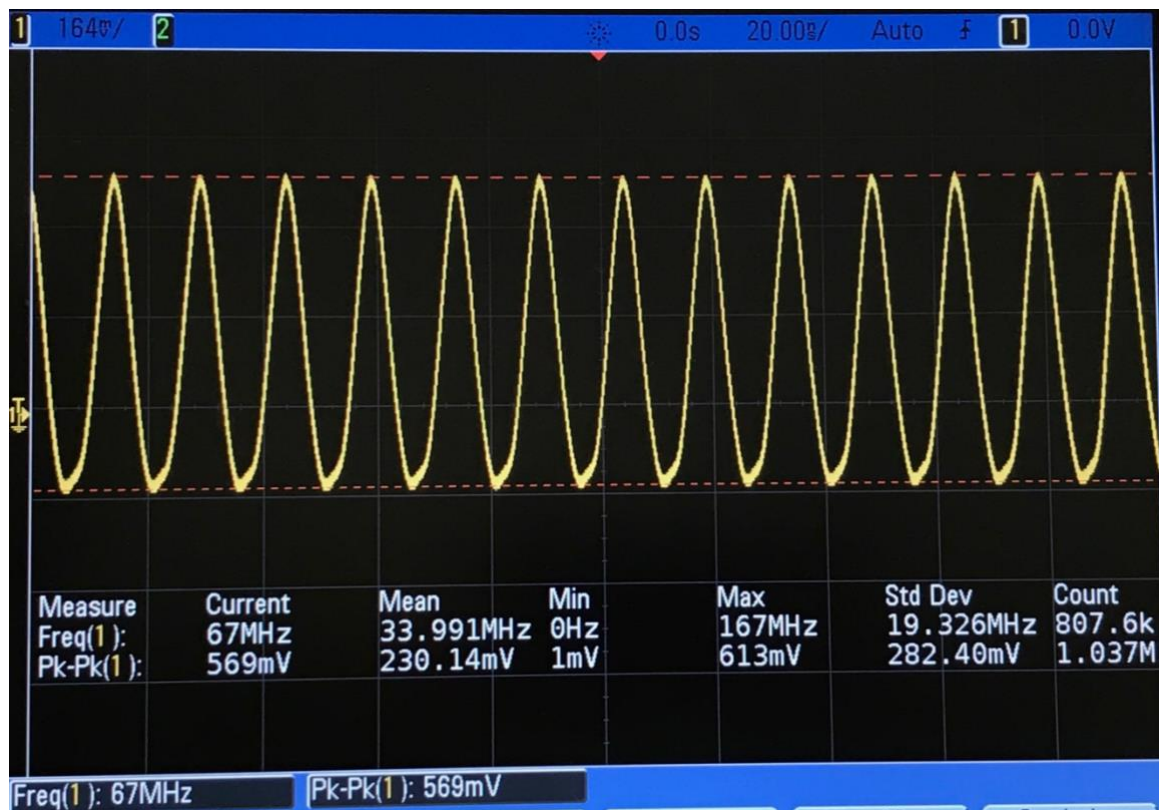
5.3 PWM Generator:

Max freq: 67MHz with delay(0)
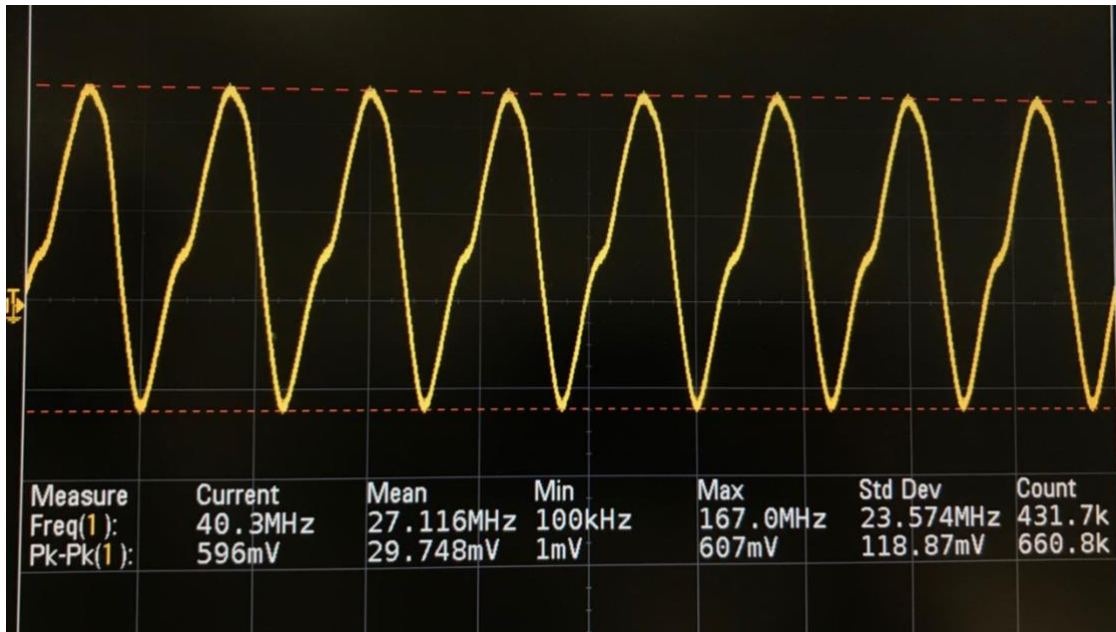Stability: Constantly changes between 38,9MHz and 42Hz, but the average is 40MHz
Standart Deviation.: 18.955MHz.
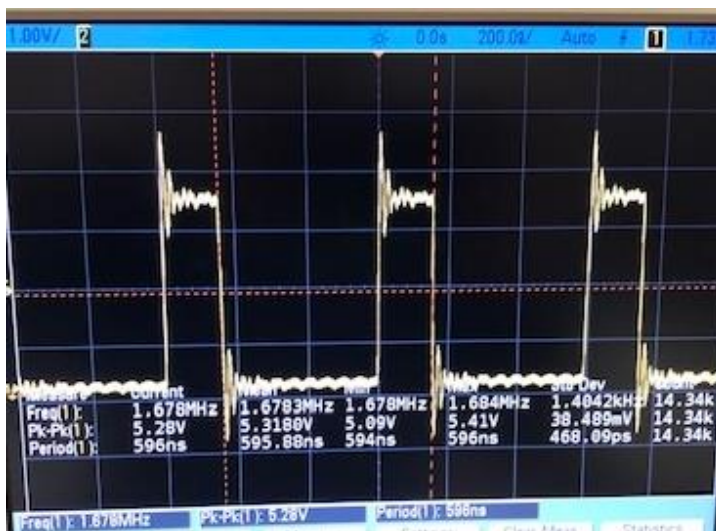Max freq (for a proper Signal) : 350kHz

Delay(0):

delay (1):

Delay (50)

Compared to the previous figure the frequency is better than through the ARM GPIO structure

delay (10000):

With a delay of about delay(10000) the PWM Signal is clear and without Jitter

frequency compared to the figure from blinking Led, is better. But the diffrence decreased.

5.4 Controlling the PWM Frequency:

First Plot are pins P8_43 and P8_44, second with the following P8_45 and P8_46.
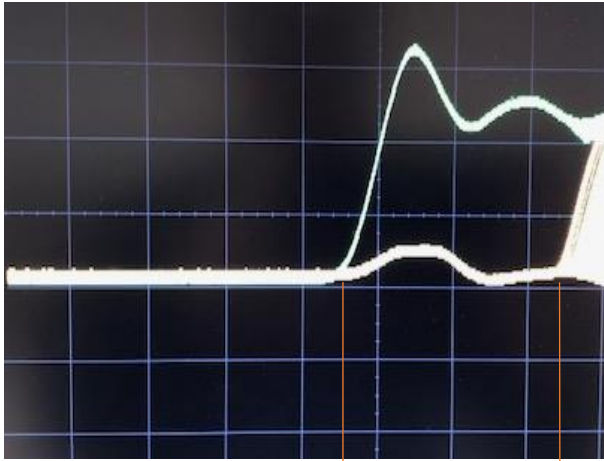

Highest frequency with 4 channels: 327kHz
Can see ringing waves- on both all waveform.

5.5 Loop Unrolling for Better Performance:

Looping speeded the process up! See frequency. No Ringing

5.9 Reading an Input at Regular Intervals:

Input Latency: ~30ns