

# DEMOQE Accelerometer Demonstration

## S08 (MC9S08QE128)

Raw data = 796 cycles = 33 microseconds

IIR = 33,714 cycles = 1415.9 microseconds

Rolling Avg. = 12,971 cycles = 544.8 microseconds

Code size (No optimizations) = 2613 bytes

## ColdFire V1 (MCF51QE128)

Raw data = 62 cycles = 2.6 microseconds

IIR = 648 cycles = 27.2 microseconds

Rolling Avg. = 396 cycles = 16.6 microseconds

Code size (No optimizations) = 2920 bytes

**NOTE:** Time in microseconds is calculated with 24MHz bus frequency for both devices as shown in demonstration.

## When moving from S08 to ColdFire V1....

Computing **Raw Data** gives you a 92% increase in bandwidth.

Computing **IIR** gives you a 98% increase in bandwidth.

Computing **Rolling Average** gives you a 97% increase in bandwidth.

Code size increases by 11%.

**NOTE:** Performance increase may vary on software implementation. These numbers apply only to this software.