

```
#include <stdio.h>
#include <emmintrin.h>
#include <sys/time.h>

unsigned long tt()
{
    struct timeval tv;
    gettimeofday(&tv, NULL);
    return 1000000 * tv.tv_sec + tv.tv_usec;
}

#define TESTSIZE 1000000
int x[TESTSIZE];
int y[TESTSIZE];
int z[TESTSIZE];

int main() {

    unsigned int t11,t12,t21,t22;

    for(int i=0;i<TESTSIZE;i++)
    {
        x[i]=2*i;
        y[i]=i;
    }

    t11 = tt();
    for(int i=0;i<TESTSIZE;i++)
    {
        z[i]=x[i]+y[i];
    }
    t12 = tt();

    __m128i *xx=(__m128i *)x;
    __m128i *yy=(__m128i *)y;
    __m128i *zz=(__m128i *)z;

    t21 = tt();
    for(int i=0;i<TESTSIZE/4;i++)
    {
        zz[i] = _mm_add_epi32 (xx[i],yy[i]);
    }
    t22 = tt();

    /*

    for(int i=0;i<TESTSIZE;i++)
    {
        printf("%d+%d=%d\n",x[i],y[i],z[i]);
    }
    */
    printf("without sse2 %u, with sse2 %u\n",t12-t11,t22-t21);

    return 0;
}
```