```c
#include "Pulse_init.h"
#include "TM4C123GH6PM.h"
#include <stdio.h>

extern void OutStr(char*);
void print_number(int number);
int x,edge=0;
int edge1,edge2,edge3;
int period,pulse_width,duty_cycle,new_number;
char msg1[100],msg2[100];

void print_number(int number)
{
    int i=0,j=0;
    while(number){
      new_number=number/10;
      msg1[i]=number-(new_number*10)+48;
      number=new_number;
      i++;
    }
    for(i=i-1;i>=0;i--){
    msg2[j]=msg1[i];
    j++;
    }

    msg2[j]='\r';
    msg2[j+1]='\4';
    OutStr(msg2);
}
  int main(){
    pulse_init();
    detect_init();
    while(1){

      x=TIMER1->RIS&4;  //Seperating CAERIS bit
      if(x==4){
        if(edge==0)
        {
          edge1=TIMER1->TAR;  //Get timer register value
          edge=edge+1;
          TIMER1->ICR |=0x04;//Clear ICR
          continue;
        }
        else if(edge==1)
        {

          edge2=TIMER1->TAR;  //Get timer register value
          edge=edge+1;
          TIMER1->ICR |=0x04;//Clear ICR
          continue;
        }
        else if(edge==2)
        {
          edge3=TIMER1->TAR;//Get timer register value
          edge=edge+1;
          TIMER1->ICR |=0x04; //Clear ICR
          continue;
        }
        else
        {
          period=edge1-edge3; //PERIOD (FIRST EDGE - THIRD EDGE) [IN CYCLE UNIT, NOT IN ns]
          pulse_width=edge1-edge2;//PULSE WIDTH (FIRST EDGE- SECOND EDGE) [IN CYCLE UNIT, NOT IN ns]
          duty_cycle=(pulse_width*100)/period; //Pulse Width*100 / PERIOD = DUTY CYCLE
          /*OutStr("Duty Cycle (%): \r\4");
          print_number(duty_cycle);*/
          OutStr("Pulse Width (us):\4");
          print_number(pulse_width*0.34/32);
          /*OutStr("Period (us): \r\4");
          print_number(period/16);*/
        }
            edge=0;

        }

      }

}
```