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/*****

Header file for PWM functions on the E128

*****/

#ifndef E128_PWM_H
#define E128_PWM_H

// Declare Public Function Prototypes
void InitPWMHardware( void);
void InitControlTimerHardware( void );
void SetDutyCycle( char, char );
void DriveForwardFull ( signed int );
void DriveForwardHalf ( void );
void DriveReverseFull ( signed int );
void DriveReverseHalf ( void );
void RotateClockwise ( void );
void RotateClockwiseHalf(void);
void RotateCounterClockwise ( void );
void RotateCounterClockwiseHalf ( void );
void StopMotor( void );
void RampUpFlywheel( char );
void RampDownFlywheel( void );
void FlywheelOff( void );

/*
int QueryWheel0Speed( void );
int QueryWheel1Speed( void );
int QueryWheel0Width( void );
int QueryWheel1Width( void );
void SetWheel0Speed( unsigned char, unsigned char );
void SetWheel1Speed( unsigned char, unsigned char);
*/

//PWM Channel Definitions
#define PWM_CHANNEL0 0 //wheel 0
#define PWM_CHANNEL1 1 //wheel 1
#define PWM_CHANNEL4 4 //flywheel

//#defines
//prescale definitions
#define PSCALE128 (_S12_PCKA0 | _S12_PCKA1 | _S12_PCKA2)
#define PSCALE64 (_S12_PCKA1 | _S12_PCKA2)
#define PSCALE32 (_S12_PCKA2 | _S12_PCKA0)
#define PSCALE16 _S12_PCKA2
#define PSCALE8 (_S12_PCKA1 | _S12_PCKA0)
#define PSCALE4 _S12_PCKA1
#define PSCALE2 _S12_PCKA0

#endif /* E128_PWM_H */

```