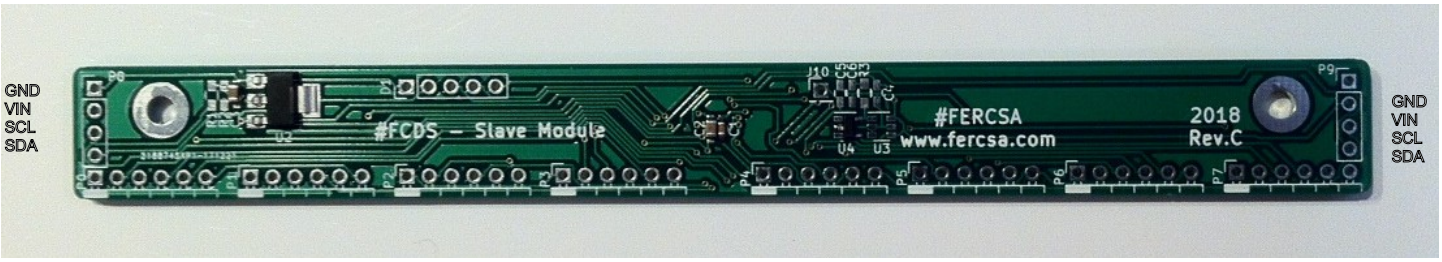
FERCSA – 24 channel ADC and 8 channel PWM w/I2C

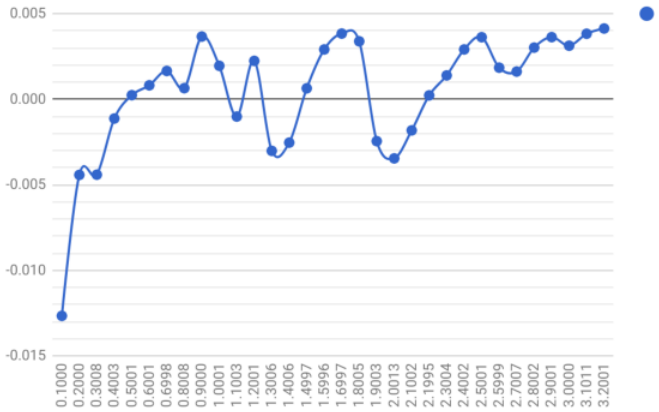


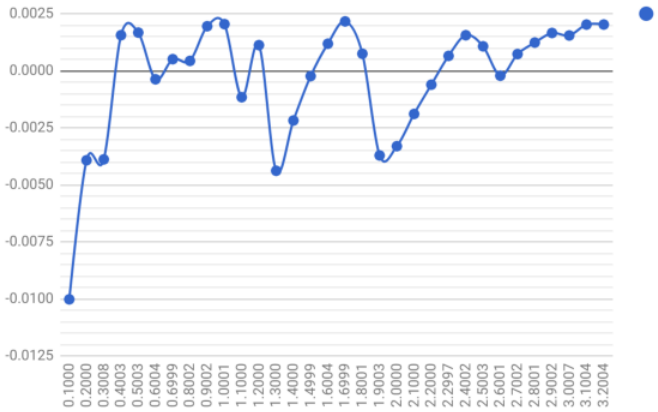
GND AIN 0 AIN 1 PWM 0 AIN 2 VOUT
GND AIN 3 AIN 4 PWM 1 AIN 5 VOUT
GND AIN 6 AIN 7 PWM 2 AIN 8 VOUT
GND AIN 9 AIN 10 PWM 3 AIN 11 VOUT
GND AIN 12 AIN 13 PWM 4 AIN 14 VOUT
GND AIN 15 AIN 16 PWM 5 AIN 17 VOUT
GND AIN 18 AIN 19 PWM 6 AIN 20 VOUT
GND AIN 21 AIN 22 PWM 7 AIN 23 VOUT

ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Typical (for 3.3V variant)	Typical (for 5.0V variant)	Units
VIN	Voltage supply input	5	7 (max.12)	V
AIN(n)	Analog input voltage	0 – 3.3	0 – 5.0	V
VOUT	Voltage supply output	3.3	5.0	V
SCL	I2C clock line	3.3	3.3 – 5.0 (based on pull-up)	V
SDA	I2C data line	3.3	3.3 – 5.0 (based on pull-up)	V
-	I2C bus speed	100	100	Kbits/s
R1, R2	I2C pull-up resistors (optional)	1.7	1.7	kOhm
PWM(n)	PWM output voltage	0 – 3.3	0 – 5.0	V
-	PWM resolution	16 (sw variable)	16 (sw variable)	bits
-	PWM frequency	720 (sw variable)	720 (sw variable)	Hz
J10	Vref output voltage	3.3	5.0	V
-	ADC bitrate	12(11 effective)	12(11 effective)	bit
-	ADC sampling rate	~8000	~8000	SPS
-	ADC input impedance	~2.2	~2.2	kOhm

ANALOG INPUT LINEARITY (based on two different channel)





CODE EXAMPLES

- Available for Arduino and Linux C.
- Please visit https://github.com/FERCSA/FCDS/tree/master/SM_demo