

# 16 Bit Analog to Digital Converter(MCP3425)

20140413

Reference;

i2c\_utility\_0.2.1.f

MCP3425\_0.1.f

```
Prop0 Cog6 ok
i2c_detect
  0 1 2 3 4 5 6 7 8 9 A B C D E F
00: 00 - - - - -
10: - - - - -
20: - - - - -
30: - - - - -
40: - - - - -
50: 50 - - - - -
60: - - - - - 68 - - - - - <-- MCP3425' address is h68.
70: - - - - -
i2c_device:2
[0 - 7] and [h78 - h7F] are reserve-address

Prop0 Cog6 ok
```

Default is Continuous Convesion Mode 12bits PGA-Gain=1  
config-register is h10.

Prop0 Cog6 ok

rd\_config

10 Prop0 Cog6 ok

Vin+=490mV Vin-=GND

Prop0 Cog6 ok

get\_A/D

Continuous Convesion Mode 12bits PGA-Gain=1

480

480

480

480

480

480

480

480

Prop0 Cog6 ok

cont 12bits 2 wr\_config get\_A/D  
Continuous Convesion Mode 12bits PGA-Gain=2

960  
960  
960  
960  
960  
960  
960  
960  
960  
960  
960  
960  
960

Prop0 Cog6 ok

cont 12bits 4 wr\_config err? get\_A/D  
Continuous Convesion Mode 16bits PGA-Gain=4

1920  
1920  
1920  
1920  
1920  
1920  
1920  
1920  
1919  
1919  
1919

Prop0 Cog6 ok

cont 12bits 8 wr\_config err? get\_A/D  
Continuous Convesion Mode 16bits PGA-Gain=8

2047  
2047  
2047  
2047  
2047  
2047  
2047  
2047

2047  
2047  
2047  
Prop0 Cog6 ok

Conversion-time takes more timr than 12bits

cont 14bits 1 wr\_config err? get\_A/D  
Continuous Convesion Mode 16bits PGA-Gain=1

1920  
1920  
1921  
1921  
1921  
1921  
1922  
1922  
1922  
Prop0 Cog6 ok

Conversion-time takes more timr than 12bits

cont 16bits 1 wr\_config err? get\_A/D  
Continuous Convesion Mode 12bits PGA-Gain=1

7673  
7673  
7672  
7672  
7672  
7672  
7671  
Prop0 Cog6 ok

1shot 12bits 1 wr\_config err? get\_A/D  
One-Shot Convesion Mode 12bits PGA-Gain=1

480  
480  
480  
480  
480  
480  
480  
480

480

Prop0 Cog6 ok

Vin+=490mV Vin-=GND

cont 12bits 1 wr\_config err? get\_A/D

Continuous Convesion Mode 16bits PGA-Gain=1

-479

-480

-480

-479

-479

-479

-479

-479

-479

-479

-479

Prop0 Cog6 ok

General Call test

Prop0 Cog6 ok

1shot 16bits 4 wr\_config err? rd\_config

A Prop0 Cog6 ok

GenCall\_reset

Prop0 Cog6 ok

rd\_config

10 Prop0 Cog6 ok

General Call Conversion

Mode change to 1shot by General Call Conversion.

GenCall\_1shot rd\_config

80 Prop0 Cog6 ok