**How to Modify VCM**

1. Refer to the datasheet: VCM datasheet : SP-VM149C-A.002.pdf

2. All projects are being designed as Auto focus , VCM controlling is included in FOCUS\_ADJ.v , the main control module is VCM\_I2C .v

3. VCM\_I2C 的 Top 如下 : 直接修改 VCM\_DATA

4. VCM\_DATA : modification

step 1 : mark VCM\_CTRL\_P 的 VCM\_DATA

step 2 :manually enter VCM\_DATA & corresponding TR\_IN pin on controlling. It is able to enter one more line under VCM\_I2C: assign VCM\_DATA= … such as, 10’b?????????? =0000000000~1111111111

representing the scale of 10bit resolution on current range from the min value to max value, every time on changing 10 bit value, and set TR\_IN 0-->1--->0 , the module will enter the value into VCM via I2C interface ,the user can confirm the change taking effect or not by observing the camera lens zooming, for other register settings, please refer to the data sheet page 8

Appendix 1 : VCM register information shows on page 9 as Table below: change the vales of D9 ~D0 and using I2C bus to send to VCM, VCM driver will work on moving the lens .

Appendix 2 VCM: the max current is120mA see below diagram, scale is 120mA/3FFh