```
pin for the slave select for the digital pot
Model for sensor register initialization
Data rate for serial transmission
Reset the CPLD (bus_write)
```

-int: 7 -byte: 3 921600

> (-address: 0x07 | **0x80** -data: 0x80)- delay 100-(-address: 0x07 | **0x80** -data: 0x00) - delay 100

To check if SPI bus is ok:

1. (bus_write) (-address: 0x00 | **0x80** -data: 0x55)

2. Read address from 1. OK if 0x55

InitCam

```
wrSensorReg16_8(0x3008, 0x80);
```

wrSensor**Regs**16_8(OV5642_QVGA_Preview); {0x3103_0x93}.

```
{0x3008,0x82},
\{0x3017, 0x7f\},\
{0x3018,0xfc},
{0x3810,0xc2},
{0x3615,0xf0},
\{0x3000,0x00\},\
{0x3001,0x00},
\{0x3002,0x5c\},\
{0x3003,0x00},
{0x3004,0xff},
{0x3005,0xff},
{0x3006,0x43},
\{0x3007,0x37\},\
\{0x3011,0x08\},\
{0x3010,0x10},
{0x460c,0x22},
{0x3815,0x04},
{0x370c,0xa0},
{0x3602,0xfc},
{0x3612,0xff},
{0x3634,0xc0},
```

- {0x3613,0x00},
- {0x3605,0x7c},
- $\{0x3621,0x09\},\$
- {0x3622,0x60},
- {0x3604,0x40},
- {0x3603,0xa7},
- (0.0000,0.00.)
- {0x3603 ,0x27},
- $\{0x4000,0x21\},$
- {0x401d,0x22},
- $\{0x3600,0x54\},\$
- {0x3605,0x04},
- $\{0x3606, 0x3f\},\$
- {0x3c01,0x80},
- {0x5000 ,0x4f},
- $\{0x5020,0x04\},\$
- {0x5181,0x79},
- {0x5182,0x00},
- {0x5185,0x22},
- [0v5107 0v01]
- {0x5197,0x01},
- {0x5001,0xff},
- {0x5500,0x0a},
- $\{0x5504,0x00\},\$
- $\{0x5505,0x7f\},\$
- $\{0x5080,0x08\},\$
- $\{0x300e,0x18\},\$
- {0x4610 ,0x00},
- {0x471d,0x05},
- {0x4708,0x06},
- {0x3808,0x02},
- {0x3809,0x80},
- {0x380a ,0x01},
- toxoood toxo il
- {0x380b ,0xe0}, {0x380e ,0x07},
- {0x380f,0xd0},
- (0.1000)
- $\{0x501f,0x00\},\$
- $\{0x5000, 0x4f\},\$
- {0x4300, 0x30},
- $\{0x3503,0x07\},\$
- $\{0x3501,0x73\},$
- {0x3502,0x80},
- $\{0x350b, 0x00\},\$
- $\{0x3503,0x07\},$
- $\{0x3824,0x11\},\$

- $\{0x3501,0x1e\},\$
- {0x3502,0x80},
- $\{0x350b, 0x7f\},\$
- $\{0x380c, 0x0c\},\$
- {0x380d,0x80},
- {0x380e,0x03},
- {0x380f,0xe8},
- {0x3a0d,0x04},
- {0x3a0e,0x03},
- {0x3818,0xc1},
- {0x3705,0xdb},
- {0x370a,0x81},
- {0x3801,0x80},
- {0x3621,0x87},
- $\{0x3801,0x50\},\$
- $\{0x3803,0x08\},\$
- $\{0x3827,0x08\},\$
- {0x3810,0x40},
- $\{0x3804,0x05\},\$
- {0x3805,0x00},
- $\{0x5682,0x05\},\$
- $\{0x5683,0x00\},\$
- $\{0x3806,0x03\},\$
- {0x3807,0xc0},
- $\{0x5686,0x03\},\$
- {0x5687,0xbc},
- {0x3a00,0x78},
- $\{0x3a1a,0x05\},\$
- $\{0x3a13,0x30\},\$
- $\{0x3a18,0x00\},\$
- {0x3a19,0x7c},
- $\{0x3a08,0x12\},$
- {0x3a09,0xc0},
- {0x3a0a,0x0f},
- {0x3a0b,0xa0},
- $\{0x350c, 0x07\},\$
- {0x350d,0xd0},
- $\{0x3500,0x00\},\$
- $\{0x3501,0x00\},\$
- $\{0x3502,0x00\},\$
- {0x350a,0x00},
- $\{0x350b, 0x00\},\$
- $\{0x3503,0x00\},\$

- {0x528a ,0x02},
- $\{0x528b, 0x04\},\$
- $\{0x528c, 0x08\},\$
- $\{0x528d, 0x08\},\$
- {0x528e,0x08},
- {0x528f,0x10},
- $\{0x5290,0x10\},\$
- {0x5292,0x00},
- {0x5293,0x02},
- $\{0x5294,0x00\},\$
- $\{0x5295,0x02\},\$
- {0x5296,0x00},
- $\{0x5297,0x02\},\$
- $\{0x5298,0x00\},\$
- {0x5299,0x02},
- {0x529a,0x00},
- {0x529b,0x02},
- $\{0x529c,0x00\},\$
- $\{0x529d, 0x02\},\$
- {0x529e,0x00},
- {0x529f,0x02},
- $\{0x3030,0x0b\},\$
- $\{0x3a02,0x00\},\$
- {0x3a03,0x7d},
- $\{0x3a04,0x00\},\$
- $\{0x3a14,0x00\},\$
- {0x3a15,0x7d},
- {0x3a16,0x00},
- $\{0x3a00,0x78\},$
- $\{0x3a08,0x09\},\$
- {0x3a09,0x60},
- {0x3a0a,0x07},
- {0x3a0b,0xd0},
- {0x3a0d,0x08},
- {0x3a0e,0x06},
- $\{0x5193,0x70\},\$
- $\{0x589b, 0x04\},\$
- {0x589a,0xc5},
- {0x401e,0x20},
- {0x4001,0x42},
- $\{0x401c, 0x04\},\$
- {0x528a,0x01},
- $\{0x528b, 0x04\},\$

- $\{0x528c,0x08\},\$
- $\{0x528d, 0x10\},\$
- $\{0x528e,0x20\},\$
- {0x528f,0x28},
- {0x5290,0x30},
- {0x5292,0x00},
- {0x5293,0x01},
- {0x5294,0x00},
- (0,,000,0,04)
- $\{0x5295,0x04\},$
- {0x5296,0x00},
- {0x5297,0x08},
- {0x5298,0x00},
- {0x5299 ,0x10},
- {0x529a ,0x00},
- {0x529b,0x20},
- $\{0x529c, 0x00\},\$
- {0x529d,0x28},
- {0x529e,0x00},
- (0.-5006 0.-00)
- $\{0x529f,0x30\},\$
- {0x5282 ,0x00},
- $\{0x5300, 0x00\},\$
- {0x5301,0x20},
- $\{0x5302,0x00\},\$
- $\{0x5303,0x7c\},\$
- {0x530c,0x00},
- {0x530d ,0x0c},
- {0x530e ,0x20},
- {0x530f,0x80},
- {0x5310 ,0x20},
- {0x5311 ,0x80},
- {0x5308,0x20},
- toxoooo ,oxzo)
- {0x5309,0x40},
- {0x5304,0x00},
- $\{0x5305,0x30\},\$
- $\{0x5306,0x00\},\$
- $\{0x5307,0x80\},\$
- {0x5314,0x08},
- {0x5315,0x20},
- toxee in toxee,
- {0x5319 ,0x30},
- {0x5316, 0x10},
- $\{0x5317,0x00\},\$
- $\{0x5318,0x02\},\$
- $\{0x5402,0x3f\},\$

- $\{0x5403,0x00\},\$
- {0x3406,0x00},
- $\{0x5180, 0xff\},\$
- {0x5181,0x52},
- {0x5182,0x11},
- $\{0x5183,0x14\},$
- {0x5184,0x25},
- {0x5185,0x24},
- {0x5186,0x06},
- (0.5105,0.00)
- {0x5187,0x08},
- {0x5188,0x08},
- {0x5189 ,0x7c},
- {0x518a ,0x60},
- {0x518b ,0xb2},
- {0x518c ,0xb2},
- $\{0x518d, 0x44\},\$
- $\{0x518e,0x3d\},$
- {0x518f,0x58},
- $\{0x5190,0x46\},$
- {0x5191,0xf8},
- {0x5192,0x04},
- {0x5193,0x70},
- {0x5194,0xf0},
- {0x5195,0xf0},
- {0x5196,0x03},
- {0x5197,0x01},
- {0x5198,0x04},
- {0x5199,0x12},
- {0x519a ,0x04},
- {0x519b,0x00},
- {0x519c,0x06},
- {0x519d ,0x82},
- (ono : ou ; ono_)
- $\{0x519e,0x00\},\$
- $\{0x5025,0x80\},\$
- {0x5583,0x40},
- $\{0x5584,0x40\},\$
- {0x5580,0x02},
- {0x5000,0xcf},
- {0x3710 ,0x10},
- $\{0x3632,0x51\},\$
- {0x3702,0x10},
- {0x3703,0xb2},
- $\{0x3704,0x18\},\$

```
{0x370b,0x40},
```

- {0x370d,0x03},
- $\{0x3631,0x01\},\$
- {0x3632,0x52},
- {0x3606,0x24},
- {0x3620,0x96},
- {0x5785,0x07},
- tokor oo ,okor j
- {0x3a13 ,0x30},
- $\{0x3600,0x52\},$
- {0x3604,0x48},
- {0x3606,0x1b},
- $\{0x370d, 0x0b\},\$
- {0x370f,0xc0},
- $\{0x3709,0x01\},\$
- {0x3823,0x00},
- {0x5007,0x00},
- $\{0x5009,0x00\},\$
- {0x5011,0x00},
- {0x5013 ,0x00},
- (0,500,0,000)
- {0x519e,0x00},
- {0x5086,0x00},
- $\{0x5087,0x00\},\$
- {0x5088,0x00},
- $\{0x5089,0x00\},\$
- {0x302b,0x00},
- {0x3808,0x01},
- {0x3809,0x40},
- {0x380a ,0x00},
- {0x380b,0xf0},
- {0x3a00 ,0x78},
- {0x5001,0xFF},
- toxooo i ,oxi i j
- {0x5583,0x50},
- {0x5584 ,0x50},
- $\{0x5580,0x02\},\$
- {0x3c01,0x80},
- $\{0x3c00,0x04\},$
- $\{0x5800, 0x48\},\$
- {0x5801,0x31},
- $\{0x5802,0x21\},\$
- $\{0x5803, 0x1b\},\$
- {0x5804,0x1a},
- $\{0x5805,0x1e\},\$

```
{0x5806,0x29},
```

- {0x5807,0x38},
- $\{0x5808, 0x26\},\$
- $\{0x5809,0x17\},$
- {0x580a,0x11},
- {0x580b,0xe},
- {0x580c,0xd},
- $\{0x580d, 0xe\},\$
- {0x580e,0x13},
- $\{0x580f, 0x1a\},\$
- $\{0x5810,0x15\},\$
- {0x5811,0xd},
- {0x5812,0x8},
- {0x5813,0x5},
- {0x5814,0x4},
- $\{0x5815,0x5\},\$
- {0x5816,0x9},
- {0x5817,0xd},
- $\{0x5818,0x11\},$
- {0x5819,0xa},
- $\{0x581a,0x4\},\$
- $\{0x581b, 0x0\},\$
- $\{0x581c, 0x0\},\$
- $\{0x581d, 0x1\},\$
- $\{0x581e,0x6\},\$
- $\{0x581f,0x9\},\$
- {0x5820,0x12},
- {0x5821,0xb},
- {0x5822,0x4},
- {0x5823,0x0},
- $\{0x5824,0x0\},\$
- {0x5825,0x1},
- {0x5826,0x6},
- {0x5827,0xa},
- {0x5828,0x17},
- {0x5829,0xf},
- $\{0x582a,0x9\},\$
- $\{0x582b, 0x6\},\$
- $\{0x582c, 0x5\},\$
- $\{0x582d, 0x6\},\$
- {0x582e ,0xa },
- $\{0x582f,0xe\},\$
- $\{0x5830,0x28\},\$

```
\{0x5831,0x1a\},\
```

- {0x5832,0x11},
- {0x5833,0xe},
- {0x5834,0xe},
- $\{0x5835,0xf\},\$
- $\{0x5836,0x15\},$
- $\{0x5837,0x1d\},\$
- $\{0x5838, 0x6e\},\$
- {0x5839,0x39},
- {0x583a,0x27},
- $\{0x583b, 0x1f\},\$
- {0x583c,0x1e},
- {0x583d,0x23},
- $\{0x583e, 0x2f\},\$
- {0x583f,0x41},
- $\{0x5840,0xe\},\$
- $\{0x5841,0xc\},\$
- {0x5842,0xd},
- {0x5843,0xc},
- $\{0x5844,0xc\},\$
- $\{0x5845,0xc\},\$
- $\{0x5846,0xc\},\$
- $\{0x5847,0xc\},\$
- {0x5848,0xd},
- {0x5849,0xe},
- {0x584a,0xe},
- {0x584b,0xa},
- {0x584c,0xe},
- {0x584d ,0xe },
- $\{0x584e,0x10\},\$
- {0x584f,0x10},
- $\{0x5850,0x11\},\$
- {0x5851,0xa},
- $\{0x5852,0xf\},\$
- {0x5853,0xe},
- $\{0x5854,0x10\},\$
- $\{0x5855,0x10\},\$
- {0x5856, 0x10},
- {0x5857,0xa},
- {0x5858,0xe},
- {0x5859,0xe},
- $\{0x585a, 0xf\},\$
- $\{0x585b, 0xf\},\$

```
\{0x585c, 0xf\},\
```

- {0x585d,0xa},
- $\{0x585e,0x9\},\$
- $\{0x585f, 0xd\},\$
- $\{0x5860,0xc\},\$
- {0x5861,0xb},
- {0x5862,0xd},
- {0x5863,0x7},
- {0x5864,0x17},
- {0x5865,0x14},
- (0vE066 0v40)
- {0x5866,0x18},
- {0x5867,0x18},
- {0x5868,0x16},
- {0x5869 ,0x12},
- {0x586a ,0x1b},
- {0x586b ,0x1a},
- $\{0x586c, 0x16\},\$
- $\{0x586d, 0x16\},\$
- {0x586e,0x18},
- {0x586f,0x1f},
- {0x5870,0x1c},
- {0x5871,0x16},
- (0 =0=0 0 40)
- {0x5872,0x10},
- $\{0x5873,0xf\},\$
- {0x5874,0x13},
- {0x5875,0x1c},
- $\{0x5876,0x1e\},\$
- $\{0x5877, 0x17\},\$
- $\{0x5878,0x11\},$
- $\{0x5879,0x11\},$
- {0x587a,0x14},
- {0x587b,0x1e},
- {0x587c ,0x1c},
- {0x587d,0x1c},
- {0x587e ,0x1a},
- $\{0x587f, 0x1a\},\$
- $\{0x5880,0x1b\},\$
- $\{0x5881,0x1f\},$
- {0x5882,0x14},
- $\{0x5883,0x1a\},\$
- $\{0x5884,0x1d\},\$
- $\{0x5885,0x1e\},\$
- $\{0x5886,0x1a\},$

```
\{0x5887,0x1a\},\
{0x5180,0xff},
\{0x5181,0x52\},\
\{0x5182,0x11\},\
\{0x5183,0x14\},
\{0x5184,0x25\},\
\{0x5185,0x24\},\
\{0x5186,0x14\},
\{0x5187,0x14\},
\{0x5188,0x14\},
{0x5189,0x69},
{0x518a,0x60},
{0x518b,0xa2},
\{0x518c, 0x9c\},\
{0x518d, 0x36},
{0x518e,0x34},
\{0x518f,0x54\},\
\{0x5190,0x4c\},\
{0x5191,0xf8},
\{0x5192,0x04\},\
\{0x5193,0x70\},\
{0x5194,0xf0},
{0x5195,0xf0},
{0x5196,0x03},
\{0x5197,0x01\},\
{0x5198,0x05},
\{0x5199, 0x2f\},\
\{0x519a,0x04\},
\{0x519b, 0x00\},\
{0x519c,0x06},
{0x519d,0xa0},
{0x519e,0xa0},
{0x528a,0x00},
\{0x528b, 0x01\},\
\{0x528c,0x04\},\
\{0x528d, 0x08\},\
{0x528e,0x10},
{0x528f,0x20},
\{0x5290,0x30\},\
\{0x5292,0x00\},\
\{0x5293,0x00\},\
```

```
\{0x5294,0x00\},\
```

- {0x5295,0x01},
- $\{0x5296,0x00\},\$
- $\{0x5297,0x04\},\$
- {0x5298,0x00},
- {0x5299,0x08},
- $\{0x529a,0x00\},\$
- {0x529b,0x10},
- {0x529c,0x00},
- $\{0x529d, 0x20\},\$
- $\{0x529e,0x00\},\$
- {0x529f,0x30},
- $\{0x5282,0x00\},\$
- $\{0x5300,0x00\},\$
- {0x5301,0x20},
- {0x5302,0x00},
- $\{0x5303,0x7c\},\$
- $\{0x530c,0x00\},\$
- {0x530d,0x10},
- {0x530e,0x20},
- {0x530f,0x80},
- $\{0x5310,0x20\},\$
- {0x5311,0x80},
- {0x5308,0x20},
- {0x5309,0x40},
- $\{0x5304,0x00\},\$
- {0x5305,0x30},
- $\{0x5306,0x00\},\$
- $\{0x5307,0x80\},\$
- $\{0x5314,0x08\},\$
- {0x5315,0x20},
- $\{0x5319,0x30\},\$
- $\{0x5316,0x10\},\$
- $\{0x5317,0x00\},\$
- $\{0x5318,0x02\},\$
- $\{0x5380,0x01\},\$
- $\{0x5381,0x00\},\$
- $\{0x5382,0x00\},\$
- $\{0x5383,0x1f\},\$
- $\{0x5384,0x00\},\$
- {0x5385,0x06},
- $\{0x5386,0x00\},\$

```
{0x5387,0x00},
```

- $\{0x5388,0x00\},\$
- {0x5389,0xE1},
- {0x538A,0x00},
- {0x538B ,0x2B},
- {0x538C ,0x00},
- {0x538D,0x00},
- {0x538E ,0x00},
- (0. 5005 0. 40)
- $\{0x538F,0x10\},$
- $\{0x5390,0x00\},$
- {0x5391,0xB3},
- $\{0x5392,0x00\},$
- {0x5393,0xA6},
- $\{0x5394,0x08\},\$
- $\{0x5480,0x0c\},\$
- $\{0x5481,0x18\},\$
- {0x5482,0x2f},
- $\{0x5483,0x55\},\$
- {0x5484,0x64},
- {0x5485,0x71},
- {0x5486,0x7d},
- (0 = 10= 0 0=)
- {0x5487,0x87}, {0x5488,0x91},
- {0x5489,0x9a},
- toko 100 jokouj
- {0x548A ,0xaa},
- {0x548B ,0xb8},
- $\{0x548C,0xcd\},$
- {0x548D ,0xdd},
- {0x548E ,0xea},
- $\{0x548F,0x1d\},$
- $\{0x5490,0x05\},\$
- {0x5491,0x00},
- {0x5492,0x04},
- (0.00.00.00.00.00)
- {0x5493,0x20},
- {0x5494,0x03},
- {0x5495,0x60},
- {0x5496,0x02},
- {0x5497,0xB8},
- $\{0x5498,0x02\},\$
- {0x5499,0x86},
- {0x549A,0x02},
- {0x549B,0x5B},

```
{0x549C,0x02},
```

- {0x549D,0x3B},
- {0x549E,0x02},
- {0x549F,0x1C},
- {0x54A0 ,0x02},
- {0x54A1,0x04},
- {0x54A2,0x01},
- {0x54A3 ,0xED},
- $\{0x54A4,0x01\},$
- {0x54A5 ,0xC5},
- $\{0x54A6,0x01\},\$
- {0x54A7,0xA5},
- $\{0x54A8,0x01\},\$
- $\{0x54A9,0x6C\},\$
- $\{0x54AA, 0x01\},\$
- {0x54AB,0x41},
- {0x54AC,0x01},
- {0x54AD,0x20},
- {0x54AE,0x00},
- {0x54AF,0x16},
- {0x54B0 ,0x01},
- TOVO TOO 'OVO I',
- {0x54B1,0x20},
- {0x54B2 ,0x00},
- {0x54B3,0x10},
- {0x54B4,0x00},
- {0x54B5,0xf0},
- {0x54B6,0x00},
- {0x54B7,0xDF},
- $\{0x5402,0x3f\},\$
- $\{0x5403,0x00\},\$
- $\{0x5500,0x10\},\$
- $\{0x5502,0x00\},\$
- {0x5503,0x06},
- {0x5504,0x00},
- $\{0x5505,0x7f\},$
- {0x5025,0x80},
- {0x3a0f,0x30},
- $\{0x3a10,0x28\},\$
- {0x3a1b,0x30},
- {0x3a1e,0x28},
- $\{0x3a11,0x61\},\$

```
{0x3a1f,0x10},
{0x5688,0xfd},
{0x5689,0xdf},
{0x568a,0xfe},
{0x568b,0xef},
{0x568c,0xfe},
{0x568d,0xef},
{0x568d,0xef},
{0x568f,0xaa},
{0x568f,0xaa},
```

Delay 100 Delay 100

To set as JPEG:

Delay 100

wrSensorRegs16 8(OV5642 JPEG Capture QSXGA);

```
// OV5642_ QSXGA _YUV7.5 fps
// 24 MHz input clock, 24Mhz pclk
// jpeg mode 7.5fps
{0x3503,0x07},
                     //AEC Manual Mode Control
\{0x3000, 0x00\},\
                     //SYSTEM RESET00
{0x3001,0x00},
                     //Reset for Individual Block
{0x3002,0x00},
                     //Reset for Individual Block
{0x3003,0x00},
                     //Reset for Individual Block
{0x3005,0xff},
                     //Clock Enable Control
{0x3006,0xff},
                     //Clock Enable Control
{0x3007,0x3f},
                     //Clock Enable Control
{0x350c,0x07},
                     //AEC VTS Output high bits
{0x350d, 0xd0},
                     //AEC VTS Output low bits
{0x3602,0xe4},
                     //Analog Control Registers
                     //Analog Control Registers
{0x3612,0xac},
                     //Analog Control Registers
{0x3613,0x44},
{0x3621,0x27},
                     //Array Control 01
{0x3622,0x08},
                     //Analog Control Registers
```

```
{0x3623,0x22},
                    //Analog Control Registers
{0x3604,0x60},
                    //Analog Control Registers
{0x3705, 0xda},
                    //Analog Control Registers
{0x370a ,0x80},
                    //Analog Control Registers
{0x3801,0x8a},
                    //HS
{0x3803,0x0a},
                    //VS
{0x3804, 0x0a},
                    //HW
{0x3805,0x20},
                    //HW
{0x3806, 0x07},
                    //VH
{0x3807,0x98},
                    //VH
{0x3808, 0x0a},
                    //DVPHO
{0x3809,0x20},
                    //DVPHO
{0x380a,0x07},
                    //DVPVO
{0x380b ,0x98},
                    //DVPVO
\{0x380c, 0x0c\},\
                    //HTS
{0x380d, 0x80},
                    //HTS
{0x380e ,0x07},
                    //VTS
{0x380f,0xd0},
                    //VTS
{0x3810,0xc2},
                    //Horizontal and Vertical Offset setting
{0x3815,0x44},
                   //Possibly DVP PCLK divider control?
{0x3818,0xc8},
                    //Mirror NO, Compression enable
{0x3824,0x01},
                    //RSV
{0x3827,0x0a},
                    //RSV
{0x3a00, 0x78},
                    //AEC System Control 0
{0x3a0d ,0x10},
                    //60 Hz Max Bands in One Frame
{0x3a0e ,0x0d},
                    //50 Hz Max Bands in One Frame
{0x3a10, 0x32},
                    //Stable Range Low Limit (enter)
{0x3a1b ,0x3c},
                    //Stable Range High Limit (go out)
{0x3a1e ,0x32},
                    //Stable Range Low Limit (go out)
{0x3a11,0x80},
                    //Step Manual Mode, Fast Zone High Limit
{0x3a1f,0x20},
                    //Step Manual Mode, Fast Zone Low Limit
{0x3a00, 0x78},
                    //AEC System Control 0
{0x460b ,0x35},
                    //RSV VFIFO Control 0B
\{0x471d, 0x00\},\
                    //DVP CONTROL 1D
{0x4713,0x03},
                    //COMPRESSION MODE SELECT mode3
\{0x471c, 0x50\},\
                    //RSV
                    //AVG X END
{0x5682,0x0a},
{0x5683,0x20},
                    //AVG X END
{0x5686,0x07},
                    //AVG Y END
{0x5687,0x98},
                    //AVG Y END
\{0x5001,0x4f\},
                    //ISP CONTROL 01, UV adjust/Line stretch/UV average/Color
                     matrix/AWB enable
\{0x589b, 0x00\},\
                    //RSV
```

```
{0x589a ,0xc0},
                      //RSV
{0x4407,0x08},
                      //COMPRESSION CTRL07 Bit[5:0]: Quantization scale 0x02
{0x589b,0x00},
                      //RSV
{0x589a ,0xc0},
                      //RSV
\{0x3002,0x0c\},\
                      //Reset for Individual Block, Reset SFIFO/compression
{0x3002,0x00},
                      //Reset for Individual Block
{0x3503,0x00},
                      //AEC Manual Mode Control, Auto enable
//{0x3818, 0xa8},
//{0x3621, 0x17},
//{0x3801, 0xb0},
{0x5025, 0x80},
                      //ISP control 37
                      //controls image luminance: Stable range high limit (enter)
{0x3a0f, 0x48},
{0x3a10, 0x40},
                      //Stable range low limit (enter)
{0x3a1b, 0x4a},
                      //Stable range high limit (go out)
\{0x3a1e, 0x3e\},\
                     //Stable range low limit (go out)
\{0x3a11, 0x70\},\
                     //Step Manual mode, fast zone high limit
{0x3a1f, 0x20},
                      //step manual zone, fast zone low limit
{0xffff, 0xff},
```

wrSensorRegs16 8(ov5642 320x240);

```
{0x3800,0x1},
                   //TIMING HS
{0x3801,0xa8},
                   //TIMING HS
{0x3802,0x0},
                   //TIMING VS
{0x3803,0xA},
                   //TIMING VS
{0x3804,0xA},
                   //TIMING HW
{0x3805,0x20},
                   //TIMING HW
{0x3806, 0x7},
                   //TIMING VH
{0x3807,0x98},
                   //TIMING VH
{0x3808,0x1},
                   //TIMING DVPHO
{0x3809, 0x40},
                   //TIMING DVPHO
{0x380a ,0x0 },
                   //TIMING DVPVO
\{0x380b, 0xF0\},\
                   //TIMING DVPVO
{0x380c,0xc},
                   //TIMING HTS
{0x380d ,0x80},
                   //TIMING HTS
\{0x380e,0x7\},\
                   //TIMING VTS
{0x380f,0xd0},
                   //TIMING VTS
\{0x5001,0x7f\},\
                   //ISP CONTROL 01
```

```
\{0x5680,0x0\},\
                   //AVG X START
{0x5681,0x0},
                   //AVG X START
{0x5682,0xA},
                   //AVG X END
{0x5683,0x20},
                   //AVG X END
                   //AVG Y START
{0x5684,0x0},
{0x5685,0x0},
                   //AVG Y Y START
\{0x5686,0x7\},
                   //AVG Y END
                   //AVG Y END
{0x5687,0x98},
{0x3801, 0xb0},
                   //TIMING TC REG18
{Oxffff, Oxff},
```

Delay 100

wrSensorReg16_8(0x3818, 0xa8); //TIMING TC REG18

wrSensorReg16_8(0x3621, 0x10); //ARRAY CONTROL 01 - binning related

wrSensorReg16_8(0x3801, 0xb0); //TIMING CONTROL HS wrSensorReg16_8(0x4407, 0x04); //COMPRESSION CTRL07

wrSensorReg16_8(0x5888, 0x00); //LENC BRV SCALE

myCAM.write_reg(ARDUCHIP_TIM, VSYNC_LEVEL_MASK);

(write_bus) (-address: ARDUCHIP_TIM | **0x80** -data: VSYNC_LEVEL_MASK)

Where

ARDUCHIP_TIM = 0x03 //timing control

VSYNC_LEVEL_MASK = 0x02