```
; WIP Last Changed Rev: 9043
;*****************************************************************************
********
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;*****************************************************************************
*******/
;
; Default INI file for the AR0835HS Rev1 (Chip ID 0x4B06)
;
; $Revision: 42436 $
; $Date: 2015-04-16 14:11:43 -0700 (Thu, 16 Apr 2015) $
;
; This file holds groups of register presets (sections) specific for this sensor. The
; presets allow you to overwrite the power-on default settings with optimized register
; settings.
; The [Demo Initialization] section contains all optimized register settings for running
```

; the sensor in the demo environment. Other sections include settings optimized for a
; variety of situations like: Running at different master clock speeds, running under
; different lighting situations, running with different lenses, etc.
; Most of the demonstration software (DevWare, SensorDemo, ...) make use of this file
; to load and store the user presets.
;
; Keyname description:
; REG = assign a new register value
; BITFIELD = do a READ-MODIFY-WRITE to part of a register. The part is defined as a mask.
; FIELD_WR = Write any register, variable or bitfield, specified by its symbol name
; LOAD = load an alternate section from this section
; STATE = set non-register state
; DELAY = delay a certain amount of milliseconds before continuing
; POLL_REG = Read a register a specified number of times, or until the register
; value no longer meets a specified condition. You specify the
; register by its address, and it only works with simple registers.
; You also specify a delay between each iteration of the loop.
; POLL_FIELD = Like POLL_REG except you specify the register by its symbol name
; as defined in the sensor data file. POLL_FIELD works with any kind
; of register or variable.
;
; Keyname format:
; REG = [<page>,] <address>, <value> //<comment>
; BITFIELD = [<page>,] <address>, <mask>, <value>
; Some examples:
; BITFIELD=2, 0x05, 0x0020, 1 //for register 5 on page 2, set the 6th bit to 1
; BITFIELD=0x06, 0x000F, 0 //for register 6, clear the first 4 bits
; FIELD_WR = <registername>, [<bitfieldname>,] <value>
; LOAD = <section>
; STATE = <state>, <value>
; DELAY = <milliseconds>
; POLL_REG = [<page>,]<address>,<mask>,<condition>,DELAY=<milliseconds>,TIMEOUT=<count>
//<comment>
; Example: Poll every 50ms, stop when value <= 8 or after 5 times (250ms).
; POLL_REG= 2, 0x3F, 0xFFFF, >8, DELAY=50, TIMEOUT=5
; POLL_FIELD = <registername>, [<bitfieldname>,] <condition>, DELAY=<milliseconds>,
TIMEOUT=<count> //<comment>
; Example: Poll every 10 ms, stop when the value = 0, or after 500ms.
; POLL_FIELD= SEQ_CMD, !=0, DELAY=10, TIMEOUT=50
;
; <page> Optional address space for this register. Some sensors (mostly SOC's)
; have multiple register pages (see the sensor spec or developer's guide)
; <address> the register address
; <value> the new value to assign to the register

```
; <mask>                is the part of a register value that needs to be updated with a new value
; <registername> Name of a register or variable as defined the sensor data (.sdat) file
; <bitfieldname> Optional name of a bitfield
; <condition>       <   <=   ==   !=   >   or   >=   followd by a numerical value
; <count>              Number of iterations of the polling loop
; <section>          the name of another section to load
; <state>              non-register program state names [do not modify]
; <milliseconds> wait for this ammount of milliseconds before continuing
; <comment>          Some form of C-style comments are supported in this .ini file
;
;*****************************************************************************
*******/

  ================================================
[================= Demo Presets =================]

[RESET]
REG= 0x301A,0x19                    // Reset
Delay=10

[Demo Initialization]
ICON= icons\Smiley24.ico    //, CHECKED=CAM_SEQ_UV_COLOR_BOOST==4
TOOLTIP="Demo Initialization - Full Resolution 42 fps"

PROMPT= "Select the sensor interface.    Do not skip:","MIPI",LOAD=Demo Initialization - 4 lane
MIPI



[HIDDEN: Demo Initialization - 4 lane MIPI]
STATE= True Black Enable, 1
STATE= True Black Level, 42

REG= 0x301A,0x19                    // Reset Sensor
Delay=100
REG=0x301A, 0x0218                  // Disable Streaming

//Initialize for Mobile
LOAD = Mob_M8_42_24IN - HS MIPI

[=========================================]
[]

[=============Mode Settings - 4 Lane MIPI=============]
////////////////////////////////////////////////////////////////////////////////////////////
```

```
[Mob_M8_42_24IN - HS MIPI]
LOAD=RESET
Delay=10
XMCLK=24000000
STATE= Master Clock, 444440000
REG=0x301A, 0x0218                  //Disable Streaming
LOAD=Default_4B

//PLL Configuration
REG=0x3064, 0x5840
REG=0x0300, 0x0009
REG=0x0304, 0x0006
REG=0x0306, 0x00FA

LOAD=MIPI Timing HS
LOAD=Sequencer_v14p02
REG=0x0342, 0x1023      //0x0F75
REG=0x0340, 0x0A01
REG=0x0202, 0x0A00
REG= 0x0112, 0x0A0A                 //no DPCM

REG=0x301A, 0x001C

REG= 0x301A,0x021C                  // Enable Streaming
////////////////////////////////////////////////////////////////////////////////////////////////////
/

[Mob_M8_30_24IN]
LOAD=RESET

//Initialize
XMCLK=24000000
STATE= Master Clock, 292800000
REG=0x301A, 0x0218                  //Disable Streaming
LOAD=Default_4B

//PLL Configuration
REG= 0x0300, 0x5                    //VT_PIX_CLK_DIV=5
REG= 0x0302, 0x1                    //VT_SYS_CLK_DIV=1
REG= 0x0304, 0x4                    //PRE_PLL_CLK_DIV=4 //Note: 24MHz/4=6MHz
REG= 0x0306, 0x7A                   //PLL_MULTIPLIER=122 //Note: Running at 732MHz
REG= 0x0308, 0xA                    //OP_PIX_CLK_DIV=10
REG= 0x030A, 0x1                    //OP_SYS_CLK_DIV=1
```

REG= 0x3064, 0x7800
DELAY=1

//Initialize MIPI
LOAD=MIPI Timings
LOAD= Sequencer_v14p02

//Frame Timing
REG=0x0342, 0xECC		//LINE_LENGTH_PCK
REG= 0x340, 0xA10		//FRAME_LENGTH_LINES
REG= 0x202, 0xA01		//COARSE_INTEGRATION_TIME
REG= 0x0112, 0x0A0A		//no DPCM

//Array Readout Settings
REG= 0x0344, 0x8		//X_ADDR_START 8
REG= 0x0348, 0xCC7		//X_ADDR_END 3271
REG= 0x0346, 0x8		//Y_ADDR_START 8
REG= 0x034A, 0x997		//Y_ADDR_END 2455
REG= 0x034C, 0xCC0		//X_OUTPUT_SIZE 3264
REG= 0x034E, 0x990		//Y_OUTPUT_SIZE 2448
REG= 0x3040, 0x4041		//X_ODD_INC & Y_ODD_INC

//Sub-sampling
REG=0x0400, 0x0		//Scaling Enabling: 0= disable, 1= x-dir, 2= xy-dir
REG=0x0402, 0x0		//Co-Site Scaling
REG=0x0404, 0x10		//Scale_M = 16
REG=0x0408, 0x1010
REG=0x040A, 0x0210
REG=0x306E, 0x9080		//Data Path Select

LOAD=Default CCM
LOAD=Lens Correction
REG= 0x301A,0x021C		// Enable Streaming

//

[Mob_M6_55_24IN - HS MIPI]
LOAD=RESET
Delay=10
XMCLK=24000000
STATE= Master Clock, 444440000

```
REG=0x301A, 0x0218                  //Disable Streaming
LOAD=Default_4B

//PLL Configuration
REG=0x3064, 0x5840
REG=0x0300, 0x0009
REG=0x0304, 0x0006
REG=0x0306, 0x00FA

LOAD=MIPI Timing HS
LOAD=Sequencer_v14p02
REG=0x0342, 0x103C     //0x10DC
REG=0x30D4, 0xB030     //CC row code of 1
REG= 0x346, 0x130
REG= 0x34A, 0x85B
REG= 0x34C, 0xCC0
REG= 0x34E, 0x72C
REG= 0x340, 0x798
REG= 0x202, 0x700
REG= 0x0112, 0x0A0A                 //no DPCM

REG=0x301A, 0x001C

REG= 0x301A,0x021C                  // Enable Streaming
////////////////////////////////////////////////////////////////////////////

[Mob_M1080p_60_24IN]
XMCLK=24000000
LOAD=RESET
Delay=10
STATE= Master Clock, 448000000
REG=0x301A, 0x0218                  //Disable Streaming
LOAD=Default_4B
LOAD=Sequencer_v14p02

//PLL Configuration
REG=0x3064, 0x5800       ////smia pixclk div2 disable
REG=0x300, 0x3       ////vt_pix_clk
REG=0x304, 0x4       ////pre_pll
REG=0x306, 0x70       ////pll_multiplier
REG=0x31B0, 0x49       //MIPI Timings
REG=0x31B2, 0x28       //MIPI Timings
REG=0x31B4, 0x4535
REG=0x31B6, 0x31D4
```

```
REG=0x31B8, 0x3089
REG=0x31BA, 0x208
REG=0x31BC, 0x7          //end MIPI Timings
REG=0x342, 0xEE0  //line length pck
REG=0x340, 0x7A0  //image size settings
REG=0x202, 0x79F
REG= 0x0112, 0x0A0A                  //no DPCM

REG=0x346, 0x130
REG=0x34A, 0x84F
REG=0x34C, 0x780        //xoutput size
REG=0x34E, 0x438        //youtput size
REG= 0x400, 0x2           //enable_scaler
REG= 0x402,    0x0         //enable true-bayer scaling
REG= 0x306E, 0x9090
REG= 0x404, 0x1B   //scaler_size
REG= 0x408, 0x050A       //slice2_residual
REG= 0x40A, 0x14A//slice2_crop
REG=0x301A, 0x2C

REG=0x301A, 0x021C                   // Enable Streaming

////////////////////////////////////////////////////////////////////////////////////////////////////
/

[Mob_M720p_120_24IN_Bin2Sum2]
XMCLK=24000000
LOAD=RESET
Delay=10
STATE= Master Clock, 448000000
REG=0x301A, 0x0218                   //Disable Streaming
LOAD=Default_4B
LOAD=Sequencer_v14p02
REG=0x3064, 0x5800       ////smia pixclk div2 disable
REG=0x300, 0x3        ////vt_pix_clk
REG=0x304, 0x4        ////pre_pll
REG=0x306, 0x70       ////pll_multiplier
REG=0x31B0, 0x49        //MIPI Timings
REG=0x31B2, 0x28        //MIPI Timings
REG=0x31B4, 0x4535
REG=0x31B6, 0x31D4
REG=0x31B8, 0x3089
REG=0x31BA, 0x208
REG=0x31BC, 0x7          //end MIPI Timings
```

```
REG=0x342, 0xEEC  //Line Length PCK
REG=0x30D4, 0xB030      //cc row sample code 1
REG=0x340, 0x3CC        //frame length lines
REG=0x202, 0x3D0        //coarse integration time
REG= 0x0112, 0x0A0A                  //no DPCM

REG=0x346, 0x130        //yaddr start
REG=0x34A, 0x839        //y addr end
REG=0x344, 0x8          //xaddr start
REG=0x348, 0xCC5        //x addr end
REG=0x34C, 0x500        //xoutput size
REG=0x34E, 0x2D0        //y output size
REG= 0x400, 0x2          //scaler enable
REG= 0x402,    0x0  //enable true bayer scaling
REG= 0x306E,0x9090
REG= 0x404, 0x14
REG= 0x408, 0x1402
REG= 0x40A, 0x18D
REG=0x3040, 0x68C3    //read mode for bin2sum2
REG=0x301A, 0x2C

REG=0x301A, 0x021C                  // Enable Streaming

////////////////////////////////////////////////////////////////////////////////////////////////////
/

[Mob_M720p_120_24IN_Sum2Sum2]
XMCLK=24000000
LOAD=RESET
Delay=10
STATE= Master Clock, 448000000
REG=0x301A, 0x0218                  //Disable Streaming
LOAD=Default_4B
LOAD=Sequencer_v14p02
REG=0x3064, 0x5800        ////smia pixclk div2 disable
REG=0x300, 0x3        ////vt_pix_clk
REG=0x304, 0x4        ////pre_pll
REG=0x306, 0x70        ////pll_multiplier
REG=0x31B0, 0x49        //MIPI Timings
REG=0x31B2, 0x28        //MIPI Timings
REG=0x31B4, 0x4535
REG=0x31B6, 0x31D4
REG=0x31B8, 0x3089
REG=0x31BA, 0x208
```

```
REG=0x31BC, 0x7         //end MIPI Timings
REG=0x342, 0xEEC  //Line Length PCK
REG=0x30D4, 0xB030      //cc row sample code 1
REG=0x340, 0x3CC        //frame length lines
REG=0x202, 0x3D0        //coarse integration time
REG= 0x0112, 0x0A0A                 //no DPCM

REG=0x346, 0x130        //yaddr start
REG=0x34A, 0x839        //y addr end
REG=0x344, 0x8          //xaddr start
REG=0x348, 0xCC5        //x addr end
REG=0x34C, 0x500        //xoutput size
REG=0x34E, 0x2D0        //y output size
REG= 0x400, 0x2          //scaler enable
REG= 0x402,    0x0  //enable true bayer scaling
REG= 0x306E,0x9090
REG= 0x404, 0x14
REG= 0x408, 0x1402
REG= 0x40A, 0x18D
REG=0x3040, 0x68C3    //read mode for bin2sum2
REG=0x30DC, 0x0100
REG=0x3EE4, 0x3459
REG=0x301A, 0x2C

REG=0x301A, 0x021C                  // Enable Streaming


////////////////////////////////////////////////////////////////////////////////////////////////////
/


[Hidden: MIPI Timings]
REG= 0x31B0, 0x0060
REG= 0x31B2, 0x0042
REG= 0x31B4, 0x4C36
REG= 0x31B6, 0x5218
REG= 0x31B8, 0x404A
REG= 0x31BA, 0x028A
REG= 0x31BC, 0x0008
DELAY=1

[Hidden: MIPI Timing HS]
REG=0x31B0,0x0042
REG=0x31B2,0x0018
```

```
REG=0x31B4,0x7A68
REG=0x31B6,0x629F
REG=0x31B8,0x404C
REG=0x31BA,0x030D
REG=0x31BC,0x800A
[]

[--------- Camera Modes ---------]
[------4:3 Aspect Ratio-------]
[CAM_8M_46FPS_24IN]
LOAD=RESET
LOAD=Initialize for Camera
STATE = Master Clock, 398400000
//PLL Configuration (Ext=24MHz, vt_pix_clk=398.4MHz, op_pix_clk=99.6MHz)
//PLL Configuration (Ext=24MHz, vt_pix_clk=440.888888888889MHz, op_pix_clk=99.2MHz)
REG= 0x0300, 0x9 //VT_PIX_CLK_DIV=4.5
REG= 0x0302, 0x1 //VT_SYS_CLK_DIV=1
REG= 0x0304, 0x3 //PRE_PLL_CLK_DIV=3 //Note: 24MHz/3=8MHz
REG= 0x0306, 0x7C //PLL_MULTIPLIER=124 //Note: Running at 992MHz
REG= 0x0308, 0xA //OP_PIX_CLK_DIV=10
REG= 0x030A, 0x1 //OP_SYS_CLK_DIV=1
BITFIELD=0x3064, 0x2000, 0x0 //connect to PLL's enable_div2
BITFIELD=0x3064, 0x0040, 0x1 // shift back vt_pix_clk_div
DELAY=1
//set column correction sampling rows-- 16, 32, 64 or 128
BITFIELD=0x30D4, 0x6000, 0x0 //sampling_code
//Output size (Pixel address must start with EVEN and end with ODD!)
REG=0x0344, 0x8 //X_ADDR_START 8
REG=0x0348, 0xCC7 //X_ADDR_END 3271
REG=0x0346, 0x8 //Y_ADDR_START 8
REG=0x034A, 0x997 //Y_ADDR_END 2455
REG=0x034C, 0xCC0 //X_OUTPUT_SIZE 3264
REG=0x034E, 0x990 //Y_OUTPUT_SIZE 2448
BITFIELD=0x3040, 0x01C0, 0x1 //X_ODD_INC
BITFIELD=0x3040, 0x003F, 0x1 //Y_ODD_INC
//"X-Bin2 Y-Bin2" and "X-Bin2Skip2 Y-Bin2Skip2" Optimization
BITFIELD=0x3040, 0x2000,0 //BinSum 1: Enable
//Binning Configuration
BITFIELD=0x3040, 0x0200,0 //LOW_POWER
//"X-Bin2 Y-Skip2", "X-Bin2Skip2 Y-Bin2Skip2", "X-Bin2Skip2 Y-Skip4" Optimization
BITFIELD=0x3040, 0x0800, 0 //X_BIN_ENABLE
//Timing Configuration
REG=0x0342, 0xEE0//LINE_LENGTH_PCK 3808.88888888889
REG=0x0340, 0x9D4//FRAME_LENGTH_LINES 2516
```

REG=0x0202, 0x9D4 //COARSE_INTEGRATION_TIME 2516
REG=0x301A, 0x1C // Enable Streaming

[CAM_8M_42FPS_24IN]
LOAD=RESET
LOAD=Initialize for Camera
STATE = Master Clock, 398400000
//PLL Configuration (Ext=24MHz, vt_pix_clk=398.4MHz, op_pix_clk=99.6MHz)
REG= 0x0300, 0x5 //VT_PIX_CLK_DIV=5
REG= 0x0302, 0x1 //VT_SYS_CLK_DIV=1
REG= 0x0304, 0x2 //PRE_PLL_CLK_DIV=2 //Note: 24MHz/2=12MHz
REG= 0x0306, 0x55 //PLL_MULTIPLIER=85 //Note: Running at 996MHz
REG= 0x0308, 0xA //OP_PIX_CLK_DIV=10
REG= 0x030A, 0x1 //OP_SYS_CLK_DIV=1
BITFIELD=0x3064, 0x2000, 0x1 //connect to PLL's enable_div2
BITFIELD=0x3064, 0x0040, 0x0 // shift back vt_pix_clk_div
DELAY=1
//set column correction sampling rows-- 16, 32, 64 or 128
BITFIELD=0x30D4, 0x6000, 0x0 //sampling_code
//Output size (Pixel address must start with EVEN and end with ODD!)
REG=0x0344, 0x8 //X_ADDR_START 8
REG=0x0348, 0xCC7 //X_ADDR_END 3271
REG=0x0346, 0x8 //Y_ADDR_START 8
REG=0x034A, 0x997 //Y_ADDR_END 2455
REG=0x034C, 0xCC0 //X_OUTPUT_SIZE 3264
REG=0x034E, 0x990 //Y_OUTPUT_SIZE 2448
BITFIELD=0x3040, 0x01C0, 0x1 //X_ODD_INC
BITFIELD=0x3040, 0x003F, 0x1 //Y_ODD_INC
//"X-Bin2 Y-Bin2" and "X-Bin2Skip2 Y-Bin2Skip2" Optimization
BITFIELD=0x3040, 0x2000,0 //BinSum 1: Enable
//Binning Configuration
BITFIELD=0x3040, 0x0200,0 //LOW_POWER
//"X-Bin2 Y-Skip2", "X-Bin2Skip2 Y-Bin2Skip2", "X-Bin2Skip2 Y-Skip4" Optimization
BITFIELD=0x3040, 0x0800, 0 //X_BIN_ENABLE
//Timing Configuration
REG=0x0342, 0xED8//LINE_LENGTH_PCK 3736
REG=0x0340, 0x9EA//FRAME_LENGTH_LINES 2538
REG=0x0202, 0x9EB //COARSE_INTEGRATION_TIME 2539
REG=0x301A, 0x1C // Enable Streaming

[CAM_8M_30FPS_24IN]
//VCO freq 660MHZ

```
//To address GoPro demo3 flicker noise
LOAD=RESET
LOAD=Initialize for Camera
STATE = Master Clock, 293333333
REG= 0x0300, 0x9 //VT_PIX_CLK_DIV=4.5
REG= 0x0302, 0x1 //VT_SYS_CLK_DIV=1
REG= 0x0304, 0x2 //PRE_PLL_CLK_DIV=2 //Note: 24MHz/2=12MHz
REG= 0x0306, 0x37 //PLL_MULTIPLIER=55 //Note: Running at 660MHz
REG= 0x0308, 0xA //OP_PIX_CLK_DIV=10
REG= 0x030A, 0x1 //OP_SYS_CLK_DIV=1
BITFIELD=0x3064, 0x2000, 0x0 //connect to PLL's enable_div2
BITFIELD=0x3064, 0x0040, 0x1 // shift back vt_pix_clk_div
DELAY=1
BITFIELD=0x30D4, 0x6000, 0x0 //sampling_code
REG=0x0344, 0x8 //X_ADDR_START 8
REG=0x0348, 0xCC7 //X_ADDR_END 3271
REG=0x0346, 0x8 //Y_ADDR_START 8
REG=0x034A, 0x997 //Y_ADDR_END 2455
REG=0x034C, 0xCC0 //X_OUTPUT_SIZE 3264
REG=0x034E, 0x990 //Y_OUTPUT_SIZE 2448
REG=0x3030,0x4041 //Read Mode
REG=0x0400, 0x0 //Scaling Enabling: 0= disable, 1= x-dir, 2= xy-dir
REG=0x0402, 0x0 //Co-Site Scaling
REG=0x0404, 0x10 //Scale_M = 16
REG=0x0408, 0x1010 //Slice 2 Residual
REG=0x040A, 0x0210 //Slice 2 Crop
BITFIELD=0x306E, 0x0070, 0x0 //Data Path Select
REG=0x0342, 0xED8//LINE_LENGTH_PCK 3808.88888888889
REG=0x0340, 0x9EA//FRAME_LENGTH_LINES 3452
REG=0x0202, 0x9EA //COARSE_INTEGRATION_TIME 3452
REG=0x301A, 0x1C // Enable Streaming

[------16:9 Aspect Ratio------]
[CAM_6M_60FPS_24IN]
LOAD=RESET
LOAD=Initialize for Camera
STATE = Master Clock, 448000000
//Line time 8.6us
REG=0x301A,0x018//Stream Off
REG=0x3F3A, 0xFF03      //Quiet Time off
REG=0x30D4, 0xB030      //CC rows of 1
REG=0x31AE, 0x0304      //Enable serial HiSpi transfer
REG=0x3064, 0x5840      //PLL controls
REG=0x0346, 0x0130      //Y_addr start
```

REG=0x034A, 0x085B //Y_addr end
REG=0x034E, 0x072C //Y_ouput_size
REG=0x0300, 0x0009 //Vt Pix clk div
REG=0x0304, 0x0006 //Pre PLL clk div
REG=0x0306, 0x00FA //PLL Multiplier
REG=0x0342, 0x0EF0 //Line length Pclk
REG=0x0340, 0x0790 //Frame length lines
REG=0x0202, 0x0780 //Coarse integration time
REG=0x301A, 0x001C //Stream on

[CAM_6M_30FPS_24IN]
LOAD=RESET
LOAD=Initialize for Camera
STATE = Master Clock, 300000000
REG=0x301A,0x018//Stream Off
REG=0x3F3A, 0xFF03 //Quiet Time off
REG=0x0306, 0x004C
REG= 0x346, 0x130
REG= 0x34A, 0x85B
REG= 0x34C, 0xCC0
REG= 0x34E, 0x72C
REG= 0x342, 0x144E
REG= 0x340, 0x79D//Frame lenght lines
REG= 0x202, 0x79D//Corase integration time
REG=0x301A, 0x1C // Stream on

[---16:9 Aspect Ratio HD modes scaled from 6M----]
[CAM_1080P+EIS_30 Scaled from 6M_24IN]
LOAD=RESET
LOAD=Initialize for Camera
Delay=10 //100ms of pause time
STATE = Master Clock, 240000000
REG=0x31AE, 0x0304 //hi-spi for demo board data transfer
REG=0x3F3A,0xFF03 //Quiet Time off
REG=0x306,0x3F //PLL Multiplier for 30fps
REG=0x3002,0x130//ystart
REG=0x3006,0x85b//yend
REG=0x3004,0x8 //Xstart
REG=0x3008,0xCC7//Xend
REG=0x300c,0xec8 //line length
REG=0x300a,0x85C//frame length lines
REG=0x3012,0x85C//integration time
REG=0x400,0x2 //Enable horizontal and vertical scaling

```
REG=0x402,0x0          //Enable True bayer sampling
REG=0x404,0x16         //scaled multiplier to closest image size
REG=0x306E,0x9090      //True bayer scaling
REG=0x408,0x0B08       //residual of slice for odd and even row
REG=0x40A,0x016B       //Crop start_o, crop_e
REG=0x034C, 0x8F8      //xoutput size has to be divisible by 16 due to demo board limitation
REG=0x034E, 0x0514     //youtput size
REG=0x30D4, 0xF200     //CC rows set to 128
BITFIELD=0x301A,0x0004,1// Enable Streaming
```

```
[CAM_1080P+EIS_60 Scaled from 6M_24IN]
LOAD=RESET   //Just in case you lock up the sensor
LOAD=Initialize for Camera
STATE = Master Clock, 480000000
Delay=10 //100ms of pause time
REG=0x31AE, 0x0304     //hi-spi for demo board data transfer
REG=0x3F3A,0xFF03      //Quiet Time off
REG=0x0300,0x04        //Vt Pix clk Div
REG=0x0302,0x01        //Vt Sys clk Div
REG=0x0304,0x02        //PRE PLL Clk Div
REG=0x306,0x52         //PLL Multiplier for 30fps
REG=0x3002,0x130 //ystart
REG=0x3006,0x85b //yend
REG=0x3004,0x8         //Xstart
REG=0x3008,0xCC7 //Xend
REG=0x300c,0xec8  //line length
REG=0x300a,0x85C //frame length lines
REG=0x3012,0x85D//integration time
REG=0x400,0x2          //Enable horizontal and vertical scaling
REG=0x402,0x0          //Enable True bayer sampling
REG=0x404,0x16         //scaled multiplier to closest image size
REG=0x306E,0x9090      //True bayer scaling
REG=0x408,0x0B08       //residual of slice for odd and even row
REG=0x40A,0x016B       //Crop start_o, crop_e
REG=0x034C, 0x8F8      //xoutput size has to be divisible by 16 due to demo board limitation
REG=0x034E, 0x0514     //youtput size
REG=0x30D4, 0xF200     //CC rows set to 128
BITFIELD=0x301A,0x0004,1// Enable Streaming
```

```
[CAM 6M60 scaled to 1080P60 672mbps true bayer]
LOAD=RESET
LOAD=Initialize for Camera
```

REG= 0x0300, 0x3 //VT_PIX_CLK_DIV=3
REG= 0x0302, 0x1 //VT_SYS_CLK_DIV=1
REG= 0x0304, 0x2 //PRE_PLL_CLK_DIV=2 //Note: 24MHz/2=12MHz
REG= 0x0306, 0x38 //PLL_MULTIPLIER=56 //Note: Running at 672MHz
REG= 0x0308, 0xA //OP_PIX_CLK_DIV=10
REG= 0x030A, 0x1 //OP_SYS_CLK_DIV=1
BITFIELD=0x3064, 0x2000, 0x0 //connect to PLL's enable_div2
BITFIELD=0x3064, 0x0040, 0x0 // shift back vt_pix_clk_div
DELAY=1
BITFIELD=0x30D4, 0x6000, 0x2 //sampling_code
REG=0x0344, 0x8 //X_ADDR_START 8
REG=0x0348, 0xCC7 //X_ADDR_END 3271
REG=0x0346, 0x8 //Y_ADDR_START 8
REG=0x034A, 0x733 //Y_ADDR_END 1843
REG=0x034C, 0x780 //X_OUTPUT_SIZE 1920
REG=0x034E, 0x438 //Y_OUTPUT_SIZE 1086
BITFIELD=0x3040, 0x01C0, 0x1 //X_ODD_INC
BITFIELD=0x3040, 0x003F, 0x1 //Y_ODD_INC
BITFIELD=0x3040, 0x2000,0 //BinSum 1: Enable
BITFIELD=0x3040, 0x0800, 0 //X_BIN_ENABLE
//Scale Configuration
REG=0x0400, 0x2 //Scaling Enabling: 0= disable, 1= x-dir, 2= xy-dir
REG=0x0402, 0x0 //Co-Site Scaling
REG=0x0404, 0x1B //Scale_M = 27
REG=0x0408, 0x050A //Slice 2 Residual
REG=0x040A, 0x014A //Slice 2 Crop
BITFIELD=0x306E, 0x0070, 0x1 //Data Path Select
//Timing Configuration
REG=0x0342, 0xECA//LINE_LENGTH_PCK 3786.66666666667
REG=0x0340, 0x7AB//FRAME_LENGTH_LINES 1963
REG=0x0202, 0x7AB //COARSE_INTEGRATION_TIME 1963
STATE = Master Clock, 448000000
REG=0x301A, 0x1C // Enable Streaming

[CAM 6M60 scaled to 1080P60 672mbps true bin]
LOAD=RESET
LOAD=Initialize for Camera
REG= 0x0300, 0x3 //VT_PIX_CLK_DIV=3
REG= 0x0302, 0x1 //VT_SYS_CLK_DIV=1
REG= 0x0304, 0x2 //PRE_PLL_CLK_DIV=2 //Note: 24MHz/2=12MHz
REG= 0x0306, 0x38 //PLL_MULTIPLIER=56 //Note: Running at 672MHz
REG= 0x0308, 0xA //OP_PIX_CLK_DIV=10
REG= 0x030A, 0x1 //OP_SYS_CLK_DIV=1

BITFIELD=0x3064, 0x2000, 0x0 //connect to PLL's enable_div2
BITFIELD=0x3064, 0x0040, 0x0 // shift back vt_pix_clk_div
DELAY=1
BITFIELD=0x30D4, 0x6000, 0x2 //sampling_code
REG=0x0344, 0x8 //X_ADDR_START 8
REG=0x0348, 0xCC7 //X_ADDR_END 3271
REG=0x0346, 0x8 //Y_ADDR_START 8
REG=0x034A, 0x733 //Y_ADDR_END 1843
REG=0x034C, 0x780 //X_OUTPUT_SIZE 1920
REG=0x034E, 0x438 //Y_OUTPUT_SIZE 1086
BITFIELD=0x3040, 0x01C0, 0x1 //X_ODD_INC
BITFIELD=0x3040, 0x003F, 0x1 //Y_ODD_INC
BITFIELD=0x3040, 0x2000,0 //BinSum 1: Enable
BITFIELD=0x3040, 0x0800, 0 //X_BIN_ENABLE
//Scale Configuration
REG=0x0400, 0x2 //Scaling Enabling: 0= disable, 1= x-dir, 2= xy-dir
REG=0x0402, 0x0 //Co-Site Scaling
REG=0x0404, 0x1B //Scale_M = 27
REG=0x0408, 0x050A //Slice 2 Residual
REG=0x040A, 0x014A //Slice 2 Crop
REG=0x0306E,0x90A0 //True Bin scaling
//Timing Configuration
REG=0x0342, 0xECA//LINE_LENGTH_PCK 3786.66666666667
REG=0x0340, 0x7AB//FRAME_LENGTH_LINES 1963
REG=0x0202, 0x7AB //COARSE_INTEGRATION_TIME 1963
STATE = Master Clock, 448000000
REG=0x301A, 0x1C // Enable Streaming

[CAM 6M60 scaled to 1080P60 672mbps sum2x2]
LOAD=RESET
LOAD=Initialize for Camera
REG= 0x0300, 0x3 //VT_PIX_CLK_DIV=3
REG= 0x0302, 0x1 //VT_SYS_CLK_DIV=1
REG= 0x0304, 0x2 //PRE_PLL_CLK_DIV=2 //Note: 24MHz/2=12MHz
REG= 0x0306, 0x38 //PLL_MULTIPLIER=56 //Note: Running at 672MHz
REG= 0x0308, 0xA //OP_PIX_CLK_DIV=10
REG= 0x030A, 0x1 //OP_SYS_CLK_DIV=1
BITFIELD=0x3064, 0x2000, 0x0 //connect to PLL's enable_div2
BITFIELD=0x3064, 0x0040, 0x0 // shift back vt_pix_clk_div
DELAY=1
BITFIELD=0x30D4, 0x6000, 0x2 //sampling_code
REG=0x0344, 0x8 //X_ADDR_START 8
REG=0x0348, 0xCC7 //X_ADDR_END 3271

REG=0x0346, 0x8 //Y_ADDR_START 8
REG=0x034A, 0x733 //Y_ADDR_END 1843
REG=0x034C, 0x780 //X_OUTPUT_SIZE 1920
REG=0x034E, 0x438 //Y_OUTPUT_SIZE 1086
BITFIELD=0x3040, 0x01C0, 0x1 //X_ODD_INC
BITFIELD=0x3040, 0x003F, 0x1 //Y_ODD_INC
BITFIELD=0x3040, 0x2000,0 //BinSum 1: Enable
BITFIELD=0x3040, 0x0800, 0 //X_BIN_ENABLE
//Scale Configuration
REG=0x0400, 0x2 //Scaling Enabling: 0= disable, 1= x-dir, 2= xy-dir
REG=0x0402, 0x0 //Co-Site Scaling
REG=0x0404, 0x1B //Scale_M = 27
REG=0x0408, 0x050A //Slice 2 Residual
REG=0x040A, 0x014A //Slice 2 Crop
REG=0x0306E,0x90C0 //sum2x2 scaling
//Timing Configuration
REG=0x0342, 0xECA//LINE_LENGTH_PCK 3786.66666666667
REG=0x0340, 0x7AB//FRAME_LENGTH_LINES 1963
REG=0x0202, 0x7AB //COARSE_INTEGRATION_TIME 1963
STATE = Master Clock, 448000000
REG=0x301A, 0x1C // Enable Streaming

[CAM 6M60 scaled to 2176x1224_P60 672mbps xy scale]
LOAD=RESET
LOAD=Initialize for Camera
//PLL Configuration (Ext=24MHz, vt_pix_clk=448MHz, op_pix_clk=67.2MHz)
REG= 0x0300, 0x3 //VT_PIX_CLK_DIV=3
REG= 0x0302, 0x1 //VT_SYS_CLK_DIV=1
REG= 0x0304, 0x2 //PRE_PLL_CLK_DIV=2 //Note: 24MHz/2=12MHz
REG= 0x0306, 0x38 //PLL_MULTIPLIER=56 //Note: Running at 672MHz
REG= 0x0308, 0xA //OP_PIX_CLK_DIV=10
REG= 0x030A, 0x1 //OP_SYS_CLK_DIV=1
BITFIELD=0x3064, 0x2000, 0x0 //connect to PLL's enable_div2
BITFIELD=0x3064, 0x0040, 0x0 // shift back vt_pix_clk_div
DELAY=1
//set column correction sampling rows-- 16, 32, 64 or 128
BITFIELD=0x30D4, 0x6000, 0x0 //sampling_code
//Output size (Pixel address must start with EVEN and end with ODD!)
REG=0x0344, 0x8 //X_ADDR_START 8
REG=0x0348, 0xCC7 //X_ADDR_END 3271
REG=0x0346, 0x8 //Y_ADDR_START 8
REG=0x034A, 0x733 //Y_ADDR_END 1843
REG=0x034C, 0x880 //X_OUTPUT_SIZE 2176

REG=0x034E, 0x4C8 //Y_OUTPUT_SIZE 1224
BITFIELD=0x3040, 0x01C0, 0x1 //X_ODD_INC
BITFIELD=0x3040, 0x003F, 0x1 //Y_ODD_INC
//"X-Bin2 Y-Bin2" and "X-Bin2Skip2 Y-Bin2Skip2" Optimization
BITFIELD=0x3040, 0x2000,0 //BinSum 1: Enable
//Binning Configuration
BITFIELD=0x3040, 0x0200,0 //LOW_POWER
//"X-Bin2 Y-Skip2", "X-Bin2Skip2 Y-Bin2Skip2", "X-Bin2Skip2 Y-Skip4" Optimization
BITFIELD=0x3040, 0x0800, 0 //X_BIN_ENABLE
//Scale Configuration
REG=0x0400, 0x2 //Scaling Enabling: 0= disable, 1= x-dir, 2= xy-dir
REG=0x0402, 0x0 //Co-Site Scaling
REG=0x0404, 0x17 //Scale_M = 23
REG=0x0408, 0x1501 //Slice 2 Residual
REG=0x040A, 0x014B //Slice 2 Crop
BITFIELD=0x306E, 0x0070, 0x1 //Data Path Select
//Timing Configuration
REG=0x0342, 0xF3B//LINE_LENGTH_PCK 3900
REG=0x0340, 0x77A//FRAME_LENGTH_LINES 1914
REG=0x0202, 0x77A //COARSE_INTEGRATION_TIME 1914
STATE = Master Clock, 448000000
REG=0x301A, 0x1C // Enable Streaming

[CAM 6M60 scaled to 2176x1224_P30 672mbps xy scale]
LOAD=RESET
LOAD=Initialize for Camera
//PLL Configuration (Ext=24MHz, vt_pix_clk=448MHz, op_pix_clk=67.2MHz)
REG= 0x0300, 0x3 //VT_PIX_CLK_DIV=3
REG= 0x0302, 0x1 //VT_SYS_CLK_DIV=1
REG= 0x0304, 0x2 //PRE_PLL_CLK_DIV=2 //Note: 24MHz/2=12MHz
REG= 0x0306, 0x38 //PLL_MULTIPLIER=56 //Note: Running at 672MHz
REG= 0x0308, 0xA //OP_PIX_CLK_DIV=10
REG= 0x030A, 0x1 //OP_SYS_CLK_DIV=1
BITFIELD=0x3064, 0x2000, 0x0 //connect to PLL's enable_div2
BITFIELD=0x3064, 0x0040, 0x0 // shift back vt_pix_clk_div
DELAY=1
//set column correction sampling rows-- 16, 32, 64 or 128
BITFIELD=0x30D4, 0x6000, 0x0 //sampling_code
//Output size (Pixel address must start with EVEN and end with ODD!)
REG=0x0344, 0x8 //X_ADDR_START 8
REG=0x0348, 0xCC7 //X_ADDR_END 3271
REG=0x0346, 0x8 //Y_ADDR_START 8
REG=0x034A, 0x733 //Y_ADDR_END 1843

REG=0x034C, 0x880 //X_OUTPUT_SIZE 2176
REG=0x034E, 0x4C8 //Y_OUTPUT_SIZE 1224
BITFIELD=0x3040, 0x01C0, 0x1 //X_ODD_INC
BITFIELD=0x3040, 0x003F, 0x1 //Y_ODD_INC
//"X-Bin2 Y-Bin2" and "X-Bin2Skip2 Y-Bin2Skip2" Optimization
BITFIELD=0x3040, 0x2000,0 //BinSum 1: Enable
//Binning Configuration
BITFIELD=0x3040, 0x0200,0 //LOW_POWER
//"X-Bin2 Y-Skip2", "X-Bin2Skip2 Y-Bin2Skip2", "X-Bin2Skip2 Y-Skip4" Optimization
BITFIELD=0x3040, 0x0800, 0 //X_BIN_ENABLE
//Scale Configuration
REG=0x0400, 0x2 //Scaling Enabling: 0= disable, 1= x-dir, 2= xy-dir
REG=0x0402, 0x0 //Co-Site Scaling
REG=0x0404, 0x17 //Scale_M = 23
REG=0x0408, 0x1501 //Slice 2 Residual
REG=0x040A, 0x014B //Slice 2 Crop
BITFIELD=0x306E, 0x0070, 0x1 //Data Path Select
//Timing Configuration
REG=0x0342, 0xF3B//LINE_LENGTH_PCK 3900
REG=0x0340, 0x0EF4//FRAME_LENGTH_LINES 1914
REG=0x0202, 0x77A //COARSE_INTEGRATION_TIME 1914
STATE = Master Clock, 448000000
REG=0x301A, 0x1C // Enable Streaming

[CAM 6M60 scaled to 2176x1836_P60 672mbps x-scale only]
LOAD=RESET
LOAD=Initialize for Camera
//PLL Configuration (Ext=24MHz, vt_pix_clk=448MHz, op_pix_clk=67.2MHz)
REG= 0x0300, 0x3 //VT_PIX_CLK_DIV=3
REG= 0x0302, 0x1 //VT_SYS_CLK_DIV=1
REG= 0x0304, 0x2 //PRE_PLL_CLK_DIV=2 //Note: 24MHz/2=12MHz
REG= 0x0306, 0x38 //PLL_MULTIPLIER=56 //Note: Running at 672MHz
REG= 0x0308, 0xA //OP_PIX_CLK_DIV=10
REG= 0x030A, 0x1 //OP_SYS_CLK_DIV=1
BITFIELD=0x3064, 0x2000, 0x0 //connect to PLL's enable_div2
BITFIELD=0x3064, 0x0040, 0x0 // shift back vt_pix_clk_div
DELAY=1
//set column correction sampling rows-- 16, 32, 64 or 128
BITFIELD=0x30D4, 0x6000, 0x0 //sampling_code
//Output size (Pixel address must start with EVEN and end with ODD!)
REG=0x0344, 0x8 //X_ADDR_START 8
REG=0x0348, 0xCC7 //X_ADDR_END 3271
REG=0x0346, 0x8 //Y_ADDR_START 8

REG=0x034A, 0x733 //Y_ADDR_END 1843
REG=0x034C, 0x880 //X_OUTPUT_SIZE 2176
REG=0x034E, 0x72C //Y_OUTPUT_SIZE 1836
BITFIELD=0x3040, 0x01C0, 0x1 //X_ODD_INC
BITFIELD=0x3040, 0x003F, 0x1 //Y_ODD_INC
//"X-Bin2 Y-Bin2" and "X-Bin2Skip2 Y-Bin2Skip2" Optimization
BITFIELD=0x3040, 0x2000,0 //BinSum 1: Enable
//Binning Configuration
BITFIELD=0x3040, 0x0200,0 //LOW_POWER
//"X-Bin2 Y-Skip2", "X-Bin2Skip2 Y-Bin2Skip2", "X-Bin2Skip2 Y-Skip4" Optimization
BITFIELD=0x3040, 0x0800, 0 //X_BIN_ENABLE
//Scale Configuration
REG=0x0400, 0x2 //Scaling Enabling: 0= disable, 1= x-dir, 2= xy-dir
REG=0x0402, 0x0 //Co-Site Scaling
REG=0x0404, 0x17 //Scale_M = 23
REG=0x0408, 0x1501 //Slice 2 Residual
REG=0x040A, 0x014B //Slice 2 Crop
BITFIELD=0x306E, 0x0070, 0x1 //Data Path Select
//Timing Configuration
REG=0x0342, 0xF3B//LINE_LENGTH_PCK 3900
REG=0x0340, 0x77A//FRAME_LENGTH_LINES 1914
REG=0x0202, 0x77A //COARSE_INTEGRATION_TIME 1914
STATE = Master Clock, 448000000
REG=0x301A, 0x1C // Enable Streaming

[CAM 6M60 scaled to 2176x1836_P60 672mbps x-scale only]
LOAD=RESET
LOAD=Initialize for Camera
//PLL Configuration (Ext=24MHz, vt_pix_clk=448MHz, op_pix_clk=67.2MHz)
REG= 0x0300, 0x3 //VT_PIX_CLK_DIV=3
REG= 0x0302, 0x1 //VT_SYS_CLK_DIV=1
REG= 0x0304, 0x2 //PRE_PLL_CLK_DIV=2 //Note: 24MHz/2=12MHz
REG= 0x0306, 0x38 //PLL_MULTIPLIER=56 //Note: Running at 672MHz
REG= 0x0308, 0xA //OP_PIX_CLK_DIV=10
REG= 0x030A, 0x1 //OP_SYS_CLK_DIV=1
BITFIELD=0x3064, 0x2000, 0x0 //connect to PLL's enable_div2
BITFIELD=0x3064, 0x0040, 0x0 // shift back vt_pix_clk_div
DELAY=1
//set column correction sampling rows-- 16, 32, 64 or 128
BITFIELD=0x30D4, 0x6000, 0x0 //sampling_code
//Output size (Pixel address must start with EVEN and end with ODD!)
REG=0x0344, 0x8 //X_ADDR_START 8
REG=0x0348, 0xCC7 //X_ADDR_END 3271

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REG=0x0346, 0x8 //Y_ADDR_START 8
REG=0x034A, 0x733 //Y_ADDR_END 1843
REG=0x034C, 0x880 //X_OUTPUT_SIZE 2176
REG=0x034E, 0x72C //Y_OUTPUT_SIZE 1836
BITFIELD=0x3040, 0x01C0, 0x1 //X_ODD_INC
BITFIELD=0x3040, 0x003F, 0x1 //Y_ODD_INC
//"X-Bin2 Y-Bin2" and "X-Bin2Skip2 Y-Bin2Skip2" Optimization
BITFIELD=0x3040, 0x2000,0 //BinSum 1: Enable
//Binning Configuration
BITFIELD=0x3040, 0x0200,0 //LOW_POWER
//"X-Bin2 Y-Skip2", "X-Bin2Skip2 Y-Bin2Skip2", "X-Bin2Skip2 Y-Skip4" Optimization
BITFIELD=0x3040, 0x0800, 0 //X_BIN_ENABLE
//Scale Configuration
REG=0x0400, 0x1 //Scaling Enabling: 0= disable, 1= x-dir, 2= xy-dir
REG=0x0402, 0x0 //Co-Site Scaling
REG=0x0404, 0x17 //Scale_M = 23
REG=0x0408, 0x1501 //Slice 2 Residual
REG=0x040A, 0x014B //Slice 2 Crop
BITFIELD=0x306E, 0x0070, 0x1 //Data Path Select
//Timing Configuration
REG=0x0342, 0xF3B//LINE_LENGTH_PCK 3900
REG=0x0340, 0x0EF4//FRAME_LENGTH_LINES 3828 to reach 30fps
REG=0x0202, 0x77A //COARSE_INTEGRATION_TIME 1914
STATE = Master Clock, 448000000
REG=0x301A, 0x1C // Enable Streaming

[CAM_6M60_scaled to 720P+EIS_60_24IN xy-scale]
LOAD=RESET   //Just in case you lock up the sensor
LOAD=Initialize for Camera
STATE = Master Clock, 448000000
Delay=10 //100ms of pause time
REG= 0x0300, 0x3     //VT_PIX_CLK_DIV=3
REG= 0x0302, 0x1     //VT_SYS_CLK_DIV=1
REG= 0x0304, 0x2     //PRE_PLL_CLK_DIV=2 //Note: 24MHz/2=12MHz
REG= 0x0306, 0x38   //PLL_MULTIPLIER=56 //Note: Running at 672MHz
REG= 0x0308, 0xA     //OP_PIX_CLK_DIV=10
REG= 0x030A, 0x1     //OP_SYS_CLK_DIV=1
BITFIELD=0x3064, 0x2000, 0x0        //connect to PLL's enable_div2
BITFIELD=0x3064, 0x0040, 0x0        // shift back vt_pix_clk_div
BITFIELD=0x30D4, 0x6000, 0x2      // set column correction sampling rows
REG=0x0344, 0x8      //X_ADDR_START 8
REG=0x0348, 0xCC7         //X_ADDR_END 3271
REG=0x0346, 0x8      //Y_ADDR_START 8
REG=0x034A, 0x733         //Y_ADDR_END 1843
```

REG=0x034C, 0x500 //X_OUTPUT_SIZE 1280
REG=0x034E, 0x2D0 //Y_OUTPUT_SIZE 720
BITFIELD=0x3040, 0x01C0, 0x1 //X_ODD_INC
BITFIELD=0x3040, 0x003F, 0x1 //Y_ODD_INC
BITFIELD=0x3040, 0x2000,0
REG=0x0400, 0x2 //Scaling Enabling: 0= disable, 1= x-dir, 2= xy-dir
REG=0x0402, 0x0 //Co-Site Scaling
REG=0x0404, 0x26 //Scale_M = 38
REG=0x0408, 0x1E03 //Slice 2 Residual
REG=0x040A, 0x00C7 //Slice 2 Crop
BITFIELD=0x306E, 0x0070, 0x1 //Data Path Select
REG=0x0342, 0xEF6//LINE_LENGTH_PCK 3830
REG=0x0340, 0x79D //FRAME_LENGTH_LINES 1949
REG=0x0202, 0x79D //COARSE_INTEGRATION_TIME 1949
BITFIELD=0x301A,0x0004,1// Enable Streaming

[-------HFR Modes--------]
[CAM_QVGA_160_24IN - With skip4+rowsum]
LOAD=Initialize for Camera
REG=0x3F3A, 0xFF03 //Quiet Time off
REG=0x0344, 0x8
REG=0x0348, 0xCC1
REG=0x0346, 0x8
REG=0x034A, 0x991
REG=0x034C, 0x140
REG=0x034E, 0xF0
REG=0x0342, 0xEA0
REG=0x0340, 0x2C9
REG=0x0202, 0x2C0
REG=0x400, 0x2
REG=0x306E, 0x9090
REG=0x404, 0x28
REG=0x408, 0x1824
REG=0x40A, 0xC6
REG=0x3040, 0x61C7
REG=,0x30BC,0x04 //Y-offset values
REG=0x301A, 0x1C // Enable Streaming

[CAM_QVGA_240_24IN - With Xskip4/Yskip8]
LOAD=Initialize for Camera
STATE = Master Clock, 365000000
REG=0x3F3A, 0xFF03 //Quiet Time off
REG=0x30D4, 0xB200 //column correction code of 1

```
REG=0x0300,0x04   //Vt Pix clk div
REG=0x0302,0x01   //Vt Sys clk div
REG=0x0304,0x03   //Pre pll clk div
REG=0x0306,0x58   //Pll multiplier
REG=0x0344, 0x8
REG=0x0348, 0xCC1
REG=0x0346, 0x8
REG=0x034A, 0x991
REG=0x034C, 0x140       //y-output size
REG=0x034E, 0x0132      //X-output size
REG=0x0342, 0xF50       //Line length Pclk
REG=0x0340, 0x173
REG=0x0202, 0x175
REG=0x400, 0x1
REG=0x404, 0x28
REG=0x408, 0x1824
REG=0x40A, 0xC6
REG=0x3040, 0x61CF      //Read mode skip and scaling (Y skip8 and xskip4)
REG=0x301A, 0x1C // Enable Streaming


[CAM_VGA_160FPS_24IN With Xskip4/Yskip4]
LOAD=Initialize for Camera
STATE = Master Clock, 400000000
REG=0x301A,0x018//Stream Off
REG=0x3F3A, 0xFF03      //Quiet Time off
REG= 0x0300, 0x4 //VT_PIX_CLK_DIV=4
REG= 0x0302, 0x1 //VT_SYS_CLK_DIV=1
REG= 0x0304, 0x3 //PRE_PLL_CLK_DIV=3 //Note: 24MHz/3=8MHz
REG= 0x0306, 0x6A //PLL_MULTIPLIER=112 //Note: Running at 896MHz
REG= 0x0308, 0xA //OP_1/250PIX_CLK_DIV=10
REG= 0x030A, 0x1 //OP_SYS_CLK_DIV=1
BITFIELD=0x30D4, 0x6000, 0x1 //sampling_code
REG=0x0344, 0x8 //X_ADDR_START 8
REG=0x0348, 0xCC1 //X_ADDR_END 3265
REG=0x0346, 0x8 //Y_ADDR_START 8
REG=0x034A, 0x991 //Y_ADDR_END 2449
REG=0x034C, 0x280 //X_OUTPUT_SIZE 816
REG=0x034E, 0x1E0 //Y_OUTPUT_SIZE 612
//REG=0x3040, 61C7    //Read mode register
BITFIELD=0x3040, 0x01C0, 0x7 //X_ODD_INC
BITFIELD=0x3040, 0x003F, 0x7 //Y_ODD_INC
BITFIELD=0x3040, 0x2000,1 //BinSum 1: Enable
BITFIELD=0x3040, 0x0200,0 //LOW_POWER
```

```
//"X-Bin2 Y-Skip2", "X-Bin2Skip2 Y-Bin2Skip2", "X-Bin2Skip2 Y-Skip4" Optimization
BITFIELD=0x3040, 0x0800, 0 //X_BIN_ENABLE
//REG=0x0400, 0x0 //Scaling Enabling: 0= disable, 1= x-dir, 2= xy-dir
//REG=0x0402, 0x0 //Co-Site Scaling
//REG=0x0404, 0x10 //Scale_M = 16
//REG=0x0408, 0x1010 //Slice 2 Residual
//REG=0x040A, 0x0210 //Slice 2 Crop
BITFIELD=0x306E, 0x0070, 0x0 //Data Path Select
REG=0x0342, 0xED8//LINE_LENGTH_PCK 3800 changed
REG=0x0340, 0x2AB//FRAME_LENGTH_LINES 683
REG=0x0202, 0x2AB //COARSE_INTEGRATION_TIME 683
REG=0x301A, 0x1C // Enable Streaming


[CAM_VGA_180_24IN Xskip4/Yskip4_24IN]
XMCLK=24000000
LOAD=RESET
STATE=Master Clock, 448000000
LOAD=Initialize for Camera
REG=0x3064, 0x5800        ////smia pixclk div2 disable
REG=0x300, 0x3        ////vt_pix_clk
REG=0x304, 0x4        ////pre_pll
REG=0x306, 0x70        ////pll_multiplier
REG=0x300C, 0xEC8      //line_length_pck
REG=0x3004, 0x008       //x_start
REG=0x3008, 0xCC1       //x_end
REG=0x3002, 0x008       //y_start
REG=0x3006, 0x991       //y_end
REG=0x034C, 0x280       //x_output
REG=0x034E, 0x1E0       //y_output
REG=0x30D4, 0xB030    //sample code of 0 for CC rows
REG=0x300A, 0x298      //frame_length_lines
REG=0x3012, 0x280      //coarse_integration
REG=0x3040, 0x61C7
REG=0x400, 0x2          //enable_scaler
REG=0x402, 0x0          //enable true-bayer scaling
REG=0x306E, 0x9090
REG=0x404, 0x14
REG=0x408, 0x406
REG=0x40A, 0x18C
REG=0x31AE, 0x0304
REG=0x31BE, 0xC007
REG=0x301A, 0x2C
```

[CAM_M720p_120_24IN - With Bin2 + RowSum]
LOAD=Initialize for Camera
STATE = Master Clock, 448000000
REG=0x3F3A, 0xFF03 //Quiet Time off
REG=0x30D4, 0x9200 //sample code of 0 for CC rows
REG= 0x0300, 0x4 //VT_PIX_CLK_DIV=3
REG= 0x0302, 0x1 //VT_SYS_CLK_DIV=1
REG= 0x0304, 0x3 //PRE_PLL_CLK_DIV=4 //Note: 24MHz/4=6MHz
REG= 0x0306, 0x71 //PLL_MULTIPLIER=112 //Note: Running at 672MHz
REG=0x34C, 0x500
REG=0x34E, 0x2D0
REG=0x0344, 0x8
REG=0x0348, 0xCC5
REG=0x0346, 0x130
REG=0x034A, 0x859
REG=0x3040, 0x68C3
REG=0x400, 0x2
REG=0x404, 0x14
REG=0x306E, 0x9090 //true bayer scaling
REG=0x408, 0x1402
REG=0x40A, 0x18D
REG=0x342, 0xE98
REG=0x340, 0x3D7
REG=0x202, 0x300
REG=0x300C,0xED8//Line Length Pix clk
REG=0x300A,0X03D7 //Frame Length Lines
REG=0x3012,0X03D7 //Coarse integration time
REG=0x301A, 0x1C // Enable Streaming

[CAM_1.5M_60_24IN 16:9 - With Sum2_Sum2_24IN]
LOAD=Initialize for Camera
REG=0x3F3A, 0xFF03 //Quiet Time off
REG=0x306, 0x4C //PLL multiplier for 60fps,setting of 50 causes column artifacts in the image
REG=0x0300,0x5 //Vt pix clock div
REG=0x0302,0x1 //Vt sys clock div
REG=0x0304,0x2 //Pre PLL sys clock div
REG=0x300c, 0xED8 //Line Length PCLK maximizing for frame rate
REG=0x300a, 0x630 //Frame Length Line
REG=0x3012, 0x631 //Coarse integration time
REG=0x3040,0x64C3 //xy bin enable and row sum enable
REG=0x3EE4,0x3549 //col-sum enable

REG=0X3004,0x8 //x-add-start
REG=0x3008,0xcc5 //x-add-end
REG=0X3002,0x132//y-add-start
REG=0x3006,0x085F //y-add-end
REG=0x034C, 0x0660 //xoutput size
REG=0x034E, 0x0398 //youtput size
REG=0x301A, 0x1C // Enable Streaming

[CAM_1.5M_120_24IN 16:9 - With Sum2_Sum2_24IN]
LOAD=Initialize for Camera
STATE = Master Clock, 448000000
REG=0x3F3A, 0xFF03 //Quiet Time off
REG=0x30D4, 0x9200 //sample code of 0 for CC rows
REG= 0x0300, 0x4 //VT_PIX_CLK_DIV=3
REG= 0x0302, 0x1 //VT_SYS_CLK_DIV=1
REG= 0x0304, 0x3 //PRE_PLL_CLK_DIV=4 //Note: 24MHz/4=6MHz
REG= 0x0306, 0x71 //PLL_MULTIPLIER=112 //Note: Running at 672MHz
REG=0x34C, 0x500
REG=0x34E, 0x2D0
REG=0x0344, 0x8
REG=0x0348, 0xCC5
REG=0x0346, 0x130
REG=0x034A, 0x859
REG=0x3040, 0x64C3 //xy bin enable and row sum enable
REG=0x3EE4,0x3549 // Column sum
REG=0x400, 0x2
REG=0x404, 0x14
REG=0x306E, 0x9090 //true bayer scaling
REG=0x408, 0x1402
REG=0x40A, 0x18D
REG=0x342, 0xE98
REG=0x340, 0x3D7
REG=0x202, 0x300
REG=0x300C,0xED8//Line Length Pix clk
REG=0x300A,0X03D7 //Frame Length Lines
REG=0x3012,0X03D7 //Coarse integration time
REG=0x3EE4,0x3549 // Column sum
REG=0x301A, 0x1C // Enable Streaming

[----Camera Compression----]
[ALaw-8 8M30]
XMCLK=24000000
LOAD=RESET

STATE= Master Clock, 292000000
LOAD=Demo_2x_Settings
LOAD=Default_4B
LOAD=Sequencer_v14p02
REG=0x31AE, 0x0304
REG=0x300, 0x04
REG=0x304, 0x04
REG=0x306, 0x62
REG=0x308, 0x08
REG=0x342, 0xECC
REG=0x340, 0xA01
REG=0x202, 0xA00
REG=0x112, 0x0A08
REG=0x301A, 0x1C

[ALaw-8 6M60]
XMCLK=24000000
LOAD=RESET
STATE= Master Clock, 448000000
LOAD=Default_4B
LOAD=Sequencer_v14p02
REG=0x31AE, 0x0304
REG=0x300, 0x04
REG=0x304, 0x06
REG=0x306, 0xE0
REG=0x308, 0x08
REG=0x340, 0x79D
REG=0x202, 0x780
REG=0x112, 0x0A08
REG= 0x346, 0x130
REG= 0x34A, 0x85B
REG= 0x34C, 0xCC0
REG= 0x34E, 0x72C
REG=0x342, 0xEF0
REG=0x301A, 0x1C

[Toolbar: Defect Correction off]
REG=0x0301A, 0x0018 // stream off
REG=0x31E0, 0x00 //Defect correction disabled
REG=0x0301A, 0x001C //Stream on
[Toolbar: Defect Correction on]
REG=0x0301A, 0x0018 // stream off
REG=0x31E0, 0x0701 //Defect correction enabled

REG=0x0301A, 0x001C //Stream on

[-------- Lens Correction----------]

[Lens Correction 90% 06/14/12 16:09:47]
STATE= Lens Curve Red,
C04163212244073DE21BE3BF1B53EFE14CF3BC2BF6ABCAEF4E24001A7043CD9E13C3E2CC2A3B
CB37B4BBD6379E43D249666BEAB3A32BEAABF4D3DB737D93E842801BE8579FCBDBE1CB13C24
08E23D7D46B4BBA6B7A3BD4DAABF3E8D0BD33DC2BFADBDEA7167BDC13D37
STATE= Lens Curve Green1,
C04163212244000E4D9BD7F93593E80864E3B3B020BBC2B97C93F87FDE43D0AF8803D898D58B
C94CF90BCC1610EBC752194BE2962F0BDBD5DE93D3FFFD13DCCFF26BE1FF8F4BD7519393CFDD
75F3D2629E8BC27177F3CA16E8D3E133EEDBCEA0B9CBD80A7ADBC97CD52
STATE= Lens Curve Green2,
C041632122440010F98BD8998993E825C443B55DFC8BC3831983F87A8283D0369D63D8D6046B
C8F0945BCC5409ABC64EB6ABE2777F4BDDDC0D93D3EDCFC3DD9BE87BE1F65D9BD742AB73CE5
D5283D275A31BC128CAA3C80054E3E12BC03BC8A3A7FBD807D82BCB9A9CC
STATE= Lens Curve Blue,
C04163212244088FCCCBE49EA673F0774BB3CB97952BD09EE6A4012C8353D4CCA713DF67E17B
D033E43BD57F0D3BD676EA3BEABADE5BECA20FE3DB541333E979FF4BEB6AA78BDE3602E3D87
60203D9654D8BC8B786DBD4EDBBD3E99641C3E18CECCBE01CAFFBDED62E8
STATE= Lens Correction Falloff, 90
STATE= Lens Correction Enable, 1

[Lens Correction 100% 06/14/12 16:36:44]
STATE= Lens Curve Red,
C0416321224406D6526BE3B21433F2781C03A3E16B4BBA5047A400182103CAEBF6C3E83133EB
CB01DF3BD778B263E6FC4ACBE91EBC2BEB92C613D6BA26D3E9BE21BBE4DE293BDD8DA433CD6
F1ED3D8E8A9DBBAAF7C6BD555BE33E7A5C103DC9C1D4BDC81CA3BDDE29CF
STATE= Lens Curve Green1,
C04163212243FFCB925BD72D3383EACF1BF3A3447F3BA4907003F8722DA3CEC1A773E03CDD0B
C87D578BCF895B63DE2642ABE14B245BE06A0443D0E55663E014C6BBDD0E3C7BD7B8AC13C0A
1FE03D2E2C26BAA314BBBC512E5F3DFEA97F3BECAC6DBD5B435CBD019F3F
STATE= Lens Curve Green2,
C04163212243FFD3D81BD7FCA0B3EAF154A39520875BAED7A713F87411F3CDCC1C13E010568B
C7D0A23BCF5F76D3DD94C3BBE17DF6CBE1A8E383D1555B83E09D764BDDBACF9BD71401B3C72
2F1D3D29314BBB334AA2BC68C2A43E0385133CCF0437BD623528BD1F0C09
STATE= Lens Curve Blue,
C04163212244088C828BE457BBC3F3971243C7A779DBC87E2D840164F8E3D5A35013E68DAAEB
D10D948BD7240773E2D2368BE99F0AEBEE74E0E3D8181193EB60F9FBE9C068BBE0622673DAE2
3BA3DAB5445BCAD8331BD8526E63E9169323E2B7A1EBDF3D9EABE0C3913
STATE= Lens Correction Falloff, 100
STATE= Lens Correction Enable, 1

[-------- PLL Settings----------]
[PLL for Mobile]
REG=0x304, 0x04
REG=0x306, 0x7A
REG= 0x31B0, 0x60 //frame_preamble
REG= 0x31B2, 0x42 //line_preamble
REG= 0x31B4, 0x1C36 //MIPI_timing_0
REG= 0x31B6, 0x5218 //MIPI_timing_1
REG= 0x31B8, 0x404A //MIPI_timing_2
REG= 0x31BA, 0x28A //MIPI_timing_3
REG= 0x31BC, 0x08 //MIPI_timing_4

[PLL for Camera]
REG=0x300, 0x4 // 768 (0x300)Wrote 4 (0x0004)
REG=0x304, 0x3 // Pre PLL clock divider
REG=0x306, 0x6E // 774 (0x306)Wrote 80 (0x0050)

[Hidden: HiSpi 10 bit mode]
REG=0x31AE, 0x304 // 12718 (0x31AE)Wrote 772 (0x0304)
REG=0x31BE, 0xC007
REG=0x112, 0xA0A // 274 (0x112)Wrote 2570 (0x0A0A)

[-------Camera settings----------]
[Demo_2x_Settings]
XMCLK=24000000
LOAD=RESET
STATE= Master Clock, 292800000

[FDOC Correction]
//Dark shading at high temperature
REG=0x3F20,0x0209 //Gth control
REG=0x3F38,0x2619 //Gth thres FDOC
REG=0x30EE,0x0320

[BLC_CAM]
REG=0x301A,0x0014 //unlock register
REG=0x0008,0x0032 //BLC level at 50
REG=0x301A,0x001C //Set streaming mode

[Disable_CRM]
BITFIELD=0x30D2,0x0001,1 //Disable CRM

[Enable_CRM]
BITFIELD=0x30D2,0x0001,0 //Enable CRM

[Hidden:CC_OFF]
//To improve col-fpn performance
REG=0x30D4, 0x5040 //column correction disabled

[Hidden:CC_ON]
REG=0x30D4, 0xD040 //column correction disabled

[Default_4B]
REG=0x3042, 0x0000
REG=0x30C0, 0x1810
REG=0x30C8, 0x0018
REG=0x30D2, 0x0000
REG=0x30D4, 0x3030 //4B
REG=0x30D6, 0x2200
REG=0x30DA, 0x0080
REG=0x30DC, 0x0080
REG=0x30EE, 0x0340 //4B
REG=0x316A, 0x8800
REG=0x316C, 0x8200
REG=0x3172, 0x0286
REG=0x3174, 0x8000
REG=0x317C, 0xE103
REG=0x3180, 0xB080 //4B
REG=0x31E0, 0x0741 //Configure 2 CDC k factor 29
REG=0x31E6, 0x0000
REG=0x3ECC, 0x0056
REG=0x3ED0, 0xC86A //4B
REG=0x3ED2, 0x66A6 //4B
REG=0x3ED4, 0x6ACC //4B
REG=0x3ED8, 0x7488 //4B
REG=0x3EDA, 0x77CB //4B
REG=0x3EDE, 0x6664
REG=0x3EE0, 0x26D5
REG=0x3EE4, 0x35C8 //4B
REG=0x3EE6, 0xB10C
REG=0x3EE8, 0x6E79
REG=0x3EEA, 0xC8B9 //4B
REG=0x3EFA, 0x9696 //4B
REG=0x3EFE, 0x77CC //4B
//2DDC setting
REG=0x3F00, 0x0051 //4B

```
REG=0x3F02, 0x00A2 //4B
REG=0x3F04, 0x0002 //4B
REG=0x3F06, 0x0004 //4B
REG=0x3F08, 0x0008 //4B
REG=0x3F0A, 0x0702 //4B
REG=0x3F0C, 0x0707 //4B
REG=0x3F10, 0x0505 //4B
REG=0x3F12, 0x0303 //4B
REG=0x3F14, 0x0101 //4B
REG=0x3F16, 0x0103 //4B
REG=0x3F18, 0x0114 //4B
REG=0x3F1A, 0x0112 //4B
REG=0x3F1C, 0x0014 //4B
REG=0x3F1E, 0x001E //4B
REG=0x3F20, 0x0209 //4B
REG=0x3F2C, 0x2210 //4B
REG=0x3F38, 0x44A8 //4B
REG=0x3F40, 0x1D1D //4B
REG=0x3F42, 0x1D1D //4B
REG=0x3F44, 0x1D1D //4B

[Initialize for Camera]
XMCLK=24000000
LOAD=RESET
Delay=10
LOAD=Default_4B
LOAD=HiSpi 10 bit mode
LOAD=PLL for Camera
Delay=10
LOAD = Sequencer_v14p02
BITFIELD=0x301A,0x0200,1    // mask bad frame


[----------ToolBars----------]
[Toolbar: Enable Streaming]
REG=0x301A, 0x1C  // Enable Streaming
[Toolbar: Disable Streaming]
REG=0x301A, 0x18  // Disable Streaming
[Toolbar:    ISO Gain settings]
MENUITEM= "ISO 100", LOAD=Hidden: ISO100
MENUITEM= "ISO 200", LOAD=Hidden: ISO200
MENUITEM= "ISO 400", LOAD=Hidden: ISO400
MENUITEM= "ISO 800", LOAD=Hidden: ISO800
MENUITEM= "ISO 1600", LOAD=Hidden: ISO1600
```

```
BITFIELD=0x301A,0x0004,0    // Enable Streaming

[Toolbar:    Analog Gain settings]
Tooltip="Select an ISO setting"
MENUITEM= "Gain 0.5x", LOAD=Gain 0.5x
MENUITEM= "Gain 1x", LOAD=Gain 1x
MENUITEM= "Gain 2x", LOAD=Gain 2x
MENUITEM= "Gain 3x", LOAD=Gain 3x
MENUITEM= "Gain 4x", LOAD=Gain 4x
MENUITEM= "Gain 6x", LOAD=Gain 6x
MENUITEM= "Gain 8x", LOAD=Gain 8x

BITFIELD=0x301A,0x0004,0    // Enable Streaming

[Hidden: Gain 0.5x]
REG=0x305E, 0x1011

[Hidden: Gain 1x]
REG=0x305E, 0x1000

[Hidden: Gain 2x]
REG=0x305E, 0x1001

[Hidden: Gain 3x]
REG=0x305E, 0x1002

[Hidden: Gain 4x]
REG=0x305E, 0x1005

[Hidden: Gain 6x]
REG=0x305E, 0x1006

[Hidden: Gain 8x]
REG=0x305E, 0x1007

[]
[Hidden: ISO100]
//Gain of 1.21
REG=0x305E, 0x1340
[Hidden: ISO200]
//Gain 2.33
REG=0x305E, 0x2540
[Hidden: ISO400]
//Gain 4.58
```

REG=0x305E, 0x24A1
[Hidden: ISO800]
//Gain of 9.07
REG=0x305E, 0x2445
[Hidden: ISO1600]
//Gain of 18.09
REG=0x305E, 0x2407
[------Color Correction Matrix------]
[Default CCM Values]
STATE=Color Correction, 1
STATE=White Balance, 3 //full custom CCM
STATE=WB Custom m00, 152
STATE=WB Custom m01, -44
STATE=WB Custom m02, -08
STATE=WB Custom m10, -10
STATE=WB Custom m11, 132
STATE=WB Custom m12, -20
STATE=WB Custom m20, -02
STATE=WB Custom m21, -84
STATE=WB Custom m22, 188

[CCM Values SNR10 DE 2.5]
STATE=Color Correction, 1
STATE=White Balance, 3 //full custom CCM
STATE=WB Custom m00, 160
STATE=WB Custom m01, -049
STATE=WB Custom m02, -011
STATE=WB Custom m10, -017
STATE=WB Custom m11, 127
STATE=WB Custom m12, -009
STATE=WB Custom m20, -014
STATE=WB Custom m21, -124
STATE=WB Custom m22, 239

[ON Semiconductor CCM Values D65_7/12/2012]
STATE=Color Correction, 1
STATE=White Balance, 3 //full custom CCM
STATE=WB Custom m00, 202
STATE=WB Custom m01, -039
STATE=WB Custom m02, -023
STATE=WB Custom m10, -012
STATE=WB Custom m11, 133
STATE=WB Custom m12, -047

STATE=WB Custom m20, -004
STATE=WB Custom m21, -090
STATE=WB Custom m22, 380

[ON Semiconductor CCM Values, D65]
STATE=Color Correction, 1
STATE=White Balance, 3 //full custom CCM
STATE=WB Custom m00, 151
STATE=WB Custom m01, -039
STATE=WB Custom m02, -012
STATE=WB Custom m10, -009
STATE=WB Custom m11, 133
STATE=WB Custom m12, -024
STATE=WB Custom m20, -003
STATE=WB Custom m21, -090
STATE=WB Custom m22, 193
[ON Semiconductor CCM Values, CWF]
STATE=Color Correction, 1
STATE=White Balance, 3 //full custom CCM
STATE=WB Custom m00, 165
STATE=WB Custom m01, -0667
STATE=WB Custom m02, 0104
STATE=WB Custom m10, -0110
STATE=WB Custom m11, 115
STATE=WB Custom m12, -0041
STATE=WB Custom m20, -0039
STATE=WB Custom m21, -126
STATE=WB Custom m22, 230

[ON Semiconductor CCM Values, A]
STATE=Color Correction, 1
STATE=White Balance, 3 //full custom CCM
STATE=WB Custom m00, 158
STATE=WB Custom m01, -0449
STATE=WB Custom m02, -0139
STATE=WB Custom m10, -0183
STATE=WB Custom m11, 129
STATE=WB Custom m12, -0109
STATE=WB Custom m20, -0131
STATE=WB Custom m21, -128
STATE=WB Custom m22, 241

[Hidden:AWB - 10 LUX D65]
REG= 0x3056, 0x1587 // GREEN1_GAIN
REG= 0x3058, 0x1F87 // BLUE_GAIN
REG= 0x305A, 0x1B87 // RED_GAIN
REG= 0x305C, 0x1587 // GREEN2_GAIN

[Hidden:AWB - 100 LUX D65]
REG= 0x3056, 0x1002 // GREEN1_GAIN
REG= 0x3058, 0x1902 // BLUE_GAIN
REG= 0x305A, 0x1682 // RED_GAIN
REG= 0x305C, 0x1002 // GREEN2_GAIN

[-------AR0835HS Sequencers--------]
[Sequencer_v14p02]
DELAY=100
// @00 Jump Table
REG=0x3D00, 0x04
REG=0x3D01, 0x77
REG=0x3D02, 0xCF
REG=0x3D03, 0xFF
REG=0x3D04, 0xFF
REG=0x3D05, 0xFF
REG=0x3D06, 0xFF
REG=0x3D07, 0xFF
// @04 Read
REG=0x3D08, 0x6F
REG=0x3D09, 0x40
REG=0x3D0A, 0x14
REG=0x3D0B, 0x0E
REG=0x3D0C, 0x23
REG=0x3D0D, 0xC2
REG=0x3D0E, 0x41
REG=0x3D0F, 0x20
REG=0x3D10, 0x30
REG=0x3D11, 0x54
REG=0x3D12, 0x80
REG=0x3D13, 0x42
REG=0x3D14, 0x00
REG=0x3D15, 0xC0
REG=0x3D16, 0x83
REG=0x3D17, 0x57
REG=0x3D18, 0x84

REG=0x3D19, 0x64
REG=0x3D1A, 0x64
REG=0x3D1B, 0x55
REG=0x3D1C, 0x81
REG=0x3D1D, 0x65
REG=0x3D1E, 0x65
REG=0x3D1F, 0x82
REG=0x3D20, 0x00
REG=0x3D21, 0xC0
REG=0x3D22, 0x6E
REG=0x3D23, 0x80
REG=0x3D24, 0x50
REG=0x3D25, 0x51
REG=0x3D26, 0x58
REG=0x3D27, 0x81
REG=0x3D28, 0x60
REG=0x3D29, 0x42
REG=0x3D2A, 0x81
REG=0x3D2B, 0x61
REG=0x3D2C, 0x81
REG=0x3D2D, 0x6E
REG=0x3D2E, 0x80
REG=0x3D2F, 0x5E
REG=0x3D30, 0x81
REG=0x3D31, 0x30
REG=0x3D32, 0x0C
REG=0x3D33, 0x84
REG=0x3D34, 0x63
REG=0x3D35, 0x82
REG=0x3D36, 0x5B
REG=0x3D37, 0x92
REG=0x3D38, 0x59
REG=0x3D39, 0x80
REG=0x3D3A, 0x5A
REG=0x3D3B, 0xA9
REG=0x3D3C, 0x30
REG=0x3D3D, 0x0C
REG=0x3D3E, 0x83
REG=0x3D3F, 0x59
REG=0x3D40, 0x59
REG=0x3D41, 0x82
REG=0x3D42, 0x5F
REG=0x3D43, 0x97
REG=0x3D44, 0x5E

REG=0x3D45, 0x80
REG=0x3D46, 0x6C
REG=0x3D47, 0x80
REG=0x3D48, 0x6D
REG=0x3D49, 0x98
REG=0x3D4A, 0x5E
REG=0x3D4B, 0x89
REG=0x3D4C, 0x50
REG=0x3D4D, 0x80
REG=0x3D4E, 0x51
REG=0x3D4F, 0x82
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REG=0x3D5E, 0x30
REG=0x3D5F, 0x94
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REG=0x3D66, 0x68
REG=0x3D67, 0x6A
REG=0x3D68, 0xAC
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REG=0x3D6B, 0x8D
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REG=0x3D6D, 0x96
REG=0x3D6E, 0x45
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REG=0x3D70, 0x6A

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REG=0x3D77, 0x90
REG=0x3D78, 0x67
REG=0x3D79, 0x64
REG=0x3D7A, 0x64
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REG=0x3D7C, 0x65
REG=0x3D7D, 0x65
REG=0x3D7E, 0x81
REG=0x3D7F, 0x58
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REG=0x3D82, 0xC0
REG=0x3D83, 0xB1
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REG=0x3D85, 0x96
REG=0x3D86, 0x53
REG=0x3D87, 0x82
REG=0x3D88, 0x5E
REG=0x3D89, 0x52
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REG=0x3D8B, 0x80
REG=0x3D8C, 0x58
REG=0x3D8D, 0x83
REG=0x3D8E, 0x64
REG=0x3D8F, 0x64
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REG=0x3D95, 0x0C
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REG=0x3D99, 0x60
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REG=0x3D9B, 0x82
REG=0x3D9C, 0x42

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REG=0x3D9E, 0x42
REG=0x3D9F, 0x80
REG=0x3DA0, 0x40
REG=0x3DA1, 0x81
REG=0x3DA2, 0x40
REG=0x3DA3, 0x89
REG=0x3DA4, 0x06
REG=0x3DA5, 0xC0
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REG=0x3DAB, 0x83
REG=0x3DAC, 0x43
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REG=0x3DAF, 0x83
REG=0x3DB0, 0x6B
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REG=0x3DB3, 0x83
REG=0x3DB4, 0x44
REG=0x3DB5, 0x81
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REG=0x3DB8, 0x06
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REG=0x3DBC, 0xA4
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REG=0x3DC2, 0x65
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REG=0x3DC4, 0x69
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REG=0x3DC6, 0x96
REG=0x3DC7, 0x40
REG=0x3DC8, 0x82

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REG=0x3DCA, 0x89
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REG=0x3DCE, 0x80
REG=0x3DCF, 0x42
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REG=0x3DD2, 0x83
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REG=0x3DD4, 0x92
REG=0x3DD5, 0x43
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REG=0x3DD7, 0x44
REG=0x3DD8, 0x85
REG=0x3DD9, 0x41
REG=0x3DDA, 0x81
REG=0x3DDB, 0x06
REG=0x3DDC, 0xC0
REG=0x3DDD, 0x81
REG=0x3DDE, 0x6A
REG=0x3DDF, 0x83
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REG=0x3DE2, 0x42
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REG=0x3DE8, 0x33
REG=0x3DE9, 0x00
REG=0x3DEA, 0x28
REG=0x3DEB, 0x30
REG=0x3DEC, 0x70
REG=0x3DED, 0x00
REG=0x3DEE, 0x6F
REG=0x3DEF, 0x40
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REG=0x3DF4, 0x41

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REG=0x3DF9, 0x5D
REG=0x3DFA, 0x80
REG=0x3DFB, 0x5A
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REG=0x3DFD, 0x57
REG=0x3DFE, 0x84
REG=0x3DFF, 0x64
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REG=0x3E01, 0x55
REG=0x3E02, 0x86
REG=0x3E03, 0x64
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REG=0x3E06, 0x88
REG=0x3E07, 0x65
REG=0x3E08, 0x82
REG=0x3E09, 0x54
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REG=0x3E0B, 0x58
REG=0x3E0C, 0x80
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REG=0x3E0E, 0xC0
REG=0x3E0F, 0x86
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REG=0x3E12, 0x10
REG=0x3E13, 0x30
REG=0x3E14, 0x9C
REG=0x3E15, 0x5C
REG=0x3E16, 0x80
REG=0x3E17, 0x6E
REG=0x3E18, 0x86
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REG=0x3E1B, 0x63
REG=0x3E1C, 0x9E
REG=0x3E1D, 0x59
REG=0x3E1E, 0x8C
REG=0x3E1F, 0x5E
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REG=0x3E25, 0x5F
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REG=0x3E27, 0x61
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REG=0x3E2D, 0x6E
REG=0x3E2E, 0x80
REG=0x3E2F, 0x64
REG=0x3E30, 0x87
REG=0x3E31, 0x64
REG=0x3E32, 0x30
REG=0x3E33, 0x50
REG=0x3E34, 0xD3
REG=0x3E35, 0x6A
REG=0x3E36, 0x6B
REG=0x3E37, 0xAD
REG=0x3E38, 0x30
REG=0x3E39, 0x94
REG=0x3E3A, 0x67
REG=0x3E3B, 0x84
REG=0x3E3C, 0x65
REG=0x3E3D, 0x82
REG=0x3E3E, 0x4D
REG=0x3E3F, 0x83
REG=0x3E40, 0x65
REG=0x3E41, 0x30
REG=0x3E42, 0x50
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REG=0x3E45, 0x06
REG=0x3E46, 0x00
REG=0x3E47, 0x8D
REG=0x3E48, 0x45
REG=0x3E49, 0x9A
REG=0x3E4A, 0x6A
REG=0x3E4B, 0x6B
REG=0x3E4C, 0x45

REG=0x3E4D, 0x85
REG=0x3E4E, 0x06
REG=0x3E4F, 0x00
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REG=0x3E51, 0x43
REG=0x3E52, 0x8A
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REG=0x3E56, 0x90
REG=0x3E57, 0x67
REG=0x3E58, 0x64
REG=0x3E59, 0x88
REG=0x3E5A, 0x64
REG=0x3E5B, 0x80
REG=0x3E5C, 0x65
REG=0x3E5D, 0x82
REG=0x3E5E, 0x10
REG=0x3E5F, 0xC0
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REG=0x3E63, 0x10
REG=0x3E64, 0xC0
REG=0x3E65, 0x66
REG=0x3E66, 0x85
REG=0x3E67, 0x64
REG=0x3E68, 0x81
REG=0x3E69, 0x17
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REG=0x3E6B, 0x80
REG=0x3E6C, 0x20
REG=0x3E6D, 0x0D
REG=0x3E6E, 0x80
REG=0x3E6F, 0x18
REG=0x3E70, 0x0C
REG=0x3E71, 0x80
REG=0x3E72, 0x64
REG=0x3E73, 0x30
REG=0x3E74, 0x60
REG=0x3E75, 0x41
REG=0x3E76, 0x82
REG=0x3E77, 0x42
REG=0x3E78, 0xB2

REG=0x3E79, 0x42
REG=0x3E7A, 0x80
REG=0x3E7B, 0x40
REG=0x3E7C, 0x82
REG=0x3E7D, 0x40
REG=0x3E7E, 0x4C
REG=0x3E7F, 0x45
REG=0x3E80, 0x92
REG=0x3E81, 0x6A
REG=0x3E82, 0x6B
REG=0x3E83, 0x9B
REG=0x3E84, 0x45
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REG=0x3E89, 0x30
REG=0x3E8A, 0xA4
REG=0x3E8B, 0x67
REG=0x3E8C, 0x85
REG=0x3E8D, 0x65
REG=0x3E8E, 0x87
REG=0x3E8F, 0x65
REG=0x3E90, 0x30
REG=0x3E91, 0x60
REG=0x3E92, 0xD3
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REG=0x3E9C, 0x70
REG=0x3E9D, 0x00
REG=0x3E9E, 0x80
REG=0x3E9F, 0x40
REG=0x3EA0, 0x4C
REG=0x3EA1, 0xBD
REG=0x3EA2, 0x00
REG=0x3EA3, 0x0E
REG=0x3EA4, 0xBE

REG=0x3EA5, 0x44
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REG=0x3EAC, 0x89
REG=0x3EAD, 0x04
REG=0x3EAE, 0x80
REG=0x3EAF, 0x80
REG=0x3EB0, 0x02
REG=0x3EB1, 0x40
REG=0x3EB2, 0x86
REG=0x3EB3, 0x09
REG=0x3EB4, 0x00
REG=0x3EB5, 0x8E
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REG=0x3EB9, 0x02
REG=0x3EBA, 0x40
REG=0x3EBB, 0x80
REG=0x3EBC, 0x04
REG=0x3EBD, 0x80
REG=0x3EBE, 0x88
REG=0x3EBF, 0x7D
REG=0x3EC0, 0xAC
REG=0x3EC1, 0x86
REG=0x3EC2, 0x09
REG=0x3EC3, 0x00
REG=0x3EC4, 0x87
REG=0x3EC5, 0x7A
REG=0x3EC6, 0x00
REG=0x3EC7, 0x0E
REG=0x3EC8, 0xC3
REG=0x3EC9, 0x79
REG=0x3ECA, 0x4C
REG=0x3ECB, 0x40

[Gain Table]
//preliminary for testing only
STATE= Gain Table Reset, 1

STATE= Gain Table, 1 0x1420
STATE= Gain Table, 1.03125 0x1421
STATE= Gain Table, 1.0625 0x1422
STATE= Gain Table, 1.09375 0x1423
STATE= Gain Table, 1.125 0x1424
STATE= Gain Table, 1.15625 0x1425
STATE= Gain Table, 1.1875 0x1426
STATE= Gain Table, 1.21875 0x1427
STATE= Gain Table, 1.25 0x1428
STATE= Gain Table, 1.28125 0x1429
STATE= Gain Table, 1.3125 0x142A
STATE= Gain Table, 1.34375 0x142B
STATE= Gain Table, 1.375 0x142C
STATE= Gain Table, 1.40625 0x142D
STATE= Gain Table, 1.4375 0x142E
STATE= Gain Table, 1.46875 0x143F
STATE= Gain Table, 1.53125 0x1431
STATE= Gain Table, 1.5625 0x1432
STATE= Gain Table, 1.59375 0x1433
STATE= Gain Table, 1.625 0x1434
STATE= Gain Table, 1.65625 0x1435
STATE= Gain Table, 1.6875 0x1436
STATE= Gain Table, 1.71875 0x1437
STATE= Gain Table, 1.75 0x1438
STATE= Gain Table, 1.78125 0x1439
STATE= Gain Table, 1.8125 0x143A
STATE= Gain Table, 1.84375 0x143B
STATE= Gain Table, 1.875 0x143C
STATE= Gain Table, 1.90625 0x143D
STATE= Gain Table, 1.9375 0x143E
STATE= Gain Table, 1.96875 0x143F
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STATE= Gain Table, 2.28125 0x1449
STATE= Gain Table, 2.3125 0x144A
STATE= Gain Table, 2.34375 0x144B
STATE= Gain Table, 2.375 0x144C

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STATE= Gain Table, 2.4375 0x144E
STATE= Gain Table, 2.46875 0x144F
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STATE= Gain Table, 2.9375 0x145E
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STATE= Gain Table, 3.3125 0x146A
STATE= Gain Table, 3.34375 0x146B
STATE= Gain Table, 3.375 0x146C
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STATE= Gain Table, 3.78125 0x1479
STATE= Gain Table, 3.8125 0x147A
STATE= Gain Table, 3.84375 0x147B
STATE= Gain Table, 3.875 0x147C
STATE= Gain Table, 3.90625 0x147D
STATE= Gain Table, 3.9375 0x147E
STATE= Gain Table, 3.96875 0x147F
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STATE= Gain Table, 6.75 0x186C
STATE= Gain Table, 6.8125 0x186D
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STATE= Gain Table, 7.125 0x1872
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STATE= Gain Table, 7.3125 0x1875
STATE= Gain Table, 7.375 0x1876
STATE= Gain Table, 7.4375 0x1877
STATE= Gain Table, 7.5 0x1878
STATE= Gain Table, 7.5625 0x1879
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STATE= Gain Table, 7.6875 0x187B
STATE= Gain Table, 7.75 0x187C
STATE= Gain Table, 7.8125 0x187D
STATE= Gain Table, 7.875 0x187E
STATE= Gain Table, 7.9375 0x187F
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STATE= Gain Table, 9.375 0x1C4B
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STATE= Gain Table, 10.25 0x1C52
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STATE= Gain Table, 10.875 0x1C57
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STATE= Gain Table, 11.25 0x1C5A
STATE= Gain Table, 11.375 0x1C5B
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STATE= Gain Table, 12.125 0x1C61
STATE= Gain Table, 12.25 0x1C62
STATE= Gain Table, 12.375 0x1C63
STATE= Gain Table, 12.5 0x1C64
STATE= Gain Table, 12.625 0x1C65
STATE= Gain Table, 12.75 0x1C66
STATE= Gain Table, 12.875 0x1C67
STATE= Gain Table, 13 0x1C68
STATE= Gain Table, 13.125 0x1C69
STATE= Gain Table, 13.25 0x1C6A
STATE= Gain Table, 13.375 0x1C6B
STATE= Gain Table, 13.5 0x1C6C
STATE= Gain Table, 13.625 0x1C6D
STATE= Gain Table, 13.75 0x1C6E
STATE= Gain Table, 13.875 0x1C6F
STATE= Gain Table, 14 0x1C70
STATE= Gain Table, 14.125 0x1C71
STATE= Gain Table, 14.25 0x1C72
STATE= Gain Table, 14.375 0x1C73
STATE= Gain Table, 14.5 0x1C74
STATE= Gain Table, 14.625 0x1C75
STATE= Gain Table, 14.75 0x1C76
STATE= Gain Table, 14.875 0x1C77
STATE= Gain Table, 15 0x1C78
STATE= Gain Table, 15.125 0x1C79
STATE= Gain Table, 15.25 0x1C7A
STATE= Gain Table, 15.375 0x1C7B
STATE= Gain Table, 15.5 0x1C7C

STATE= Gain Table, 15.625 0x1C7D
STATE= Gain Table, 15.75 0x1C7E
STATE= Gain Table, 15.875 0x1C7F
STATE= Gain Table, 16 0x2C40
STATE= Gain Table, 16.25 0x2C41
STATE= Gain Table, 16.5 0x2C42
STATE= Gain Table, 16.75 0x2C43
STATE= Gain Table, 17 0x2C44
STATE= Gain Table, 17.25 0x2C45
STATE= Gain Table, 17.5 0x2C46
STATE= Gain Table, 17.75 0x2C47
STATE= Gain Table, 18 0x2C48
STATE= Gain Table, 18.25 0x2C49
STATE= Gain Table, 18.5 0x2C4A
STATE= Gain Table, 18.75 0x2C4B
STATE= Gain Table, 19 0x2C4C
STATE= Gain Table, 19.25 0x2C4D
STATE= Gain Table, 19.5 0x2C4E
STATE= Gain Table, 19.75 0x2C4F
STATE= Gain Table, 20 0x2C50
STATE= Gain Table, 20.25 0x2C51
STATE= Gain Table, 20.5 0x2C52
STATE= Gain Table, 20.75 0x2C53
STATE= Gain Table, 21 0x2C54
STATE= Gain Table, 21.25 0x2C55
STATE= Gain Table, 21.5 0x2C56
STATE= Gain Table, 21.75 0x2C57
STATE= Gain Table, 22 0x2C58
STATE= Gain Table, 22.25 0x2C59
STATE= Gain Table, 22.5 0x2C5A
STATE= Gain Table, 22.75 0x2C5B
STATE= Gain Table, 23 0x2C5C
STATE= Gain Table, 23.25 0x2C5D
STATE= Gain Table, 23.5 0x2C5E
STATE= Gain Table, 23.75 0x2C5F
STATE= Gain Table, 24 0x2C60
STATE= Gain Table, 24.25 0x2C61
STATE= Gain Table, 24.5 0x2C62
STATE= Gain Table, 24.75 0x2C63
STATE= Gain Table, 25 0x2C64
STATE= Gain Table, 25.25 0x2C65
STATE= Gain Table, 25.5 0x2C66
STATE= Gain Table, 25.75 0x2C67
STATE= Gain Table, 26 0x2C68

STATE= Gain Table, 26.25 0x2C69
STATE= Gain Table, 26.5 0x2C6A
STATE= Gain Table, 26.75 0x2C6B
STATE= Gain Table, 27 0x2C6C
STATE= Gain Table, 27.25 0x2C6D
STATE= Gain Table, 27.5 0x2C6E
STATE= Gain Table, 27.75 0x2C6F
STATE= Gain Table, 28 0x2C70
STATE= Gain Table, 28.25 0x2C71
STATE= Gain Table, 28.5 0x2C72
STATE= Gain Table, 28.75 0x2C73
STATE= Gain Table, 29 0x2C74
STATE= Gain Table, 29.25 0x2C75
STATE= Gain Table, 29.5 0x2C76
STATE= Gain Table, 29.75 0x2C77
STATE= Gain Table, 30 0x2C78
STATE= Gain Table, 30.25 0x2C79
STATE= Gain Table, 30.5 0x2C7A
STATE= Gain Table, 30.75 0x2C7B
STATE= Gain Table, 31 0x2C7C
STATE= Gain Table, 31.25 0x2C7D
STATE= Gain Table, 31.5 0x2C7E
STATE= Gain Table, 31.75 0x2C7F
REG=0x305E,0x143D // recommended minim gain

[===============Lens Shading Correction=============]
[Lens Correction]
STATE= Lens Curve Red,
C04163212243F80B068BC96A2D13EA4791E3BF861F9BD03B481BC5022433BFC40DD3C2C6B00B
AC2476A3A9D1E483E9B3EC03B9491F4BB321892BA8B397BBCC061733CC48DDF3A61B8A23C9F
80D6BA73A886BC80A6A0BCCEC1F03AB75CADBD9A4E68BAAB028A3D3AF264
STATE= Lens Curve Green1,
C04163212243F84DF02BBD287523E59602C3B580F36BCA0E7B13C2972D63BB520653CC1EA89B
A1BEFC7BBFDF9FA3E667E653B6AABD8BD3D8955BA8514D33AAC66E43C700813B8C493C5BC13
E20ABA0C6D3CBB83E579BCA992EF3A5BDEFEBD010DEDB979BC903CF5EC3B
STATE= Lens Curve Green2,
C04163212243F8521D9BBD6255E3E6655F03B5B788FBCB2CC463C4B146F3BBC7C223CB8FBA9B
9BA18E2BBE46D093E5BBF973BB0CD9FBD3ED951BB06DDA63B1B5EB53C63CB30BA607F41BBD5
B795B992AFD8BBAC3216BCA21B06B9C00AD4BD02133639DC49FF3CF2E0A8
STATE= Lens Curve Blue,
C04163212243F81D6BFBC27A7363E2FCA8D3B8E180DBCACF7E33C2F7D053BBA1B703C922910B
A301BD5BBBE6E2C3E2C9F6E3C0C0ABEBD4D54AFBB9A2D2D3C3302863C704596BAE42E5EBBCE
165B39609E26BBA372E8BCF37408BB39790FBC88A1043B0F8D533CB735DE
STATE= Lens Correction Falloff, 90

STATE= Lens Correction Enable, 1

[===============AWB and CCM==================]
[AWB]
Load=Auto on

[Default CCM]
STATE=Color Correction, 1
STATE=White Balance, 3 //full custom CCM
STATE=WB Custom m00, 152
STATE=WB Custom m01, -44
STATE=WB Custom m02, -08
STATE=WB Custom m10, -10
STATE=WB Custom m11, 132
STATE=WB Custom m12, -20
STATE=WB Custom m20, -02
STATE=WB Custom m21, -84
STATE=WB Custom m22, 188

//
[HIdden: Color Correction Matrices for DevWare AWB 08/06/12 11:23:52- A-8741 - REV1]
// For SOC sensors and image co-processors, these settings are to be used ONLY in SOC by pass mode.

STATE= AWB Incandescent, 1.536 -0.880 0.345 -0.115 1.311 -0.195 -0.222 -0.587 1.809
STATE= AWB Incandescent Gain, 0.627 2.910
STATE= AWB Sun, 1.494 -0.342 -0.152 -0.158 1.599 -0.441 -0.020 -0.498 1.518
STATE= AWB Sun Gain, 1.391 1.417
STATE= AWB Weight Map Method, 2
STATE= AWB Weight Map, 0 16 4112 0 0 626 29298 4352 0 5938 29559 30496 17 14195 9079 30578 631 30583 30583 30583 6007 30583 14113 4369 6007 30578 256 0 273 4368 0 0
STATE= AWB Weight Map X Scale, 114
STATE= AWB Weight Map Y Scale, 146
STATE= AWB Weight Map X Shift, 36
STATE= AWB Weight Map Y Shift, 12
STATE= AWB Weight Map X Center, -3
STATE= AWB Weight Map Y Center, -38
STATE= AWB Weight Map Angle Sin, 35
STATE= AWB Weight Map Angle Cos, 53
STATE= AWB Weight Map Luma Low, 4
STATE= AWB Weight Map Luma High, 251

```
////////////////////////////////////////////////////////////////////////////////////////////////////
/
[//////////////////////////DevWare Settings////////////////////////////////]

[Toolbar: Full resolution 42fps]
ICON= icons\violet-8M-24.ico    //, CHECKED=CAM_SEQ_UV_COLOR_BOOST==4
TOOLTIP="3264 x 2448 pixels at 30fps"

LOAD=Mob_M8_42_24IN - HS MIPI

[Toolbar: 6M 55fps]
ICON= icons\ROI-24.ico    //, CHECKED=CAM_SEQ_UV_COLOR_BOOST==4
TOOLTIP="3264 x 1836 pixels at 30fps"

LOAD=Mob_M6_55_24IN - HS MIPI

[Toolbar: 1080p 60fps]
ICON= icons\orange-1080-24.ico    //, CHECKED=CAM_SEQ_UV_COLOR_BOOST==4
TOOLTIP="1080p 30fps"

//REG=0x3012, 0x079B                    //Integration time = 33ms
Load=Mob_M1080p_60_24IN

////////////////////////////////////////////////////////////////////////////
[]

[Toolbar: Light Settings]
ICON= icons\sun_bulb-24.ico
TOOLTIP="White Balance at different light settings "
MENUITEM="D65 10lux", LOAD=D65 10 LUX
MENUITEM="D65 25lux", LOAD=D65 25 LUX
MENUITEM="D65 100lux", LOAD=D65 100 LUX
MENUITEM="D65 800lux", LOAD=D65 800 LUX
MENUITEM="CWF 25lux", LOAD=CWF 25 LUX
MENUITEM="CWF 100lux", LOAD=CWF 100 LUX
MENUITEM="CWF 800lux", LOAD=CWF 800 LUX

[Hidden: D65 10 LUX]
//8X Analog Gain
Load= Auto off
ICON= icons\scene-modes-24.ico
TOOLTIP="D65 for low light conditions"
Load= 8X Gain
REG=0x3032, 0x0300
```

```
REG=0x3038, 0x0300
REG=0x3034, 0x0420
REG=0x3036, 0x04F8
REG=0x3012, 0x141B                    //Integration time = 66ms
LOAD=Default CCM
LOAD= Lens Correction

[Hidden: D65 25 LUX]
//8X Analog Gain
Load= Auto off
ICON= icons\scene-modes-24.ico
TOOLTIP="D65 for low light conditions"
Load= 8X Gain
REG=0x3032, 0x0100
REG=0x3038, 0x0100
REG=0x3034, 0x0160
REG=0x3036, 0x01A0
REG=0x3012, 0x141B                    //Integration time = 66ms
LOAD=Default CCM
LOAD= Lens Correction

[Hidden: D65 100 LUX]
//3X Analog Gain
Load= Auto off
ICON= icons\pref-color-repro-24.ico
TOOLTIP="D65 for mid light conditions"
LOAD=3X Gain
REG=0x3032, 0x011A
REG=0x3038, 0x011A
REG=0x3034, 0x0190
REG=0x3036, 0x01D6
REG=0x3012, 0x141B                    //Integration time = 66ms
LOAD=Default CCM
LOAD= Lens Correction

[Hidden: D65 800 LUX]
//1X Analog Gain
Load= Auto off
ICON= icons\sun_bulb-24.ico
TOOLTIP="D65 for high light conditions"
LOAD=1X Gain
REG=0x3032, 0x0100
REG=0x3038, 0x0100
REG=0x3034, 0x0160
```

```
REG=0x3036, 0x01A8
REG=0x3012, 0x0A0D                    //Integration time = 31ms
LOAD=Default CCM
LOAD= Lens Correction

[Hidden: CWF 25 LUX]
//8X Analog Gain
Load= Auto off
ICON= icons\scene-modes-24.ico
TOOLTIP="D65 for low light conditions"
Load= 8X Gain
REG=0x3032, 0x0100
REG=0x3038, 0x0100
REG=0x3034, 0x0130
REG=0x3036, 0x0294
REG=0x3012, 0x141B                    //Integration time = 66ms
LOAD=Default CCM
LOAD= Lens Correction

[Hidden: CWF 100 LUX]
//3X Analog Gain
Load= Auto off
ICON= icons\pref-color-repro-24.ico
TOOLTIP="D65 for mid light conditions"
LOAD=3X Gain
REG=0x3032, 0x01A2
REG=0x3038, 0x01A2
REG=0x3034, 0x01E8
REG=0x3036, 0x03E6
REG=0x3012, 0x141B                    //Integration time = 66ms
LOAD=Default CCM
LOAD= Lens Correction

[Hidden: CWF 800 LUX]
//1X Analog Gain
Load= Auto off
ICON= icons\sun_bulb-24.ico
TOOLTIP="D65 for high light conditions"
LOAD=1X Gain
REG=0x3032, 0x014C
REG=0x3038, 0x014C
REG=0x3034, 0x017E
REG=0x3036, 0x0310
REG=0x3012, 0x0A0D                    //Integration time = 31ms
```

LOAD=Default CCM
LOAD= Lens Correction

//
[Color Processing ON]
STATE= Auto Exposure, 1
STATE= Noise Removal, 0124
STATE= Defect Enable, 1
STATE= White Balance, 1

[Color Processing OFF]
STATE= Auto Exposure, 0
STATE= Noise Removal, 0000
STATE= Defect Enable, 0
STATE= White Balance, 0

//

[1X Gain]
REG=0x302A, 0x02
REG=0x302C, 0x02
REG=0x302E, 0x02
REG=0x3030, 0x02

[2x Gain]
REG=0x302A, 0x04
REG=0x302C, 0x04
REG=0x302E, 0x04
REG=0x3030, 0x04

[3X Gain]
REG=0x302A, 0x06
REG=0x302C, 0x06
REG=0x302E, 0x06
REG=0x3030, 0x06

[4X Gain]
REG=0x302A, 0x08
REG=0x302C, 0x08
REG=0x302E, 0x08
REG=0x3030, 0x08

[6X Gain]
REG=0x302A, 0x0C

REG=0x302C, 0x0C
REG=0x302E, 0x0C
REG=0x3030, 0x0C

[8X Gain]
REG=0x302A, 0x10
REG=0x302C, 0x10
REG=0x302E, 0x10
REG=0x3030, 0x10

[//]

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