

Filter Code	Lower	Upper
ARTCAM_FILTERTYPE_BRIGHTNESS	-255	255
ARTCAM_FILTERTYPE_CONTRAST	-127	127
ARTCAM_FILTERTYPE_HUE	-360	360
ARTCAM_FILTERTYPE_SATURATION	-255	255
ARTCAM_FILTERTYPE_SHARPNESS	0	30
ARTCAM_FILTERTYPE_BAYER_GAIN_RGB	0	200
ARTCAM_FILTERTYPE_BAYER_GAIN_R	0	200
ARTCAM_FILTERTYPE_BAYER_GAIN_G	0	200
ARTCAM_FILTERTYPE_BAYER_GAIN_B	0	200
ARTCAM_FILTERTYPE_GAMMA	0	200
ARTCAM_FILTERTYPE_GLOBAL_GAIN	0	63
ARTCAM_FILTERTYPE_COLOR_GAIN_R	0	63
ARTCAM_FILTERTYPE_COLOR_GAIN_G1	0	63
ARTCAM_FILTERTYPE_COLOR_GAIN_G2	0	63
ARTCAM_FILTERTYPE_COLOR_GAIN_B	0	63
ARTCAM_FILTERTYPE_EXPOSURETIME	1	16383

Filter Code	Effective Value
ARTCAM_FILTERTYPE_BAYER_GAIN_AUTO	TRUE FALSE
ARTCAM_FILTERTYPE_BAYERMODE	0 1 2 3

Compatible with Camera clock 24MHz

Remarks

Not compatible with half-clock, model changed in clock and sub-sampling mode.

<< In case of changing size >>

Remarks

Reg0x09 used below stands for Shutter value of our SDK.

Calculation for Exposure time is as below:

$t_{INT} = \text{Reg0x09} \times \text{row time} - \text{overhead time} - \text{reset delay}$, where:

Row time = $((\text{Reg0x04} + 1) + 371 + \text{Reg0x05} - 0)$ pixel clock periods

Overhead time = 180 pixel clock periods

Reset Delay = $4 \times \text{Reg0x0C}$ pixel clock periods

Reg0x09	=	1472	< = Shutter value
Reg0x04	=	2047	< = Value: Horizontal size - 1
Reg0x05	=	142	< = Fixed value 142
Reg0x0C	=	0	< = Fixed value 0

$1 \text{ pc}(\text{pixel clock periods}) = 1 / 24\text{MHz} = 1/24 \text{ us}$

$$\begin{aligned} t_{INT} &= \text{Reg0x09} \times \text{row time} - \text{overhead time} - \text{reset delay} \quad \text{pixel clock periods} \\ &= (\text{Reg0x09} \times ((\text{Reg0x04} + 1) + 371 + \text{Reg0x05} - 0) - 180 - 4 \times \text{Reg0x0C}) \times \text{pcp} \\ &= (1472 \times ((2047 + 1) + 371 + 142 - 0) - 180 - 4 \times 0) \times (1/24\text{us}) \\ &= (1472 \times (2048 + 371 + 142 - 0) - 180) \times (1/24 \text{ us}) \\ &= (1472 \times 2561 - 180) \times (1/24 \text{ us}) \\ &= 157.1 \text{ ms} \end{aligned}$$

For example : 964×964 Set Exposure time as 50 msec

Shutter value X is as below:

$$\begin{aligned} X &= (24\text{MHz} \times 50\text{msec} + 180) / (\text{Horizontal value} + 513) \\ &= 813 \end{aligned}$$