Allied Vision

APPLICATION NOTE

Decimation

2016-Mar-21

Introduction

Decimation (also known as sub-sampling) is the process of skipping neighboring pixels (with the same color) while being read out from the CCD chip.

Decimation is available for all Manta cameras with firmware version 01.44 or later. See https://www.alliedvision.com/en/support/firmware for details.

Description of decimation

Decimation is used primarily for the reduction in the number of pixels and the amount of data while retaining the original image area angle and image brightness. Cameras support horizontal, vertical and H+V decimation modes.

Horizontal decimation modes

The different decimation patterns are shown below. Highlighted pixels are displayed and white pixels are skipped.

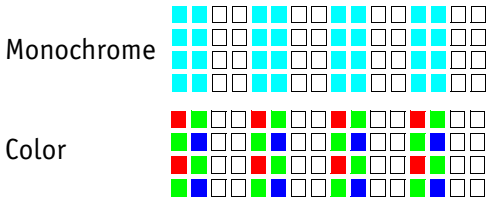

Figure 1: *DecimationHorizontal = 2. 2x reduction factor. 2 of 4 columns displayed*

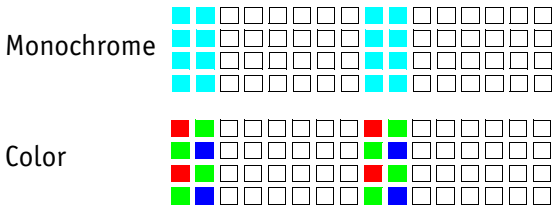

Figure 2: *DecimationHorizontal = 4. 4x reduction factor. 2 of 8 columns displayed*

The image appears horizontally compressed in this mode and no longer exhibits a true aspect ratio.

Vertical decimation modes

The different decimation patterns are shown below. Highlighted pixels are displayed and white pixels are skipped.

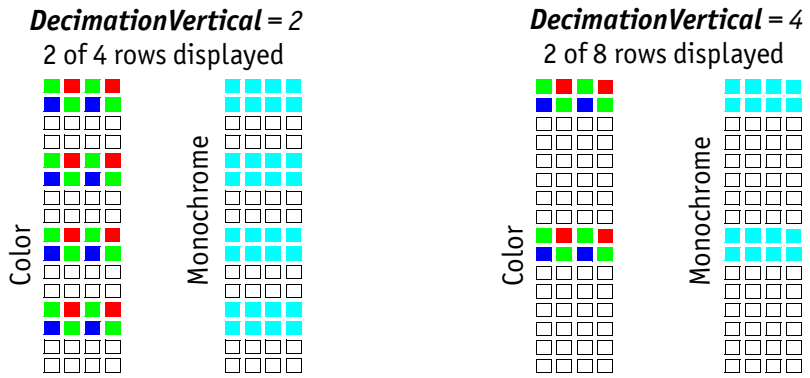

Figure 3: *Vertical decimation*

The image appears vertically compressed in this mode and no longer exhibits a true aspect ratio.

H+V decimation modes

The different decimation patterns are shown below. Highlighted pixels are displayed and white pixels are skipped.

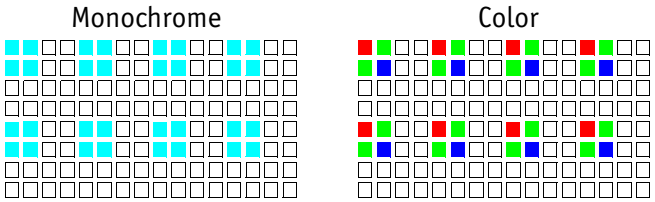

Figure 4: *DecimationHorizontal / DecimationVertical = 2. 2x reduction factor. 2 of 4 columns/rows displayed*

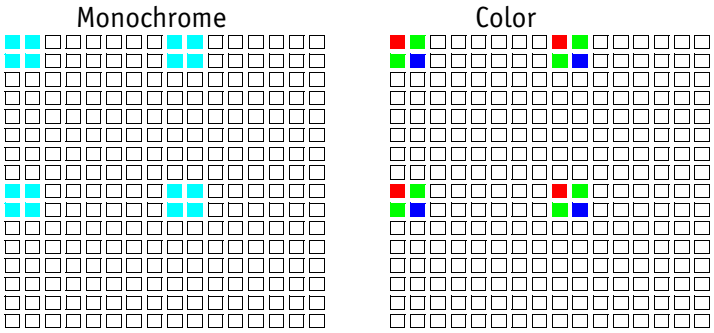

Figure 5: *DecimationHorizontal / DecimationVertical = 4. 4x reduction factor. 2 of 8 columns/rows displayed*

Additional References

Technical manuals and GigE feature reference
https://www.alliedvision.com/en/support/technical-documentation

For technical support, please contact support@alliedvision.com.
For comments or suggestions regarding this document, please contact info@alliedvision.com.

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