

## 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.



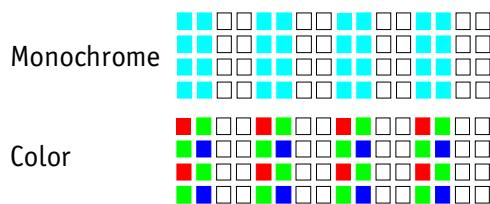
Decimation is available for all Manta cameras with firmware version 01.44 or later. See <https://www.alliedvision.com/en/support/firmware> for details.

## Description of decimation

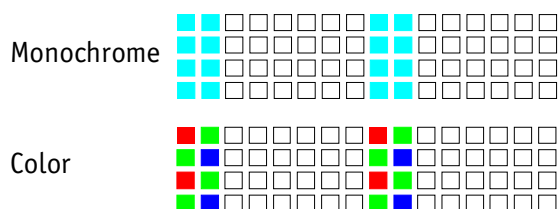
Decimation is used primarily for the reduction in the number of pixels and the amount of data while retaining the original image area angle and image brightness. Cameras support horizontal, vertical and H+V decimation modes.

### 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*



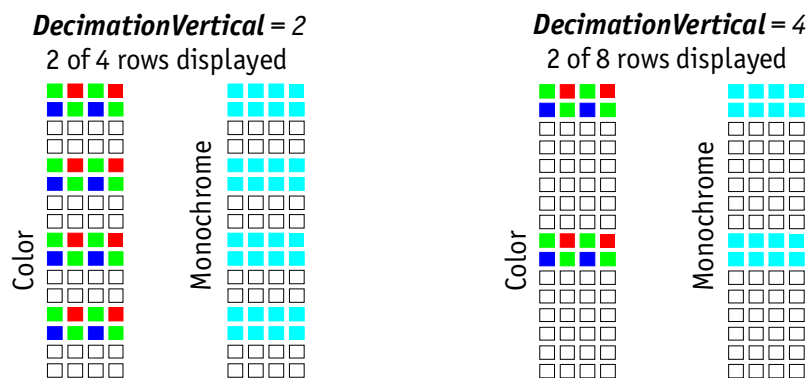
**Figure 2:** *DecimationHorizontal = 4. 4x reduction factor. 2 of 8 columns displayed*



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.



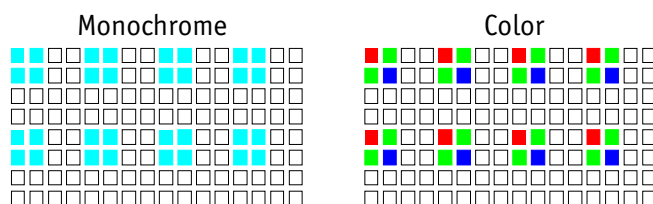
**Figure 3:** Vertical decimation



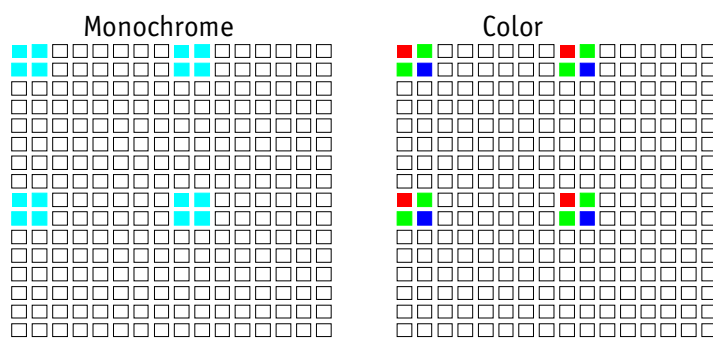
The image appears vertically compressed in this mode and no longer exhibits a true aspect ratio.

## 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*

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