

# Slope TOP

Documentation  
TouchDesigner  
The Slope TOP generates pixels that represent the difference between its value and its neighbouring pixels' values.

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The Slope TOP shows where the luminance in an image rises or falls relative to its neighboring pixel(s) (immediately left-right and below-above pixels).

- Output value of [Zero Point] means the neighbor's values are the same as the pixel's value.
- Output value that are above [Zero Point] indicate that the values are increasing left-to-right or bottom-to-top (depending on Horizontal / Vertical)

Luminance of pixel =  
 $0.299R + 0.587G + 0.114B$

Horizontal Luminance
Horizontal Red
Horizontal Green
Horizontal Blue
Horizontal Alpha
Horizontal RGB Average
Horizontal RGBA Average
Vertical Luminance
Vertical Red
Vertical Green
Vertical Blue
Vertical Alpha
Vertical RGB Average
Vertical RGBA Average
Neutral
One
Zero

Method	Determines what pixels to use when calculating the slope at each pixel in the image.
Zero Point	Sets the value to output when the slope is zero, similar to a midpoint.
Strength	Set the strength of the output using this multiplier. Higher values result in higher slope values.
Sample Step	This determines the distance from each pixel to the sample pixel. When units are set to pixels, it is the number of pixels away from the current pixel which is sampled to find edges. A Sample Step of 3 would sample pixels 3 pixels away to look for edges.

