



# Image Algebra

Image Algebra performs mathematical operations on volumes and constant numerical values by means of an algebraic formula parser. There are several useful formulas preloaded, as detailed in the table below.

**Table 6.6: Preloaded Image Algebra Formulas**

Formula	Output=
Copy a File	Input
Average Two Files	(File1+File2)/2
Binary times Grayscale	(Bin!=0)*Gray
Grayscale Thresholding	(a>=#in_min#)*(a<=#in_max#)*a+(a<#in_min#)*#out_min#+(a>#in_max#)*#out_max#
Create 24-bit	RED(r)+GREEN(g)+BLUE(b)
Extract the Red Channel	RED(Input)
Use Total of 3 slices	ADDTOT(3,1)
Use Average of 5 slices	ADDAVG(5,1)
Pseudo Transparency	((xpos(a)+ypos(a))%2)*a+((xpos(a)+ypos(a)+1)%2)*b
Row Interlace	(ypos()%2)*a+((ypos()+1)%2)*b
Intensity Clipping	((a<#min#)*#min#)+((a>#max#)*#max#)+((a>=#min#)*(a<=#max#))*a)