

Supplementary Material of Multi-Level Context Ultra-Aggregation for Stereo Matching

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1. Residual Module

Tab. 1 shows the layer-wise definition of the residual module.

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Table 1. The Details of Residual Module

Type	K	S	P	Output	Dim.	I/O	Input
Left Image							
Deconv.	3	2	0	left_fea_up_2x	32/32	4/2	fusion
Crop	–	–	–	left_fea_up_2x_cropped	32/32	2/2	left_fea_up_2x
Conv.	3	1	1	left_fea_2x	64/32	2/2	Concat[conv1_x , left_fea_up_2x_cropped]
	3	1	1		32/32		
Deconv.	3	2	0	left_fea_up_1x	32/32	2/1	left_fea_2x
Crop	–	–	–	left_fea_up_1x_cropped	32/32	1/1	left_fea_up_1x
Conv.	3	1	1	left_fea_1x	64/32	1/1	left_fea_up_1x_cropped
	3	1	1		32/32		
Right Image							
Deconv.	3	2	0	right_fea_up_2x	32/32	4/2	fusion
Crop	–	–	–	right_fea_up_2x_cropped	32/32	2/2	right_fea_up_2x
Conv.	3	1	1	right_fea_2x	64/32	2/2	Concat[conv1_x , right_fea_up_2x]
	3	1	1		32/32		
Deconv.	3	2	0	right_fea_up_1x	32/32	2/1	right_fea_2x
Crop	–	–	–	right_fea_up_1x_cropped	32/32	1/1	right_fea_up_1x
Conv.	3	1	1	right_fea_1x	64/32	1/1	right_fea_up_1x
	3	1	1		32/32		
Residual							
Warp	–	–	–	left_warped	32/32	1/1	Map1 , right_fea_1x
Error	–	–	–	left_error	32/32	1/1	left_fea_1x - left_warped
Conv.	5	1	2	R_conv1_1	65/128	1/1	Concat[left_error, left_fea_1x, Map1 , Left]
Conv.	5	1	2	R_conv1_2	128/256	1/1	R_conv1_1
Conv.	5	1	2	R_residual	256/1	1/1	R_conv1_2
Disparity							
Sum.	–	–	–	R_Dispatch	1/1	1/1	Map1 + R_residual

K, S, P: kernel size, stride, and padding of convolutional layer; **Dim.**: dimension of input/output feature maps; **I/O**: scale of input/output feature maps; **conv1_x, fusion**: feature maps generated by F_3 and F_8 ; Symbol “+/-”: element-wise summation/subtraction operation.