

Layer (type)	Output Shape	Param #
=====		
input_1 (InputLayer)	[(None, 32, 128, 1)]	0
<hr/>		
conv2d (Conv2D)	(None, 32, 128, 64)	640
<hr/>		
max_pooling2d (MaxPooling2D)	(None, 16, 64, 64)	0
<hr/>		
conv2d_1 (Conv2D)	(None, 16, 64, 128)	73856
<hr/>		
max_pooling2d_1 (MaxPooling2D)	(None, 8, 32, 128)	0
<hr/>		
conv2d_2 (Conv2D)	(None, 8, 32, 256)	295168
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conv2d_3 (Conv2D)	(None, 8, 32, 256)	590080
<hr/>		
max_pooling2d_2 (MaxPooling2D)	(None, 4, 32, 256)	0
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conv2d_4 (Conv2D)	(None, 4, 32, 512)	1180160
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batch_normalization (Batch Normalization)	(None, 4, 32, 512)	2048
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conv2d_5 (Conv2D)	(None, 4, 32, 512)	2359808
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batch_normalization_1 (Batch Normalization)	(None, 4, 32, 512)	2048
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max_pooling2d_3 (MaxPooling2D)	(None, 2, 32, 512)	0

conv2d_6 (Conv2D)	(None, 1, 31, 512)	1049088
lambda (Lambda)	(None, 31, 512)	0
bidirectional (Bidirectional)	(None, 31, 512)	1574912
bidirectional_1 (Bidirectional)	(None, 31, 512)	1574912
dense (Dense)	(None, 31, 79)	40527

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Total params: 8,743,247

Trainable params: 8,741,199

Non-trainable params: 2,048

Model: "model_1"

Layer (type)	Output Shape	Param #	Connected to
=====			
input_1 (InputLayer)	[(None, 32, 128, 1)]	0	
conv2d (Conv2D)	(None, 32, 128, 64)	640	input_1[0][0]
max_pooling2d (MaxPooling2D)	(None, 16, 64, 64)	0	conv2d[0][0]

conv2d_1 (Conv2D)	(None, 16, 64, 128)	73856	max_pooling2d[0][0]
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max_pooling2d_1 (MaxPooling2D)	(None, 8, 32, 128)	0	conv2d_1[0][0]
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conv2d_2 (Conv2D)	(None, 8, 32, 256)	295168	max_pooling2d_1[0][0]
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conv2d_3 (Conv2D)	(None, 8, 32, 256)	590080	conv2d_2[0][0]
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max_pooling2d_2 (MaxPooling2D)	(None, 4, 32, 256)	0	conv2d_3[0][0]
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conv2d_4 (Conv2D)	(None, 4, 32, 512)	1180160	max_pooling2d_2[0][0]
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batch_normalization (BatchNorma	(None, 4, 32, 512)	2048	conv2d_4[0][0]
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conv2d_5 (Conv2D)	(None, 4, 32, 512)	2359808	batch_normalization[0][0]
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batch_normalization_1 (BatchNor	(None, 4, 32, 512)	2048	conv2d_5[0][0]
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max_pooling2d_3 (MaxPooling2D)	(None, 2, 32, 512)	0	batch_normalization_1[0][0]
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conv2d_6 (Conv2D)	(None, 1, 31, 512)	1049088	max_pooling2d_3[0][0]
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lambda (Lambda)	(None, 31, 512)	0	conv2d_6[0][0]
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bidirectional (Bidirectional)	(None, 31, 512)	1574912	lambda[0][0]
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bidirectional_1 (Bidirectional)	(None, 31, 512)	1574912	bidirectional[0][0]
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dense (Dense)	(None, 31, 79)	40527	bidirectional_1[0][0]
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true_labels (InputLayer)	[(None, 19)]	0	
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input_length (InputLayer)	[(None, 1)]	0	
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label_length (InputLayer)	[(None, 1)]	0	
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ctc (Lambda)	(None, 1)	0	dense[0][0]
			true_labels[0][0]
			input_length[0][0]
			label_length[0][0]

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