```
Model: "deeplabv3p_mobilenetv3large"
_____
_____
 Layer (type)                Output Shape          Param #    Connected to
=================================================================================
================
 image_input (InputLayer)    [(None, 512, 512, 3   0          []
                             )]

 Conv_pad (ZeroPadding2D)    (None, 513, 513, 3)   0          ['image_input[0]
                                                              [0]']

 Conv (Conv2D)               (None, 256, 256, 16   432        ['Conv_pad[0]
                                                              [0]']
                             )

 Conv/BatchNorm (BatchNormaliza  (None, 256, 256, 16   64      ['Conv[0][0]']
 tion)                       )

 activation (Activation)     (None, 256, 256, 16   0          ['Conv/BatchNorm
                                                              [0][0]']
                             )

 expanded_conv/depthwise/Conv (  (None, 256, 256, 16   144     ['activation[0]
                                                              [0]']
 DepthwiseConv2D)            )

 expanded_conv/depthwise/BatchN  (None, 256, 256, 16   64      ['expanded_conv/d
 epthwise/Conv[0]
 orm (BatchNormalization)    )                                 [0]']

 activation_1 (Activation)   (None, 256, 256, 16   0          ['expanded_conv/d
 epthwise/BatchNo
                             )                                 rm[0][0]']

 expanded_conv/project (Conv2D)  (None, 256, 256, 16   256     ['activation_1[0]
                                                              [0]']
                             )

 expanded_conv/project/BatchNor  (None, 256, 256, 16   64      ['expanded_conv/p
 roject[0][0]']
 m (BatchNormalization)      )

 expanded_conv/Add (Add)     (None, 256, 256, 16   0          ['activation[0]
                                                              [0]',
                             )                                 'expanded_conv/p
 roject/BatchNorm
                                                              [0][0]']

 expanded_conv_1/expand (Conv2D  (None, 256, 256, 64   1024    ['expanded_conv/A
 dd[0][0]']
                             )                                )

 expanded_conv_1/expand/BatchNo  (None, 256, 256, 64   256     ['expanded_conv_
 1/expand[0][0]']
 rm (BatchNormalization)     )

 activation_2 (Activation)   (None, 256, 256, 64   0          ['expanded_conv_
 1/expand/BatchNor
                             )                                 m[0][0]']
```

Layer (type)	Output Shape	Param #	Connected to
expanded_conv_1/depthwise/Conv [0'] (DepthwiseConv2D)	(None, 128, 128, 64)	576	['activation_2[0]
expanded_conv_1/depthwise/Batc 1/depthwise/Conv[hNorm (BatchNormalization)	(None, 128, 128, 64)	256	['expanded_conv_ 0][0]']
activation_3 (Activation) 1/depthwise/Batch	(None, 128, 128, 64)	0	['expanded_conv_ Norm[0][0]']
expanded_conv_1/project (Conv2 [0'] D)	(None, 128, 128, 24)	1536	['activation_3[0]
expanded_conv_1/project/BatchN 1/project[0][0]'] orm (BatchNormalization)	(None, 128, 128, 24)	96	['expanded_conv_
expanded_conv_2/expand (Conv2D 1/project/BatchNo)	(None, 128, 128, 72)	1728	['expanded_conv_ rm[0][0]']
expanded_conv_2/expand/BatchNo 2/expand[0][0]'] rm (BatchNormalization)	(None, 128, 128, 72)	288	['expanded_conv_
activation_4 (Activation) 2/expand/BatchNor	(None, 128, 128, 72)	0	['expanded_conv_ m[0][0]']
expanded_conv_2/depthwise/Conv [0'] (DepthwiseConv2D)	(None, 128, 128, 72)	648	['activation_4[0]
expanded_conv_2/depthwise/Batc 2/depthwise/Conv[hNorm (BatchNormalization)	(None, 128, 128, 72)	288	['expanded_conv_ 0][0]']
activation_5 (Activation) 2/depthwise/Batch	(None, 128, 128, 72)	0	['expanded_conv_ Norm[0][0]']
expanded_conv_2/project (Conv2 [0'] D)	(None, 128, 128, 24)	1728	['activation_5[0]
expanded_conv_2/project/BatchN 2/project[0][0]'] orm (BatchNormalization)	(None, 128, 128, 24)	96	['expanded_conv_
expanded_conv_2/Add (Add) 1/project/BatchNo 2/project/BatchNo	(None, 128, 128, 24)	0	['expanded_conv_ rm[0][0]', 'expanded_conv_ rm[0][0]']
expanded_conv_3/expand (Conv2D 2/Add[0][0]']	(None, 128, 128, 72)	1728	['expanded_conv_

Layer (type)	Output Shape	Param #	Connected to
)	)		
expanded_conv_3/expand/BatchNo rm (BatchNormalization)	(None, 128, 128, 72)	288	['expanded_conv_ 3/expand[0][0]']
activation_6 (Activation)	(None, 128, 128, 72)	0	['expanded_conv_ 3/expand/BatchNor m[0][0]']
expanded_conv_3/depthwise/Conv (DepthwiseConv2D)	(None, 64, 64, 72)	1800	['activation_6[0] [0]']
expanded_conv_3/depthwise/Batc hNorm (BatchNormalization)	(None, 64, 64, 72)	288	['expanded_conv_ 3/depthwise/Conv[0][0]']
activation_7 (Activation)	(None, 64, 64, 72)	0	['expanded_conv_ 3/depthwise/Batch Norm[0][0]']
expanded_conv_3/squeeze_excite /AvgPool (GlobalAveragePooling 2D)	(None, 72)	0	['activation_7[0] [0]']
reshape (Reshape)	(None, 1, 1, 72)	0	['expanded_conv_ 3/squeeze_excite/ AvgPool[0][0]']
expanded_conv_3/squeeze_excite /Conv (Conv2D)	(None, 1, 1, 24)	1752	['reshape[0][0]']
expanded_conv_3/squeeze_excite /Relu (ReLU)	(None, 1, 1, 24)	0	['expanded_conv_ 3/squeeze_excite/ Conv[0][0]']
expanded_conv_3/squeeze_excite /Conv_1 (Conv2D)	(None, 1, 1, 72)	1800	['expanded_conv_ 3/squeeze_excite/ Relu[0][0]']
activation_8 (Activation)	(None, 1, 1, 72)	0	['expanded_conv_ 3/squeeze_excite/ Conv_1[0][0]']
expanded_conv_3/squeeze_excite /Mul (Multiply)	(None, 64, 64, 72)	0	['activation_7[0] [0]', 'activation_8[0] [0]']
expanded_conv_3/project (Conv2 D)	(None, 64, 64, 40)	2880	['expanded_conv_ 3/squeeze_excite/ Mul[0][0]']
expanded_conv_3/project/BatchN orm (BatchNormalization)	(None, 64, 64, 40)	160	['expanded_conv_ 3/project[0][0]']
expanded_conv_4/expand (Conv2D	(None, 64, 64, 120)	4800	['expanded_conv_ 3/project/BatchNo

```
)                                                            rm[0][0]']

 expanded_conv_4/expand/BatchNo  (None, 64, 64, 120)  480    ['expanded_conv_
 4/expand[0][0]']
 rm (BatchNormalization)

 activation_9 (Activation)       (None, 64, 64, 120)  0      ['expanded_conv_
 4/expand/BatchNor
                                                              m[0][0]']

 expanded_conv_4/depthwise/Conv  (None, 64, 64, 120)  3000   ['activation_9[0]
 [0]']
   (DepthwiseConv2D)

 expanded_conv_4/depthwise/Batc  (None, 64, 64, 120)  480    ['expanded_conv_
 4/depthwise/Conv[
 hNorm (BatchNormalization)                                   0][0]']

 activation_10 (Activation)      (None, 64, 64, 120)  0      ['expanded_conv_
 4/depthwise/Batch
                                                              Norm[0][0]']

 expanded_conv_4/squeeze_excite  (None, 120)          0      ['activation_10
 [0][0]']
 /AvgPool (GlobalAveragePooling
 2D)

 reshape_1 (Reshape)             (None, 1, 1, 120)    0      ['expanded_conv_
 4/squeeze_excite/
                                                              AvgPool[0][0]']

 expanded_conv_4/squeeze_excite  (None, 1, 1, 32)     3872   ['reshape_1[0]
 [0]']
 /Conv (Conv2D)

 expanded_conv_4/squeeze_excite  (None, 1, 1, 32)     0      ['expanded_conv_
 4/squeeze_excite/
 /Relu (ReLU)                                                 Conv[0][0]']

 expanded_conv_4/squeeze_excite  (None, 1, 1, 120)    3960   ['expanded_conv_
 4/squeeze_excite/
 /Conv_1 (Conv2D)                                             Relu[0][0]']

 activation_11 (Activation)      (None, 1, 1, 120)    0      ['expanded_conv_
 4/squeeze_excite/
                                                              Conv_1[0][0]']

 expanded_conv_4/squeeze_excite  (None, 64, 64, 120)  0      ['activation_10
 [0][0]',
 /Mul (Multiply)                                              'activation_11
 [0][0]']

 expanded_conv_4/project (Conv2  (None, 64, 64, 40)   4800   ['expanded_conv_
 4/squeeze_excite/
  D)                                                          Mul[0][0]']

 expanded_conv_4/project/BatchN  (None, 64, 64, 40)   160    ['expanded_conv_
 4/project[0][0]']
 orm (BatchNormalization)

 expanded_conv_4/Add (Add)       (None, 64, 64, 40)   0      ['expanded_conv_
```

Layer (type)	Output Shape	Param #	Connected to
3/project/BatchNo			rm[0][0]', 'expanded_conv_
4/project/BatchNo			rm[0][0]']
expanded_conv_5/expand (Conv2D)	(None, 64, 64, 120)	4800	['expanded_conv_ 4/Add[0][0]']
expanded_conv_5/expand/BatchNo rm (BatchNormalization)	(None, 64, 64, 120)	480	['expanded_conv_ 5/expand[0][0]']
activation_12 (Activation) 5/expand/BatchNor	(None, 64, 64, 120)	0	['expanded_conv_ m[0][0]']
expanded_conv_5/depthwise/Conv (DepthwiseConv2D)	(None, 64, 64, 120)	3000	['activation_12 [0][0]']
expanded_conv_5/depthwise/Batc hNorm (BatchNormalization)	(None, 64, 64, 120)	480	['expanded_conv_ 5/depthwise/Conv[0][0]']
activation_13 (Activation) 5/depthwise/Batch	(None, 64, 64, 120)	0	['expanded_conv_ Norm[0][0]']
expanded_conv_5/squeeze_excite /AvgPool (GlobalAveragePooling 2D)	(None, 120)	0	['activation_13 [0][0]']
reshape_2 (Reshape) 5/squeeze_excite/	(None, 1, 1, 120)	0	['expanded_conv_ AvgPool[0][0]']
expanded_conv_5/squeeze_excite /Conv (Conv2D)	(None, 1, 1, 32)	3872	['reshape_2[0] [0]']
expanded_conv_5/squeeze_excite 5/squeeze_excite/ /Relu (ReLU)	(None, 1, 1, 32)	0	['expanded_conv_ Conv[0][0]']
expanded_conv_5/squeeze_excite 5/squeeze_excite/ /Conv_1 (Conv2D)	(None, 1, 1, 120)	3960	['expanded_conv_ Relu[0][0]']
activation_14 (Activation) 5/squeeze_excite/	(None, 1, 1, 120)	0	['expanded_conv_ Conv_1[0][0]']
expanded_conv_5/squeeze_excite /Mul (Multiply)	(None, 64, 64, 120)	0	['activation_13 [0][0]', 'activation_14 [0][0]']
expanded_conv_5/project (Conv2	(None, 64, 64, 40)	4800	['expanded_conv_

Layer (type)	Output Shape	Param #	Connected to
5/squeeze_excite/ D)			Mul[0][0]']
expanded_conv_5/project/BatchN orm (BatchNormalization)	(None, 64, 64, 40)	160	['expanded_conv_ 5/project[0][0]']
expanded_conv_5/Add (Add)	(None, 64, 64, 40)	0	['expanded_conv_ 4/Add[0][0]', 'expanded_conv_ 5/project/BatchNo rm[0][0]']
expanded_conv_6/expand (Conv2D)	(None, 64, 64, 240)	9600	['expanded_conv_ 5/Add[0][0]']
expanded_conv_6/expand/BatchNo rm (BatchNormalization)	(None, 64, 64, 240)	960	['expanded_conv_ 6/expand[0][0]']
activation_15 (Activation)	(None, 64, 64, 240)	0	['expanded_conv_ 6/expand/BatchNor m[0][0]']
expanded_conv_6/depthwise/Conv (DepthwiseConv2D)	(None, 32, 32, 240)	2160	['activation_15 [0][0]']
expanded_conv_6/depthwise/Batc hNorm (BatchNormalization)	(None, 32, 32, 240)	960	['expanded_conv_ 6/depthwise/Conv[0][0]']
activation_16 (Activation)	(None, 32, 32, 240)	0	['expanded_conv_ 6/depthwise/Batch Norm[0][0]']
expanded_conv_6/project (Conv2 D)	(None, 32, 32, 80)	19200	['activation_16 [0][0]']
expanded_conv_6/project/BatchN orm (BatchNormalization)	(None, 32, 32, 80)	320	['expanded_conv_ 6/project[0][0]']
expanded_conv_7/expand (Conv2D)	(None, 32, 32, 200)	16000	['expanded_conv_ 6/project/BatchNo rm[0][0]']
expanded_conv_7/expand/BatchNo rm (BatchNormalization)	(None, 32, 32, 200)	800	['expanded_conv_ 7/expand[0][0]']
activation_17 (Activation)	(None, 32, 32, 200)	0	['expanded_conv_ 7/expand/BatchNor m[0][0]']
expanded_conv_7/depthwise/Conv (DepthwiseConv2D)	(None, 32, 32, 200)	1800	['activation_17 [0][0]']

expanded_conv_7/depthwise/Batc 7/depthwise/Conv[hNorm (BatchNormalization)	(None, 32, 32, 200)	800	['expanded_conv_ 0][0]']
activation_18 (Activation) 7/depthwise/Batch	(None, 32, 32, 200)	0	['expanded_conv_ Norm[0][0]']
expanded_conv_7/project (Conv2 [0][0]'] D)	(None, 32, 32, 80)	16000	['activation_18
expanded_conv_7/project/BatchN 7/project[0][0]'] orm (BatchNormalization)	(None, 32, 32, 80)	320	['expanded_conv_
expanded_conv_7/Add (Add) 6/project/BatchNo 7/project/BatchNo	(None, 32, 32, 80)	0	['expanded_conv_ rm[0][0]', 'expanded_conv_ rm[0][0]']
expanded_conv_8/expand (Conv2D 7/Add[0][0]'])	(None, 32, 32, 184)	14720	['expanded_conv_
expanded_conv_8/expand/BatchNo 8/expand[0][0]'] rm (BatchNormalization)	(None, 32, 32, 184)	736	['expanded_conv_
activation_19 (Activation) 8/expand/BatchNor	(None, 32, 32, 184)	0	['expanded_conv_ m[0][0]']
expanded_conv_8/depthwise/Conv [0][0]'] (DepthwiseConv2D)	(None, 32, 32, 184)	1656	['activation_19
expanded_conv_8/depthwise/Batc 8/depthwise/Conv[hNorm (BatchNormalization)	(None, 32, 32, 184)	736	['expanded_conv_ 0][0]']
activation_20 (Activation) 8/depthwise/Batch	(None, 32, 32, 184)	0	['expanded_conv_ Norm[0][0]']
expanded_conv_8/project (Conv2 [0][0]'] D)	(None, 32, 32, 80)	14720	['activation_20
expanded_conv_8/project/BatchN 8/project[0][0]'] orm (BatchNormalization)	(None, 32, 32, 80)	320	['expanded_conv_
expanded_conv_8/Add (Add) 7/Add[0][0]', 8/project/BatchNo	(None, 32, 32, 80)	0	['expanded_conv_ 'expanded_conv_ rm[0][0]']

Layer (type)	Output Shape	Param #	Connected to
expanded_conv_9/expand (Conv2D)	(None, 32, 32, 184)	14720	['expanded_conv_8/Add[0][0]']
expanded_conv_9/expand/BatchNo rm (BatchNormalization)	(None, 32, 32, 184)	736	['expanded_conv_9/expand[0][0]']
activation_21 (Activation)	(None, 32, 32, 184)	0	['expanded_conv_9/expand/BatchNor m[0][0]']
expanded_conv_9/depthwise/Conv (DepthwiseConv2D)	(None, 32, 32, 184)	1656	['activation_21[0][0]']
expanded_conv_9/depthwise/Batc hNorm (BatchNormalization)	(None, 32, 32, 184)	736	['expanded_conv_9/depthwise/Conv[0][0]']
activation_22 (Activation)	(None, 32, 32, 184)	0	['expanded_conv_9/depthwise/Batch Norm[0][0]']
expanded_conv_9/project (Conv2 D)	(None, 32, 32, 80)	14720	['activation_22[0][0]']
expanded_conv_9/project/BatchN orm (BatchNormalization)	(None, 32, 32, 80)	320	['expanded_conv_9/project[0][0]']
expanded_conv_9/Add (Add)	(None, 32, 32, 80)	0	['expanded_conv_8/Add[0][0]', 'expanded_conv_9/project/BatchNo rm[0][0]']
expanded_conv_10/expand (Conv2 D)	(None, 32, 32, 480)	38400	['expanded_conv_9/Add[0][0]']
expanded_conv_10/expand/BatchN orm (BatchNormalization)	(None, 32, 32, 480)	1920	['expanded_conv_10/expand[0][0]']
activation_23 (Activation)	(None, 32, 32, 480)	0	['expanded_conv_10/expand/BatchNo rm[0][0]']
expanded_conv_10/depthwise/Con v (DepthwiseConv2D)	(None, 32, 32, 480)	4320	['activation_23[0][0]']
expanded_conv_10/depthwise/Bat chNorm (BatchNormalization)	(None, 32, 32, 480)	1920	['expanded_conv_10/depthwise/Conv[0][0]']
activation_24 (Activation)	(None, 32, 32, 480)	0	['expanded_conv_10/depthwise/Batc hNorm[0][0]']

expanded_conv_10/squeeze_excit e/AvgPool (GlobalAveragePoolin g2D)	(None, 480)	0	['activation_24 [0][0]']
reshape_3 (Reshape)	(None, 1, 1, 480)	0	['expanded_conv_1 0/squeeze_excite /AvgPool[0][0]']
expanded_conv_10/squeeze_excit e/Conv (Conv2D)	(None, 1, 1, 120)	57720	['reshape_3[0] [0]']
expanded_conv_10/squeeze_excit e/Relu (ReLU)	(None, 1, 1, 120)	0	['expanded_conv_1 0/squeeze_excite /Conv[0][0]']
expanded_conv_10/squeeze_excit e/Conv_1 (Conv2D)	(None, 1, 1, 480)	58080	['expanded_conv_1 0/squeeze_excite /Relu[0][0]']
activation_25 (Activation)	(None, 1, 1, 480)	0	['expanded_conv_1 0/squeeze_excite /Conv_1[0][0]']
expanded_conv_10/squeeze_excit e/Mul (Multiply)	(None, 32, 32, 480)	0	['activation_24 [0][0]', 'activation_25 [0][0]']
expanded_conv_10/project (Conv 2D)	(None, 32, 32, 112)	53760	['expanded_conv_1 0/squeeze_excite /Mul[0][0]']
expanded_conv_10/project/Batch Norm (BatchNormalization)	(None, 32, 32, 112)	448	['expanded_conv_1 0/project[0][0]']
expanded_conv_11/expand (Conv2 D)	(None, 32, 32, 672)	75264	['expanded_conv_1 0/project/BatchN orm[0][0]']
expanded_conv_11/expand/BatchN orm (BatchNormalization)	(None, 32, 32, 672)	2688	['expanded_conv_1 1/expand[0][0]']
activation_26 (Activation)	(None, 32, 32, 672)	0	['expanded_conv_1 1/expand/BatchNo rm[0][0]']
expanded_conv_11/depthwise/Con v (DepthwiseConv2D)	(None, 32, 32, 672)	6048	['activation_26 [0][0]']
expanded_conv_11/depthwise/Bat chNorm (BatchNormalization)	(None, 32, 32, 672)	2688	['expanded_conv_1 1/depthwise/Conv [0][0]']
activation_27 (Activation)	(None, 32, 32, 672)	0	['expanded_conv_1 1/depthwise/Batc

			hNorm[0][0]']
expanded_conv_11/squeeze_excit [0][0]'] e/AvgPool (GlobalAveragePoolin g2D)	(None, 672)	0	['activation_27
reshape_4 (Reshape)	(None, 1, 1, 672)	0	['expanded_conv_1 1/squeeze_excite /AvgPool[0][0]']
expanded_conv_11/squeeze_excit [0]'] e/Conv (Conv2D)	(None, 1, 1, 168)	113064	['reshape_4[0]
expanded_conv_11/squeeze_excit 1/squeeze_excite e/Relu (ReLU)	(None, 1, 1, 168)	0	['expanded_conv_1 /Conv[0][0]']
expanded_conv_11/squeeze_excit 1/squeeze_excite e/Conv_1 (Conv2D)	(None, 1, 1, 672)	113568	['expanded_conv_1 /Relu[0][0]']
activation_28 (Activation) 1/squeeze_excite	(None, 1, 1, 672)	0	['expanded_conv_1 /Conv_1[0][0]']
expanded_conv_11/squeeze_excit [0][0]', e/Mul (Multiply) [0][0]']	(None, 32, 32, 672)	0	['activation_27 'activation_28
expanded_conv_11/project (Conv 1/squeeze_excite 2D)	(None, 32, 32, 112)	75264	['expanded_conv_1 /Mul[0][0]']
expanded_conv_11/project/Batch 1/project[0][0]' Norm (BatchNormalization)	(None, 32, 32, 112)	448	['expanded_conv_1]
expanded_conv_11/Add (Add) 0/project/BatchN 1/project/BatchN	(None, 32, 32, 112)	0	['expanded_conv_1 orm[0][0]', 'expanded_conv_1 orm[0][0]']
expanded_conv_12/expand (Conv2 1/Add[0][0]'] D)	(None, 32, 32, 672)	75264	['expanded_conv_1
expanded_conv_12/expand/BatchN 2/expand[0][0]'] orm (BatchNormalization)	(None, 32, 32, 672)	2688	['expanded_conv_1
activation_29 (Activation) 2/expand/BatchNo	(None, 32, 32, 672)	0	['expanded_conv_1 rm[0][0]']
expanded_conv_12/depthwise/Con [0][0]']	(None, 32, 32, 672)	16800	['activation_29

Layer (type)	Output Shape	Param #	Connected to
v (DepthwiseConv2D)			
expanded_conv_12/depthwise/Bat chNorm (BatchNormalization)	(None, 32, 32, 672)	2688	['expanded_conv_12/depthwise/Conv[0][0]']
activation_30 (Activation)	(None, 32, 32, 672)	0	['expanded_conv_12/depthwise/BatchNorm[0][0]']
expanded_conv_12/squeeze_excit e/AvgPool (GlobalAveragePooling2D)	(None, 672)	0	['activation_30[0][0]']
reshape_5 (Reshape)	(None, 1, 1, 672)	0	['expanded_conv_12/squeeze_excite/AvgPool[0][0]']
expanded_conv_12/squeeze_excit e/Conv (Conv2D)	(None, 1, 1, 168)	113064	['reshape_5[0][0]']
expanded_conv_12/squeeze_excit e/Relu (ReLU)	(None, 1, 1, 168)	0	['expanded_conv_12/squeeze_excite/Conv[0][0]']
expanded_conv_12/squeeze_excit e/Conv_1 (Conv2D)	(None, 1, 1, 672)	113568	['expanded_conv_12/squeeze_excite/Relu[0][0]']
activation_31 (Activation)	(None, 1, 1, 672)	0	['expanded_conv_12/squeeze_excite/Conv_1[0][0]']
expanded_conv_12/squeeze_excit e/Mul (Multiply)	(None, 32, 32, 672)	0	['activation_30[0][0]', 'activation_31[0][0]']
expanded_conv_12/project (Conv 2D)	(None, 32, 32, 160)	107520	['expanded_conv_12/squeeze_excite/Mul[0][0]']
expanded_conv_12/project/Batch Norm (BatchNormalization)	(None, 32, 32, 160)	640	['expanded_conv_12/project[0][0]']
expanded_conv_13/expand (Conv2 D)	(None, 32, 32, 960)	153600	['expanded_conv_12/project/BatchNorm[0][0]']
expanded_conv_13/expand/BatchN orm (BatchNormalization)	(None, 32, 32, 960)	3840	['expanded_conv_13/expand[0][0]']
activation_32 (Activation)	(None, 32, 32, 960)	0	['expanded_conv_13/expand/BatchNorm[0][0]']
expanded_conv_13/depthwise/Con	(None, 32, 32, 960)	24000	['activation_32

```
                                      [0][0]']
 v (DepthwiseConv2D)

 expanded_conv_13/depthwise/Bat  (None, 32, 32, 960)  3840      ['expanded_conv_1
 3/depthwise/Conv
 chNorm (BatchNormalization)                                     [0][0]']

 activation_33 (Activation)      (None, 32, 32, 960)  0         ['expanded_conv_1
 3/depthwise/Batc
                                                                 hNorm[0][0]']

 expanded_conv_13/squeeze_excit  (None, 960)          0         ['activation_33
 [0][0]']
 e/AvgPool (GlobalAveragePoolin
 g2D)

 reshape_6 (Reshape)             (None, 1, 1, 960)    0         ['expanded_conv_1
 3/squeeze_excite
                                                                 /AvgPool[0][0]']

 expanded_conv_13/squeeze_excit  (None, 1, 1, 240)    230640    ['reshape_6[0]
 [0]']
 e/Conv (Conv2D)

 expanded_conv_13/squeeze_excit  (None, 1, 1, 240)    0         ['expanded_conv_1
 3/squeeze_excite
 e/Relu (ReLU)                                                   /Conv[0][0]']

 expanded_conv_13/squeeze_excit  (None, 1, 1, 960)    231360    ['expanded_conv_1
 3/squeeze_excite
 e/Conv_1 (Conv2D)                                               /Relu[0][0]']

 activation_34 (Activation)      (None, 1, 1, 960)    0         ['expanded_conv_1
 3/squeeze_excite
                                                                 /Conv_1[0][0]']

 expanded_conv_13/squeeze_excit  (None, 32, 32, 960)  0         ['activation_33
 [0][0]',
 e/Mul (Multiply)                                                 'activation_34
 [0][0]']

 expanded_conv_13/project (Conv  (None, 32, 32, 160)  153600    ['expanded_conv_1
 3/squeeze_excite
  2D)                                                            /Mul[0][0]']

 expanded_conv_13/project/Batch  (None, 32, 32, 160)  640       ['expanded_conv_1
 3/project[0][0]'
 Norm (BatchNormalization)                                       ]

 expanded_conv_13/Add (Add)      (None, 32, 32, 160)  0         ['expanded_conv_1
 2/project/BatchN
                                                                 orm[0][0]',
                                                                  'expanded_conv_1
 3/project/BatchN
                                                                 orm[0][0]']

 expanded_conv_14/expand (Conv2  (None, 32, 32, 960)  153600    ['expanded_conv_1
 3/Add[0][0]']
  D)

 expanded_conv_14/expand/BatchN  (None, 32, 32, 960)  3840      ['expanded_conv_1
```

```
4/expand[0][0]']
 orm (BatchNormalization)

 activation_35 (Activation)      (None, 32, 32, 960)  0       ['expanded_conv_1
4/expand/BatchNo

                                                                 rm[0][0]']

 expanded_conv_14/depthwise/Con  (None, 32, 32, 960)  24000   ['activation_35
[0][0]']
 v (DepthwiseConv2D)

 expanded_conv_14/depthwise/Bat  (None, 32, 32, 960)  3840    ['expanded_conv_1
4/depthwise/Conv
 chNorm (BatchNormalization)                                    [0][0]']

 activation_36 (Activation)      (None, 32, 32, 960)  0       ['expanded_conv_1
4/depthwise/Batc

                                                                 hNorm[0][0]']

 expanded_conv_14/squeeze_excit  (None, 960)          0       ['activation_36
[0][0]']
 e/AvgPool (GlobalAveragePoolin
 g2D)

 reshape_7 (Reshape)             (None, 1, 1, 960)    0       ['expanded_conv_1
4/squeeze_excite

                                                                 /AvgPool[0][0]']

 expanded_conv_14/squeeze_excit  (None, 1, 1, 240)    230640  ['reshape_7[0]
[0]']
 e/Conv (Conv2D)

 expanded_conv_14/squeeze_excit  (None, 1, 1, 240)    0       ['expanded_conv_1
4/squeeze_excite
 e/Relu (ReLU)                                                  /Conv[0][0]']

 expanded_conv_14/squeeze_excit  (None, 1, 1, 960)    231360  ['expanded_conv_1
4/squeeze_excite
 e/Conv_1 (Conv2D)                                              /Relu[0][0]']

 activation_37 (Activation)      (None, 1, 1, 960)    0       ['expanded_conv_1
4/squeeze_excite

                                                                 /Conv_1[0][0]']

 expanded_conv_14/squeeze_excit  (None, 32, 32, 960)  0       ['activation_36
[0][0]',
 e/Mul (Multiply)                                               'activation_37
[0][0]']

 expanded_conv_14/project (Conv  (None, 32, 32, 160)  153600  ['expanded_conv_1
4/squeeze_excite
 2D)                                                            /Mul[0][0]']

 expanded_conv_14/project/Batch  (None, 32, 32, 160)  640     ['expanded_conv_1
4/project[0][0]'
 Norm (BatchNormalization)                                      ]

 expanded_conv_14/Add (Add)      (None, 32, 32, 160)  0       ['expanded_conv_1
3/Add[0][0]',

                                                                 'expanded_conv_1
4/project/BatchN
```

```
                                                         orm[0][0]']

 aspp1_depthwise (DepthwiseConv   (None, 32, 32, 160)   1440      ['expanded_conv_1
4/Add[0][0]']
 2D)

 aspp2_depthwise (DepthwiseConv   (None, 32, 32, 160)   1440      ['expanded_conv_1
4/Add[0][0]']
 2D)

 aspp3_depthwise (DepthwiseConv   (None, 32, 32, 160)   1440      ['expanded_conv_1
4/Add[0][0]']
 2D)

 average_pooling2d (AveragePool   (None, 1, 1, 160)     0         ['expanded_conv_1
4/Add[0][0]']
 ing2D)

 aspp1_depthwise_BN (BatchNorma   (None, 32, 32, 160)   640       ['aspp1_depthwise
[0][0]']
 lization)

 aspp2_depthwise_BN (BatchNorma   (None, 32, 32, 160)   640       ['aspp2_depthwise
[0][0]']
 lization)

 aspp3_depthwise_BN (BatchNorma   (None, 32, 32, 160)   640       ['aspp3_depthwise
[0][0]']
 lization)

 image_pooling (Conv2D)           (None, 1, 1, 256)     40960     ['average_pooling
2d[0][0]']

 re_lu_1 (ReLU)                   (None, 32, 32, 160)   0         ['aspp1_depthwise
_BN[0][0]']

 re_lu_3 (ReLU)                   (None, 32, 32, 160)   0         ['aspp2_depthwise
_BN[0][0]']

 re_lu_5 (ReLU)                   (None, 32, 32, 160)   0         ['aspp3_depthwise
_BN[0][0]']

 image_pooling_BN (BatchNormali   (None, 1, 1, 256)     1024      ['image_pooling
[0][0]']
 zation)

 aspp0 (Conv2D)                   (None, 32, 32, 256)   40960     ['expanded_conv_1
4/Add[0][0]']

 aspp1_pointwise (Conv2D)         (None, 32, 32, 256)   40960     ['re_lu_1[0][0]']

 aspp2_pointwise (Conv2D)         (None, 32, 32, 256)   40960     ['re_lu_3[0][0]']

 aspp3_pointwise (Conv2D)         (None, 32, 32, 256)   40960     ['re_lu_5[0][0]']

 re_lu (ReLU)                     (None, 1, 1, 256)     0         ['image_pooling_B
N[0][0]']

 aspp0_BN (BatchNormalization)    (None, 32, 32, 256)   1024      ['aspp0[0][0]']

 aspp1_pointwise_BN (BatchNorma   (None, 32, 32, 256)   1024      ['aspp1_pointwise
```

```
[0][0]']
 lization)

 aspp2_pointwise_BN (BatchNorma   (None, 32, 32, 256)   1024      ['aspp2_pointwise
[0][0]']
 lization)

 aspp3_pointwise_BN (BatchNorma   (None, 32, 32, 256)   1024      ['aspp3_pointwise
[0][0]']
 lization)

 aspp_resize (Lambda)             (None, 32, 32, 256)   0         ['re_lu[0][0]']

 aspp0_activation (ReLU)          (None, 32, 32, 256)   0         ['aspp0_BN[0]
[0]']

 re_lu_2 (ReLU)                   (None, 32, 32, 256)   0         ['aspp1_pointwise
_BN[0][0]']

 re_lu_4 (ReLU)                   (None, 32, 32, 256)   0         ['aspp2_pointwise
_BN[0][0]']

 re_lu_6 (ReLU)                   (None, 32, 32, 256)   0         ['aspp3_pointwise
_BN[0][0]']

 concatenate (Concatenate)        (None, 32, 32, 1280   0         ['aspp_resize[0]
[0]',
                                  )                                'aspp0_activatio
n[0][0]',
                                                                   're_lu_2[0][0]',
                                                                   're_lu_4[0][0]',
                                                                   're_lu_6[0][0]']

 concat_projection (Conv2D)       (None, 32, 32, 256)   327680    ['concatenate[0]
[0]']

 concat_projection_BN (BatchNor   (None, 32, 32, 256)   1024      ['concat_projecti
on[0][0]']
 malization)

 re_lu_7 (ReLU)                   (None, 32, 32, 256)   0         ['concat_projecti
on_BN[0][0]']

 feature_projection0 (Conv2D)     (None, 128, 128, 48   1152      ['expanded_conv_
2/Add[0][0]']
                                  )

 dropout (Dropout)                (None, 32, 32, 256)   0         ['re_lu_7[0][0]']

 feature_projection0_BN (BatchN   (None, 128, 128, 48   192       ['feature_project
ion0[0][0]']
 ormalization)                    )

 decoder_resize (Lambda)          (None, 128, 128, 25   0         ['dropout[0][0]']
                                  6)

 re_lu_8 (ReLU)                   (None, 128, 128, 48   0         ['feature_project
ion0_BN[0][0]']
                                  )

 concatenate_1 (Concatenate)      (None, 128, 128, 30   0         ['decoder_resize
```

```
                                         [0][0]',
                                    4)                                    're_lu_8[0][0]']

 decoder_conv0_depthwise (Depth    (None, 128, 128, 30   2736      ['concatenate_1
[0][0]']
 wiseConv2D)                       4)

 decoder_conv0_depthwise_BN (Ba    (None, 128, 128, 30   1216      ['decoder_conv0_d
epthwise[0][0]']
 tchNormalization)                 4)

 re_lu_9 (ReLU)                    (None, 128, 128, 30   0         ['decoder_conv0_d
epthwise_BN[0][0

                                   4)                                   ]']

 decoder_conv0_pointwise (Conv2    (None, 128, 128, 25   77824     ['re_lu_9[0][0]']
 D)                                6)

 decoder_conv0_pointwise_BN (Ba    (None, 128, 128, 25   1024      ['decoder_conv0_p
ointwise[0][0]']
 tchNormalization)                 6)

 re_lu_10 (ReLU)                   (None, 128, 128, 25   0         ['decoder_conv0_p
ointwise_BN[0][0

                                   6)                                   ]']

 decoder_conv1_depthwise (Depth    (None, 128, 128, 25   2304      ['re_lu_10[0]
[0]']
 wiseConv2D)                       6)

 decoder_conv1_depthwise_BN (Ba    (None, 128, 128, 25   1024      ['decoder_conv1_d
epthwise[0][0]']
 tchNormalization)                 6)

 re_lu_11 (ReLU)                   (None, 128, 128, 25   0         ['decoder_conv1_d
epthwise_BN[0][0

                                   6)                                   ]']

 decoder_conv1_pointwise (Conv2    (None, 128, 128, 25   65536     ['re_lu_11[0]
[0]']
 D)                                6)

 decoder_conv1_pointwise_BN (Ba    (None, 128, 128, 25   1024      ['decoder_conv1_p
ointwise[0][0]']
 tchNormalization)                 6)

 re_lu_12 (ReLU)                   (None, 128, 128, 25   0         ['decoder_conv1_p
ointwise_BN[0][0

                                   6)                                   ]']

 logits_semantic (Conv2D)          (None, 128, 128, 1)   257       ['re_lu_12[0]
[0]']

 pred_resize (Lambda)              (None, 512, 512, 1)   0         ['logits_semantic
[0][0]']

 reshape_8 (Reshape)               (None, 512, 512, 1)   0         ['pred_resize[0]
[0]']

 Predictions/Sigmoid (Activatio    (None, 512, 512, 1)   0         ['reshape_8[0]
[0]']
```

```
 n)

================================================================================
================
Total params: 3,538,065
Trainable params: 3,509,313
Non-trainable params: 28,752
_____
_____
```