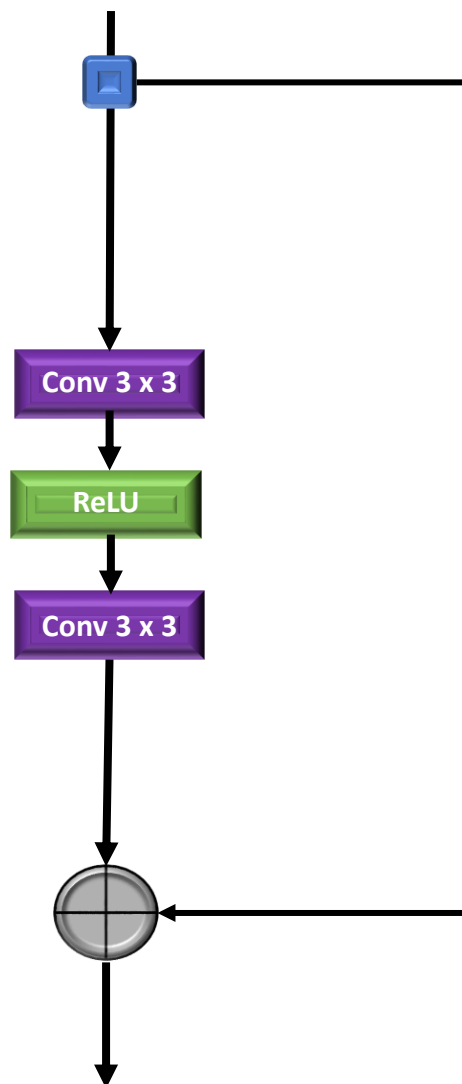
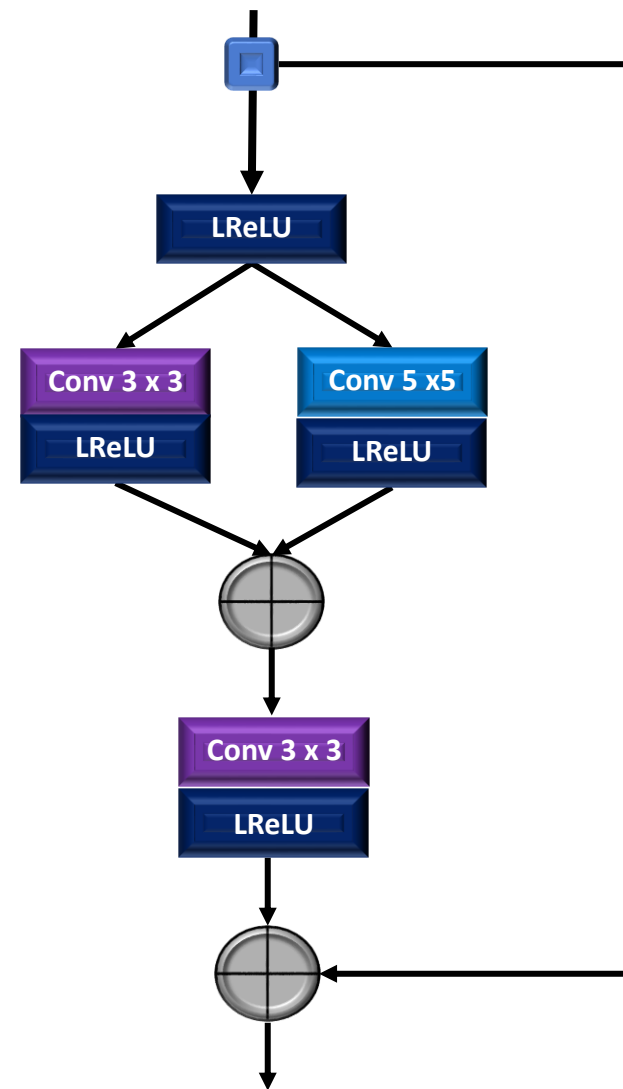


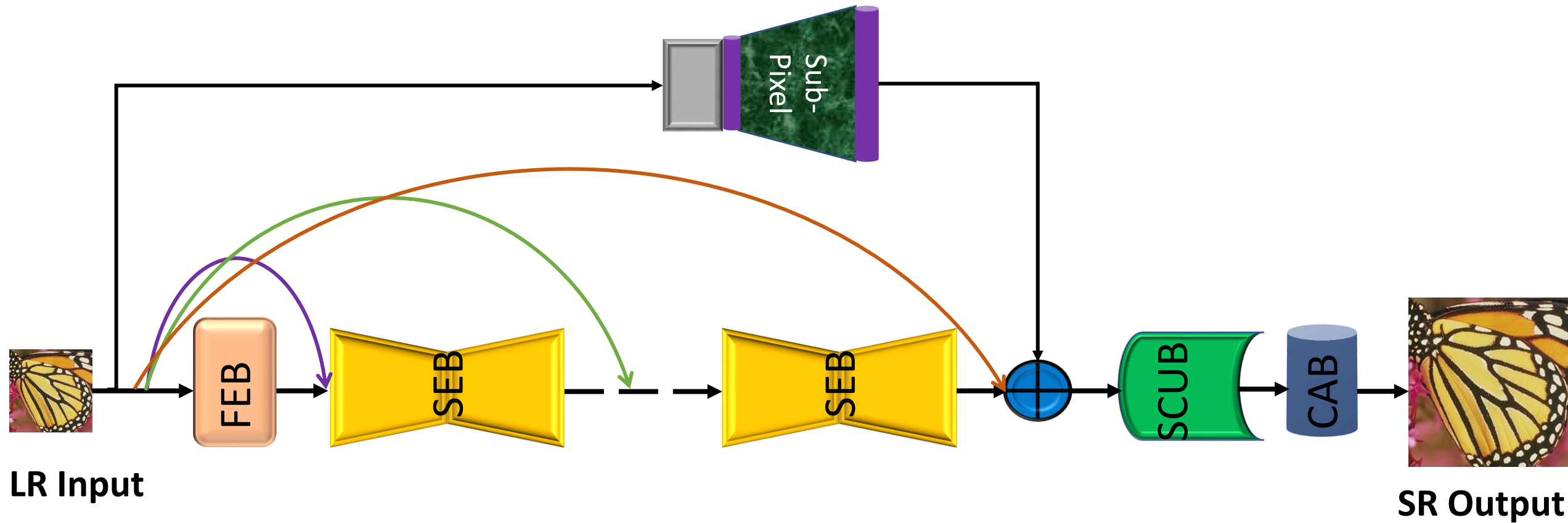
(a) SRResNet



(b) EDSR



(c) Our Proposed split-concatenation block (SCB)



FEB = Feature  
Extraction Block



SEB = Squeeze-and-  
Excitation Block



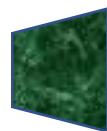
SCUB = Split-  
concatenation-Block



CAB = Capsule unit  
block



Bottleneck Layer



Sub-pixel Layer

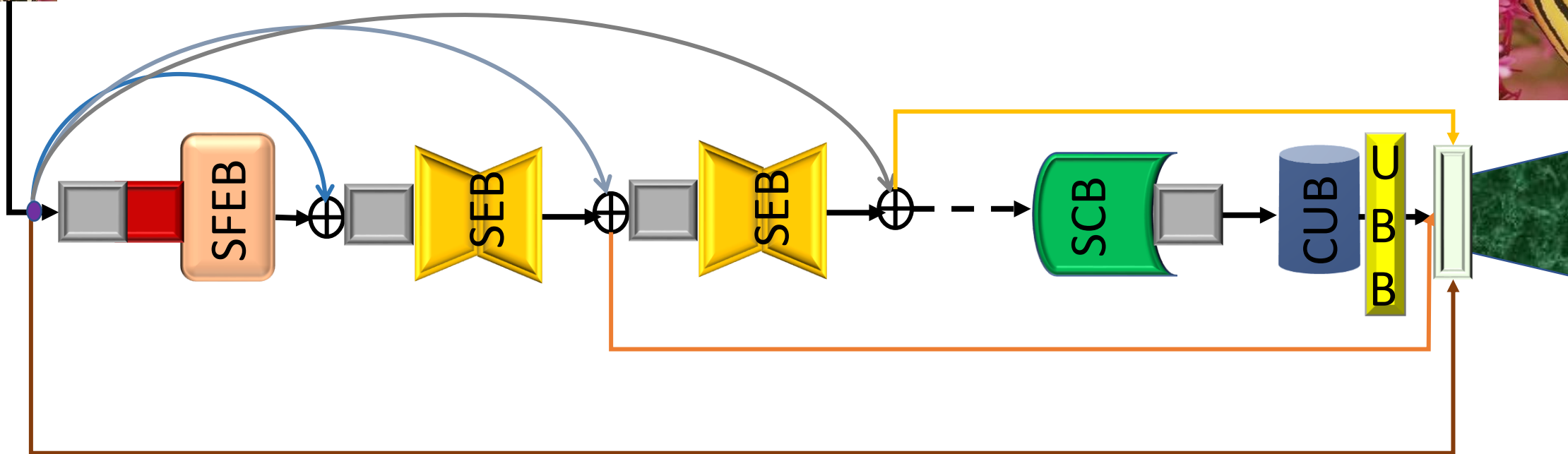


3x3 CNN Layer



LR Input

HR Output



3x3 CNN Layer



SFEB = Shallow Feature Extraction Block



SCB = Split-concatenation-Block



Element-wise sum



Concatenate Layer



LReLU



SEB = Squeeze-and-Excitation Block



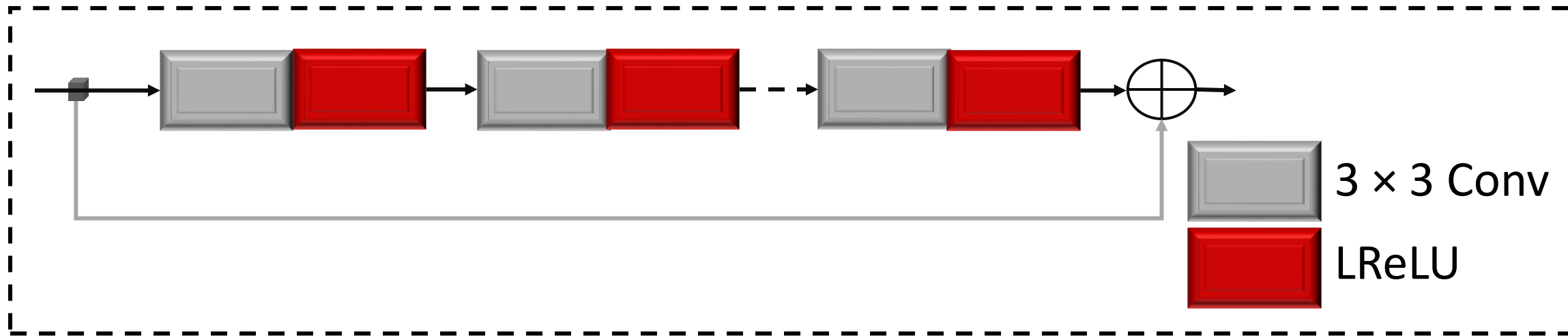
CUB = Capsule unit block



Transpose Convolution

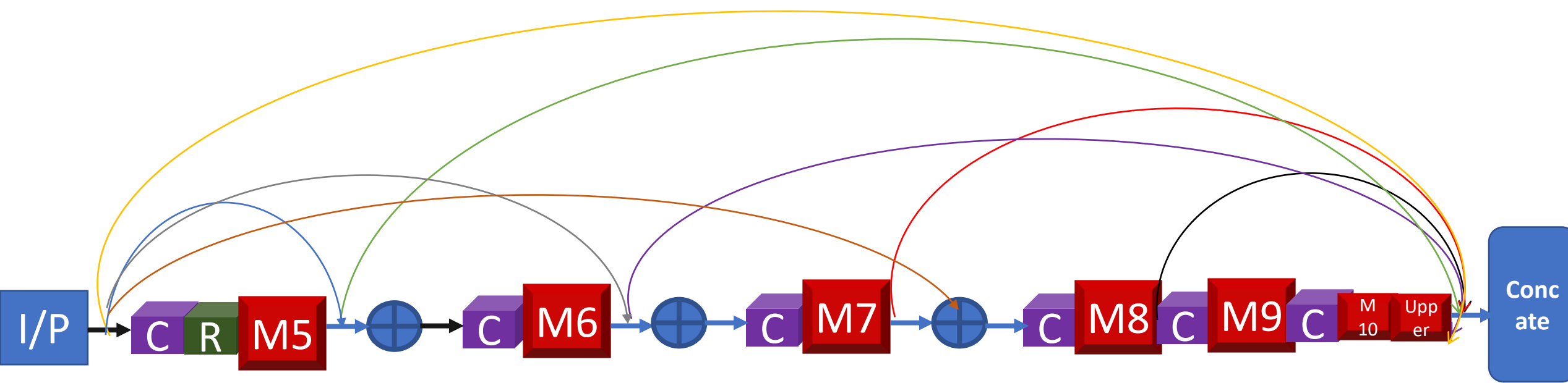
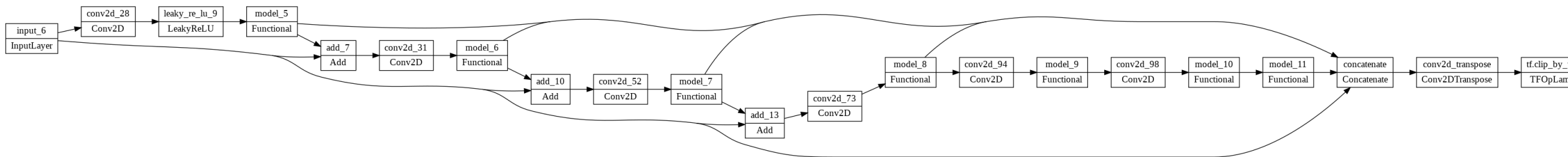


UBB = Upper Branch Block

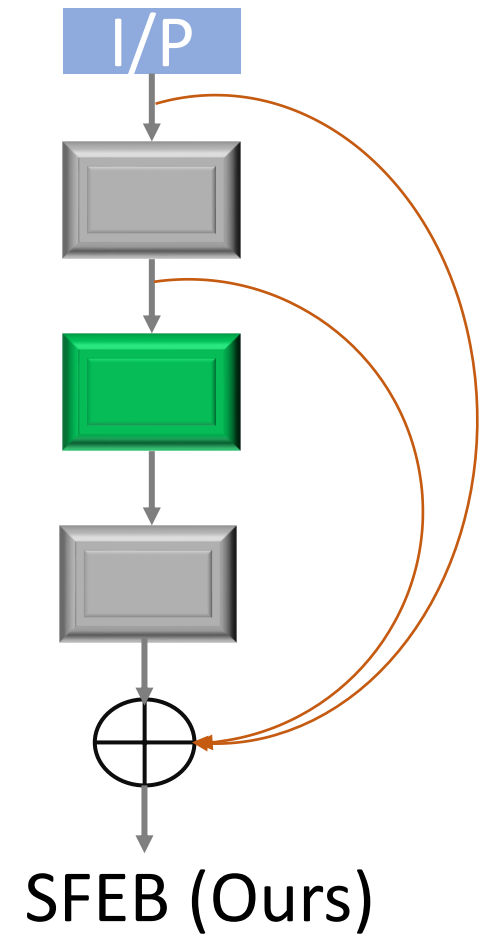
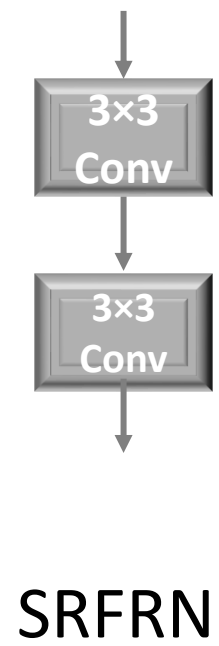
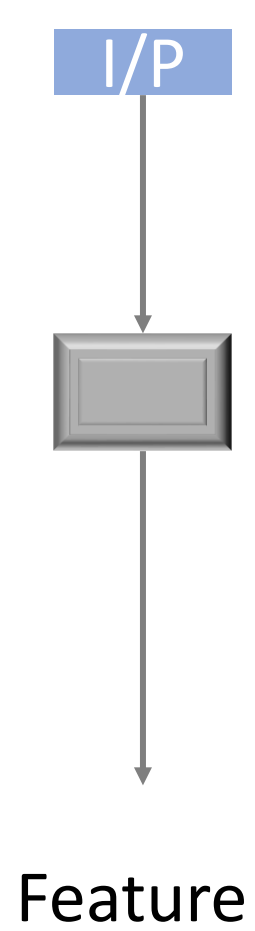


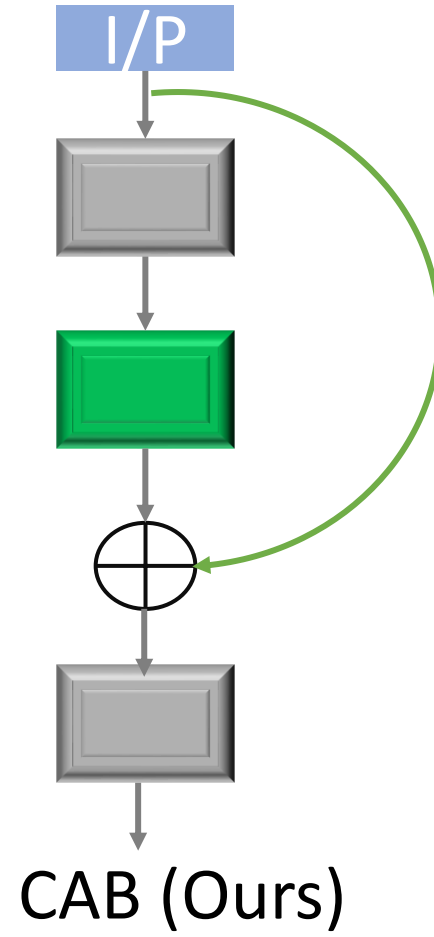
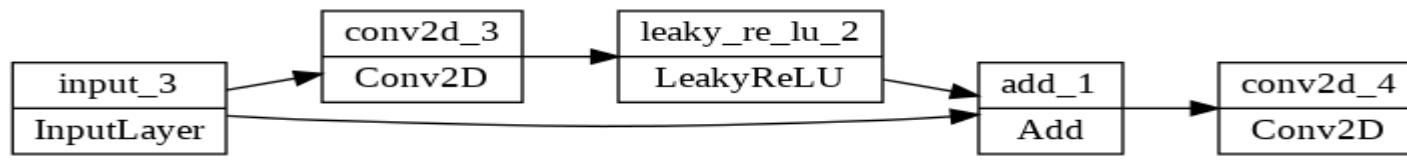
Upper Branch Block (UBB)



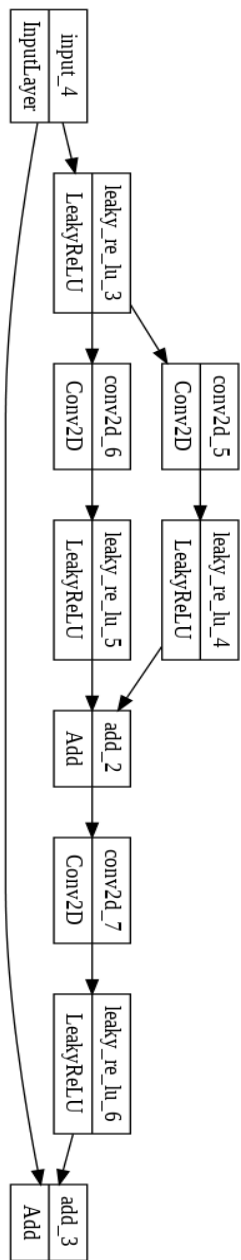


M5 = SFEB

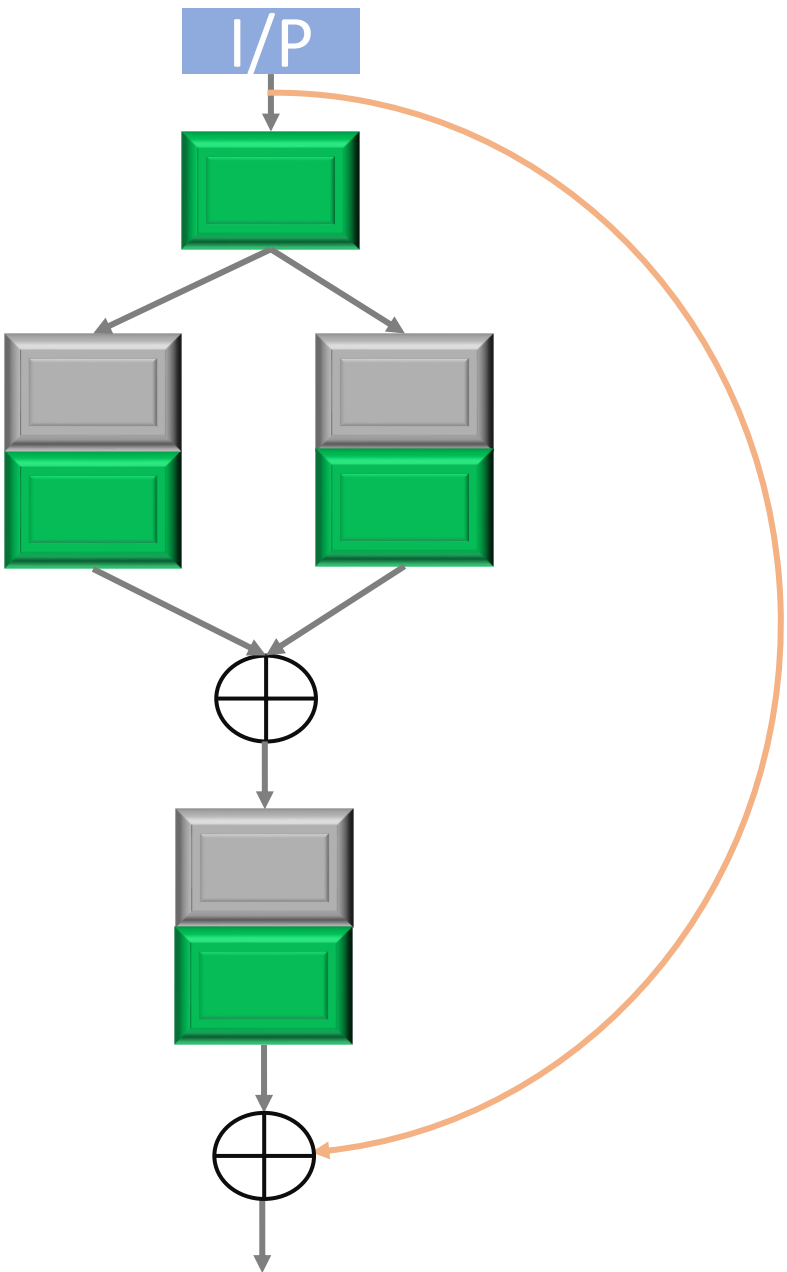


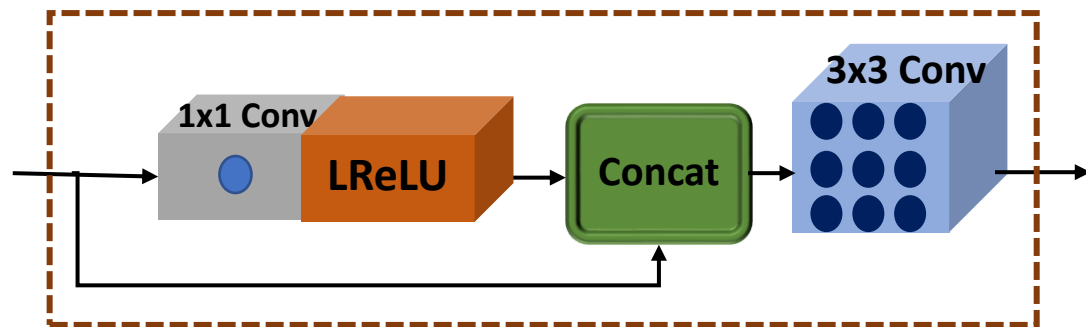


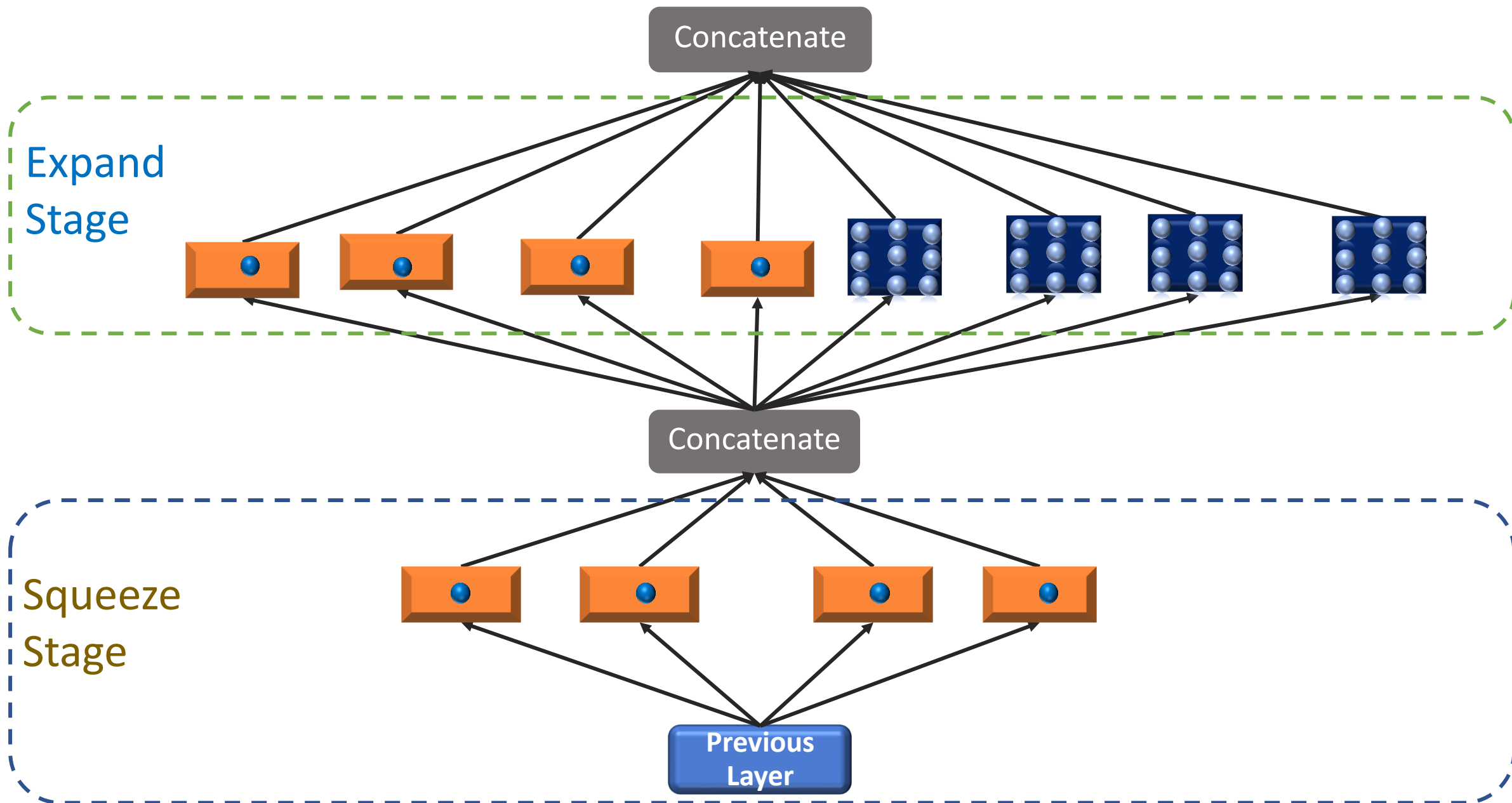




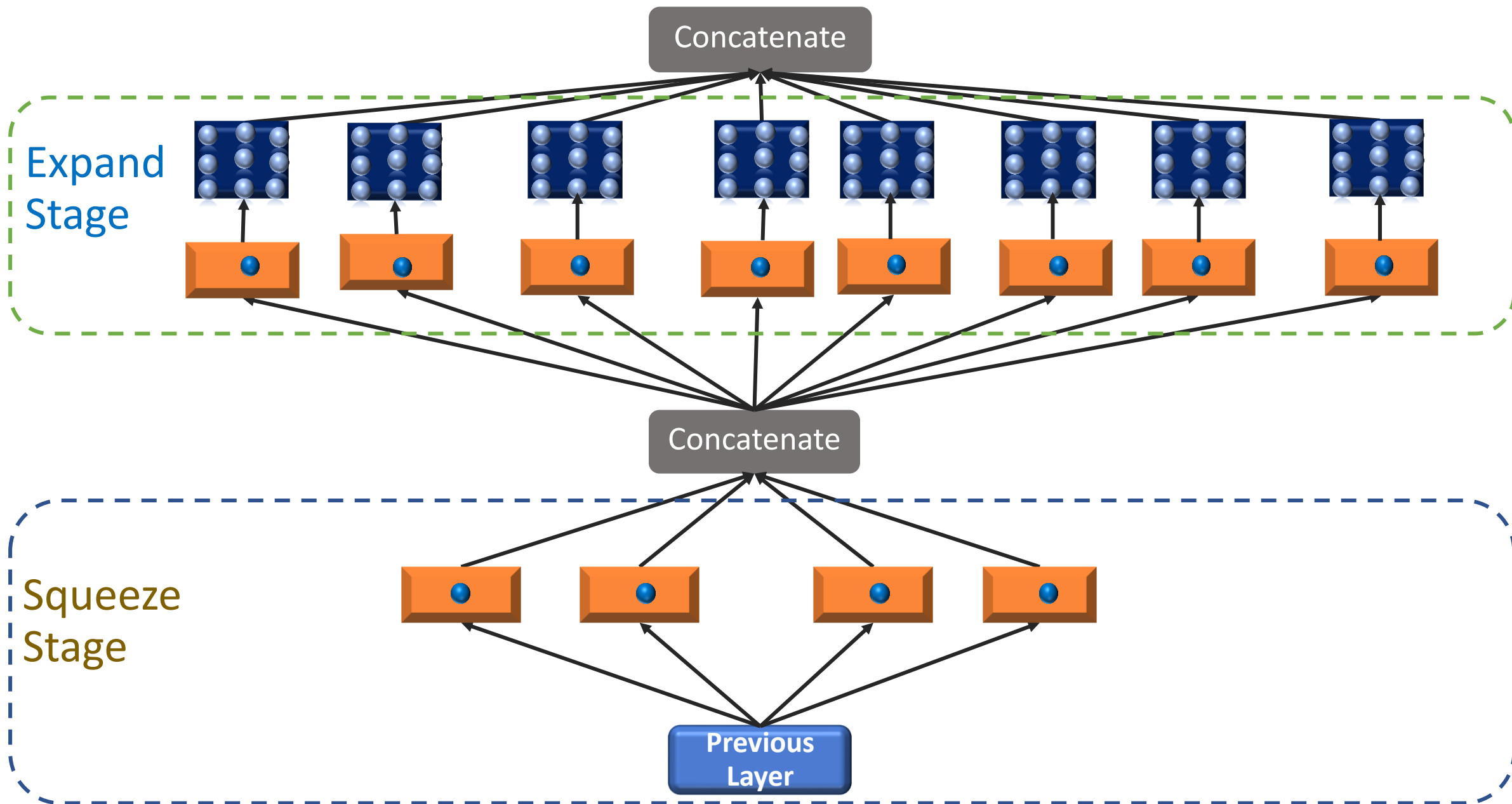
SCUB



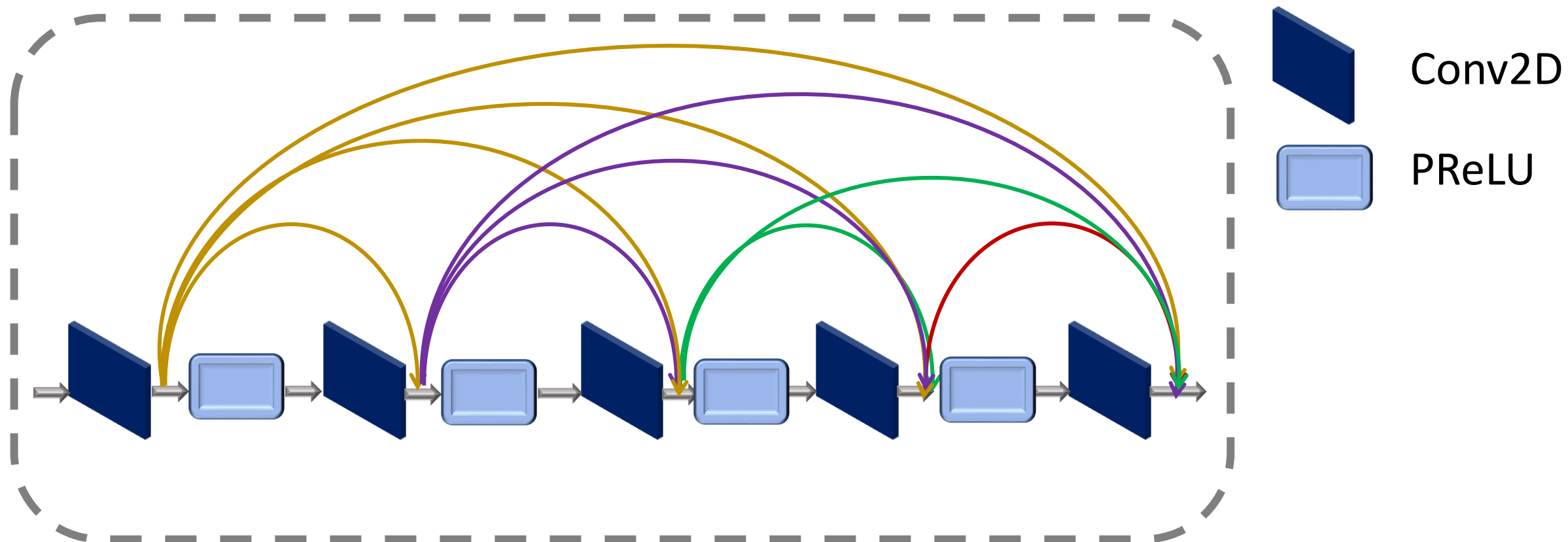




Original Fire Block (Squeeze and Expand Stage Block)



Proposed Fire Block (DWCF Fire Module) Depthwise separable Convolutional Fire Module)



Dense Block