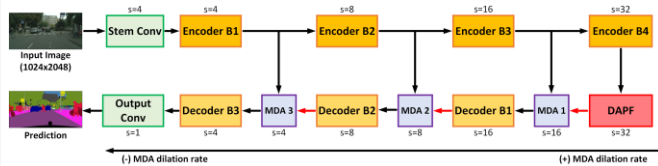


Summary

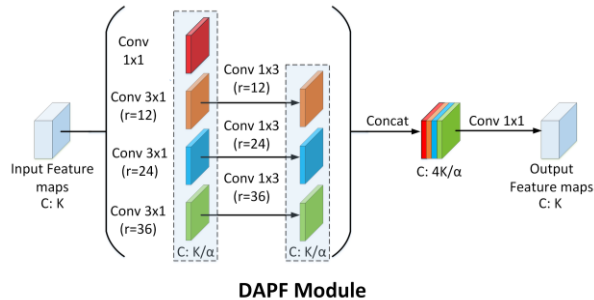
- Reduce the **accuracy gap** between *real-time* and *non-real-time* semantic segmentation networks.
- We propose two key modules to increase the accuracy performance by keeping a low computational cost: **DAPF** and **MDA**.
- Two additional variations of our proposal **FASDD-Net** are provided to balance the trade-off between speed and accuracy further.

Network Architecture

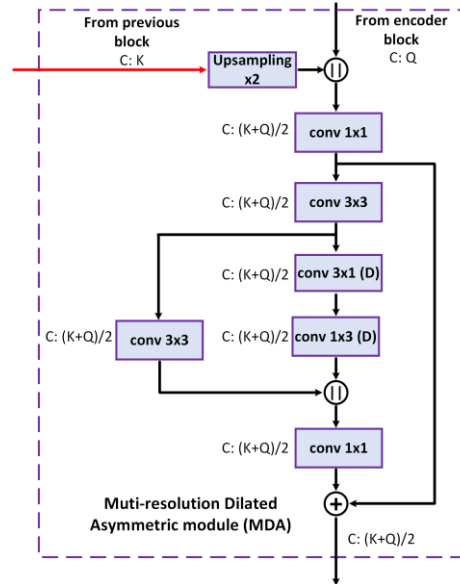
- The **FASDD-Net** family of networks provides high accuracy and fast Inference speed even at high-resolution input images (1024x2048).



Dilated Asymmetric Pyramidal Fusion module (DAPF)



Multi-resolution Dilated Asymmetric module (MDA)



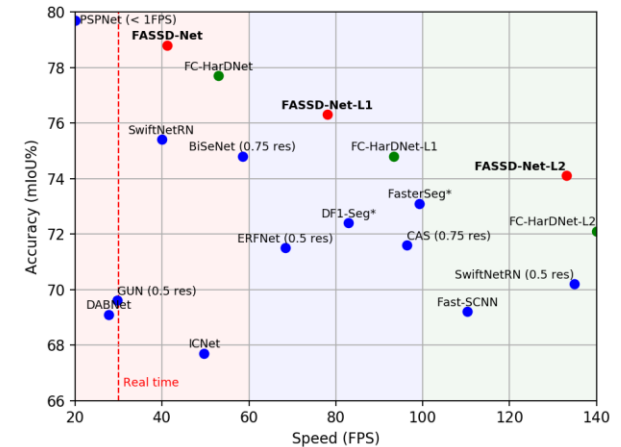
Ablation Study

- We obtain consistent performance improvements with our proposals, individually and combined.

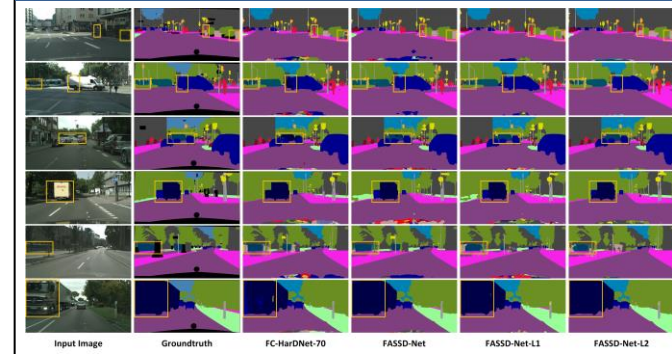
TABLE I
ABLATION STUDY OF OUR PROPOSED MODULES ON THE CITYSCAPES
VALIDATION SET.

Method	GFLOPs	No. Parameters	Δp	FPS	mIoU
FC-HarDNet-70 [7]	35.4	4.10M	-	52.3	76.4
Baseline	32.9	1.90M	0M	56.3	75.2
+ ASPP	36.8	3.85M	1.95M	50.2	75.8
+ DAPF	33.9	2.36M	0.46M	53.9	77.7
+ MDA	44.2	2.38M	0.48M	42.2	77.4
+ ASPP + MDA	48.0	4.33M	2.43M	39.1	76.8
+ DAPF + MDA	45.1	2.85M	0.95M	41.1	78.2

Quantitative Experimental Results



Qualitative Experimental Results



Open Repository

- Code and models available at:
<https://github.com/GibranBenitez/FASDD-Net>

