









██████████ 423798/423798 [00:50<00:00, 8340.54it/s]

Compute cycles: 423797  
Stall cycles: 0  
Overall utilization: 97.16%  
Mapping efficiency: 98.64%  
Average IFMAP DRAM BW: 13.135 words/cycle  
Average Filter DRAM BW: 0.087 words/cycle  
Average OFMAP DRAM BW: 15.775 words/cycle

Running Layer 1



██████████ 577152/577152 [01:00<00:00, 9555.10it/s]

Compute cycles: 577151  
Stall cycles: 0  
Overall utilization: 72.46%  
Mapping efficiency: 100.00%  
Average IFMAP DRAM BW: 11.545 words/cycle  
Average Filter DRAM BW: 1.525 words/cycle  
Average OFMAP DRAM BW: 11.642 words/cycle

\*\*\*\*\* SCALE SIM Run Complete \*\*\*\*\*

Completed SCALE-Sim run 1

Running SCALE-Sim with Config:

/home/msaha4/Downloads/lab3/scale-sim-v2/configs/my\_config\_2.cfg

Output Directory: /home/msaha4/Downloads/lab3/output/run\_DC\_2

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\*\*\*\*\* SCALE SIM \*\*\*\*\*

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Array Size: 16x16

SRAM IFMAP (kB): 128

SRAM Filter (kB): 128

SRAM OFMAP (kB): 128

Dataflow: Weight Stationary

CSV file path: /home/msaha4/Downloads/lab3/dnn\_layers.csv

Working in ESTIMATE BANDWIDTH mode.

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Running Layer 0



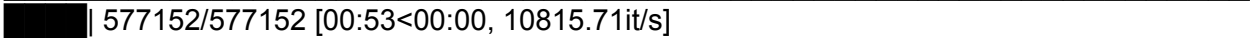


██████████ 423798/423798 [00:46<00:00, 9081.38it/s]

Compute cycles: 423797

Stall cycles: 0  
Overall utilization: 97.16%  
Mapping efficiency: 98.64%  
Average IFMAP DRAM BW: 10.047 words/cycle  
Average Filter DRAM BW: 9.852 words/cycle  
Average OFMAP DRAM BW: 15.776 words/cycle

Running Layer 1

100%  
  
 577152/577152 [00:53<00:00, 10815.71it/s]

Compute cycles: 577151  
Stall cycles: 0  
Overall utilization: 72.46%  
Mapping efficiency: 100.00%  
Average IFMAP DRAM BW: 9.908 words/cycle  
Average Filter DRAM BW: 1.574 words/cycle  
Average OFMAP DRAM BW: 11.700 words/cycle  
\*\*\*\*\* SCALE SIM Run Complete \*\*\*\*\*

Completed SCALE-Sim run 2

Running SCALE-Sim with Config:

/home/msaha4/Downloads/lab3/scale-sim-v2/configs/my\_config\_3.cfg

Output Directory: /home/msaha4/Downloads/lab3/output/run\_DC\_3

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\*\*\*\*\* SCALE SIM \*\*\*\*\*

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Array Size: 16x16

SRAM IFMAP (kB): 64

SRAM Filter (kB): 128

SRAM OFMAP (kB): 64




Dataflow: Weight Stationary

CSV file path: /home/msaha4/Downloads/lab3/dnn\_layers.csv

Working in ESTIMATE BANDWIDTH mode.

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Running Layer 0

100%  
  
 423798/423798 [00:47<00:00, 8853.46it/s]

Compute cycles: 423797  
Stall cycles: 0  
Overall utilization: 97.16%  
Mapping efficiency: 98.64%  
Average IFMAP DRAM BW: 13.135 words/cycle

Average Filter DRAM BW: 9.852 words/cycle  
Average OFMAP DRAM BW: 15.775 words/cycle

Running Layer 1

100%  
577152/577152 [00:59<00:00, 9695.44it/s]

Compute cycles: 577151

Stall cycles: 0

Overall utilization: 72.46%

Mapping efficiency: 100.00%

Average IFMAP DRAM BW: 11.545 words/cycle

Average Filter DRAM BW: 1.574 words/cycle

Average OFMAP DRAM BW: 11.642 words/cycle

\*\*\*\*\* SCALE SIM Run Complete \*\*\*\*\*

Completed SCALE-Sim run 3

Running SCALE-Sim with Config:

/home/msaha4/Downloads/lab3/scale-sim-v2/configs/my\_config\_4.cfg

Output Directory: /home/msaha4/Downloads/lab3/output/run\_DC\_4

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\*\*\*\*\* SCALE SIM \*\*\*\*\*

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Array Size: 16x16

SRAM IFMAP (kB): 256

SRAM Filter (kB): 128

SRAM OFMAP (kB): 256

Dataflow: Weight Stationary

CSV file path: /home/msaha4/Downloads/lab3/dnn\_layers.csv

Working in ESTIMATE BANDWIDTH mode.

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Running Layer 0

100%  
423798/423798 [00:47<00:00, 8982.05it/s]

Compute cycles: 423797

Stall cycles: 0

Overall utilization: 97.16%

Mapping efficiency: 98.64%

Average IFMAP DRAM BW: 5.753 words/cycle

Average Filter DRAM BW: 9.852 words/cycle

Average OFMAP DRAM BW: 15.778 words/cycle

Running Layer 1



577152/577152 [00:49<00:00, 11641.47it/s]

Compute cycles: 577151

Stall cycles: 0

Overall utilization: 72.46%

Mapping efficiency: 100.00%

Average IFMAP DRAM BW: 9.903 words/cycle

Average Filter DRAM BW: 1.574 words/cycle

Average OFMAP DRAM BW: 11.817 words/cycle

\*\*\*\*\* SCALE SIM Run Complete \*\*\*\*\*

Completed SCALE-Sim run 4

Running SCALE-Sim with Config:

/home/msaha4/Downloads/lab3/scale-sim-v2/configs/my\_config\_5.cfg

Output Directory: /home/msaha4/Downloads/lab3/output/run\_DC\_5

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\*\*\*\*\* SCALE SIM \*\*\*\*\*

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Array Size: 16x16

SRAM IFMAP (kB): 64

SRAM Filter (kB): 512

SRAM OFMAP (kB): 256

Dataflow: Weight Stationary

CSV file path: /home/msaha4/Downloads/lab3/dnn\_layers.csv

Working in ESTIMATE BANDWIDTH mode.

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Running Layer 0



423798/423798 [00:48<00:00, 8808.95it/s]

Compute cycles: 423797

Stall cycles: 0

Overall utilization: 97.16%

Mapping efficiency: 98.64%

Average IFMAP DRAM BW: 13.135 words/cycle

Average Filter DRAM BW: 9.495 words/cycle

Average OFMAP DRAM BW: 15.778 words/cycle

Running Layer 1



577152/577152 [01:00<00:00, 9489.66it/s]

Compute cycles: 577151

Stall cycles: 0  
Overall utilization: 72.46%  
Mapping efficiency: 100.00%  
Average IFMAP DRAM BW: 11.545 words/cycle  
Average Filter DRAM BW: 1.641 words/cycle  
Average OFMAP DRAM BW: 11.817 words/cycle  
\*\*\*\*\* SCALE SIM Run Complete \*\*\*\*\*  
Completed SCALE-Sim run 5  
Running SCALE-Sim with Config:  
/home/msaha4/Downloads/lab3/scale-sim-v2/configs/my\_config\_m1.cfg  
Output Directory: /home/msaha4/Downloads/lab3/output/run\_M\_1

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\*\*\*\*\* SCALE SIM \*\*\*\*\*


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Array Size: 16x16  
SRAM IFMAP (kB): 64  
SRAM Filter (kB): 64  
SRAM OFMAP (kB): 64  
Dataflow: Output Stationary  
CSV file path: /home/msaha4/Downloads/lab3/dnn\_layers.csv  
Working in ESTIMATE BANDWIDTH mode.

=====

Running Layer 0


100%





 448020/448020 [00:44<00:00, 10045.11it/s]

Compute cycles: 448019  
Stall cycles: 0  
Overall utilization: 91.91%  
Mapping efficiency: 99.51%  
Average IFMAP DRAM BW: 2.376 words/cycle  
Average Filter DRAM BW: 0.102 words/cycle  
Average OFMAP DRAM BW: 0.728 words/cycle

Running Layer 1

100%



 446208/446208 [00:53<00:00, 8362.87it/s]

Compute cycles: 446207  
Stall cycles: 0  
Overall utilization: 93.72%  
Mapping efficiency: 94.53%  
Average IFMAP DRAM BW: 2.979 words/cycle







\*\*\*\*\* SCALE SIM \*\*\*\*\*

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Array Size:    16x16
SRAM IFMAP (kB):    16
SRAM Filter (kB):    16
SRAM OFMAP (kB):    16
Dataflow:      Output Stationary
CSV file path: /home/msaha4/Downloads/lab3/dnn_layers.csv
Working in ESTIMATE BANDWIDTH mode.

```

## Running Layer 0

100%|██████████  
██████████ | 448020/448020 [00:44<00:00, 9985.55it/s]  
Compute cycles: 448019  
Stall cycles: 0  
Overall utilization: 91.91%  
Mapping efficiency: 99.51%  
Average IFMAP DRAM BW: 4.109 words/cycle  
Average Filter DRAM BW: 0.124 words/cycle  
Average OFMAP DRAM BW: 0.667 words/cycle

## Running Layer 1

[illegible]

\*\*\*\*\* SCALE SIM Run Complete \*\*\*\*\*

Completed SCALE-Sim run 4  
Running SCALE-Sim with Config:  
/home/msaha4/Downloads/lab3/scale-sim-v2/configs/my\_config\_m5.cfg  
Output Directory: /home/msaha4/Downloads/lab3/output/run\_M\_5



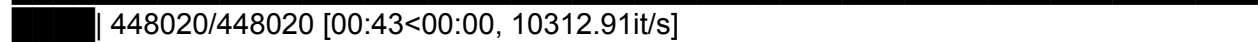
\*\*\*\*\* SCALE SIM \*\*\*\*\*

Array Size: 16x16  
SRAM IFMAP (kB): 128

SRAM Filter (kB): 64  
SRAM OFMAP (kB): 256  
Dataflow: Output Stationary  
CSV file path: /home/msaha4/Downloads/lab3/dnn\_layers.csv  
Working in ESTIMATE BANDWIDTH mode.



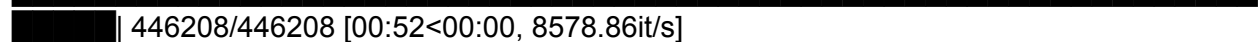
=====

Running Layer 0

100%  
  
 448020/448020 [00:43<00:00, 10312.91it/s]

Compute cycles: 448019  
Stall cycles: 0  
Overall utilization: 91.91%  
Mapping efficiency: 99.51%  
Average IFMAP DRAM BW: 2.234 words/cycle  
Average Filter DRAM BW: 0.102 words/cycle  
Average OFMAP DRAM BW: 1.172 words/cycle

Running Layer 1

100%  
  
 446208/446208 [00:52<00:00, 8578.86it/s]

Compute cycles: 446207  
Stall cycles: 0  
Overall utilization: 93.72%  
Mapping efficiency: 94.53%  
Average IFMAP DRAM BW: 9.908 words/cycle  
Average Filter DRAM BW: 15.756 words/cycle  
Average OFMAP DRAM BW: 16.000 words/cycle

\*\*\*\*\* SCALE SIM Run Complete \*\*\*\*\*

Completed SCALE-Sim run 5  
All SCALE-Sim runs completed successfully!