MNIST

Original

1 channel
28 x 28

6 channels
28 x 28

6 channels
14 x 14

16 channels
10 x 10

16 channels
5 x 5

120 neurons   84 neurons   10 outputs

5 x 5 convolution   2 x 2 max pool   5 x 5 convolution   2 x 2 max pool   dense   dense   dense

Compressed

1 channel
28 x 28

1 channel
28 x 28

6 channels
28 x 28

6 channels
14 x 14

4 channels
14 x 14

6 channels
10 x 10

16 channels
10 x 10

16 channels
5 x 5

18 neurons   18 neurons   128 neurons   9 neurons   84 neurons   10 outputs

5 x 5
convolution   1 x 1
convolution   2 x 2
max pool   1 x 1
convolution   5 x 5
convolution   1 x 1
convolution   2 x 2
max pool   dense   dense   dense   dense   dense   dense
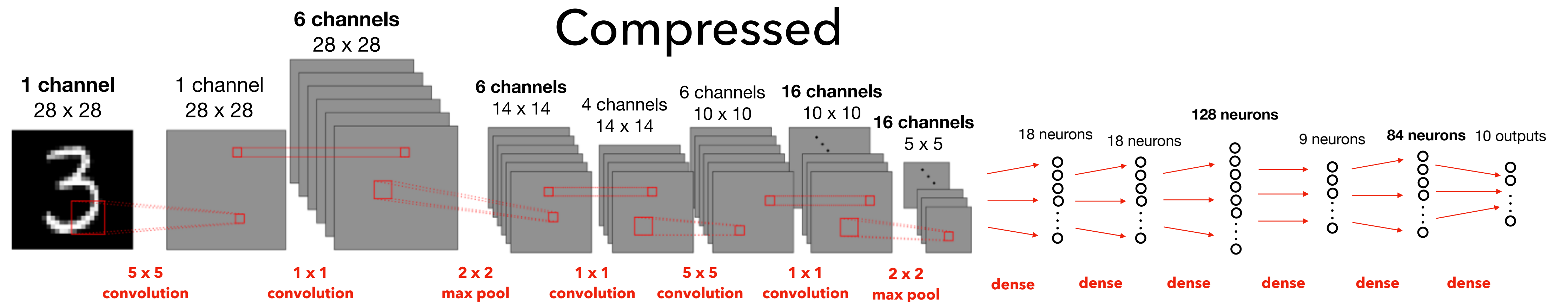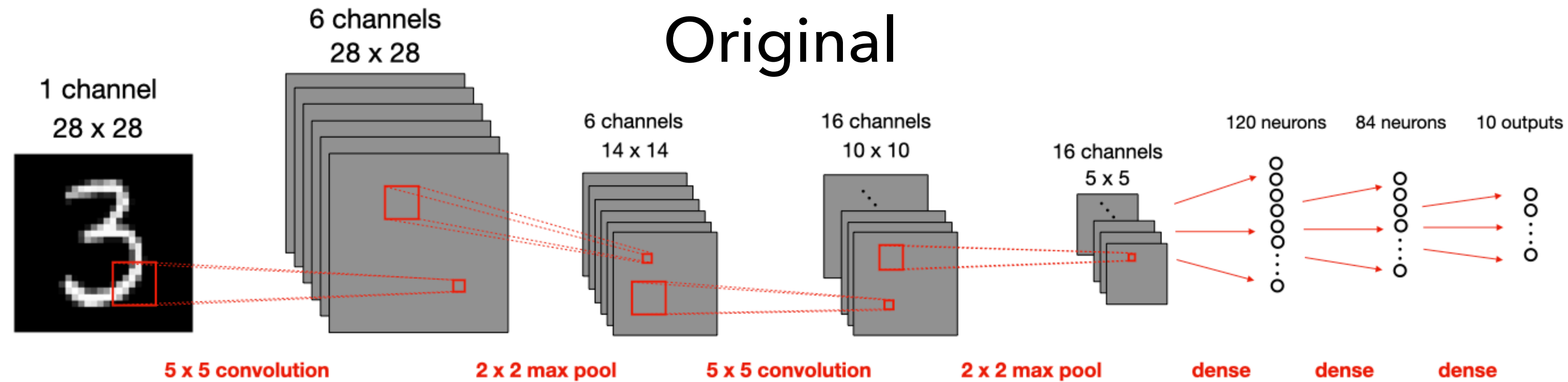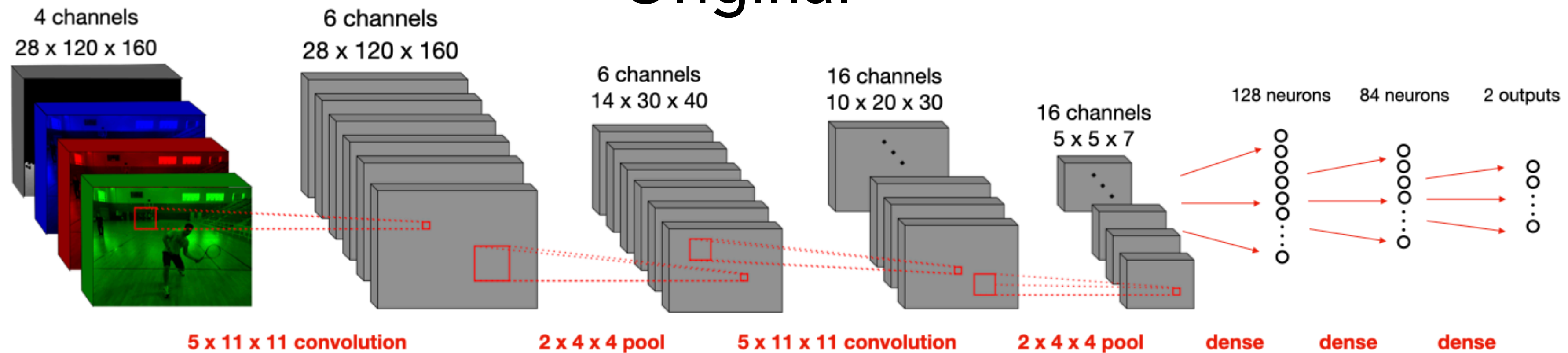
The channels marked with **bold** correspond
to the layer in the original model

Method 2 results
THETIS

Original

4 channels
28 x 120 x 160

6 channels
28 x 120 x 160

6 channels
14 x 30 x 40

16 channels
10 x 20 x 30

16 channels
5 x 5 x 7

128 neurons

84 neurons

2 outputs

5 x 11 x 11 convolution

2 x 4 x 4 pool

5 x 11 x 11 convolution

2 x 4 x 4 pool

dense

dense

dense

Compressed

4 channels
28 x 120 x 160

2 channels
28 x 120 x 160

2 channels
28 x 120 x 160

6 channels
28 x 120 x 160

6 channels
14 x 30 x 40

2 channels
14 x 30 x 40

3 channels
10 x 20 x 30

16 channels
10 x 20 x 30

16 channels
5 x 5 x 7

128 neurons

84 neurons

2 outputs

1 neuron 1 neuron

1 neuron

1 x 1 x 1
convolution

5 x 11 x 11
convolution

1 x 1 x 1
convolution

2 x 4 x 4
pool

1 x 1 x 1
convolution

5 x 11 x 11
convolution

1 x 1 x 1
convolution

2 x 4 x 4
pool

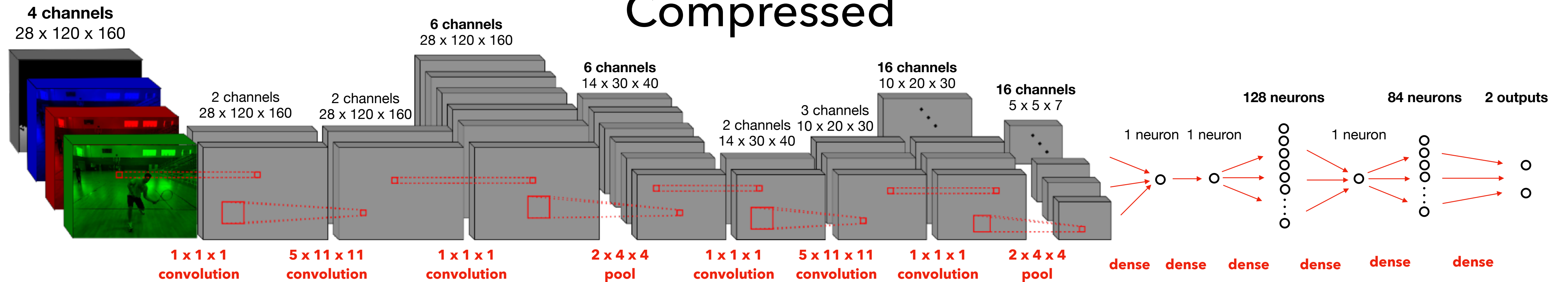dense dense dense dense dense dense

The channels marked with **bold** correspond
to the layer in the original model