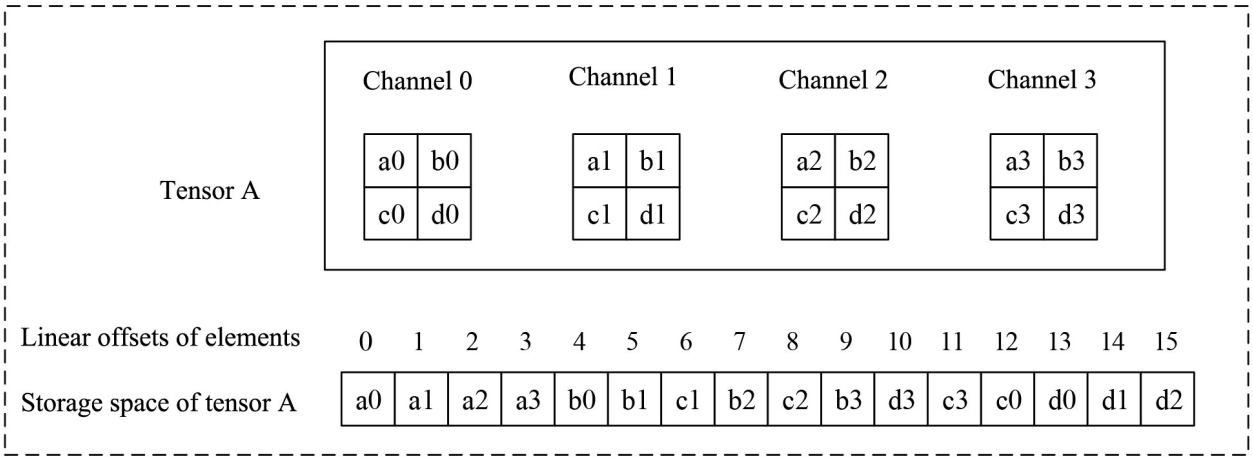
Tensor A
Channel 0
Channel 1
Channel 2
Channel 3
a0 b0 c0 d0
a1 b1 c1 d1
a2 b2 c2 d2
a3 b3 c3 d3
Linear offsets of elements
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
Storage space of tensor A
a0 a1 a2 a3 b0 b1 c1 b2 c2 b3 d3 c3 c0 d0 d1 d2

FIG. 1

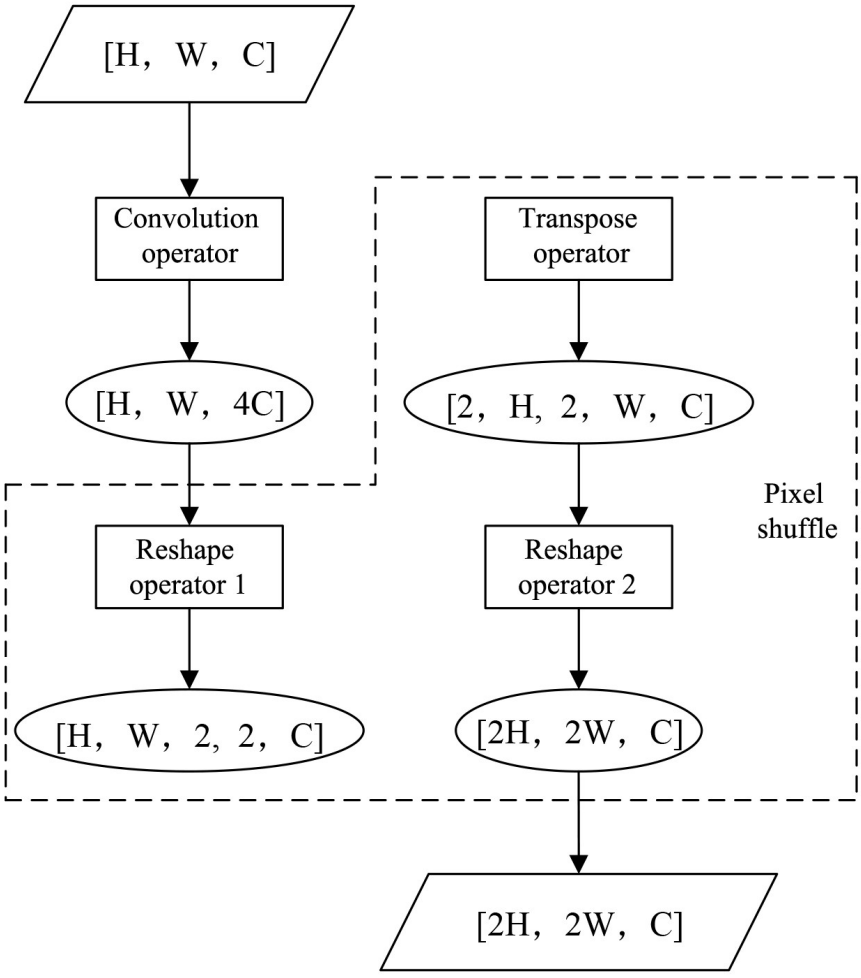
[H, W, C]
Convolution operator
[H, W, 4C]
Reshape operator 1
[H, W, 2, 2, C]
Transpose operator
[2, H, 2, W, C]
Reshape operator 2
[2H, 2W, C]
Pixel shuffle
[2H, 2W, C]

FIG. 2

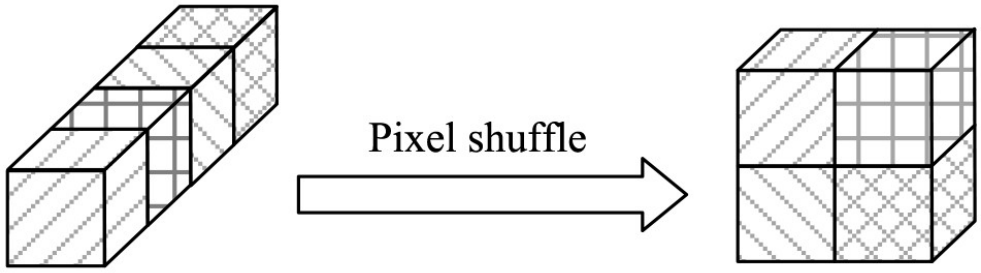
Pixel shuffle

FIG. 3

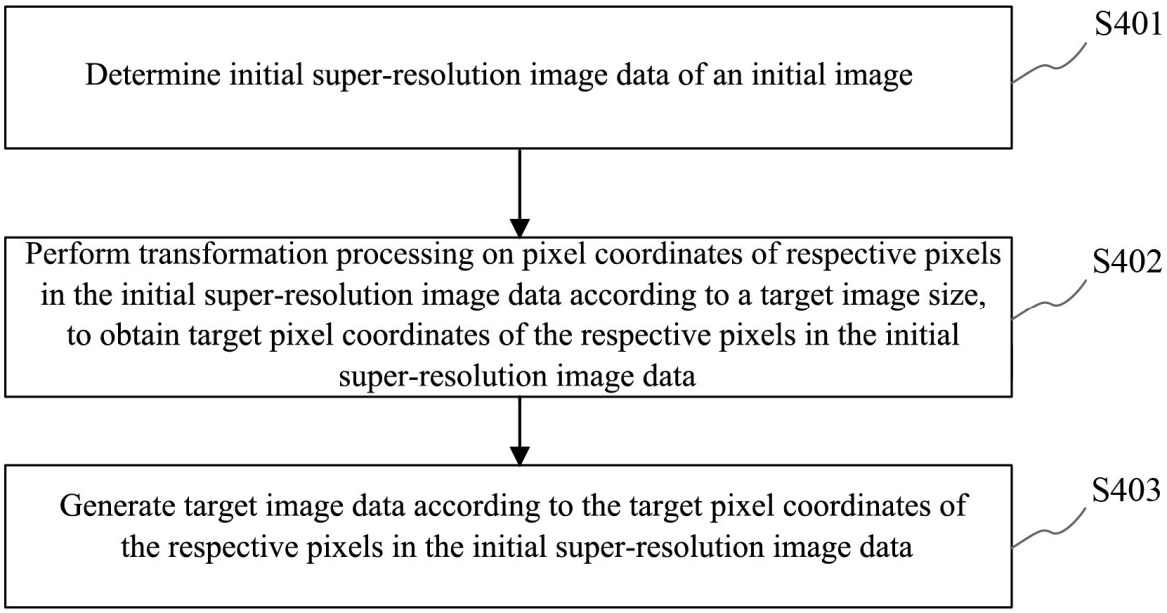
Determine initial super-resolution image data of an initial image
S401
Perform transformation processing on pixel coordinates of respective pixels in the initial super-resolution image data according to a target image size, to obtain target pixel coordinates of the respective pixels in the initial super-resolution image data
S402
Generate target image data according to the target pixel coordinates of the respective pixels in the initial super-resolution image data
S403

FIG. 4

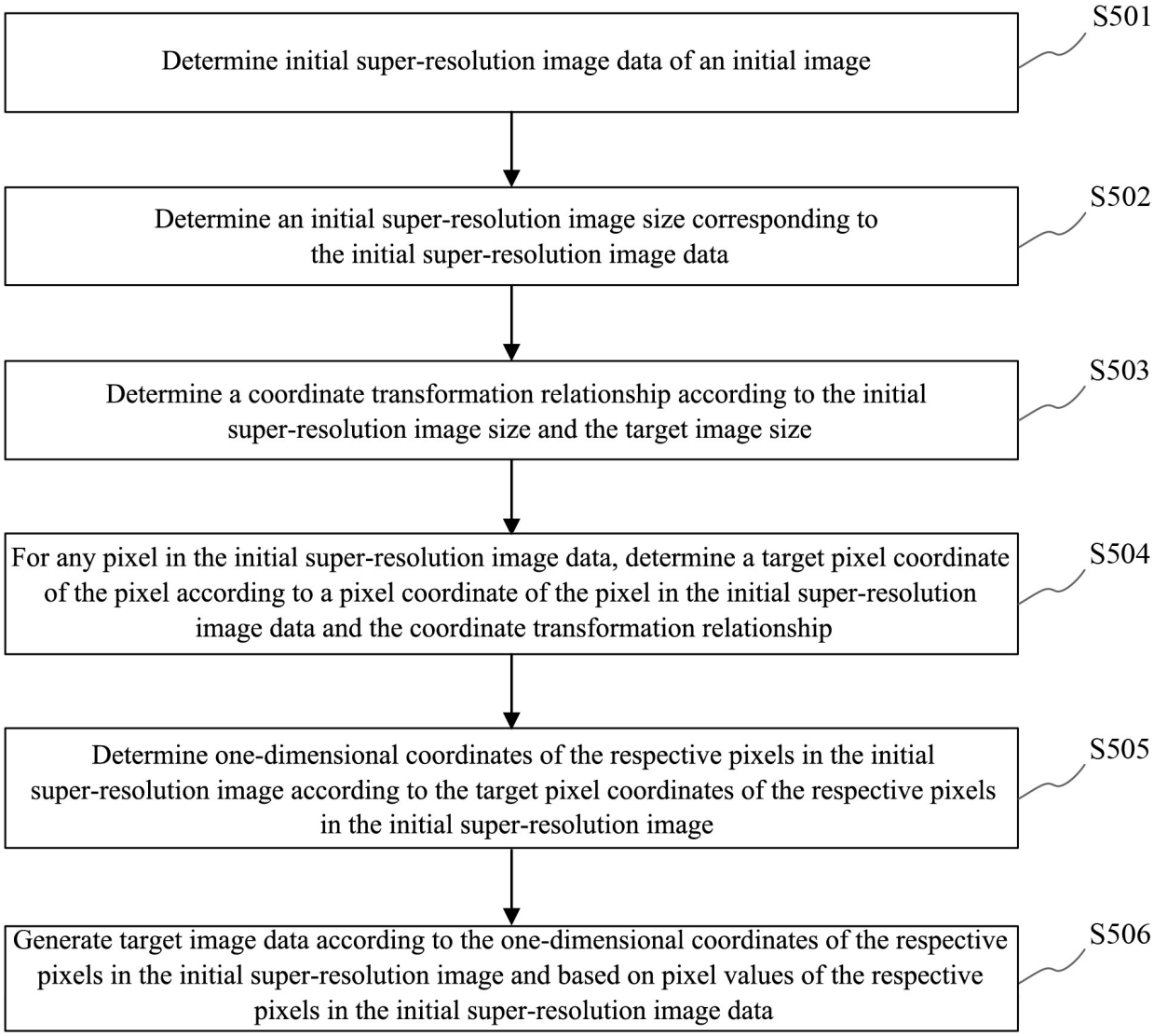
Determine initial super-resolution image data of an initial image
S501
Determine an initial super-resolution image size corresponding to the initial super-resolution image data
S502
Determine a coordinate transformation relationship according to the initial super-resolution image size and the target image size
S503
For any pixel in the initial super-resolution image data, determine a target pixel coordinate of the pixel according to a pixel coordinate of the pixel in the initial super-resolution image data and the coordinate transformation relationship
S504
Determine one-dimensional coordinates of the respective pixels in the initial super-resolution image according to the target pixel coordinates of the respective pixels in the initial super-resolution image
S505
Generate target image data according to the one-dimensional coordinates of the respective pixels in the initial super-resolution image and based on pixel values of the respective pixels in the initial super-resolution image data
S506

FIG. 5

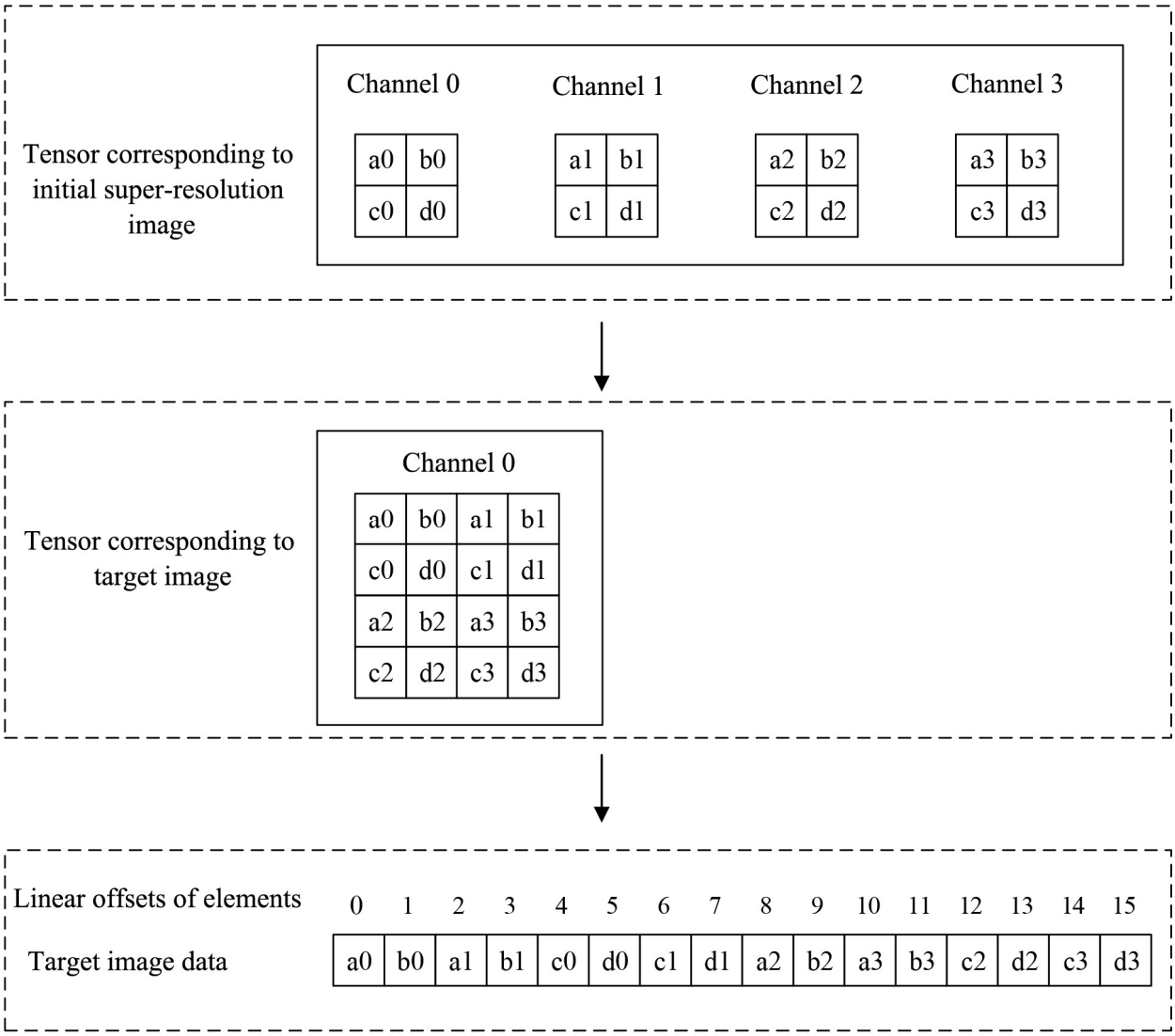
Tensor corresponding to initial super-resolution image
Channel 0
a0 b0
c0 d0
Channel 1
a1 b1
c1 d1
Channel 2
a2 b2
c2 d2
Channel 3
a3 b3
c3 d3
Tensor corresponding to target image
Channel 0
a0 b0 a1 b1
c0 d0 c1 d1
a2 b2 a3 b3
c2 d2 c3 d3
Linear offsets of elements
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
Target image data
a0 b0 a1 b1 c0 d0 c1 d1 a2 b2 a3 b3 c2 d2 c3 d3

FIG. 6

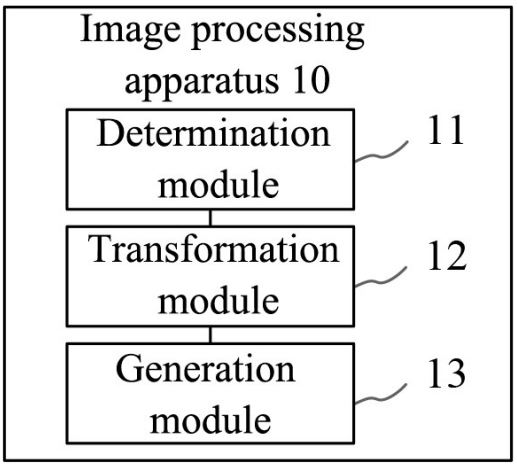

FIG. 7

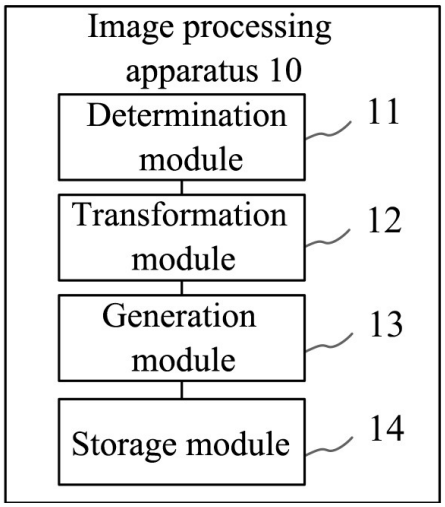

FIG. 8

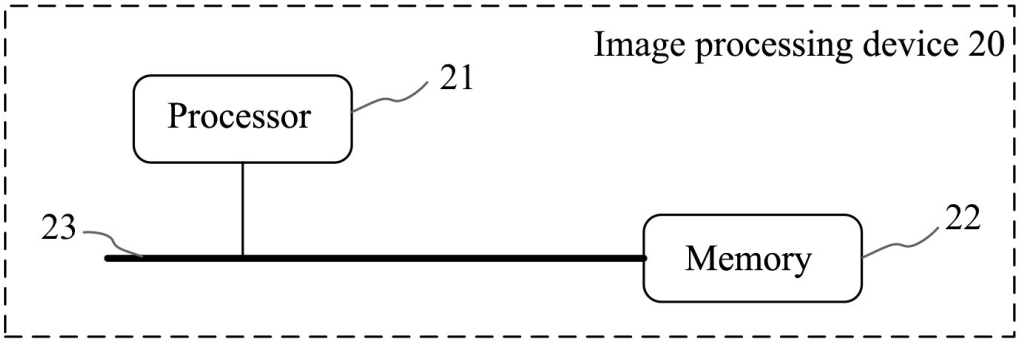

FIG. 9