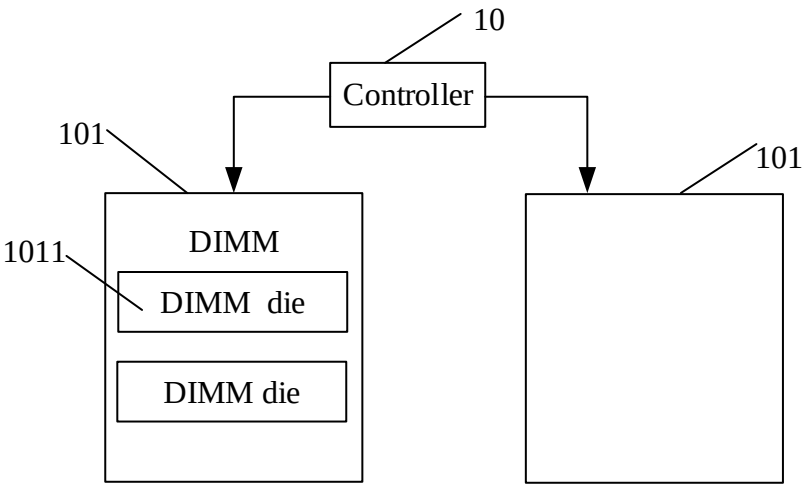

10
Controller
101
101
DIMM
1011
DIMM die
DIMM die

FIG. 1

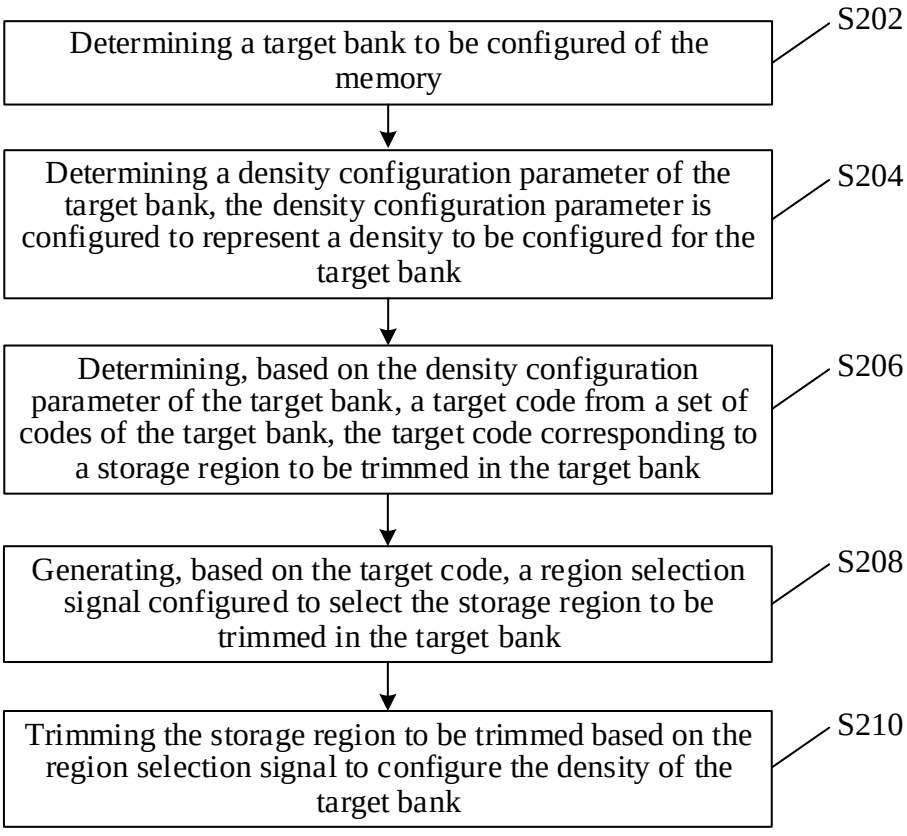

Determining a target bank to be configured of the memory
S202
Determining a density configuration parameter of the target bank, the density configuration parameter is configured to represent a density to be configured for the target bank
S204
Determining, based on the density configuration parameter of the target bank, a target code from a set of codes of the target bank, the target code corresponding to a storage region to be trimmed in the target bank
S206
Generating, based on the target code, a region selection signal configured to select the storage region to be trimmed in the target bank
S208
Trimming the storage region to be trimmed based on the region selection signal to configure the density of the target bank
S210

FIG. 2

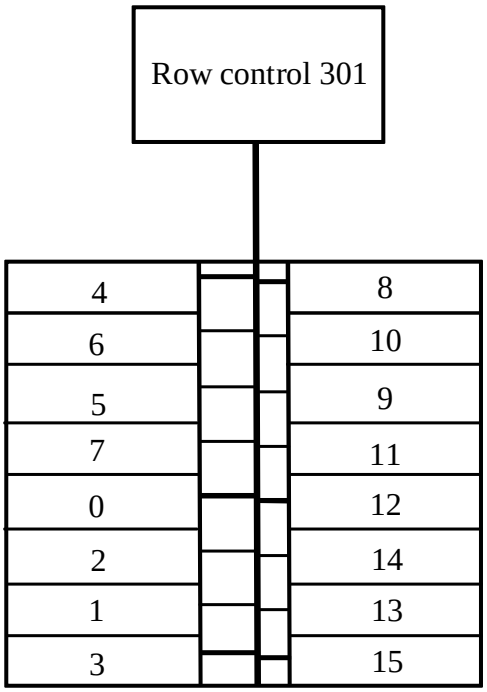

Row control 301
4
8
6
10
5
9
7
11
0
12
2
14
1
13
3
15

FIG. 3a

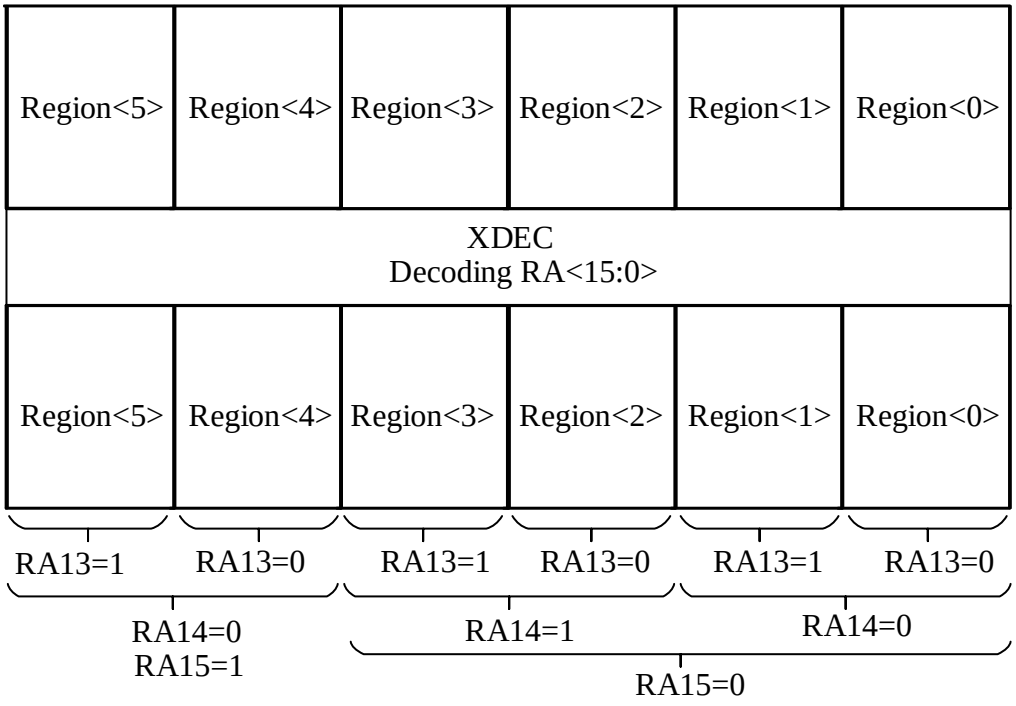

Region<5>
Region<4>
Region<3>
Region<2>
Region<1>
Region<0>
XDEC
Decoding RA<15:0>
Region<5>
Region<4>
Region<3>
Region<2>
Region<1>
Region<0>
RA13=1
RA13=0
RA13=1
RA13=0
RA13=1
RA13=0
RA14=0
RA15=1
RA14=1
RA14=0
RA15=0

FIG. 3b

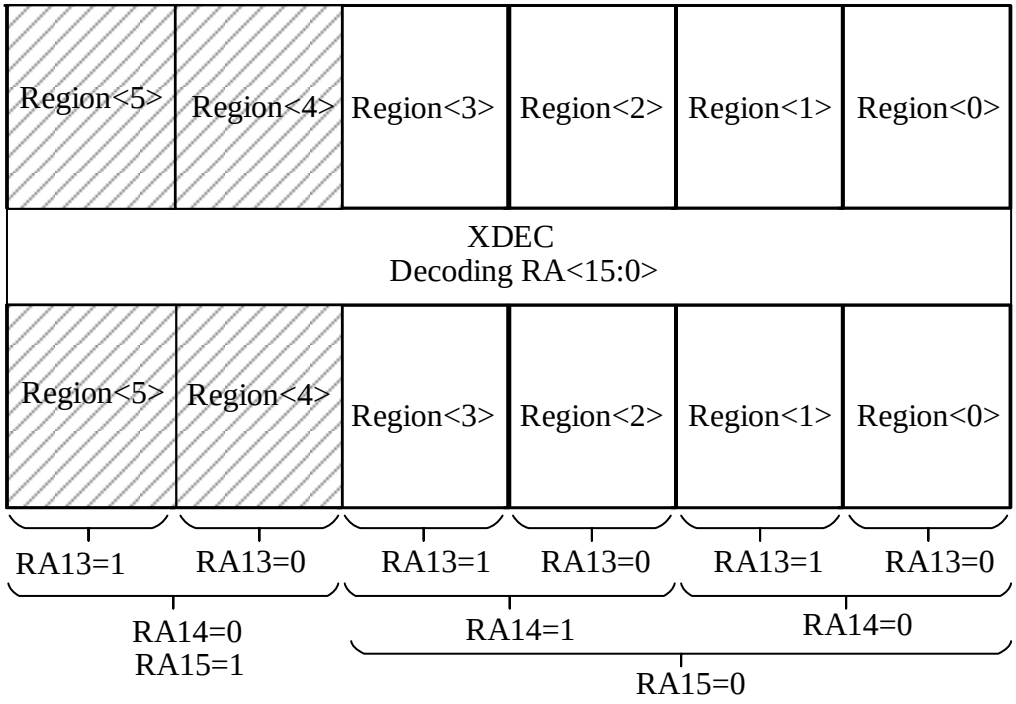


FIG. 3c

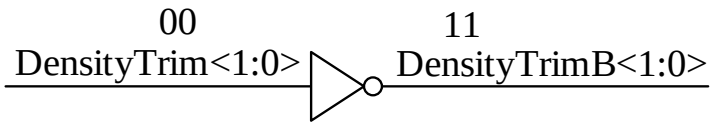


FIG. 3d

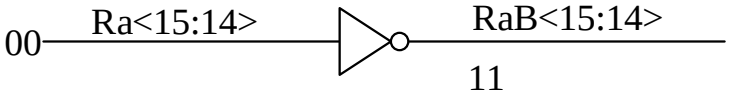


FIG. 3e

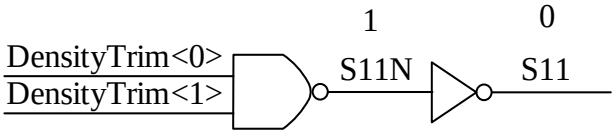


FIG. 3f

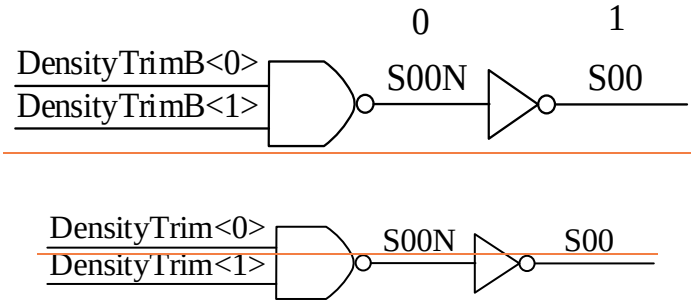


FIG. 3g

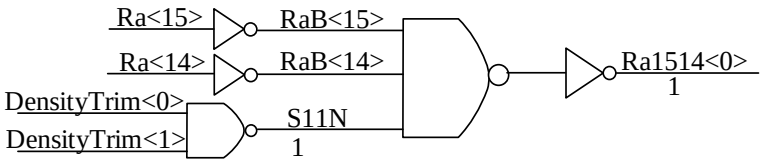


FIG. 3h

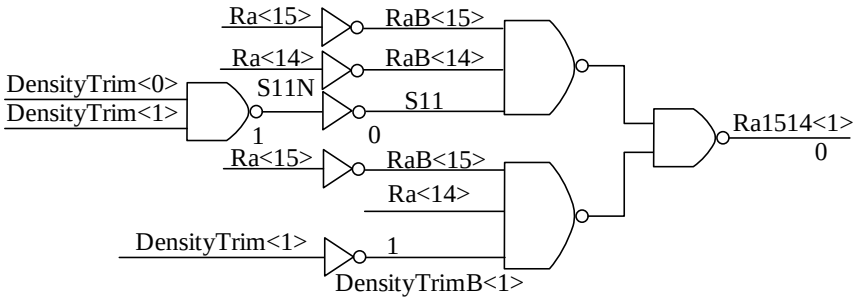


FIG. 3i

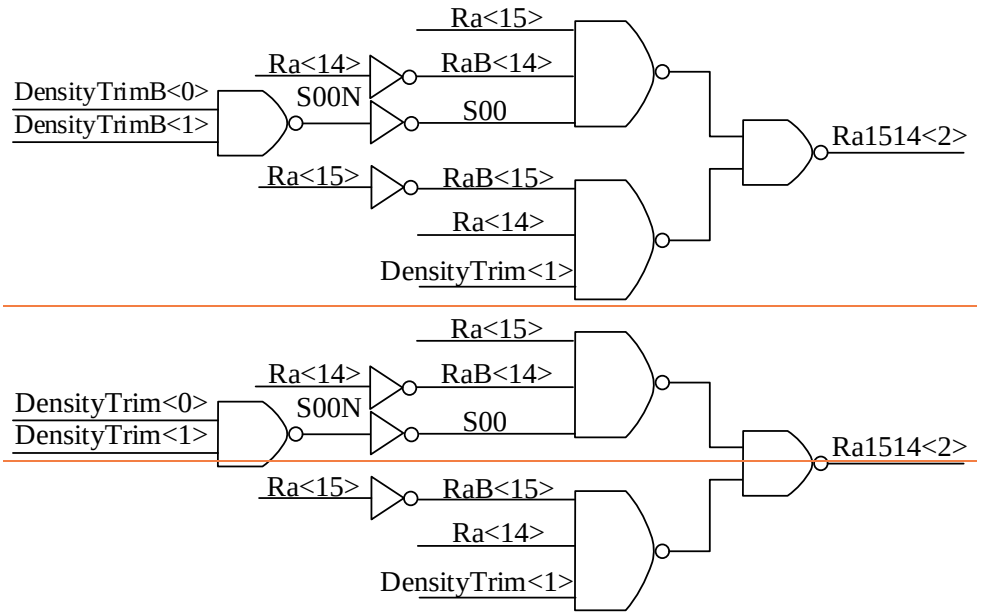

Ra<15>
Ra<14>
RaB<14>
DensityTrimB<0>
S00N
S00
DensityTrimB<1>
Ra1514<2>
Ra<15>
RaB<15>
Ra<14>
DensityTrim<1>
Ra<15>
Ra<14>
RaB<14>
DensityTrim<0>
S00N
S00
DensityTrim<1>
Ra1514<2>
Ra<15>
RaB<15>
Ra<14>
DensityTrim<1>

FIG. 3j

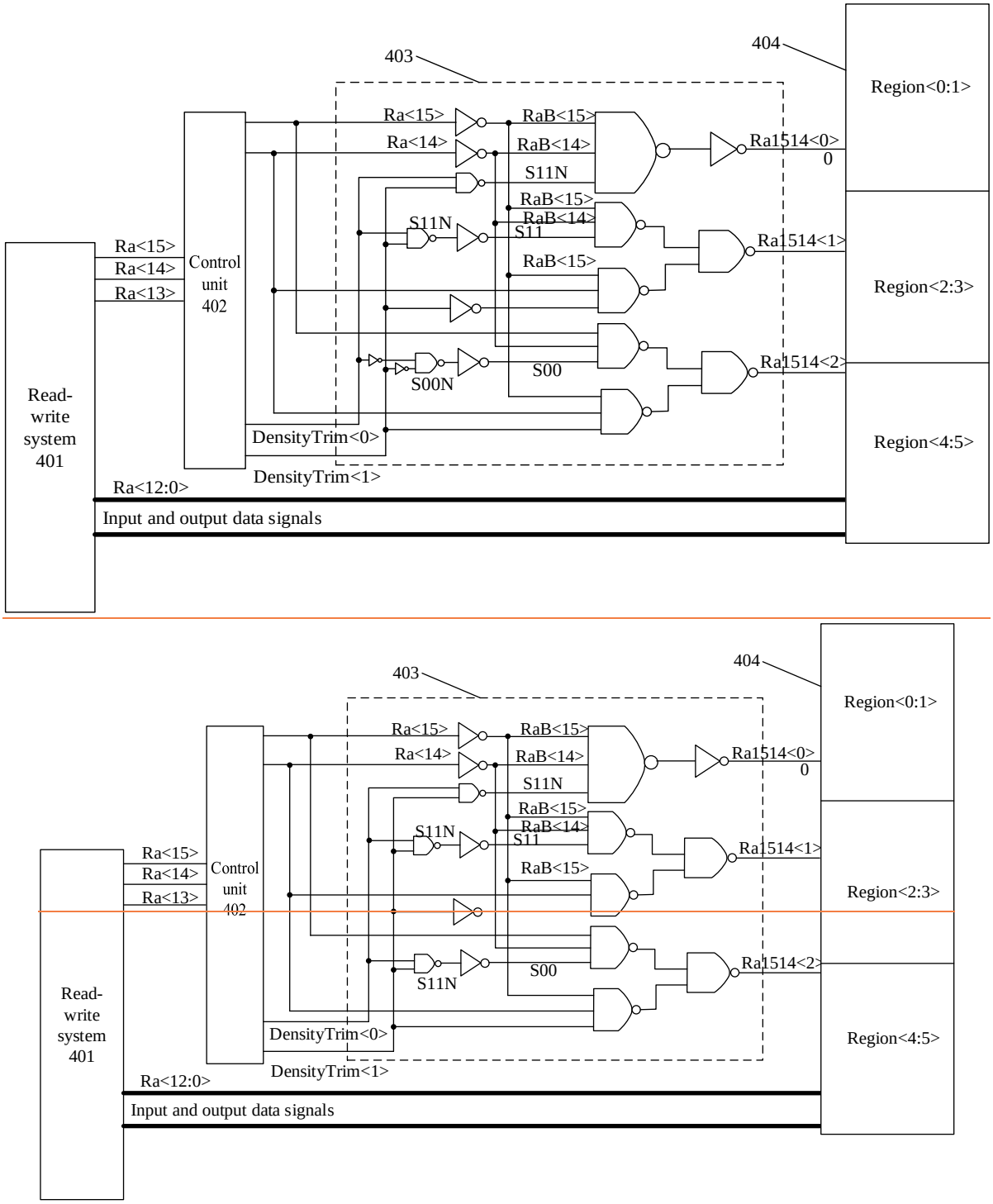

403
404
Region<0:1>
Region<2:3>
Region<4:5>
Ra<15>
Ra<14>
Ra<13>
Control unit 402
Read-write system 401
RaB<15>
RaB<14>
S11N
S11
S00
S00N
Ra1514<0>
0
Ra1514<1>
Ra1514<2>
DensityTrim<0>
DensityTrim<1>
Ra<12:0>
Input and output data signals

FIG. 4

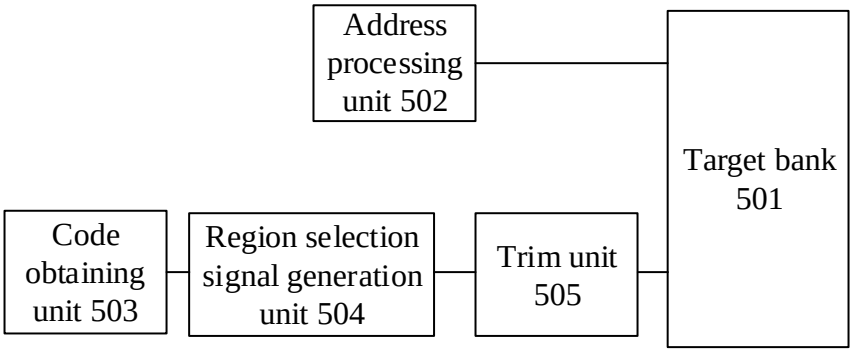

Address processing unit 502
Target bank 501
Code obtaining unit 503
Region selection signal generation unit 504
Trim unit 505

FIG. 5