

IMAGE RECOGNITION ACCELERATOR, TERMINAL DEVICE, AND IMAGE RECOGNITION METHOD

ABSTRACT

This application discloses an image recognition accelerator, a terminal device, and an image
5 recognition method. The image recognition accelerator includes a dimensionality-reduction
processing module, an NVM, and an image matching module. During an image recognition process
of the image recognition accelerator, the dimensionality-reduction processing module first reduces a
dimensionality of first image data according to a specified dimensionality-reduction parameter γ .
The NVM writes, into a first storage area of the NVM according to a specified first current I_1 , ω
10 low-order bits of each numeric value of the first image data on which dimensionality reduction has
been performed, and writes, into a second storage area of the NVM according to a specified second
current, $(N-\omega)$ high-order bits of each numeric value of the first image data on which
dimensionality reduction has been performed. The first current is lower than the second current. In
this way, the matching module may determine whether an image library stored in the NVM includes
15 image data matching the first image data on which dimensionality reduction has been performed.
The image recognition accelerator provided in embodiments of the present invention can ensure
accuracy of image recognition while reducing a system power consumption of the terminal device.

FIGURE 3