desired object through the support unit **4030**. For example, the support unit **4030** may be a wrist band.

[0195] Although not shown, the electronic device **4000** may include an application processor and a display driver IC. As described above with reference to FIGS. **1** to **16**, the application processor and the display driver IC process and transmit valid pixel data corresponding to valid pixels included in the screen **4020**, but do not process and transmit pixel data that is not actually used. Thus, power consumption in the electronic device **4000** may decrease and the display performance thereof may be improved.

[0196] While inventive concepts have been particularly shown and described with reference to various example embodiments thereof, it will be understood that various changes in form and details may be made therein without departing from the principles and spirit of inventive concepts. Accordingly, the scope of inventive concepts should not limited to these example embodiments, and may be defined by the claims and their equivalents.

What is claimed is:

1. A method of operating an application processor to control a display device including a valid display region having a non-rectangular shape, the method comprising:

receiving screen information associated with the valid display region; and

outputting a plurality of pieces of valid pixel data, the plurality of pieces of valid pixel data selected based on the screen information and corresponding to the valid display region of the display device.

2. The method of claim **1**, wherein the screen information includes a starting position of the valid display region and a number of pixels arranged continuously from the starting position in each of a plurality of lines of a display panel of the display device, the plurality of lines being horizontal or vertical lines.

3. The method of claim **1**, wherein

the valid display region includes at least two lines;

each of the at least two lines includes a different number of valid pixels; and

the at least two lines are horizontal or vertical lines.

4. The method of claim **1**, wherein the outputting a plurality of pieces of valid pixel data comprises:

packing the plurality of pieces of valid pixel data;

writing the packed plurality of pieces of valid pixel data to a memory; and

outputting the packed plurality of pieces of valid pixel data from the memory to the display device.

5. The method of claim **4**, wherein the writing the packed plurality of pieces of valid pixel data to a memory comprises:

writing, from among the packed plurality of pieces of valid pixel data, valid pixel data corresponding to at least two lines of the valid display region to at least one row or column of the memory, the at least two lines being horizontal or vertical lines of the valid display region.

6. The method of claim **4**, wherein the packing the plurality of pieces of valid pixel data comprises:

arranging the plurality of pieces of valid pixel data into units, each of the units including pixel data corresponding to a plurality of pixels.

7. The method of claim **4**, wherein

the writing writes a first number of the packed plurality of pieces of valid pixel data to the memory; and

the outputting outputs the first number of the packed plurality of pieces of valid pixel data to the display device.

8. The method of claim **1**, wherein the outputting a plurality of pieces of valid pixel data comprises:

generating rectangular image data;

storing the rectangular image data in a memory;

selectively reading, based on the screen information, the plurality of pieces of valid pixel data from among the rectangular image data stored in the memory, the plurality of pieces of valid pixel data corresponding to the valid display region; and

outputting the selectively read plurality of pieces of valid pixel data to the display device.

9. The method of claim **1**, further comprising:

identifying valid pixel data corresponding to a portion of the valid display region to be updated; and

outputting the identified valid pixel data and location information of the portion of the valid display region to the display device.

10. A display system comprising:

a display panel configured to display an image in a valid display region;

an application processor configured to execute computer readable instructions such that the application processor is configured to

receive screen information associated with the valid display region,

pack a plurality of pieces of valid pixel data, the plurality of pieces of valid pixel data corresponding to valid image data to be displayed in the valid display region, and the valid image data based on the screen information, and

output the packed plurality of pieces of valid pixel data; and

a display driver circuit configured to

restore the valid image data by unpacking the packed plurality of pieces of valid pixel data received from the application processor, and

drive the display panel based on the restored valid image data.

11. The display system of claim **10**, wherein the application processor is configured to execute the computer readable instructions such that the application processor is further configured to

generate the valid image data based on the screen information; and

write the packed plurality of pieces of valid pixel data to a memory.

12. The display system of claim **10**, further comprising:

a memory; and wherein

the application processor is configured to execute the computer readable instructions such that the application processor is further configured to write the packed plurality of pieces of valid pixel data to the memory.

13. The display system of claim **10**, wherein the display driver circuit comprises:

a graphics memory configured to store the packed plurality of pieces of valid pixel data; and wherein

the display driver circuit is further configured to rearrange the packed plurality of pieces of valid pixel data to correspond to the valid display region.