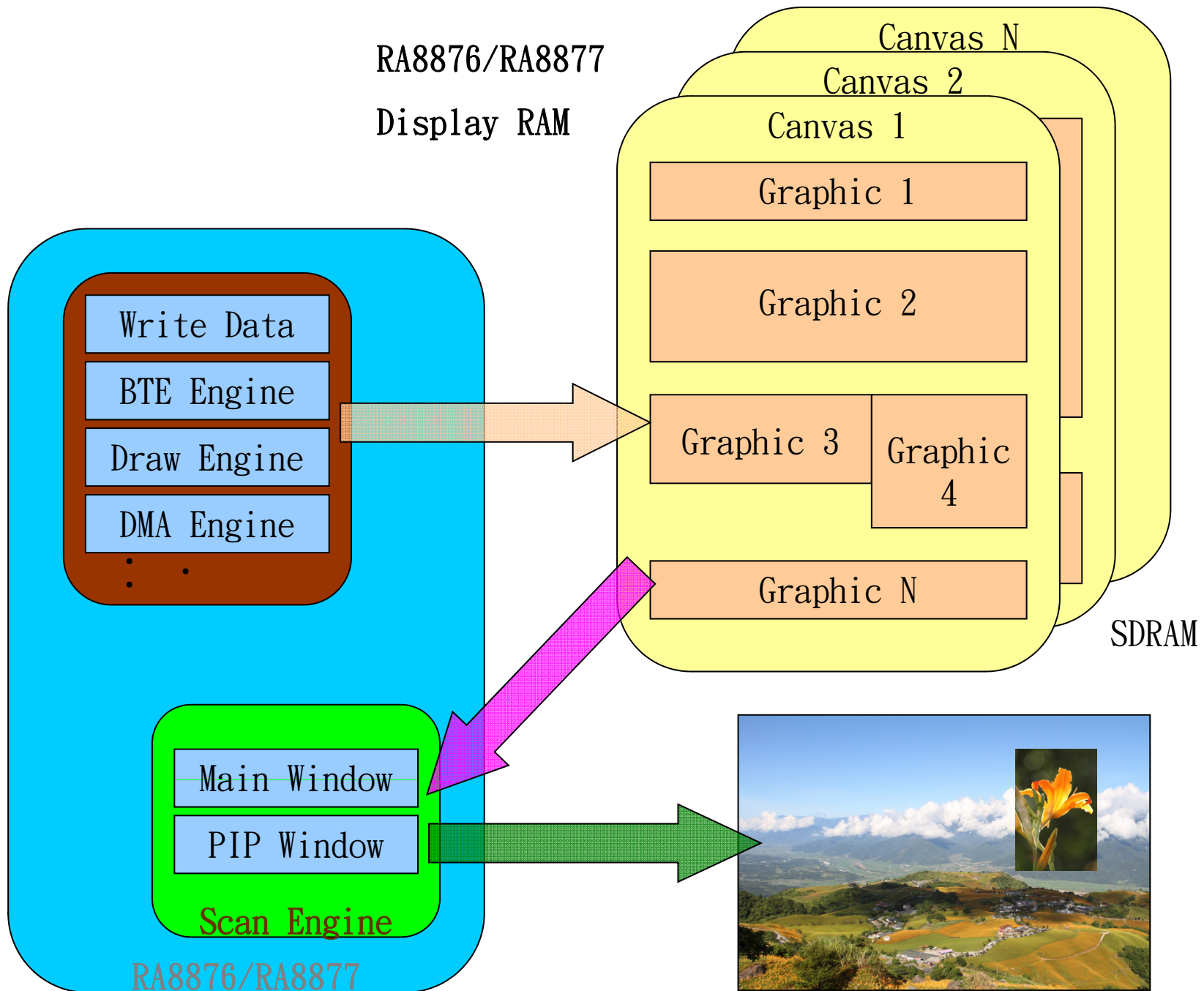
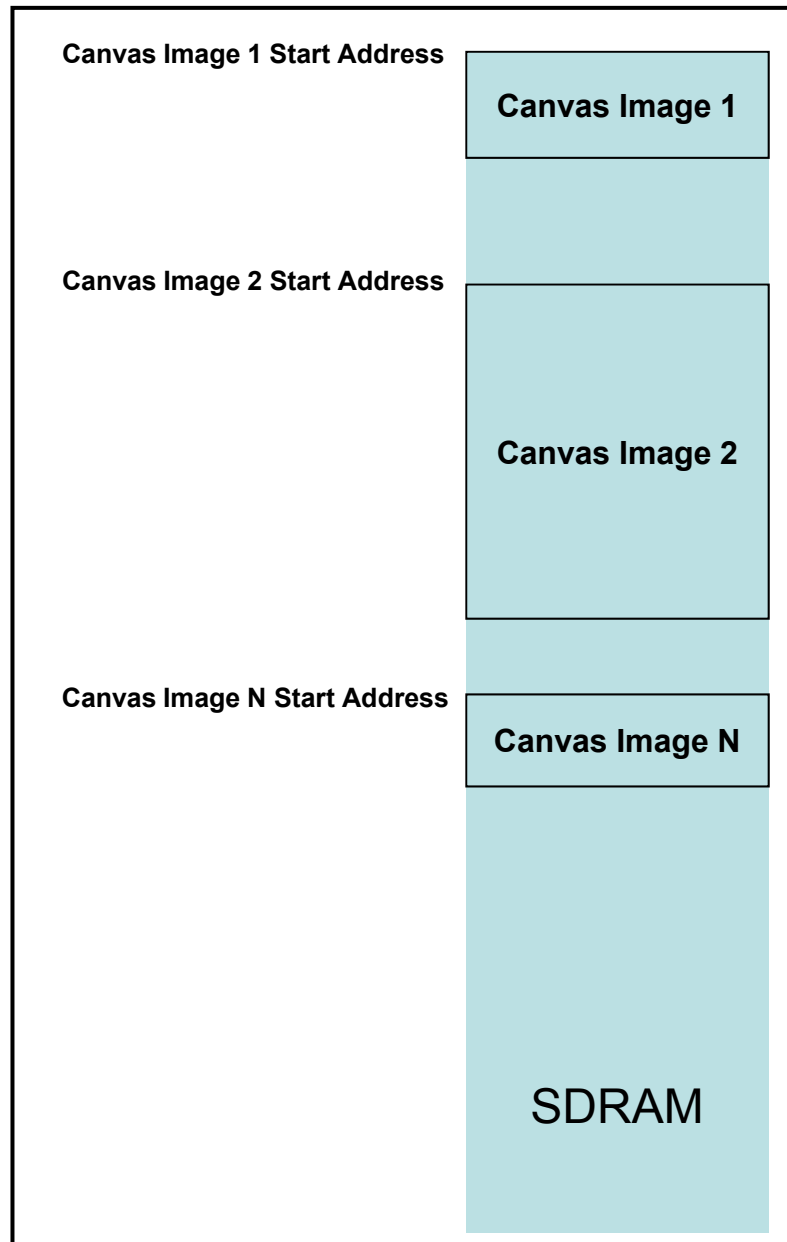
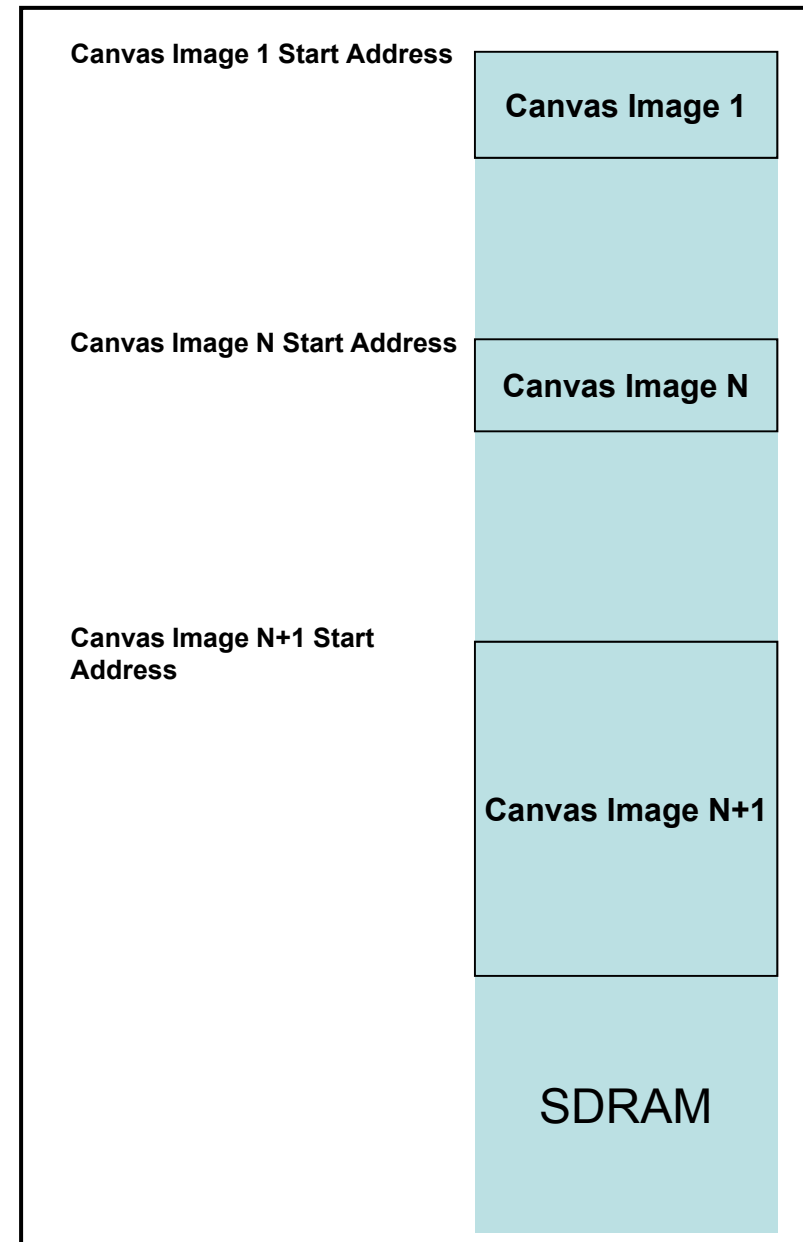




[The planning concept of Canvas Image Start Address]



or

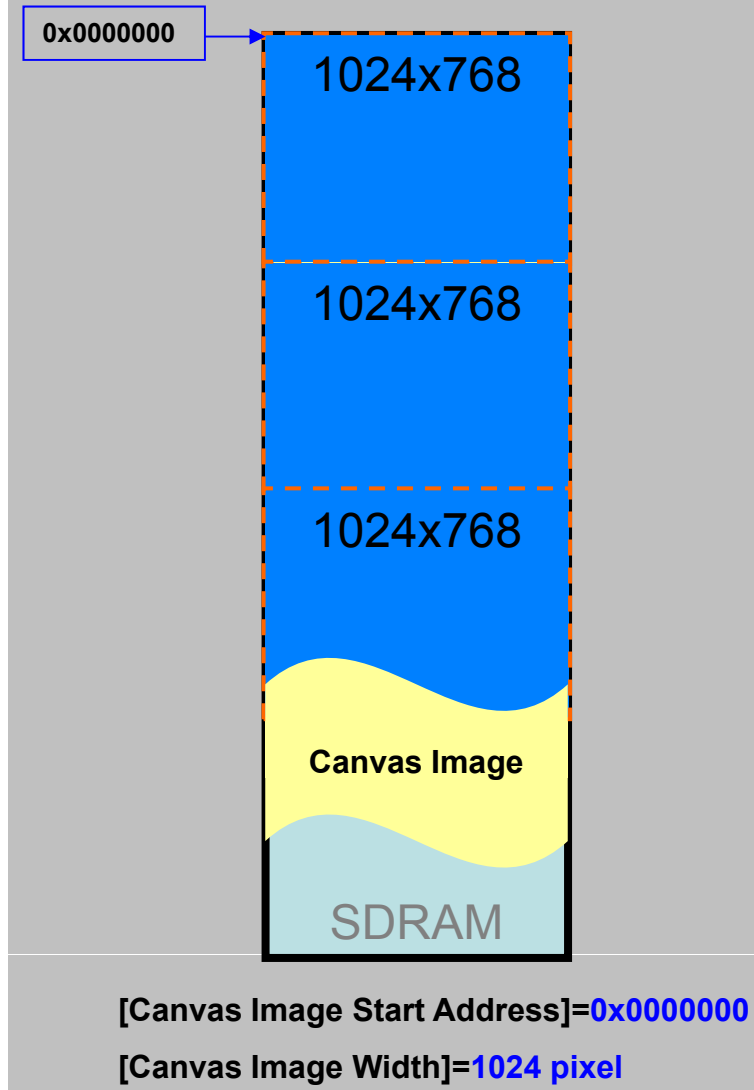


Canvas Image Start Address and Canvas Image Width must be a multiple of 4.

[Canvas Image ex1] :

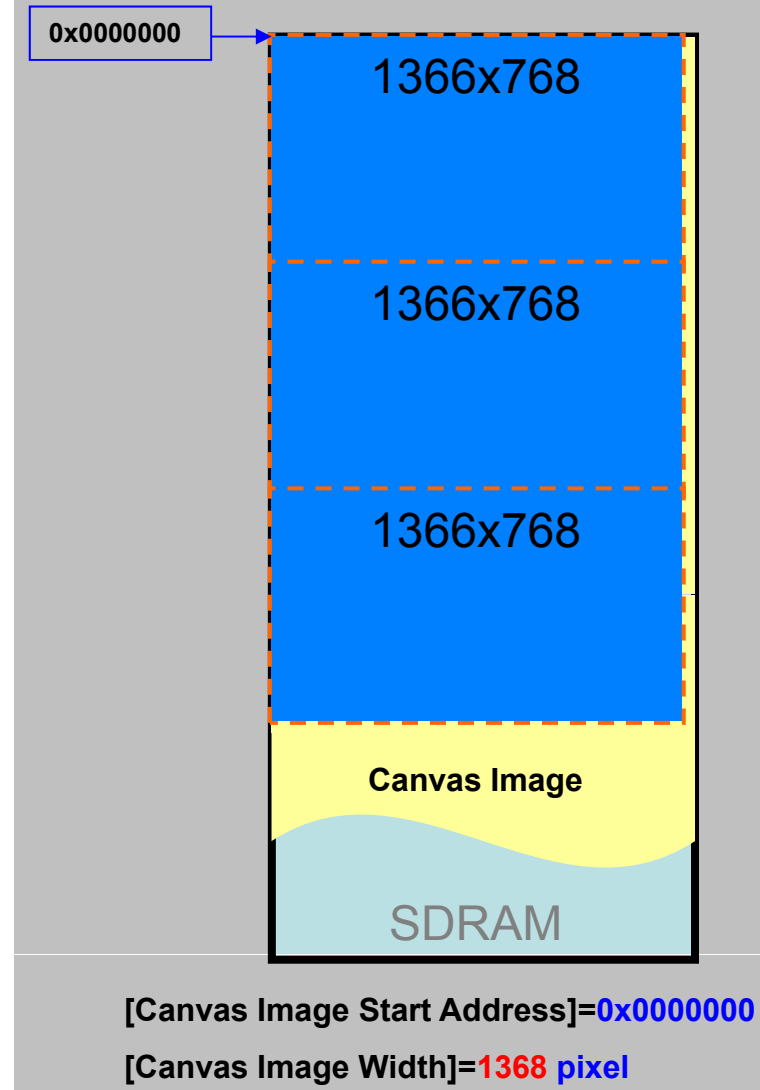
You can

(Figure_Canvas-1.1)



You can

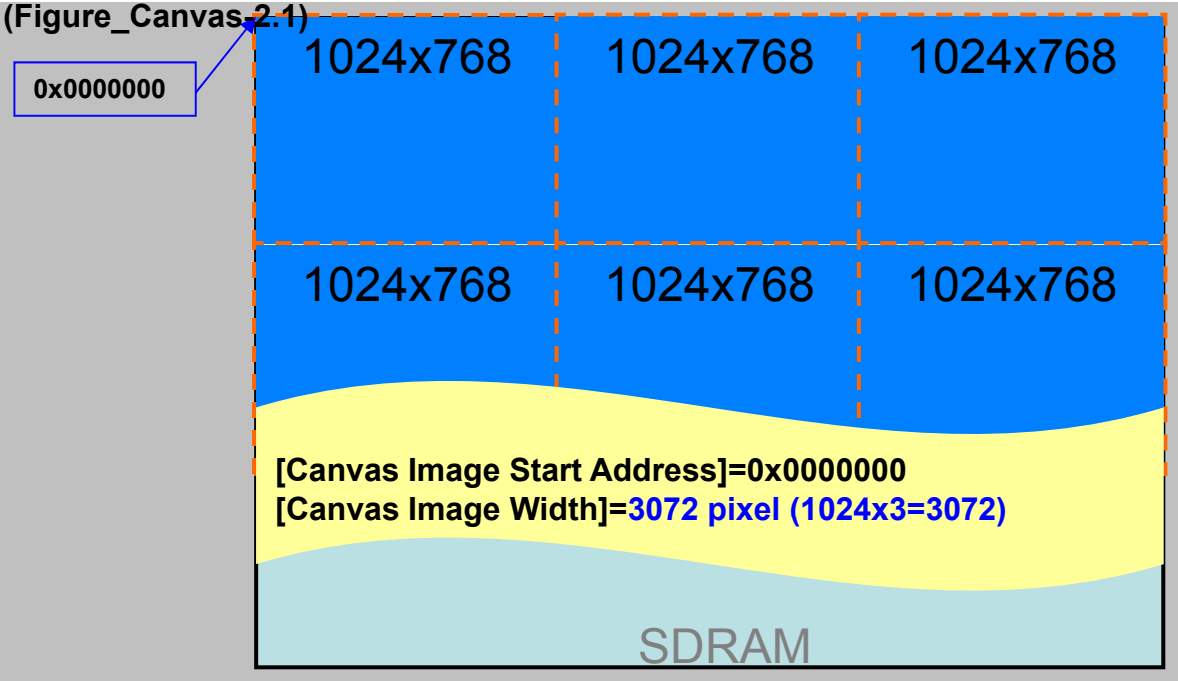
(Figure_Canvas-1.2)



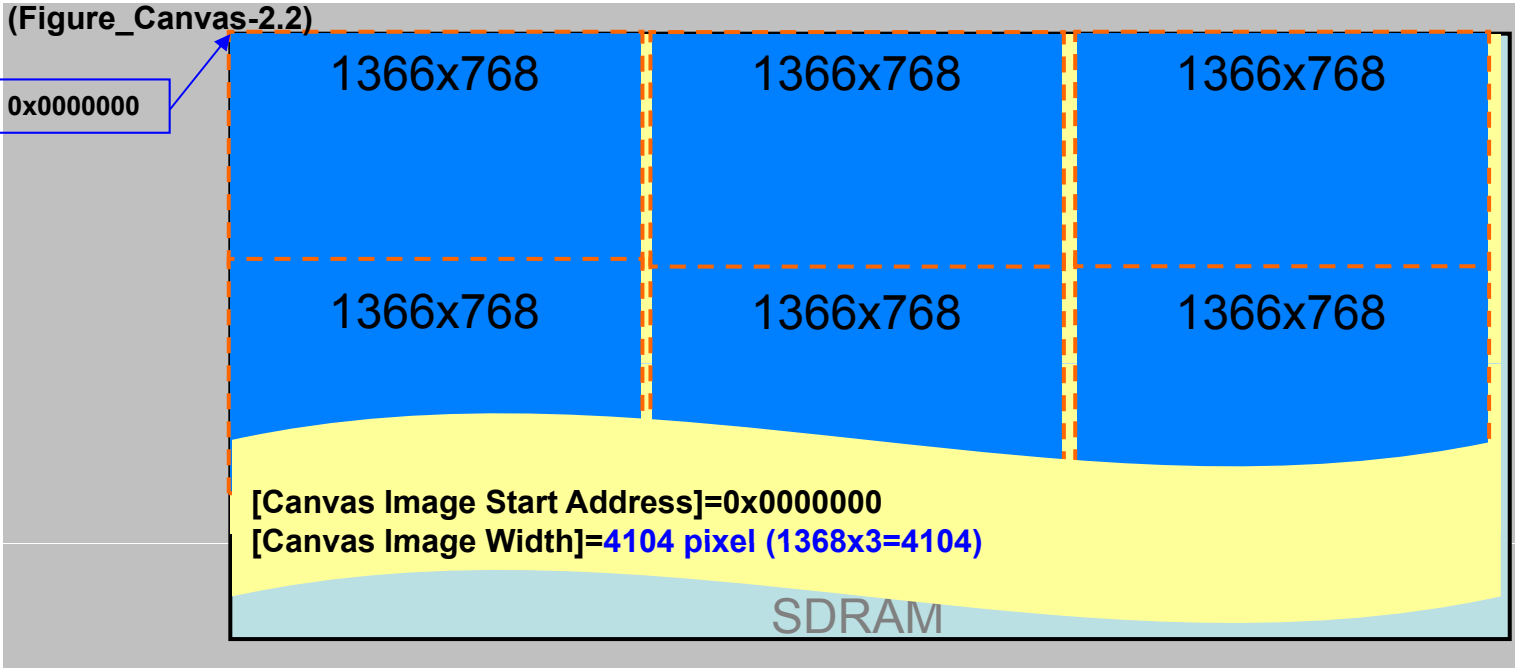
Canvas Image Start Address and Canvas Image Width must be a multiple of 4.

[Canvas Image ex2] :

You can



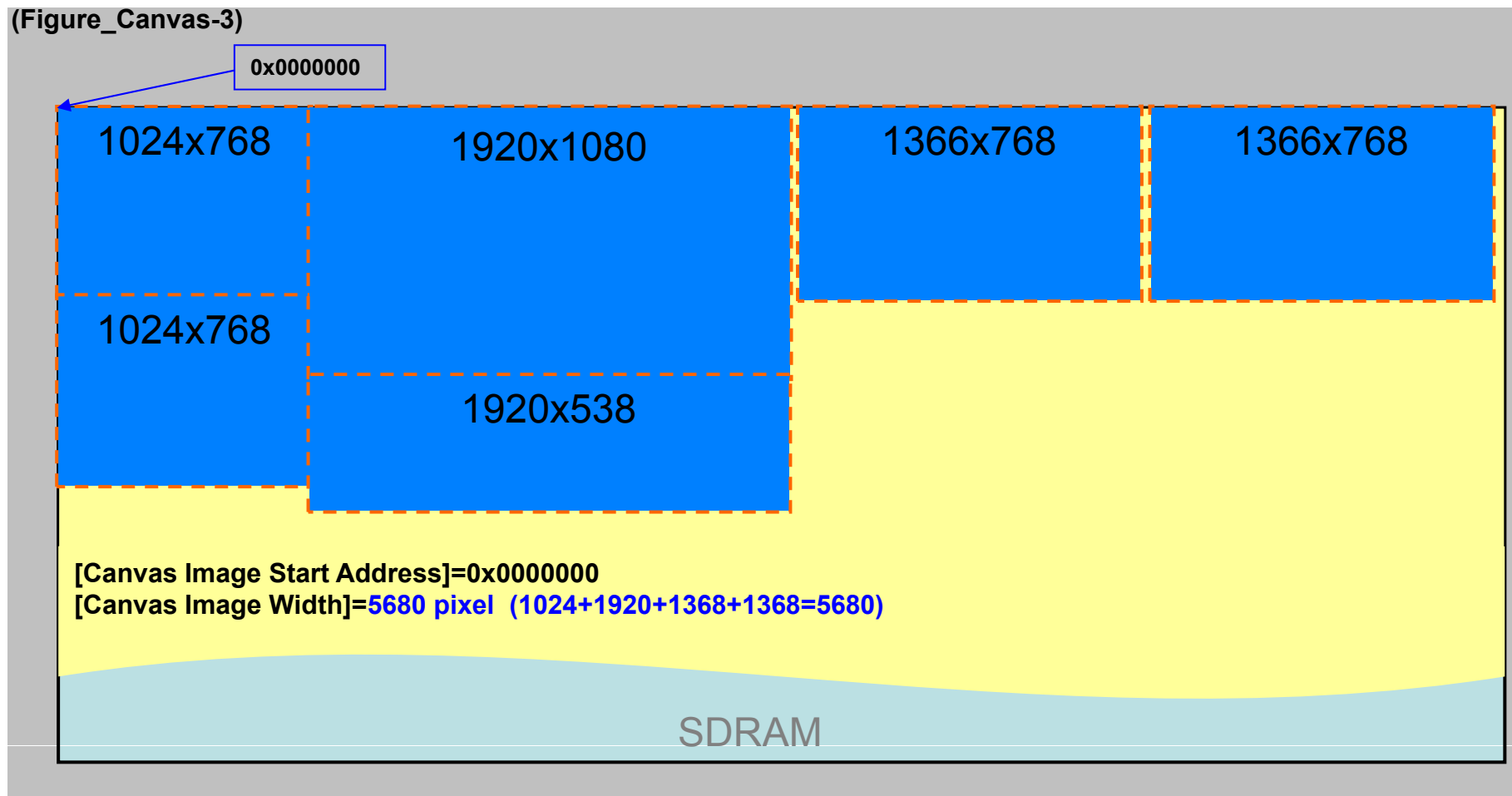
You can



Canvas Image Start Address and Canvas Image Width must be a multiple of 4.

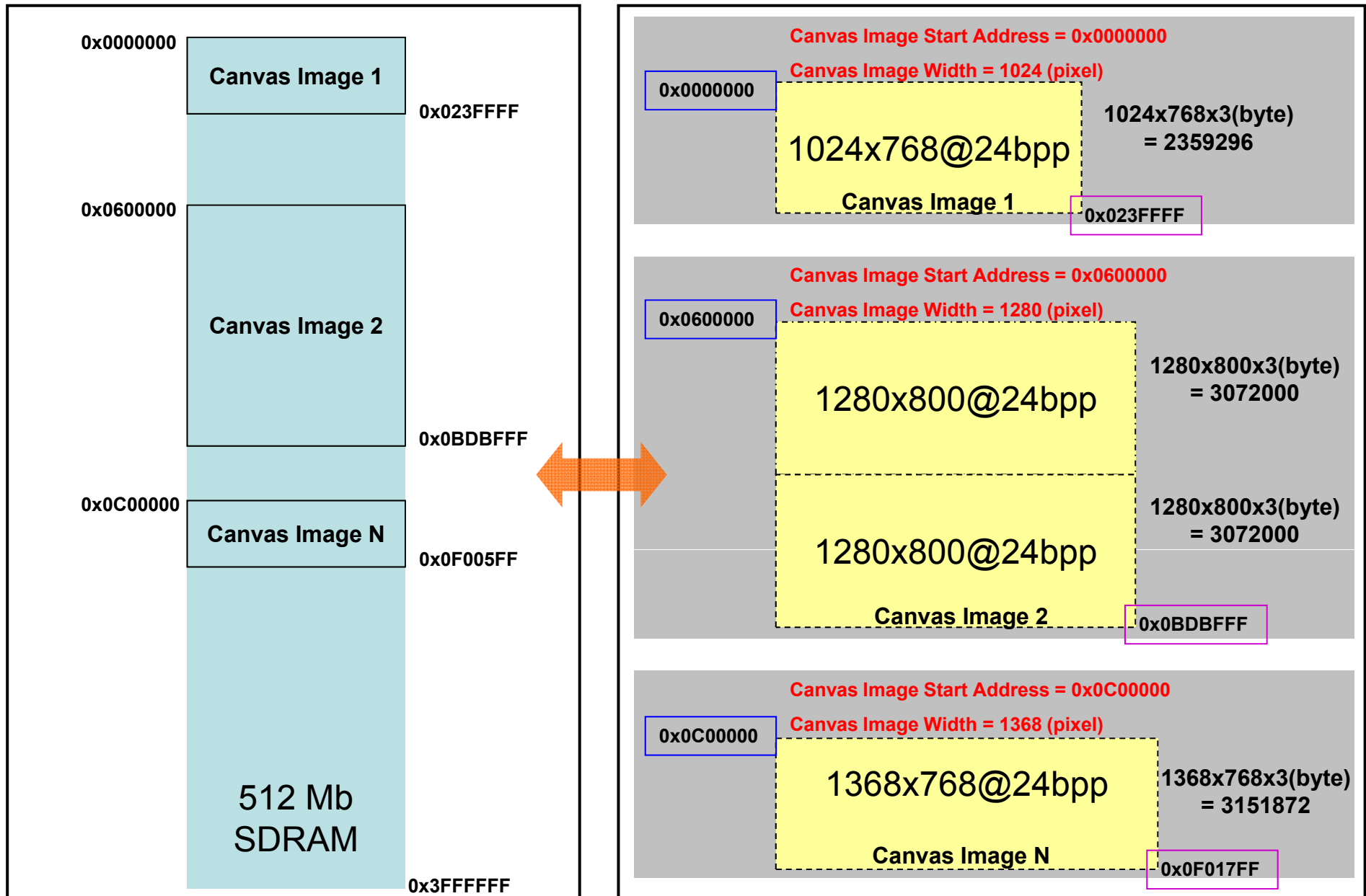
[Canvas Image ex3] :

You can



Canvas Image Start Address and Canvas Image Width must be a multiple of 4.

[Canvas Image ex4] :



Suppose you plan 3 Canvas Image:

Canvas Image 1

- 1024x768 @24bpp
- 1024x768 @24bpp

Canvas Image 2

- 1366x768 @24bpp
- 1366x768 @24bpp

Canvas Image N

- 1024x768 @24bpp
- 1366x768 @24bpp
- 480x800 @24bpp
- 480x800 @24bpp
- 800x480 @24bpp
- 800x480 @24bpp

The diagram illustrates the memory layout of 512 Mb SDRAM. It is divided into four horizontal sections:

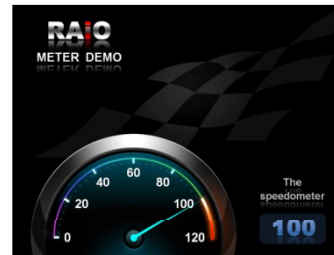
- Canvas Image 1:** Located at the top, starting at address **0x0000000** and ending at **0x047FFFFF**.
- Canvas Image 2:** Located below the first image, starting at **0x0600000** and ending at **0x0C02FFFF**.
- Canvas Image N:** Located below the second image, starting at **0x0D00000** and ending at **0x18D35FFF**.
- 512 Mb SDRAM:** The total memory size, spanning from **0x0000000** to **0x3FFFFFFF**.

	Canvas Image Start Address	Canvas Width (Pixel)	Canvas Image Memory Size (byte)						
			width	x	height	x	color depth	=	memory size
Canvas Image 1	0x0000000	1024	1024	x	768+768	x	3 (byte)	=	4718592
			0x0000000 + 4718592 = 0x0480000						
Canvas Image 2	if 0x0600000	1368+1368	1368+1368	x	768	x	3 (byte)	=	6303744
			0x0600000 + 6303744 = 0x0C03000						
Canvas Image N	if 0x0D00000	1024+1368	1024+1368	x	768+480+480	x	3 (byte)	=	12400128
			0x0D00000 + 12400128 = 0x18D3600						

[example for Canvas Image]

[Canvas Image Start Address]=0x0000000

[Canvas Image Width]=1024



Canvas_1

[Canvas Image Start Address]=0x0600000

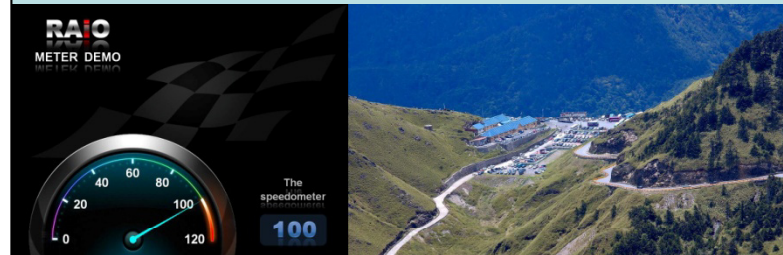
[Canvas Image Width]=1368



Canvas_2

[Canvas Image Start Address]=0x0C00000

[Canvas Image Width]=1024+1368=2392



Canvas_N

Display RAM(SDRAM)

[example for Active Window]

```
Canvas_Image_Start_address(0);  
Canvas_Image_width(1024);  
Active_Window_XY(0,0);  
Active_Window_WH(1024,768);  
write_picture1();
```

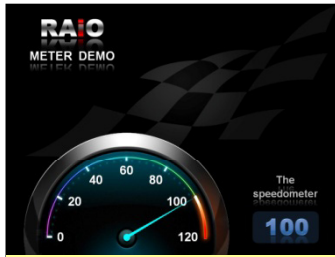
```
Canvas_Image_Start_address(0x0600000);  
Canvas_Image_width(1368);  
Active_Window_XY(0,0);  
Active_Window_WH(1366,768);  
write_picture2();
```

```
Canvas_Image_Start_address(0x0C00000);  
Canvas_Image_width(2392);  
Active_Window_XY(0,0);  
Active_Window_WH(1024,768);  
write_picture1();  
Active_Window_XY(1024,0);  
Active_Window_WH(1366,768);  
write_picture2();  
Active_Window_XY(0,768);  
Active_Window_WH(1920,1080);  
write_picture3();
```



[example for Main Image]





Canvas_1



Canvas_2

(0,0)



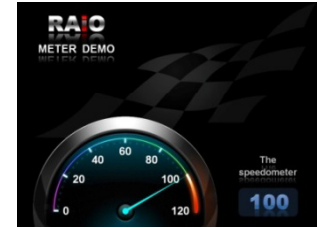
Canvas_N

Display RAM(SDRAM)

[example for Main Window]

(Ex1: If LCD resolution = 1024x768)

```
Canvas_Image_Start_address(0);
Canvas_Image_width(1024);
Main_Image_Start_Address(0);
Main_Image_Width(1024);
Main_Window_Start_XY(0,0);
```



LCD Display

(Ex2: If LCD resolution = 1366x768)

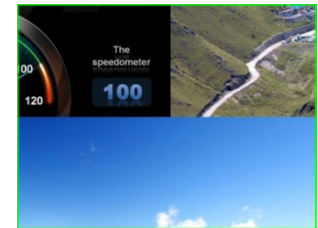
```
Canvas_Image_Start_address(0x0600000);
Canvas_Image_width(1368);
Main_Image_Start_Address(0x0600000);
Main_Image_Width(1368);
Main_Window_Start_XY(0,0);
```



LCD Display

(Ex3: If LCD resolution = 1024x768)

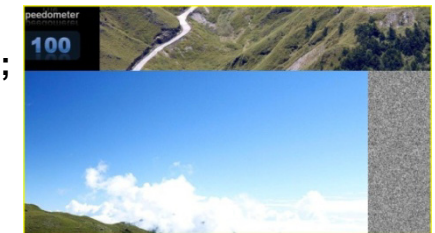
```
Canvas_Image_Start_address(0x0C00000);
Canvas_Image_width(2392);
Main_Image_Start_Address(0x0C00000);
Main_Image_Width(2392);
Main_Window_Start_XY(500,384);
```



LCD Display

(Ex4: If LCD resolution = 1366x768)

```
Canvas_Image_Start_address(0x0C00000);
Canvas_Image_width(2392);
Main_Image_Start_Address(0x0C00000);
Main_Image_Width(2392);
Main_Window_Start_XY(768,550);
```



LCD Display

Main Image Start Address, Main Image Width and Main_Window_Start_X must be a multiple of 4 .

[example for PIP Window]

```
( If LCD resolution = 1366x768 )
Canvas_Image_Start_address(0x0600000);
Canvas_Image_width(1368);
Main_Image_Start_Address(0x0600000);
Main_Image_Width(1368);
Main_Window_Start_XY(0,0);
```



LCD

```
Select_PIP1_Parameter();
PIP_Image_Start_Address(0x0000000);
PIP_Image_Width(1024);
PIP_Window_Image_Start_XY(44,418);
PIP_Window_Width_Height(654,346);
PIP_Display_Start_XY(674,35);
Enable_PIP1();
```

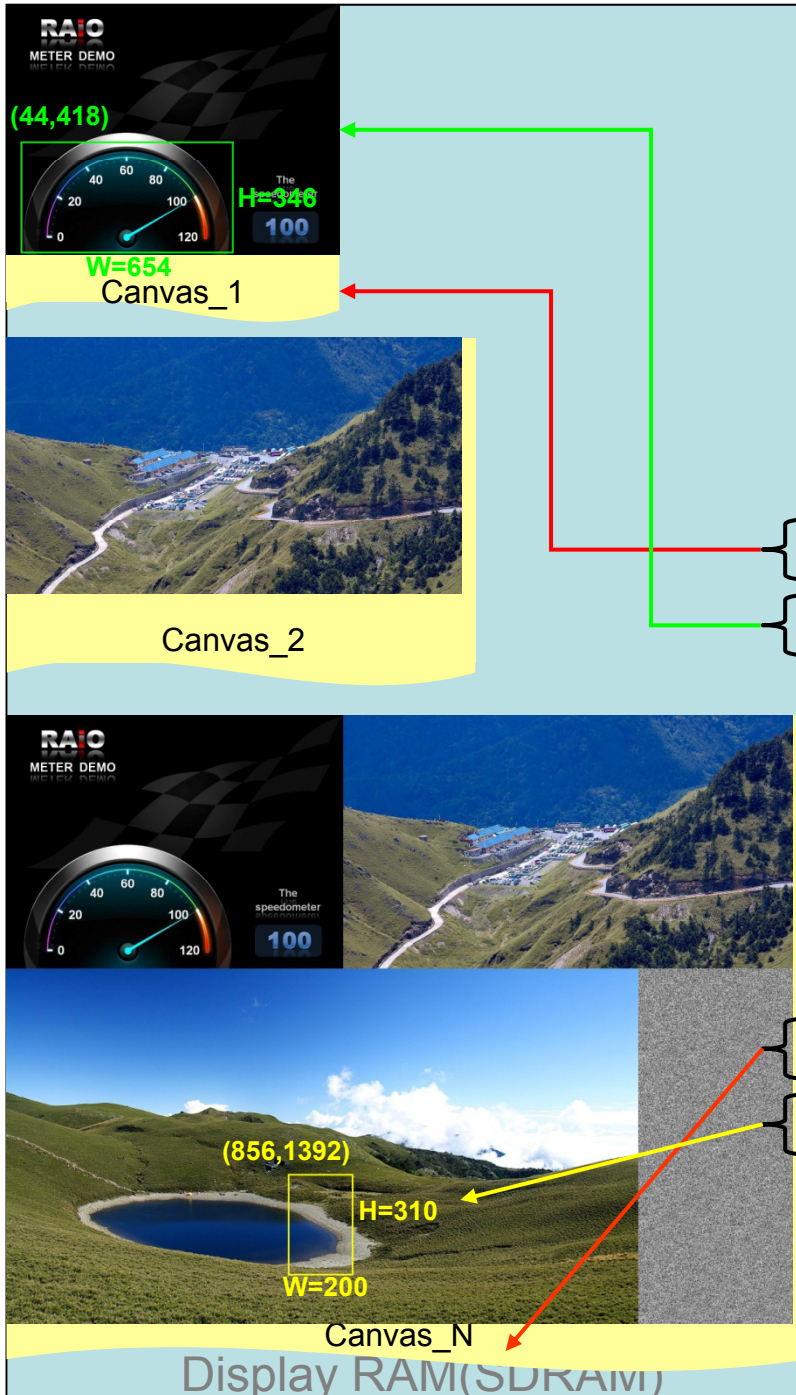


LCD

```
Select_PIP2_Parameter();
PIP_Image_Start_Address(0x0C00000);
PIP_Image_Width(2392);
PIP_Window_Image_Start_XY(856,1392);
PIP_Window_Width_Height(200,310);
PIP_Display_Start_XY(108,179);
Enable_PIP2();
```



LCD



PIP Image Start Address, PIP Image Width, PIP_Window_Image_Start_XY and PIP_Display_Start_X, must be a multiple of 4 .