

Previewer Sample Application Usage Note

This document provides overview about how to execute Previewer sample examples and how to verify the output image.

Previewer Basic Example:

This application demonstrates basic previewing functionality. This application converts raw image in Bayer pattern to YUV4:2:2 image.

Steps to execute Previewer Basic example:

1. For hardware setup, Connect XDS 510 USB emulator to the JTAG connector on DM6437 board. Switch on the power supply for board.
2. Open CCS 3.3 setup. Import EVMDM6437_XDS510USB configuration. Click on "Save & Quit" button and exit the setup.
3. Open CCS3.3. This will open "CCStudio: Parallel Debug Manager" window. Connect C64PLUS and open the CCS window.
4. Open
"`<root>\packages\ti\sdo\pspdrivers\system\dm6437\bios\evmDM6437\video\sample\build\previewer\psp_bios_prev_st_basic_example.pjt`".
Compile this project using Debug->Build.
5. Load the generated .out file and execute it.
6. After completion of this application execution, "Previewer: Basic Test pass" message will be printed on DSP/BIOS -> Message Log.
7. Now, the output image from Previewer can be viewed in CCS image viewer. To view the image, go to View->Graph->Image as shown in Figure 1.

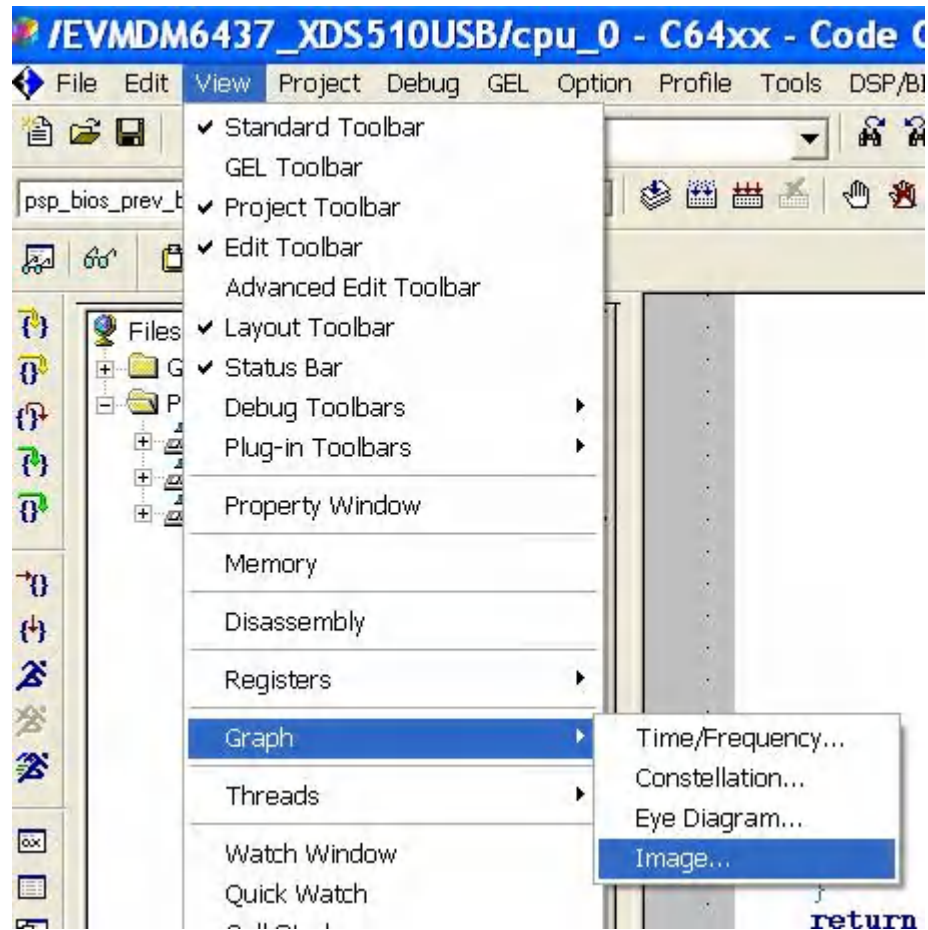


Figure 1. CCS View->Graph->Image

8. The Graph Property Dialog will be displayed as shown in Figure 2. In Graph Property Dialog window enter all configuration values as shown in Figure 2.

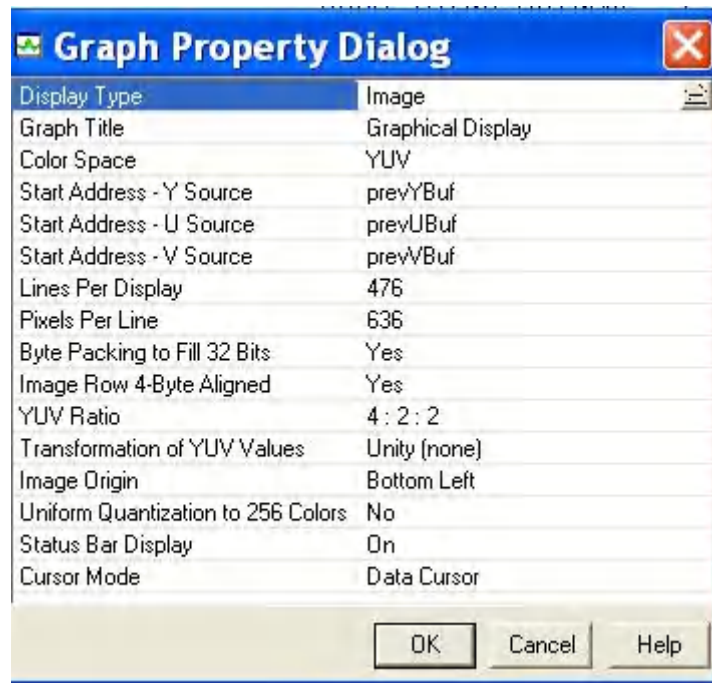


Figure 2. Graph Property Dialog settings for basic application

9. Press OK to view the Previewer output image.
10. Output Image of the Basic Example is shown in Figure 3

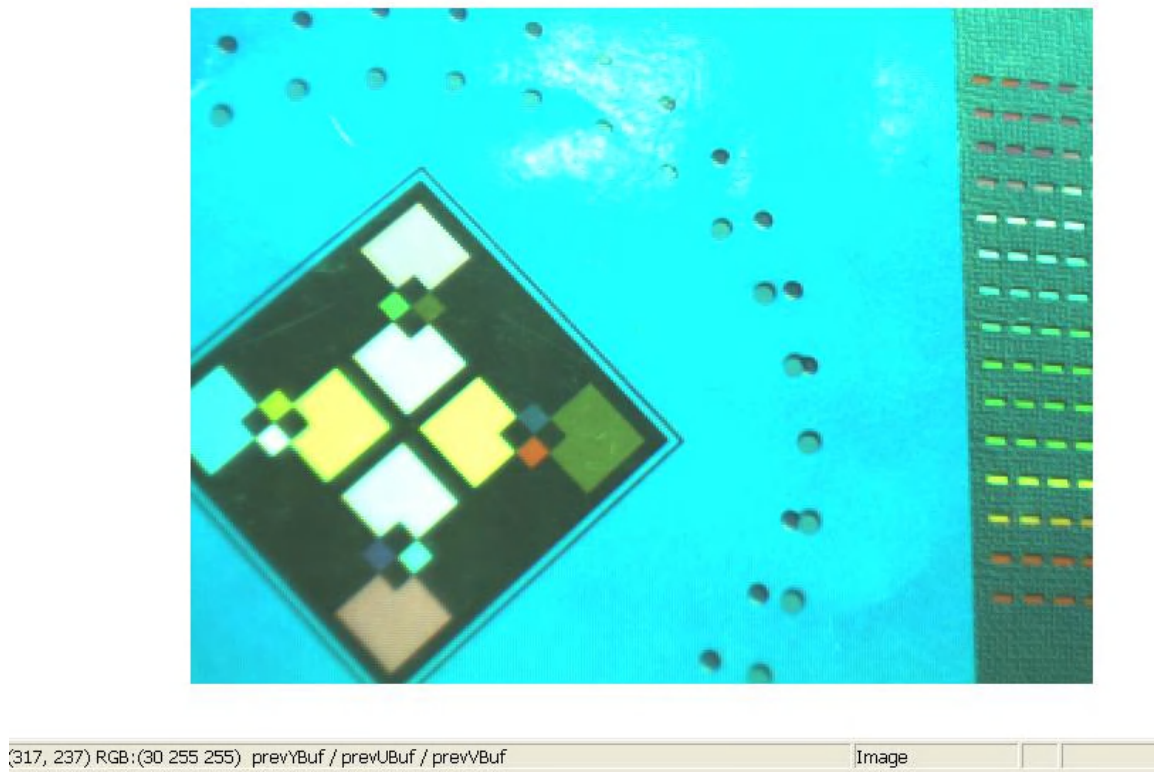


Figure 3. Output Image of the basic Example

Previewer Multipass Example:

This application demonstrates multipass functionality to preview image of horizontal size greater than 1280 pixels. This application converts raw image in Bayer pattern to YUV4:2:2 image.

Steps to execute Previewer Multipass example:

1. For hardware setup, Connect XDS 510 USB emulator to the JTAG connector on DM6437 board. Switch on the power supply for board.
2. Open CCS 3.3 setup. Import EVMDM6437_XDS510USB configuration. Click on "Save & Quit" button and exit the setup.
3. Open CCS3.3. This will open "CCStudio: Parallel Debug Manager" window. Connect C64PLUS and open the CCS window.
4. Open
`"<root>\packages\ti\sdo\pspdrivers\system\dm6437\bios\evmDM6437\video\sample\build\previewer\psp_bios_prev_st_multipass_example.pjt"`
 . Compile this project using Debug->Build.
5. Load the generated .out file and execute it.
6. After completion of this application execution, "Previewer: Multipass Test Pass" message will be printed on DSP/BIOS -> Message Log.

7. Now, the output image from Previewer can be viewed in CCS image viewer. To view the image, go to View->Graph->Image as shown in Figure 1.
8. The Graph Property Dialog will be displayed as shown in Figure 4. In Graph Property Dialog window enter all configuration values as shown in Figure 4.

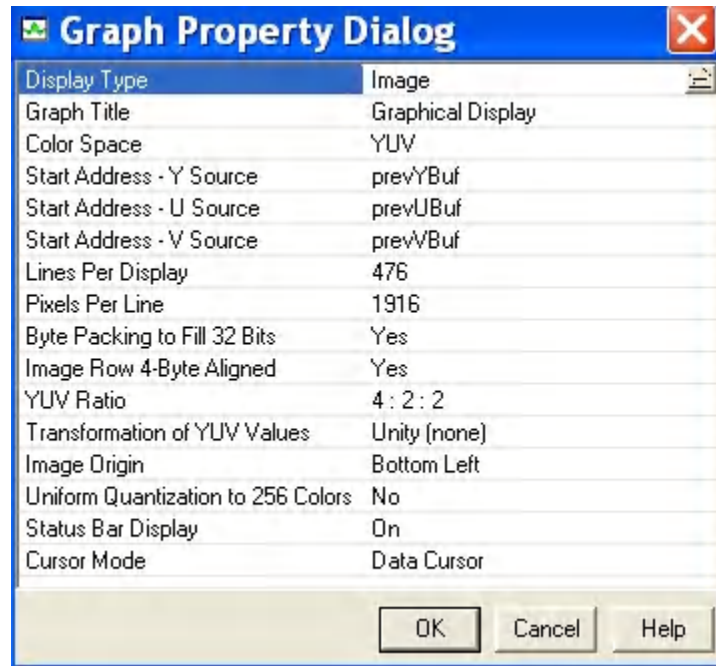


Figure 4. Graph Property Dialog settings for multipass application

9. Press OK to view the Previewer output image
10. Output Image of the Multipass Example is shown in Figure 5

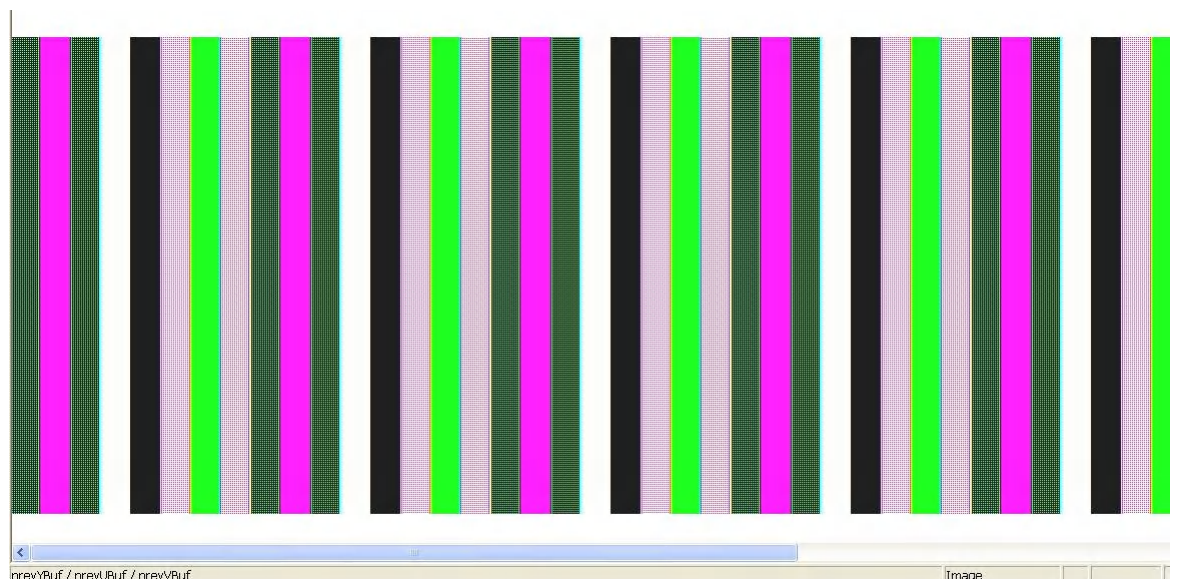


Figure 5. Output Image of the Multipass Example

VPFE-Previewer On-the-fly Example:

This application is loopback application which demonstrates VPFE, Previewer On-the-fly and VPBE driver functionalities.

Steps to execute VPFE-Previewer On-the-fly example:

1. For hardware setup, Connect XDS 510 USB emulator to the JTAG connector on DM6437 board. Switch on the power supply for board. Connect video cable from DAC-B of DM6437 EVM to TV.
2. Open CCS 3.3 setup. Import EVMDM6437_XDS510USB configuration. Click on "Save & Quit" button and exit the setup.
3. Open CCS3.3. This will open "CCStudio: Parallel Debug Manager" window. Connect C64PLUS and open the CCS window.
4. Open
`"<root>\packages\ti\sdo\pspdrivers\system\dm6437\bios\evmDM6437\video\sample\build\previewer_on_the_fly\psp_bios_prev_st_on_the_fly_example.pjt"` Compile this project using Debug->Build.
5. Load the generated .out file and execute it.
6. This application is loopback application; Captured image should get displayed on TV.

VPFE-Previewer Dark Frame Capture Example:

This application shows Previewer Dark Frame Capture and Dark Frame Subtract functionalities.

In this application first normal loopback application without dark frame subtract will start. After sometimes it will ask user to cover the lens with dark paper or camera shutter so that dark frame can be captured. After completion of dark frame capture again it will ask user to uncover the lens and afterwards It will start loopback with dark frame subtract.

Steps to execute VPFE-Previewer Dark Frame Capture example:

1. For hardware setup, Connect XDS 510 USB emulator to the JTAG connector on DM6437 board. Switch on the power supply for board. Connect video cable from DAC-B of DM6437 EVM to TV.
2. Open CCS 3.3 setup. Import EVMDM6437_XDS510USB configuration. Click on "Save & Quit" button and exit the setup.
3. Open CCS3.3. This will open "CCStudio: Parallel Debug Manager" window. Connect C64PLUS and open the CCS window.
4. Open
`"<root>\packages\ti\sdo\pspdrivers\system\dm6437\bios\evmDM6437\video\sample\build\previewer_on_the_fly\psp_bios_prev_st_on_the_fly_dfc_example.pjt"` Compile this project using Debug->Build.
5. Load the generated .out file and execute it.
6. This application is loopback application; Captured image should get displayed on TV.