

1. 解压工程到纯英文路径;

电脑 > 数据 (D:) > develop > mygit > dmk_zynq7010_v2 > demo > multy_sport

名称	类型	大小
.Xil	文件夹	
ip_repo	文件夹	
ov5640_hdmi.cache	文件夹	
ov5640_hdmi.hw	文件夹	
ov5640_hdmi.ioplanning	文件夹	
ov5640_hdmi.ip_user_files	文件夹	
ov5640_hdmi.runs	文件夹	
ov5640_hdmi.sdk	文件夹	
ov5640_hdmi.sim	文件夹	
ov5640_hdmi.srcs	文件夹	
ov5640_hdmi.xpr	Vivado Project Fi...	44 KB
vivado.jou	JOU 文件	1 KB
vivado.log	文本文档	3 KB
vivado_12828.backup.jou	JOU 文件	1 KB
vivado_12828.backup.log	文本文档	3 KB
vivado_15496.backup.jou	JOU 文件	3 KB
vivado_15496.backup.log	文本文档	4 KB
vivado_17440.backup.jou	JOU 文件	7 KB
vivado_17440.backup.log	文本文档	17 KB
vivado_43048.backup.jou	JOU 文件	3 KB
vivado_43048.backup.log	文本文档	11 KB

2. 双击"ov5640_hdmi.xpr"打开Vivado工程, 要求Vivado版本为Vivado2018.3;

3. 点击"File"-->"Launch SDK";

File Edit Flow Tools Reports Window Layout View Help Q- Quick Access

PROJECT MANAGER - ov5640_hdmi

Sources

- Design Sources (1)
 - design_1_wrapper (design_1_wrapper.v) (1)
- Constraints (1)
- Simulation Sources (1)
- Utility Sources

Project Summary

Overview | Dashboard

Settings Edit

Project name: ov5640_
Project location: D:/devel
Product family: Zynq-70
Project part: xc7z020
Top module name: design_
Target language: Verilog
Simulator language: Mixed

Synthesis

Status: Complete
Messages: 1601 warnin
Active run: synth_1
Part: xc7z020clg4
Strategy: Vivado Synth
Report Strategy: Vivado Synth

4. 点击窗口的下拉按钮，选择"Choose Location...";

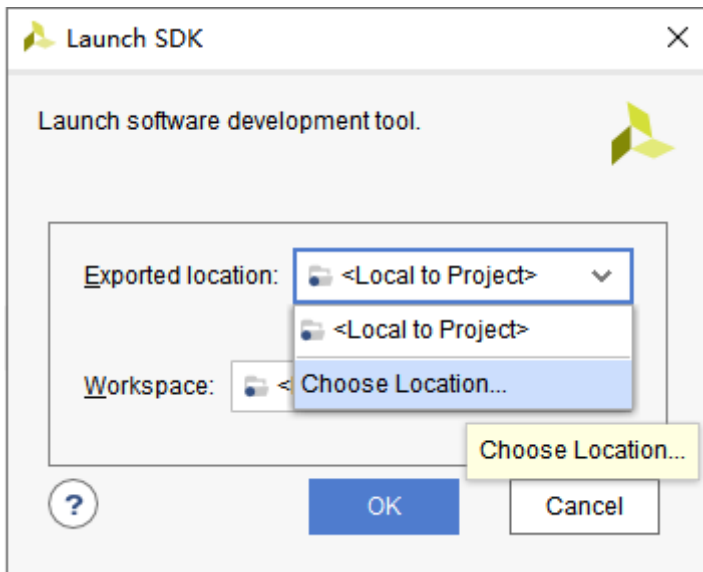
Launch SDK

Launch software development tool.

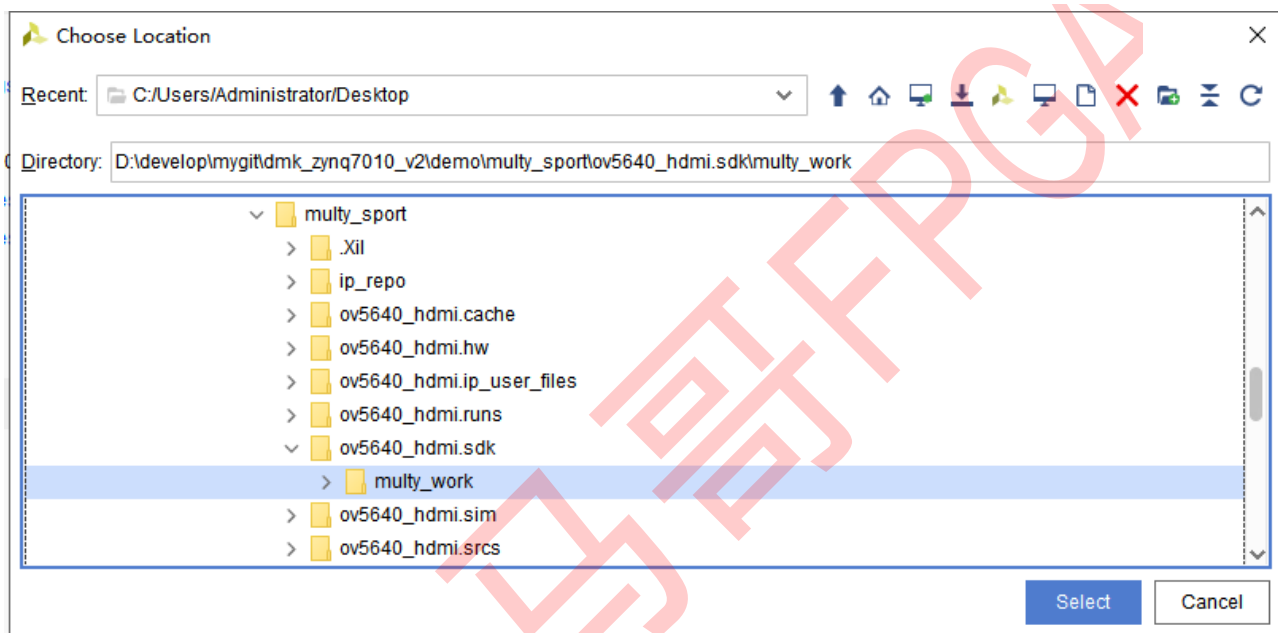
Exported location: <Local to Project>

Workspace: <Local to Project>

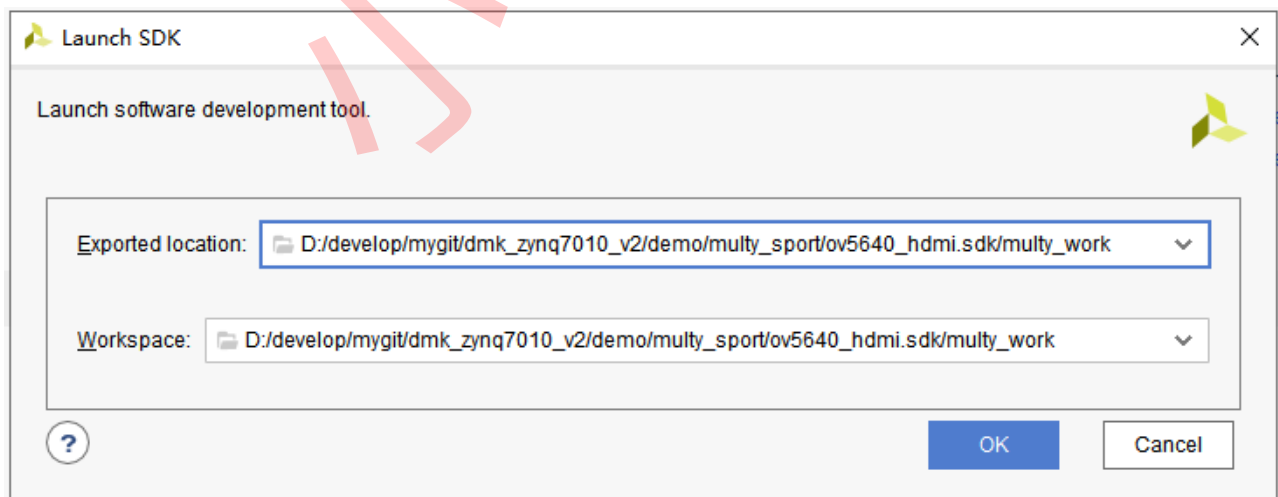
OK Cancel



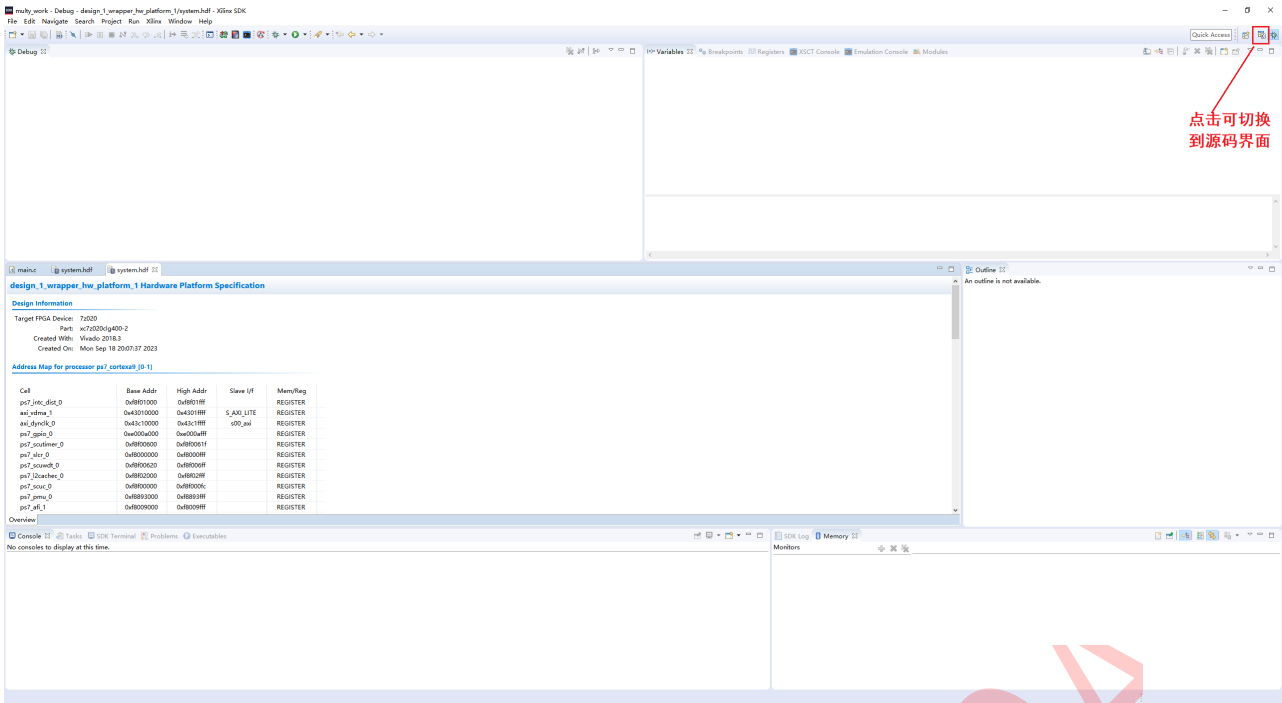
5. 浏览路径到multy_sport\ov5640_hdmi.sdk\multy_work, 点击"Select";



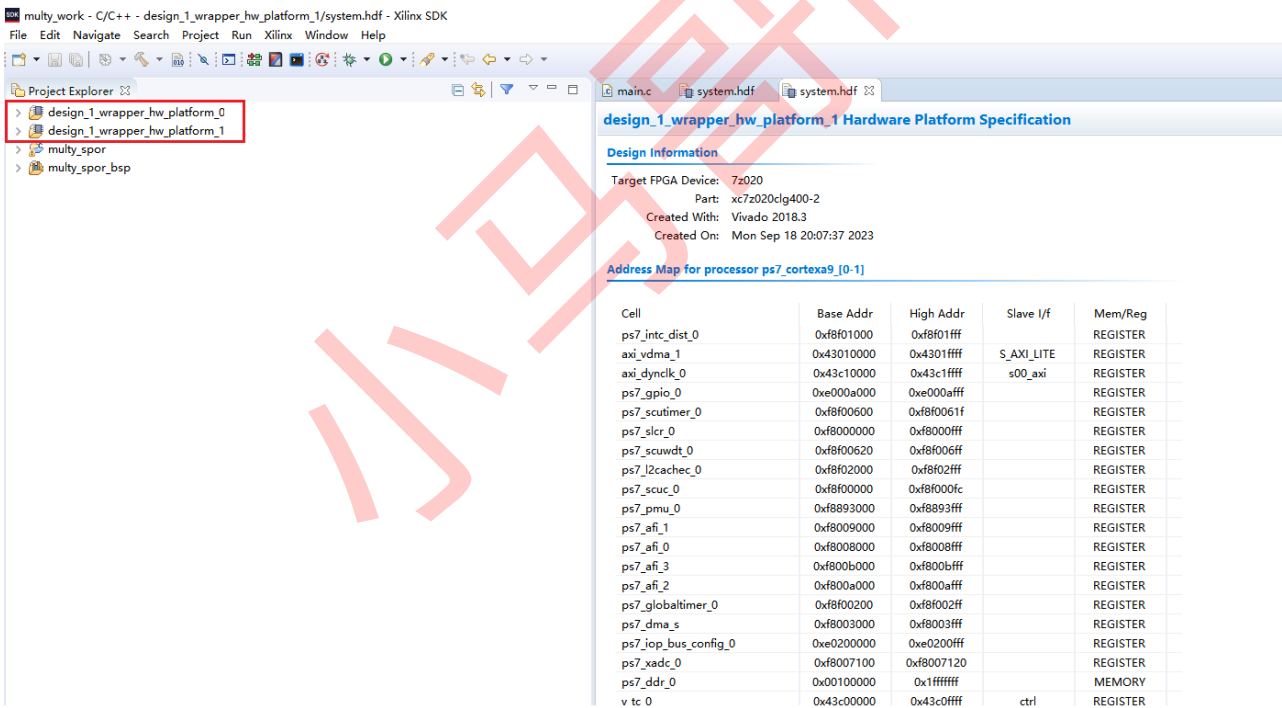
6. Export location和Workspace的路径都需要浏览到multy_sport\ov5640_hdmi.sdk\multy_work, 然后点击"OK";



7. 此时SDK会自动打开, 点击右上角的红框中的按钮可以切换界面到源码界面;

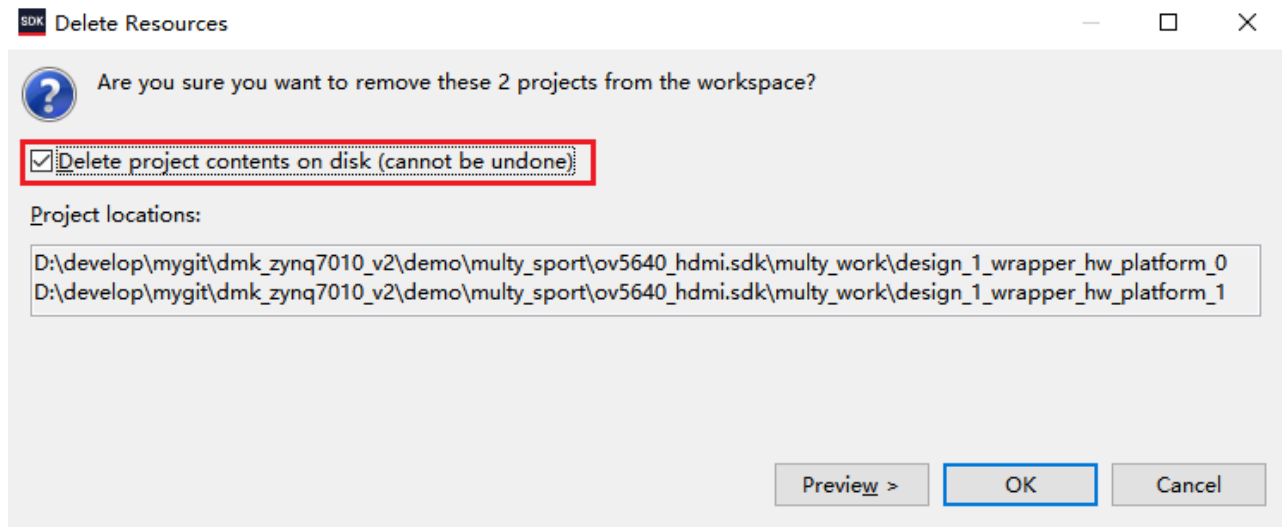


8. 在源码界面中可以发现，SDK又新生成了一个平台工程：design_1_wrapper_hw_platform_1，如果没有修改过BD文件的内容，那这里可以点击选择design_1_wrapper_hw_platform_1按”DELETE键“把它删除了，用老的design_1_wrapper_hw_platform_0即可，如果自己修改过BD文件内容，则看步骤9；

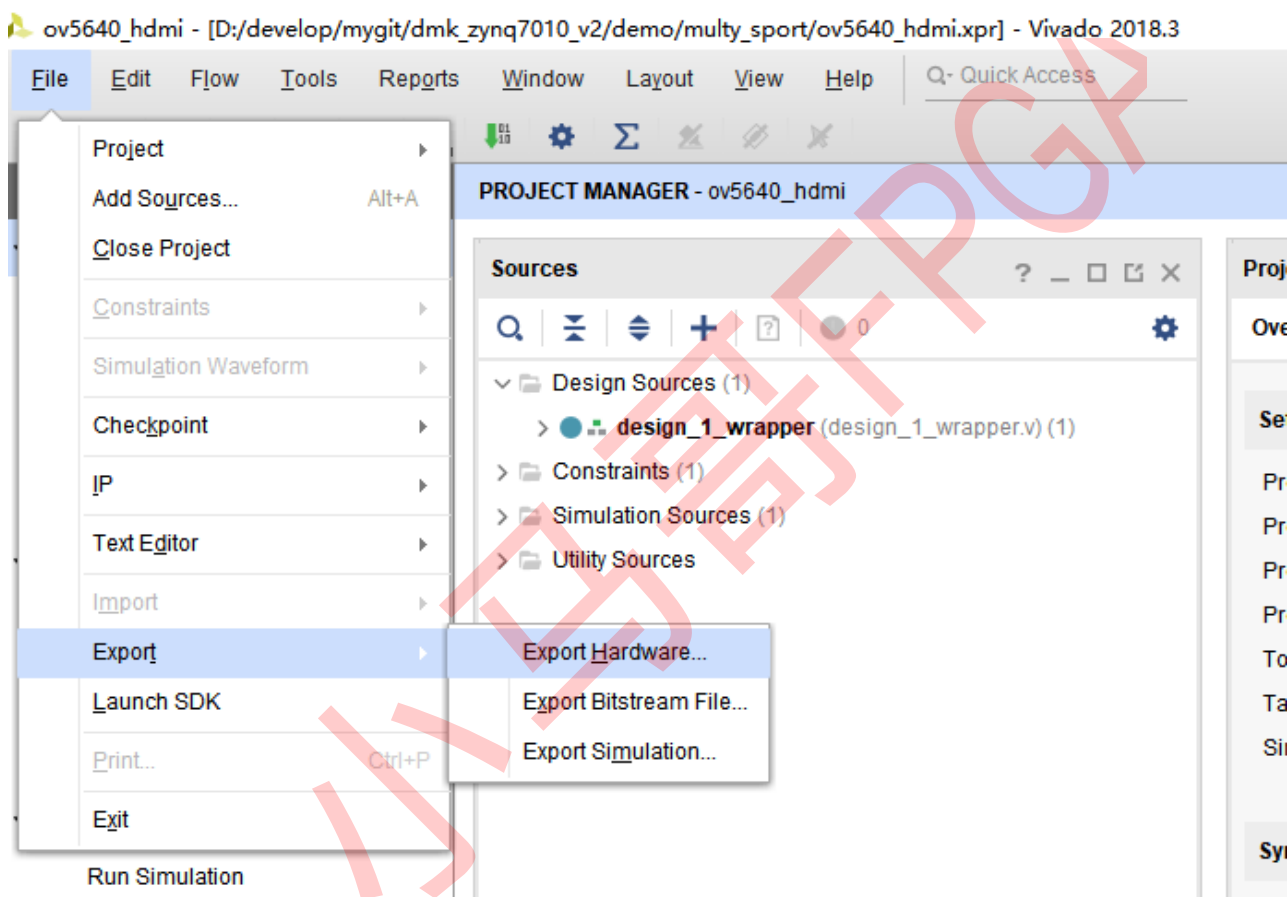


9. 如果没有修改过BD文件，可以跳过此步骤，看步骤10；

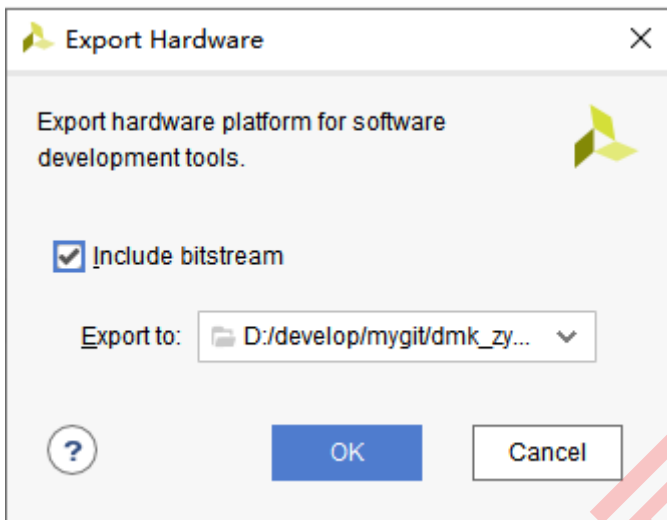
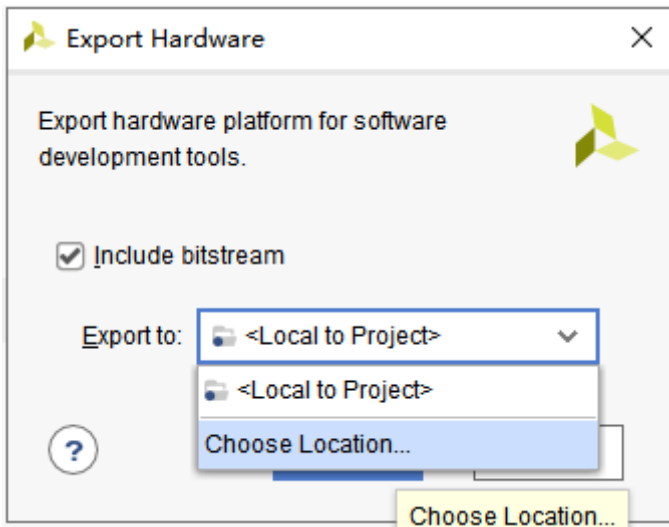
- a. 选中design_1_wrapper_hw_platform_0和design_1_wrapper_hw_platform_1，按”DELETE键“删除，勾选”Delete project contents on disk(cannot be undone)”;



b. 关闭SDK软件，回到Vivado重新Export Hardware；

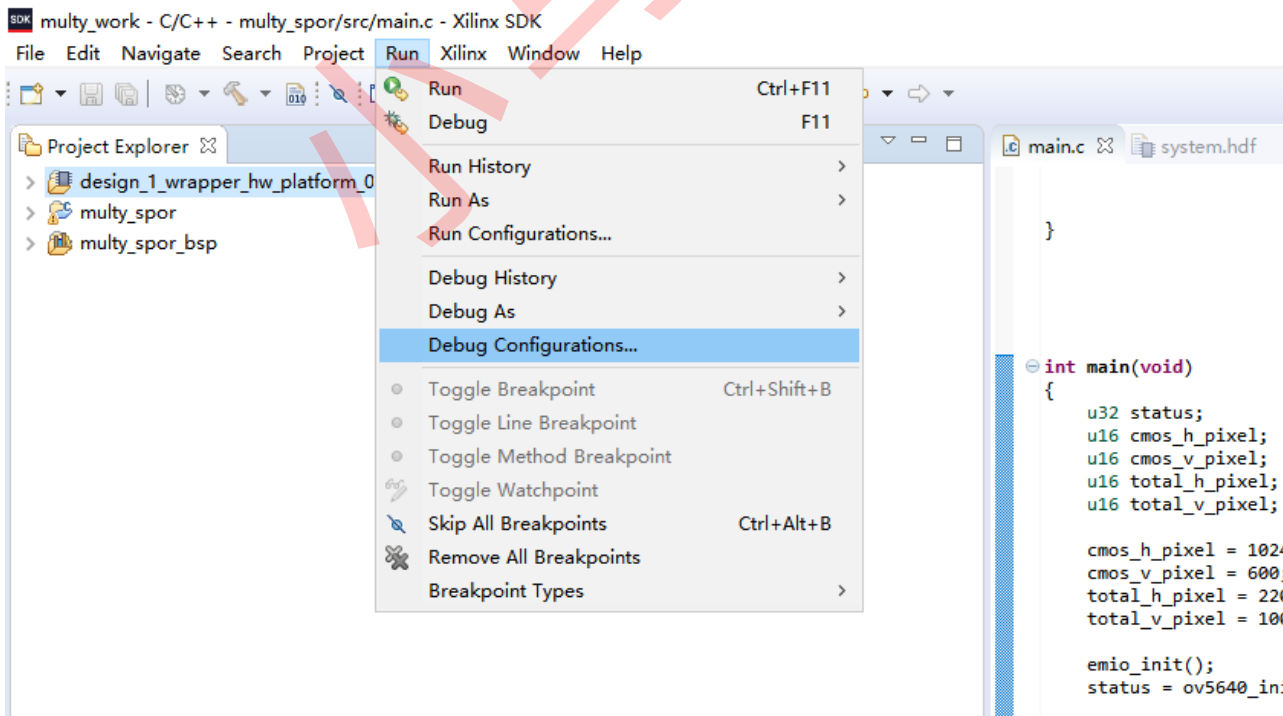


c. 勾选"Include bitstream",点击"Choose Location..."-->浏览到路径multy_sport\ov5640_hdmi.sdk\multy_work-->点击"OK";



d. 重新Launch SDK;

10. 用Type-C线连接电脑和开发板（JTAG接口），开发板连接HDMI显示屏，然后在SDK中点击"Run"-->"Debug Configurations..."



11. 点击"Debug";

Create, manage, and run configurations

Run or Debug a program using System Debugger.

Name: System Debugger using Debug_multy_spor.elf on Local

Target Setup Application Arguments Environment Symbol Files Source Path Map Common

Debug Type: Standalone Application Debug

Connection: Local New

Hardware Platform: design_1_wrapper_hw_platform_0

Bitstream File: design_1_wrapper.bit Search... Browse... Generate...

Initialization File: ps7_init.tcl Search... Browse...

FPGA Device: Auto Detect Select...

PS Device: Auto Detect Select...

Reset entire system
 Program FPGA
 Run ps7_init
 Run ps7_post_config
 Enable Cross-Trigging

Summary of operations to be performed

Following operations will be performed before launching the debugger.

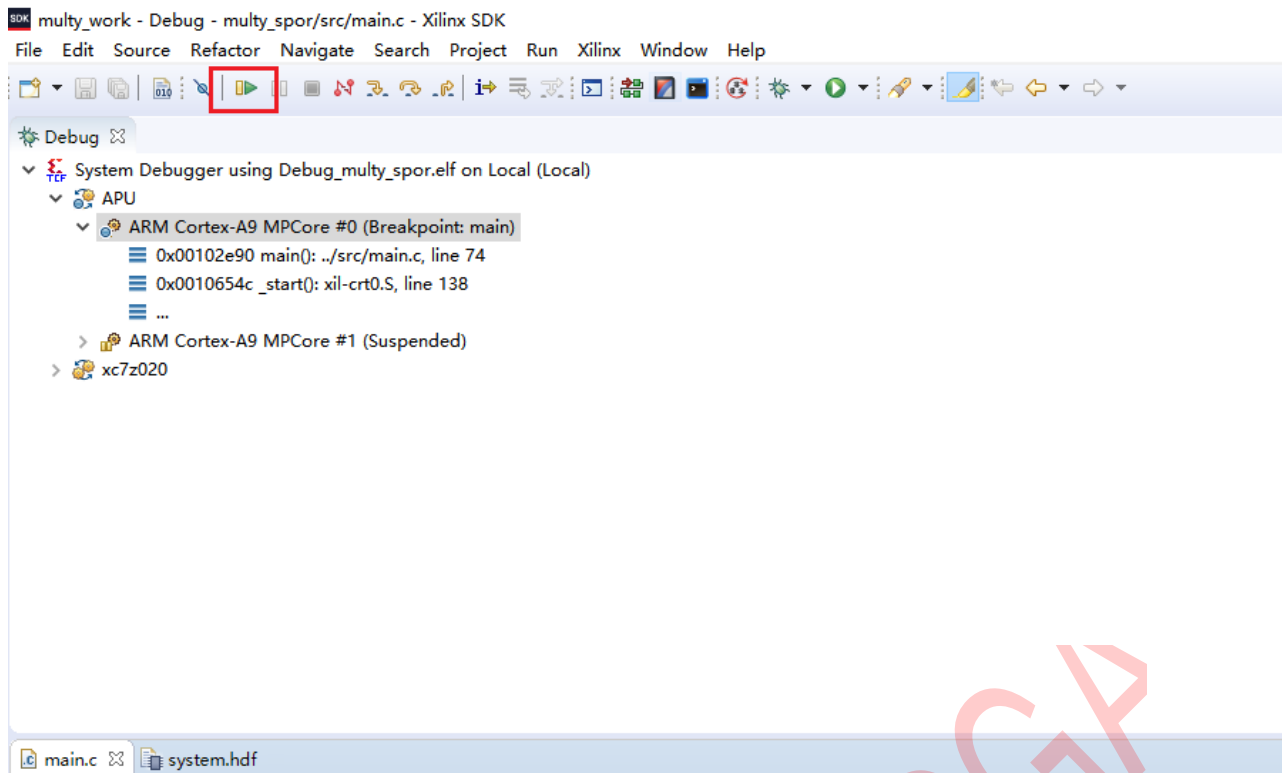
1. Resets entire system. Clears the FPGA fabric (PL).
2. Program FPGA fabric (PL).
3. Run ps7_init to initialize PS.
4. Run ps7_post_config. Enables level shifters from PL to PS. (Recommended to use this option only after system reset or board power ON).
5. All processors in the system will be suspended, and Applications will be downloaded to the following processors as specified in the Applications tab.
 - 1) ps7_cortexa9_0 (D:\develop\mygit\dmk_zynq7010_v2\demo\multy_sport\ov5640_hdmi.sdk\multy_work\multy_spor\Debug\multy_spor.elf)

Filter matched 6 of 11 items

Revert Apply

Debug Close

12. 点击运行按钮，如下图所示；



```
main.c system.hdf

int main(void)
{
    u32 status;
    u16 cmos_h_pixel;           //ov5640 DVP 输出水平像素点数
    u16 cmos_v_pixel;         //ov5640 DVP 输出垂直像素点数
    u16 total_h_pixel;        //ov5640 水平总像素大小
    u16 total_v_pixel;        //ov5640 垂直总像素大小

    cmos_h_pixel = 1024;      //设置OV5640输出分辨率1280*720
    cmos_v_pixel = 600;
```

13. 观察HDMI显示屏，可以用手在摄像头前晃动验证下多运动目标检测的效果；