## 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	
è	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 КВ

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";

🝌 ov5640\_hdmi - [D:/develop/mygit/dmk\_zynq7010\_v2/demo/multy\_sport/ov5640\_hdmi.xpr] - Vivado 2018.3



🝌 Launch SDK

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Laurich sollware development tool.	
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Exported location: 😜 <local project="" to=""></local>	
Workspace: 😜 <local project="" to=""> 🗸 🗸</local>	
OK   Cancel	

🝌 Launch SDK X											
Launch software development tool.											
Exported location:	Exported location: 🚘 <local project="" to=""> 🗸 🗸</local>										
	😜 <local project="" to=""></local>										
Workspace: 😜 <	Workspace: Choose Location										
		Choose Location									
?	ОК	Cancel									

5. 浏览路径到multy\_sport\ov5640\_hdmi.sdk\multy\_work,点击"Select";

A Choose Location		Х
Recent: 🗅 C:/Users/Administrator/Desktop 🔹 🕇 🏠 🖵 🛃 🏊	🖵 🗅 🗙 I	B X C
Directory: D:\develop\mygit\dmk_zynq7010_v2\demo\multy_sport\ov5640_hdmi.sdk\multy_work		
<pre>     multy_sport        </pre>		^
<pre>&gt; ov5640_hdmi.tp_user_files &gt; ov5640_hdmi.runs &gt; ov5640_hdmi.sdk</pre>		
<pre>&gt; multy_work &gt; ov5640_hdmi.sim &gt; ov5640_hdmi.srcs</pre>		~
	Select	Cancel

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";

🔥 Launch SDK	×
Launch software development tool.	4
Exported location: D:/develop/mygit/dmk_zynq7010_v2/demo/multy_sport/ov5640_hdmi.sdk/multy_work	~
Workspace: D:/develop/mygit/dmk_zynq7010_v2/demo/multy_sport/ov5640_hdmi.sdk/multy_work	~
? ОК	Cancel

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;

The Edit Navigate Search	gn_1_wrapper_hw_platfor h Project Run Xilinx	m_1/system.hdf Window Help	- Xilinx SDK								- ø ×
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B mainc in system.bdf	a system.hdf 22									B Outline 22	7 H B
design 1 wrapper hw	platform 1 Hardw	are Platform	Specification						^	An outline is not available.	
and the second process											
Design Information											
Target FPGA Device: 72020 Part: w725	10 020/10400-2										
Created With: Vivad	do 2018.3										
Created On: Mon	Sep 18 20:07:37 2023										
Address Map for processor	r ps7_cortexa9_[0-1]										
Cel	Base Addr	High Addr	Slave I/F	Mem/Reg							
ps7_intc_dist_0	0xf8f01000	0xf8f01fff		REGISTER							
asi durdik 0	0x43010000	0x43011111	S AND LITE	REGISTER							
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ps7_soutimer_0	0xf8f00600	0xf8f0061f		REGISTER							
ps7_slcr_0	0x48000000	0xH8000HH		REGISTER							
ps7_souwdt_0	0xf8f00620	0xf8f006ff		REGISTER							
ps7_l2cachec_0	0x48402000	0x1880299		REGISTER							
psr_souc_0	0-19992000	0.4890.200		REGISTER							
ps7 afi 1	0xf8009000	0xf8009fff		REGISTER							
Overview											
B Controle 22 - 2 Taylor B	SDK Terminal III Brok	amr. O Everyte						Entries B Memory St			
No consoles to display at this	time	0.000						Monitors	a x %		
									2.6.2		

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;

Edit Navigate Search Project Run Xilinx Wind	ow Help										
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Project Explorer 🖾	🖻 🕏 🔻 🗸 🗖	🖻 main.c 📑 system.hdf	💼 system.hdf 🛛								
design_1_wrapper_hw_platform_0 design 1 wrapper hw platform 1		design_1_wrapper_hw_p	latform_1 Hardw	are Platform	Specification						
multy_spor		Design Information									
🎍 multy_spor_bsp											
	Target FPGA Device: 7z020										
		Part: xc/z020	2018 2								
		Created With: Vivado	18 20:07:37 2023								
	· ·										
		Address Map for processor p	s7_cortexa9_[0-1]								
		Cell	Base Addr	High Addr	Slave I/f	Mem/Reg					
		ps7 intc dist 0	0xf8f01000	0xf8f01fff		REGISTER					
		axi vdma 1	0x43010000	0x4301ffff	S AXI LITE	REGISTER					
		axi dynclk 0	0x43c10000	0x43c1ffff	s00 axi	REGISTER					
		ps7 gpio 0	0xe000a000	0xe000afff	-	REGISTER					
		ps7_scutimer_0	0xf8f00600	0xf8f0061f		REGISTER					
		ps7_slcr_0	0xf8000000	0xf8000fff		REGISTER					
		ps7_scuwdt_0	0xf8f00620	0xf8f006ff		REGISTER					
		ps7_l2cachec_0	0xf8f02000	0xf8f02fff		REGISTER					
		ps7_scuc_0	0xf8f00000	0xf8f000fc		REGISTER					
		ps7_pmu_0	0xf8893000	0xf8893fff		REGISTER					
		ps7_afi_1	0xf8009000	0xf8009fff		REGISTER					
		ps7_afi_0	0xf8008000	0xf8008fff		REGISTER					
		ps7_afi_3	0xf800b000	0xf800bfff		REGISTER					
		ps7_afi_2	0xf800a000	0xf800afff		REGISTER					
		ps7_globaltimer_0	0xf8f00200	0xf8f002ff		REGISTER					
		ps7_dma_s	0xf8003000	0xf8003fff		REGISTER					
		ps7_iop_bus_config_0	0xe0200000	0xe0200fff		REGISTER					
		ps7_xadc_0	0xf8007100	0xf8007120		REGISTER					
		ps7_ddr_0	0x00100000	0x1fffffff		MEMORY					
		v tc 0	0x43c00000	0x43c0ffff	ctrl	REGISTER					

- 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 contets on disk(cannot be undone)";



## b. 关闭SDK软件,回到Vivado重新Export Hardware;

🚴 ov5640\_hdmi - [D:/develop/mygit/dmk\_zynq7010\_v2/demo/multy\_sport/ov5640\_hdmi.xpr] - Viv<u>ado\_</u>2018.3

<u>F</u> ile	<u>E</u> dit F <u>l</u> ow <u>T</u> ools F	Rep <u>o</u> rts	<u>W</u> indow	Layout <u>\</u>	<u>/</u> iew <u>H</u> el	0 Q- QL	lick Access		
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	Expor <u>t</u>	- • [ -	Export <u>H</u>	ardware					То
	Launch SDK		E <u>x</u> port Bi	tstream File					Та
	Print	trl+P	Export Si	<u>m</u> ulation					Si
	E <u>x</u> it								Com
	Run Simulation								Syl

c. 勾选"Include bitstream",点击"Choose Location..."-->浏览到路径multy\_sport\ov5640\_hdmi.sdk\multy\_work-->点击"OK";



Configurations ... "

som multy\_work - C/C++ - multy\_spor/src/main.c - Xilinx SDK



Eventual Configurations												×
Create, manage, and run configurations Run or Debug a program using System Debugger.												Ť.
	Name: System Debugg	er using Debu	bug_multy_s	spor.elf on Local								
	🖲 Target Setup	Application 😣	🕬 Argum	ents 📧 Environn	ment 🚡 Symbol	Files 🤤 Source	ce 🔏 Path Maj	p 🔲 Common				
Performance Analysis Target Communication Framework	Debug Type: Standa	lone Applicatio	ation Debug	<b>j</b> ~								
Xilinx C/C++ Application (GDB)	Connection: Local			~ New								
System Debugger using Debug_multy_spor.elf on Local	Hardware Platform:	design_1_wra	wrapper_hw_	_platform_0						$\sim$		
	Bitstream File:	design_1_wra	wrapper.bit							Search	Browse	Generate
	Initialization File:	ps7_init.tcl								Search	Browse	
	PS Device:	Auto Detect	α σ							Select		
		Hato better		6						Selection		
< > > Filter matched 6 of 11 items	Run ps7_post_config     Enable Cross-Triggering		3. Runs 4. Runs 5. All p 1) p	In ensus Brute System: Clears user PCA labor, (PC). 2. Program PCA fabor, (PC). 3. Runs ps7_init to infiaite PS. 4. Runs ps7_ons config. Enables level shifters from PL to PS. (Recommended to use this option 5. All processors in the system will be suspended, and Applications will be downloaded to the: 1) ps7_cortexa9_0 (Dt\develop\u00edwelop\		his option only aff d to the following hdmi.odk/multy_w	n only after system reset or board following processors as specified kt/multy_work/multy_sport/Debugty		cations tab. 0 Apply Close			
12. 点击运行按钮,如	下图所示;											

## multy\_work - Debug - multy\_spor/src/main.c - Xilinx SDK

