

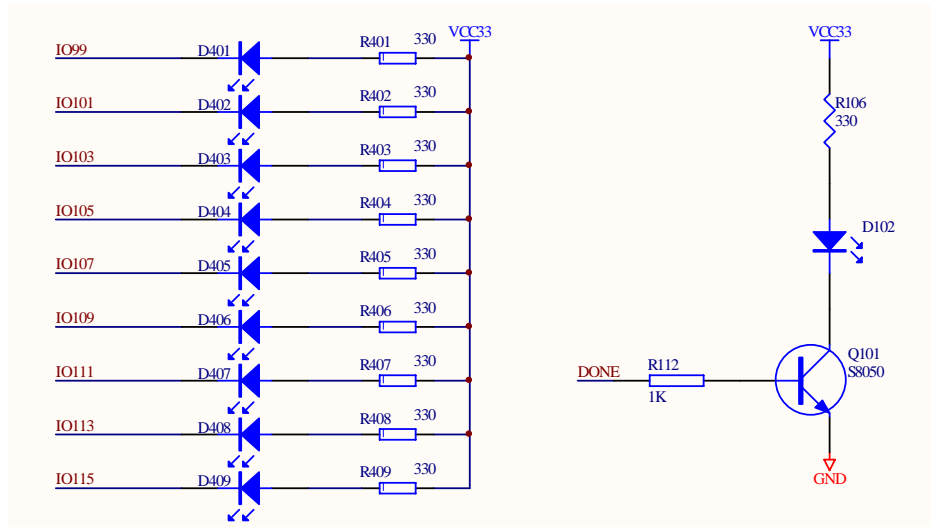


Lattice XP demoboard User manual

## 1. 十个发光二极管（LED）

用于辅助调试，可以通过设置LED的点亮状态，直观显示运行结果。

### ● 电路连接



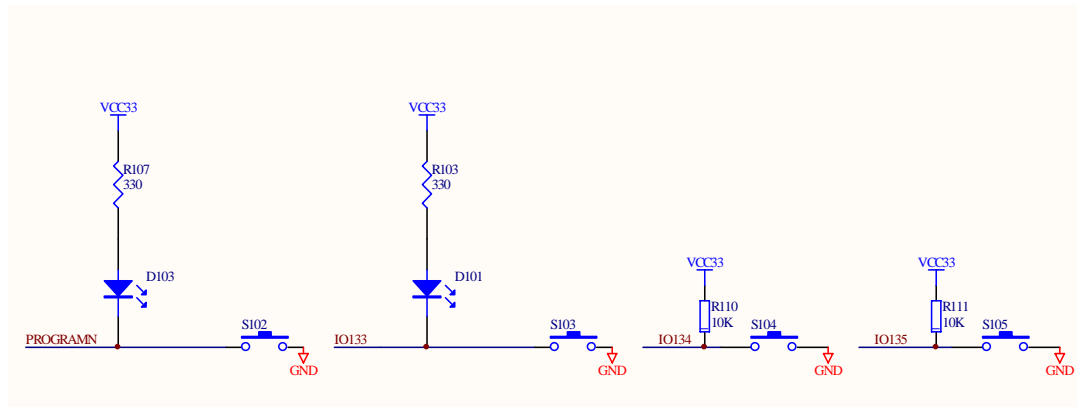
### ● 管脚映射

器件	信号名称	LFXP3C对应管脚
D401	IO99	PIN160
D402	IO101	PIN162
D403	IO103	PIN165
D404	IO105	PIN168
D405	IO107	PIN170
D406	IO109	PIN173
D407	IO111	PIN175
D408	IO113	PIN178
D409	IO115	PIN180
D102	DONE	PIN2

## 2. 按键输入

四个轻触按键可用于触发信号输入，并可配合软件将其定义为复位信号等功能，以便于调试。

### ● 电路连接



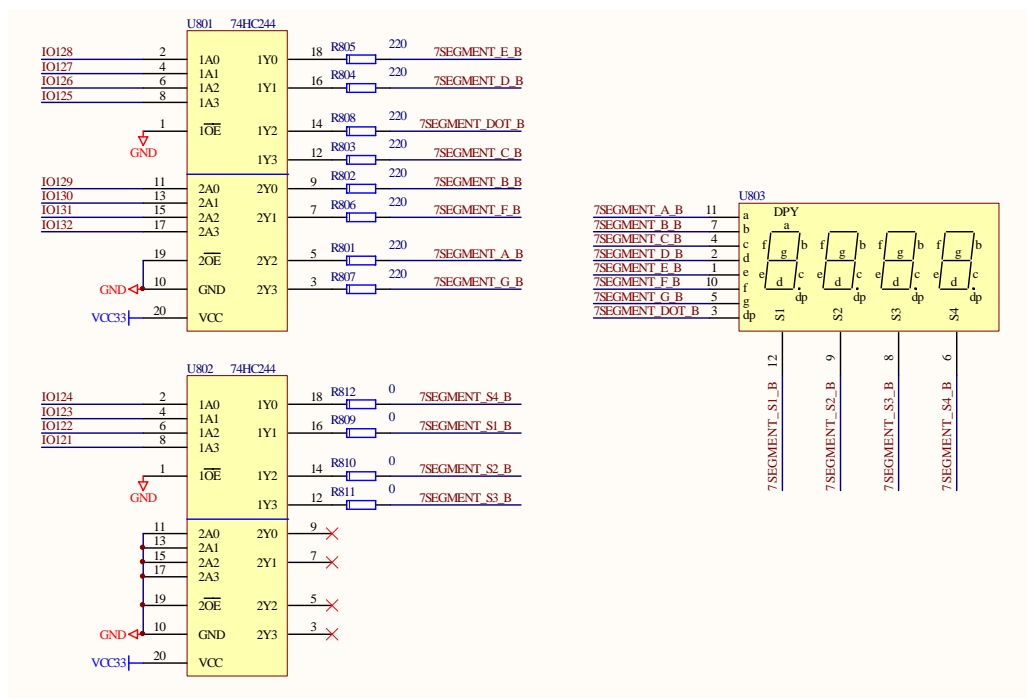
● 管脚映射

器件	信号名称	LFXP3C对应管脚
S102	PROGRAMN	PIN3
S103	I0133	PIN204
S104	I0134	PIN205
S105	I0135	PIN206

3. 数码管显示

通过两片 74HC244 驱动 4 位共阳极数码管显示。

● 电路连接



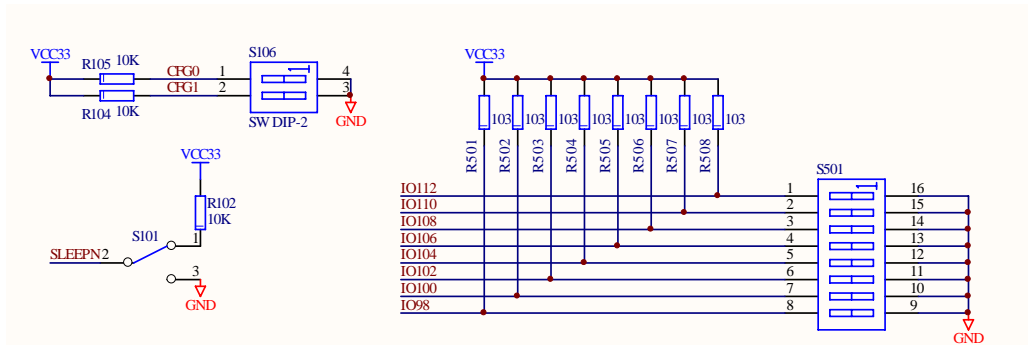
● 管脚映射

器件	信号名称	LFXP3C对应管脚
U801-1A0	I0128	PIN198
U801-1A1	I0127	PIN197
U801-1A2	I0126	PIN196
U801-1A3	I0125	PIN195
U801-2A0	I0129	PIN200
U801-2A1	I0130	PIN201
U801-2A2	I0131	PIN202
U801-2A3	I0132	PIN203
U802-1A0	I0124	PIN193
U802-1A1	I0123	PIN192
U802-1A2	I0122	PIN191
U802-1A3	I0121	PIN190

4. 拨码开关

拨码开关在简单的逻辑调试时，可用作状态输入，减少额外的硬件连接。

● 电路连接



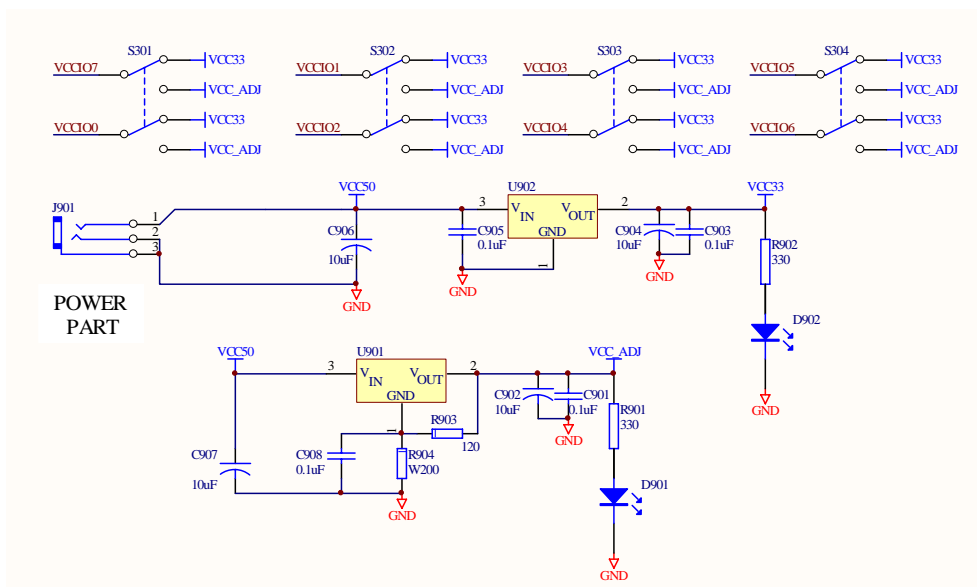
● 管脚映射

器件	信号名称	LFXP3C对应管脚
S501-1	IO112	PIN176
S501-2	IO110	PIN174
S501-3	IO108	PIN171
S501-4	IO106	PIN169
S501-5	IO104	PIN166
S501-6	IO102	PIN164
S501-7	IO100	PIN161
S501-8	IO98	PIN159
S106-1	CFG0	PIN208
S106-2	CFG1	PIN1
S101	SLEEPN	PIN51

5. 电源方案

通过设定选择开关，可为 LFXP3C 的 8 组 I/O 分别选择供电电压。评估板提供了 3.3V 和 V<sub>adj</sub> 可选。通过调节可调电阻 R904，可以将 V<sub>adj</sub> 设定为 1.25V 至 3.3V 之间的任意电压。

● 电路连接

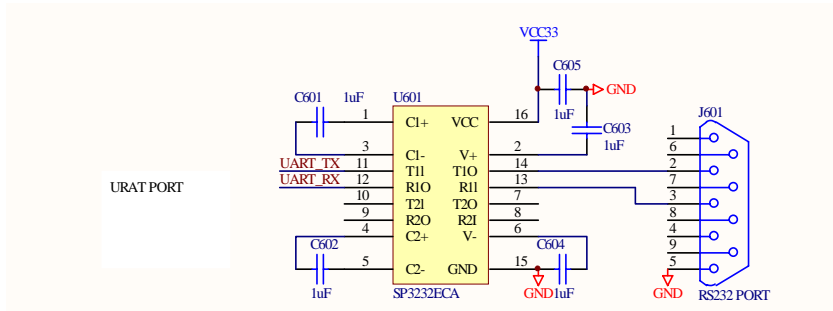


- 管脚映射

功能选择	LFXP3C对应管脚	信号名称	功能描述
VCCI00	PIN189	VCC33	I/O BANK0工作电压为3.3V
	PIN199	VCC ADJ	I/O BANK0工作电压为Vadj
VCCI01	PIN167	VCC33	I/O BANK1工作电压为3.3V
	PIN177	VCC ADJ	I/O BANK1工作电压为Vadj
VCCI02	PIN140	VCC33	I/O BANK2工作电压为3.3V
	PIN149	VCC ADJ	I/O BANK2工作电压为Vadj
VCCI03	PIN115	VCC33	I/O BANK3工作电压为3.3V
	PIN125	VCC ADJ	I/O BANK3工作电压为Vadj
VCCI04	PIN87	VCC33	I/O BANK4工作电压为3.3V
	PIN97	VCC ADJ	I/O BANK4工作电压为Vadj
VCCI05	PIN64	VCC33	I/O BANK5工作电压为3.3V
	PIN74	VCC ADJ	I/O BANK5工作电压为Vadj
VCCI06	PIN28	VCC33	I/O BANK6工作电压为3.3V
	PIN41	VCC ADJ	I/O BANK6工作电压为Vadj
VCCI07	PIN13	VCC33	I/O BANK7工作电压为3.3V
	PIN23	VCC ADJ	I/O BANK7工作电压为Vadj

## 6. RS-232 串口

- 电路连接

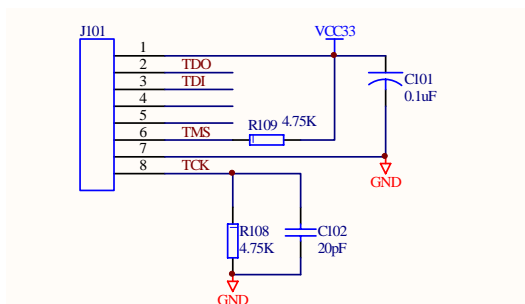


- 管脚映射

器件	信号名称	LFXP3C对应管脚
SP3232	UART-RX	PIN104
SP3232	UART-TX	PIN102

## 7. JTAG 接口

- 电路连接

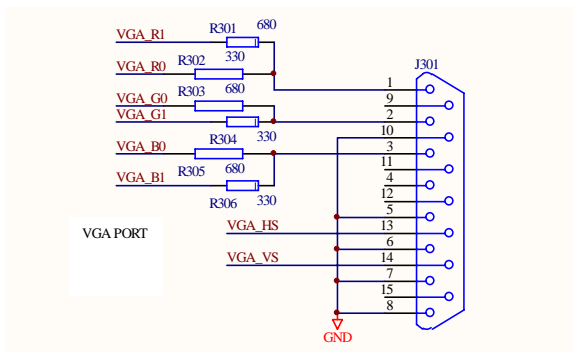


- 管脚映射

器件	信号名称	LFXP3C对应管脚
J101-1	DC3V3	
J101-2	TDO	PIN153
J101-3	TDI	PIN155
J101-4		
J101-5		
J101-6	TMS	PIN156
J101-7	GND	
J101-8	TCK	PIN157

## 8. VGA 接口

- 电路连接

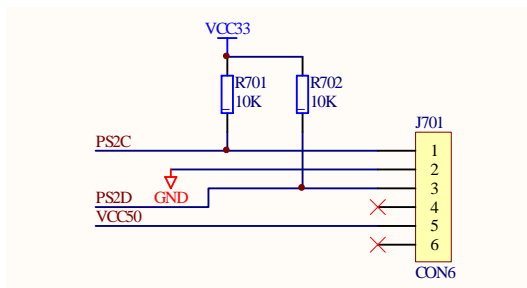


- 管脚映射

器件	信号名称	LFXP3C对应管脚
J301-1	VGA_R0	PIN60
	VGA_R1	PIN58
J301-2	VGA_G0	PIN56
	VGA_G1	PIN57
J301-3	VGA_B0	PIN55
	VGA_B1	PIN54
J301-13	VGA_HS	PIN61
J301-14	VGA_VS	PIN62

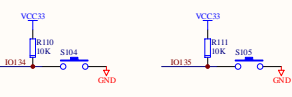
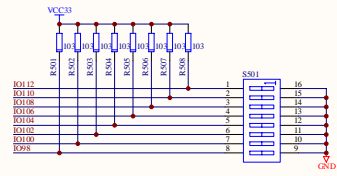
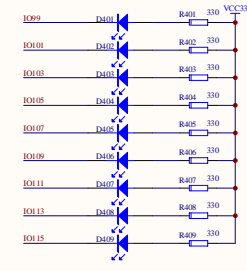
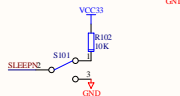
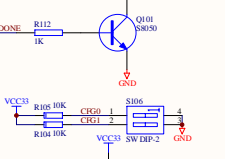
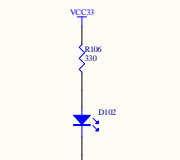
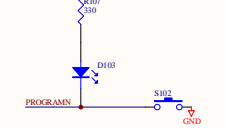
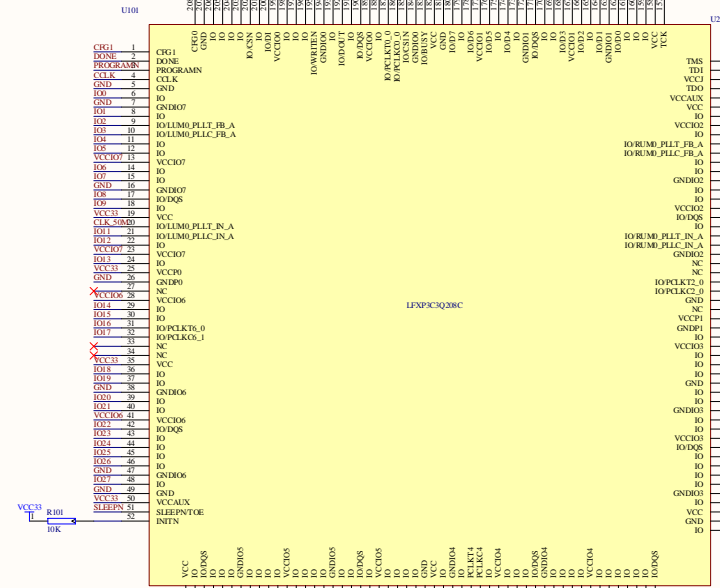
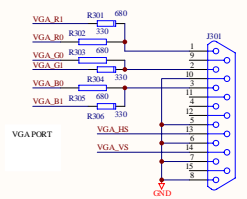
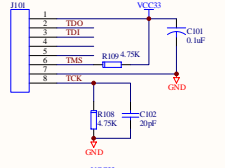
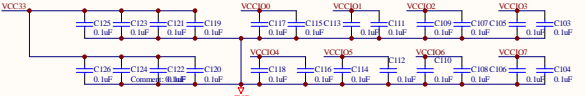
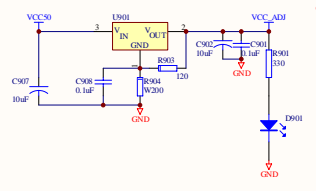
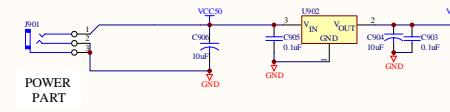
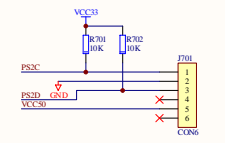
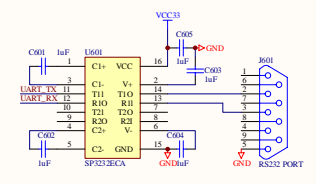
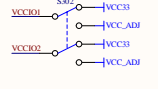
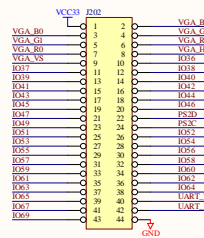
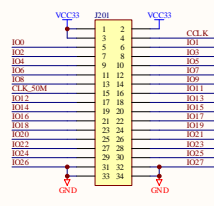
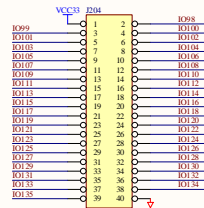
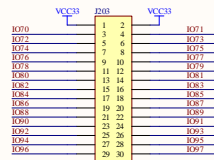
## 9. PS/2 鼠标、键盘接口

- 电路连接



- 管脚映射

器件	信号名称	LFXP3C对应管脚
J701-1	PS2C	PIN83
J701-3	PS2D	PIN78



CLK PART

