

R11 开发板使用说明书

目录

1	概述	1
1.1	编写目的	1
1.2	适用范围	1
2	硬件概述	2
2.1	R11 处理器介绍	2
2.1.1	框图及基本规格	2
2.1.2	基本规格	2
2.1.3	软硬件配置	3
3	接口概览	5
3.1	接口功能	6
3.1.1	DC_5V_IN	6
3.1.2	USB-OTG	6
3.1.3	MIPI CAMEA	7
3.1.4	DVP CAMEA	7
3.1.5	RGB	8
3.1.6	DEBUG	8
3.1.7	LVDS	9
3.1.8	RGB	10

版本历史

文档版本	时间	备注
V1.0	2020/12/23	建立初始版本

1 概述

1.1 编写目的

方便用户更快熟悉 R11 开发板。

缩短项目研发周期，快速上手。

1.2 适用范围

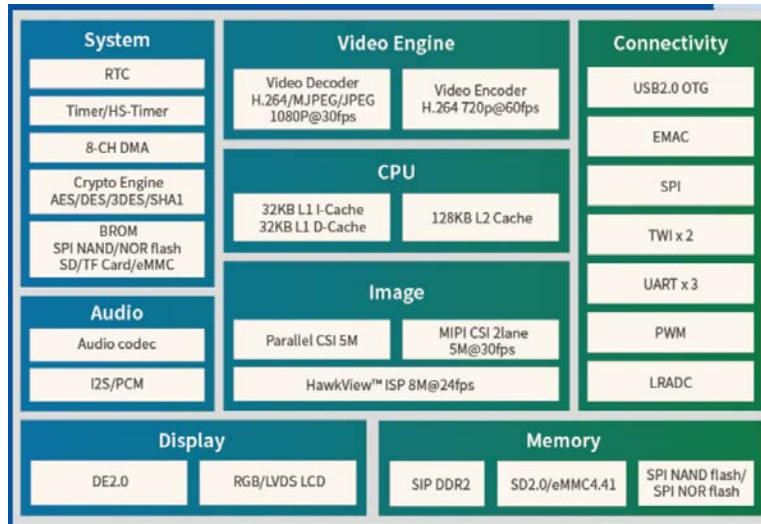
本文档适用于全志 R11 开发板。

提供：软件、硬件、原理图、SDK、调试指导、设计参考指南资料等

2 硬件概述

2.1 R11 处理器介绍

2.1.1 框图及基本规格



2.1.2 基本规格

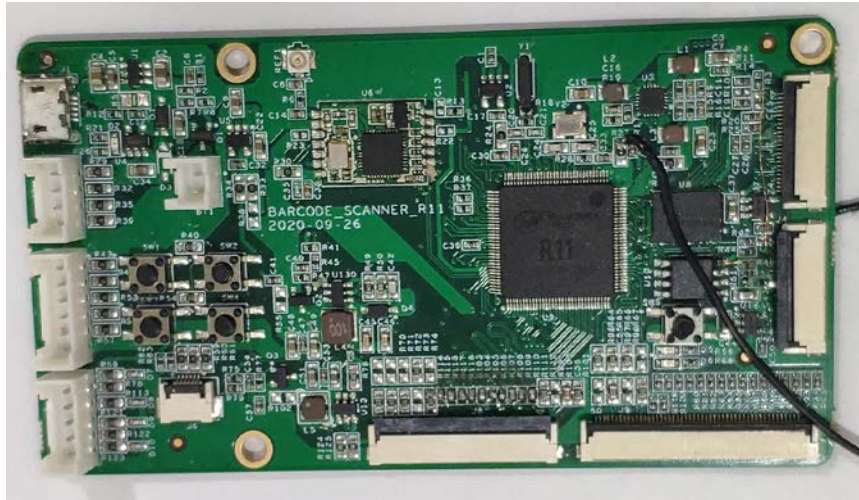
<p>CPU</p> <ul style="list-style-type: none"> • ARM® Cortex™-A7 @1.2GHz <p>Video</p> <ul style="list-style-type: none"> • Supports H.264 encoder up to 720p@60fps • Supports H.264 and JPEG/MJPEG decoder up to 1080p@30fps <p>ISP</p> <ul style="list-style-type: none"> • Integrated ISP up to 5M pixels • Supports two channel outputs for display and encoding respectively • Supports various input and output formats • Supports AE/AF/AWB • Supports saturation adjustment/noise reduction/defect pixel correction/ distortion correction <p>Memory</p> <ul style="list-style-type: none"> • SIP 16-bit DDR2 	<p>Video Input/Output</p> <ul style="list-style-type: none"> • Supports 8/10/12-bit parallel CSI and 2-lane MIPI CSI2 • Supports BT1120 input • Supports capture resolution up to 5M with parallel interface • Video capture resolution up to 1080p@30fps • Supports RGB LCD output, up to 1024x768@60fps • Supports Allwinner's next-gen SmartColor display technology for better visual effects for images & videos <p>Audio Codec</p> <ul style="list-style-type: none"> • Supports two ADC channel and two DAC channels • Supports one stereo headphone output • Supports one differential microphone input 	<p>Security Engine</p> <ul style="list-style-type: none"> • Supports AES/DES/TDES, SHA1 and MD5 <p>Connectivity</p> <ul style="list-style-type: none"> • SDIO, LRADC, SPI, TWI, UART, PWM, USB <p>OS</p> <ul style="list-style-type: none"> • Supports Linux OS <p>Package</p> <ul style="list-style-type: none"> • eLQFP 128 (including one built-in DDR2)
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2.1.3 软硬件配置

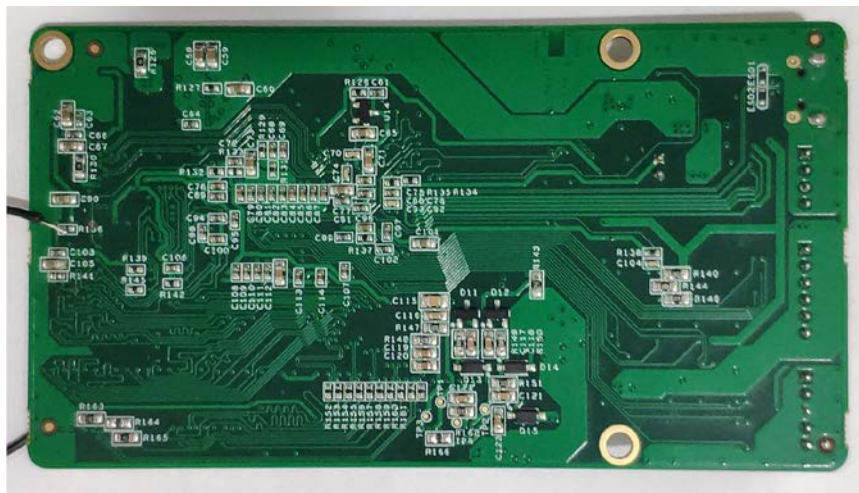
Cpu	R11
内存	内置 DDR2 64MB
存储	128MB SPI flash
电源	5V 2A
系统软件	Linux-3.4.39
屏幕	RGB、LVDS
WiFi	XR819
camera	MIPI、DVP
debug	1 个
OTG	USB OTG*1 个
KEY	4 个

R11 开发板如下：

正面：



背面：

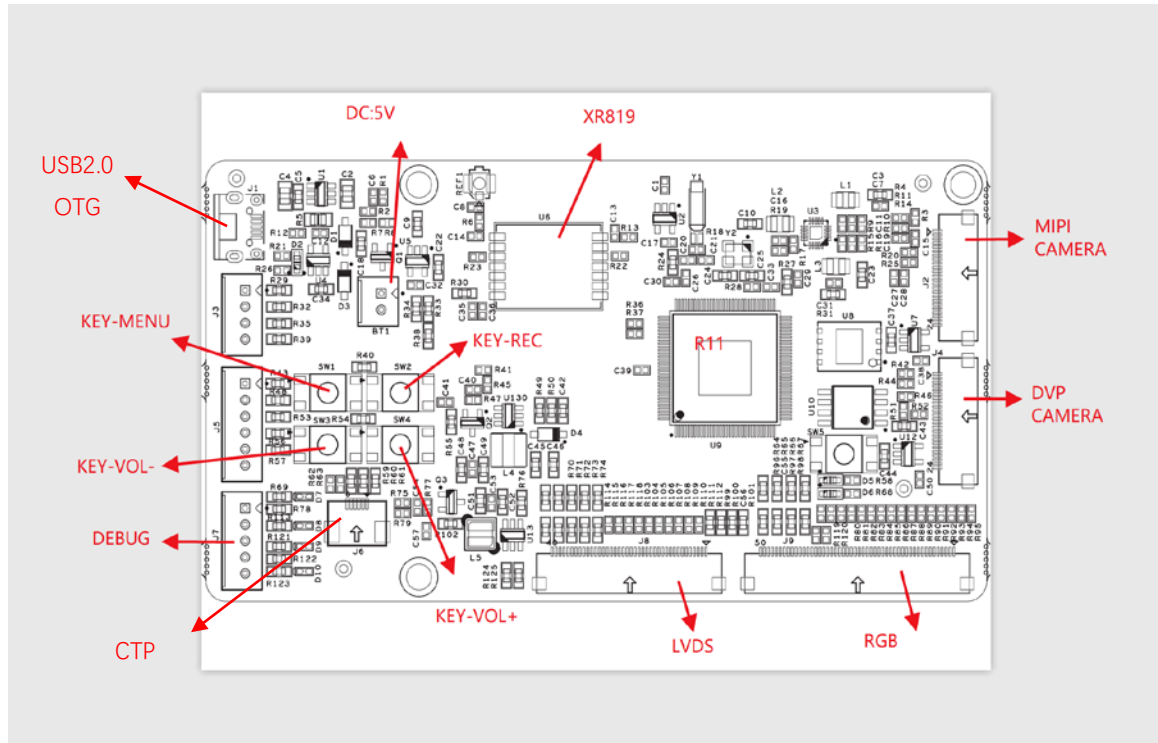


效果：

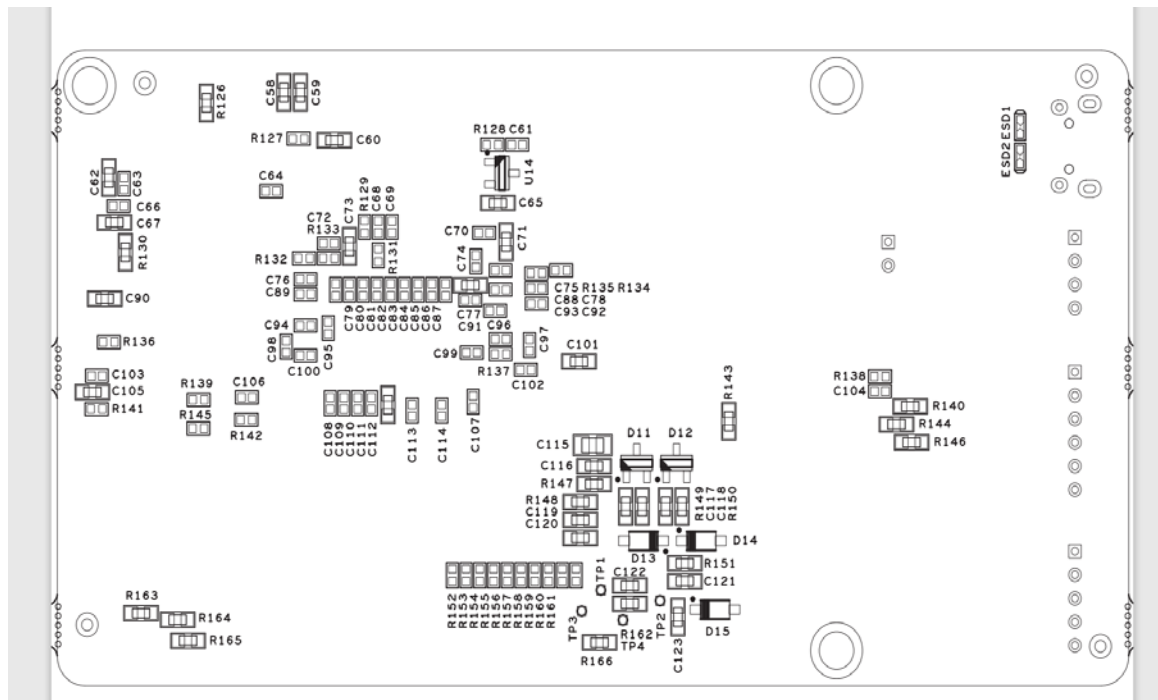


3 接口概览

正面:



背面:



3.1 接口功能

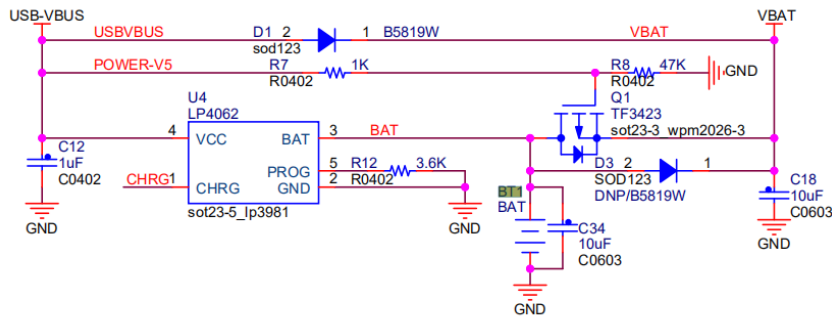
3.1.1 DC_5V_IN

丝印: BT1

接口属性: 主电源输入, 内正外负插孔

电压: 5V

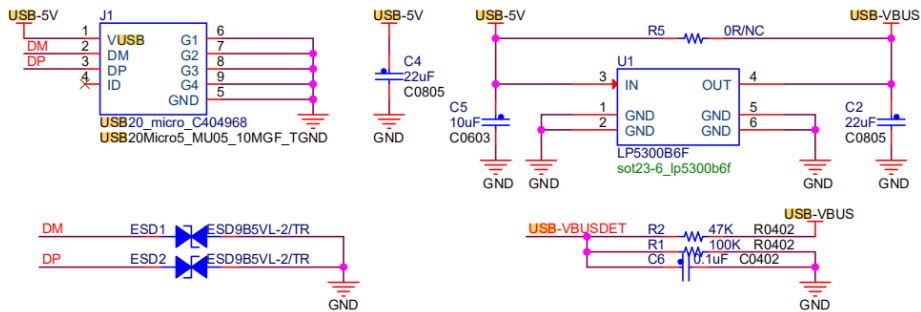
电流: 2A 及以上



3.1.2 USB-OTG

丝印: J1

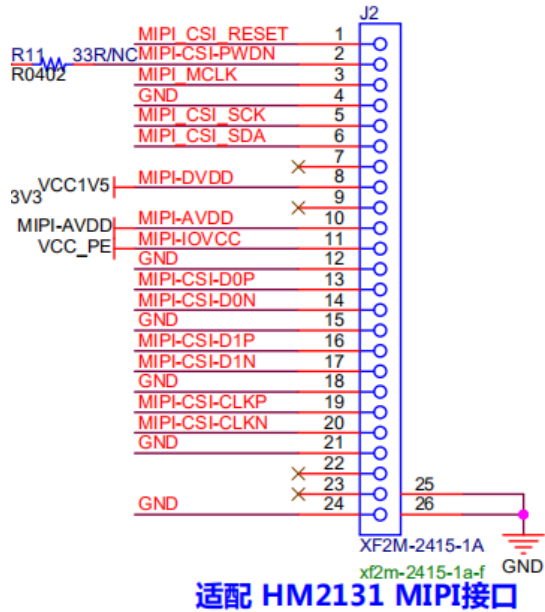
接口属性: 可用于烧写和供电



3.1.3 MIPI CAMERA

丝印: J2

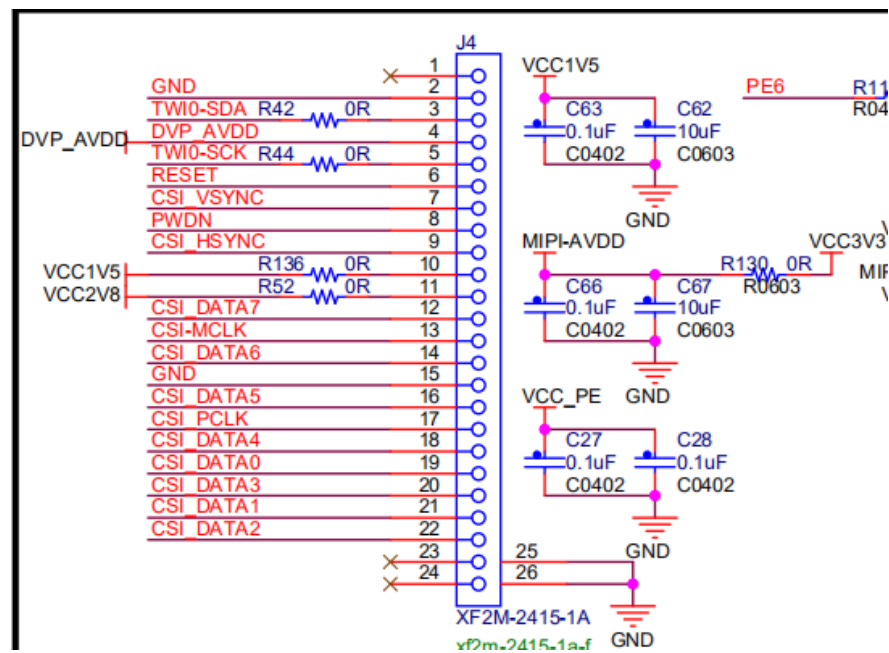
接口属性: 接 MIPI CAMERA



3.1.4 DVP CAMERA

丝印: J4

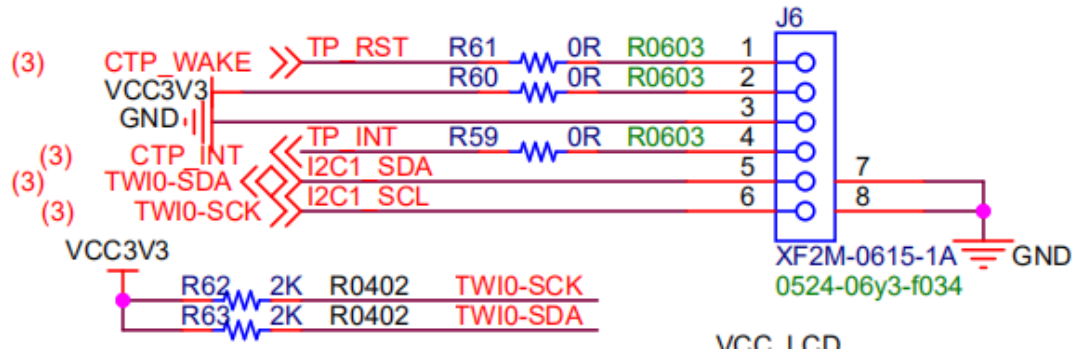
接口属性: 接 DVP CAMERA



3.1.5 RGB

丝印: J6

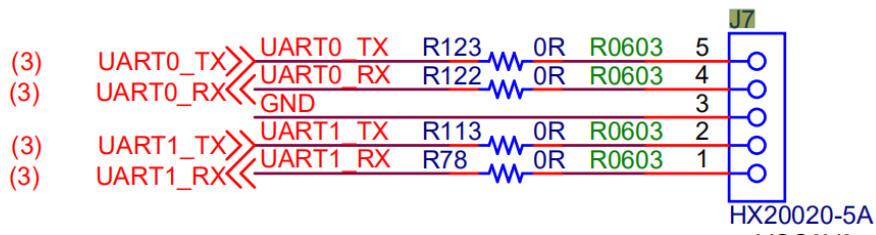
接口属性: 接触摸屏



3.1.6 DEBUG

丝印: J7

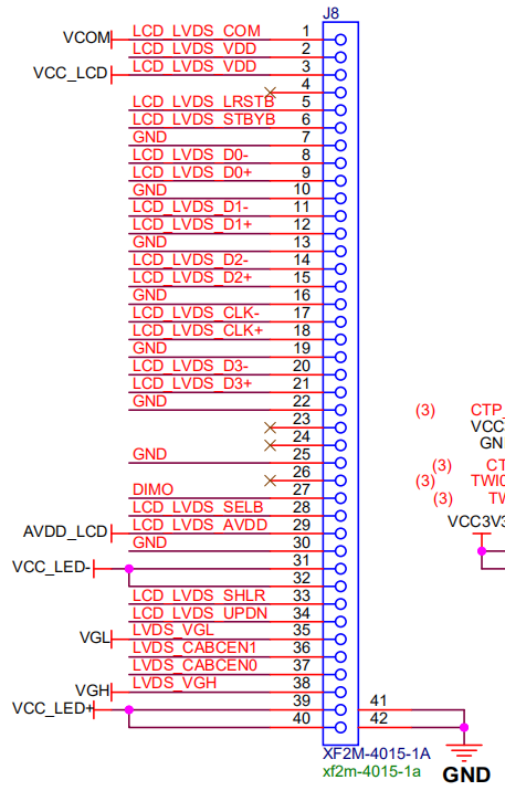
接口属性: 调试接口



3.1.7 LVDS

丝印: J8

接口属性: 接 40pin LVDS 液晶屏



LCD LVDS 接口

