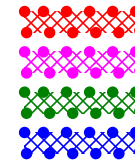


CONTENT INDEXING

- 01. INDEX
- 02. Change List
- 03. Block Diagram
- 04. Power Tree-RK818
- 05. RK3128 Power
- 06. RK3128 DDR Controller
- 07. RK3128 Flash/SD Controller
- 08. RK3128 MISC&USB
- 09. RK3128 DISPLAY/GMAC Controller
- 10. RK3128 CAMERA/HDMI Controller
- 11. RK3128 CODEC/VDAC
- 12. RK3128 GPIO
- 13. RAM-LPDDR2
- 14. Memory-Nand Flash
- 15. Power-RK818
- 16. Connector

PCB POWER WIRE WIDTH INDICATE



No indicate

- above 80 miles
- above 50 miles
- above 30 miles
- above 16 miles
- Under needs

6 LAYERS PCB STACK

TOP		Hoz(18um) + plating copper(18um) 1080(68) 3.2mil
GND		0.3mm 1/1oz
S1		2116(53) 4.2mil
POWER		0.3mm 1/1oz
S2		1080(68) 3.2mil
BOTTOM		Hoz(18um) + plating copper(18um)



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Title: Index

File: FirePrime

REV: V01


Create Date: Monday, June 01, 2015

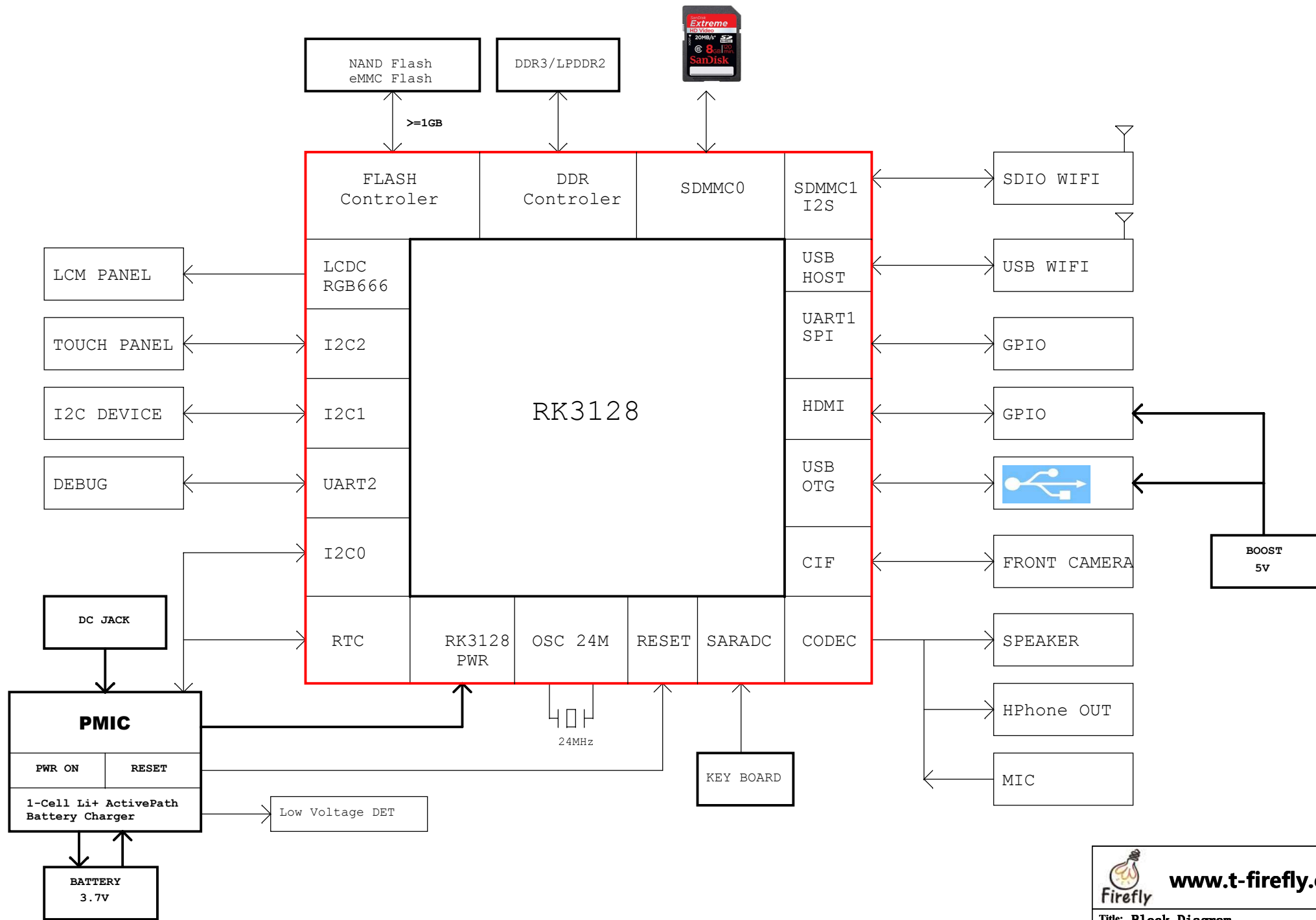
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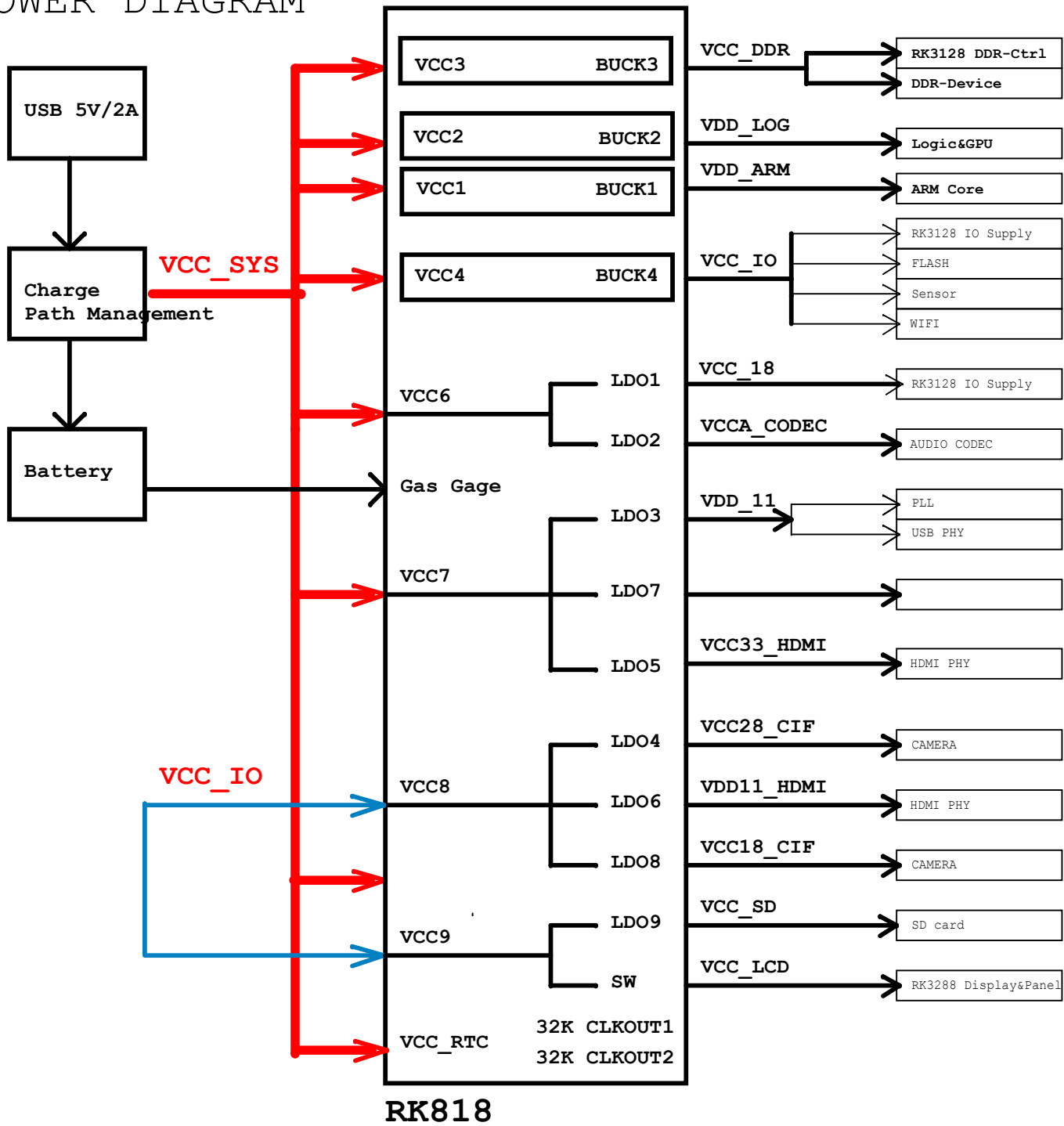
Page Total: 16

Version	Date	Author	Change Note	Note
V00	20150130	HWQ	The first edit	
V00	20150312	HWQ	Increase pull-up resistor for adcin1.	


		www.t-firefly.com	
Title: Change List			
File: FirePrime			REV: V01
Create Date: Monday, June 01, 2015		Page Num: 2	
Modify Date: Monday, June 01, 2015		Page Total: 16	



POWER DIAGRAM



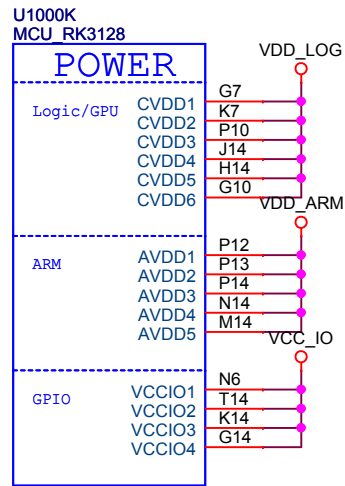
PowerName	PMU Channel	TIMER (2mS)	default ON/OFF	default voltage	sleep ON/OFF
VDD_ARM	DCDC1	solt:3	ON	1.1V	ON
VDD_LOG	DCDC2	solt:1	ON	1.1V	ON
VCC_IO	DCDC4	solt:1	ON	3.0V	ON
VCC_DDR	DCDC3	solt:5	ON 1.0V	DDR3 1.5V DDR3L 1.35V LPDDR 1.2V	ON
VCCA_TP	VLD01	X	OFF	3.3V	OFF
VCCA_CODEC	VLD02	X	OFF	3.0V	OFF
VDD_11	VLD03	solt:1	ON	1.1V	ON
VCC28_CIF	VLD04	solt:2	ON	2.5V	OFF
VCC_PMUIO	VLD05	solt:1	ON	3.0V	ON
VDD_12	VLD06	X	OFF	1.2V	OFF
	VLD07	solt:2	ON	1.8V	OFF
VCC18_CIF	VLD08	X	OFF	1.8V	OFF
VCC_SD	VLD09	solt:5	ON	3.0V	OFF
VCC_LCD	VSWOUT1	X	OFF	3.0V	OFF



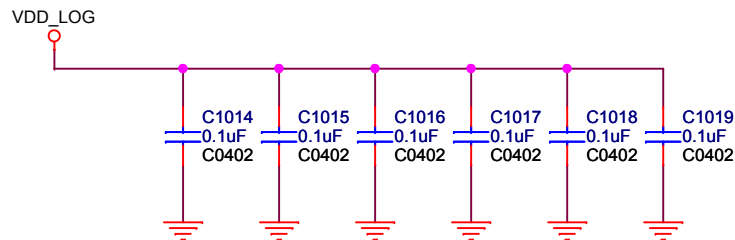
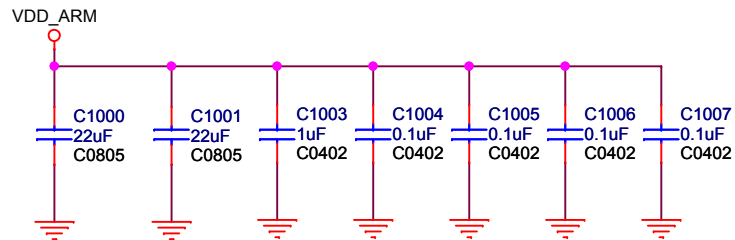
www.t-firefly.com

Title: Power Tree-RK818	
File: FirePrime	REV: V01
Create Date: Monday, June 01, 2015	Page Num: 4
Modify Date: Monday, June 01, 2015	Page Total: 16

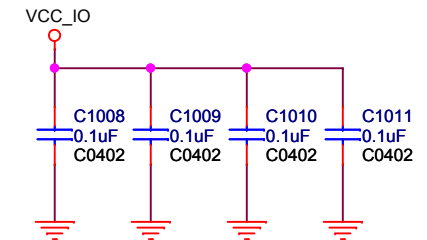
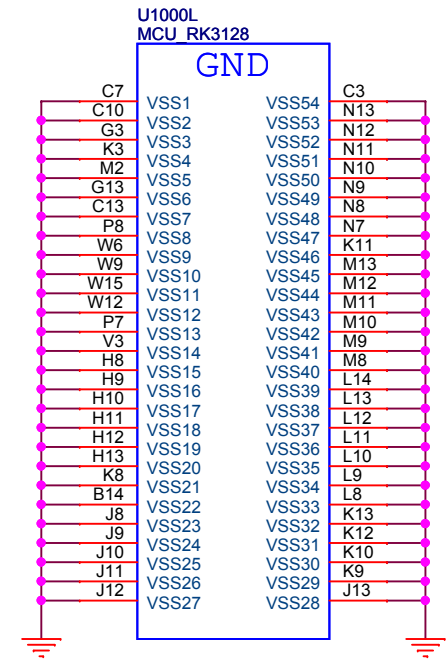

RK3128-K



Note:
Place these filter capacitors under CPU.



RK3128-L

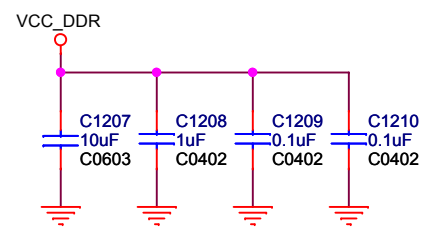
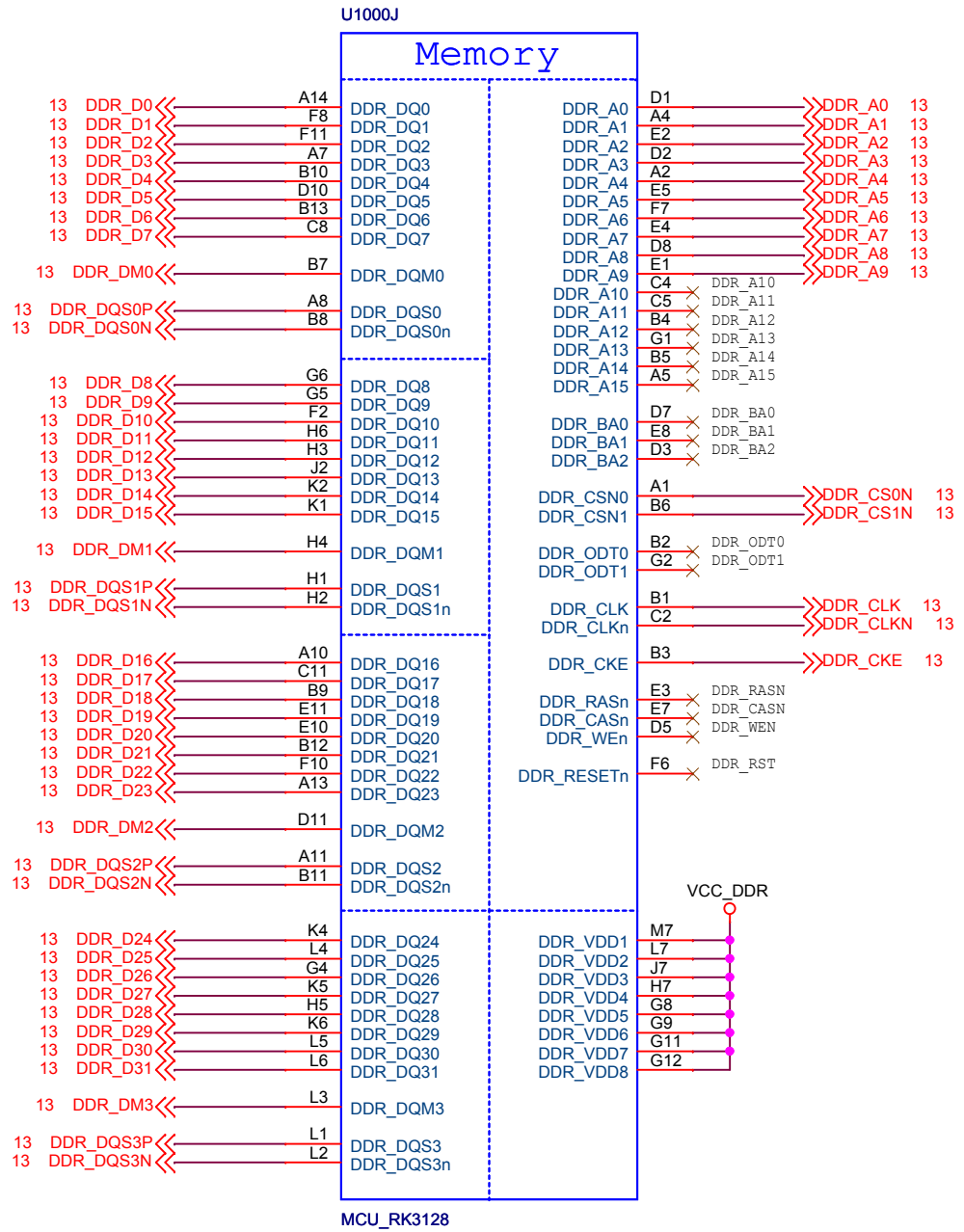




www.t-firefly.com

Title: RK3128 Power

File: FirePrime REV: V01

Create Date: Monday, June 01, 2015	Page Num: 5
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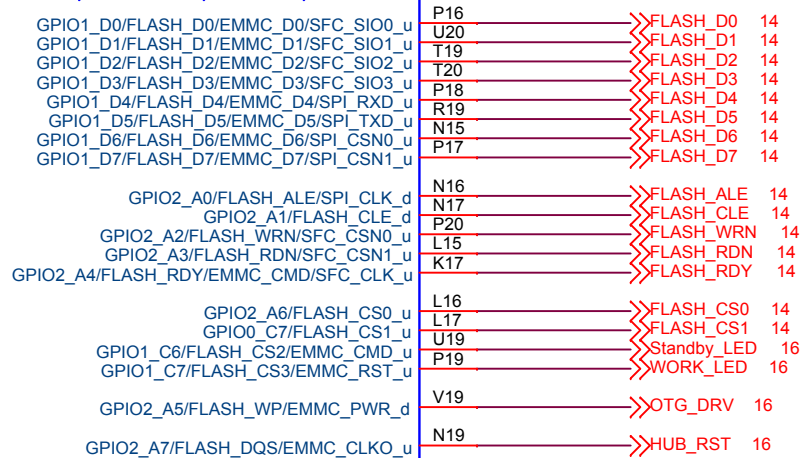
Title: RK3128 DDR Controller

File: FirePrime	REV: V01
Create Date: Monday, June 01, 2015	Page Num: 6
Modify Date: Monday, June 01, 2015	Page Total: 16

RK3128-E

U1000E
MCU_RK3128

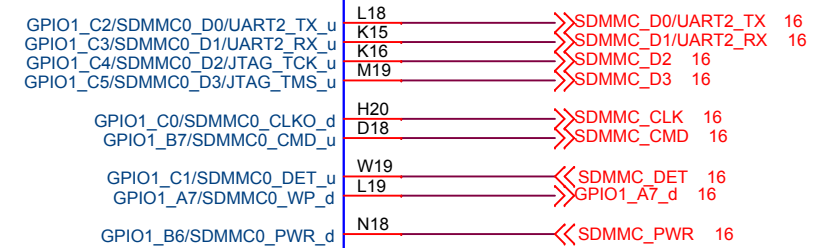

Nand Flash/eMMC/SFC/SPI



RK3128-D

U1000D
MCU_RK3128

SDMMC0

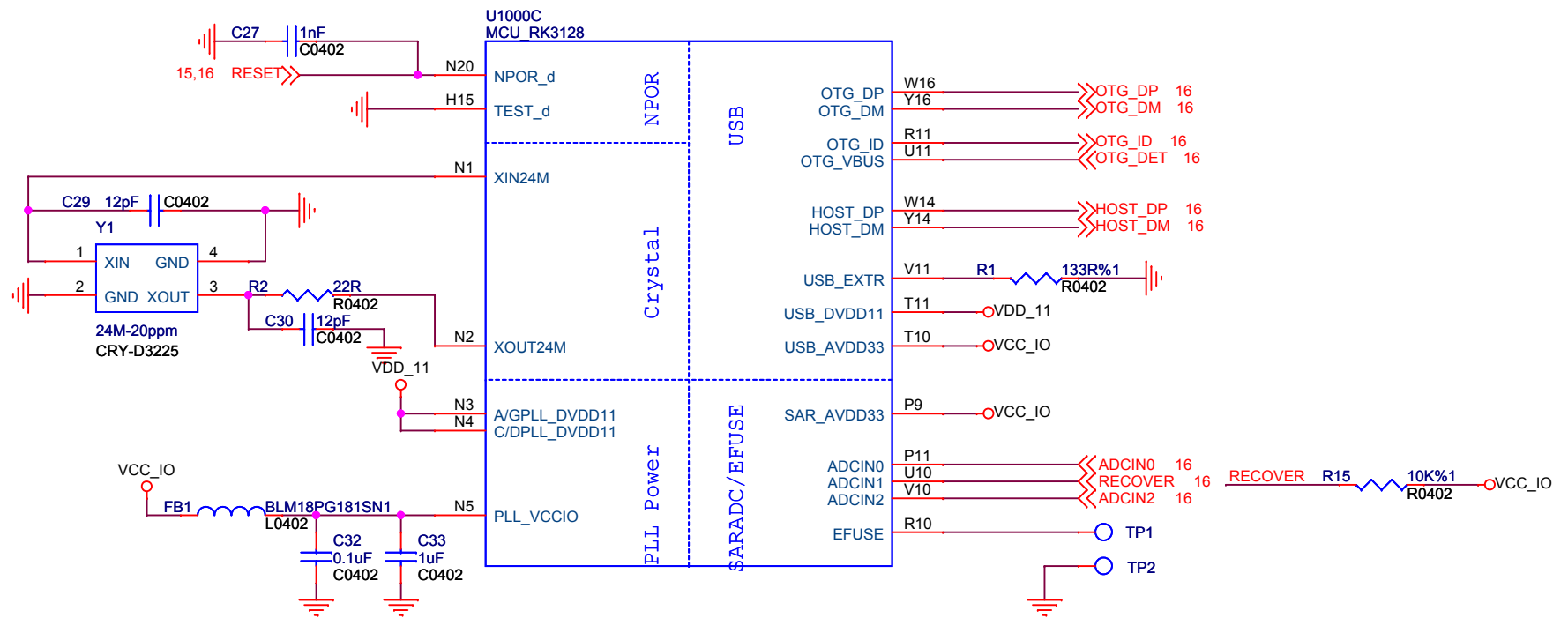
www.t-firefly.com

Title: RK3128 Flash/SD Controller

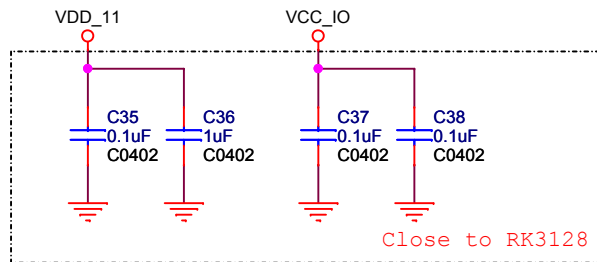
File: FirePrime REV: V01


Create Date: Monday, June 01, 2015	Page Num: 7
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RK3128-C



Note: All the capacitor should be place close to the power pin of RK3128.



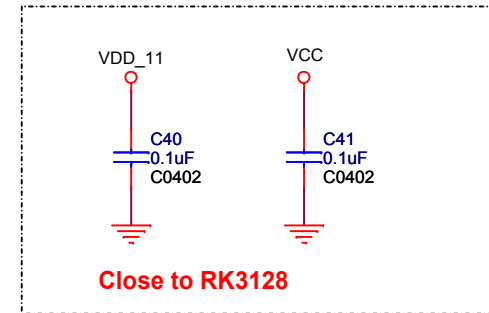
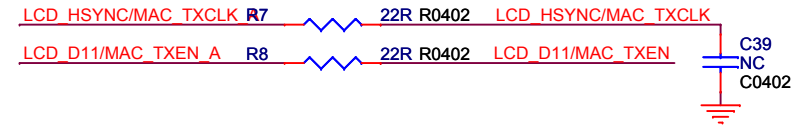
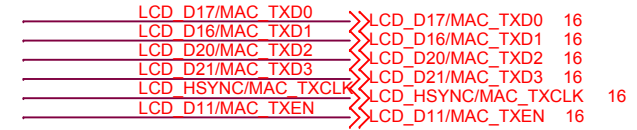
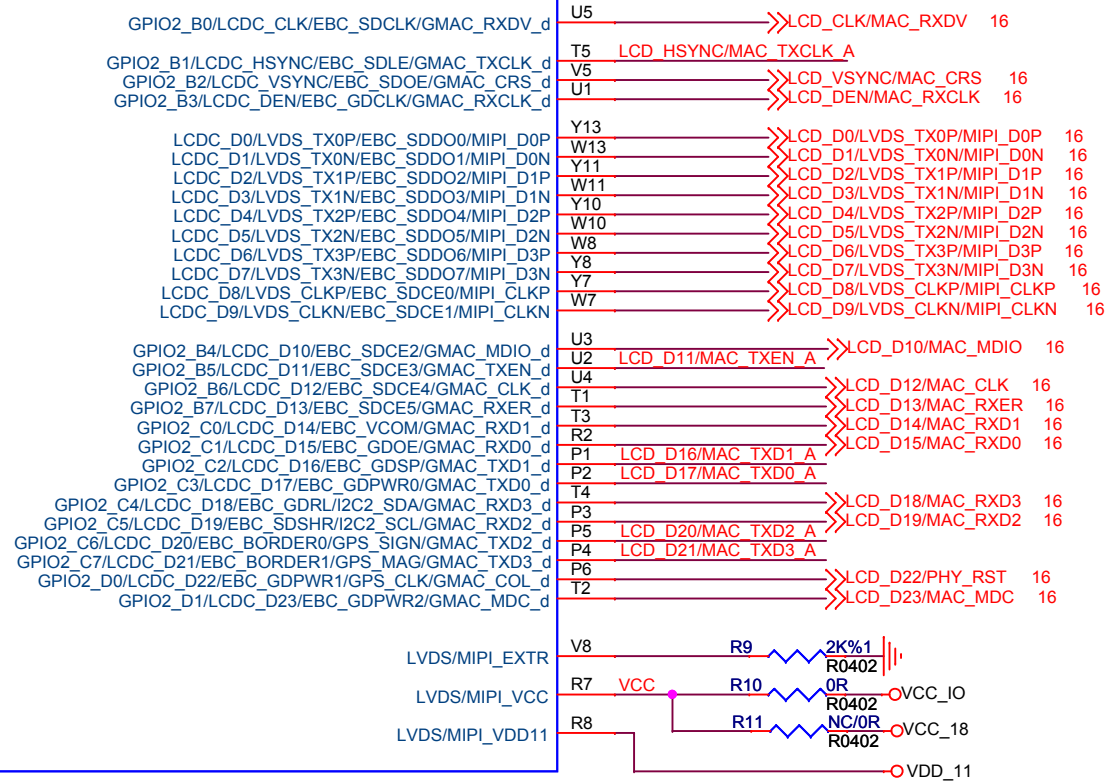



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Title: RK3128 MISC&USB	
File: FirePrime	REV: V01
Create Date: Monday, June 01, 2015	Page Num: 8
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U1000A
MCU RK3128

LCDC/LVDS/MIPI/GMAC/EMAC

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Title: RK3128DISPLAY/GMAC Controller

File: FirePrime REV: V01

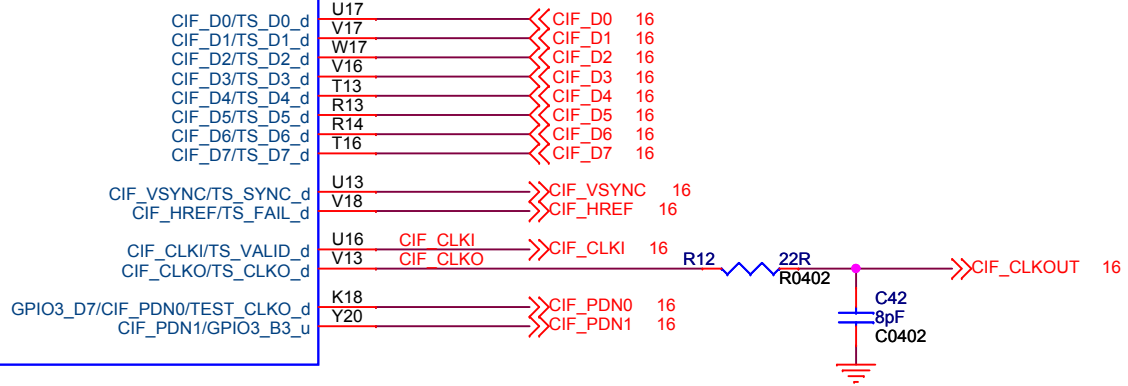
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Modify Date: Monday, June 01, 2015 Page Total: 16

RK3128-B

U1000B
MCU_RK3128

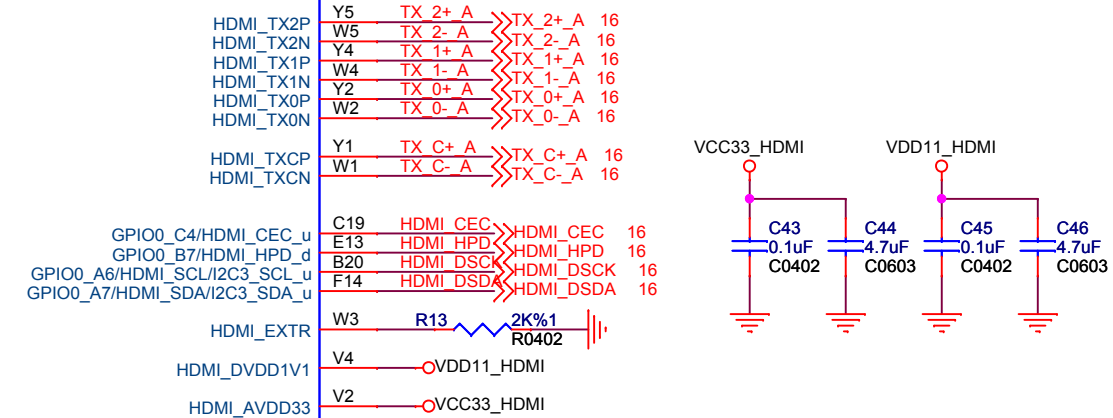
CIF/TS




RK3128-H

U1000H

HDMI TX



MCU_RK3128



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Title: RK3128 CAMERA/HDMI Controller

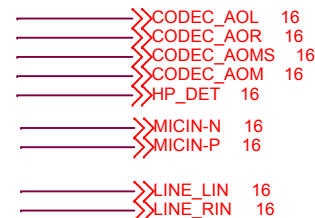
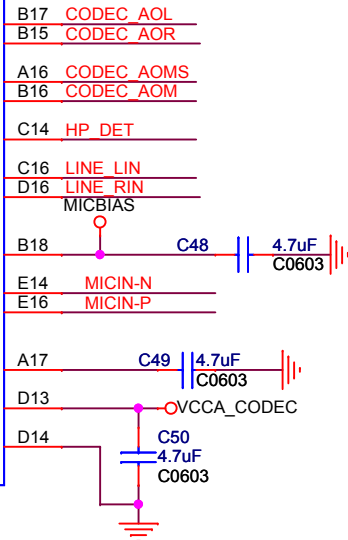
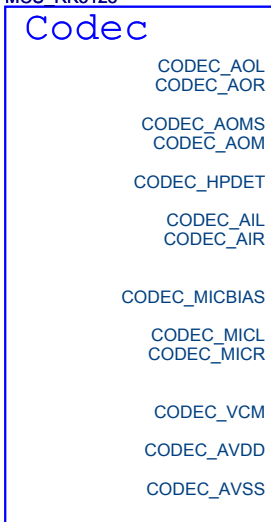
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Create Date: Monday, June 01, 2015 Page Num: 10

Modify Date: Monday, June 01, 2015 Page Total: 16

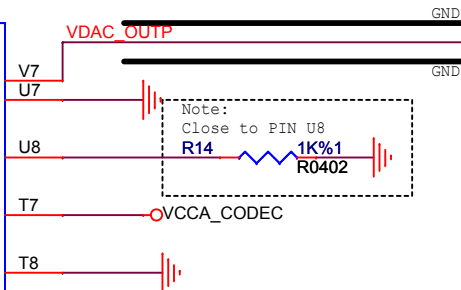
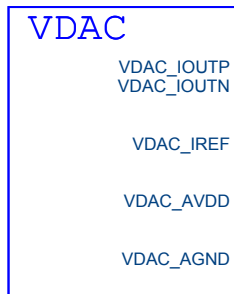
RK3128-F

U1000F
MCU_RK3128



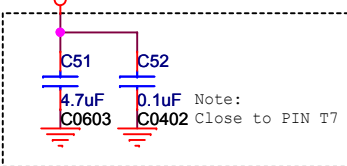
RK3128-G

U1000G



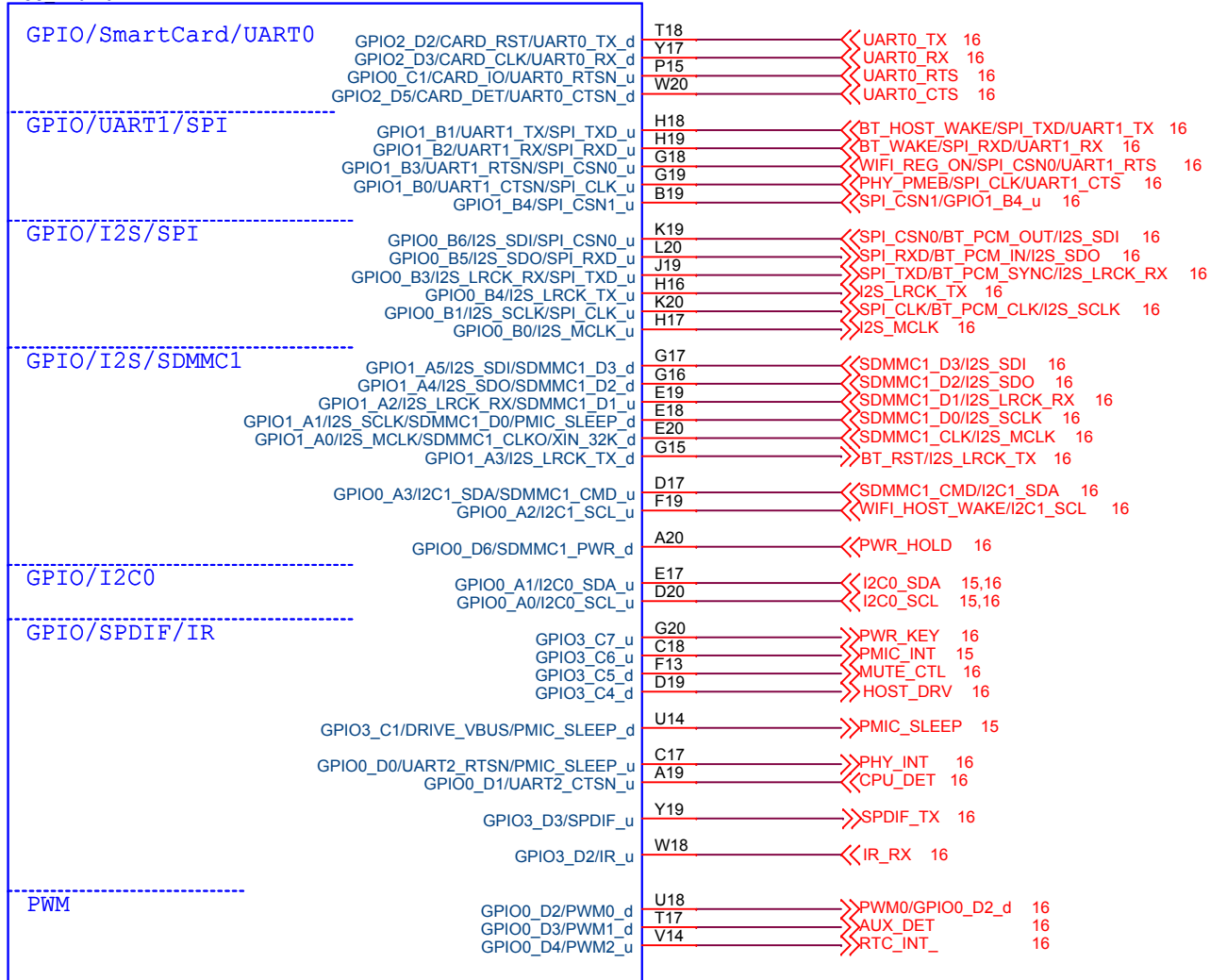
MCU_RK3128

VCCA_CODEC



Title: RK3128 CODEC/VDAC	
File: FirePrime	REV: V01
Create Date: Monday, June 01, 2015	Page Num: 11
Modify Date: Monday, June 01, 2015	Page Total: 16

U10001
MCU_RK3128



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Title: RK3128 GPIO

File: FirePrime

REV: V01

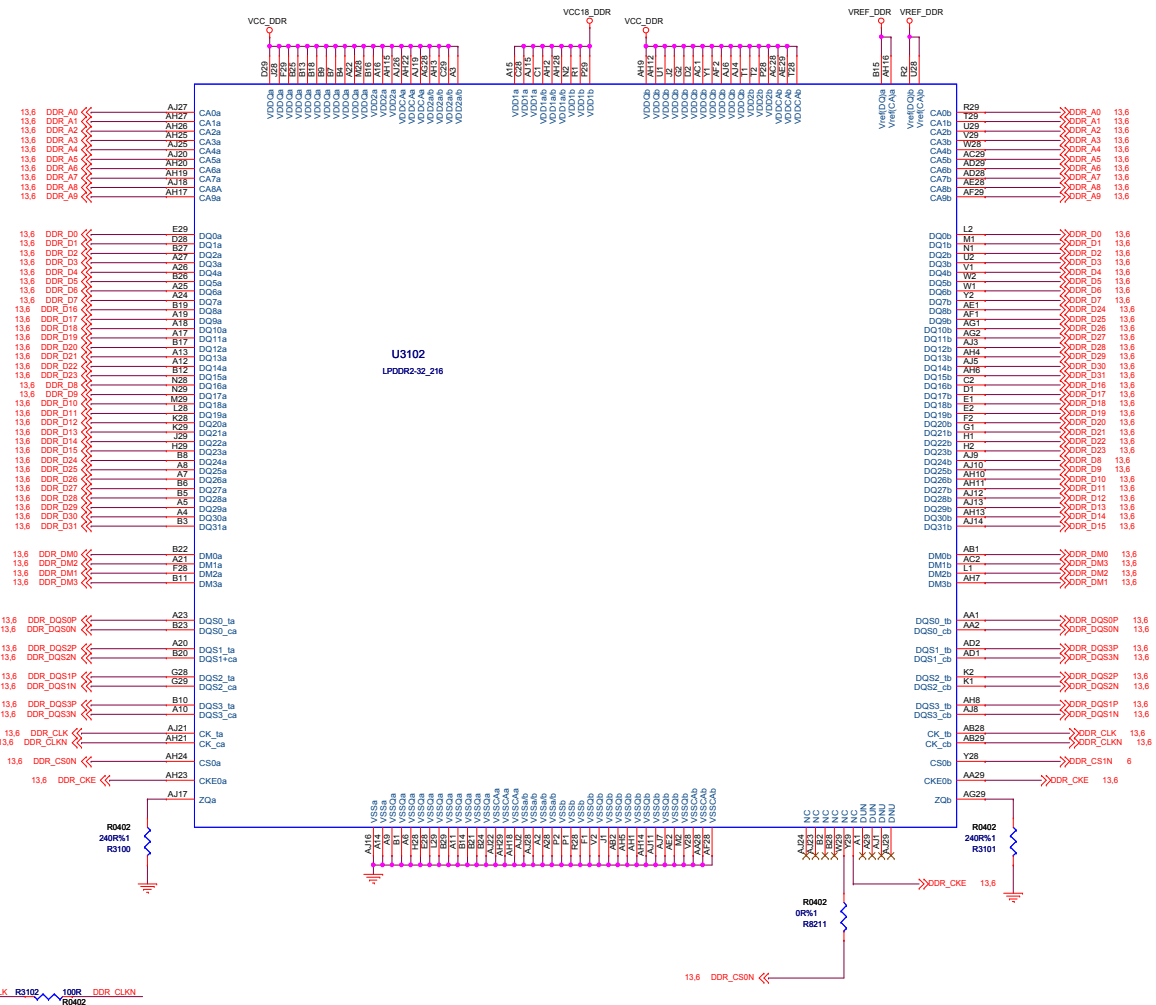
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Page Num: 12

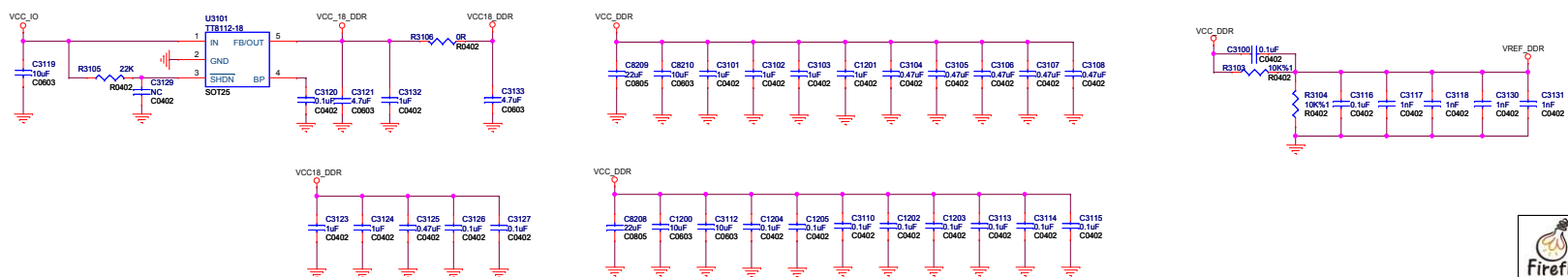
Modify Date: Monday, June 01, 2015

Page Total: 16

LPDDR2



LPDDR2 Power Filter



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Firefly

Title: RAM-LPDDR2

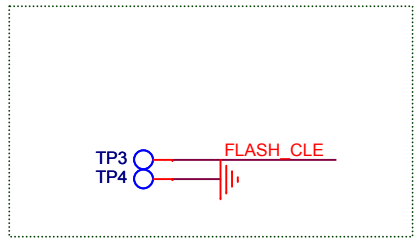
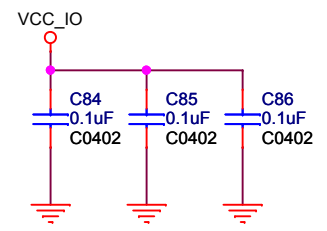
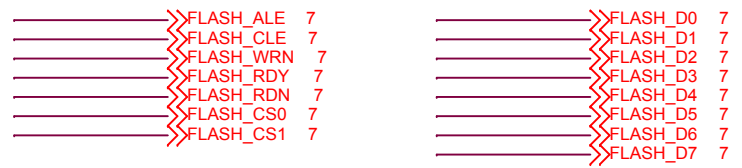
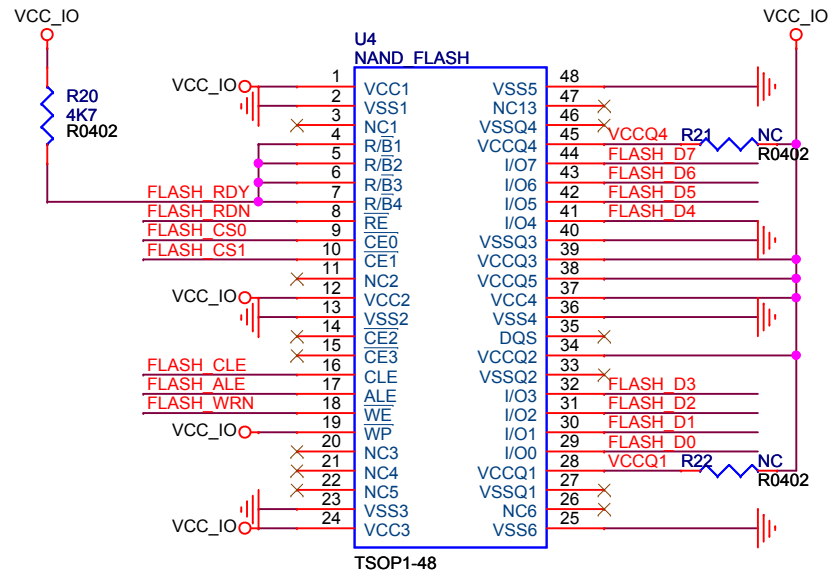
File: Firefly


REV: V01

Client Date: Monday, June 01, 2015 Page Num: 13

Modify Date: Monday, June 01, 2015 Page Total: 16

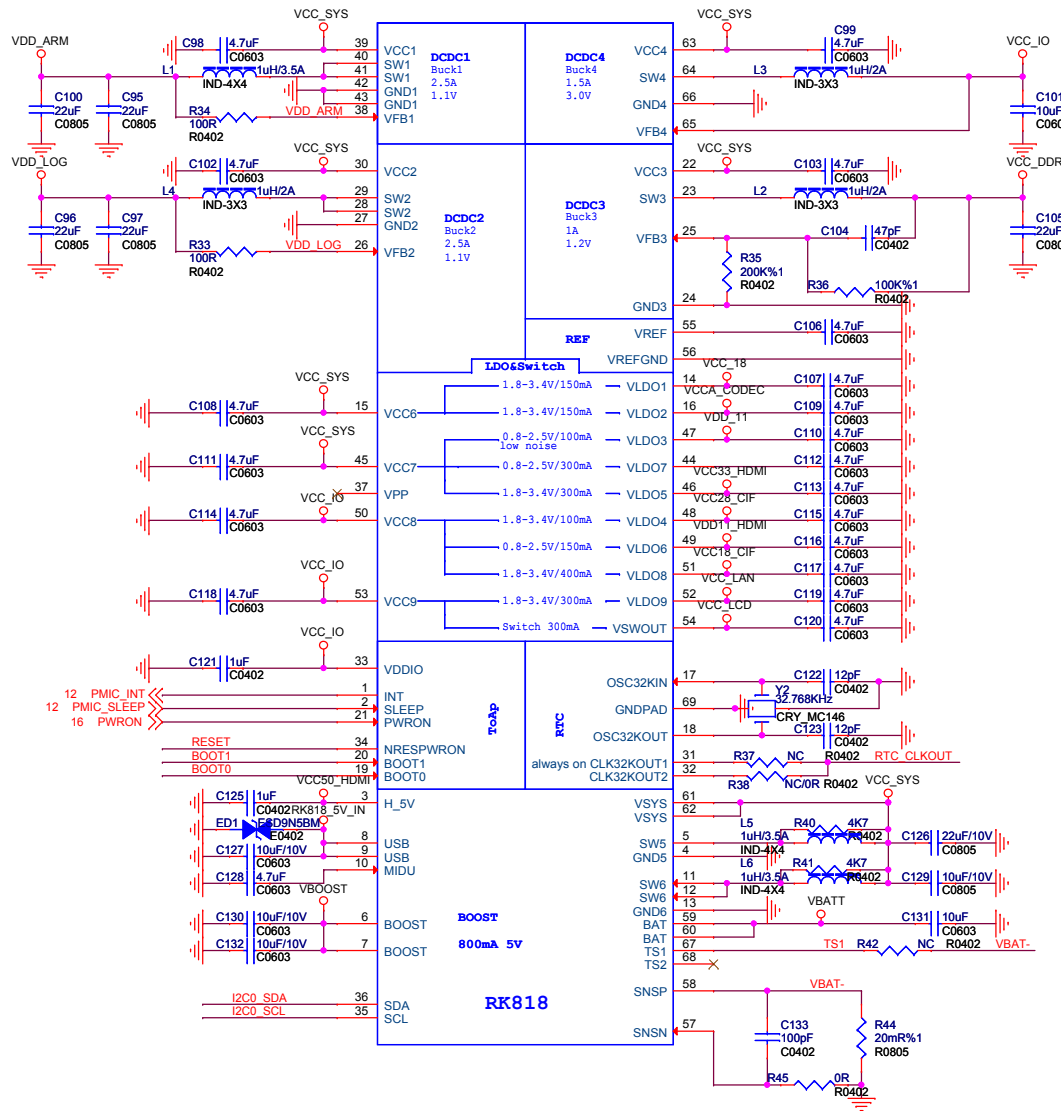
NAND FLASH





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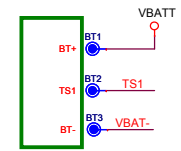
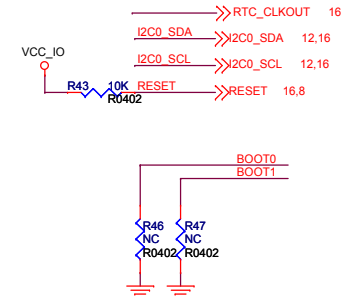
Title: Memory-Nand Flash	
File: FirePrime	REV: V01
Create Date: Monday, June 01, 2015	Page Num: 14
Modify Date: Monday, June 01, 2015	Page Total: 16



PCB POWER WIRE WIDTH INDICATE

	above 80 miles
	above 50 miles
	above 30 miles
	above 12 miles
	Under needs

PowerName	PMU Channel	TIMER (2ms)	Default ON/OFF	default voltage	sleep ON/OFF
VDD_ARM	DCDC1	soltt:3	ON	1.1V	ON
VDD_LOG	DCDC2	soltt:11	ON	1.1V	ON
VCC_IO	DCDC4	soltt:11	ON	3.0V	ON
VCC_DDR	DCDC3	soltt:5	ON	DDR3 1.5V DDR3L 1.35V LPDDR 1.2V	ON
VCCA_TF	VLD01	X	OFF	3.3V	OFF
VCCA_CODECC	VLD02	X	OFF	3.0V	OFF
VDD_I1	VLD03	soltt:11	ON	1.1V	ON
VCC28_CIF	VLD04	soltt:12	ON	2.5V	OFF
VCC_PMUID	VLD05	soltt:11	ON	3.0V	ON
VDD_I2	VLD06	X	OFF	1.2V	OFF
VCC18_CIF	VLD07	soltt:2	ON	1.8V	OFF
VCC18_CIF	VLD08	X	OFF	1.8V	OFF
VCC_SD	VLD09	soltt:13	ON	3.0V	OFF
VCC_LCD	VSR0UF1	X	OFF	3.0V	OFF



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Title: **Power-RK818**

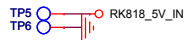
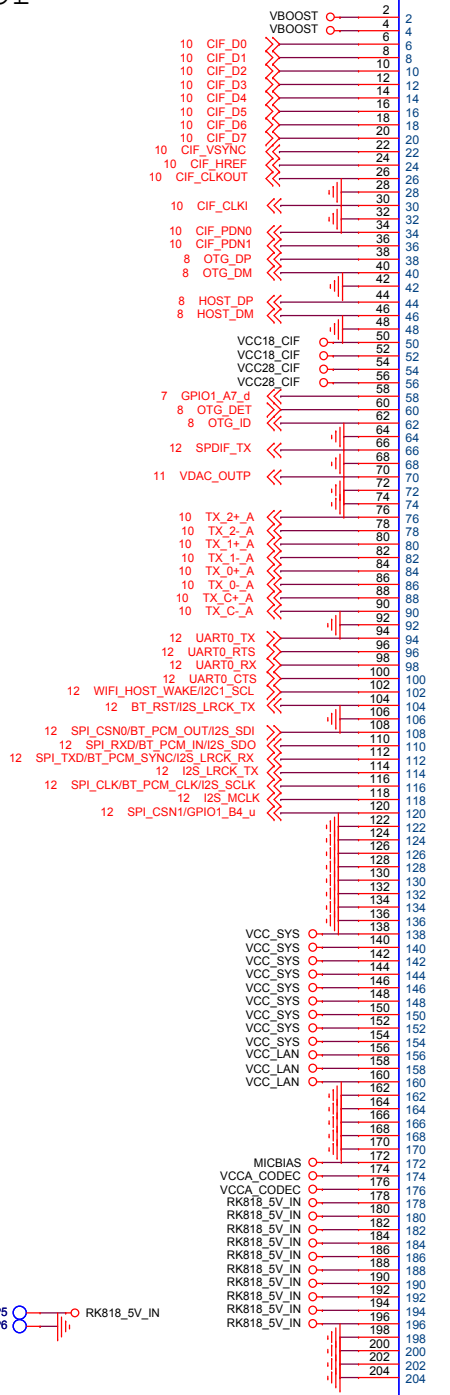
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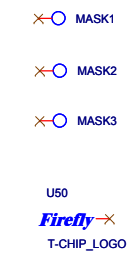
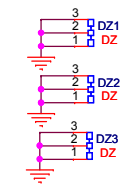
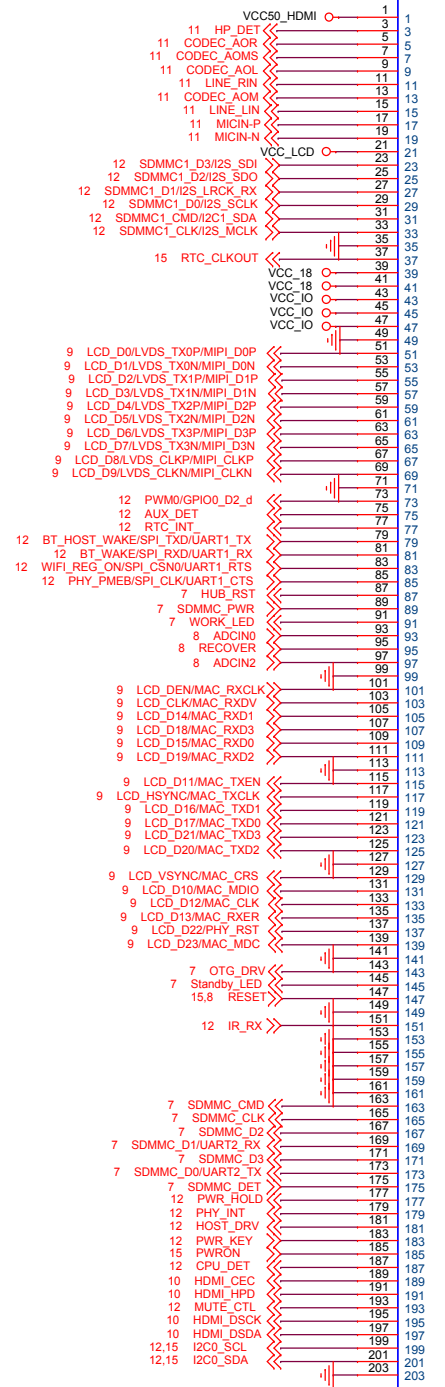
Modify Date: **Monday, June 01, 2015** Page Total: 16


Connector

J15
2013311-2



J16
2013311-1





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Title: Connector

File: FirePrime		REV: V01
Create Date: Monday, June 01, 2015	Page Num: 16	
Modify Date: Monday, June 01, 2015	Page Total: 16	