Power Diagram and Sequence

Power in LCB3399 core board

Recommended Power for carrier board

S0:normal   work
S3:suspend
S5:shutdown

VCC12V DCIN

DC Adapter 12V

SY8113B BUCK,PWM 3A,<5uA shutdown

VCC_SYS 5.0V

1110mA/23mA/TBD

PMIC RK808 VDC
AUTO-BOOT by DC plug-in

PWR_EN

PMIC_EXT_EN
2440mA/48mA/TBD

VCC12V_DCIN

VCC5V0_USB 5.1V

SY6280AAC Switch 5V/1A,80mR 0.1uA shutdown

VBUS5V0_TYPEC
VBUS USB 3.0 Type-C0 port
VCCSV0_TYPEC0_EN

SY6280AAC Switch 5V/1A,80mR 0.1uA shutdown

VCC5V0_HOST0
VBUS USB 2.0 A port
VCC5V0_HOST_EN

SY6280AAC Switch 5V/1A,80mR 0.1uA shutdown

VCC5V0_HOST1
VBUS USB 2.0 A port
VCC5V0_HOST_EN

SY6280AAC Switch 5V/1A,80mR 0.1uA shutdown

VCC5V0_HOST2
VBUS USB 3.0 A port
VCC5V0_HOST_EN

FUSB302 Type-C VCONN
CC 300mA/1uA

SY8113B BUCK,PWM 3A,<5uA shutdown
EN always ON

SY8113B BUCK,PWM 3A,<5uA shutdown
PMIC_EXT_EN

VCC_SYS 5.0V

VCC3V3_SYS

WPM2015 P-MOSFET 1.8A,110mR@4.5V

VCC5V0_FAN
VCC of Speaker AMP
FAN_CTL_H
S0/OFF/OFF

B5819WS

VCC5V0_HDMI
VCC of HDMI Device

VCC3V3_SYS

PT5108E23E-30 LDO 3.0V/500mA <1uA shutdown

VCC3V0_SD
SD/TF Card
S0/OFF/OFF   TBD/TBD/TBD
SDMMC0_PWR_H

VCC3V3_CC	VCC of FUSB302	S0/S3/OFF	8.6mA/<0.3mA/TBD
VCC3V3_WL	VCC of WIFI module	S0/OFF/OFF	
VCC3V3_WLIN	VBAT of WIFI+BT module	S0/S3/OFF	864mA/12.1mA/TBD
VCC3V3_EPHY	AVCC/DVCC of ethernet phy	S0/S3/OFF	103.5mA/26.3mA/TBD
VCC3V3_MIC	VDD of MIC Array	S0/S3/OFF	
VCC3V3_SPDIF	VCC of SPDIF Driver IC	S0/S3/OFF	TBD/TBD/TBD
VCC3V3_PCIE	VCC of PCIE Device	S0/OFF/OFF	
VCC3V3_IR	VCC of IR Receiver	S0/S3/OFF	5.3mA/1.1mA/TBD
VCC3V3_HDMIIN	VCC of PCIE Device	S0/OFF/OFF	
VCC3V3_LED	Work LED	S0/S3/OFF	1.2mA/1.2mA/TBD
VCC3V3_HUB	AVDD of USB HUB	S0/S3/OFF	TBD/0.56mA/TBD

PowerName	PMIC Channel	Time Slot (step 2mS)	Default voltage	Supply Limit	Default ON/OFF	Sleep ON/OFF
VCC3V3_SYS	EX_DCDC	Slot:1	3.3V	2.0A	ON	ON
VCC_1V8	DCDC4	Slot:1	1.8V	3.0A	ON	ON
VCCA_1V8	VLDO3	Slot:1	1.8V	100mA	ON	ON
VCC_1V5	VLDO6	Slot:1	1.5V	150mA	ON	ON
VDD_LOG	EX_DCDC	Slot:1A	0.9V	1.0A	ON	ON
VCCA_0V9	EX_LDO	Slot:1A	0.9V	300mA	ON	ON
VDD_CPU_B	EX_DCDC	Slot:1A	0.9V	6.0A	ON	OFF
VDD_GPU	EX_DCDC	Slot:1A	0.9V	6.0A	ON	OFF
VCC_DDR	DCDC3	Slot:2	FB=1.0V	2.5A	ON	ON
VCC3V0_SD	EX_LDO	Slot:2	3.0V	500mA	ON	OFF
VDD_CPU_L	DCDC2	Slot:3	0.9V	5.0A	ON	OFF
VDD_CENTER	DCDC1	Slot:4	0.9V	5.0A	ON	OFF
VCC_3V0	VLDO8	Slot:5	3.0V	300mA	ON	ON
VCCIO_SD	VLDO4	Slot:7	3.0V	150mA	ON	ON
VCCA1V8_HDMI	VLDO2		1.8V	150mA	OFF	ON
VCCA0V9_HDMI	VLDO7		0.9V	300mA	OFF	ON
Reserve	VSWOUT1	Slot:6		5.0A	ON	ON
Reserve	VSWOUT2			5.0A	ON	ON
Reserve	VLDO1			150mA	OFF	OFF
Reserve	VLDO5			300mA	OFF	OFF
RESET		Slot:7	OD		ON	

VCCA
VCC of PMIC RTC
S0/S3/S5
7.6mA/TBD/30uA

PMIC RK808 BUCK1 5A,0.7-1.5V TBD uA shutdown
VDD_CENTER
VDD of SOC center   S0/OFF/OFF   1050mA/TBD/TBD

PMIC RK808 BUCK2 5A,0.7-1.5V TBD uA shutdown
VDD_CPU_L
VDD of Quard-A53   S0/OFF/OFF   1480mA/TBD/TBD

PMIC RK808 BUCK3 2.5A,1.0-1.8V TBD uA shutdown
VCC_DDR
VDD of DDR CTRL   S0/S3/OFF
VDDCA/VDD2 of DDR   S0/S3/OFF   1240mA/3.5mA/TBD
VDDQ of DDR   S0/S3/OFF

PMIC RK808 BUCK4 3A,1.8-3.3V TBD uA shutdown
VCC_1V8
VCC1V8_EMMC   VDD of EMMC CRTL,VDDQ of EMMC FLASH IO   S0/S3/OFF   234mA/<4mA/TBD
VCC1V8_WIFI   VDDIO of WIFI+BT module   S0/S3/OFF   10.6mA/4.25mA/TBD
VCC1V8_IO   VDDIO/VDDPST of GPIO   S0/S3/OFF   20mA/0.3mA/TBD
VCC1V8_DDR   VDD1 of LPDDR3   S0/S3/OFF   49.7mA/940uA/TBD uA

PMIC RK808 LDO1 150mA,1.8-3.4V TBD uA shutdown
VCC1V8_DVP
VDDIO of sensor   S0/S3/OFF   TBD/TBD/TBD

PMIC RK808 LDO2 150mA,1.8-3.4V TBD uA shutdown
VCC2V8_DVP
VDD of sensor   S0/S3/OFF   TBD/TBD/TBD

PMIC RK808 LDO3 100mA,0.8-2.5V TBD uA shutdown
VCCA_1V8
VCC1V8_PMUIO1   VDDIO/VDDPST of PMUIO1   S0/S3/OFF   5mA/133uA/TBD
VCC1V8_PMUPLL   VCC of PMU PLL   S0/S3/OFF   9.6mA/1.01mA/TBD
VCC1V8_PLL   AVDD of PLL   S0/S3/OFF   18mA/0.3uA/TBD
VCC1V8_USB   AVDD of USB phy   S0/S3/OFF   10.1mA/1.79mA/TBD
VCC1V8_ADC   AVDD of SARADC   S0/S3/OFF   3.3mA/<1mA/TBD
VCC1V8_PCIE   AVDD of PCIE phy   S0/S3/OFF   5mA/<1mA/TBD

PMIC RK808 LDO4 150mA,1.8-3.4V TBD uA shutdown
VCCIO_SD
VDDIO of SDMMC0   S0/OFF/OFF   3.4mA/TBD/TBD

PMIC RK808 LDO5 300mA,1.8-3.4V TBD uA shutdown
VCCA3V0_CODEC
VDD of CODEC

PMIC RK808 LDO6 150mA,0.8-2.5V TBD uA shutdown
VCC_1V5
VDDPST of APIO2/APIO4   S0/OFF/OFF   17.4mA/TBD/TBD

PMIC RK808 LDO7 300mA,0.8-2.5V TBD uA shutdown
VCCA1V8_CODEC
VDDIO of CODEC   S0/S3/OFF   TBD/TBD/TBD

PMIC RK808 LDO8 300mA,1.8-3.4V TBD uA shutdown
VCC_3V0
VDD of APIO2/APIO4/PMUIO2   S0/OFF/OFF   13.5mA/TBD/TBD

PMIC RK808 VSW1 5A,200mohm TBD uA shutdown
VCC3V3_S3
AVDD of USB phy   S0/S3/OFF   17.7mA/0.25mA/TBD
CORE VCC of EMMC FLASH   S0/S3/OFF   200mA/0.24mA/TBD
VDD of APIO1   S0/OFF/OFF   17.4mA/TBD/TBD

PMIC RK808 VSW2 5A,200mohm TBD uA shutdown
VCC3V3_S0

SYR837PKC Switch 6A,1uA shutdown
VDD_CPU_B
VDD of Dual-A72   S0/OFF/OFF   4140mA/TBD/TBD
VCC_1V8

SYR838PKC Switch 6A,1uA shutdown
VDD_GPU
VDD of Mali-T864   S0/OFF/OFF   3880mA/TBD/TBD
VCC_1V8

SY8088AAC BUCK,PWM 1A,<1uA shutdown
VDD_LOG
VDD of SOC Logic   S0/S3/OFF   390mA/7.5mA/TBD
VCC_1V8

LP3983SAB5F-08 LDO 0.9V/400mA <1uA shutdown
VCCA_0V9
VCC0V9_PLL   AVDD of PLL   S0/S3/OFF   13.4mA/108uA/TBD
VCC0V9_PMUPLL   VDD of PMU PLL   S0/S3/OFF   12.3mA/160uA/TBD
VCC0V9_DDRPLL   AVDD of DDR CTRL   S0/S3/OFF   13.4mA/18uA/TBD
VCC0V9_EMMC   VDD of EMMC CTRL CORE DLL   S0/S3/OFF   3.4mA/<3mA/TBD
VCC0V9_USB   AVDD of USB phy   S0/S3/OFF   20.6mA/2.54mA/TBD
VCC0V9_PCIE   AVDD of PCIE phy   S0/S3/OFF   6.3mA/TBD/TBD
VCC3V3_SYS

PT5108E23E-18 LDO 1.8V/500mA <1uA shutdown
VCC_EFUSE
VCC of EFUSE   User/OFF/OFF 1.7mA/TBD/TBD
EFUSE_VQPS_EN_H