| 5 |  | 4 |  | 3 |  | 2 |  |
| --- | --- | --- | --- | --- | --- | --- | --- |

1

**Y3**

6

**PHY1\_XTALOUT**

1

X1

GND4

**J28**

1

**GMAC1\_TXD0\_M1 GMAC1\_TXD1\_M1 GMAC1\_TXD2\_M1 GMAC1\_TXD3\_M1 GMAC1\_TXEN\_M1**

**GMAC1\_TXCLK\_M1**

**GMAC1\_RXD0\_M1 GMAC1\_RXD1\_M1**

2X23

GND

**25MHz**

**C123**

**22pF**

**PHY1\_XTALIN**

**C124**

**22pF**

6

1

9 

**PHY1\_MDI3- PHY1\_MDI\_3-**

MDI3-

8

**PHY1\_MDI3+ PHY1\_MDI\_3+**

MDI3+

6

**PHY1\_MDI2- PHY1\_MDI\_2-**

MDI2-

5

**PHY1\_MDI2+ PHY1\_MDI\_2+**

MDI2+

7

**PHY1\_MDI1- PHY1\_MDI\_1-**

MDI1-

4

**PHY1\_MDI1+ PHY1\_MDI\_1+**

D D

**GMAC1\_RXD2\_M1 GMAC1\_RXD3\_M1 GMAC1\_RXDV\_CRS\_M1**

**R182 NC**

**ETH1\_REFCLKO\_25M\_M0 PHY1\_XTALOUT**

MDI1+

3

**PHY1\_MDI0- PHY1\_MDI\_0-**

MDI0-

2

**PHY1\_MDI0+ PHY1\_MDI\_0+**

**GMAC1\_RXCLK\_M1**

| **C125** |
| --- |

**10nF**

1MDI0+ TCT

**ETH1\_REFCLKO\_25M\_M0**

**R183 100R**

**GMAC1\_MCLKINOUT\_M1 PHY1\_CLKOUT125**

**PHY1\_CHASSIS\_GND PHY1\_LED1/CFG\_LDO0**

10 11

Earth G+

| C |
| --- |
| B |

**GMAC1\_MCLKINOUT\_M1**

**GMAC1\_MDC\_M1**

**GMAC1\_MDIO\_M1**

**GMAC1\_RSTn\_GPIO2\_D1**

**R186 120R**

3.3Vpp

MAC <----- PHY

**VCC3V3\_PHY1**

**PHY1\_LED2/CFG\_LDO1**

**R184 510R R185 510R R188 0R**

G 12

14

Y 13 Y+

**HR911130C**

RJ45\_HR911130C

Tab down

5

1

5

1

| C |
| --- |
| B |

**GMAC1\_INT/PMEB\_GPIO2\_D0**

VCCIO\_PHY1=3.3V DNP 22R

**C127 1000pF**

**PHY1\_CHASSIS\_GND**

VCCIO\_PHY1=1.8V

**VDD10\_PHY1**

**1**

**0**

120R 100R Default

**R194 4.7K**

**PHY1\_LED0/CFG\_EXT PHY1\_LED2/CFG\_LDO1 PHY1\_LED1/CFG\_LDO0**

**R191 4.7K R193 4.7K**

**VCC3V3\_PHY1**

RGMII Power Source External 3.3V

External 1.8V (default)

HR915330CE: -40~85

CFG\_EXT CFG\_LDO[1:0]

| 1'b1 |
| --- |
| 1'b1 |

2'b00

2'b10

**R195 2.49K**

**O**

**D**

**L**

**5**

**\_**

**ODL**

**\_**

**T X**

**E**

**\_**

**VCC\_PHY0\_IO Voltage Config**

Internal 1.8V 1'b0 2'b10

**T**

**21**

**GF**

**GF**

**GF**

**U**

**N**

**T**

**C**

**C**

**C**

**VCC3V3\_PHY1** 1

**1**

**T**

**E**

**S**

**R**

0

9

**OL**

**ATX**

**1YHP**

**\_**

**IL**

**ATX**

**1YHP**

**\_**

**UO**

**KLC**

**1YHP**

**\_**

**/2**

**D**

**E**

**L**

**\_**

**1Y**

**H**

**P**

**/1**

**D**

**E**

**L**

**\_**

**1Y**

**H**

**P**

**/0**

**D**

**E**

**L**

**\_**

**1Y**

**H**

**P**

**R197 0R**

**GMAC1\_INT/PMEB\_GPIO2\_D0**

**R198 4.7K R200 4.7K**

**PHY1\_RXD3/PHYAD0 PHY1\_RXCLK/PHYAD1 PHY1\_RXDV/PHYAD2**

**R196 4.7K**

**VCCIO\_PHY1**

**PHY1\_LED2/CFG\_LDO1**

**PHY1\_LED1/CFG\_LDO0**

8

7

6

5

4

3

2

1

**U10**

4

d

4

3

3

T

3

3

3

3

3

1

3

3

**PHY Address Config**

PHY Address PHYAD[2:0] 1 (default) 3'b001

3

0

K

N

0

B

a

T

T

E

PE

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3D

DVA

ESR

1D

DVA

LC

TXE

\_

I

L

ATX

\_

UO

KLC

ODL

GF

\_

ODL

GF

\_

XE

G

FC

\_

MP/B

T

**R201 4.7K**

**PHY1\_RXD0/RXDLY**

**R202 NC**

/T

U

C/2

C/1

/0

D

NI

**VCCIO\_PHY1**

**VDD10\_PHY1**

**PHY1\_MDI0+ PHY1\_MDI0-**

**PHY1\_MDI1+ PHY1\_MDI1-**

1 2 3 4 5

MDI[0]+ MDI[0]- AVDD10 MDI[1]+ MDI[1]-

O

L

ATX

\_

DEL

DEL

EL

DVDD1021 RXD3/PHYAD022 RXD2/PLLOFF23 RXD1/TXDLY24 RXD0/RXDLY25 RXCTL/PHYAD226 RXC/PHYAD127 DVDD\_RG28 DVDD3329 REG\_OUT30

**PHY1\_REG\_OUT**

**PHY1\_RXCLK/PHYAD1 PHY1\_RXDV/PHYAD2**

**VCC3V3\_PHY1 VCCIO\_PHY1**

**Pull-up for additional 2ns delay to RXC for data latching**

**PHY1\_MDI2+ PHY1\_MDI2-**

6 7 8

MDI[2]+ MDI[2]-

**PHY1\_RXD0/RXDLY PHY1\_RXD1/TXDLY PHY1\_RXD2/PLLOFF**

**R203 4.7K**

**PHY1\_RXD1/TXDLY**

**R204 NC**

**VCCIO\_PHY1**

**VCC\_1V8 VDD10\_PHY1**

**PHY1\_MDI3+ PHY1\_MDI3-**

9

10

AVDD10 MDI[3]+ MDI[3]-

**PHY1\_RXD3/PHYAD0**

**VDD10\_PHY1**

**Pull-up for additional 2ns delay to TXC for data latching**

**R205 0.1R**

**VCCIO\_PHY1**

**Close to PIN28**

B

**R206 NC**

**PHY1\_RXD2/PLLOFF**

**R207 4.7K**

**VCCIO\_PHY1**

**C130**

**C131**

**C132**

3

**Pull-up to disable PLL @ ALDPS mode(Low power mode)**

T

3

S

O

3

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L

DD

RY

C

0

T

C

**4.7uF**

**1uF**

**100nF**

V

A

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HP

DM

I

DM

D

XT

D

XT

D

XT

D

XT

C

XT

XT

**RTL8211F-CG**

2

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9

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1

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1

1

2

**1**

**VCC3V3\_PHY1**

**1**

**1**

**1**

**1**

**1**

**1**

**M**

**1**

**M**

**\_**

**n**

**C**

**M**

**OI**

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**3D**

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**M**

**2D**

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**M**

**1D**

**\_**

**M**

**0D**

**\_**

**M**

**NE**

**\_**

**\_**

**K**

**L**

**VDD10\_PHY1 VCC\_3V3 VCC3V3\_PHY1**

**C**

**TSR**

**1YHP**

**\_**

**DM**

**1CAMG**

**\_**

**DM**

**1CAMG**

**\_**

**XT**

**1CAMG**

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**XT**

**1CAMG**

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**XT**

**1CAMG**

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**XT**

**1CAMG**

**\_**

**XT**

**1CAMG**

**\_**

**XT**

**1CAMG**

**\_**

**PHY1\_REG\_OUT**

**L6**

**Close to PIN21**

**R209 0.1R**

**Close to PIN11,40**

**VCC3V3\_PHY1**

**GMAC1\_RSTn\_GPIO2\_D1** PHYRSTB is 3.3V IO

**R210 NC R212 0R**

**C139 100nF**

**R211 1.8K**

**VCCIO\_PHY1**

**2.2uH**

**C135**

**4.7uF**

**Close to PIN30**

RTL8211F-CG(SW Mode)

RTL8211FI-CG(SW Mode)Industrial

**C136 100nF**

**C138 100nF**

**C137 4.7uF**

**C133 100nF**

**C140 4.7uF**

**C134 100nF**

**C141 100nF**

**PHY1\_RXD0/RXDLY PHY1\_RXD1/TXDLY**

**R214 22R R213 22R**

**GMAC1\_RXD0\_M1 GMAC1\_RXD1\_M1**

**C143**

**C144**

A A

**PHY1\_RXD2/PLLOFF PHY1\_RXD3/PHYAD0**

**PHY1\_RXCLK/PHYAD1 PHY1\_RXDV/PHYAD2**

**R215 22R R216 22R**

**R217 22R R218 22R**

**GMAC1\_RXD2\_M1 GMAC1\_RXD3\_M1**

**GMAC1\_RXCLK\_M1 GMAC1\_RXDV\_CRS\_M1**

**C145**

**100nF**

**100nF**

**100nF**

**Close to PIN29**

**NC**

**Close to PHY**

***Rockchip Confidential***

**Close to PIN3,8,38**

| 5 |  | 4 |  | 3 |  | 2 |  |
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**12V/3A DCIN**

**L1**

**J1**

4

3

2

1

**SYS\_12V**

1

2

**2PIN**

**DC\_12V**

**J2**

45

3

2

~~1~~

**C1**

**100nF**

**4.7uH**

**D1**

**SS34**

**C2**

**100uF**

**C4**

**100nF**

**SYS\_12V R1**

**FAN**

D D **J3**

**0R**

1 2

5

**CORE\_5V**

**SYS\_12V**

**VCC5V0\_SYS**

**U1**

**NB679GD**

4

**R2**

**3.3R**

8

**C5**

**220nF**

**D2**

**1N4148**

3

**Q1**

3 4 **UKEY**

**R4**

1

VIN

K

L

C

T

S

B

SW7

**L2**

**PCMB051H-2R2MS/6A**

| **C6** | **C7** | **C8** |
| --- | --- | --- |
| **22uF** | **22uF** | **22uF** |

**C9**

**GPIO3\_A6**

**R5 10K**

**R3**

1

**WNM2016** 2

**C10**

**22uF**

**C11**

**22uF**

**C12**

**100NF**

**R6 10K**

**NC**

**C14**

11 12

EN

EN\_CLK

VOUT5

**C13**

**100NF**

**100K**

**10K**

6PGND2 AGND~~10~~

LDO

C

**0.1uF**

**RTC**

**C15 1uF**

G

P

3

C

V

9

**RTC\_3.3V**

**VCC\_3V3**

**D3 1N4148**

**R7 100K**

**C16 1uF**

**J4**

**2PIN**

1 2

**D4**

| **1N5819** |
| --- |

**C17**

**1uF**

1

**U15** NC

VCC8

**C62**

**100NF**

**VCC\_3V3**

**R8**

**C18**

**R43 10K**

2

NC7

C C

**3.3R**

**220nF**

4

**X1**

1

OSCI

**U2**

VDD8

**R72 22R**

**VCC\_3V3**

3

NC NC

SCL6

**I2C5\_SCL\_M0**

**U3**

**NB679GD**

**DC\_5V**

**VCC5V0\_SYS**

2 1

2

**XOSI1 XOSI0**

3

**32.768K**

OSCO nINT

CLKO7 SCL6

**R9 ~~22R~~**

**RTC\_CLK**

**I2C5\_SCL\_M0**

4SDA5

**I2C5\_SDA\_M0**

**SYS\_12V**

4

8

MC-146

3

~~4~~SDA~~5~~ GND

**R10 ~~22R~~ R11 ~~2K~~**

**I2C5\_SDA\_M0**

GND

**R14**

1

VIN

K

L

C

T

S

B

SW7

**L3**

**PCMB051H-2R2MS/6A**

| **C20** | **C21** | **C22** |
| --- | --- | --- |
| **22uF** | **22uF** | **22uF** |

**C23**

**C19 22PF**

**PCF8563/AT8563**

**VCC\_3V3**

**R12 2K R13 22R**

**RTCIC\_INT\_L\_GPIO0\_D3**

**ATSHA204A**

**C24**

**22uF**

**C25**

**22uF**

**C26**

**100NF**

**EXT\_EN**

**R15 10K**

**NC**

**C27**

11 12

EN

EN\_CLK

VOUT5

**C28**

**0.1uF**

**100NF**

**NC**

6PGND2

LDO

**C29 1uF**

G

P

3

AGND~~10~~

C

C

V

9

**DC\_5V R18**

**LED**

**DC\_5V**

**DC\_5V**

**R17**

**R19**

**R16 100K**

**VCC3V3\_SYS**

**C30 1uF**

**510R**

**510R**

**J5**

1

1

**LED1**

**LED2**

2

2

**LED\_BLUE**

**LED\_BLUE**

**J6 510R**

**J7**

1

**LED3**

2

**U4**

**NB680GD**

**R20 3.3R**

**C31**

**220nF**

**VCC3V3\_SYS**

**2PIN**

**2PIN**

**LED\_BLUE**

**2PIN**

B B

**SYS\_12V**

4

8

**R21 10K**

1

3

**Q2**

**R22 10K**

1

3

**Q3**

**GPIO3\_A4 GPIO2\_B2**

1

**R25**

K

L

C

VIN

T S

B

SW7

**L4**

**PCMB051H-2R2MS/6A**

| **C32** | **C33** | **C34** |
| --- | --- | --- |
| **22uF** | **22uF** | **22uF** |

**C35**

**R23 51K**

**S8050**

2

**R24 51K**

**S8050**

2

**C36**

**22uF**

**C37**

**22uF**

**C38**

**100NF**

**EXT\_EN**

**R26 10K**

**NC**

**C39**

11 12

EN

EN\_CLK

VOUT5

**C40**

**0.1uF**

**100NF**

**NC**

6PGND2

**C41 1uF**

LDO

G

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3

AGND~~10~~

C

C

V

9

**R27 100K**

**C42 1uF**

A A

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**Project:**

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| Thursday, November 17, 2022  Thursday, November 17, 2022  Thursday, November 17, 2022 | Rev:  Rev:  Rev: |
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V1.0 V1.0 V1.0

SmartFLY 1 10 Designed by:Rev Sheet: of iewed by: Designed by:Rev Sheet: of iewed by: Designed by:Rev Sheet: of iewed by: 1 10

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Default Default Default

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VCC5V1

**CORE\_5V CORE\_5V**

4

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8

**VCC\_3V3 VCC\_1V8 VCC3V3\_SD**

10

~~12~~

14

**VCC\_3V3**

VCC5V VCC5V VCC5V GND

GND

GND

VCC5V3 VCC5V~~5~~ GND7

GND9

GND~~11~~ GND13

| **C43** |
| --- |
| **22uF** |

**C44**

**100nF**

| **C45** |
| --- |
| **22uF** |

**C46**

**100nF**

**C47**

**100nF**

**VCC\_3V3**

**VCC\_1V8**

**VCC\_1V8**

**SARADC\_VIN4 SARADC\_VIN3 SARADC\_VIN2**

~~16~~ 18 20 ~~22~~ 24 ~~26~~ 28 30 ~~32~~ 34 ~~36~~ 38 40

VCC\_3V3

VCC\_3V3

VCC\_1V8

VCC\_1V8

NC

VCCIO\_ACODEC VCCIO\_ACODEC GND

SARADC\_VIN7 SARADC\_VIN6 SARADC\_VIN5 SARADC\_VIN4 SARADC\_VIN3

VCCA\_1V8~~15~~ VCC3V3\_SD17 VCC3V3\_SD19

VCCIO\_WL~~21~~ VCCIO\_WL23 GND~~25~~

NC27

GND29

GPIO1\_D2~~31~~ GPIO1\_D333 GPIO1\_D0~~35~~ GPIO1\_B137 GPIO1\_B039

**VCCA\_1V8**

**VCC3V3\_SD**

**VCC3V3\_SD**

**FSPI\_D1/FLASH\_RDN FSPI\_CS0N/FLASH\_CS0N FSPI\_CLK**

**GPIO1\_B1**

**GPIO1\_B0**

DD

**SARADC\_VIN1**

**SARADC\_VIN0\_KEY/RECOVERY**

**RST**

**EXT\_EN**

**RK809\_PWRON**

**SPKP\_OUT**

**SPKN\_OUT**

**HPL\_OUT**

**HP\_SNS**

~~42~~ 44 ~~46~~ 48 50 ~~52~~ 54 ~~56~~ 58 60 ~~62~~ 64 ~~66~~

SARADC\_VIN2

SARADC\_VIN1

SARADC\_VIN0\_KEY/RECOVERY GND

RESET

EXT\_EN

RK809\_PWRON

GND

SPKP\_OUT

SPKN\_OUT

GND

HPL\_OUT

HP\_SNS

GPIO1\_B2~~41~~

GPIO1\_D143

GPIO1\_D4~~45~~

I2C3\_SDA\_M047 I2C3\_SCL\_M049 GPIO1\_A4~~51~~

GPIO1\_C753

I2C0\_SCL\_PMIC~~55~~ I2C0\_SDA\_PMIC57 GND59

UART8\_RX\_M0~~61~~ UART8\_TX\_M063 UART8\_CTSn\_M0~~65~~

**FSPI\_D0/FLASH\_RDY**

**FSPI\_D3/FLASH\_CS1n**

**GPIO1\_A4**

**eMMC\_RSTn/FSPI\_D2/FLASH\_WPn**

**UART8\_RX\_M0**

**UART8\_TX\_M0**

**CON2**

122

**DC\_5V VCC3V3\_SYS** 1

344

3

**HPR\_OUT MIC1\_INP**

68 70

HPR\_OUT GND

UART8\_RTSn\_M067 GND69

**GPIO2\_B2 GPIO2\_B1**

**GSENSOR\_INT\_L\_GPIO3\_C1 SPDIF\_TX\_M1**

**R28 22R R29 22~~R~~ R31 22~~R~~**

~~5~~6~~6~~

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| 1  **4**  **1**  **D**  **E** | 1    **5**  **1**  **D**  **E** | 1    **6**  **1**  **D**  **E** | 1    **7**  **1**  **D**  **E** | 1  **2**  **2**  **D**  **E** | 1  **9**  **1**  **D**  **E** | 1  **0**  **2**  **D**  **E** | 1    **1**  **2**  **D**  **E** | 1  **3**  **2**  **D**  **E** | 1  **4**  **2**  **D**  **E** |
| **N**  **1**  **5** | **N**  **1**  **5** | **N**  **1**  **5** | **N**  **1**  **5** | **N**  **1**  **5** | **N**  **1**  **5** | **N**  **1**  **5** | **N**  **1**  **5** | **N**  **1**  **5** | **N**  **1**  **5** |

**R32 22R R30 22~~R~~ R33 22~~R~~**

**GPIO2\_B1 GPIO0\_D5**

~~72~~

MIC1\_INP

SOC\_CLK32K\_OUT~~71~~

**GPIO3\_A1 GPIO3\_A5** 9

**MIC1\_INN**

**GMAC0\_MCLKINOUT ETH0\_REFCLKO\_25M**

**GMAC0\_TXCLK**

**GMAC0\_TXD3**

**GMAC0\_TXD2**

**GMAC0\_TXD1**

**GMAC0\_TXD0**

74 ~~76~~ 78 80 ~~82~~ 84 ~~86~~ 88 90 ~~92~~ 94

MIC1\_INN

GND

GMAC0\_MCLKINOUT ETH0\_REFCLKO\_25M GND

GMAC0\_TXCLK

GND

GMAC0\_TXD3

GMAC0\_TXD2

GMAC0\_TXD1

GMAC0\_TXD0

RK809\_32KOUT\_WIFI73 GND~~75~~

GMAC0\_RXCLK77

GND79

GMAC0\_RXD3~~81~~

GMAC0\_RXD283

GMAC0\_RXD1~~85~~

GMAC0\_RXD087

GMAC0\_RXDV\_CRS89 GMAC0\_MDIO~~91~~

GND93

**GMAC0\_RXCLK**

**GMAC0\_RXD3**

**GMAC0\_RXD2**

**GMAC0\_RXD1**

**GMAC0\_RXD0**

**GMAC0\_RXDV\_CRS GMAC0\_MDIO**

**GPIO2\_D7**

**GPIO0\_D4**

**GPIO0\_C0**

**GPIO3\_D4**

**SDMMC2\_CLK\_M0 SDMMC2\_D2\_M0 SDMMC2\_D3\_M0 SDMMC2\_D0\_M0 SDMMC2\_D1\_M0 SDMMC2\_CMD\_M0**

**R34 22~~R~~ R36 22~~R~~ R38 22~~R~~ R40 22~~R~~ R42 22~~R~~ R44 22~~R~~R45 22~~R~~ R47 22~~R~~ R49 22R R51 22~~R~~**

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| 1  **1**  **D**  **E** | 1  **2**  **D**  **E** | 1    **3**  **D**  **E** | 1    **4**  **D**  **E** | 1 1**5**    **6**  **D**  **D**  **E**  **E** | | 1    **7**  **D**  **E** | 1    **8**  **D**  **E** | 1  **9**  **D**  **E** | 1  **0**  **1**  **D**  **E** | 1  **1**  **1**  **D**  **E** |
| **N**  **1**  **5** | **N**  **1**  **5** | **N**  **N**  **1**  **1**  **5**  **5** | | **N**  **1**  **5** | **N**  **1**  **5** | **N**  **1**  **5** | **N**  **1**  **5** | **N**  **1**  **5** | **N**  **1**  **5** | **N**  **1**  **5** |

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232424

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293030 29

**R37 22R R39 22~~R~~ R41 22~~R~~ R35 22~~R~~**

**R46 0R R48 0R R50 0R R52 0R**

**SARADC\_VIN4**

**SARADC\_VIN3**

**SARADC\_VIN2**

**SARADC\_VIN1**

**MULTI\_PHY0\_REFCLKN MULTI\_PHY0\_REFCLKP MULTI\_PHY1\_REFCLKP MULTI\_PHY1\_REFCLKN**

**GMAC0\_TXEN**

**GMAC0\_MDC**

**SDMMC0\_CLK/CAN0\_RX\_M1 SDMMC0\_CMD/CAN0\_TX\_M1**

~~96~~

98

100 ~~102~~

GMAC0\_TXEN

GMAC0\_MDC

GND

SDMMC0\_CLK/CAN0\_RX\_M1

SDMMC0\_D2~~95~~ SDMMC0\_D197 SDMMC0\_D099 SDMMC0\_D3~~101~~

**SDMMC0\_D2 SDMMC0\_D1 SDMMC0\_D0 SDMMC0\_D3**

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**E**

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**30PIN**

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**D**

**E**

SDMMC0\_CMD/CAN0\_TX\_M1

**N**

**N**

**4**

**N**

104

GND103

**1**

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**1**

GND

**5**

**5**

**5**

~~106~~

EDP\_TX\_D0P~~105~~

2

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**SDMMC0\_DET**

**USB3\_OTG0\_ID**

**USB3\_OTG0\_VBUSDET**

**USB3\_OTG0\_DP**

**USB3\_OTG0\_DM**

**USB3\_OTG0\_SSRXN**

108 110 ~~112~~ 114 ~~116~~ 118 120 ~~122~~

SDMMC0\_DET\_L

USB3\_OTG0\_ID

USB3\_OTG0\_VBUSDET GND

USB3\_OTG0\_DP

USB3\_OTG0\_DM

GND

USB3\_OTG0\_SSRXN

EDP\_TX\_D0N107 EDP\_TX\_D1P109 EDP\_TX\_D1N~~111~~ EDP\_TX\_D2P113 EDP\_TX\_D2N~~115~~ EDP\_TX\_D3P117 EDP\_TX\_D3N119 GND~~121~~

**4**

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**EDP\_TX\_D0P**

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**EDP\_TX\_D1P**

**EDP\_TX\_D1N**

CC

**USB3\_OTG0\_SSRXP**

**USB3\_OTG0\_SSTXN**

**USB3\_OTG0\_SSTXP**

**USB3\_HOST1\_SSRXN USB3\_HOST1\_SSRXP USB3\_HOST1\_SSTXP USB3\_HOST1\_SSTXN**

**USB3\_HOST1\_DP**

**USB3\_HOST1\_DM**

**SATA2\_TXP**

**SATA2\_TXN**

**SATA2\_RXP**

**SATA2\_RXN**

**REFCLK\_OUT\_CAM**

**GPIO0\_D5**

**RTCIC\_INT\_L\_GPIO0\_D3 GPIO0\_A5**

**HDMI\_TX2P\_PORT**

**HDMI\_TX2N\_PORT**

**HDMI\_TX1P\_PORT**

**HDMI\_TX1N\_PORT**

**HDMI\_TX0P\_PORT**

**HDMI\_TX0N\_PORT**

**HDMI\_TXCLKP\_PORT HDMI\_TXCLKN\_PORT**

**TP\_INT\_L\_GPIO0\_B5 TP\_RST\_L\_GPIO0\_B6 I2C1\_SCL\_TP**

**I2C1\_SDA\_TP**

**PWM7\_IR**

**UART2\_TX\_M0\_DEBUG UART2\_RX\_M0\_DEBUG EDP\_HPD**

124 ~~126~~ 128 130 ~~132~~ 134 ~~136~~ 138 140 ~~142~~ 144 ~~146~~ 148 150 ~~152~~ 154 ~~156~~ 158 160 ~~162~~ 164 ~~166~~ 168 170 ~~172~~ 174 ~~176~~ 178 180 ~~182~~ 184 ~~186~~ 188 190 ~~192~~ 194 ~~196~~ 198 200 ~~202~~ 204

USB3\_OTG0\_SSRXP USB3\_OTG0\_SSTXN USB3\_OTG0\_SSTXP GND

USB3\_HOST1\_SSRXN USB3\_HOST1\_SSRXP USB3\_HOST1\_SSTXN USB3\_HOST1\_SSTXP GND

USB3\_HOST1\_DP

USB3\_HOST1\_DM

GND

SATA2\_TXP

SATA2\_TXN

SATA2\_RXP

SATA2\_RXN

GND

REFCLK\_OUT\_CAM

GND

GPIO0\_D5

RTCIC\_INT\_L\_GPIO0\_D3 GPIO0\_A5

GND

GND

HDMI\_TX2P\_PORT

HDMI\_TX2N\_PORT

HDMI\_TX1P\_PORT

HDMI\_TX1N\_PORT

HDMI\_TX0P\_PORT

HDMI\_TX0N\_PORT

HDMI\_TXCLKP\_PORT HDMI\_TXCLKN\_PORT GND

TP\_INT\_L\_GPIO0\_B5 TP\_RST\_L\_GPIO0\_B6 I2C1\_SCL\_TP

I2C1\_SDA\_TP

PWM7\_IR

UART2\_TX\_M0\_DEBUG UART2\_RX\_M0\_DEBUG GPIO0\_C2

EDP\_TX\_AUXP123

EDP\_TX\_AUXN~~125~~

GND127

MULTI\_PHY0\_REFCLKN129 MULTI\_PHY0\_REFCLKP~~131~~ MULTI\_PHY1\_REFCLKP133 MULTI\_PHY1\_REFCLKN~~135~~ GND137

PCIE30\_TX0P139

PCIE30\_TX0N~~141~~

PCIE30\_TX1P143

PCIE30\_TX1N~~145~~

PCIE30\_RX0P147

PCIE30\_RX0N149

PCIE30\_RX1P~~151~~

PCIE30\_RX1N153

GND~~155~~

PCIE30\_REFCLKP\_IN157 PCIE30\_REFCLKN\_IN159 PCIE20\_REFCLKN~~161~~

PCIE20\_REFCLKP163

GND~~165~~

GND167

GPIO0\_A6169

GPIO0\_C1~~171~~

GPIO0\_D6173

GPIO0\_C3~~175~~

PCIE\_PWREN\_H\_GPIO0\_D4177 WORKING\_LEDEN\_H\_GPIO0\_C0179 LCD1\_BL\_PWM5~~181~~

GPIO0\_C7183

GPIO0\_B7~~185~~

GPIO0\_C5187

HDMITX\_SDA189

HDMITX\_SCL~~191~~

HDMITX\_CEC\_M0193

HDMI\_TX\_HPDIN~~195~~

GND197

MIPI\_DSI\_TX1\_D0N199

MIPI\_DSI\_TX1\_D0P~~201~~

MIPI\_DSI\_TX1\_D1N203

**EDP\_TX\_AUXP**

**EDP\_TX\_AUXN**

**MULTI\_PHY0\_REFCLKN MULTI\_PHY0\_REFCLKP MULTI\_PHY1\_REFCLKP MULTI\_PHY1\_REFCLKN**

**PCIE30\_TX0P**

**PCIE30\_TX0N**

**PCIE30\_TX1P**

**PCIE30\_TX1N**

**PCIE30\_RX0P**

**PCIE30\_RX0N**

**PCIE30\_RX1P**

**PCIE30\_RX1N**

**PCIE30\_REFCLKP\_IN PCIE30\_REFCLKN\_IN PCIE20\_REFCLKN PCIE20\_REFCLKP**

**GPIO0\_A6**

**GPIO0\_C1**

**GPIO0\_D6**

**GPIO0\_C3**

**GPIO0\_D4**

**GPIO0\_C0**

**LCD1\_BL\_PWM5**

**GPIO0\_C7**

**GPIO0\_B7**

**GPIO0\_C5**

**HDMITX\_SDA**

**HDMITX\_SCL**

**HDMITX\_CEC\_M0**

**HDMI\_TX\_HPDIN**

**MIPI\_DSI\_TX1\_D0N MIPI\_DSI\_TX1\_D0P**

BB

**MIPI\_DSI\_TX0\_D0N/LVDS\_TX0\_D0N MIPI\_DSI\_TX0\_D0P/LVDS\_TX0\_D0P MIPI\_DSI\_TX0\_D1N/LVDS\_TX0\_D1N MIPI\_DSI\_TX0\_D1P/LVDS\_TX0\_D1P**

**MIPI\_DSI\_TX0\_CLKN/LVDS\_TX0\_CLKN MIPI\_DSI\_TX0\_CLKP/LVDS\_TX0\_CLKP MIPI\_DSI\_TX0\_D2N/LVDS\_TX0\_D2N MIPI\_DSI\_TX0\_D2P/LVDS\_TX0\_D2P MIPI\_DSI\_TX0\_D3N/LVDS\_TX0\_D3N MIPI\_DSI\_TX0\_D3P/LVDS\_TX0\_D3P**

**MIPI\_CSI\_RX\_D0N**

**MIPI\_CSI\_RX\_D0P**

**MIPI\_CSI\_RX\_D1N**

**MIPI\_CSI\_RX\_D1P**

**MIPI\_CSI\_RX\_CLK0N**

**MIPI\_CSI\_RX\_CLK0P**

**MIPI\_CSI\_RX\_CLK1N**

**MIPI\_CSI\_RX\_CLK1P**

**PCIE30X2\_PERSTn\_M1**

**GPIO2\_D7**

**GPIO3\_A0**

**GPIO3\_A2**

**GPIO3\_A5**

**GPIO3\_A6**

**PCIECLKIC\_OE\_H\_GPIO3\_A7**

**HP\_DET\_L\_GPIO3\_C2**

**UART4\_TX\_M1**

**UART4\_RX\_M1**

**GPIO3\_B6**

**I2C5\_SCL\_M0**

**I2C5\_SDA\_M0**

**GSENSOR\_INT\_L\_GPIO3\_C1**

**SPDIF\_TX\_M1**

**SDMMC2\_CLK\_M0**

**SDMMC2\_D2\_M0**

**SDMMC2\_D3\_M0**

~~206~~ 208 210 ~~212~~ 214 ~~216~~ 218 220 ~~222~~ 224 ~~226~~ 228 230 ~~232~~ 234 ~~236~~ 238 240 ~~242~~ 244 ~~246~~ 248 250 ~~252~~ 254 ~~256~~ 258 260 ~~262~~ 264 ~~266~~ 268 270 ~~272~~ 274 ~~276~~ 278 280 ~~282~~ 284

GND

MIPI\_DSI\_TX0\_D0N/LVDS\_TX0\_D0N MIPI\_DSI\_TX0\_D0P/LVDS\_TX0\_D0P MIPI\_DSI\_TX0\_D1N/LVDS\_TX0\_D1N MIPI\_DSI\_TX0\_D1P/LVDS\_TX0\_D1P MIPI\_DSI\_TX0\_CLKN/LVDS\_TX0\_CLKN

MIPI\_DSI\_TX0\_CLKP/LVDS\_TX0\_CLKP MIPI\_DSI\_TX0\_D2N/LVDS\_TX0\_D2N MIPI\_DSI\_TX0\_D2P/LVDS\_TX0\_D2P MIPI\_DSI\_TX0\_D3N/LVDS\_TX0\_D3N MIPI\_DSI\_TX0\_D3P/LVDS\_TX0\_D3P GND

MIPI\_CSI\_RX\_D0N

MIPI\_CSI\_RX\_D0P

MIPI\_CSI\_RX\_D1N

MIPI\_CSI\_RX\_D1P

MIPI\_CSI\_RX\_CLK0N

MIPI\_CSI\_RX\_CLK0P

MIPI\_CSI\_RX\_CLK1N

MIPI\_CSI\_RX\_CLK1P

GND

PCIE30X2\_PERSTn\_M1

PCIE30X2\_PRSNT\_L\_GPIO2\_D7 BT\_REG\_ON\_H\_GPIO3\_A0

HOST\_WAKE\_BT\_H\_GPIO3\_A2

I2S3\_SDO\_M0

I2S3\_SDI\_M0

PCIECLKIC\_OE\_H\_GPIO3\_A7

GND

HP\_DET\_L\_GPIO3\_C2

UART4\_TX\_M1

UART4\_RX\_M1

GPIO3\_B6

I2C5\_SCL\_M0

I2C5\_SDA\_M0

GSENSOR\_INT\_L\_GPIO3\_C1

SPDIF\_TX\_M1

GND

SDMMC2\_CLK\_M0/CIF\_D5

SDMMC2\_D2\_M0/CIF\_D2

SDMMC2\_D3\_M0/CIF\_D3

MIPI\_DSI\_TX1\_D1P~~205~~ GND207

MIPI\_DSI\_TX1\_CLKN209 MIPI\_DSI\_TX1\_CLKP~~211~~ MIPI\_DSI\_TX1\_D2N213 MIPI\_DSI\_TX1\_D2P~~215~~ MIPI\_DSI\_TX1\_D3N217 MIPI\_DSI\_TX1\_D3P219 MIPI\_CSI\_RX\_D2N~~221~~

MIPI\_CSI\_RX\_D2P223

MIPI\_CSI\_RX\_D3N~~225~~

MIPI\_CSI\_RX\_D3P227

GND229

UART9\_TX\_M1~~231~~

UART9\_RX\_M1233

CAN1\_RX\_M1~~235~~

CAN1\_TX\_M1237

GMAC1\_INT/PMEB\_GPIO2\_D0239 BT\_WAKE\_HOST\_H\_GPIO3\_A1~~241~~ GMAC1\_RSTN\_GPIO2\_D1243 GMAC0\_INT/PMEB\_GPIO2\_D2~~245~~ GMAC0\_RSTn\_GPIO2\_D3247 ETH1\_REFCLKO\_25M\_M0249 CON\_INT\_L\_GPIO4\_D2~~251~~ I2S3\_LRCK\_M0253

I2S3\_SCLK\_M0~~255~~

UART3\_RX\_M1257

UART3\_TX\_M1259

PA\_EN\_H\_GPIO3\_C3~~261~~ PWM14\_M0263

CAMERA0\_PDN\_L\_GPIO4\_B4~~265~~ CAMERA1\_PDN\_L\_GPIO4\_B5267 MIPICAM1\_RST\_L\_GPIO3\_B5269

PCIE30X2\_WAKEn\_M1~~271~~ PCIE30X2\_CLKREQn\_M1273 SATA2\_ACT\_LED~~275~~

GND277

SDMMC2\_D0\_M0/CIF\_D0279 SDMMC2\_D1\_M0/CIF\_D1~~281~~ SDMMC2\_CMD\_M0/CIF\_D4283

**MIPI\_DSI\_TX1\_D1N**

**MIPI\_DSI\_TX1\_D1P**

**MIPI\_DSI\_TX1\_CLKN**

**MIPI\_DSI\_TX1\_CLKP**

**MIPI\_DSI\_TX1\_D2N**

**MIPI\_DSI\_TX1\_D2P**

**MIPI\_DSI\_TX1\_D3N**

**MIPI\_DSI\_TX1\_D3P**

**MIPI\_CSI\_RX\_D2N**

**MIPI\_CSI\_RX\_D2P**

**MIPI\_CSI\_RX\_D3N**

**MIPI\_CSI\_RX\_D3P**

**UART9\_TX\_M1**

**UART9\_RX\_M1**

**CAN1\_RX\_M1**

**CAN1\_TX\_M1**

**GMAC1\_INT/PMEB\_GPIO2\_D0 GPIO3\_A1**

**GMAC1\_RSTn\_GPIO2\_D1 GMAC0\_INT/PMEB\_GPIO2\_D2 GMAC0\_RSTn\_GPIO2\_D3 ETH1\_REFCLKO\_25M\_M0 GPIO4\_D2**

**GPIO3\_A4**

**GPIO3\_A3**

**UART3\_RX\_M1**

**UART3\_TX\_M1**

**GPIO3\_C3**

**EDP\_BL\_PWM14\_M0**

**CAMERA0\_PDN\_L\_GPIO4\_B4 CAMERA1\_PDN\_L\_GPIO4\_B5 MIPICAM1\_RST\_L\_GPIO3\_B5 PCIE30X2\_WAKEn\_M1**

**PCIE30X2\_CLKREQn\_M1 SATA2\_ACT\_LED**

**SDMMC2\_D0\_M0**

**SDMMC2\_D1\_M0**

**SDMMC2\_CMD\_M0**

**J8**

**LX**

**J10**

**LX**

**J12**

**CON1 J14**

**CON1 J16**

**CON1**

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**J9**

**LX**

**J11**

**LX**

**J13**

**CON1 J15**

**CON1 J17**

**CON1 J42**

**CON1**

1 1

1 1

1 1

**M1**

**MARK M3**

**MARK**

**M2**

**MARK M4**

**MARK**

AA

**GMAC1\_RXD2\_M1**

**GPIO3\_D4**

**GMAC1\_TXD0\_M1**

**GMAC1\_TXD1\_M1**

**GMAC1\_TXEN\_M1**

**GMAC1\_RXD0\_M1**

**GMAC1\_RXDV\_CRS\_M1 GMAC1\_MCLKINOUT\_M1**

**USB2\_HOST3\_DP**

**USB2\_HOST3\_DM**

**USB2\_HOST2\_DP**

**USB2\_HOST2\_DM**

~~286~~ 288 290 ~~292~~ 294 ~~296~~ 298 300 ~~302~~ 304 ~~306~~ 308 310 ~~312~~ 314

GND

GPIO4\_A1

GPIO3\_D4

GPIO4\_A4

GPIO4\_A5

GPIO4\_A6

GPIO4\_A7

GPIO4\_B1

GPIO4\_C1

GND

USB2\_HOST3\_DP USB2\_HOST3\_DM USB2\_HOST2\_DP USB2\_HOST2\_DM GND

WIFI\_REG\_ON\_H\_GPIO3\_D5/CIF\_D7~~285~~ GND287

GMAC1\_TXCLK\_M1/CIF\_D10289 GMAC1\_RXCLK\_M1/CIF\_D13~~291~~ GMAC1\_RXD3\_M1/CIF\_D12293 GMAC1\_TXD3\_M1/CIF\_D9~~295~~

GMAC1\_TXD2\_M1/CIF\_D8297

GMAC1\_RXD1\_M1/CAM\_CLKOUT1299 GND~~301~~

CIF\_CLKOUT303

GND~~305~~

GMAC1\_MDIO\_M1/CIF\_VSYNC307 GMAC1\_MDC\_M1/CIF\_HREF309 GND~~311~~

I2C4\_SCL\_M0313

**GPIO3\_D5**

**GMAC1\_TXCLK\_M1 GMAC1\_RXCLK\_M1 GMAC1\_RXD3\_M1 GMAC1\_TXD3\_M1 GMAC1\_TXD2\_M1 GMAC1\_RXD1\_M1**

**CIF\_CLKOUT**

**GMAC1\_MDIO\_M1 GMAC1\_MDC\_M1**

**I2C4\_SCL\_M0**

**Project:**

**Project: Project:**

**YY3568**

youyeetoo.com

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I2C4\_SDA\_M0~~315~~

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316

**I2C4\_SDA\_M0**

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**J18**

GND11

GND GND

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**DC\_5V**

**TF Card**

DAT21

**SDMMC0\_D2**

**VCC5V0\_USB30\_OTG**

DAT3 CMD

VDD CLK

GND DAT0

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| 4 | | | | | |  |  |  |  |
| 5 | **R53** |  |  | **100R** |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |
| 8 | | | |  |  |  |  |  |  |
| 9 | | |  |  |  |  |  |  |  |
| 10 |  | **V**  **R**  **2** | **V**  **R**  **3** | **V**  **R**  **4** | **V**  **R**  **5** | **V**  **R**  **6** |  |  |  |
|  | **V**  **R**  **1** | **V**  **R**  **7** | **C50** |
|  | **N**  **C** | **N**  **C** | **N**  **C** | **N**  **C** | **N**  **C** | **N**  **C** | **N**  **C** | **100NF** |  |
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**SDMMC0\_D3**

**SDMMC0\_CMD/CAN0\_TX\_M1 VCC3V3\_SD**

**SDMMC0\_CLK/CAN0\_RX\_M1 SDMMC0\_D0**

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VOUT GND

**U5**

IN5 EN4

**C48 1uF**

**R54 100R**

**GPIO0\_A5**

D D

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DAT1 CD

**SDMMC0\_D1 SDMMC0\_DET**

**C49**

**R55**

OCB

**SGM2576**

**R56**

**TRF-11008ZB-PBW**

X

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X

IF

GND

**C51**

**100nF**

**4.7K**

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**10uF**

**VCC5V0\_USB30\_OTG**

**R57 10K**

**NC**

**R58 20K**

**USB3\_OTG0\_VBUSDET**

2 2

9 1

**CN1**

| 1 | 1    **2**  **S** | 1    **3**  **S** | 1    **4**  **S** | 1    **5**  **S** | 1    **6**  **S** |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1**  **S**  **V** | **C52** |  | **C53** |
| **T**  2 | **V**  **T**  2 | **V**  **T**  2 | **V**  **T**  2 | **V**  **T**  2 | **T**  2 | **22UF** |  | **100NF**  **R59** |
|  |  |  |  |  |  | |  | **R60** |
|  |  |  |  |  | | |  | **R61** |
|  |  |  |  | | | |  | **R62** |
|  |  |  | | | | |  | **C55** |
|  |  | | | | | |  |  |
|  | **C57** | | | | | | | |

**DC\_5V**

**USB3.0\_5V**

Shield

GND

SSRX

5 ~~4~~

**2.2R**

**USB3\_OTG0\_SSRXN**

**R111 NC**

**U6**

D+

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VBUS

SSRX+ AGND SSTX

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**2.2R**

**~~2.2R~~**

**2.2R**

**10~~0NF~~**

**USB3\_OTG0\_SSRXP**

**USB3\_OTG0\_DP**

**USB3\_OTG0\_DM**

**USB3\_OTG0\_SSTXN**

**VCC5V0\_USB30\_OTG**

1 2 3

VOUT GND

OCB

IN5 EN4

**C54 1uF**

**R63 100R**

**GPIO0\_D6**

**USB3.0**

**USB\_3.0**

SSTX+

SSSRX

GND

SSSRX+

DD+

AGND

DD

~~9~~

**~~100NF~~**

**R65 2.2R**

14

~~1~~3

|  | | | | |  |  | **R67** |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  | **R68** |
|  | | |  |  |  |  | **R69** |
|  |  |  |  |  | **C58** | | |
|  |  |  |  |  |  | | |
|  |  |  |  |  |  |  | **C59** |
| 2  2  **7**  **8**  **S**  **S** | 2  **9**  **S** | 2    **0**  **1** | 2    **1**  **1** | 2  **2**  **1** | **C60** |  | **C61** |
| **V**  **V**  **T**  **T** | **V**  **T** | **S**  **V**  **T** | **S**  **V**  **T** | **S**  **V**  **T** | **22UF** |  | **100NF** |

**2.2R**

15

~~1~~2

**~~2.2R~~**

16

**2.2R**

11

~~1~~7

**10~~0NF~~**

**USB3\_OTG0\_SSTXP USB3\_HOST1\_SSRXN**

**USB3\_HOST1\_SSRXP USB3\_HOST1\_DP**

**USB3\_HOST1\_DM**

**C56**

**100nF**

**SGM2576**

**R66**

**4.7K**

**R64 NC**

C C

SSSTX

VVBUS

SSSTX+

Shield

10 ~~1~~8

**100NF**

**USB3.0\_5V**

**USB3\_HOST1\_SSTXN USB3\_HOST1\_SSTXP**

1 2

0

2

**CN2**

1

**USB3\_OTG0\_ID**

1

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**SW8**

2 1 **97C2ST**

**VBAT\_USB DC\_5V**

**R74 0R**

| **C64**  **100NF** |
| --- |

**USB2.0**

12

~~11~~ SHELL4 SHELL3

10

~~9~~SHELL2 SHELL1

VBUS11 D1-2 D1+~~3~~

GND14 VBUS25 D2-6 D2+~~7~~ GND28

**VBAT\_USB**

**R71 2.2R**

**R73 2.2R**

**VBAT\_USB**

**R76 2.2R**

**R77 2.2R**

**DM1 DP1**

**DM2 DP2**

**C63**

**10UF**

**DUAL\_USB**

**V**

**V**

**V**

**V**

**R**

**R**

**R**

**R**

**8**

**9**

**1**

**1**

**0**

**1**

**NC**

| **N**  **C** | **N**  **C** |
| --- | --- |

**NC**

B B

**J19**

1

**V33\_HUB**

**DM2**

**DP2**

1 2 ~~3~~

**U8**

AVDD DM2

G

L

85

DPI28 DMI27 DP0~~26~~

**R82 ~~2.2R~~**

**DP1**

**DM1**

**USB2\_HOST2\_DP**

2

~~3~~

4

**4PIN/B**

**C66**

|  |
| --- |
|  |

**C67**

**VR1**

**2**

|  |
| --- |

**V**

**R**

**1**

**3**

**R79 2.2R R80 2.~~2R~~ R81 ~~0R~~**

**DP3**

**DM3**

**DC\_5V**

**VBAT\_USB**

**R78 ~~680R~~ V33\_HUB**

**TAL1**

4 ~~5~~ 6

DP2

RREF AVDD

0G

DM025 V33~~24~~ V523

**R83 ~~2.2R~~**

V33\_HUB

**VBAT\_USB**

**USB2\_HOST2\_DM**

**C65 20pF** 2

**Y1 ~~12MHz~~** XTAL11

TAL1 **R84**

**100NF**

**22uF**

**NC**

**NC**

**R85**

**TAL2**

**DM3**

**DP3**

7 ~~8~~ 9

X1

X2

DM3

PWREN122 OVCUR1#~~21~~ PWREN220

**R86 10K R87 20~~K~~**

**~~V~~BAT\_USB**

**C68 20pF**

3

GND

XTAL2

GND4

**1M**

**10K**

**V33\_HUB**

**DM4**

**DP4**

~~10~~ 11 12

DP3

AVDD DM4

OVCUR2#~~19~~ PGANG18 PSELF17

**R88 NC R89 10~~0K~~ R90 51~~0K~~**

**V33\_HUB TAL2**

**V33\_HUB**

**J20**

**VBAT\_USB**

**R91 47K**

**C69**

**0.1uF**

~~13~~ 14

DP4

REST# TEST

GL850G

DVDD~~16~~ GND15

**V33\_HUB**

**V33\_HUB**

| **C70**  **100NF** |
| --- |

**C71**

**100NF**

**VBAT\_USB**

**C72**

**10UF**

**VBAT\_USB**

**C73**

**100NF**

**4PIN/B**

1 2 ~~3~~ 4

**C74**

|  |
| --- |
|  |

**C75**

**VR**

**14**

|  |
| --- |

**V**

**R**

**1**

**5**

**R92 2.2R R93 2.~~2R~~ R94 ~~0R~~**

**DP4**

**DM4**

**DC\_5V**

**100NF**

**22uF**

**NC**

**NC**

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Default Default Default

3 10

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**MIPI DSI0**

**30pin**

10~~10~~ 1111 12~~12~~ 1313 1414 15~~15~~ 1616 17~~17~~ 1818 1919 20~~20~~ 2121 22~~22~~ 2323 2424 25~~25~~ 2626 27~~27~~ 2828 2929 3030

**R95 10K**

**LCD\_5V**

**LCD\_5V**

**LCD\_5V**

**VCC\_3V3**

**I2C1\_SDA\_TP**

4

3

**30pin**

1010 11~~11~~ 1212 13~~13~~ 1414 1515 16~~16~~ 1717 18~~18~~ 1919 2020 21~~21~~ 2222 23~~23~~ 2424 2525 26~~26~~ 2727 28~~28~~ 2929 3030

**R96 10K**

**LCD\_5V LCD\_5V LCD\_5V**

2 1

2

1

**VCC\_3V3 VCC\_3V3**

32

~~31~~ 32 31

**I2C1\_SCL\_TP**

**GPIO0\_C7**

**TP\_INT\_L\_GPIO0\_B5**

**GPIO3\_B6**

**GPIO0\_C3**

**GPIO0\_C5**

**TP\_RST\_L\_GPIO0\_B6**

**MIPI\_DSI\_TX0\_D0P/LVDS\_TX0\_D0P**

**MIPI DSI1**

32

31 32

31

**I2C5\_SDA\_M0 I2C5\_SCL\_M0 GPIO4\_D2**

**GPIO0\_C1**

**GPIO3\_A5**

**LCD1\_BL\_PWM5 GPIO3\_A2**

**GPIO3\_A0**

**I2C5\_SDA\_M0 I2C5\_SCL\_M0**

**R97 2.~~2K~~**

2 1 **R98 2.2K**

**VCC\_3V3**

**MIPI\_DSI\_TX0\_D0N/LVDS\_TX0\_D0N**

**MIPI\_DSI\_TX1\_D0P MIPI\_DSI\_TX1\_D0N**

D D **MIPI\_DSI\_TX0\_D1P/LVDS\_TX0\_D1P**

99

88

7~~7~~

66

5~~5~~

44

33

2~~2~~

11

**J21**

**J23**

11

2~~2~~

**MIPI\_DSI\_TX0\_D1N/LVDS\_TX0\_D1N**

**MIPI\_DSI\_TX0\_CLKP/LVDS\_TX0\_CLKP MIPI\_DSI\_TX0\_CLKN/LVDS\_TX0\_CLKN**

**MIPI\_DSI\_TX0\_D2P/LVDS\_TX0\_D2P MIPI\_DSI\_TX0\_D2N/LVDS\_TX0\_D2N**

**MIPI\_DSI\_TX0\_D3P/LVDS\_TX0\_D3P MIPI\_DSI\_TX0\_D3N/LVDS\_TX0\_D3N**

99

8~~8~~

77

6~~6~~

55

44

3~~3~~

22

1~~1~~

**J22**

**30pin**

1010 1111 12~~12~~ 1313 14~~14~~ 1515 1616 17~~17~~ 1818 19~~19~~ 2020 2121 22~~22~~ 2323 24~~24~~ 2525 2626 27~~27~~ 2828 29~~29~~ 3030

**MIPI\_DSI\_TX1\_D1P**

**MIPI\_DSI\_TX1\_D1N**

**MIPI\_DSI\_TX1\_CLKP**

**MIPI\_DSI\_TX1\_CLKN**

**MIPI\_DSI\_TX1\_D2P**

**MIPI\_DSI\_TX1\_D2N**

**MIPI\_DSI\_TX1\_D3P**

**MIPI\_DSI\_TX1\_D3N**

**R99 2.2K**

**R100 2.2K**

**R101 ~~22R~~**

**R102 ~~22R~~**

**VCC\_1V8**

**VCC\_1V8**

**I2C4\_SDA\_M0**

**I2C4\_SCL\_M0**

33 4~~4~~

**C76 100NF C80 ~~100NF~~**

**EDP\_TX\_D1N EDP\_TX\_D1P**

**R103 ~~22R~~ R108 ~~22R~~**

**CAMERA0\_PDN\_L\_GPIO4\_B4 GPIO3\_D5**

55 66

| **C81** |
| --- |

**100NF**

**EDP\_TX\_D0N**

**MIPI CAMERA**

**R105 22R**

**CIF\_CLKOUT**

7~~7~~

**C77 ~~100NF~~**

**EDP\_TX\_D0P**

**R106 ~~22R~~**

**CAMERA1\_PDN\_L\_GPIO4\_B5**

88

**R104**

| **100K**  **10~~0NF~~** |
| --- |

**R109 22R**

**MIPICAM1\_RST\_L\_GPIO3\_B5**

9~~9~~

**C78R110 ~~22R~~**

**EDP**

1010 1111 12~~12~~ 1313 14~~14~~

**C79 ~~100NF~~ R107 ~~100K~~**

**EDP\_TX\_AUXP**

**EDP\_TX\_AUXN**

**VCC\_LCD**

**VCC\_LCD**

**VCC\_LCD**

**VCC\_LCD VCC3V3\_SYS**

32

~~31~~ 32

**REFCLK\_OUT\_CAM**

**MIPI\_CSI\_RX\_D0P**

**MIPI\_CSI\_RX\_D0N**

31

1515 1616 17~~17~~

**R**

**19**

**0**

**R**

**18**

**9**

**R**

**18**

**7**

**R75 0R**

31

**MIPI\_CSI\_RX\_D1P MIPI\_CSI\_RX\_D1N**

C C

32

31 32

1818 19~~19~~ 2020 2121

**10**

**0R**

**10**

**0R**

**N**

**C**

**R192 NC**

**EDP\_HPD**

| **C97**  **100NF** |
| --- |

**MIPI\_CSI\_RX\_CLK0P MIPI\_CSI\_RX\_CLK0N**

**MIPI\_CSI\_RX\_D2P MIPI\_CSI\_RX\_D2N**

22~~22~~

2323

24~~24~~

2525

2626

27~~27~~

2828

29~~29~~

3030

**30pin**

|  |
| --- |

**SYS\_12V**

**SYS\_12V**

**SYS\_12V**

**SYS\_12V**

**VCC\_TP**

**R199 ~~NC~~ R208 ~~0R~~**

**GPIO1\_A4**

**EDP\_BL\_PWM14\_M0**

**C98**

**10UF**

9~~9~~

88

7~~7~~

66

55

4~~4~~

33

2~~2~~

11

**J24**

**MIPI\_CSI\_RX\_D3P MIPI\_CSI\_RX\_D3N**

**MIPI\_CSI\_RX\_CLK1P MIPI\_CSI\_RX\_CLK1N**

**LCD\_5V**

**LCD\_5V**

**J25**

**C82 10UF**

| **C83** | **100NF** |
| --- | --- |

**TP**

11 2~~2~~ 33 44 5~~5~~ 66

|  |  |  |
| --- | --- | --- |
|  |  |  |
| **V**  **V**  **V**  **R**  **R**  **R**  **1**  **1**  **6**  **7** | |
| **N**  **N**  **N**  **C**  **C**  **C** | |

2 1 ~~2 1~~

**R115 ~~0R~~ R116 22R**

2 1 **R117 ~~22R~~**

2 1 ~~2 1~~

**R118 ~~22R~~ R120 22R**

**VCC\_3V3**

**GPIO0\_A6**

**GPIO0\_B7**

**I2C1\_SCL\_TP**

**I2C1\_SDA\_TP**

**R119 0R**

**DC\_5V LCD\_5V**

| **C84** |
| --- |

2 1 **C85**

**C86**

~~2 1~~

**R121 ~~2.2K~~**

**VCC\_TP**

**CON-6PIN-2D0**

**V**

**R**

**1**

**9**

**N**

**C**

**R122 ~~2.2K~~**

**100NF**

**22uF**

**22uF**

B B

**DC\_5V**

1

22

| 3  2 |
| --- |

**D5**

**B5819WS** 2

**VCC\_3V3**

3 G

4 G

D2P1

**HDMI\_TX2P\_PORT**

**HDMI\_TX2P\_PORT**

1

**ED26 ESD5304D** NC\_1010

**HDMI\_TX2P\_PORT**

**R123**

1

1

**R124**

1

D2\_G

| 2 |
| --- |
| 3 |

**HDMI\_TX2N\_PORT**

~~2~~

IO1 IO2

NC\_9~~9~~

**HDMI\_TX2N\_PORT**

**1.8K**

**~~Q4~~**

|  |
| --- |

**10K**

D2N

**HDMI\_TX2N\_PORT**

3GND8 GND

**HDMI\_TXDDC\_SCL\_PORT**

2

3

2

2

**HDMITX\_SCL**

D1P~~4~~

**HDMI\_TX1P\_PORT**

**HDMI\_TX1P\_PORT**

~~4~~

IO3

NC\_7~~7~~

**HDMI\_TX1P\_PORT**

D1\_G D1N

| 5 |
| --- |
| 6 |

**HDMI\_TX1N\_PORT**

**HDMI\_TX1N\_PORT**

5

IO4

NC\_66

**HDMI\_TX1N\_PORT**

**WNM2021**

**VCC\_3V3**

**HDMI**

Ty

pe

D0P~~7~~

| 8 |
| --- |
| 9 |

D0\_G

D0N

CLKP10

**HDMI\_TX0P\_PORT**

**HDMI\_TX0N\_PORT HDMI\_TXCLKP\_PORT**

**HDMI\_TX0P\_PORT**

1

**ED27 ESD5304D** NC\_1010

**HDMI\_TX0P\_PORT**

**R125**

1

**R126**

1

CLK\_G

| 11 |
| --- |
| 12 |

**HDMI\_TX0N\_PORT**

2

IO1 IO2

NC\_99

**HDMI\_TX0N\_PORT**

A

CLKN

**HDMI\_TXCLKN\_PORT**

~~3~~GND~~8~~ GND

CEC13

| 14  15 | | | | |  |
| --- | --- | --- | --- | --- | --- |
| 16 | | | | |  |
| 17 | |  |  |  |  |
| 18 | | **VCC5V\_HDMI\_TX** |  |  |
| 19 |  |  |  |  |
| **C87**1 |  |  |  | **V**  **R**  **2**  **1** | **V**  **R** |
| **1uF**  2 |  |  |  | **N**    **C** | **N**  **C** |

**HDMI\_TX\_CEC\_PORT**

**HDMI\_TXCLKP\_PORT HDMI\_TXCLKN\_PORT**

4 ~~5~~

IO3

NC\_77 NC\_6~~6~~

**HDMI\_TXCLKP\_PORT HDMI\_TXCLKN\_PORT**

**Q5**

**1.8K**

1

**10K**

Utility SCL

**HDMI\_TXDDC\_SCL\_PORT HDMI\_TXDDC\_SDA\_PORT**

IO4

**HDMI\_TXDDC\_SDA\_PORT**

2

3

|  |
| --- |

2

2

**HDMITX\_SDA**

2

SDA

GND

+5V

HPD

1

**V**

**R**

**2**

**3**

**HDMI\_TX\_HPD\_PORT**

**VCC5V\_HDMI\_TX DC\_5V**

2 1

**D6 B5819W**

**VCC\_3V3**

1

**D7**

**WNM2021**

**VCC5V\_HDMI\_TX VCC\_3V3**

A A

**J26**

**HDMI\_TYPE\_A** HDMI19P-90

G

1 2

G

0 2

**NC**

**HDMI\_TX\_HPD\_PORT**

**R128**

1

**100K**

2

2 1 **R127 1K**

**HDMI\_TX\_HPDIN**

**HDMI\_TX\_CEC\_PORT**

**NC**

2

**R129**

1

**27K**

2

3

**Q6**

1

2

1

**R130**

**27K**

2

**HDMITX\_CEC\_M0**

**WNM2021**

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Default Default Default

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**+3VSB\_WIFI\_BT1 VCCA\_1V8**

**CON3**

7

2

1

**+3VSB\_WIFI\_BT1**

978

7

GND\_78

D D

**GPIO1\_B1**

**R**

**1**

**3**

**1**

**1**

**0**

**0**

**K**

**R137 22RR138 ~~22R~~**

**R**

**1**

**3**

**2**

**4**

**.**

**7**

**K**

75

73 3.3V\_7474

GND\_75

71 3.3V\_7272

RESERVED/REFCLKP1

69 UIM\_PWR\_SRC/GPIO1/PEWAKE1#70

RESERVED/REFCLKN1

67 UIM\_PWR\_SNK/CLREQ1#68

GND\_69

65 UIM\_SWP/PERST1#66

Reserved\_2nd\_PERn1

63 RESERVED\_6464

Reserved\_2nd\_PERp1

61 ALERT62

GND\_63

59 I2C\_CLK60

Reserved\_2nd\_PETn1

57 I2C\_DATA58

Reserved\_2nd\_PETp1

55 W\_DISABLE1#56

GND\_57

53 Reserved\_W\_DISABLE2#54

PEWake0#

51 PERST0#52

**+3VSB\_WIFI\_BT1 +3VSB\_WIFI\_BT1**

**R13**

**3**

**8.**

**2K**

**R**

**1**

**3**

**4**

**8**

**.**

**2**

**K**

**R**

**1**

**3**

**5**

**1**

**0**

**0**

**K**

**R**

**1**

**3**

**6**

**8**

**.**

**2**

**K**

**R139 22R**

**GPIO1\_B0 GPIO3\_A3**

**PCIE20\_REFCLKN PCIE20\_REFCLKP**

**SATA2\_RXN**

**SATA2\_RXP**

**SATA2\_TXN**

**SATA2\_TXP**

**R140 0R**

**R141 ~~0R~~**

**C88 100NF**

**C90 ~~100NF~~**

| **100NF** |
| --- |

**C91**

**C92 ~~100NF~~**

CLKREQ0#

49 SSCLK50

GND\_51

47 COEX148

REFCLKN0

45 COEX246

REFCLKP0

43 COEX344

GND\_45

41 RESERVED\_4242

PERn0

39 RESERVED\_4040

PERp0

37 RESERVED\_3838

GND\_39

35 UART\_RTS36

PETn0

33 UART\_CTS34

**R159 ~~NC~~**

**C89**

**100NF**

**RTC\_CLK**

PETP0

GND\_33

23

UART\_TX32

UART\_RX22 UART\_Wake#20

C C

21 19 17 15 13 11 9

7

SDIO\_Reset# SDIO\_Wake# SDIO\_DAT3 SDIO\_DAT2 SDIO\_DAT1 SDIO\_DAT0 SDIO\_CMD

SDIO\_CLK

GND\_7

GND\_1818

LED2#16

PCM\_OUT/I2S\_SD\_OUT14 PCM\_IN/I2S\_SD\_IN12 PCM\_SYNC/I2S\_WS10

PCM\_CLK/I2S\_SCK8 LED1#6

3.3V\_44

**+3VSB\_WIFI\_BT1**

**+3VSB\_WIFI\_BT1 VCC3V3\_SYS**

**USB2\_HOST3\_DM**

USB\_D 5

3.3V\_22

**+3VSB\_WIFI\_BT1**

**USB2\_HOST3\_DP**

3 1

USB\_D+ GND\_1

7

7

7

7

**MINI\_PCI\_75P**

GND\_7676

| **C93** | **C94** | **C95** |
| --- | --- | --- |
| **22uF** | **100NF** | **22uF** |

**C96**

**100NF**

**R142 0R**

B B

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Default 5 10

Default

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**PHY0\_XTALOUT**

**Y2**

X1

4

GND4

3

2

**J27**

1

6

1

**GMAC0\_TXD0 GMAC0\_TXD1 GMAC0\_TXD2 GMAC0\_TXD3 GMAC0\_TXEN**

**GMAC0\_TXCLK**

**GMAC0\_RXD0 GMAC0\_RXD1 GMAC0\_RXD2**

**C100 22pF**

2X23

GND

**25MHz**

**C101 22pF**

**PHY0\_XTALIN**

**PHY0\_MDI3- PHY0\_MDI3+**

**PHY0\_MDI2- PHY0\_MDI2+**

**PHY0\_MDI1- PHY0\_MDI1+**

**PHY0\_MDI0-**

9

8 6

5 7

4 3

MDI3-

MDI3+ MDI2-

MDI2+ MDI1-

MDI1+

6

1



D D

**GMAC0\_RXD3**

**GMAC0\_RXDV\_CRS**

**R144 NC**

**ETH0\_REFCLKO\_25M PHY0\_XTALOUT**

**PHY0\_MDI0+**

2

MDI0-

**GMAC0\_RXCLK**

**C102 10nF**

1MDI0+ TCT

**ETH0\_REFCLKO\_25M**

**R145 100R**

**GMAC0\_MCLKINOUT PHY0\_CLKOUT125**

10

**PHY0\_CHASSIS\_GND**

11

**PHY0\_LED1/CFG\_LDO0**

Earth G+

**GMAC0\_MCLKINOUT**

**GMAC0\_MDC**

**GMAC0\_MDIO**

**GMAC0\_RSTn\_GPIO2\_D3 GMAC0\_INT/PMEB\_GPIO2\_D2**

**R148**

**120R**

VCCIO\_PHY0=3.3V

3.3Vpp

MAC <----- PHY

DNP 22R

**VCC3V3\_PHY0**

**PHY0\_LED2/CFG\_LDO1**

**R146 510R R147 510R**

**R150 0R**

G 12

14

Y 13 Y+

**HR911130C**

Tab down **C104 1000pF**

5

1

5

1

**PHY0\_CHASSIS\_GND**

VCCIO\_PHY0=1.8V

120R 100R Default

HR915330CE: -40~85 RGMII Power Source

CFG\_EXT CFG\_LDO[1:0]

**VDD10\_PHY0**

**1**

**0**

**R156 4.7K**

**PHY0\_LED0/CFG\_EXT PHY0\_LED2/CFG\_LDO1 PHY0\_LED1/CFG\_LDO0**

**R153 4.7K R155 4.7K**

**VCC3V3\_PHY0**

External 3.3V

External 1.8V (default)

| 1'b1 |
| --- |
| 1'b1 |

2'b00 2'b10

**R157**

**2.49K**

**OD**

**OD**

**T X**

**VCC\_PHY0\_IO Voltage Config**

Internal 1.8V 1'b0 2'b10

C C

**L**

**5**

**\_**

**L\_**

**E\_**

**T**

**21**

**GF**

**GF**

**GF**

**U**

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**C**

**C**

**C**

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**U**

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**L**

**L**

**O**

**2**

**1**

**0**

**VCC3V3\_PHY0**

**A**

**A**

**K**

**D**

**D**

**D**

**T**

**T**

**L**

**E**

**E**

**E**

**X**

**X**

**C**

**L**

**L**

**L**

**0**

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**T**

**0**

**0**

**0**

**0**

**0**

**0**

**E**

**Y**

**Y**

**Y**

**Y**

**Y**

**Y**

**S**

**H**

**H**

**H**

**H**

**H**

**H**

**R**

**P**

**P**

**P**

**P**

**P**

**P**

**R158 0R**

**R161 4.7K**

**R162 4.7K**

**GMAC0\_INT/PMEB\_GPIO2\_D2**

**PHY0\_RXD3/PHYAD0 PHY0\_RXCLK/PHYAD1 PHY0\_RXDV/PHYAD2**

**R160 4.7K**

**VCCIO\_PHY0**

**PHY0\_LED2/CFG\_LDO1**

**PHY0\_LED1/CFG\_LDO0**

Reserve for EMI.

7

4

2

0

8

6

3

1

**U9**

1 4

4

9

3

3

3

3

K

5

3

3

3

1

3

3

**PHY Address Config**

PHY Address PHYAD[2:0] 1 (default) ~~3'b001~~

3

0

N

0

T

B

d a

P

\_

E

3DDVA

T

1

E

D

S

D

R

V

A

LC

TXE

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I

LATX

T

O

U

D

\_

O

L

K

\_

L

G

C

F

ODL

GF

\_

XE

GFC

\_

EMP/BT

**R163 4.7K**

**PHY0\_RXD0/RXDLY**

/TU

C/2

C/1

/0D

NI

**VDD10\_PHY0**

**PHY0\_MDI0+ PHY0\_MDI0-**

**PHY0\_MDI1+ PHY0\_MDI1-**

1 2 3 4 5

MDI[0]+ MDI[0]- AVDD10 MDI[1]+ MDI[1]-

O

LATX

\_

DEL

DEL

EL

DVDD1021 RXD3/PHYAD022 RXD2/PLLOFF23 RXD1/TXDLY24 RXD0/RXDLY25 RXCTL/PHYAD226 RXC/PHYAD127 DVDD\_RG28 DVDD3329 REG\_OUT30

**PHY0\_REG\_OUT**

**PHY0\_RXCLK/PHYAD1 PHY0\_RXDV/PHYAD2**

**VCC3V3\_PHY0 VCCIO\_PHY0**

**Pull-up for additional 2ns delay to RXC for data latching**

**PHY0\_MDI2+ PHY0\_MDI2-**

6 7 8

MDI[2]+ MDI[2]-

**PHY0\_RXD0/RXDLY PHY0\_RXD1/TXDLY PHY0\_RXD2/PLLOFF**

**R165 4.7K**

**PHY0\_RXD1/TXDLY**

**VCC\_1V8 VDD10\_PHY0**

**PHY0\_MDI3+ PHY0\_MDI3-**

9

10

AVDD10 MDI[3]+ MDI[3]-

**PHY0\_RXD3/PHYAD0**

**VDD10\_PHY0**

**Pull-up for additional 2ns delay to TXC for data latching**

**VCCIO\_PHY0**

**R167 0.1R**

**Close to PIN28**

**PHY0\_RXD2/PLLOFF**

**R169 4.7K**

**VCCIO\_PHY0**

B B

B

3

T

**C107**

**C108**

**C109**

**4.7uF**

**1uF**

**100nF**

**Pull-up to disable PLL @ ALDPS mode(Low power mode)**

3

S

O

3

2

1

L

DD

RY

C

0

T

C

V

A

1

HP

DM

IDM

DXT

DXT

DXT

DXT

CXT

XT

**RTL8211F-CG**

2

3

4

5

6

7

8

9

0

1

**VCC3V3\_PHY0**

1

1

1

1

1

1

1

1

2

**K**

QFN40\_A

RTL8211F-CG(SW Mode)

**O**

**3**

**2**

**1**

**0**

**N**

**L**

**n**

**VDD10\_PHY0 VCC\_3V3 VCC3V3\_PHY0**

**C**

**I**

**D**

**D**

**D**

**D**

**E**

RTL8211FI-CG(SW Mode)Industrial **C**

**Close to PIN11,40**

**T**

**SR**

**0Y**

**HP**

**\_**

**DM**

**0CA**

**MG**

**\_**

**DM**

**0CA**

**MG**

**\_**

**XT**

**0CA**

**MG**

**\_**

**XT**

**0CA**

**MG**

**\_**

**XT**

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**MG**

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**XT**

**0CA**

**MG**

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**XT**

**0CA**

**MG**

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**XT**

**0CA**

**MG**

**\_**

**PHY0\_REG\_OUT**

**L5**

**2.2uH**

**C113**

**C114**

**Close to PIN21 C115**

**R171 0.1R**

**C110 4.7uF**

**C111 100nF**

**C112 100nF**

**VCC3V3\_PHY0**

**GMAC0\_RSTn\_GPIO2\_D3** PHYRSTB is 3.3V IO

**R172 NC R174 0R**

**C116 100nF**

**R173 1.8K**

**VCCIO\_PHY0**

**Close to PIN30**

RTL8211F-CG(SW Mode)

RTL8211FI-CG(SW Mode)Industrial

**4.7uF**

**100nF**

**100nF**

**C117 4.7uF**

**C118 100nF**

**PHY0\_RXD0/RXDLY**

**R175 22R**

**GMAC0\_RXD0**

**C119**

**C120**

**C121**

**R176 22R 100nF**

**PHY0\_RXD1/TXDLY PHY0\_RXD2/PLLOFF**

**R177 22R**

**GMAC0\_RXD1 GMAC0\_RXD2**

**100nF**

**100nF**

A A

**PHY0\_RXD3/PHYAD0 PHY0\_RXCLK/PHYAD1 PHY0\_RXDV/PHYAD2**

**Close to PHY**

**R178 22R R179 22R R180 22R**

**GMAC0\_RXD3**

**GMAC0\_RXCLK GMAC0\_RXDV\_CRS**

**C122 NC**

**Close to PIN3,8,38**

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**Close to PIN29**

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SmartFLY 6 10

Default 6 10

Default 6 10

Default

2

1

5

4

3

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1

**R219 100R**

**KEY VCC\_3V3**

**C146**

**R220 1K**

**SW1**

**SPK MIC**

**10uF**

**SW**

**SPKP\_OUT**

**FB1 0R**

1 2

1

**J29**

**MIC1\_INP**

**C147**

**R221 22R**

D D

**FB2**

1 2 **MIC1 J30**

**SARADC\_VIN0\_KEY/RECOVERY**

**SW2**

**SPKN\_OUT**

**0R**

**V**

**V**

**R**

**R**

**2**

**2**

**4**

**5**

**N**

**N**

**C**

**C**

R225

100K

2

**CN2M\_2R00\_V\_P\_DIP**

**MIC1\_INN**

**100pF R224 1K**

1 2

**MIC-4020**

1

2

**CN2M\_2R00\_V\_P\_DIP**

**RK809\_PWRON RST**

**R222 22R**

|  |  |
| --- | --- |
|  |  |
|  |  |

**C**

**1**

**5**

**0**

**1**

**0**

**0**

**N**

**F**

**SW**

**SW3 SW**

**VCC\_3V3VCC\_3V3**

R226 10K **J31**

R227 22R

**HP\_DET\_L\_GPIO3\_C2**

C C

|  |
| --- |
|  |

**C151**

**10uF**

**C152**

**R228**

7

7

33

**J32**

5

1 2

**100NF**

**10K**

**HPR\_OUT HPL\_OUT**

**R229 0R R232 0R**

5

5

22

R230 0R R231 0R

**HP\_SNS**

4 3 **UKEY**

**PWM7\_IR**

**C153**

**100PF**

**C154**

**100PF**

1

**ED30**

**ED31**

1

**ESD5451N**

4 6

4 6

**EJ**11 88

**ESD5451N**

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2

B B

A A

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SmartFLY 7 10

Default 7 10

Default 7 10

Default

2

1

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4

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**R234 0R**

2

1

**PCIe3.0 x 2Lanes**

**CON4 M.2 SOCKET M-KEY**

**VCC3V3\_PCIE**

**CLK0P\_CON PCIE30\_REFCLKP\_CON**

**CLK0N\_CON**

**R235 0R**

**PCIE30\_REFCLKN\_CON**

**DP3**

**R143 5.1R**

1 3 5 7

GND

GND

PERn3 PERp3

3.3V2 3.3V4 N/C6

**R152 NC**

**VCC3V3\_PCIE**

**VCC3V3\_PI6C**

**R236 10K**

**PI6C\_S0**

**DM3**

**R149 5.~~1R~~ C166 NC**

9

11

GND

N/C8

DAS/DSS#10

**R170 NC**

**VCC3V3\_PCIE**

D D

**PI6C\_S1**

**PI6C\_SS0 PI6C\_SS1**

**R237 10K**

**R239 10K R241 10K**

**VCC3V3\_PCIE PCIE30\_RX1N**

**R181 NC C156 220nF**

13 15 17 19 21 23 25 27 29

PETn3 PETp3 GND

PERn2 PERp2 GND

PETn2 PETp2 GND

3.3V12 3.3V14 3.3V16 3.3V18

N/C20 N/C22 N/C24 N/C26 N/C28

**C155 10uF**

**C205**

**VCC5V0\_SYS**

1

**U11**

OUT5

**VCC3V3\_PI6C**

**PCIE30\_RX1P**

**PCIE30\_TX1N PCIE30\_TX1P**

**PCIE30\_RX0N**

**C157**

**C158 C159**

| **220nF** |
| --- |
| **220nF** |
| **220nF** |

31 33 35 37 39 41

PERn1

PERp1

GND

PETn1

PETp1

GND

PERn0/SATA-B+

N/C30

N/C32

N/C34

N/C36

DEVSLP38 N/C40

**SIM\_RST SIM\_CLK SIM\_DATA SIM\_VDD**

**100NF**

**R242 10K R154 NC**

**VCC3V3\_PCIE VCC3V3\_PCIE**

IN

**PCIE30\_RX0P**

PERp0/SATA-B 43

N/C42

45

GND

N/C44

**C161**

2

GND

**C163**

**PCIE30\_TX0N**

**C160 220nF**

PETn0/SATA-A 47

N/C46

**1uF**

**~~G~~PIO3\_C3**

**R244**

**10K**

**R247**

**NC**

3BP4

EN

**SGM2019-3.3YN5G/TR VCC3V3\_PI6C**

**10uF** 10V

**PCIE30\_TX0P**

**PCIE30\_REFCLKN\_CON PCIE30\_REFCLKP\_CON**

**C162**

**C164 C165**

| **220nF** |
| --- |
| **220nF** |
| **220nF** |

49 51 53 55 57

67

PETp0/SATA-A+ GND

REFCLKn

REFCLKp

GND

N/C48

PERST#50 CLKREQ#52 PEWAKE#54 N/C56

N/C58

SUSCLK68

**R243 22R**

**R245 22~~R~~**

**R246 22~~R~~**

**VCC3V3\_PCIE**

**R164 NC**

**PCIE30X2\_PERSTn\_M1**

**PCIE30X2\_CLKREQn\_M1**

**PCIE30X2\_WAKEn\_M1**

**VCC3V3\_SYS DC\_5V**

C C

**R249**

**VCC3V3\_PCIE**

**R151 NC**

69 71 73

N/C

PEDET GND

3.3V70 3.3V72 3.3V74

**RTC\_CLK**

**R248 0RR291 NC**

**PCIECLKIC\_OE\_H\_GPIO3\_A7**

**R250 10K**

1

**10K**

3

**Q7**

**S8050**

**PI6C\_OE**

75

GND GND

**SIM2**

**C170 100NF**

**C171 22uF**

**C172 22uF**

**R251**

2

**C494 100NF**

**SIM\_VDD**

1

GND5

**51K**

| **C493** |
| --- |

**100NF**

**SIM\_RST SIM\_CLK**

2 3 4

VCC RST CLK NC

0

NC6 ID7 NC8

**SIM\_VDD SIM\_DATA**

**R292**

**VCC3V3\_PI6C**

**C173**

**1uF**

**C174 100nF**

9

1

9

0

1

靠座子摆放

**SIM**

**SIM\_VDD**

**10K**

**VCC3V3\_PI6C**

**SPI Flash**

B B

**PI6C\_S0 PI6C\_S1**

1 2

**U12**

S0

S1

VDDX16

**C175 1uF**

**R255 2.2R**

**C176**

**100nF**

**C177 10uF**

**VCCIO\_FLASH**

3

**PI6C\_SS0**

8

**PI6C\_SS1**

4

5

**Y4**

SS0

SS1

X1/CLK

VDDA12

CLK0P15 CLK0N14

**CLK0P CLK0N**

**R257 33R R258 33R**

**R252**

**R253**

**R254**

**10K**

**10K**

**10K**

**CLK0P\_CON**

**CLK0N\_CON**

**VCCIO\_FLASH VCC\_1V8 VCCIO\_FLASH**

1

X1

GND4

**R259 22R** 5% 7

X2

GNDX

CLK1N10 CLK1P11

**R260**

**R261**

**U13**

**GD5F1GQ5UEYIG**

WSON8\_8R00X6R00X0R80\_T

2X23 GND

**PI6C\_OE**

6

**49.9R**

**49.9R**

**FSPI\_CS0n/FLASH\_CS0n**

1

VCC8

CS

1 2 **R256 ~~0R~~**

**C178**

1

OE

**25MHz**

9

GNDA13

**FSPI\_D1/FLASH\_RDn**

2HOLD(D3)7 DO(D1)

**FSPI\_D3/FLASH\_CS1n**

**100nF**

**C179 22pF**

**C180 22pF**

IREF

**PI6C557-03BLE**

**R262**

3

**eMMC\_RSTn/FSPI\_D2/FLASH\_WPn**

WP(D2)

D

CLK6

2

**FSPI\_CLK**

4DI(D0)5 A

**FSPI\_D0/FLASH\_RDY**

**470R**

**CLK1P CLK1N**

**R263 33R R264 33R**

**R265**

**R266**

**PCIE30\_REFCLKP\_IN PCIE30\_REFCLKN\_IN**

VSS

P

E

9

A A

**49.9R**

**49.9R**

If board target trace impedance is 50ohm

then R = 475ohm providing an IREF of 2.32 mA .

The output current ( IOH ) is 6 \* IREF . 

6x2.32X50=696mV

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SmartFLY 8 10

Default 8 10

Default 8 10

Default

2

1

5

**J33**

1

2

3

4

**C181**

**VCC3V3\_SYS ED32**

**R267 22R**

**R268 ~~22R~~**

**ED33**

4

**UART2\_TX\_M0\_DEBUG**

**UART2\_RX\_M0\_DEBUG**

**J34**

1

2

3

4

**R269 22R R270 ~~22R~~**

3

**I2C1\_SCL\_TP I2C1\_SDA\_TP**

2

1

**SATA3.0 Port2**

**4PIN/G**

1

1

**C182**

**VCC3V3\_SYS ED34**

**ED35**

**100NF**

**ESD5451N**

**ESD5451N**

**4PIN/R**

**100NF**

1

**ESD5451N**

1

**ESD5451N**

2**J37** 2

**J35**

2

2

1

D D

1

**SATA2\_TXP**

**C183 10nF**

2

1

2 3 4

**C186**

**VCC3V3\_SYS ED36**

**ED37**

**R271 22R R272 ~~22R~~**

**UART3\_TX\_M1 UART3\_RX\_M1**

**J36**

**SATA2\_TXN SATA2\_RXN**

**C184**

**C185 C187**

| **10nF** |
| --- |
| **10nF** |
| **10nF** |

3 4 5 6

2 3 4 5

2222

**4PIN/G**

**100NF**

1

**ESD5451N**

1

**ESD5451N**

1

2

3

4

**C188**

**VCC3V3\_SYS ED38**

**R273 22R**

**R275 ~~22R~~**

**ED39**

**I2C5\_SCL\_M0 I2C5\_SDA\_M0**

**SATA2\_RXP**

**SATA2\_ACT\_LED**

**R274 510R**

**R276 0R**

7

8

9

10 11

6

7

8

9

10

**J38**

1 2 3 4

**C191**

2

**VCC3V3\_SYS**

2

**R277 22R R278 ~~22R~~**

**UART4\_TX\_M1 UART4\_RX\_M1**

**4PIN/R**

**100NF**

1

**ESD5451N** 2

1

**ESD5451N** 2

**DC\_5V**

**R279 0R**

| **C189** |
| --- |
|  |

**100NF**

**C190 22uF**

12 13 14 15 16 17 18

11 12 13 14 15 16 17

2121

**ED40**

**ED41**

**4PIN/G J39**

1 2 3 4

**100NF**

1

**ESD5451N** 2

1

**ESD5451N**

2

**R280 22R**

**R281 ~~22R~~**

**UART8\_TX\_M0 UART8\_RX\_M0**

**SYS\_12V**

| **C192** |
| --- |
|  |

**100NF**

**C193 22uF**

19 20

18

19

20

**FPC-20PIN-0D5-A**

C C

**C194**

**VCC3V3\_SYS ED42**

**ED43**

**4PIN/G**

**J40**

1

2

3

4

**100NF**

1

**ESD5451N** 2

**VCC3V3\_SYS**

1

**ESD5451N**

2

**R282 22R**

**R283 ~~22R~~**

**UART9\_TX\_M1 UART9\_RX\_M1**

**C195**

**ED44**

**ED45**

**4PIN/G**

**100NF**

1

**ESD5451N** 2

1

**ESD5451N** 2

B B **CAN1\_M1 CAN transceiver IC**

**VCC\_3V3**

**R284 NC**

**VCC\_3V3 VCC\_CAN VCC5V0\_SYS R285 0R**

TCAN332G:PIN3=3.3V,PIN5,8=NC TCAN1044V-Q1:PIN3=5V,PIN5=VIO,PIN8=S

**CAN1\_TX\_M1**

**R286 22R**

**C196 4.7uF**

5 1

**U14**

VIO TXD

VCC3 CANH7

**C197**

**100nF**

**R287 60.4R**

**C198 4.7uF**

**CANH**

**CANH CANL**

**4PIN2.0PA** 4

3

2

**CAN1\_RX\_M1**

4

**R288 22R**

RXD

CANL6

**R289 60.4R**

**C199 4.7nF**

1

**CAN\_VSS CAN\_VSS**

**J41**

1

**C200**

**C201**

**CANL**

**C202**

**FB3**

A A

8

**NC**

**NC**

S

**C203**

GND2

**C204**

**100nF**

**0R**

**R290**

**4.7K**

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**TCAN1044V-Q1**

**NC**

**NC**

2

**CAN\_VSS**

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