


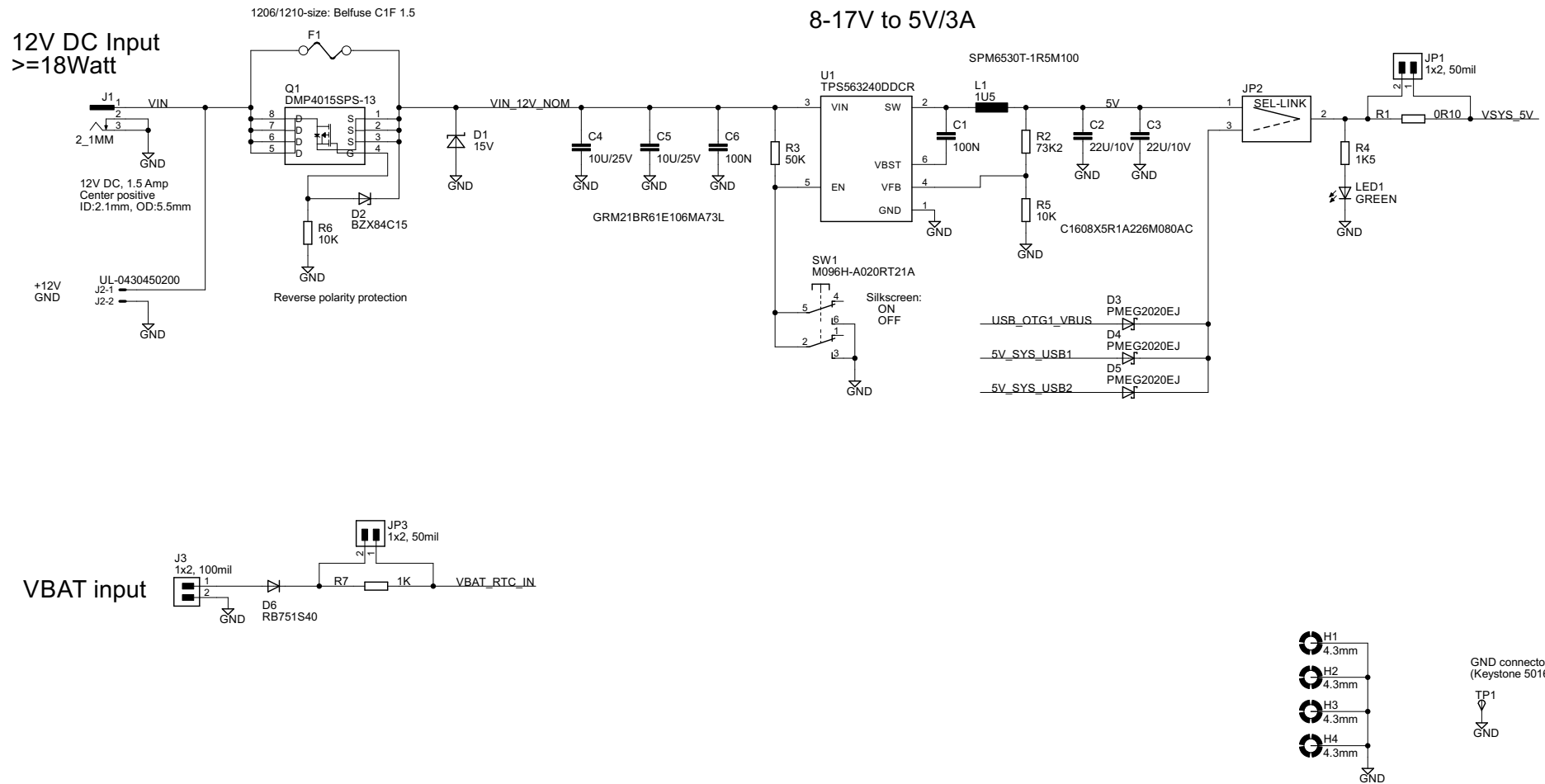
Page 2:	Powering
Page 3:	uCOM Connectors
Page 4:	Push-buttons and Boot control
Page 5:	I2C GPIO Expander and user LEDs and button
Page 6:	JTAG Debug Interface and Optional QSPI
Page 7:	Parallel LCD interface
Page 8:	Expansion Connectors
Page 9:	100/10Mbps Ethernet-PHY Adapter
Page 10:	MIPI-DSI Display Interfaces
Page 11:	MIPI-DSI to HDMI Adapter
Page 12:	Camera Interface
Page 13:	Ethernet Interface for on-board PHY
Page 14:	USB OTG and USB C Interface
Page 15:	USB Host Interface and Hub
Page 16:	UART-to-USB bridge interfaces
Page 17:	Mikrobus/Click Module Interface
Page 18:	I2C Connections
Page 19:	M.2 (NGFF) Key E Connector
Page 20:	PCIe Signal Routing
Page 21:	uSD card interface
Page 22:	M.2 (NGFF) Key B Connector (USB Host and PCIe Interfaces)
Page 22:	MIPI-DSI to LVDS Adapter

UL = UnLoaded = normally not mounted component.

Default jumper settings are indicated in the schematic.
However, always check jumper positions on actual boards
since there is no guarantee that all jumpers are in default place.

Rev PA1-PA8 First revision	
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Powering



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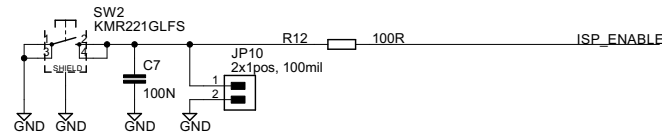
uCOM Connectors



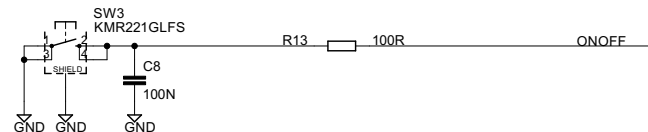
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Push-buttons and Boot control

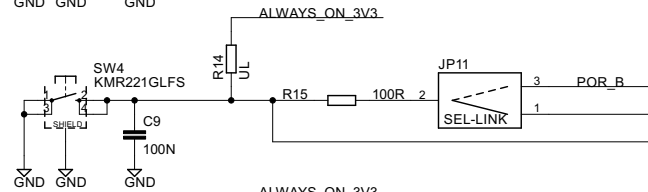
ISP Enable Key
and jumper



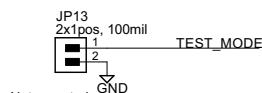
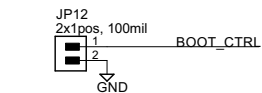
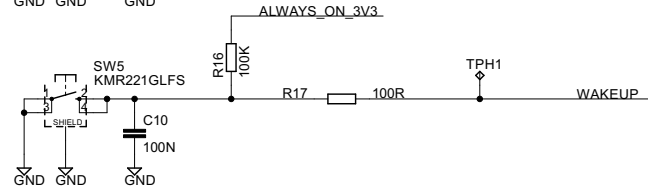
ON/OFF Key



Reset Key

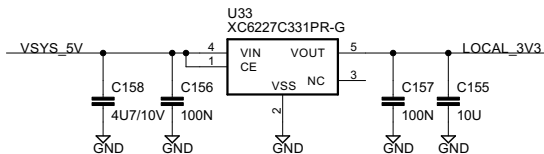


Wakeup Switch



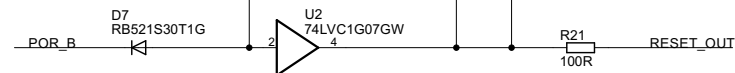
Not mounted

PERI_3V3

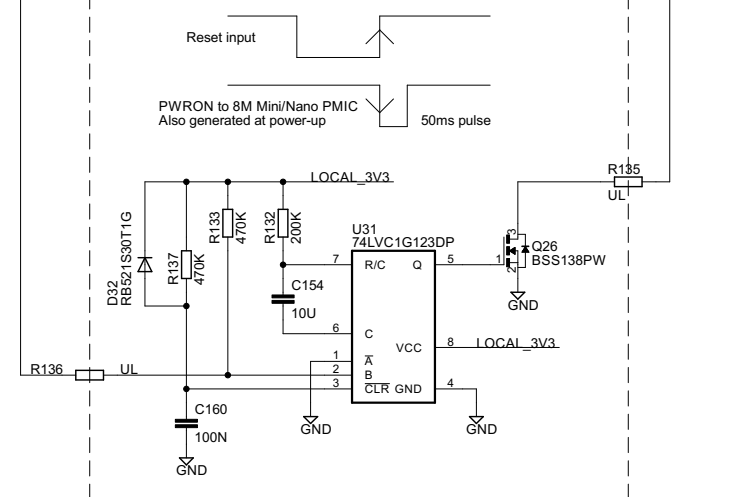


Can be 1.8 or 3.3V logic level

Reset LED



Optional control for iMX8M Mini/Nano



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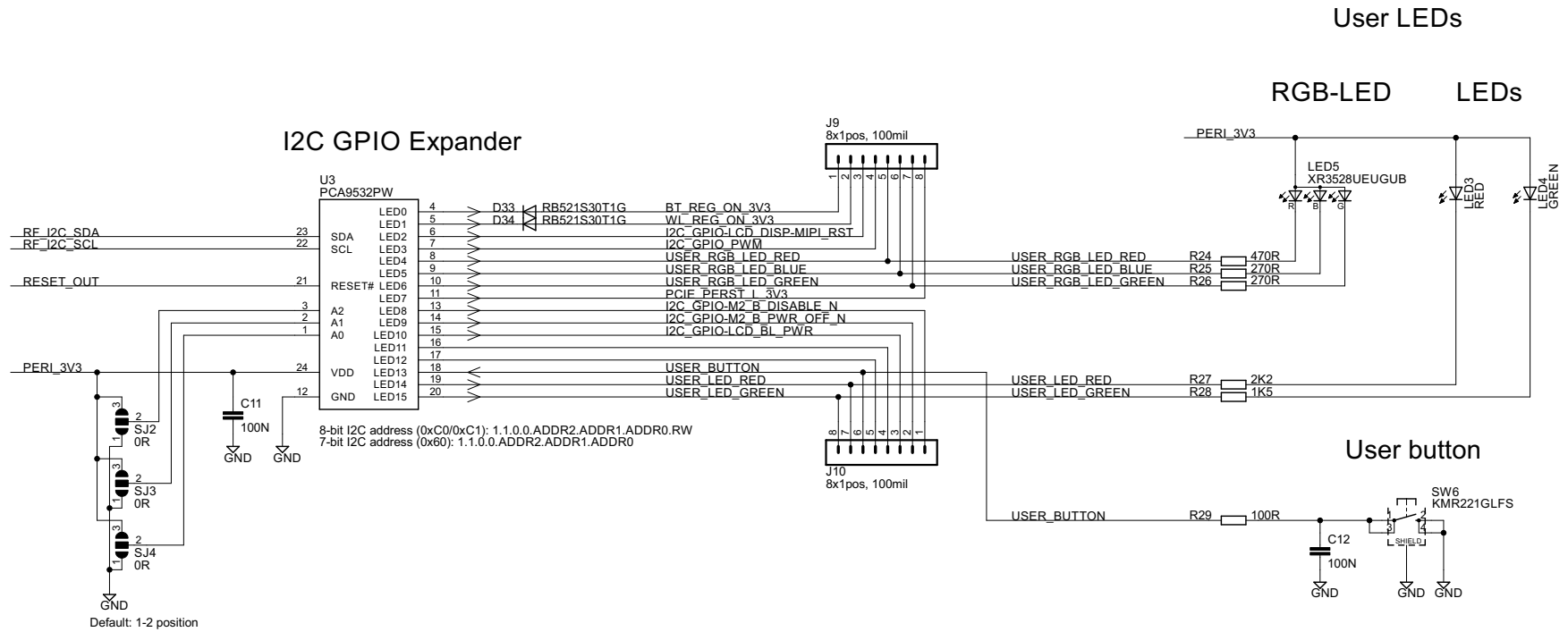
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I2C GPIO Expander and user LEDs and button



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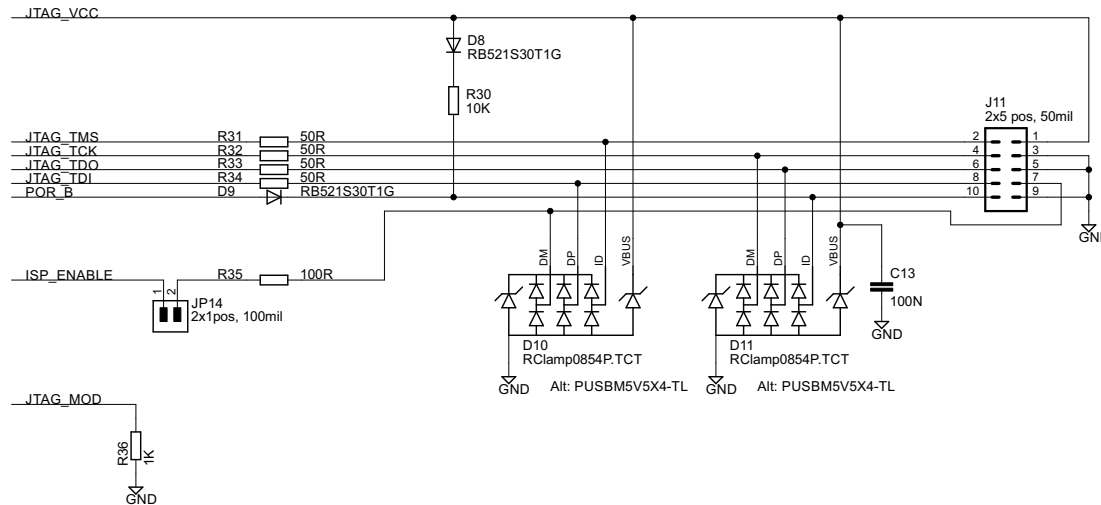
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JTAG Debug Interface and Optional QSPI



ARM 10-pin interface Serial Wire Mode

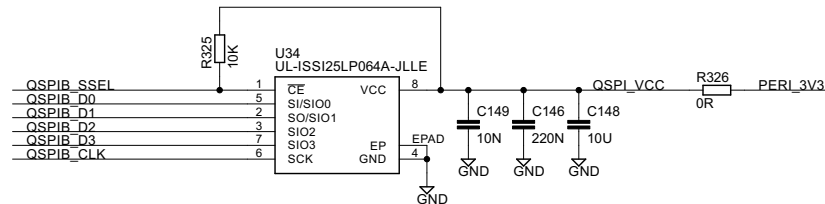
10 pos (50 mil pitch) connector

2-SWDIO	1-VCC
4-SWCLK	3-GND
6-SWO	5-GND
8-N/U	7-Optional ISP_ENABLE
10-RESET	9-GND

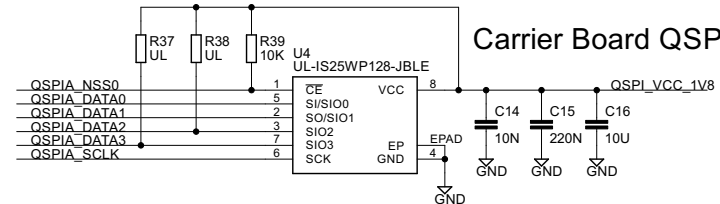
ARM 10-pin interface JTAG Mode

2-TMS	1-VCC
4-TCLK	3-GND
6-TDO	5-GND
8-TDI	7-(RTCK)
10-RESET	9-GND

Pads for carrier board QSPI (for iMX RT1064 uCOM)



Pads for carrier board QSPI (for iMX8M Mini/Nano uCOM)



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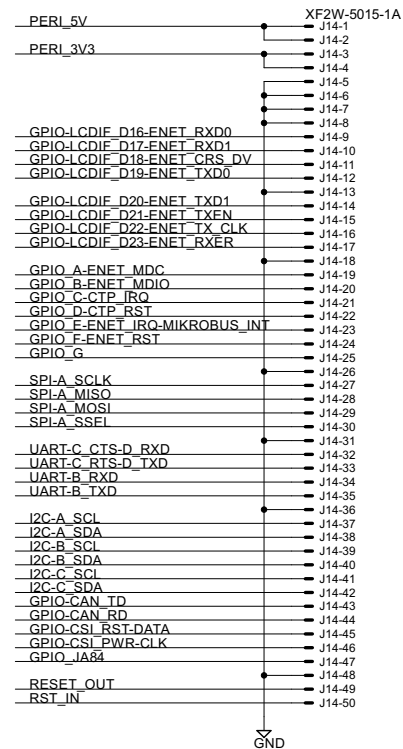
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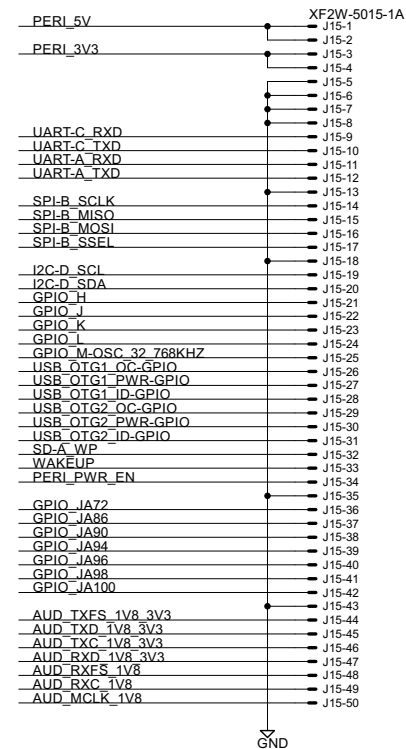
Expansion Connectors

Dual 50-pos FPC Connectors (0.50mm pitch)

Connector "A"
(in silkscreen on PCB)



Connector "B"
(in silkscreen on PCB)



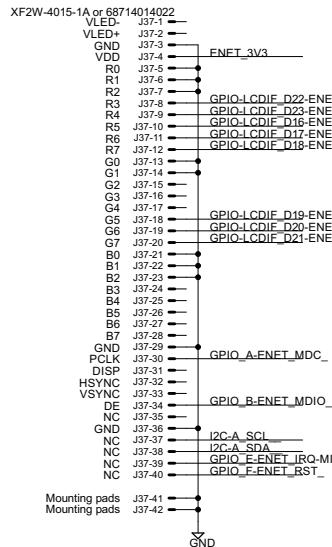
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Separate adapter board

Connector "A"
(in silkscreen on PCB)

0.5mm pitch, top and bottom contacts

XF2W-5015-1A

J17-1 PERI_5V

J17-2 ENET_3V3

J17-3

J17-4

J17-5

J17-6

J17-7

J17-8

J17-9

J17-10

J17-11

J17-12

J17-13

J17-14

J17-15

J17-16

J17-17

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J17-62

J17-63

J17-64

J17-65

J17-66

J17-67

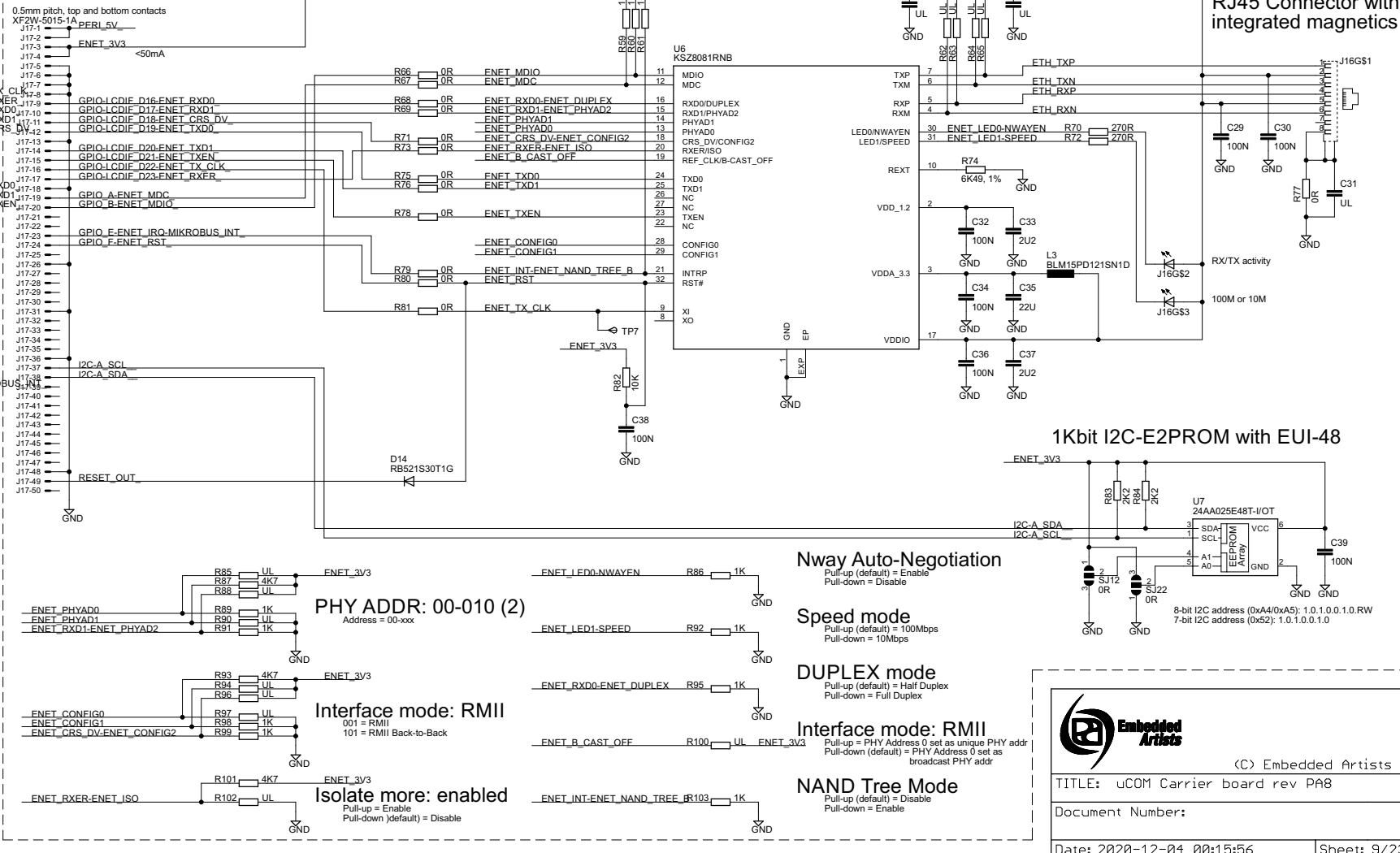
J17-68

J17-69

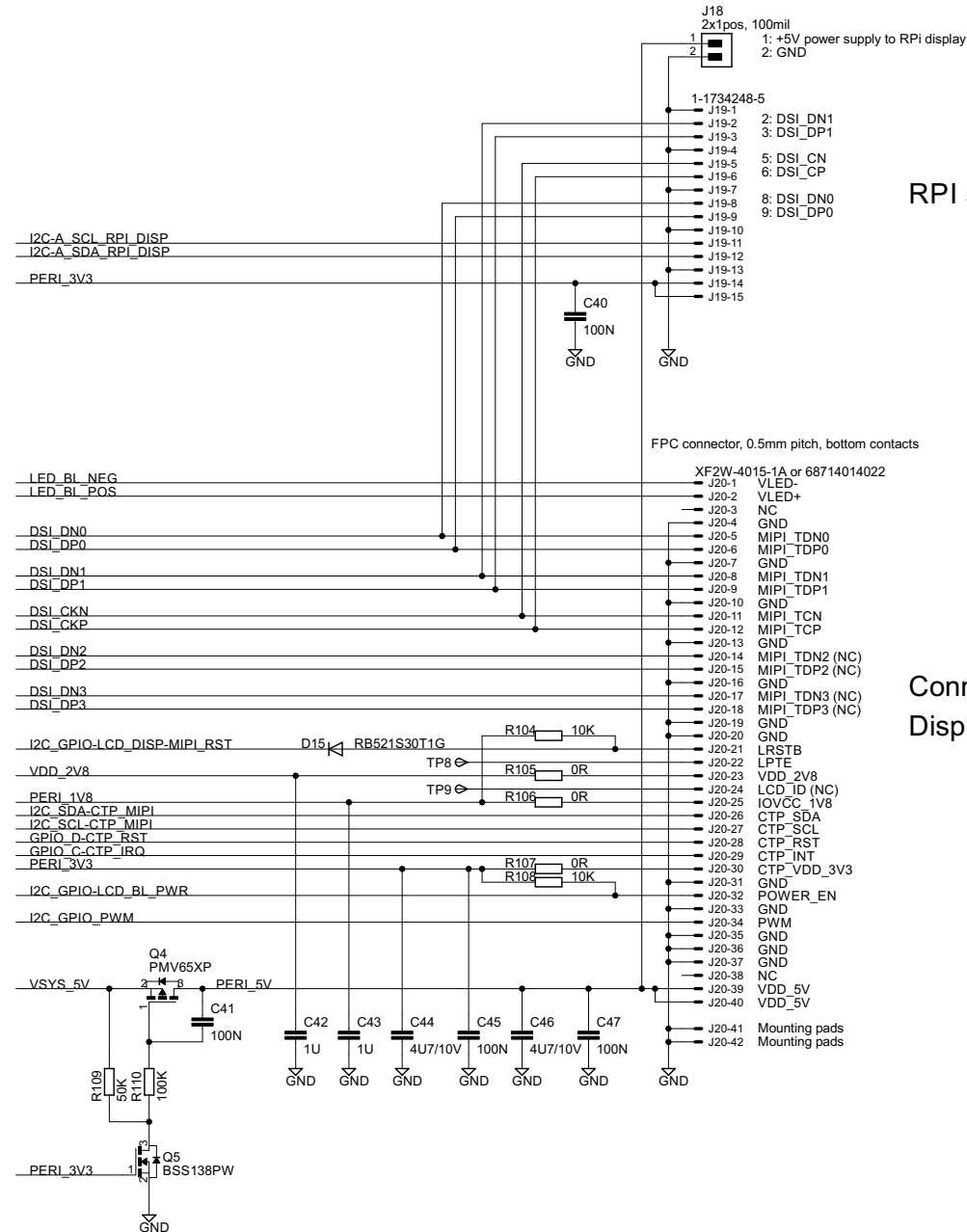
J17-70

100/10Mbps Ethernet-PHY Adapter

RJ45 Connector with
integrated magnetics



MIPI-DSI Display Interfaces



RPI serial display (MIPI)

Connects to NXP RK055HDMIPI4M
Display: RK055AHD091-CTG(720P)



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Document Number:

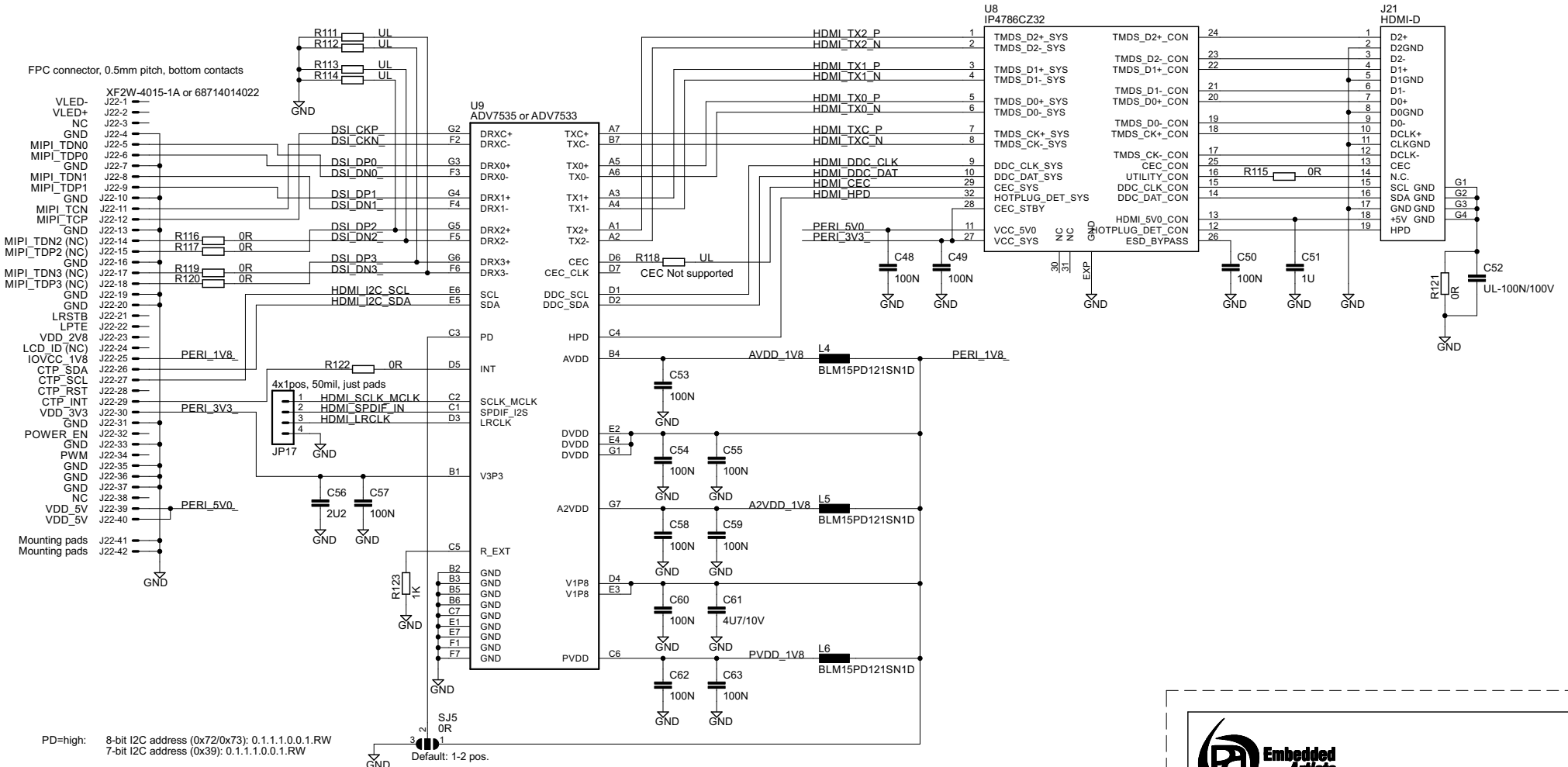
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MIPI-DSI to HDMI Adapter

Separate adapter board

HDMI connector



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TITLE: uCOM Carrier board rev PA8

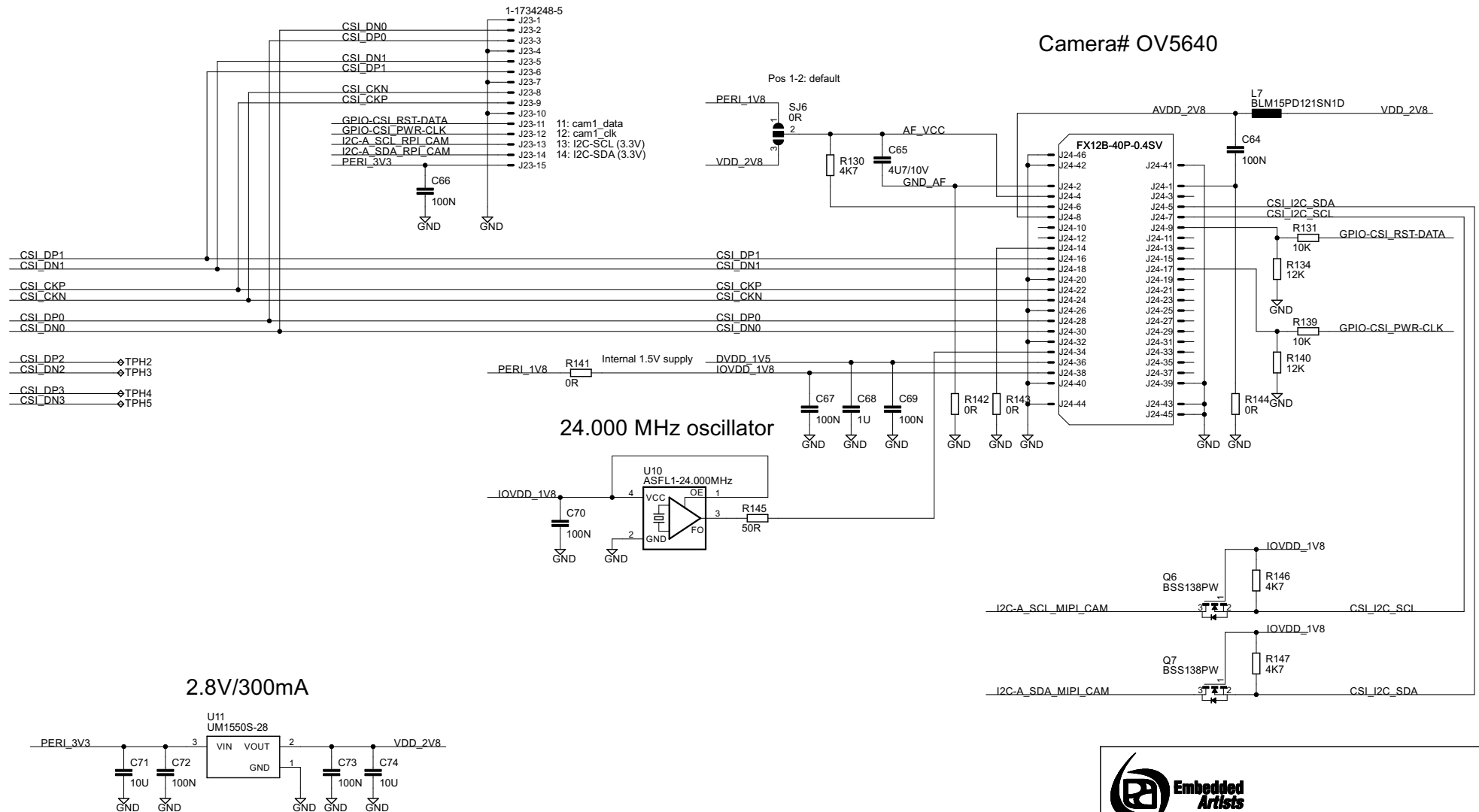
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Camera Interface

RPI serial camera (MIPI)



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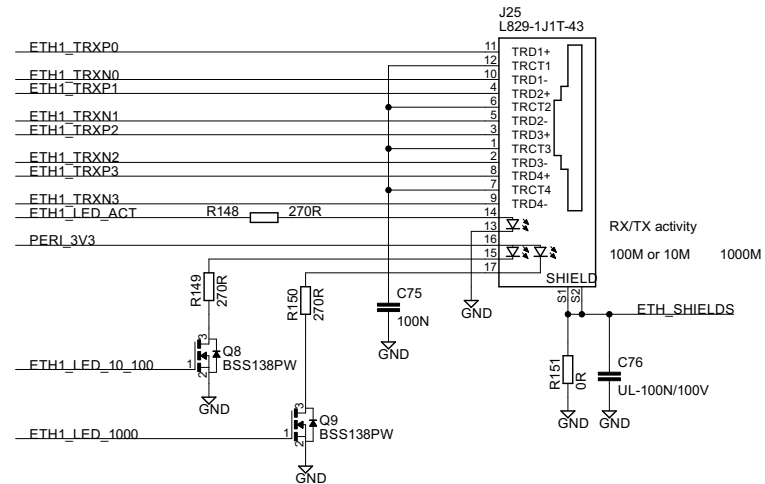
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Ethernet Interface for on-board PHY

Ethernet Interface



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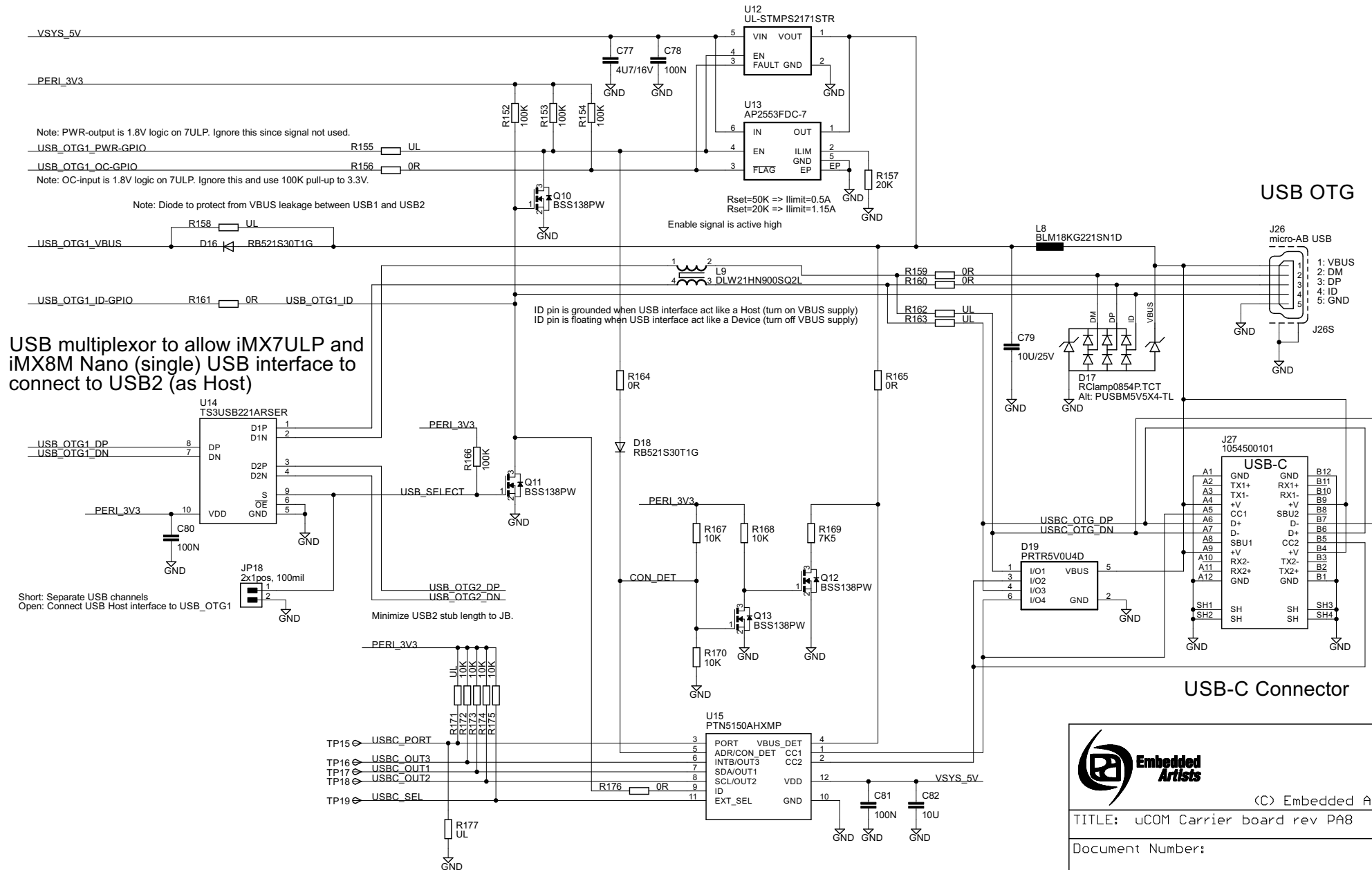
TITLE: uCOM Carrier board rev PA8

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USB OTG and USB C Interface



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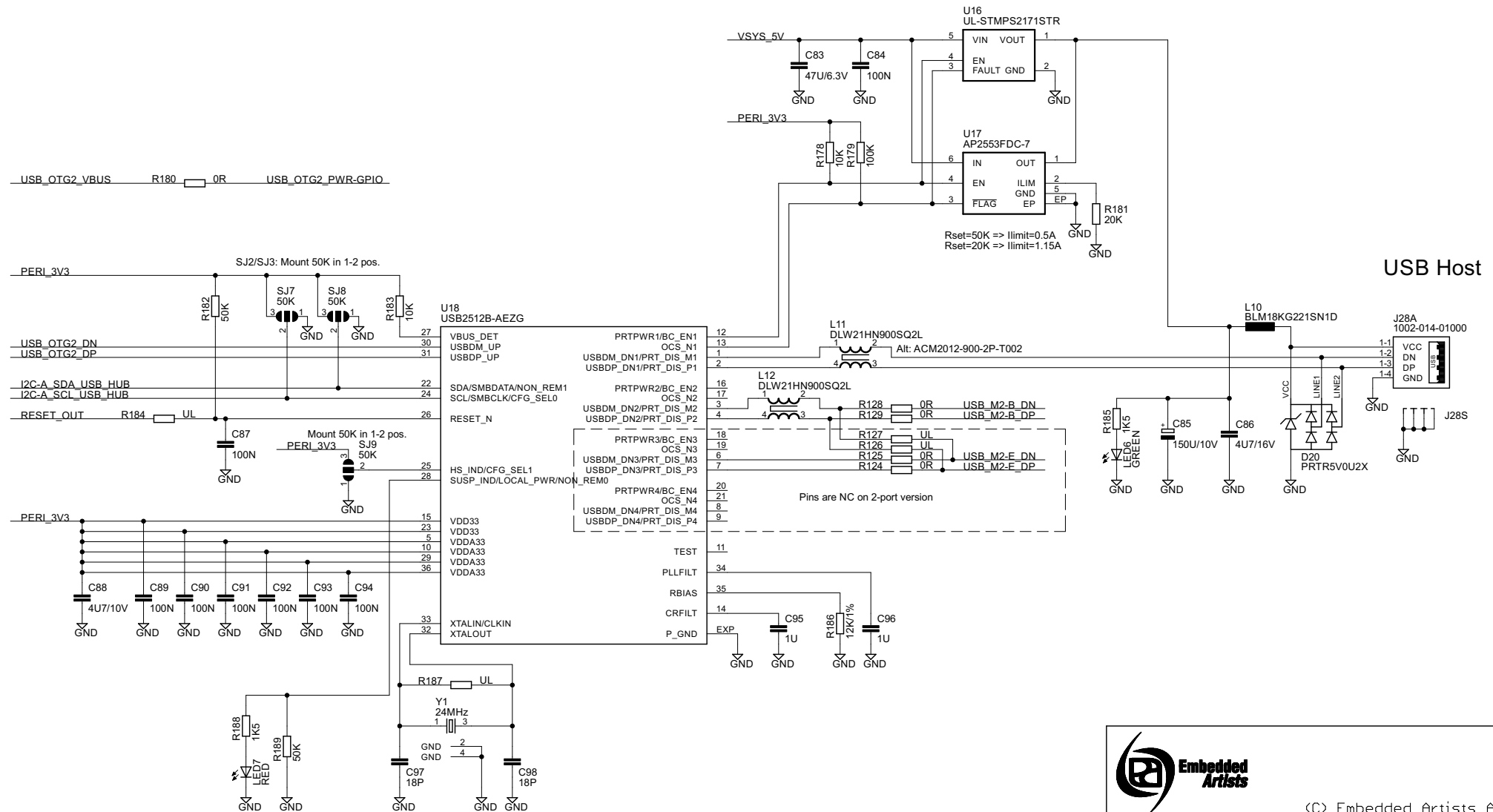
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USB Host Interface and Hub



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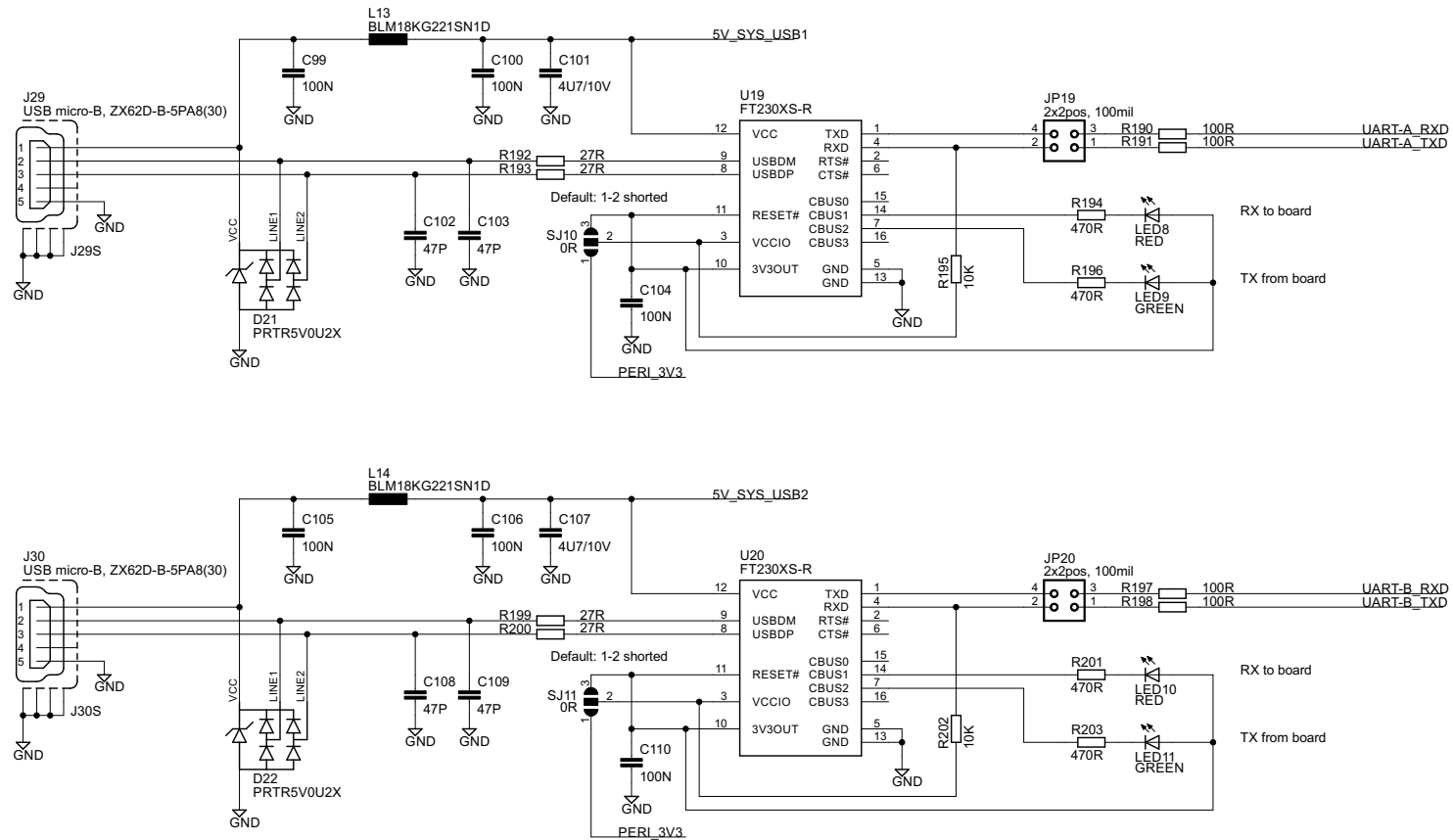
TITLE: uCOM Carrier board rev PA8

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UART-to-USB bridge interfaces



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TITLE: uCOM Carrier board rev PA8

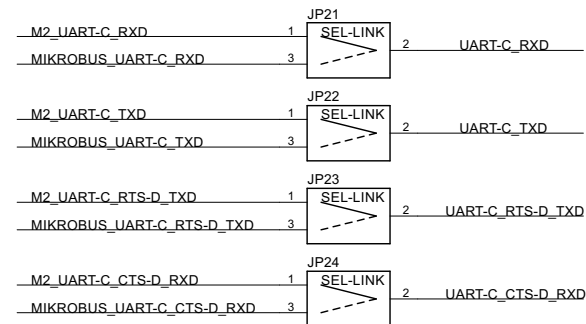
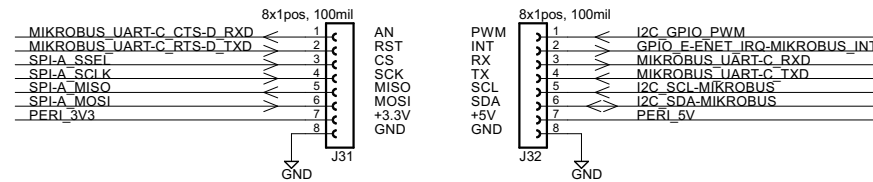
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Mikrobus/Click Module Interface

Mikrobus/Click Module Interface



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TITLE: uCOM Carrier board rev PA8

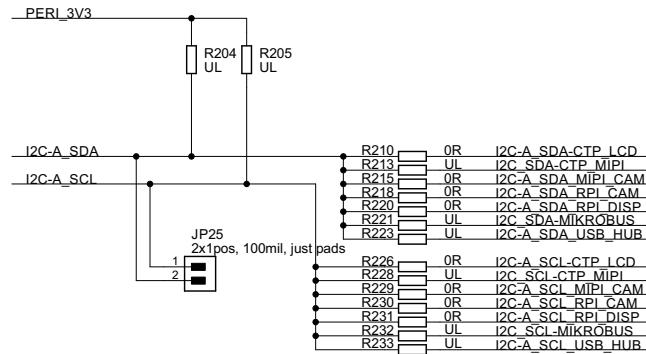
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I2C Connections

I2C-A



64kbit E2PROM on uCOM: 24LC64
8-bit I2C address (0xAA/0xAB): 1.0.1.0.1.0.1.RW
7-bit I2C address (0x55): 1.0.1.0.1.0.1

GPIO expander: PCA9532PW
8-bit I2C address (0xC0/0xC1): 1.1.0.0.ADDR2.ADDR1.ADDR0.RW
7-bit I2C address (0x60): 1.1.0.0.ADDR2.ADDR1.ADDR0

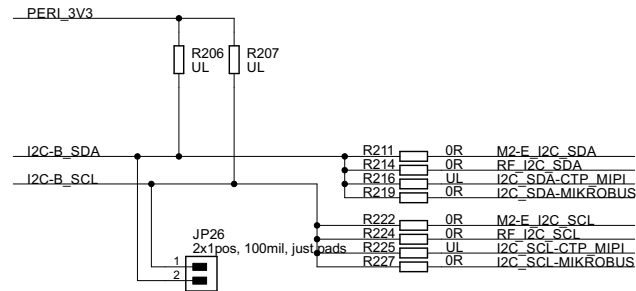
Optional 1Kbit I2C-E2PROM with EUI-48: 24AA025E48T
8-bit I2C address (0xA6/0xA7): 1.0.1.0.0.1.1.RW
7-bit I2C address (0x53): 1.0.1.0.0.1.1

~~Audio codec: WM8731SEDS
8-bit I2C address (0x34/0x35): 0.0.1.0.1.0.1.RW
7-bit I2C address (0x1A): 0.0.1.0.1.0.1~~

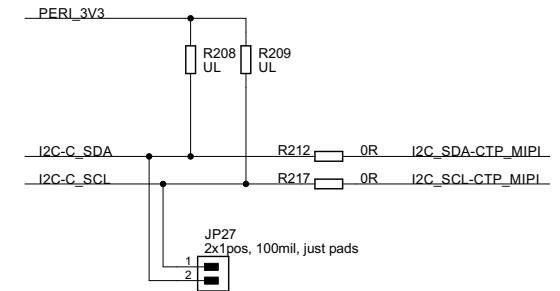
~~RTC: PCF8523
8-bit I2C address (0xD0/0xD1): 1.1.0.1.0.0.0.RW
7-bit I2C address (0x68): 1.1.0.1.0.0.0~~

~~Clock generator: 9FGV0241AKILF
8-bit I2C address (0xD4/0xD5): 1.1.0.1.0.1.0.RW
7-bit I2C address (0x5A): 1.1.0.1.0.1.0~~

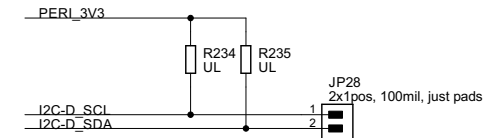
I2C-B



I2C-C



I2C-D



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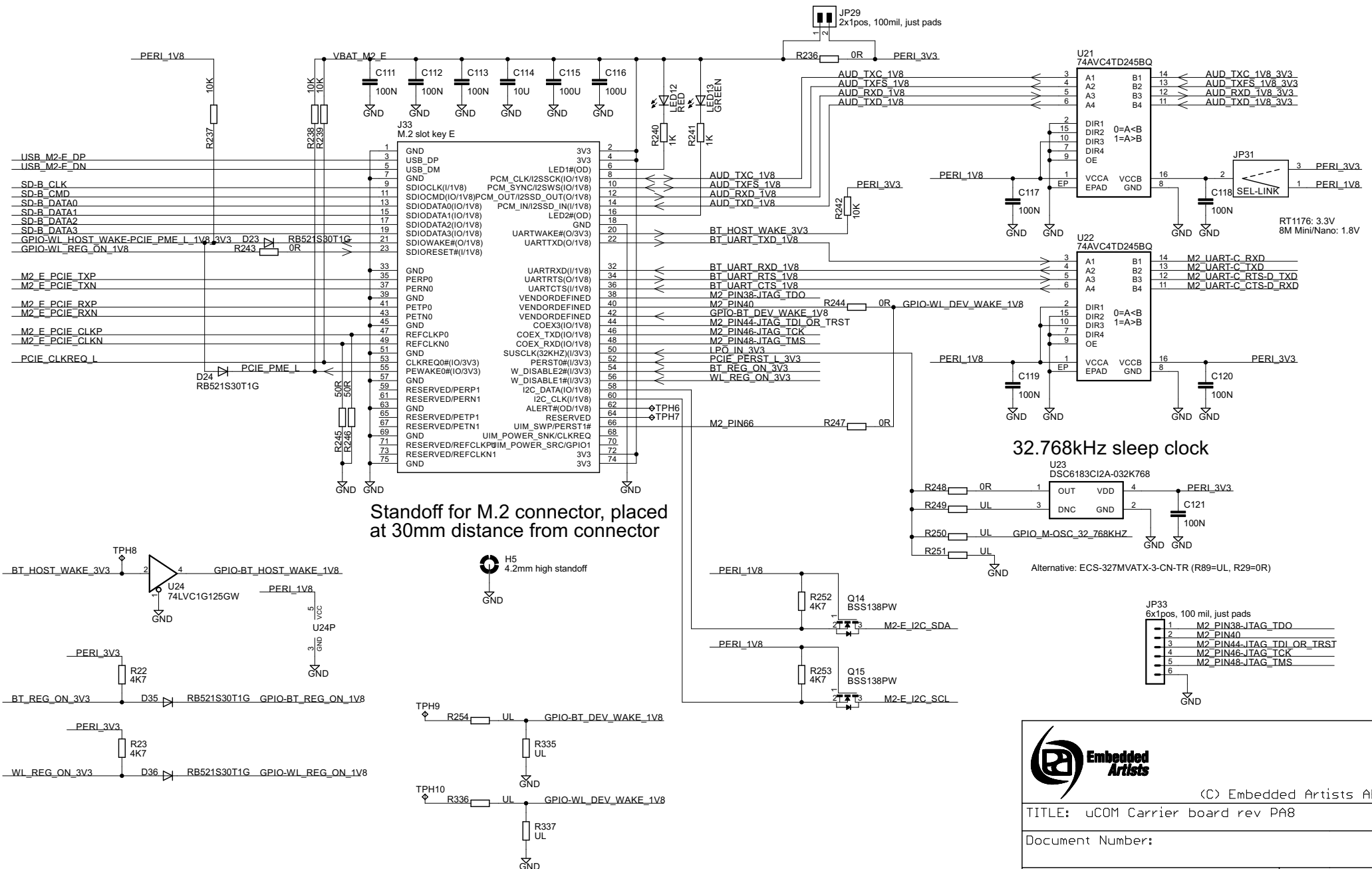
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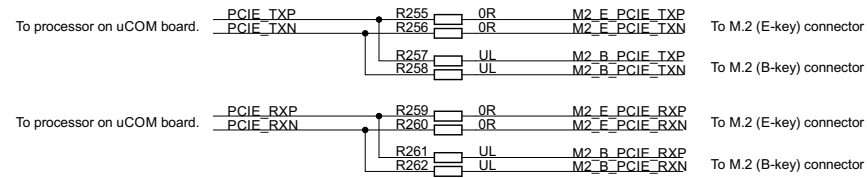
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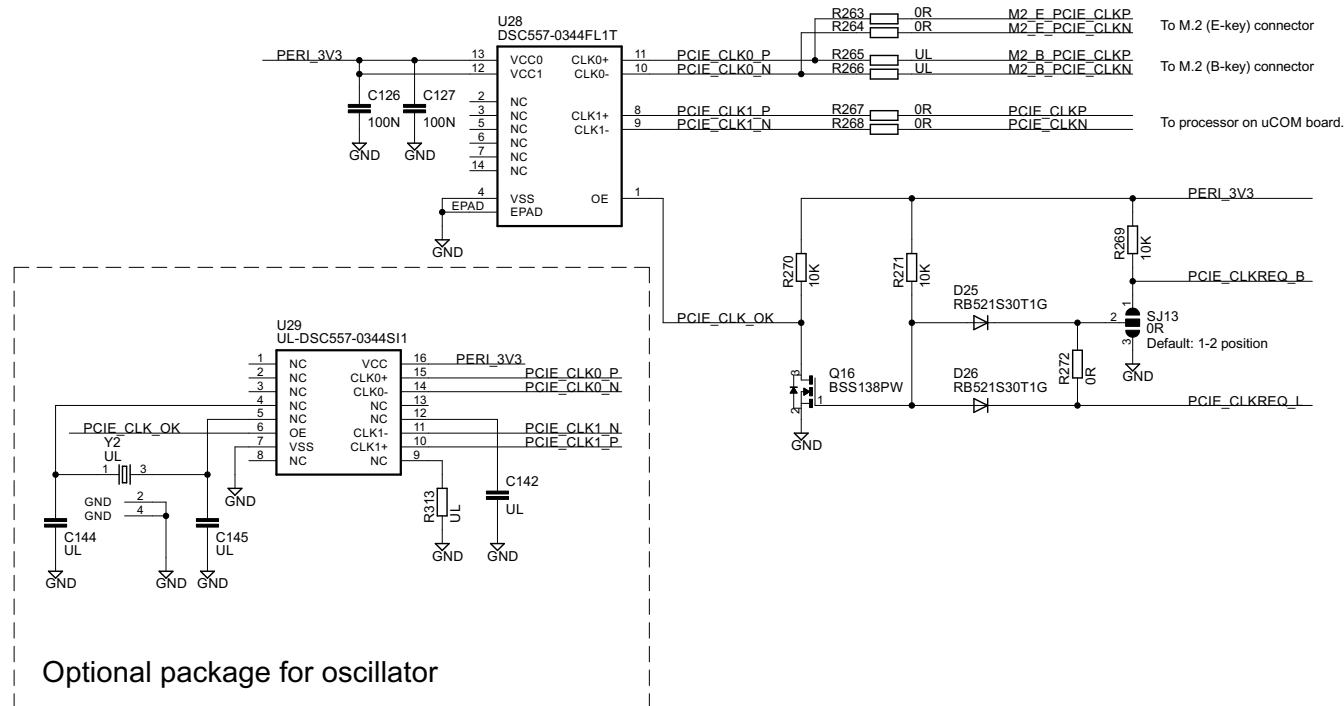
M.2 (NGFF) Key E Connector



PCIe Signal Routing



100MHz clock generator



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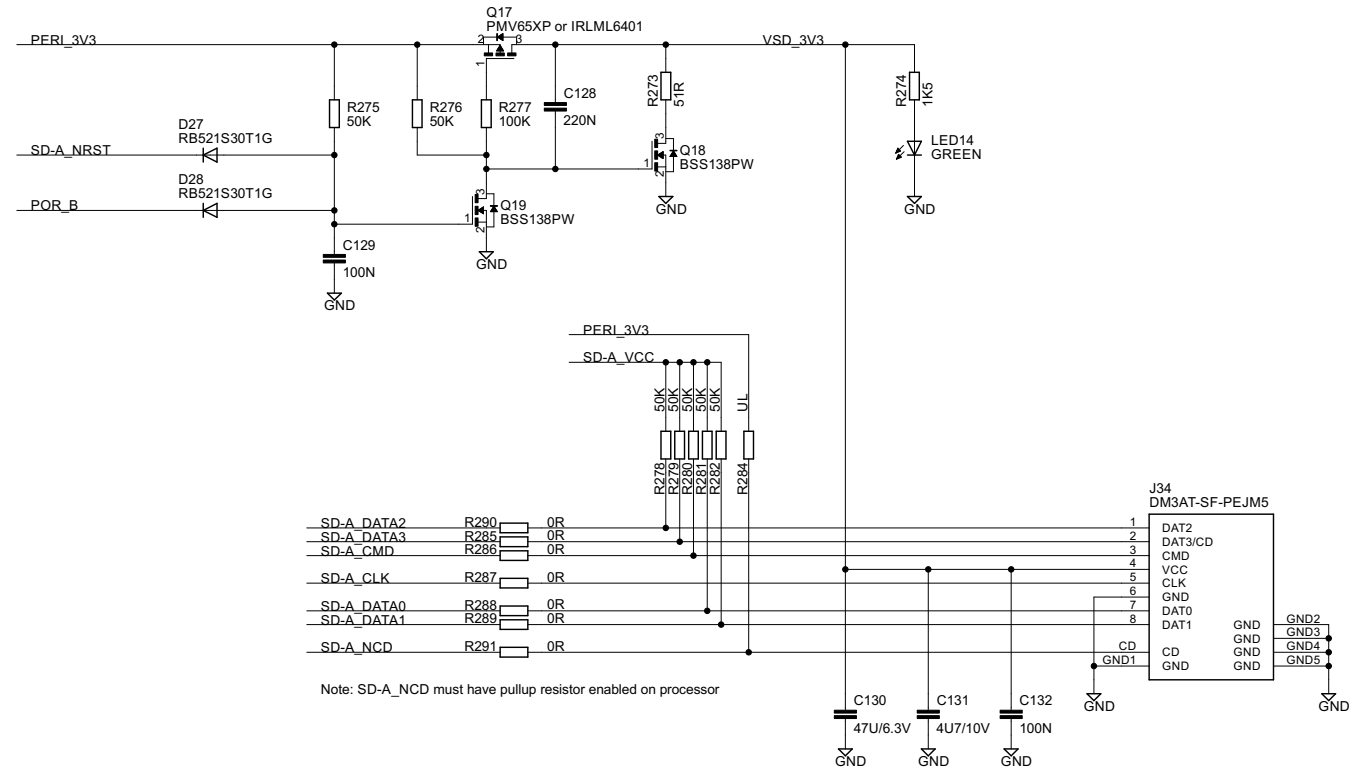
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uSD card interface

Power Switch for SD3.0



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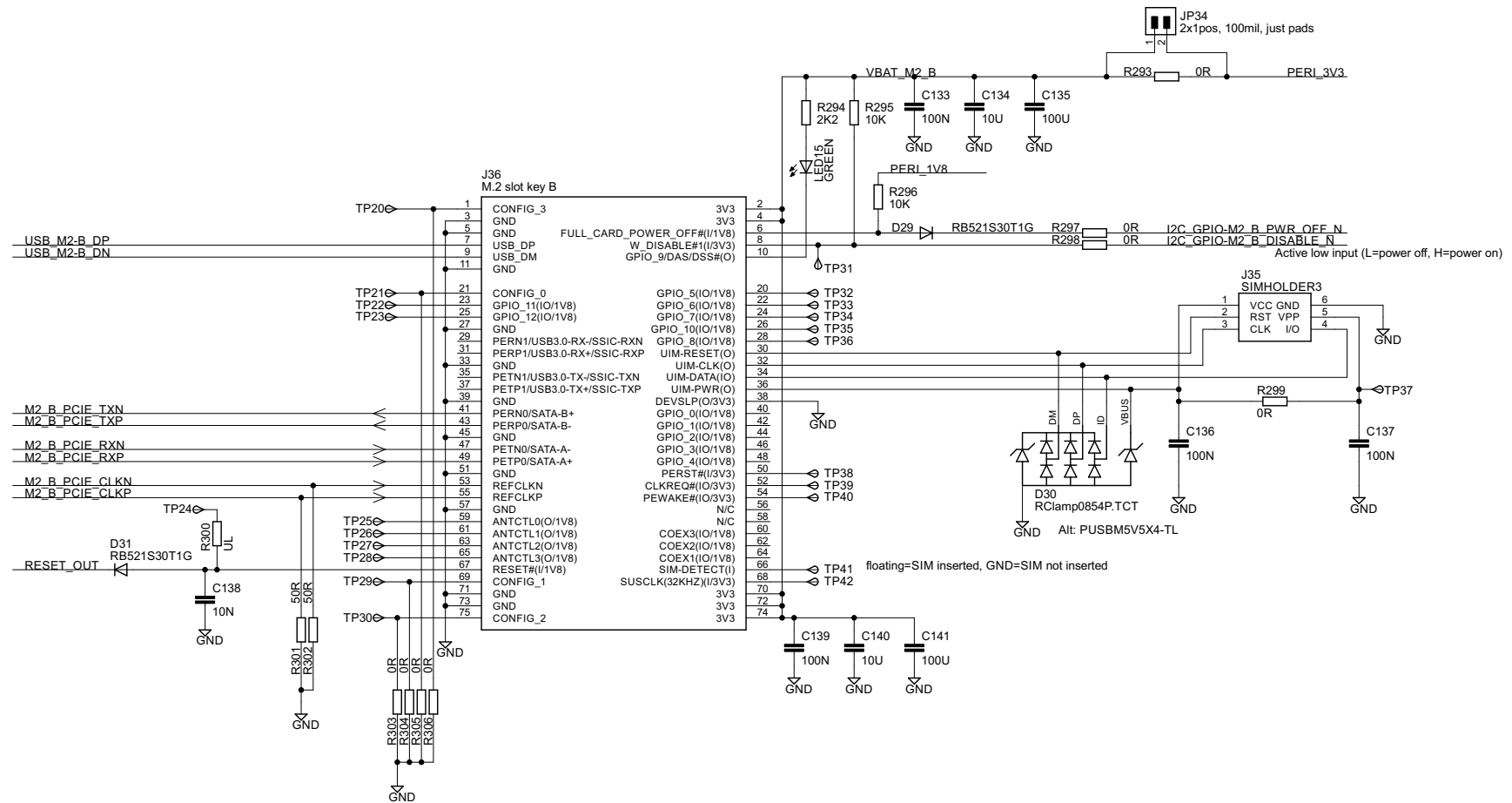
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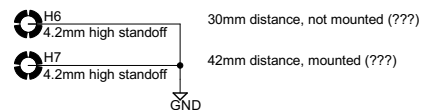
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M.2 (NGFF) Key B Connector (USB Host and PCIe Interfaces)



Standoffs for M.2 connector, placed at 30mm and 42mm distance from connector



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