To Extract BOM:

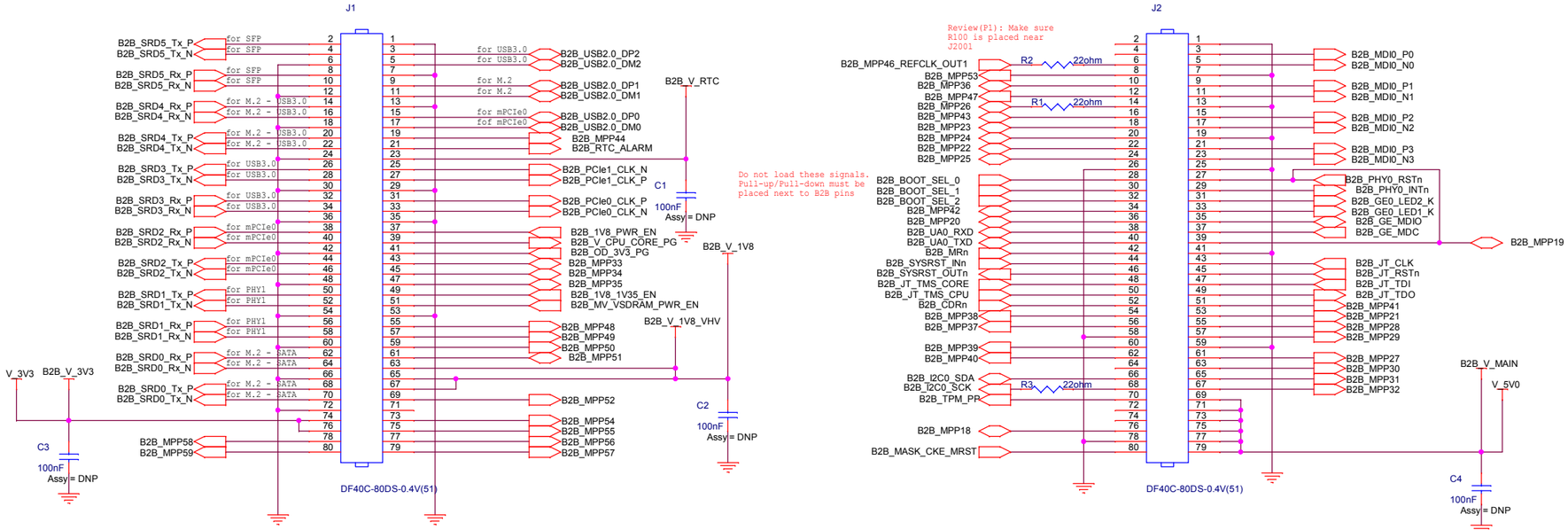
Item\tQuantity\tAssemblyOption\tPart\tPCB Footprint\tDescription\tDataSheet\tManufacturer\tManufacturer P/N\tSolidRun P/N\tReference
{Item}\t{Quantity}\t{ASSY}\t{Value}\t{PCB Footprint}\t{DESCRIPTION}\t{Datasheet}\t{Manufacturer}\t{Manufacturer P/N}\t{SolidRun P/N}\t{Reference}

To Extract BOM:

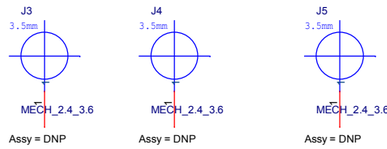
Item\tQuantity\tAssemblyOption\tValue\tDescription\tManufacturer Name\tManufacturer P/N\tSolidRun P/N\tPCB Footprint\tReference

{Item}\t{Quantity}\t{Assy}\t{Value}\t{DESCRIPTION}\t{Manufacturer Name}\t{Manufacturer P/N}\t{SolidRun P/N}\t{PCB Footprint}\t{Refe

Size	Title	Rev
C	BOM Extraction	1.0
Date: Wednesday, February 24, 2016	Sheet 1 of 8	

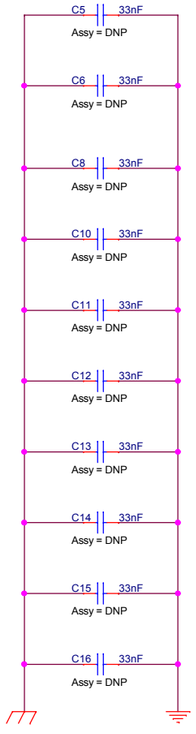


Four mechanical holes for the MicroSoM

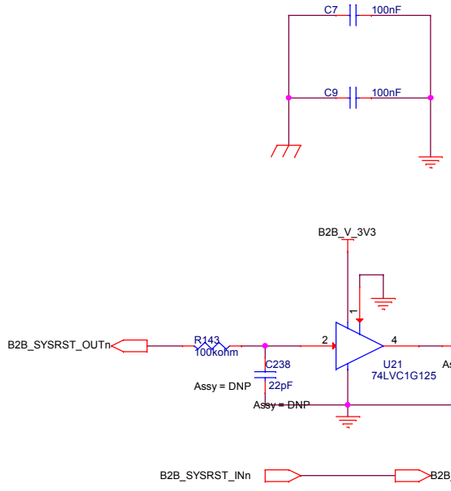


4th mechanical hole was removed due to routing limitations

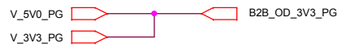
Bypass capacitors between GNDC and GND

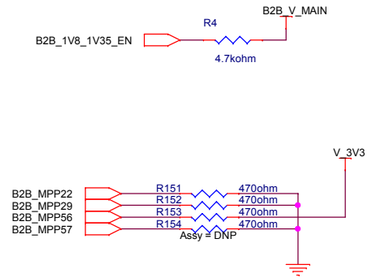


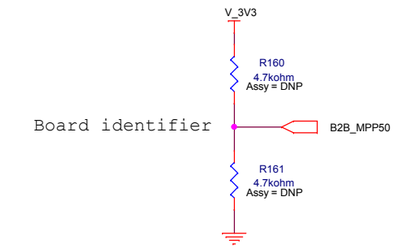
Bypass capacitors for MDIO passing underneath GNDC

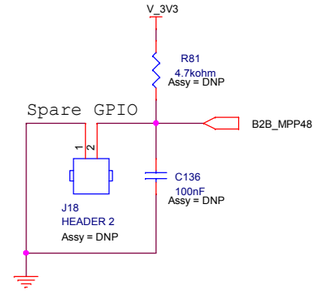


Carrier DC-DC PGOOD Signals will enable CPU DC-DC on uSoM. Signal is pulled up on uSom.

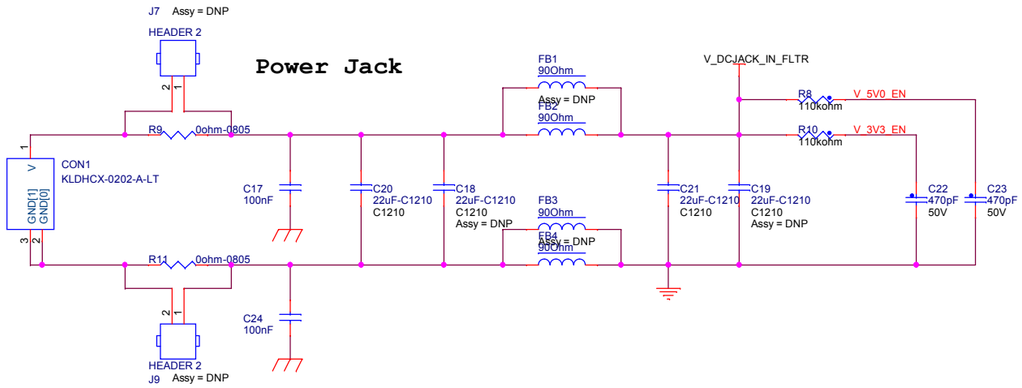


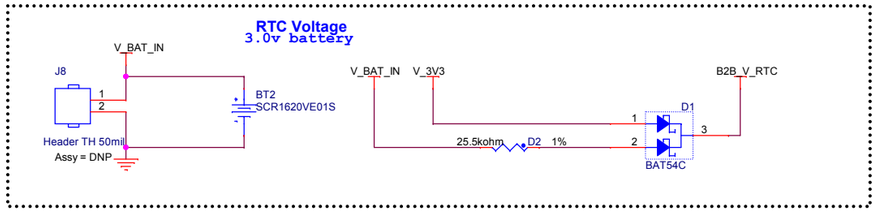


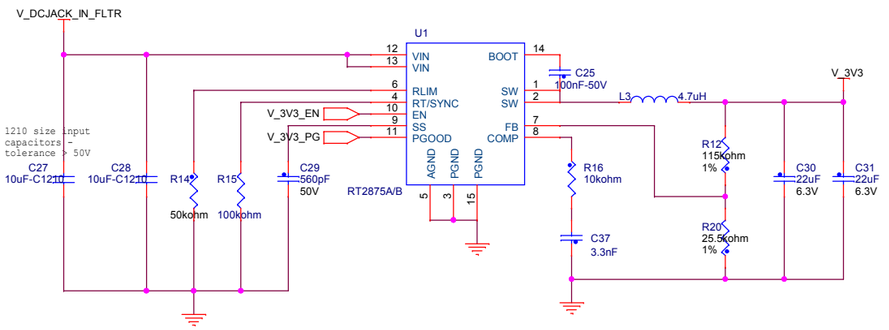


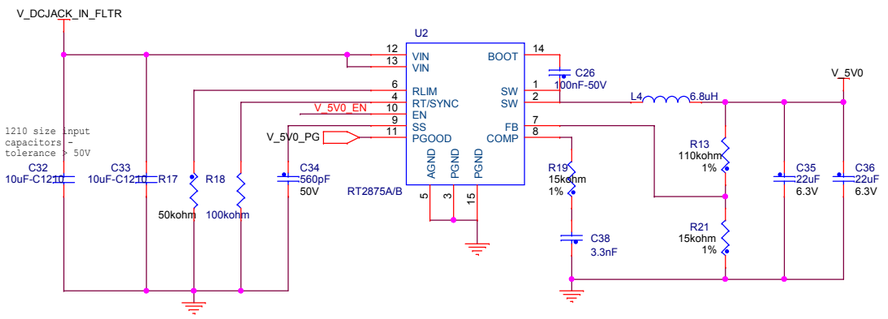


Size	Title	Rev
C	uSOM B2B + Connectivity	1.0
Date: Wednesday, December 21, 2016	Sheet 2 of 8	





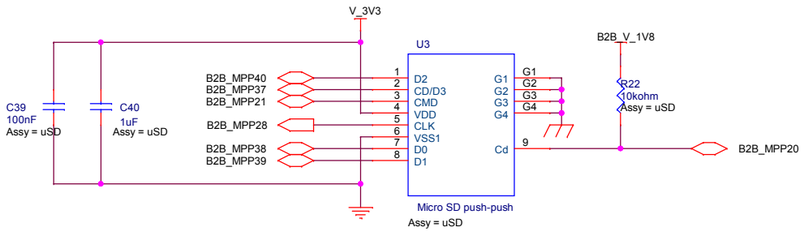


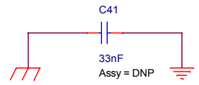


Size	Title	Rev
C	Power	1.0

Date: Wednesday, December 21, 2016 Sheet 3 of 8

uSD

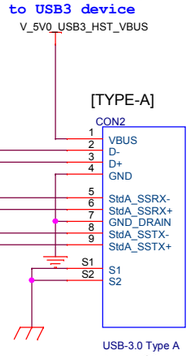




USB2.0
- Common Mode Choke

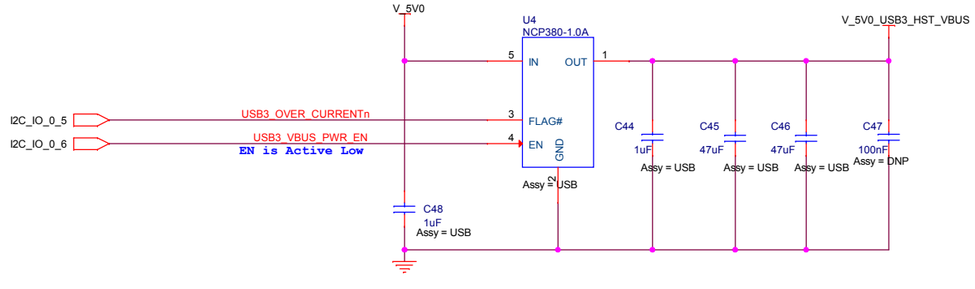
Connector side

5v/1A Power out to USB3 device



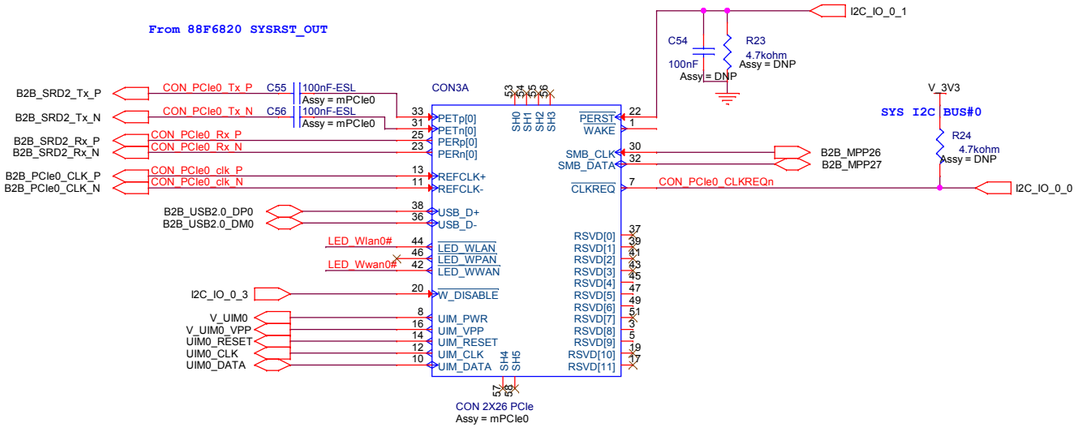
MV USB3.0 HOST

USB3.0
- Common Mode Choke

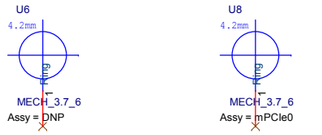


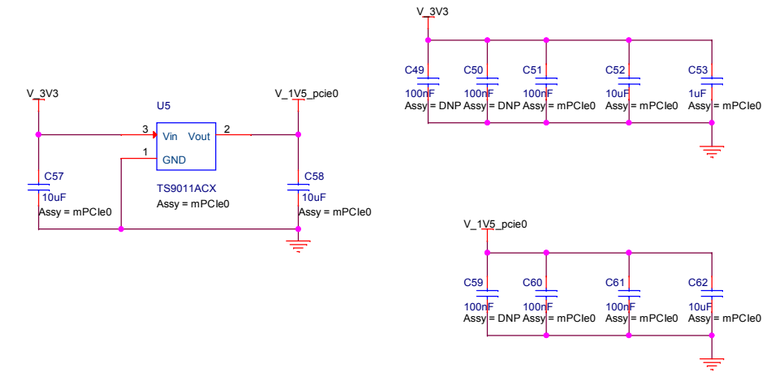
Size	Title	Rev
C	uSD + USB3.0	1.0
Date: Wednesday, December 21, 2016	Sheet 4 of 8	

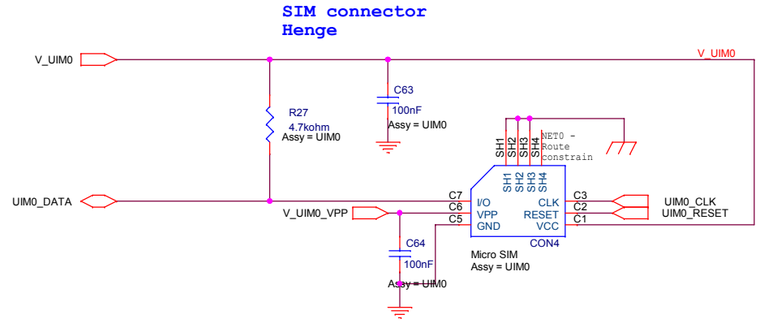
miniPCIe0

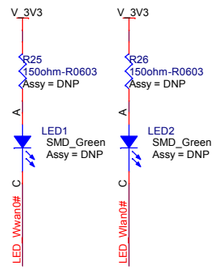


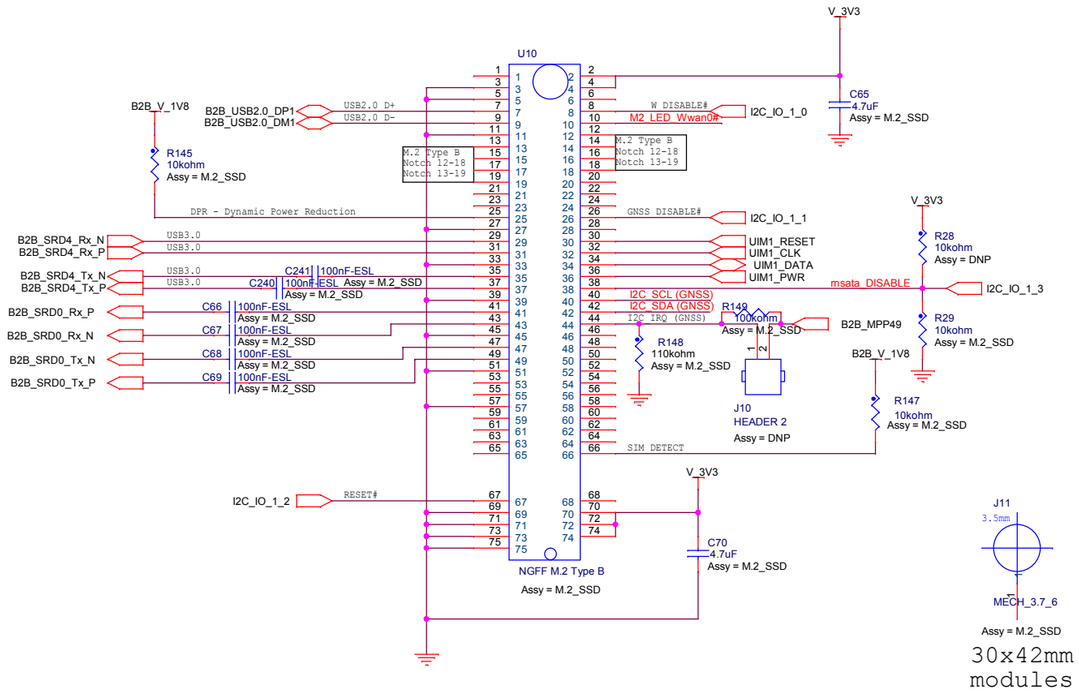
Mechanical holes/spacers for the mPCIe module

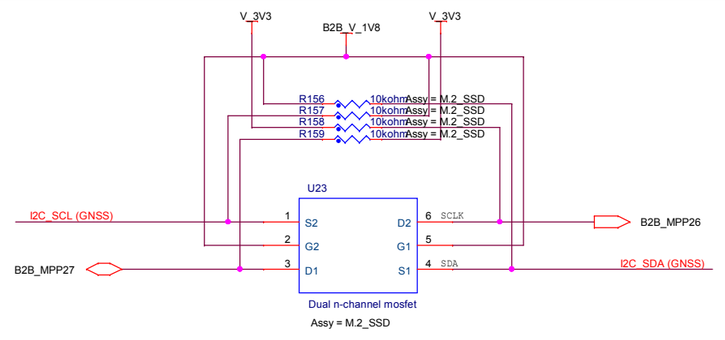


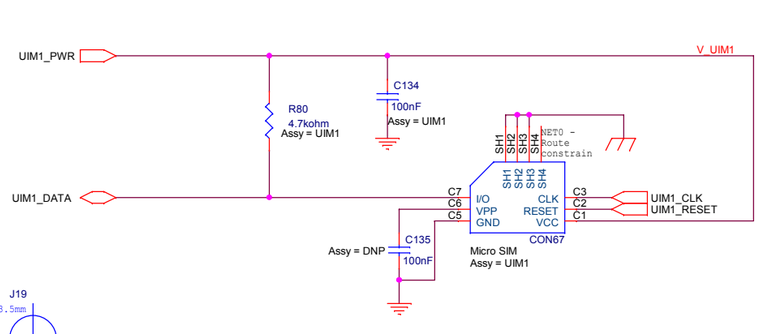


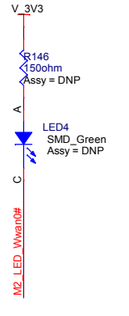


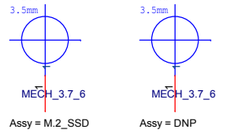








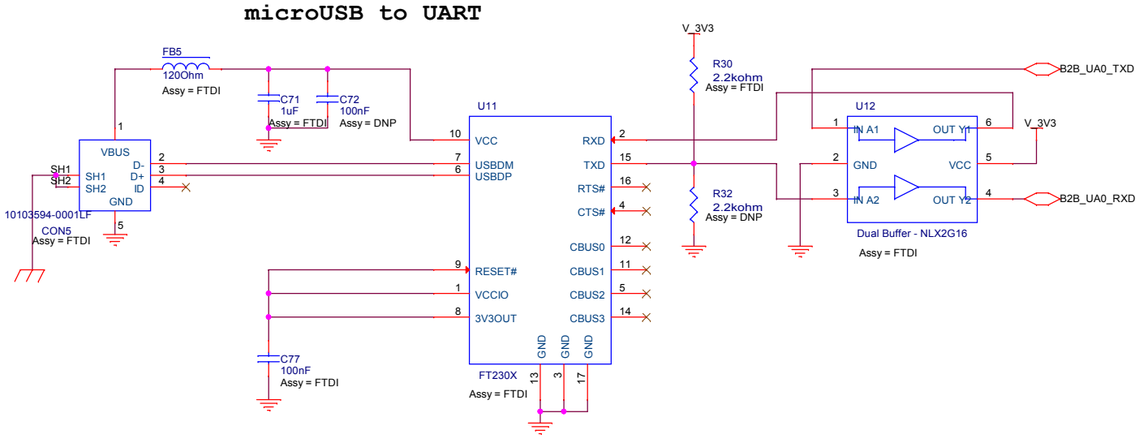




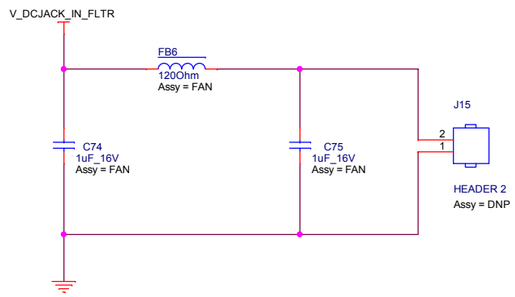
30x42mm modules 22x30mm modules

Size	Title	Rev
C	mPCIe + M.2	1.0
Date: Saturday, August 05, 2017	Sheet 5 of 8	

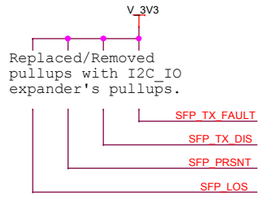
microUSB to UART



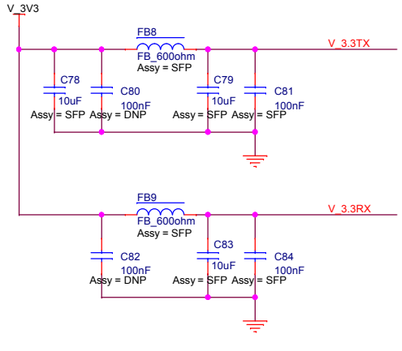
FAN Power



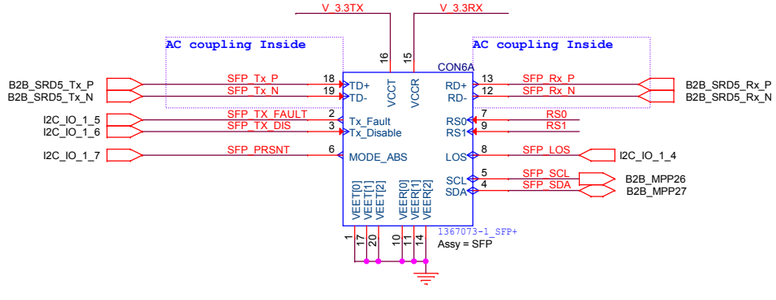
SFP + defines maximum current withdraw from V_3.3TX and V_3.3RX as 300mA each.

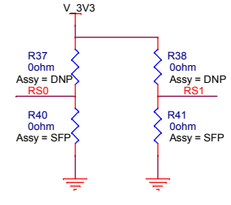


SFP TRANSCEIVER Power

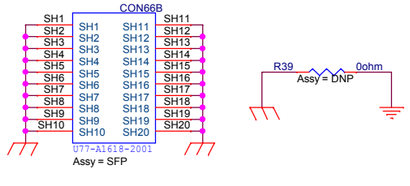


SFP TRANSCEIVER





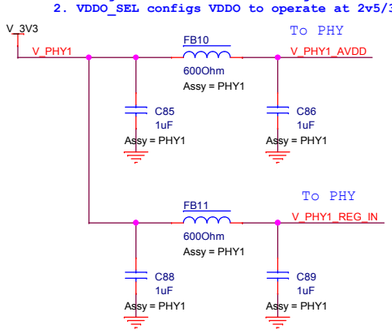
SFP Shield



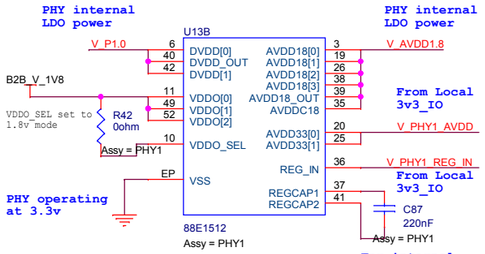
Size	Title	Rev
C	MikroUSB_UART + Fan + SFP	1.0
Date: Sunday, March 27, 2016	Sheet 6 of 8	

PHY Power configurations

88E1512 power configurations:
1. using internal 1v8 and 1v0 regulators.
2. VDDO_SEL configs VDDO to operate at 2v5/3v3.

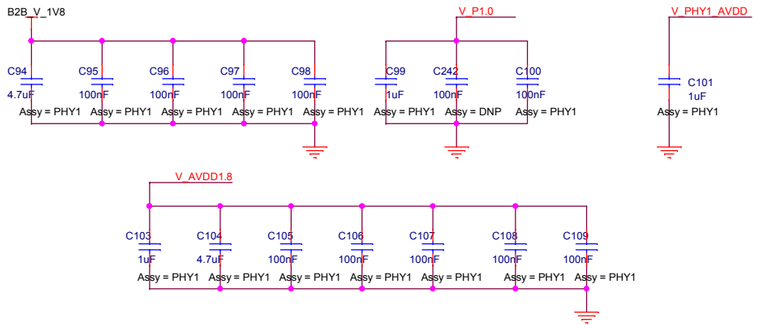


PHY internal LDO power



PHY internal LDO power

PHY operating at 3.3v



PHYADD configuration

88E1512 PHY configuration options:
PHY_address=1

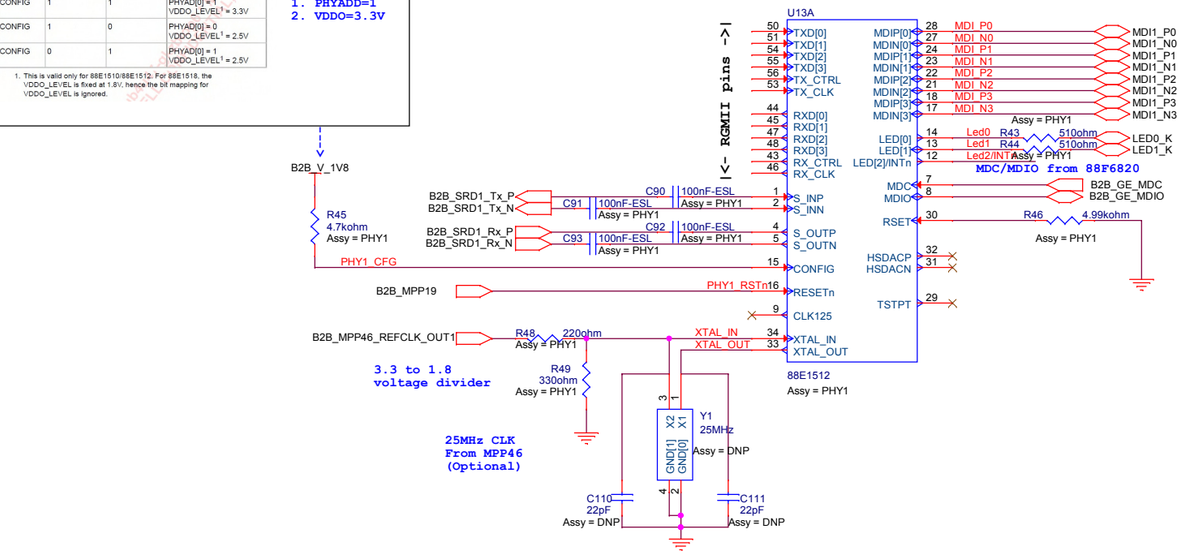
Table 53: Configuration Mapping

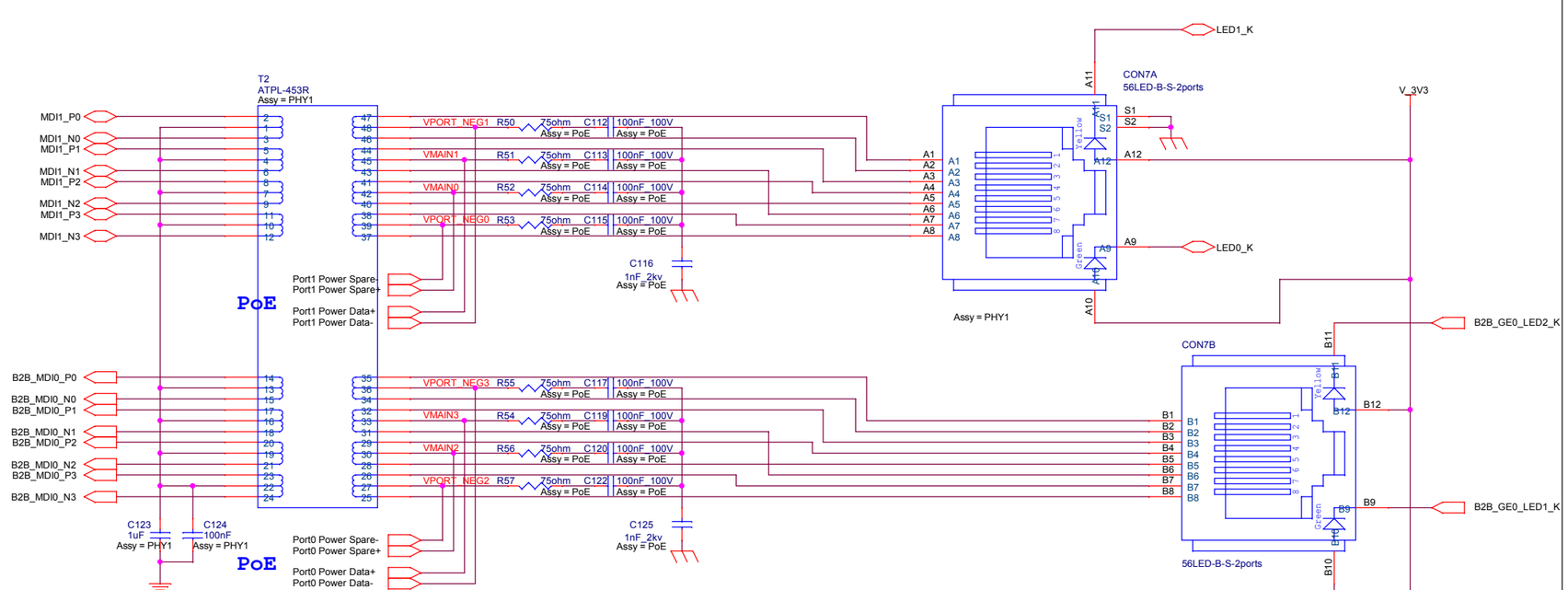
Pin	CONFIG Bit1	CONFIG Bit 0	Value Assignment
CONFIG	0	0	PHYAD[0] = 0 VDDO_LEVEL[1] = 3.3V
CONFIG	1	1	PHYAD[0] = 1 VDDO_LEVEL[1] = 3.3V
CONFIG	1	0	PHYAD[0] = 0 VDDO_LEVEL[1] = 2.5V
CONFIG	0	1	PHYAD[0] = 1 VDDO_LEVEL[1] = 2.5V

1. This is valid only for 88E1510/88E1512. For 88E1518, the VDDO_LEVEL is fixed at 1.8V, hence the bit mapping for VDDO_LEVEL is ignored.

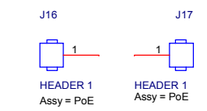
1. PHYADD=1
2. VDDO=3.3V

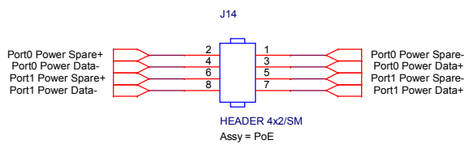
PHY1 - SGMII1 Function as GE1 Port

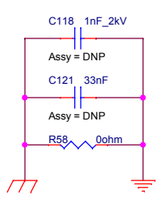




mechanical support for PoE module card

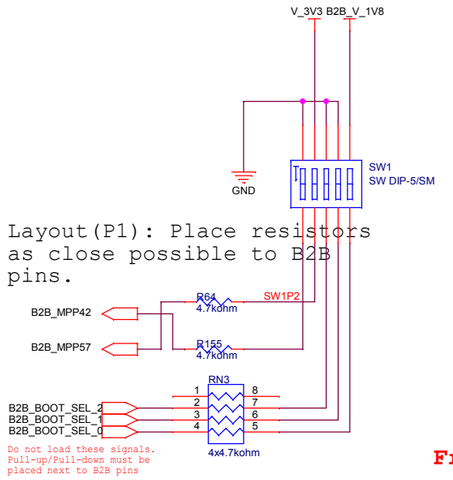


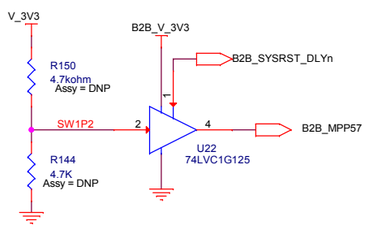




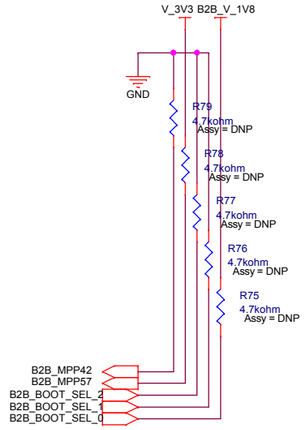
Size	Title	Rev
C	GE PHY1 + RJ45	1.0
Date: Wednesday, December 21, 2016	Sheet 7 of 8	

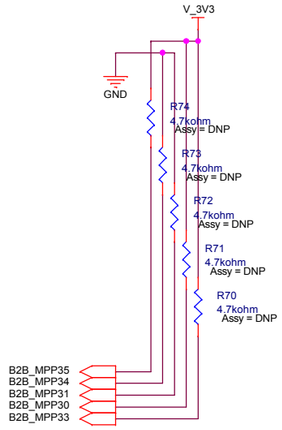
Internally pulled to 0x36:
110110

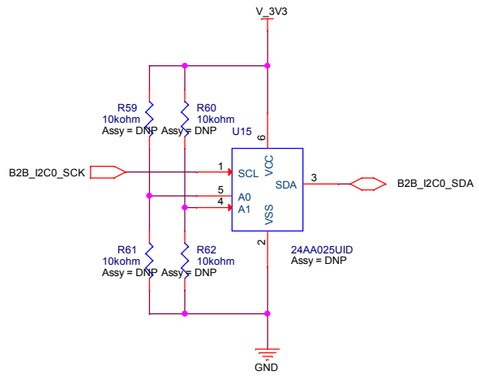


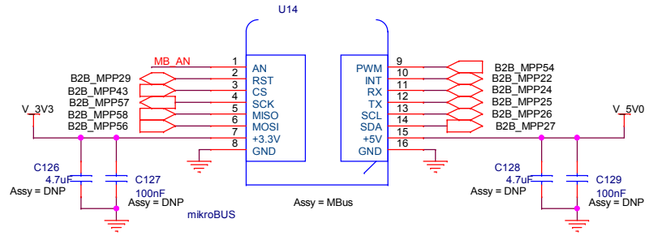


Frequency default Assy









PART NO.	XX	X	/XX
Device	Address Options	Temperature Range	Package

Device: MCP3021T: 10-Bit 2-Wire Serial A/D Converter (Tape and Reel)

Temperature Range: E = -40°C to +125°C

Address Options:

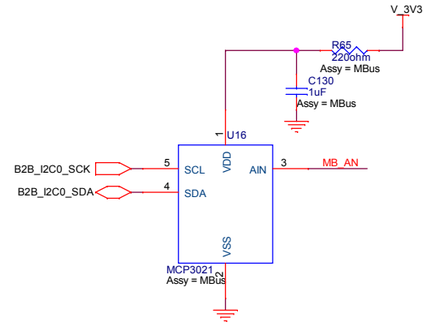
XX		A2	A1	A0
A0	=	0	0	0
A1	=	0	0	1
A2	=	0	1	0
A3	=	0	1	1
A4	=	1	0	0
A5 *	=	1	0	1
A6	=	1	1	0
A7	=	1	1	1

* Default option. Contact Microchip factory for other address options

Package: OT = SOT-23, 5-lead (Tape and Reel)

Examples:

a) MCP3021A0T-E/OT: Extended, A0 Address, Tape and Reel
b) MCP3021A1T-E/OT: Extended, A1 Address, Tape and Reel
c) MCP3021A2T-E/OT: Extended, A2 Address, Tape and Reel
d) MCP3021A3T-E/OT: Extended, A3 Address, Tape and Reel
e) MCP3021A4T-E/OT: Extended, A4 Address, Tape and Reel
f) MCP3021A5T-E/OT: Extended, A5 Address, Tape and Reel
g) MCP3021A6T-E/OT: Extended, A6 Address, Tape and Reel
h) MCP3021A7T-IE/OT: Extended, A7 Address, Tape and Reel



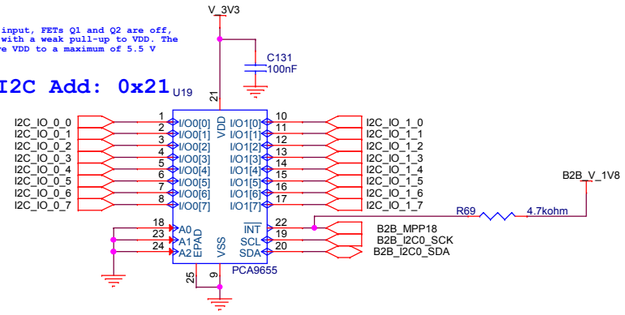
PCA9555
16-bit I2C and SMBus I/O port with interrupt
5V tolerant I/Os

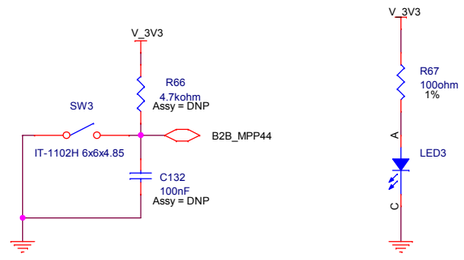
I/O port
When an I/O is configured as an input, FETs Q1 and Q2 are off, creating a high impedance input with a weak pull-up to VDD. The input voltage may be raised above VDD to a maximum of 5.5 V

I/O Table

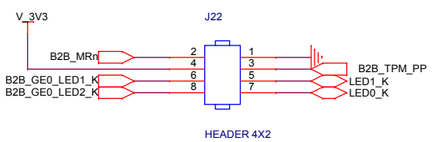
IO2_0
IO2_1
IO2_2
IO2_3
IO2_4
IO2_5
IO2_6
IO2_7
IO3_0
IO3_1
IO3_2
IO3_3
IO3_4
IO3_5
IO3_6
IO3_7

I2C Add: 0x21

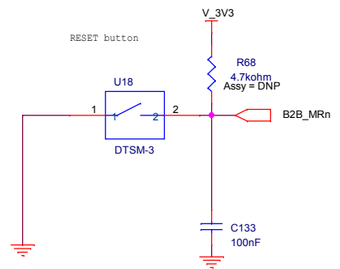




AP Reset Switch (GPIO)



RJ-45 LEDs, Board Reset and TPM_PP



Size	Title	Rev
C	Mikrobus + Booting + IO_Ex	1.0
Date: Wednesday, December 21, 2016	Sheet 8 of 8	