

1	2	3	4	5	6	7	8						
A								A					
B								B					
C								C					
D								D					
E								E					
<div>Table Of Contents</div> <table><tr><th>SHEET#</th><th>SHEET TITLE</th></tr><tr><td>1</td><td>Title Sheet</td></tr><tr><td>2</td><td>Block Diagram</td></tr></table>								SHEET#	SHEET TITLE	1	Title Sheet	2	Block Diagram
SHEET#	SHEET TITLE												
1	Title Sheet												
2	Block Diagram												
1	2	3	4	5	6	7	8						

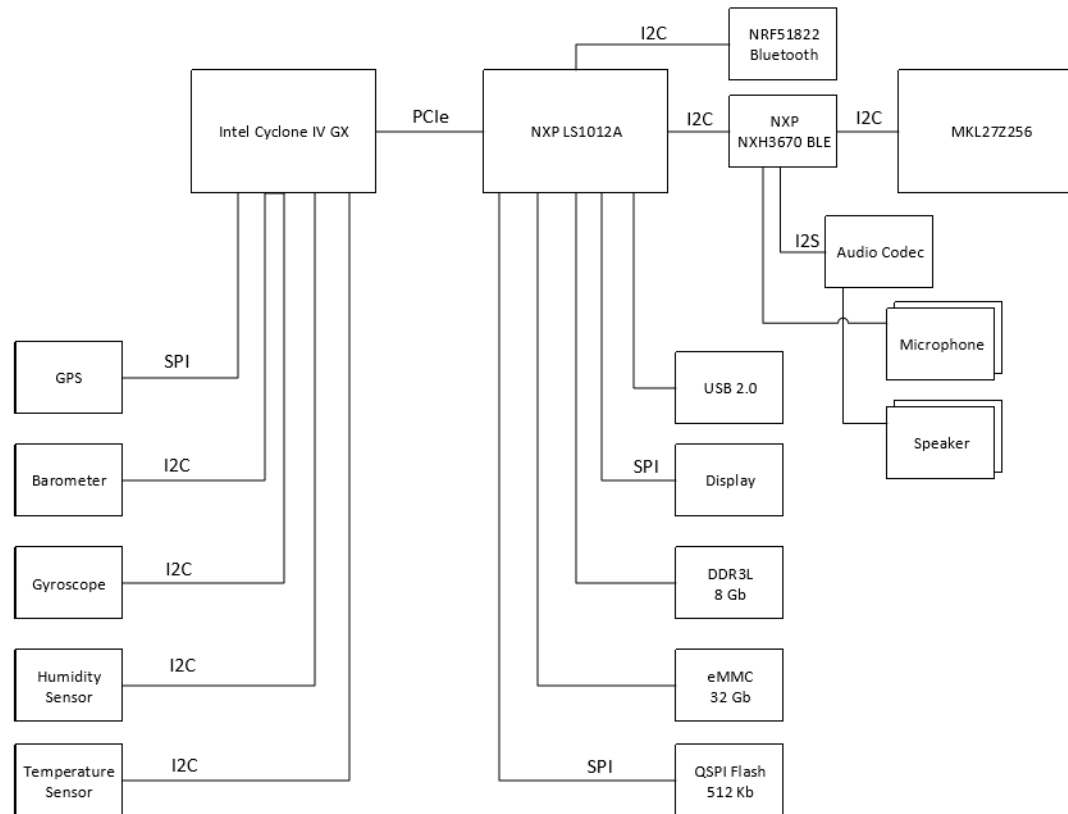
Robin Murphy

Sheet: /
File: SmarH-001.sch

Title: **SmarH-001**

Size: B	Date: 2020-01-16	Rev: A1
KiCad E.D.A. kicad (5.1.4)-1	Id: 1/20	

Block Diagram



Robin Murphy

Sheet: /Block Diagram/

File: BlockDiagram.sch

Title: SmarH-001

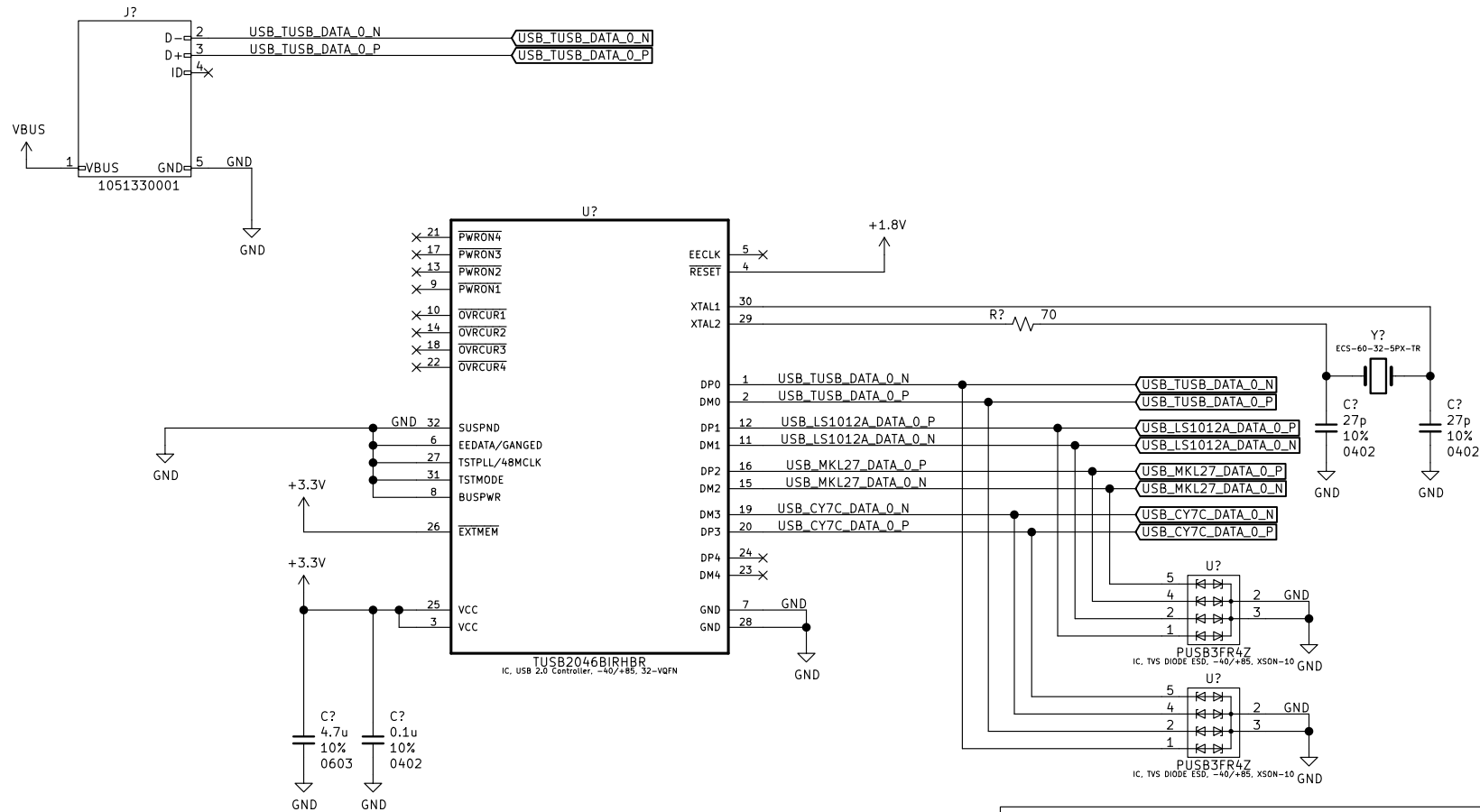
Size: A4 Date: 2020-01-16

KiCad E.D.A. kicad (5.1.4)-1

Rev: A1

Id: 2/20

USB Connector



Robin Murphy

Sheet: /USB Connector/

File: USBConnector.sch

Title: Smarth-001

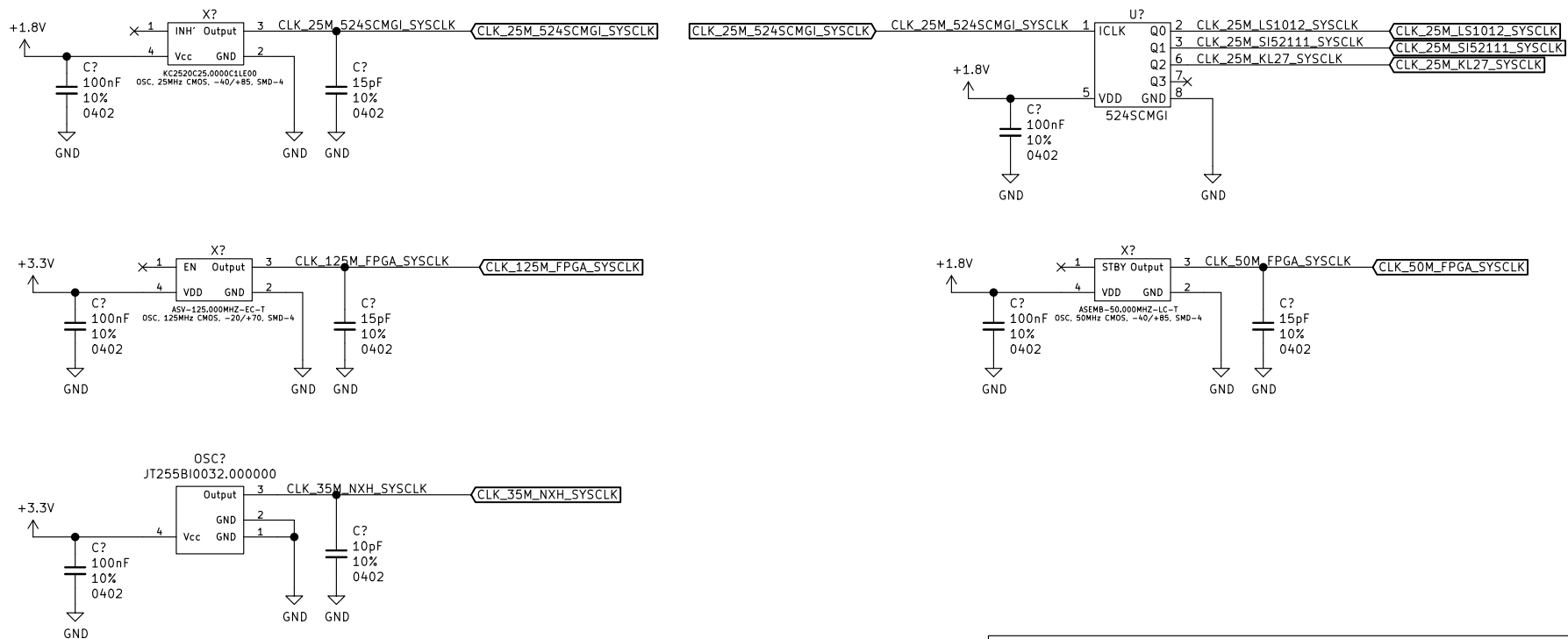
Size: A4 Date: 2020-01-16

KiCad E.D.A. kicad (5.1.4)-1

Rev: A1

Id: 3/20

Oscillators



Robin Murphy

Sheet: /Oscillators/

File: Oscillators.sch

Title: Smarth-001

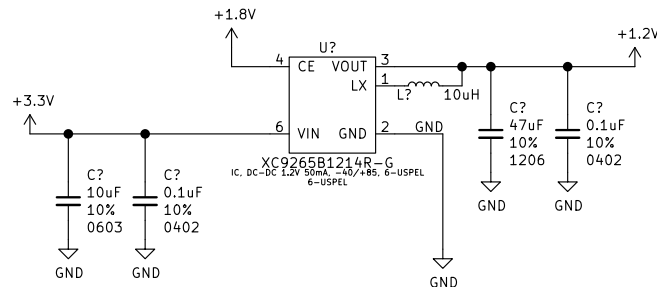
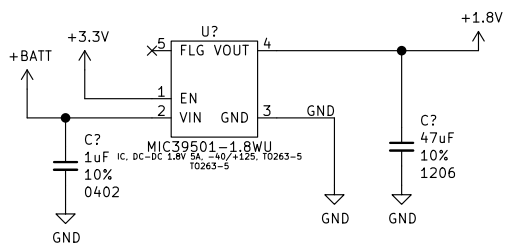
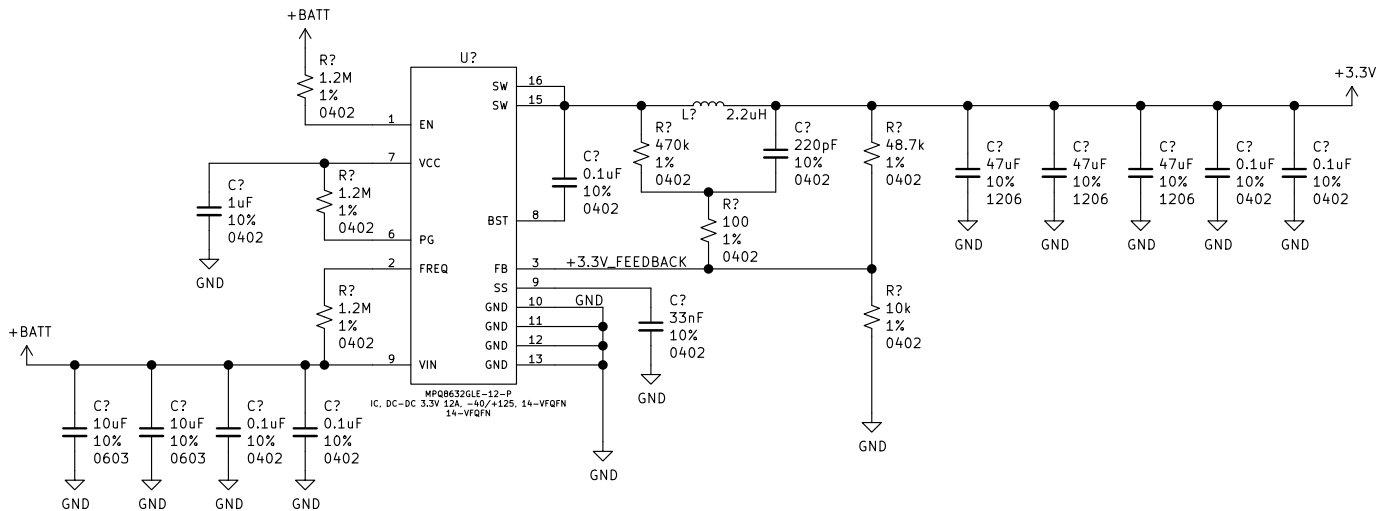
Size: A4 Date: 2020-01-16

KiCad E.D.A. kicad (5.1.4)-1

Rev: A1

Id: 4/20

Power Converters



Robin Murphy

Sheet: /Power Converters/
File: Power Converters.sch

Title: <i>Smarth-001</i>

Size: A4	Date: 2020-01-16
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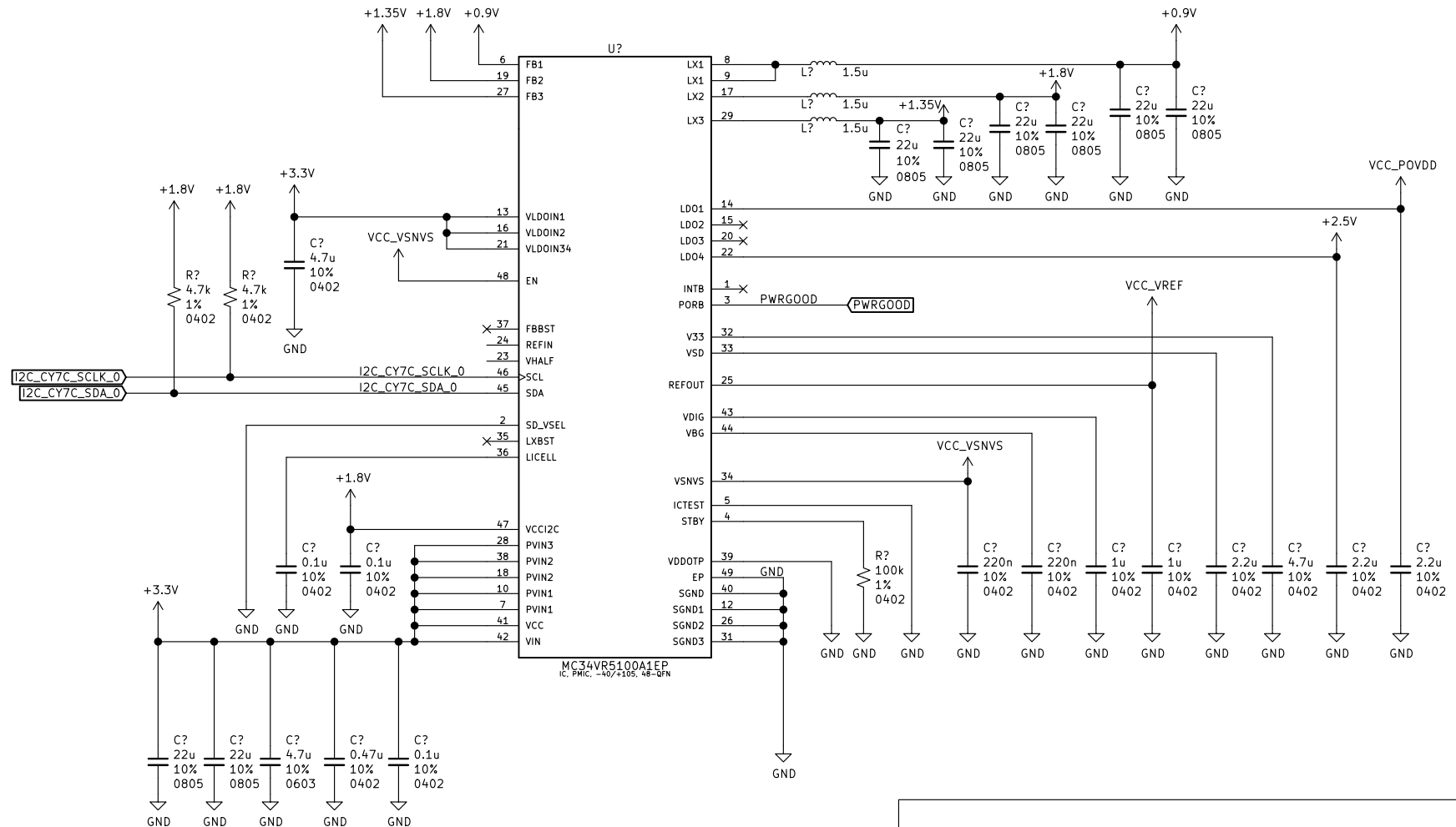
KiCad E.D.A.	kicad (5.1.4)-1
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Rev: A1

Id: 5/20

PMIC

Im generating 1.8V here for the LS specific peices and 1.8V from an external regulator for other components, can they both be connected or do they have to be separete?



Robin Murphy

Sheet: /PMIC/

File: PMIC.sch

Title: Smarth-001

Size: A4

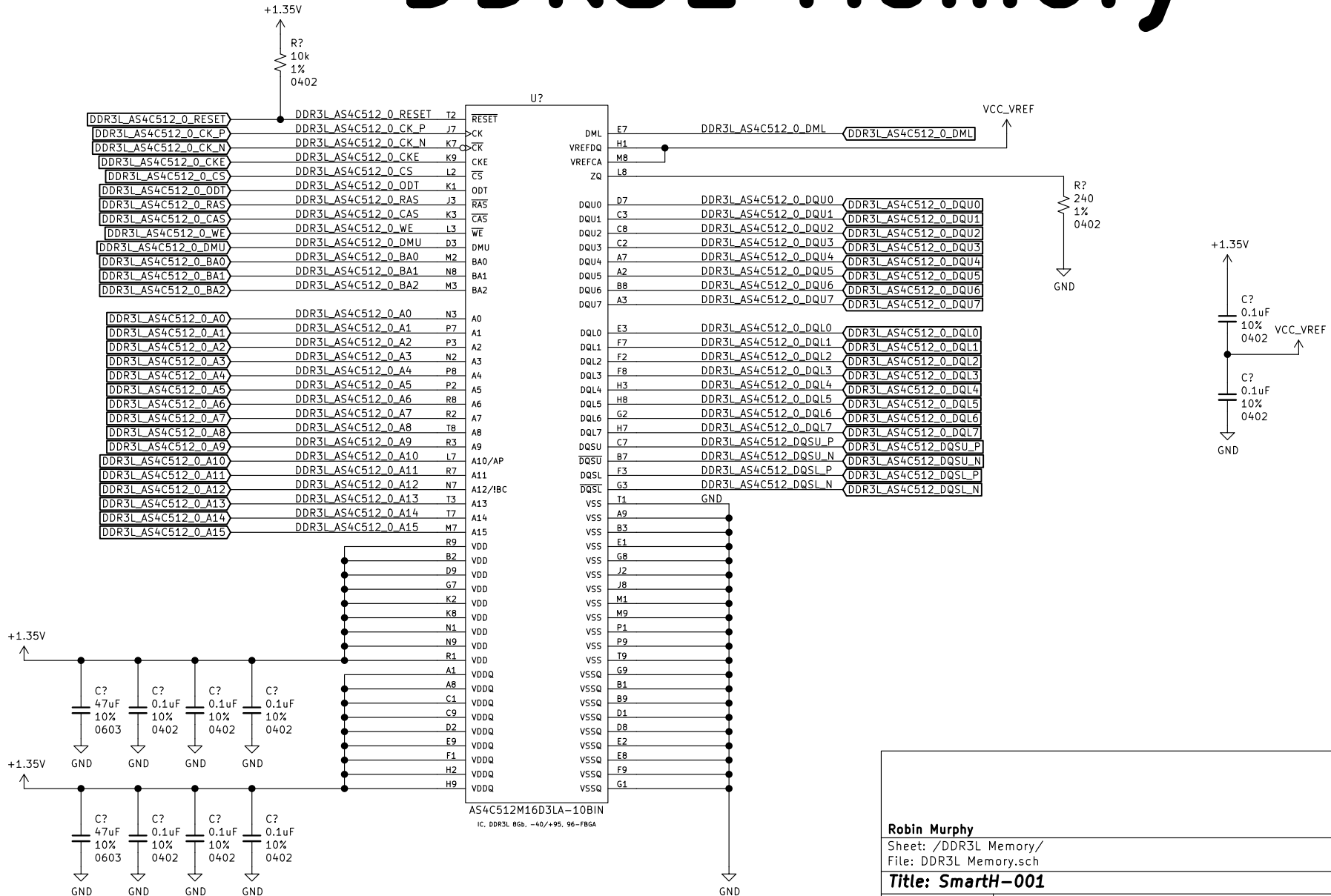
Date: 2020-01-16

Rev: A1

KiCad E.D.A. kicad (5.1.4)-1

Id: 6/20

DDR3L Memory



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Sheet: /DDR3L Memory/
File: DDR3L Memory.sch

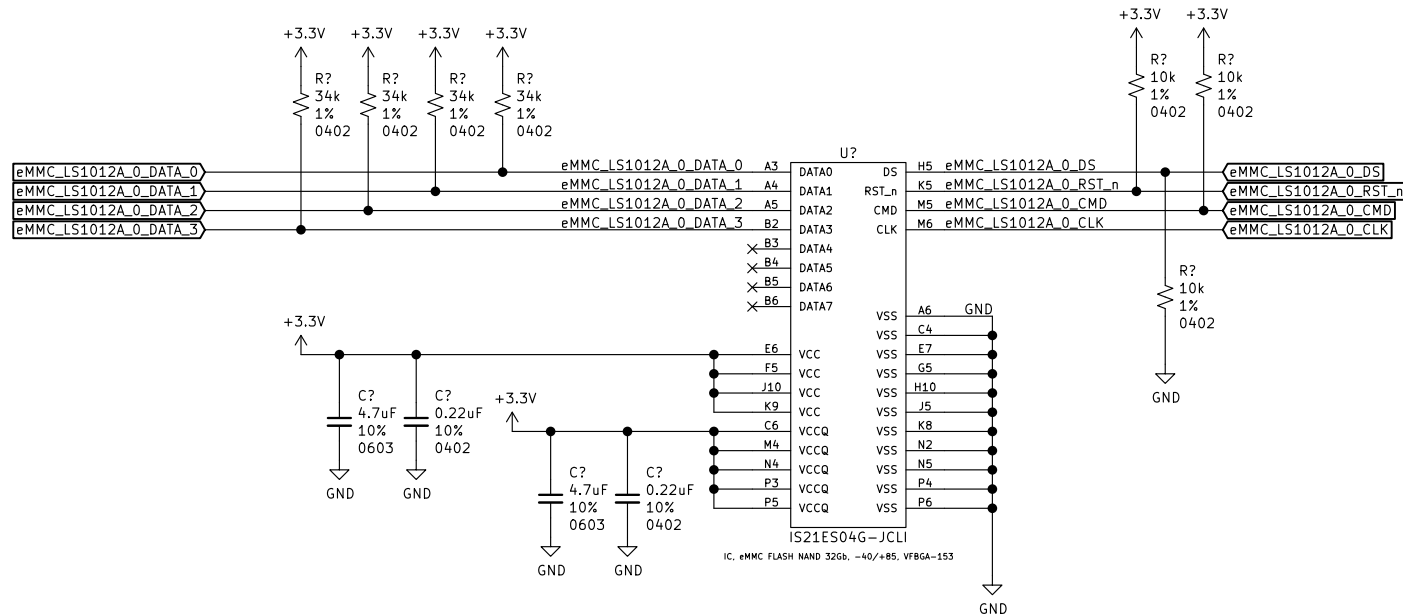
Title: Smarth-001

Size: A4 Date: 2020-01-16
KiCad E.D.A. kicad (5.1.4)-1

Rev: A1
Id: 7/20

eMMC

They call out VDDI in datasheet, but I can't find it in pin-out...



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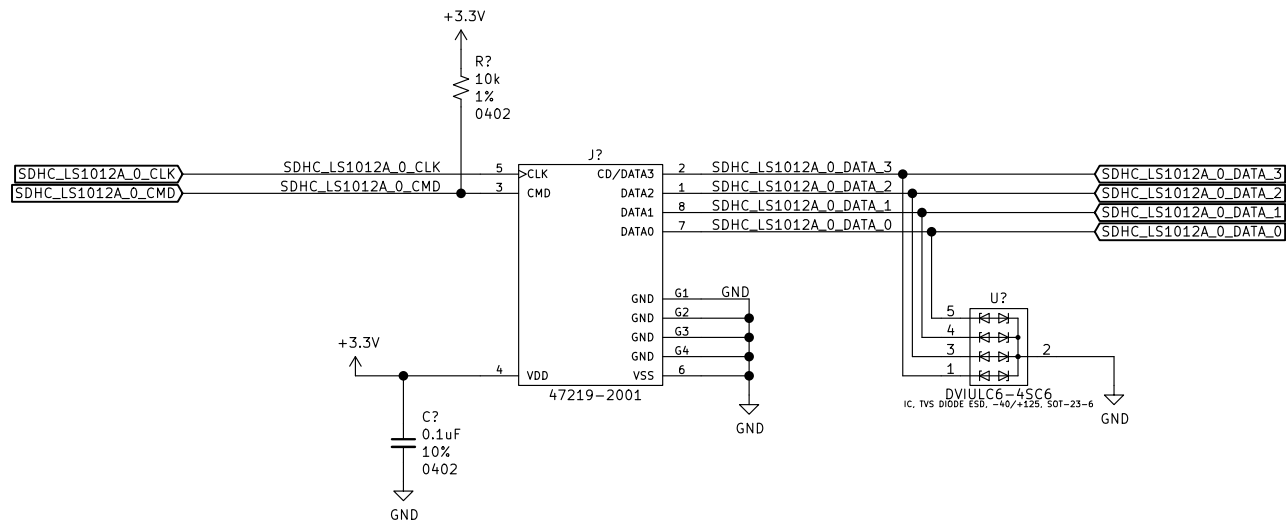
Sheet: /eMMC Memory/
File: eMMC Memory.sch

Title: Smarth-001

Size: A4 Date: 2020-01-16
KiCad E.D.A. kicad (5.1.4)-1

Rev: A1
Id: 8/20

SDHC Connector



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Sheet: /SDHC Connector/
File: SDHCConnector.sch

Title: **Smarth-001**

Size: A4 Date: 2020-01-16

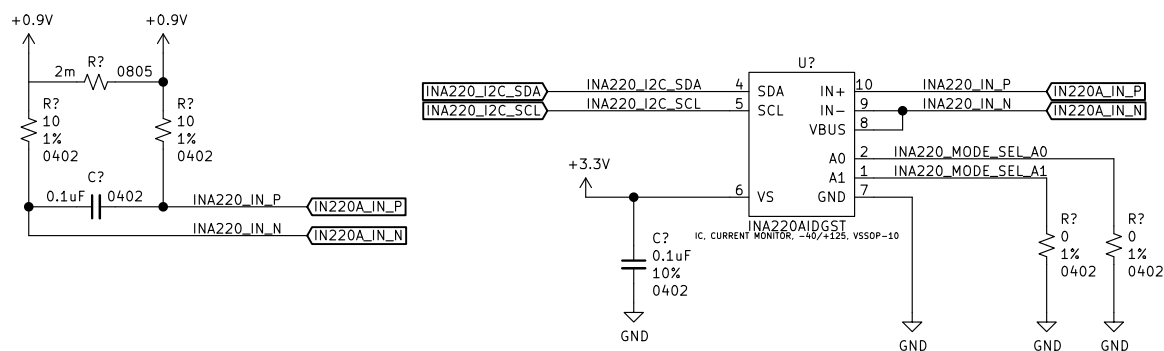
KiCad E.D.A. kicad (5.1.4)-1

Rev: **A1**

Id: 9/20

Current Monitor

Maybe change what to measure



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Sheet: /Current Monitor/

File: CurrentMonitor.sch

Title: SmarH-001

Size: A4 Date: 2020-01-16

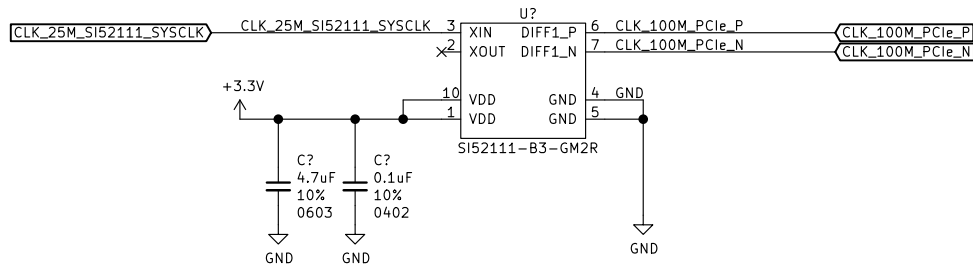
KiCad E.D.A. kicad (5.1.4)-1

Rev: A1

Id: 10/20

PCIe

Datasheet says: 25.00 MHz crystal input or 3.3 V, 25 MHz clock Input.
What happens if 1.8V 25MHz clock? Should I use a secondary clock?



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Sheet: /PCIe/
File: PCIe.sch

Title: SmarH-001

Size: A4 Date: 2020-01-16

KiCad E.D.A. kicad (5.1.4)-1

Rev: A1

Id: 11/20

QSPI Flash

The schematic illustrates the electrical connections for a QSPI Flash IC (S25FS512SAGMF1011) on a PCB. The IC is a 16-pin device with the following connections:

- Power Supply:**
 - +1.8V:** Connected to pin 1 (RESET) and pin 9 (WP) via 10k resistors.
 - +1.8V_PROG:** Connected to pin 2 (VDD) via a 0.1uF capacitor.
 - GND:** Connected to pins 10 (GND) and 11 (GND).
- Signal Connections:**
 - RESET:** Pin 1, connected to +1.8V via a 10k resistor.
 - WP:** Pin 9, connected to +1.8V via a 10k resistor.
 - DATA0:** Pin 15, connected to QSPI_LS1012A_0_DATA0.
 - DATA1:** Pin 8, connected to QSPI_LS1012A_0_DATA1.
 - CLK_SCK:** Pin 16, connected to CLK_SCK_LS1012A_SYSCLK.
 - CS:** Pin 7, connected to QSPI_LS1012A_0_CS.
 - MISO:** Pin 12, connected to SPI_CY7C_MISO_0.
 - MOSI:** Pin 13, connected to SPI_CY7C_MOSI_0.
 - SCLK:** Pin 14, connected to SPI_CY7C_SCLK_0.
 - SS:** Pin 17, connected to SPI_CY7C_SS_0.
- Programming Header:** A header J? is connected to +1.8V_PROG and GND, labeled "To power QSPI for programming".

Component Values:

- Resistors: 10k, 1%, 0402.
- Capacitor: 0.1uF, 10%, 0402.

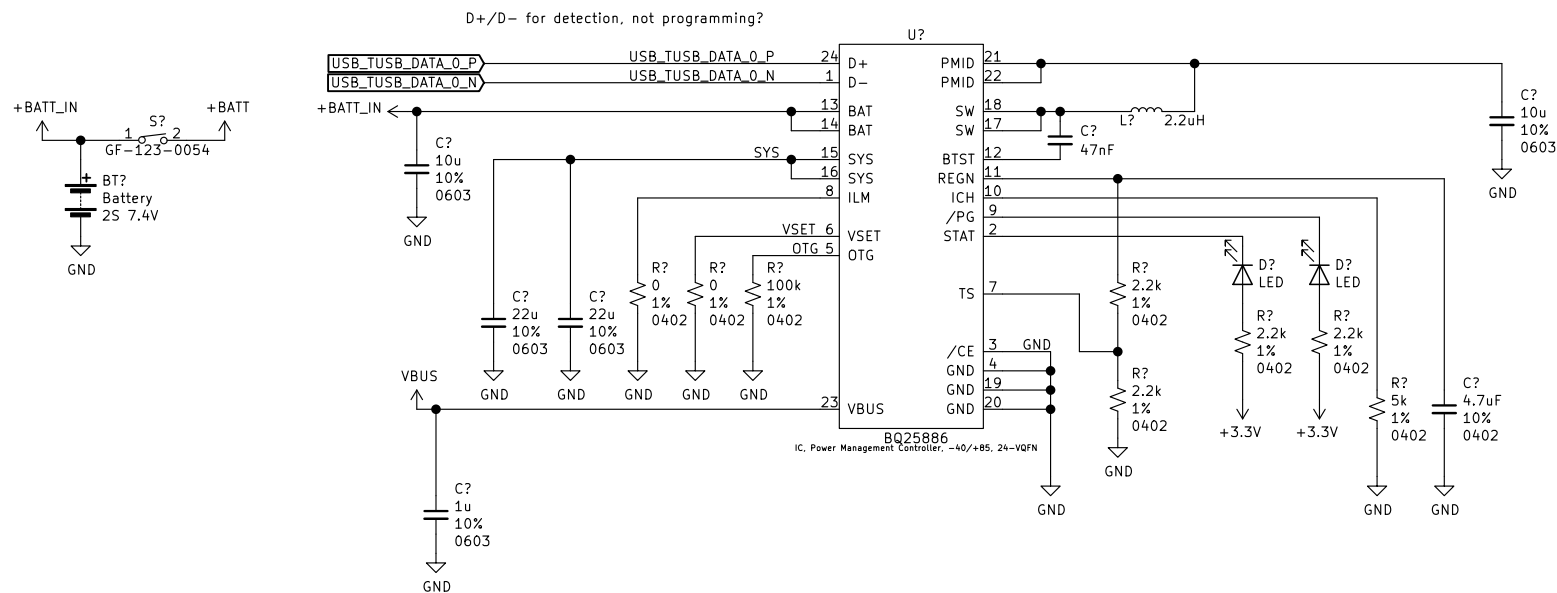
IC Information: S25FS512SAGMF1011, IC, NOR Memory, 512Mb, -40/+85, S01C-16.

Metadata:

- Sheet: /QSPI Flash/
- File: QSPI Flash.sch
- Title: Smarth-001
- Size: A4
- Date: 2020-01-16
- Rev: A1
- KiCad E.D.A. kicad (5.1.4)-1
- Id: 12/20

Rev: A1
Id: 12/20

Battery Charging



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Sheet: /Battery Charging/
File: BatteryCharging.sch

Title: SmarH-001

Size: A4 Date: 2020-01-16

KiCad E.D.A. kicad (5.1.4)-1

Rev: A1

Id: 13/20

Audio Codec

Robin Murphy

Sheet: /Audio Codec/

File: AudioCodec.sch

Title: Smarth-001

Size: A4

Date: 2020-01-16

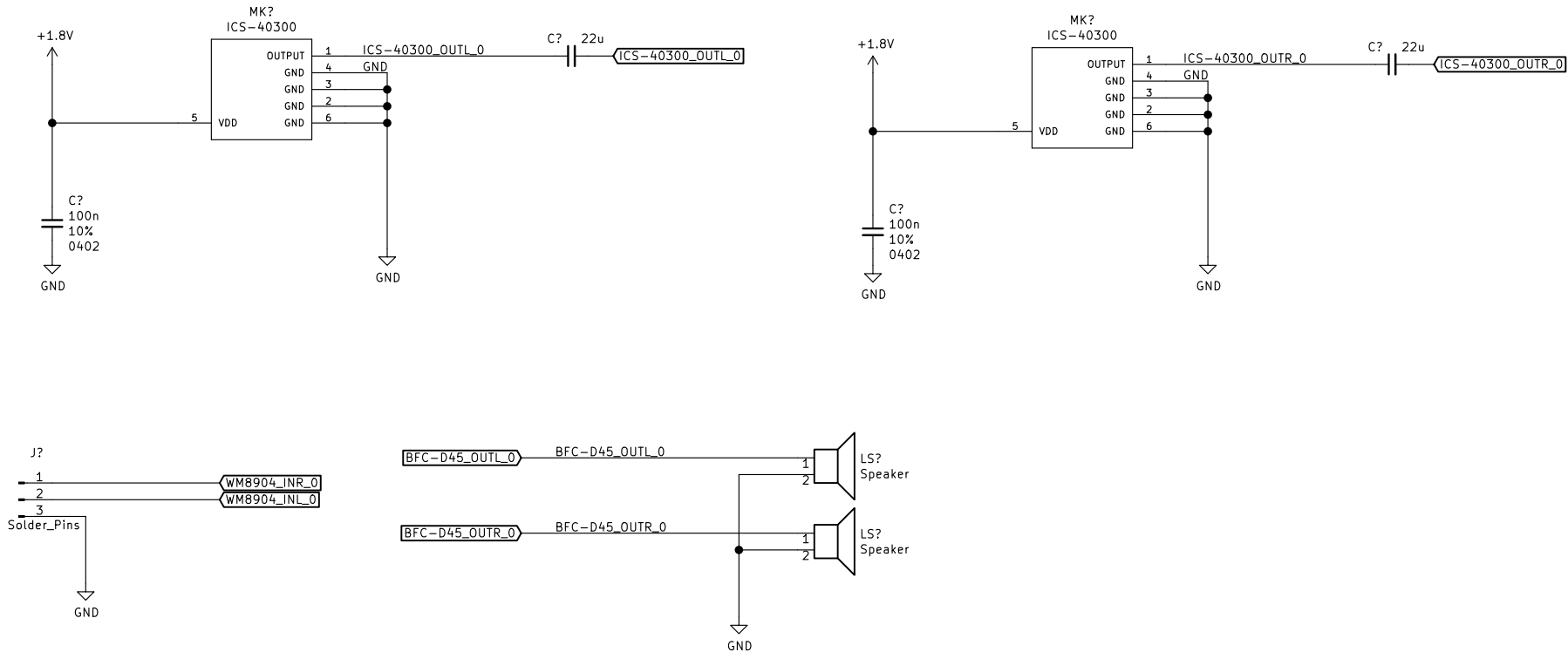
Rev: A1

KiCad E.D.A. kicad (5.1.4)-1

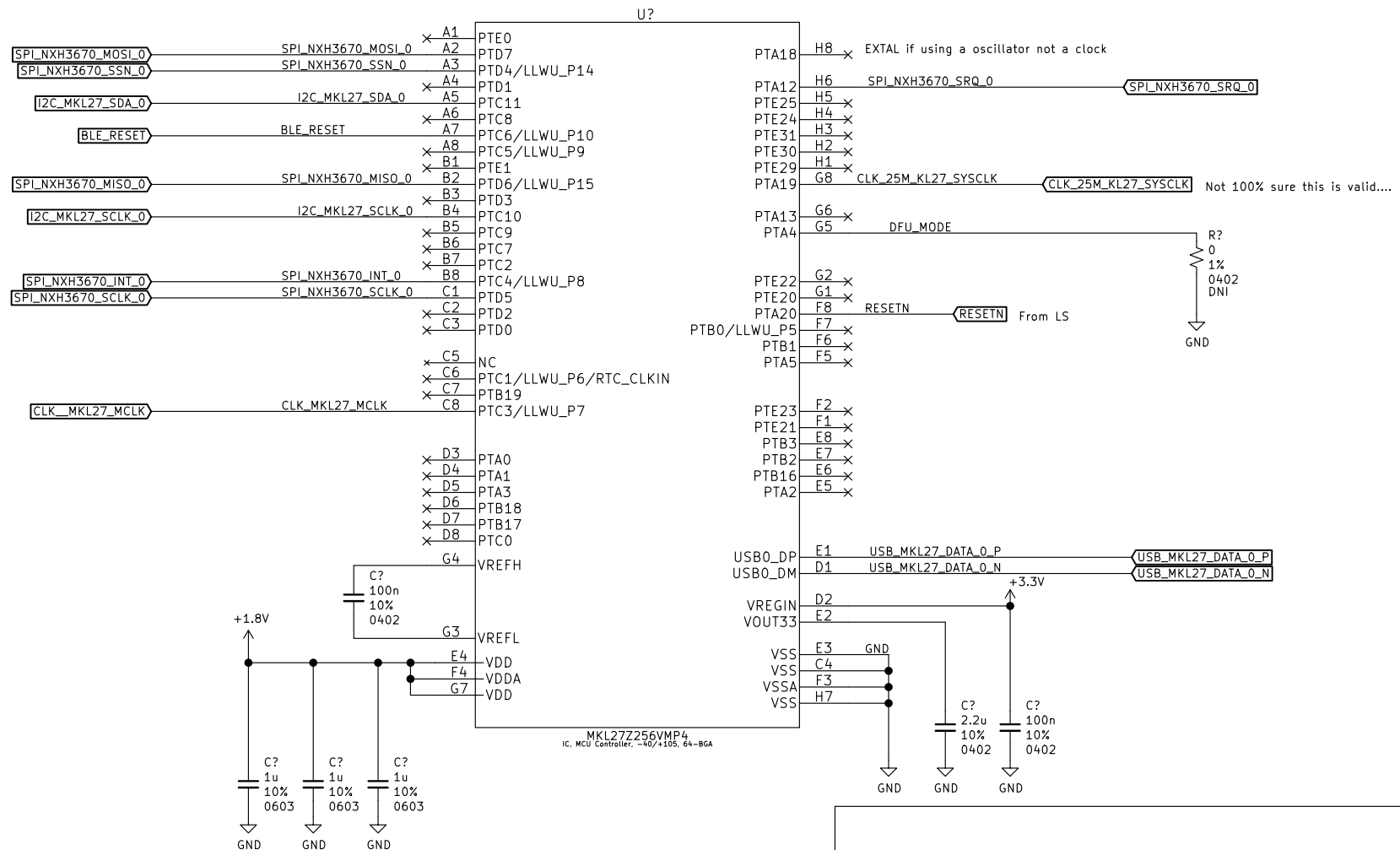
Id: 14/20

Id: 14/20

Audio Output



Kinetis KL27



Robin Murphy

Sheet: /Kinetis KL27/

File: KinetisKL27.sch

Title: Smarth-001

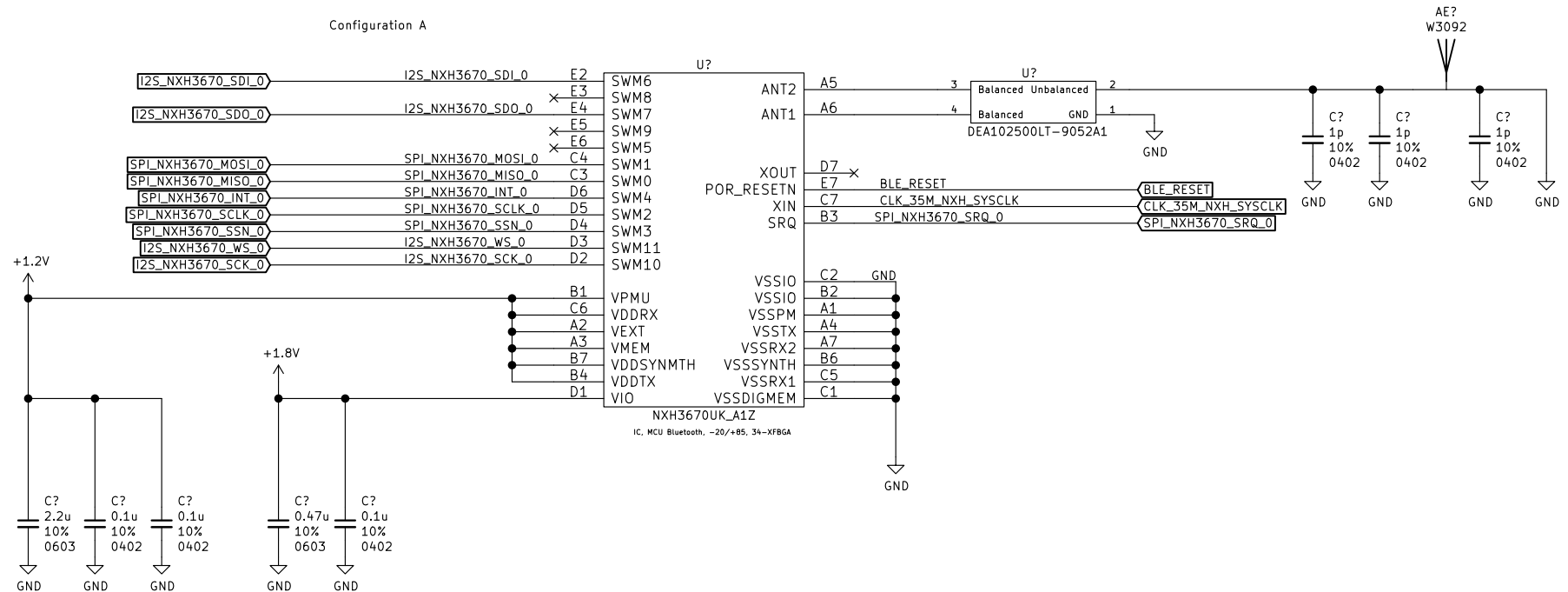
Size: A4 Date: 2020-01-16

KiCad E.D.A. kicad (5.1.4)-1

Rev: A1

Id: 16/20

NxH3670



Robin Murphy

Sheet: /NxH3670/

File: NxH3670.sch

Title: Smarth-001

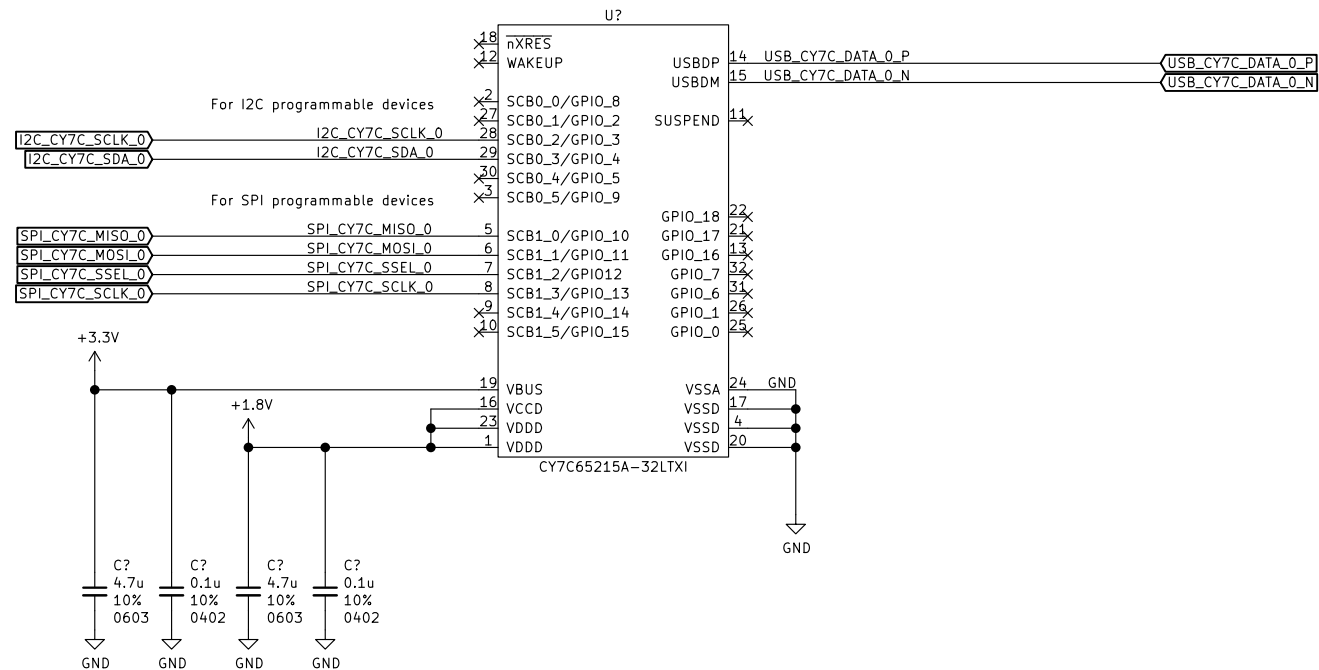
Size: A4 Date: 2020-01-16

KiCad E.D.A. kicad (5.1.4)-1

Rev: A1

Id: 17/20

USB to SPI/I2C Bridge



Robin Murphy

Sheet: /USB to SPI/I2C Bridge/
File: USBtoSPI-I2C.sch

Title: SmarH-001

Size: A4

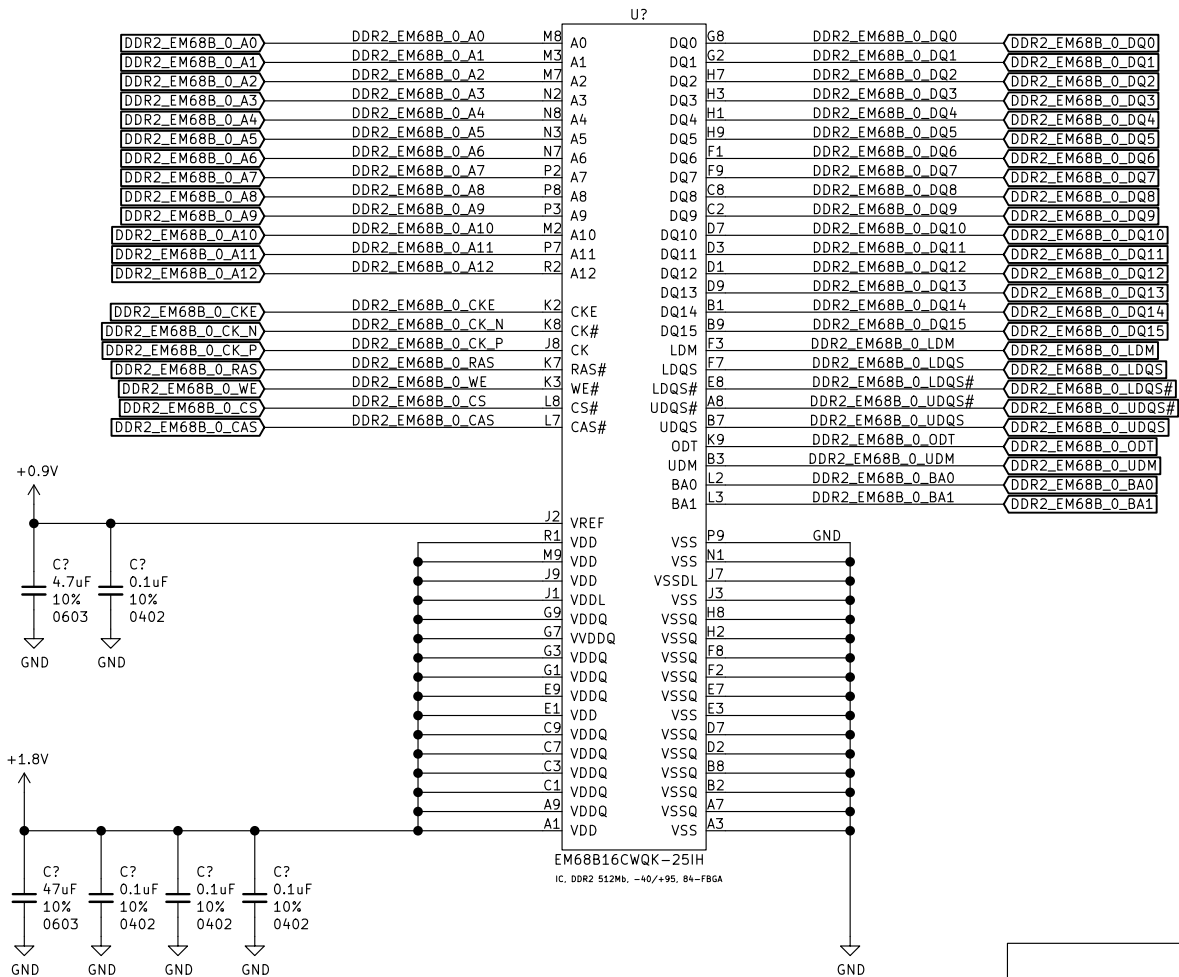
Date: 2020-01-16

KiCad E.D.A. kicad (5.1.4)-1

Rev: A1

Id: 18/20

DDR2 Memory



Robin Murphy

Sheet: /DDR2 Memory/

File: DDR2 Memory.sch

Title: Smarth-001

Size: A4

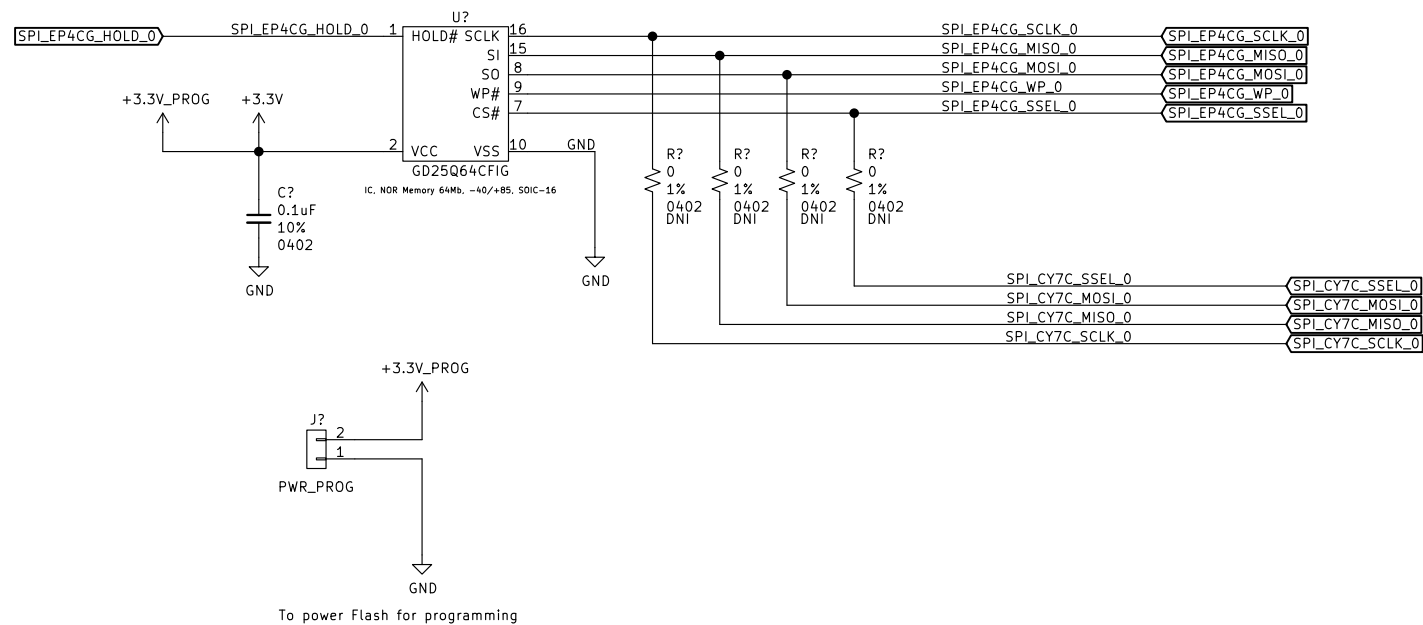
Date: 2020-01-16

KiCad E.D.A. kicad (5.1.4)-1

Rev: A1

Id: 19/20

Flash Memory



Sheet: /Flash Memory/
File: FlashMemory.sch

Title:

Size: A4
KiCad E.D.A. kicad (5.1.4)-1

Date:

Rev:
Id: 20/20