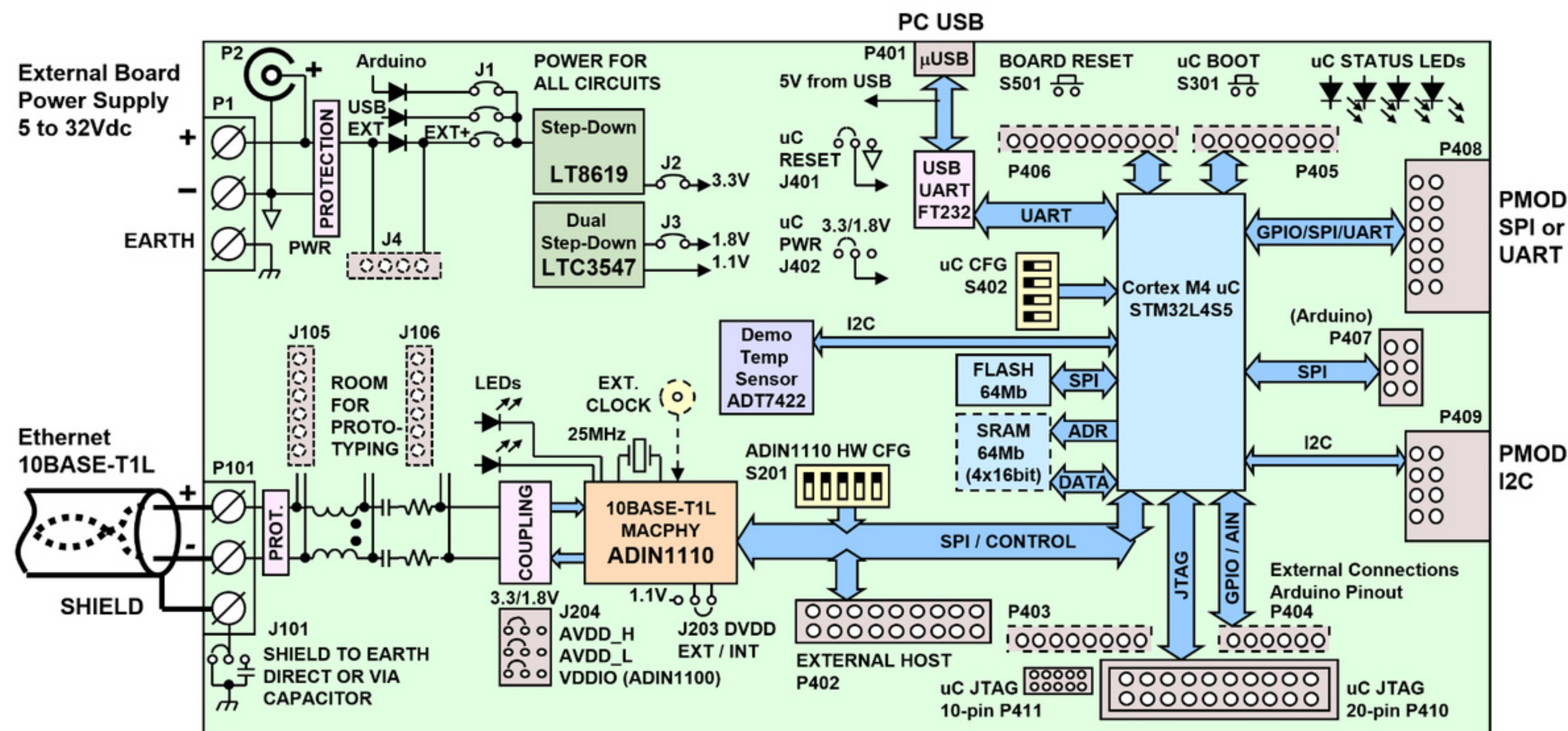


# EVAL-ADIN1110EBZ


10BASE-T1L MACPHY APPLICATION / EVALUATION BOARD

BLOCK DIAGRAM:



CONTENT:

- Page 1: BLOCK DIAGRAM:
- Page 2: ADIN1110 10BASE-T1L MACPHY
- Page 3: STM32L4S Cortex M4 uC
- Page 4: External connections
- Page 5: Power and other circuits

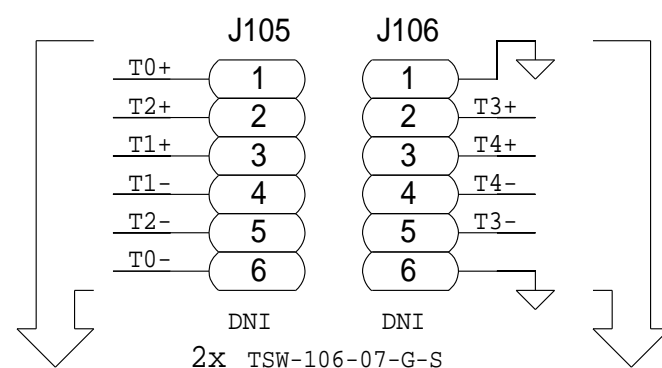
<div></div> <div>ANALOG DEVICES</div>	SCHEMATIC				
	EVAL-ADIN1110EBZ ADIN1110 LT8619, LTC3547				
	DESIGN VIEW Michal Brychta/Mark Ramos		DRAWING NO. 02_067642		REV B1
	PTD ENGINEER Patrick Duignan		SIZE C	SCALE 1:1	SHEET 1 OF 5

# ADIN1110 10BASE-T1L MACPHY

## REVISIONS

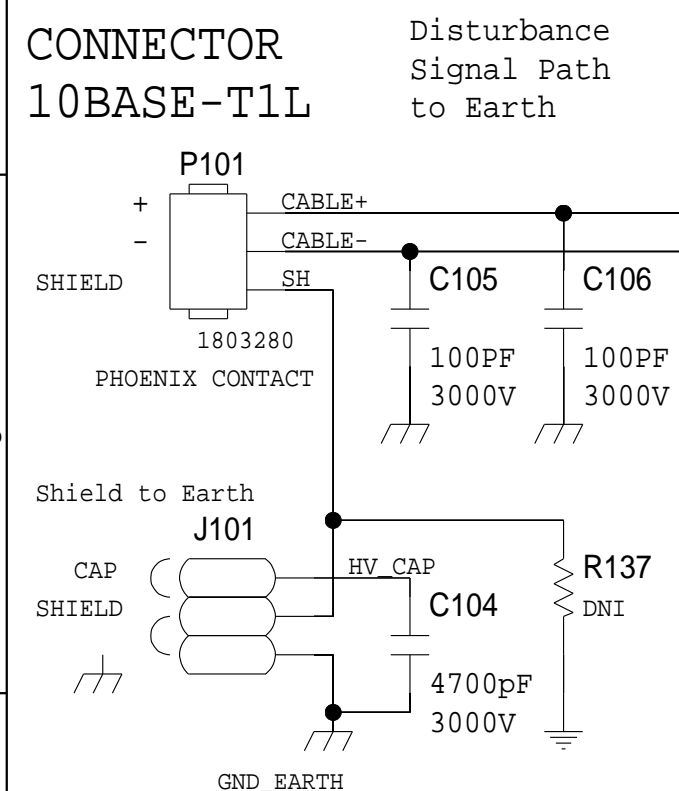
REV	DESCRIPTION	DATE	APPROVED

Test points for MDI prototyping

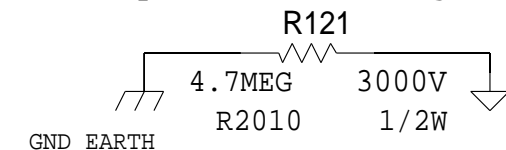


All 0 ohm resistors and "DNI" components here only for experiments & prototyping

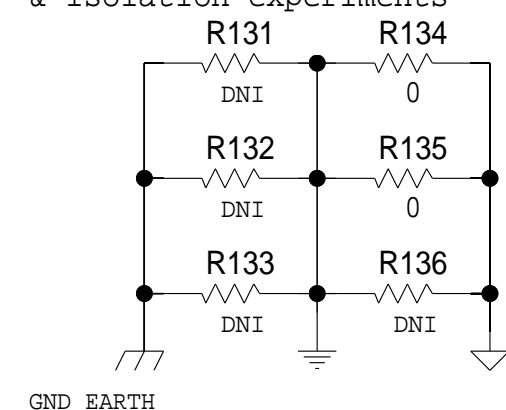
## CONNECTOR 10BASE-T1L



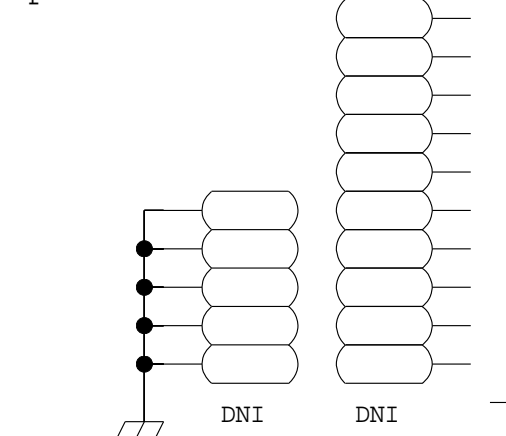
Resistor, earth to ground for capacitors discharge



Ground options for EMC & isolation experiments



More PCB prototyping points



Disturbance Signal Path to Earth

ESD/Surge Overvoltage Protection

Common Mode Inductor

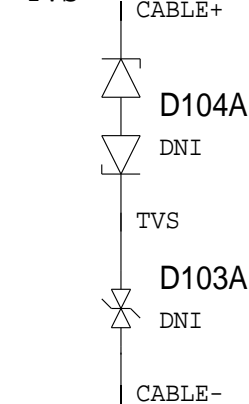
Coupling Capacitors

ESD/Surge Protection

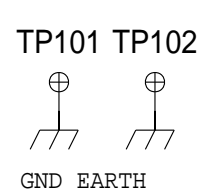
Termination Resistors

RX-TX Mixing

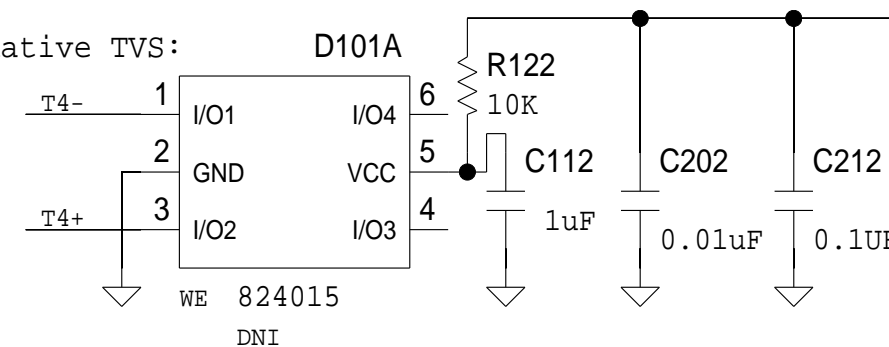
Alternative TVS:



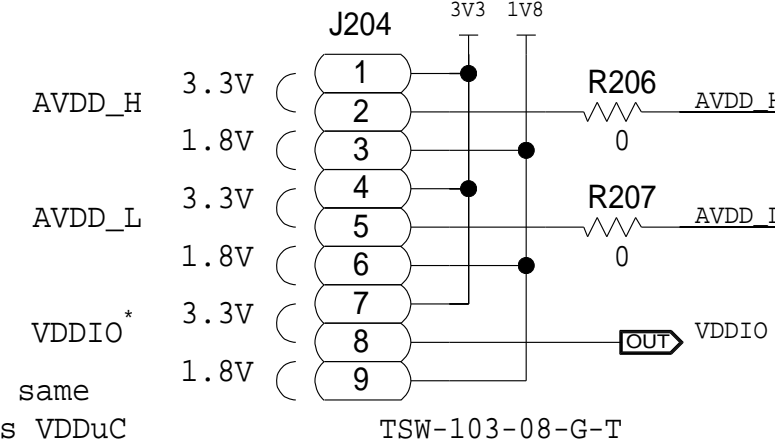
Mounting holes 3.2mm exposed contact ring



Alternative TVS:

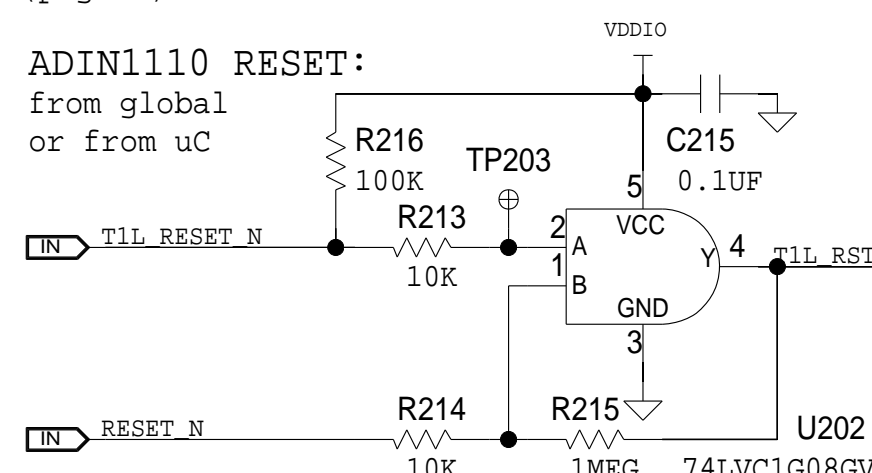


## ADIN1110 POWER

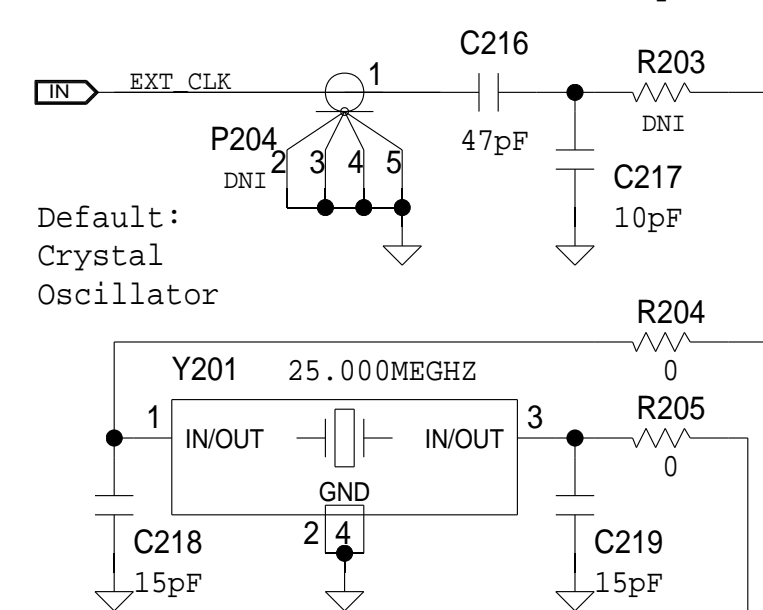


\* Set the same voltage as VDDuC on J302 (page 3)

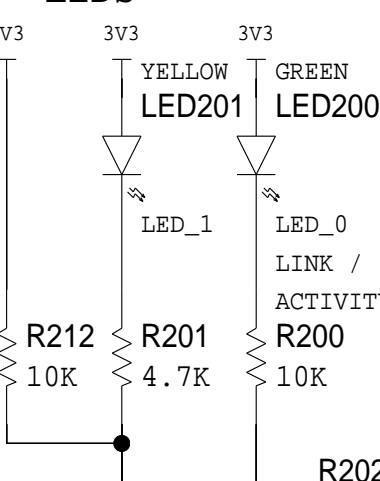
ADIN1110 RESET: from global or from uC



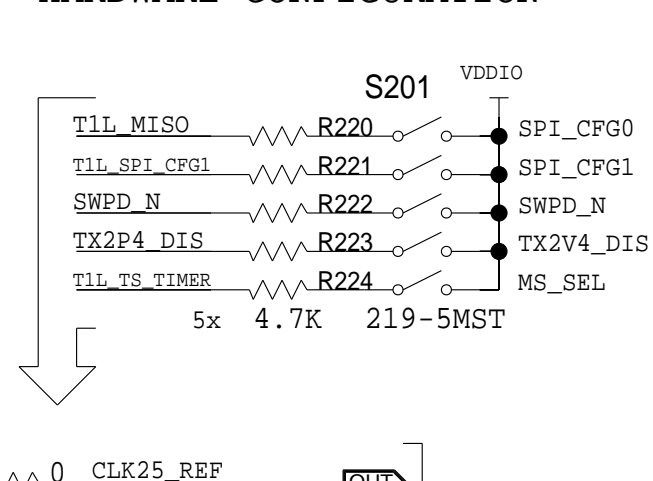
Optional: External Clock (Must be AC coupled!)



## ADIN1110 LEDs



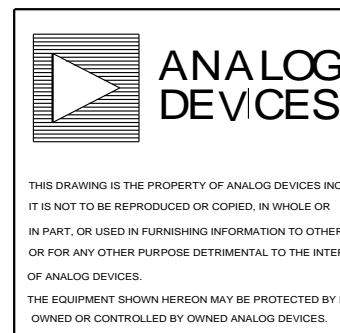
## ADIN1110 HARDWARE CONFIGURATION



HOST interface digital signals

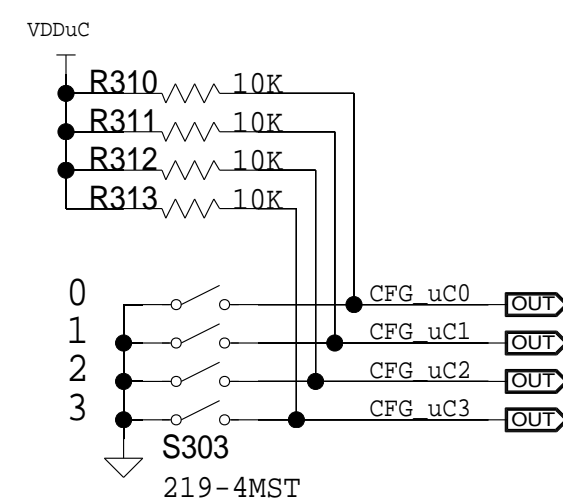
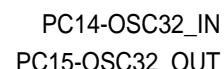
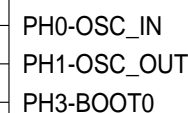
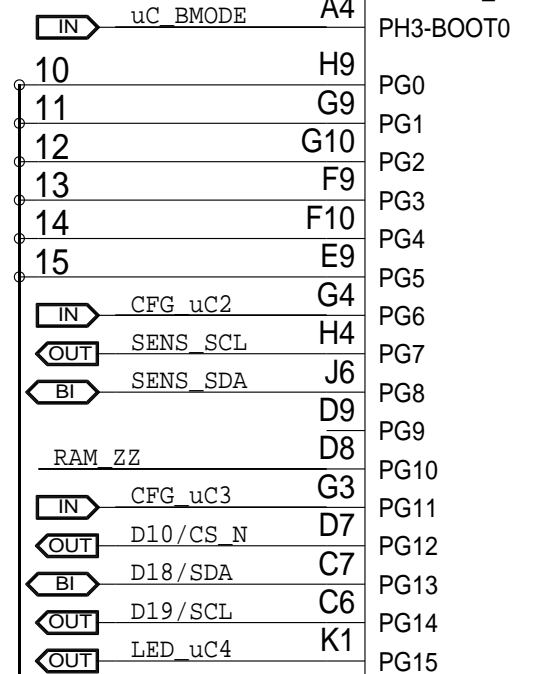
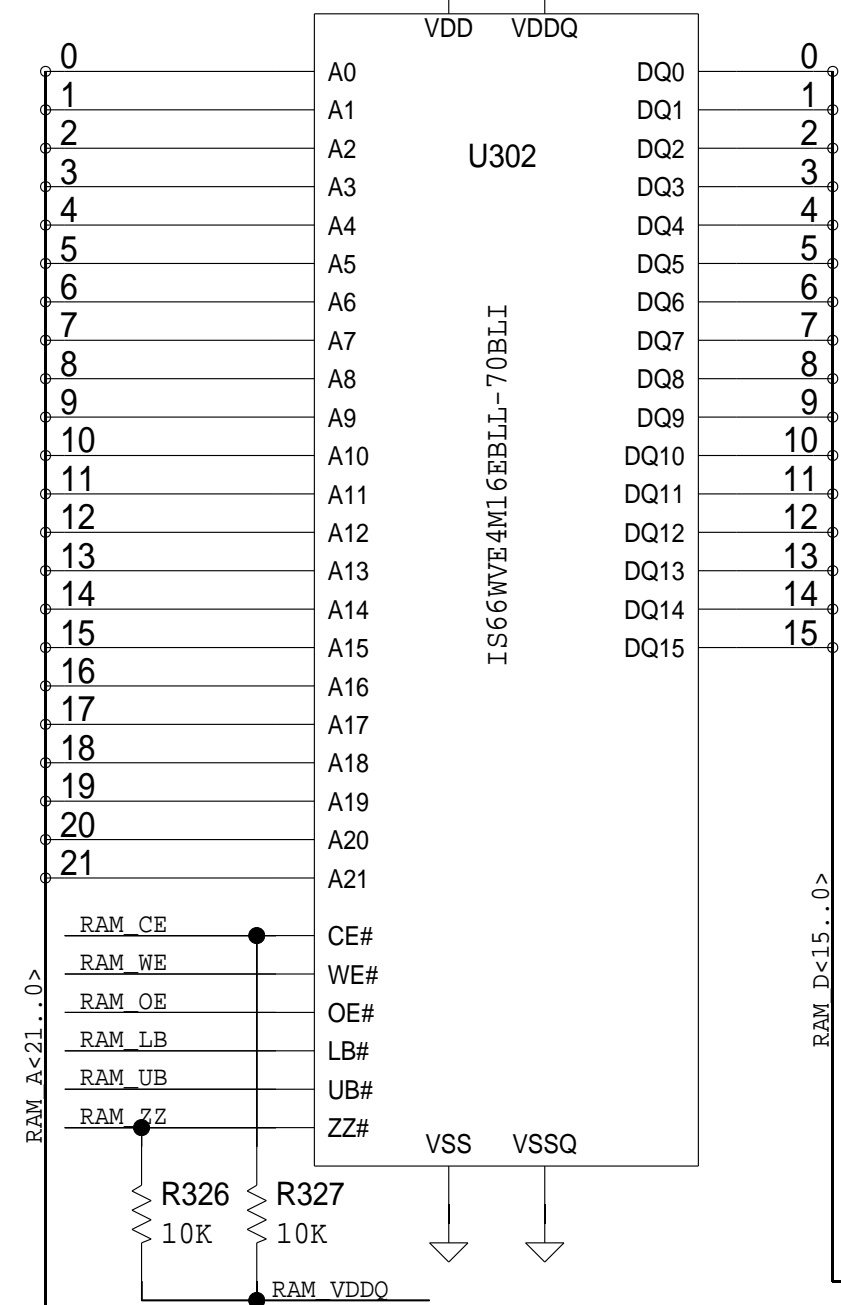
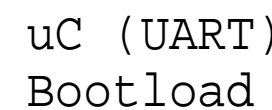
## SCHEMATIC

EVAL-ADIN1110EBZ ADIN1110 LT8619, LTC3547			
DESIGN VIEW Michal Brychta/Mark Ramos	DRAWING NO. 02_067642	REV B1	
PTD ENGINEER Patrick Duignan	SIZE C	SCALE 1:1	SHEET 2 OF 5



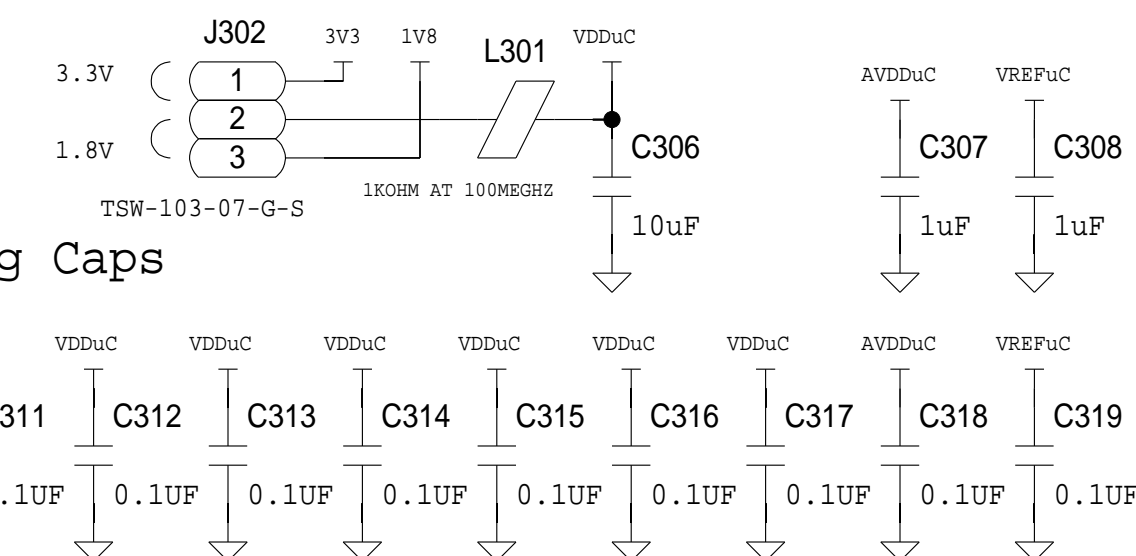


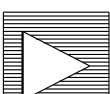
```
uC RESET
from global
or forced
```



The diagram illustrates a 4-bit LED display driver circuit. It features four parallel channels, each driven by a 3V3 supply. Each channel consists of an input (IN), a buffer (LED UC1-4), a resistor (R301-4), and an LED (LED301-4). The LEDs are color-coded: GREEN, RED, YELLOW, and BLUE. The circuit is powered by a 3V3 supply.

Set the same voltage as VDDIO  
on J204 (page 2)



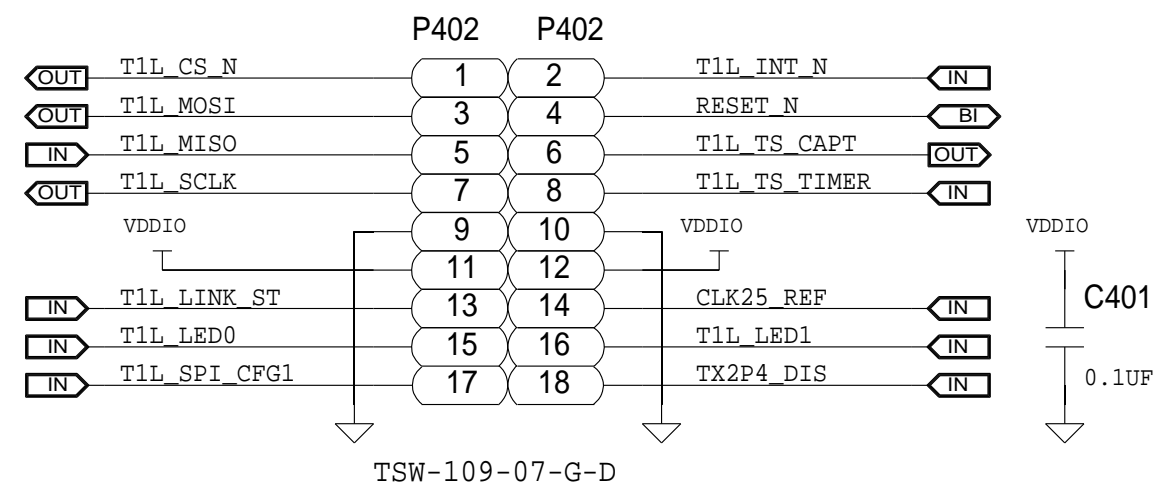
<div><div><div>ANALOG DEVICES</div><div><p>THIS DRAWING IS THE PROPERTY OF ANALOG DEVICES INC. IT IS NOT TO BE REPRODUCED OR COPIED, IN WHOLE OR IN PART, OR USED IN FURNISHING INFORMATION TO OTHERS, OR FOR ANY OTHER PURPOSE DETRIMENTAL TO THE INTERESTS OF ANALOG DEVICES. THE EQUIPMENT SHOWN HEREON MAY BE PROTECTED BY PATENTS OWNED OR CONTROLLED BY OWNED ANALOG DEVICES.</p></div></div></div>	SCHEMATIC				
	EVAL-ADIN110EBZ ADIN110 LT8619, LTC3547				
	DESIGN VIEW Michal Brychta/Mark Ramos		DRAWING NO. 02_067642		REV B1
	PTD Duignan Patrick Duignan		SIZE C	SCALE 1:1	SHEET 3 OF 5

## External Connections

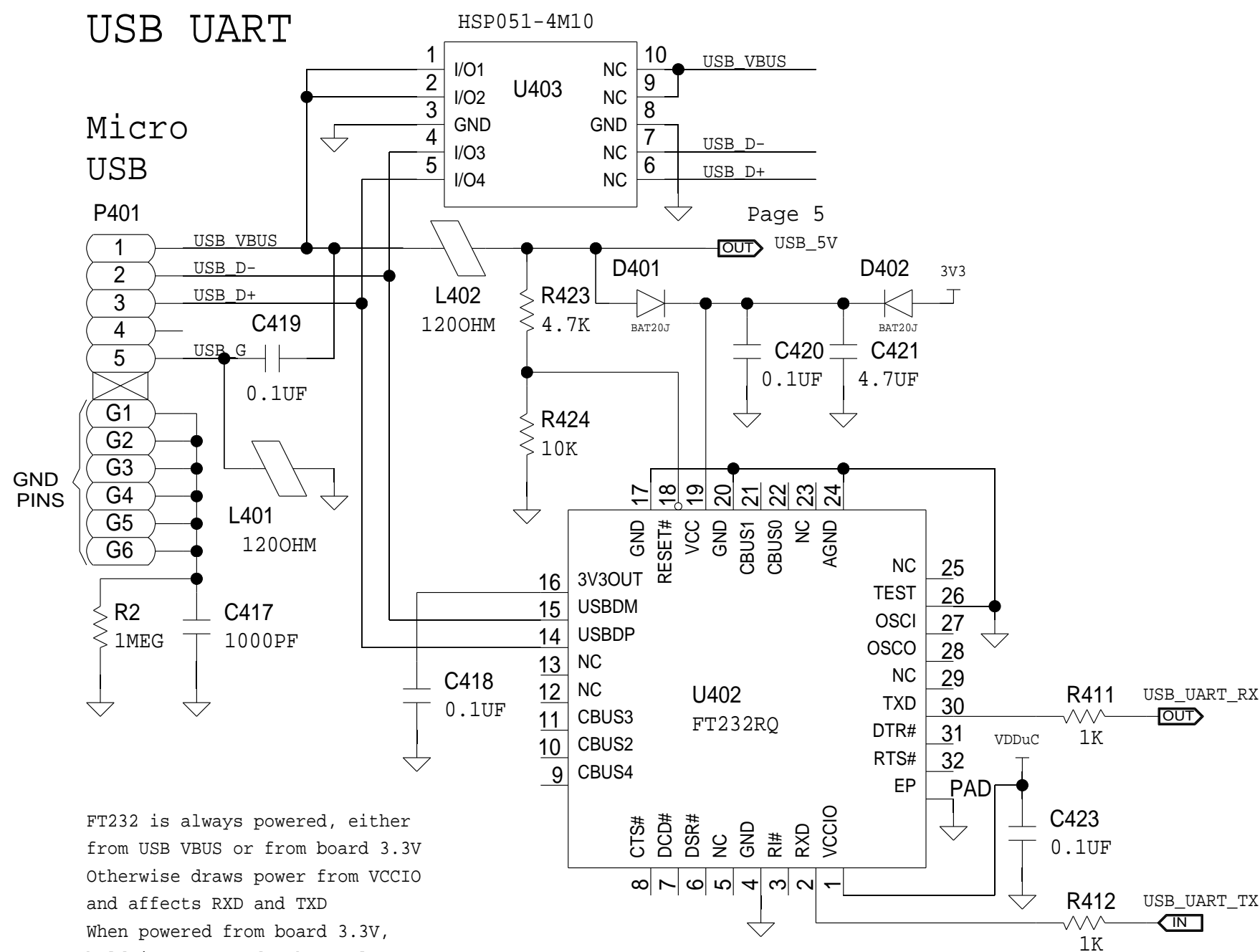
ADIN1110 Signals for monitoring  
or connection to external host

Logic voltage levels related to ADIN1110 VDDIO  
When using ADIN1110 with an external host/uC  
place the local uC in reset by jumper J301 in "GND" position

Pins 1 to 12 compatible with PMOD Type 2A (Expanded SPI)  
Pins 13 to 16 are exposing more ADIN1110 signals



## USB UART



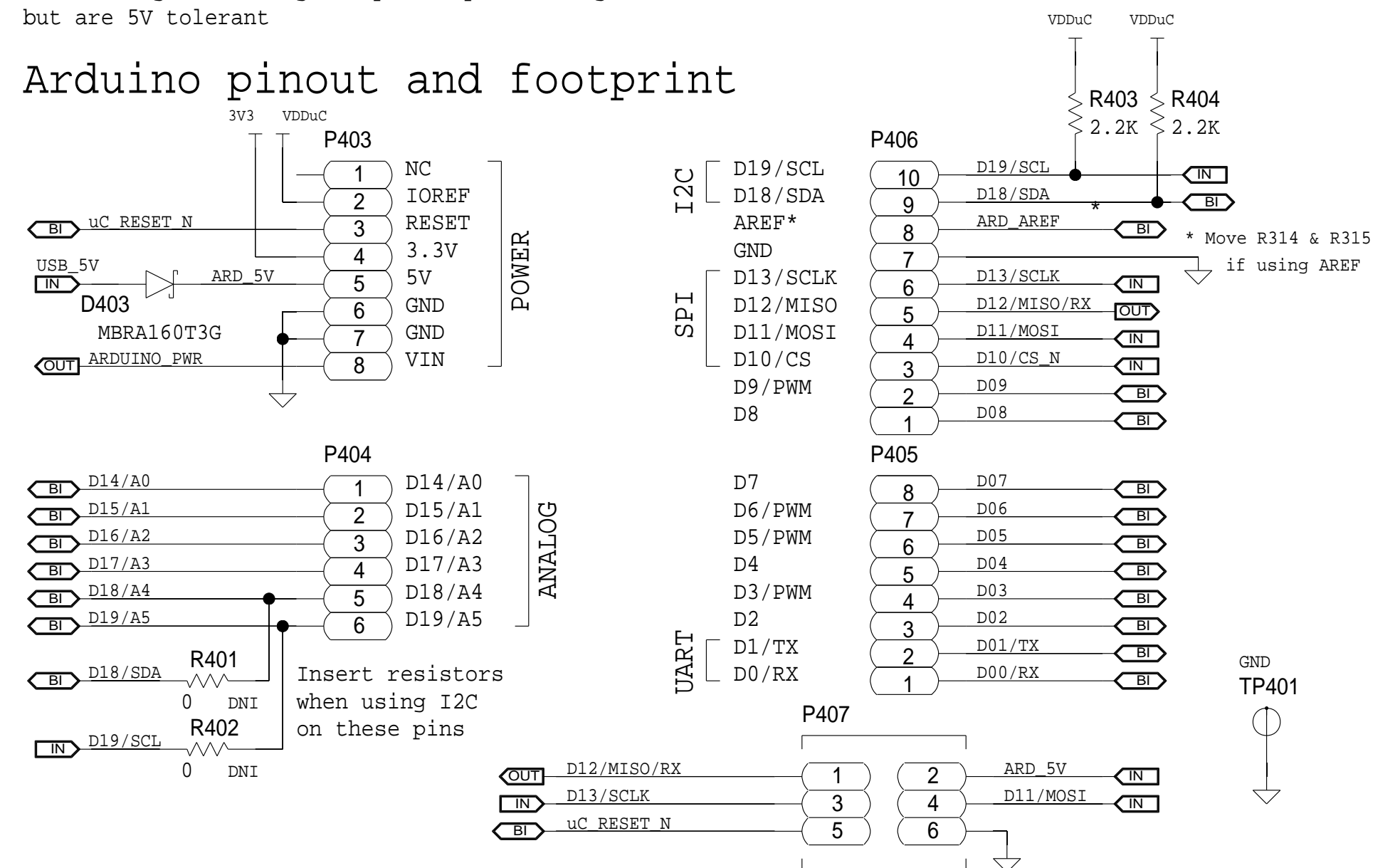
FT232 is always powered, either from USB VBUS or from board 3.3V. Otherwise draws power from VCCIO and affects RXD and TXD. When powered from board 3.3V, held in reset and takes only <100uA.

## uC Signals

for external applcation / demo use

Pins configured as logic outputs have voltage levels related to VDDuC  
Pins configured as logic inputs expect voltage levels related to VDDuC  
but are 5V tolerant

## Arduino pinout and footprint

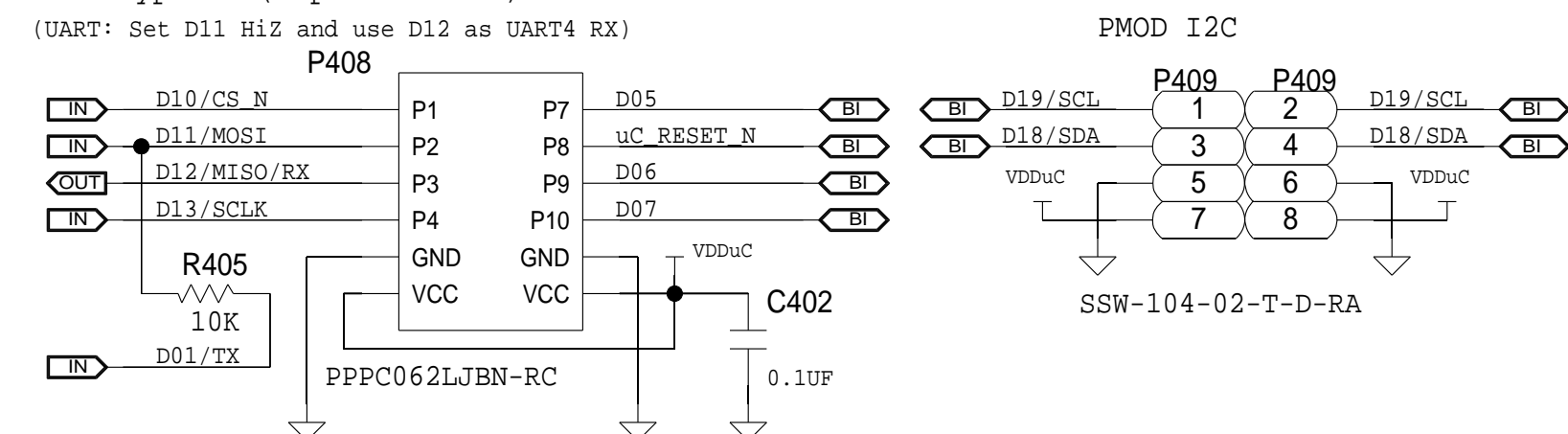


## PMOD pinout & footprint

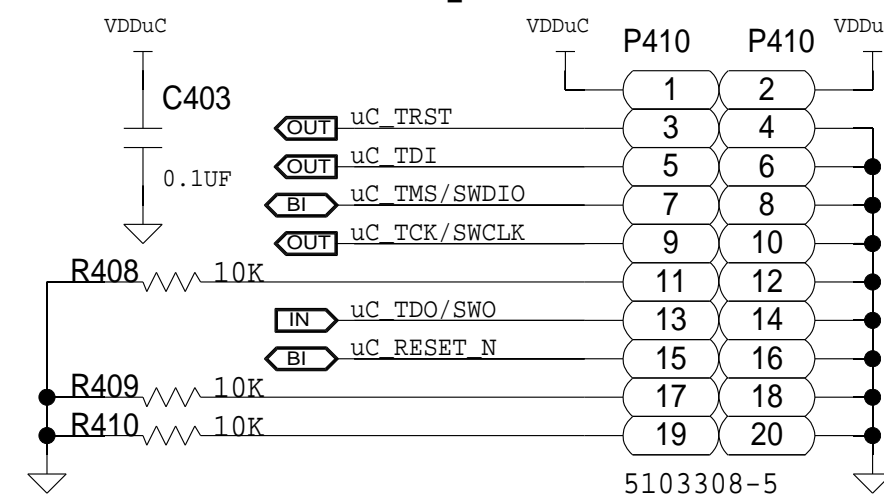
```

PMOD Type 2A (Expanded SPI)
PMOD Type 4A (Expanded UART)
(UART: Set D11 HiZ and use D12 as UART4 RX)

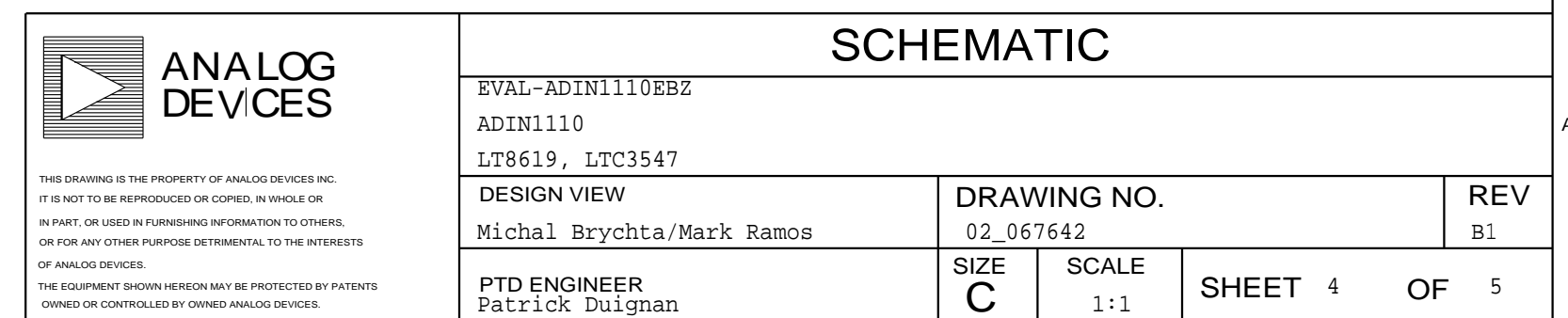
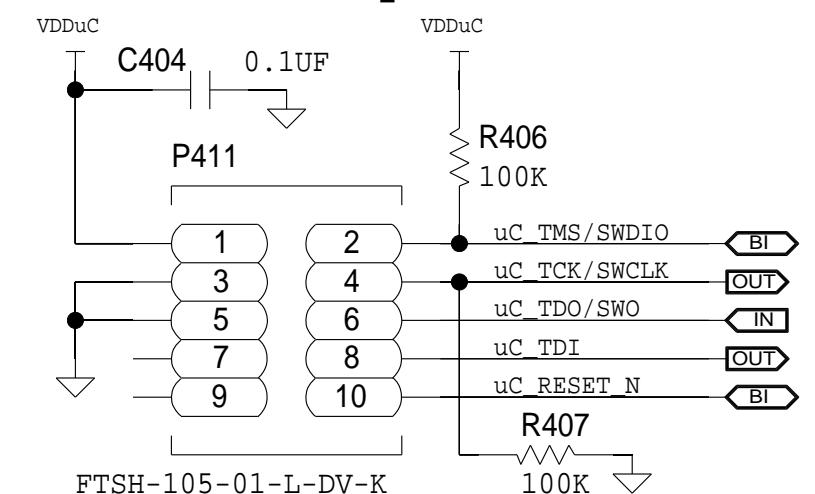
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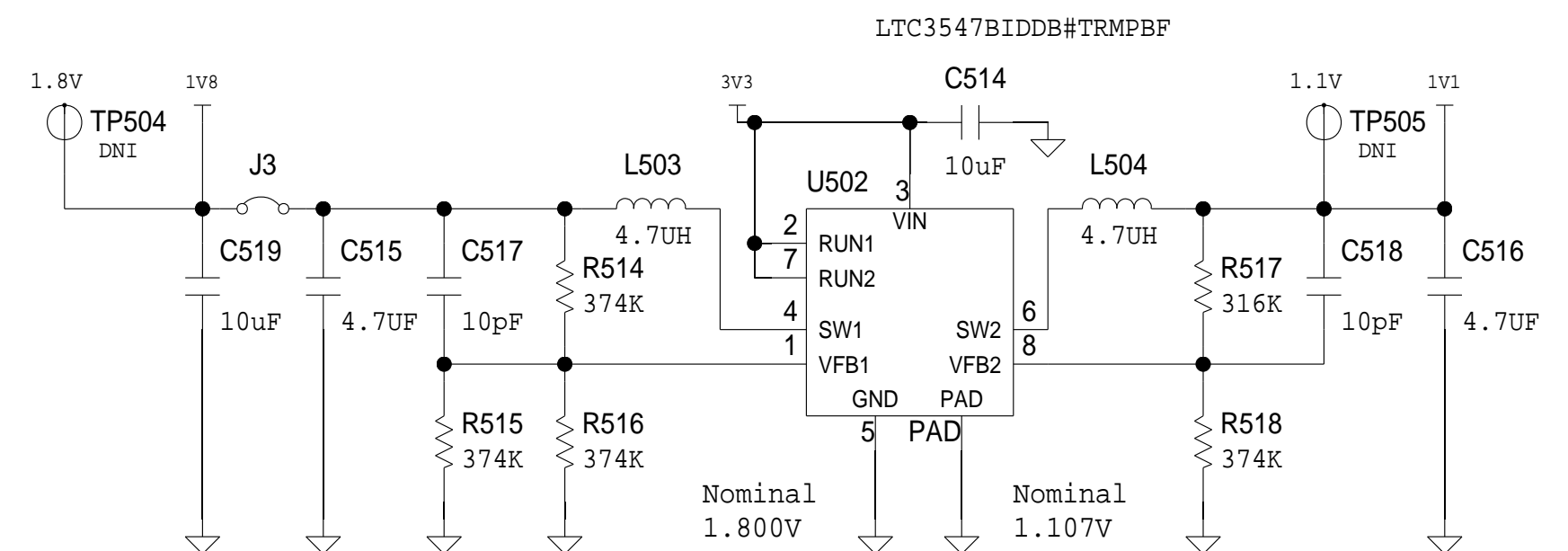
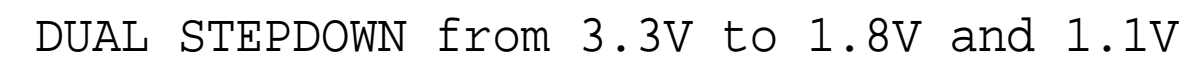
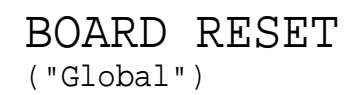
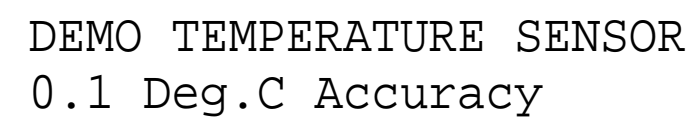
## uC JTAG (20-pin)



## uC JTAG (10-pin)



REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



EVAL-ADIN1110EBZ
ADIN1110
LT8619, LTC3547