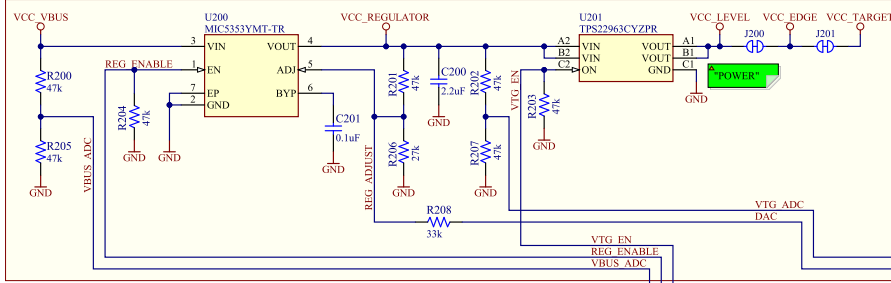


### TARGET ADJUSTABLE REGULATOR



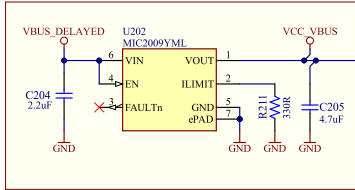
**J200:**  
 - Cut-strap used for full separation of target power from the level shifters and on-board regulators.  
 - For current measurements using an external power supply, this strap could be cut for more accurate measurements. Leakage back through the switch is in the micro ampere range.  
**J201:**  
 - For current measurements using the on-board power supply, this strap must be cut and an ammeter connected across.

**MIC5353:**  
 Vin: 2.6V to 6V  
 Vout: 1.25V to 5.1V  
 Imax: 500mA  
 Dropout (typical): 50mV @ 150mA, 160mV @ 500mA  
 Accuracy: 2% initial  
 Thermal shutdown and current limit  
 Maximum output voltage is limited by the input voltage and the dropout voltage in the regulator. ( $V_{max} = V_{in} - \text{dropout}$ )

Interface Signal	ICSP™ TARGET	UPDI TARGET	SWD TARGET
CDC TX	UART RX	UART RX	UART RX
CDC RX	UART TX	UART TX	UART TX
DBG0	DAT	UPDI	SWDAT
DBG1	CLK	GPIO	SWCLK
DBG2	GPIO	GPIO	SWO/GPIO
DBG3	MCLR	RESET	RESET
VCC	-	-	-

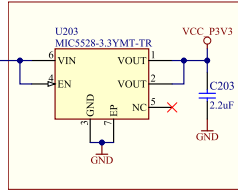
**ADJUSTABLE OUTPUT AND LIMITATIONS:**  
 - The DEBUGGER can adjust the output voltage of the regulator between 1.25V and 5.1V to the target.  
 - The voltage output is limited by the input (V<sub>BUS</sub>), which can vary between 4.40V to 5.25V  
 - The level shifters have a minimum supply voltage of 1.2V and supports the full output range of the voltage regulator.  
 - The TPS2963CZPDR has a minimum supply voltage of 1V and supports the full output range of the voltage regulator.  
 - Firmware configuration will limit the voltage range to be within the target specification.

### VBUS CURRENT-LIMIT



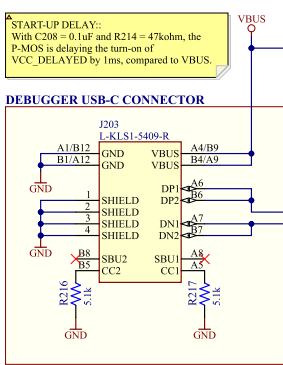
**CURRENT LIMIT:**  
 - With R211 = 330kohm, the current through the power switch MIC2009 is limited to: 506mA (min) - 712mA(typ) - 903mA (max).

### DEBUGGER REGULATOR

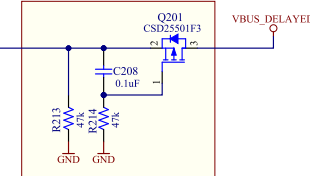


**MIC5528:**  
 Vin: 2.5V to 5.5V  
 Vout: Fixed 3.3V  
 Imax: 500mA  
 Dropout: 260mV @ 500mA

### DEBUGGER USB-C CONNECTOR

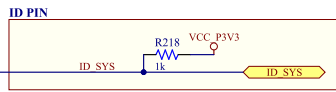
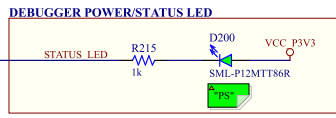
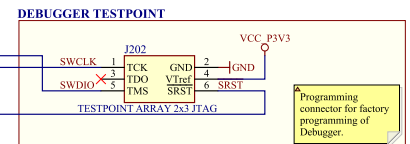
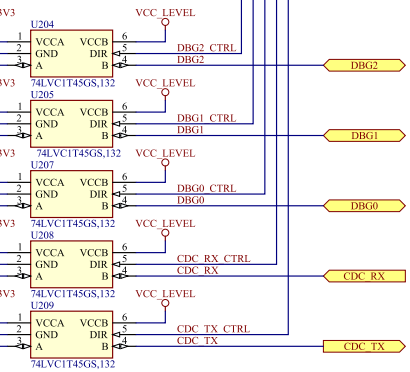
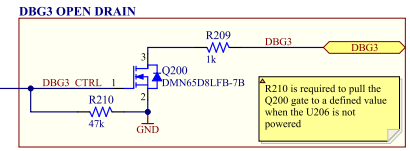
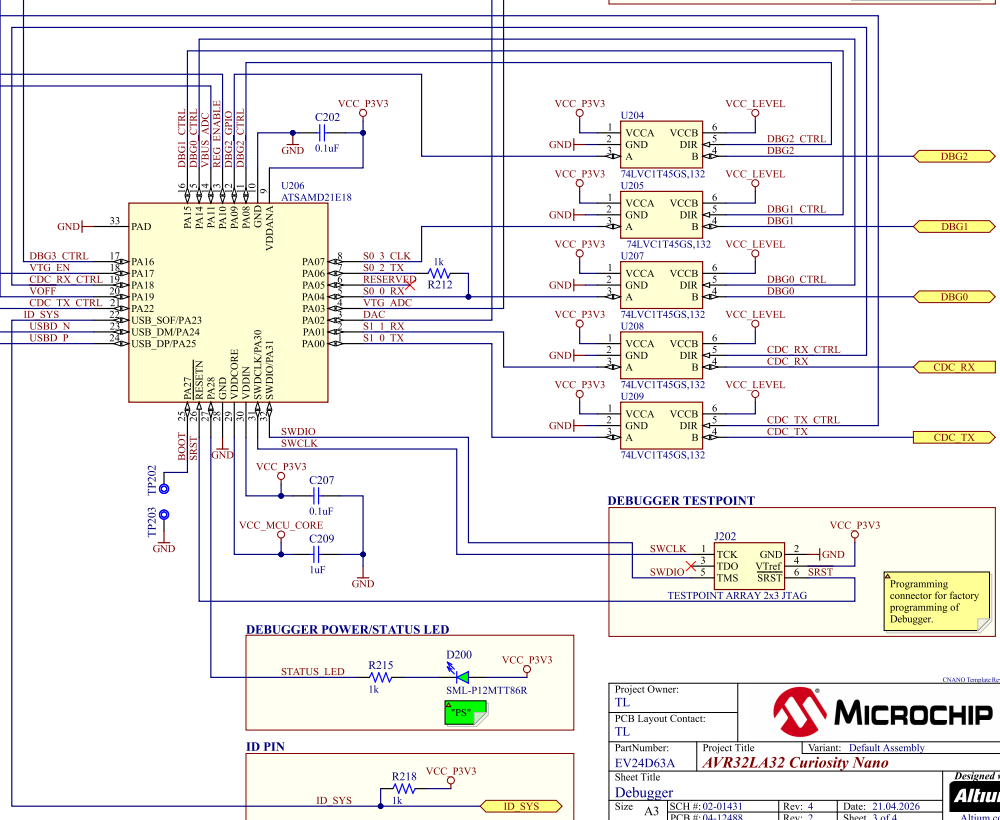


### VBUS START-UP DELAY



**START-UP DELAY:**  
 With C208 = 0.1uF and R214 = 47kohm, the P-MOS is delaying the turn-on of VCC\_DELAYED by 1ms, compared to VBUS.

## DEBUGGER



TP200 and TP201 are MTG Holes in the corners of the PCB close to the DEBUGGER section labelled "GND" on the silkscreen.

Project Owner: TL  
 PCB Layout Contact: TL  
 Part Number: EV24D63A  
 Project Title: AVR32LA32 Curiosity Nano  
 Variant: Default Assembly  
 Sheet Title: Debugger  
 Size: A3  
 SCH #: 02-01451  
 Rev: 4  
 Date: 21.04.2026  
 PCB #: 04-12488  
 Rev: 2  
 Sheet: 3 of 4  
 File: AVR32LA32\_Curiosity\_Nano\_Debugger\_SchDoc

**MICROCHIP**

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