

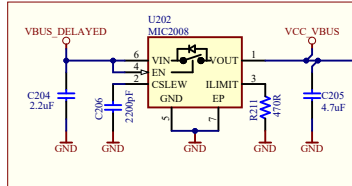
The diagram shows the VCC regulator and VBUS ADC circuit. The VCC regulator (U200, MIC5353YMT-TR) is a voltage follower. Its VIN is connected to VCC_VBUS through a 47k resistor (R200). Its VOUT is connected to VCC_LEVEL through a 47k resistor (R204). The VBUS ADC (U201, MIC34163YCS) is also a voltage follower. Its VIN is connected to VCC_LEVEL through a 47k resistor (R206). Its VOUT is connected to VCC_EDGE and VCC_TARGET through a 47k resistor (R207). The circuit includes various resistors (R200, R205, R204, R206, R207, R208) and capacitors (C200, C201) for regulation and filtering. A 'POWER' block is connected to the VCC_EDGE output.

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	<u>MCLR</u>	<u>RESET</u>	<u>RESET</u>
VCC	-	-	-

VBUS SLEW RATE- & CURRENT-LIMIT



CURRENT LIMIT:
- With R205 set to 470 ohms, the current through the power switch MIC2008 is limited to 500mA.

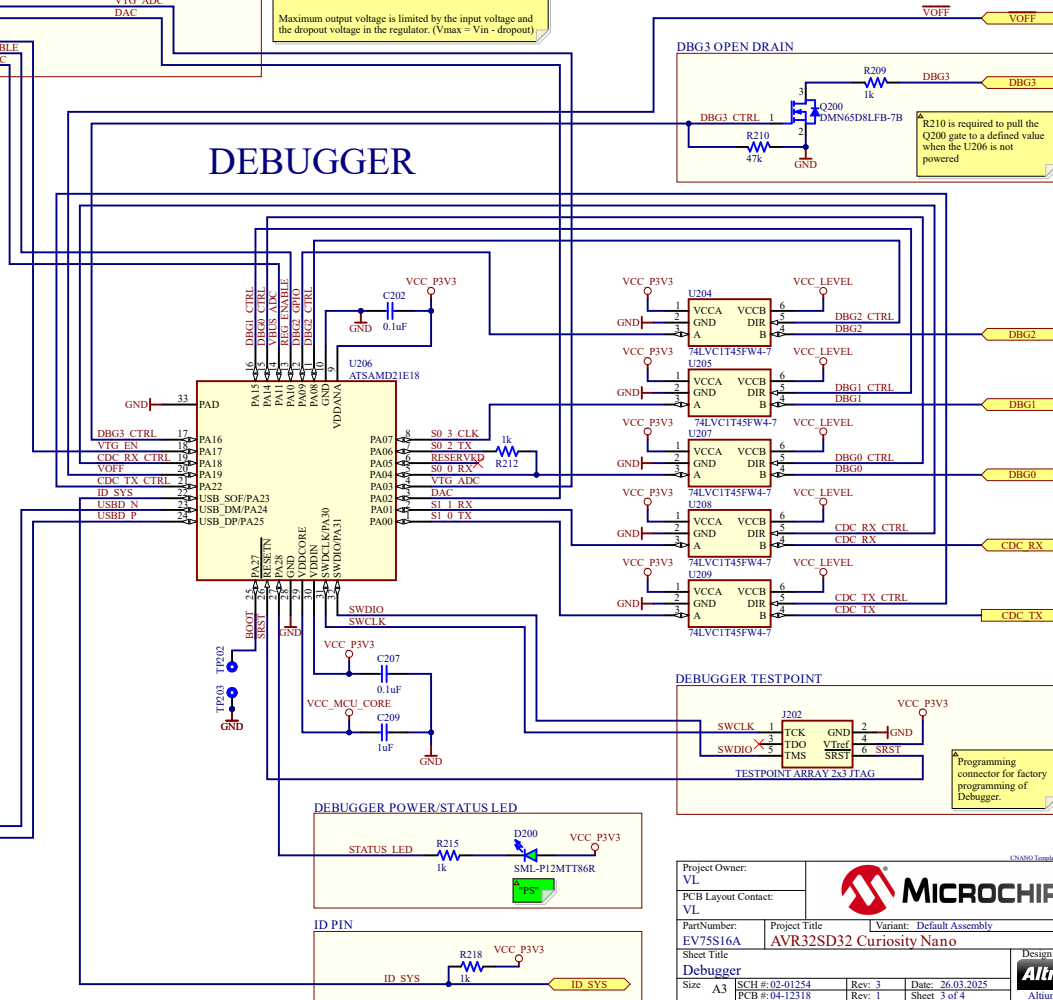
SLEW RATE LIMIT:
- The CSLEW feature is implemented incorrectly. CSLEW should be connected to VIN with a capacitor. The actual slew rate for VCC_VBUS is approximately 50V/ms.

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

START-UP DELAY::
With $C_{208} = 0.1\mu F$ and $R_{214} = 47k\Omega$, the P-MOS is delaying the turn-on of VCC DELAYED by 1ms, compared to VBUS.

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

DEBUGGER



CNANO Terminate Revision: 2.5

Project Owner: VL		 MICROCHIP		CS5000 Template Revision: 2	
PCB Layout Contact: VL					
Part Number: EV75S16A		Project Title AVR32SD32 Curiosity Nano		Variant: <u>Default Assembly</u>	
Sheet Title Debugger		Designed with 			
Size: A3		SCH No: 02-01254 PCB No: 04-12315		Rev: 3 Date: 26.03.2025	
File: AVR32SD32_Curiosity_Nano_Debugger.sch		Rev: 1		Sheet 3 of 4	
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