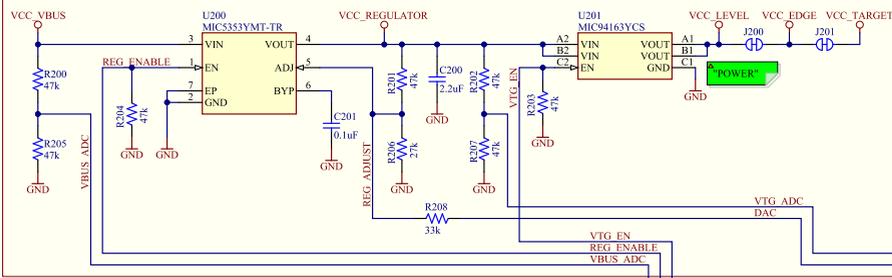


TARGET ADJUSTABLE REGULATOR



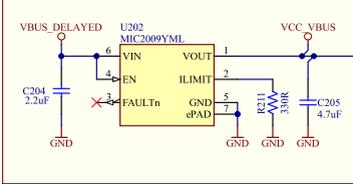
J200:
 - Cut-strap used for full separation of target power from the level shifters and on-board regulators.
 - For current measurements using an external power supply, this strap could be cut for more accurate measurements. Leakage back through the switch is in the micro ampere range.
 - For current 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 RX	UART RX	UART RX	UART RX
DBG0	UART TX	UART TX	UART TX
DBG1	DAT	UPDI	SWDAT
DBG2	CLK	GPIO	SWCLK
DBG3	GPIO	GPIO	SWO/GPIO
VCC	-	-	-

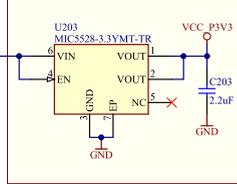
ADJUSTABLE OUTPUT AND LIMITATIONS:
 - The DEBUGGER can adjust the output voltage of the regulator between 1.25V and 5.1V to the target.
 - The voltage output is limited by the input (USB), which can vary between 4.40V to 5.25V
 - The level shifters have a minimal voltage level of 1.65V and will limit the minimum operating voltage allowed for the target to still allow communication.
 - The MIC94163 has a minimal voltage level of 1.70V and will limit the minimum voltage delivered to the target.
 - Firmware configuration will limit the voltage range to be within the target specification.

VBUS CURRENT-LIMIT



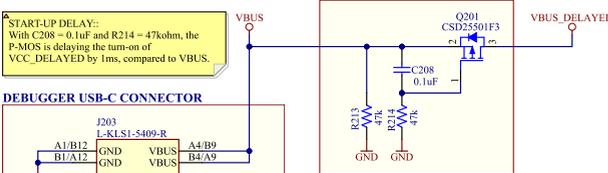
CURRENT LIMIT:
 - With R211 = 330ohm, the current through the power switch MIC2099 is limited to: 300mA (min) - 712mA(typ) - 903mA (max).

DEBUGGER REGULATOR

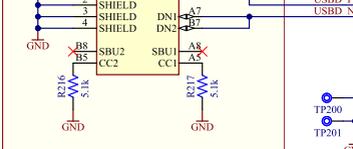


MIC5528:
 Vin: 2.5V to 5.5V
 Vout: Fixed 3.3V
 Imax: 500mA
 Dropout: 260mV @ 500mA

VBUS START-UP DELAY

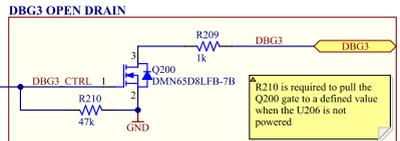
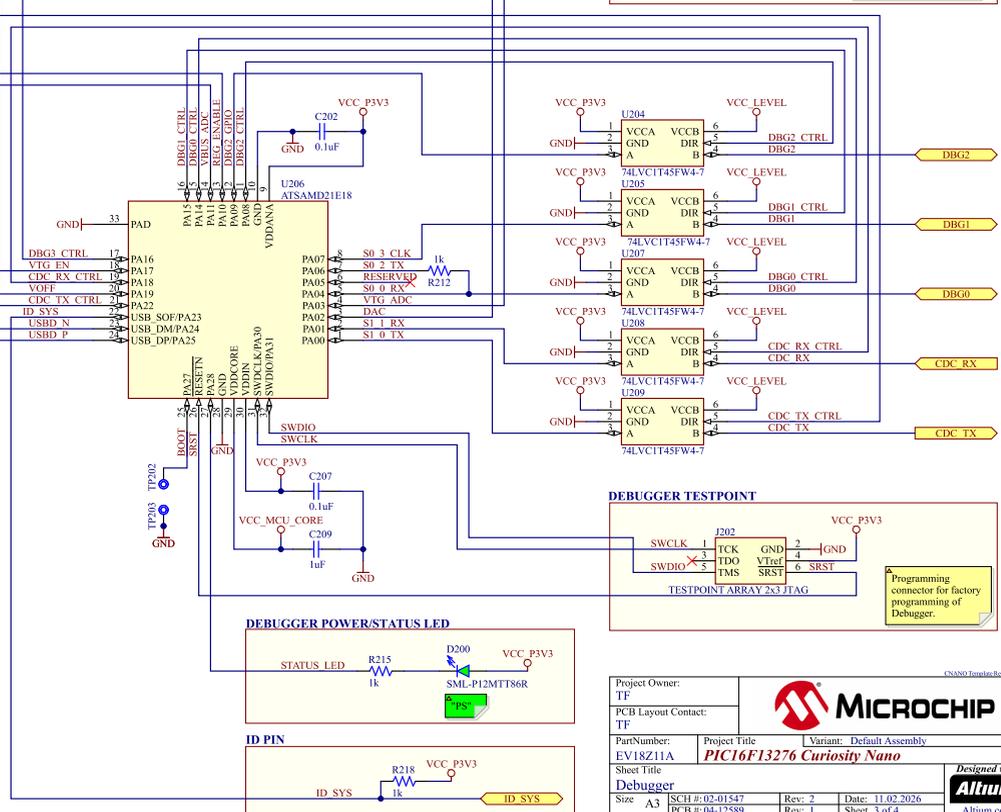


DEBUGGER USB-C CONNECTOR

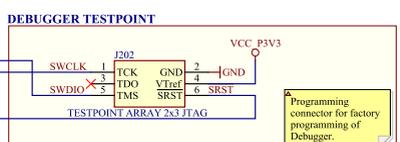
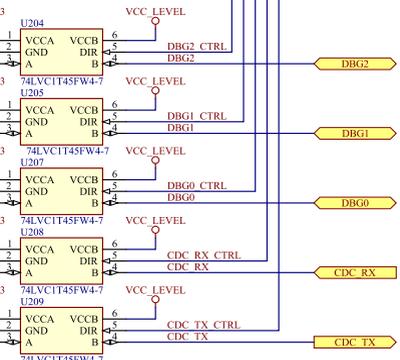


TP200 and TP201 are MTG Holes in the corners of the PCB close to the DEBUGGER section labelled "GND" on the silkscreen.

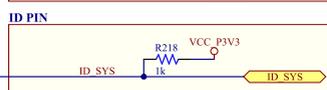
DEBUGGER



R210 is required to pull the Q200 gate to a defined value when the U206 is not powered.



Programming connector for factory programming of Debugger.



Project Owner: TF
 PCB Layout Contact: TF
 Part Number: E3143Z11A
 Sheet Title: PIC16F13276 Curiosity Nano Debugger
 Project Title: Variant: Default Assembly
 Date: 11.02.2026
 Rev: 2
 Sheet 3 of 4

MICROCHIP

Designed with Altium

File: PIC16F13276_Curiosity_Nano_Debugger_SchDoc