

Interface	ICSP	UPDI
Signal <td>TARGET</td> <td>TARGET</td>	TARGET	TARGET
	UART RX	UART RX
	UART TX	UART TX
	DAT	UPDI
	CLK	GPIO
	GPIO	GPIO
	MCLR	RESET
	VCC	

**J100**  
Cut-strip used for full separation of target power from the level shifters and on-board regulators.  
- For current measurements using an external power supply, this strip could be cut for more accurate measurements. Leakage back through the switch is in the micro ampere range.

**J101**  
This is footprint for a 1x2, 100mil pitch pin-header that can be used for easy current measurement in the target microcontroller and the LED / Button. To use the footprint:  
- Cut the track between the holes, and mount a pin-header

**MIC5553**  
Vin: 2.5V 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.  
(Vmax = Vin - dropout)

**DEBUGGER TESTPOINTS**

SWCLK  
SWDIO  
TCK  
TDO  
TMS  
TRST  
TDI  
GND

Programming connector for factory programming of Debugger  
Testpoint Array

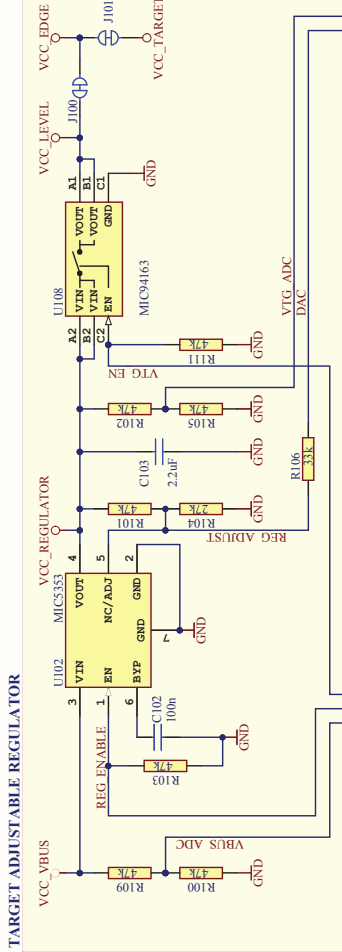
STATUS LED  
TP100

**DEBUGGER POWER/STATUS LED**  
R107  
D100  
VCC\_P3V3  
GREEN LED  
SML-P1EM1T86R

**DEBUGGER USB MICRO-B CONNECTOR**  
PTC Resettable fuse:  
Hold current: 500mA  
Trip current: 1000mA

VBUS  
F100  
MC36213  
J105  
USB D+  
USB D-  
ID  
GND  
SHIELD1  
SHIELD2  
SHIELD3  
SHIELD4  
SHEILD MU-AMB0142AB2\_269

**ID PIN**  
VCC\_P3V3  
ID\_SYS  
ID\_SYS



**Adjustable output and limitations:**  
- The on-board debugger can adjust the output voltage of the regulator between 1.25V and 5.1V to the target.  
- 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 output switch has a minimal voltage level of 1.70V and will limit the minimum voltage delivered to the target.  
- Firmware allows for the voltage range to be wider than the target specification.  
- Firmware feedback loop will adjust the output voltage accuracy to within 0.5%.

