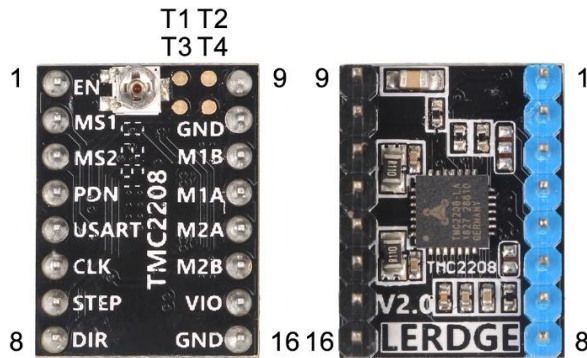


TMC2208 Lerdge-SilentStepDrive

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Module Top View



Features and additional Resources

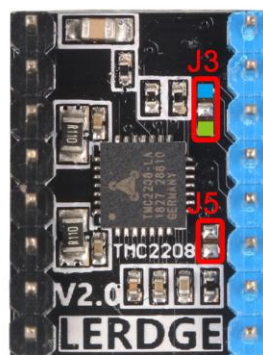
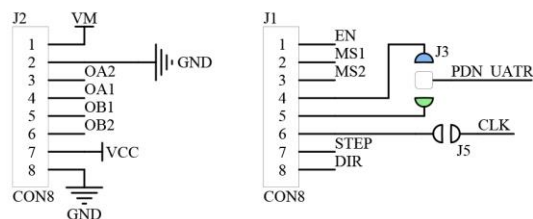
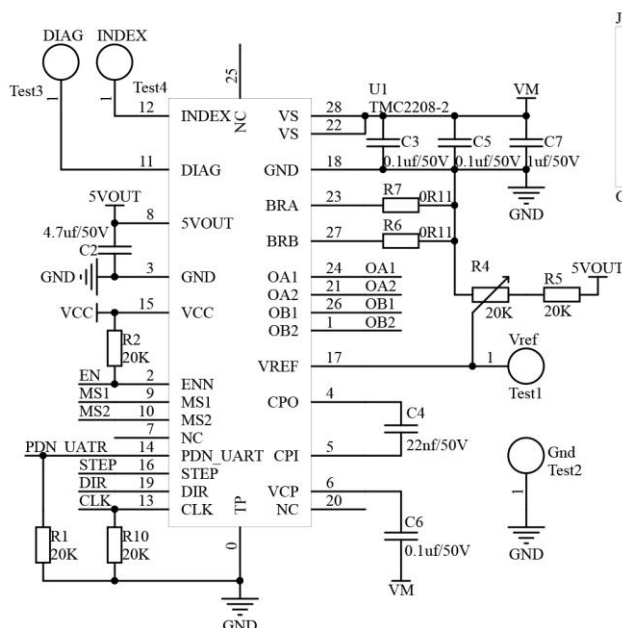
- ✓ TMC2208-LA stepper motor controller & driver
- ✓ Supply voltage 4.75-36V
- ✓ Continuous $I_{\text{phase}} = 1.0\text{A RMS}$
- ✓ I_{phase} up to 1.4A RMS = 1.97A peak for a short time
- ✓ Quiet operation with StealthChop™
- ✓ Smooth Running 256 microsteps by MicroPlyer™ interpolation
- ✓ Energy savings with CoolStep™
- ✓ Configuration and extended diagnostics via UART
- ✓ Control via Step & Dir interface
- ✓ Board width 15.5mm, board height 20.5mm
- ✓ 2x8 pin 2.54mm header rows for pins/connectors

Pin List

T1	Vref	T2	GND
T3	DIAG	T4	INDEX

1	EN	9	VM
2	MS1	10	GND
3	MS2	11	M1B
4	NC (PDN_UART)	12	M1A
5	NC (PDN_UART)	13	M2A
6	NC (CLK)	14	M2B
7	STEP	15	VIO
8	DIR	16	GND

Schematics



$$I_{\text{RMS}} = \frac{325\text{mV}}{R_{\text{sense}} + 30\text{m}\Omega} \cdot \frac{1}{\sqrt{2}} \cdot \frac{V_{\text{ref}}}{2.5\text{V}} \approx 0.66 \cdot V_{\text{ref}}$$

V_{ref} 0...2.5V (default: 1.25V)
 R_{sense} 0.11 Ohm

EN (with pull-up)
 GND Enable driver
 VCC Disable driver

MS1	MS2	Steps	Interpolation
VCC	GND	2	256
GND	VCC	4	256
GND	GND	8	256
VCC	VCC	16	256