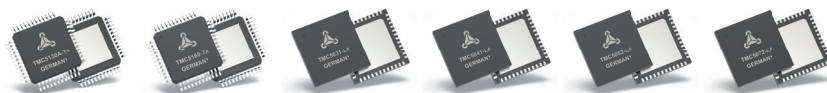


Stepper motor driver



PRODUCT	TMC260A	TMC261A	TMC2660	TMC262	TMC2041	TMC2100	TMC2130	TMC2160	TMC2160	TMC2590	TMC2208	TMC2224	TMC2202	TMC2209
Number of axes		1		1	2	1	1	1	1	1		1		1
Stepper motor type		2-Phase		2-Phase	2-Phase	2-Phase	2-Phase	2-Phase	2-Phase	2-Phase		2-Phase		2-Phase
Motor supply	9...40V	9...60V	9...30V	9...60V	5...26V	5...46V	5...46V	8...60V	5V...60V			5...36V		5V...29V
Logic voltage		3.3...5V		3.3...5V	3.3...5V	3.3...5V	3.3...5V	3.3...5V	3.3...5V			3.3...5V		3.3...5V
Phase current, max. (RMS)	1.4A	1.4A	2.2A (2.8A)	ext. MOSFETs	2x 1.1A / 1x 2.2A	1.2A / 1.4A	1.2A / 1.4A	ext. MOSFETs	ext. MOSFETs			1.4A		2.0A
Phase current, max. (peak)	2A	2A	4A	ext. MOSFETs	2x 1.5A / 1x 3.1A	1.7A / 2A	1.7A / 2A	ext. MOSFETs	ext. MOSFETs			2.0A		2.8A
Microsteps, max.		256		256	256	256	256	256	256			256		256
Stand alone (without µC)		-		-	-	✓	(✓)	(✓)	✓			✓		✓
SPI		✓		✓	✓	-	✓	✓	✓			-		-
Step/Direction		✓		✓	✓	✓	✓	✓	✓			✓		✓
Single Wire UART		-		-	✓	-	-	-	-			✓		✓
StallGuard2™		✓		✓	✓	-	✓	✓	✓			-		-
StallGuard4™		-		-	-	-	-	-	-			-		✓
CoolStep™		✓		✓	✓	-	✓	✓	✓			-		✓
SpreadCycle™ chopper		✓		✓	✓	✓	✓	✓	✓			✓		✓
ChopSync2™		-		-	-	-	✓	-	-			-		-
MicroPlyer™ (multiplier to 256 µsteps)		16		16	16	any to 256	any to 256	any to 256	16		2/4/8/16	4/8/16/32	2/4/8/16	8/16/32/64
StealthChop™ (no audible noise)		-		-	-	✓	✓	-	-			-		-
StealthChop2™ (no audible noise & fast acceleration)		-		-	-	-	-	✓	-			✓		✓
Internal RDson current measurement		-		-	-	✓	✓	-	-			✓		✓
Programmable microstep table		-		-	-	-	✓	✓	-			-		-
Passive braking (closed bridge)		-		-	-	-	✓	✓	-			✓		✓
Pin-compatible with		TMC261 TMC2660 TMC260		-	-	TMC2130-LA TMC2130-TA TMC5130-TA	TMC2100-LA TMC2100-TA TMC5130-TA	TMC5160-TA	-	Allegro A4988	TI DRV8824	Allegro A4982		-
Package		QFP44 (10x10)		QFN32 (5x5)	QFN48 (7x7)	QFN36 (5x6) eTQFP48 (7x7)	QFN36 (5x6) eTQFP48 (7x7)	eTQFP48 (7x7)	TQFP32-EP(5x5)	QFN28 (5x5)	QFN28 (5x5)	QFN32 (5x5)		QFN28 (5x5)
Order code	TMC260A-PA	TMC261-PA	TMC2660-PA	TMC262-LA	TMC2041-LA	TMC2100-LA TMC2100-TA	TMC2130-LA TMC2130-TA	TMC2160-TA	TMC2590-TA	TMC2208-LA	TMC2224-LA	TMC2202-WA		TMC2209-LA

Stepper motor motion controller & driver (cDriver)



PRODUCT	TMC5130A	TMC5160	TMC5031	TMC5041	TMC5062	TMC5072
Number of axes	1	1	2	2	2	2
Stepper motor type	2-Phase	2-Phase	2-Phase	2-Phase	2,3-Phase	2-Phase
Motor supply	5V...46V	8V...60V	5V...16V	5V...26V	5V...20V	5V...26V
Logic voltage	3.3V...5V	3.3V...5V	3.3V...5V	3.3V...5V	3.3V...5V	3.3V...5V
Phase current, max. (RMS)	1.4A	up to 20A (ext. MOSFETs)	2x 1.1A	2x 1.1A	2x 1.1A	2x 1.1A / 1x 2.2A
Phase current, max. (peak)	2A	ext. MOSFETs	2x 1.5A	2x 1.5A	2x 1.5A	2x 1.5A / 1x 3.1A
Microsteps, max.	256	256	256	256	256	256
Motion controller: ramping and positioning	✓	✓	✓	✓	✓	✓
Acceleration ramp	Linear SixPoint™	Linear SixPoint™	Linear SixPoint™	Linear SixPoint™	Linear SixPoint™	Linear SixPoint™
SPI	✓	✓	✓	✓	✓	✓
Step/Direction	✓	✓	-	-	-	✓
Single wire UART	✓	✓	-	-	✓	✓
Home-/limit switch In	2	2	4	4	4	4
ABN-encoder interface	1	1	-	-	2	2
StallGuard2™	✓	✓	✓	✓	✓	✓
CoolStep™	✓	✓	✓	✓	✓	✓
SpreadCycle™ chopper	✓	✓	✓	✓	✓	✓
ChopSync2™	✓	✓	✓	✓	✓	✓
MicroPlyer™ (multiplier to 256 μsteps)	any to 256	any to 256	-	-	-	16
StealthChop™ (no audible noise)	✓	-	-	✓	-	✓
StealthChop2™ (no audible noise & fast acceleration)	-	✓	-	-	-	-
DcStep™	✓	✓	-	✓	✓	✓
Passive braking (closed bridge)	✓	✓	-	✓	-	✓
Internal RDSon current measurement	✓	-	-	-	-	-
Programmable microstep table	✓	✓	✓	✓	✓	✓
Package	eTQFP48 (7x7)	eTQFP48 (7x7) QFN56 (8x8)	QFN48 (7x7)	QFN48 (7x7)	QFN48 (7x7)	QFN48 (7x7)
Order code	TMC5130A-TA	TMC5160-TA TMC5160-WA	TMC5031-LA	TMC5041-LA	TMC5062-LA	TMC5072-LA

Motor driver for battery-powered motor control



PRODUCT	TMC2300	TMC6300	TMC7300
Number of axes	1	1	2 (1)
Motor type	2-Phase Stepper	3-Phase BLDC, PMSM	Brushed DC
Motor supply	2V (1.8V)...11V	2V (1.8V)...11V	2V (1.8V)...11V
Phase current, max. (RMS)	1.2A	-	-
Phase current, max. (peak)	1.7A	2A	2A (2.4A)
Standby current draw	<50nA typ.	<50nA typ.	<50nA typ.
Microsteps, max.	256	-	-
Controller interface	S/D + UART	6 line HS & LS	PWM, UART
StallGuard4™	✓	-	-
CoolStep™	✓	-	-
StealthChop2™ (no audible noise & fast acceleration)	✓	-	-
Pulse generator	✓	-	-
MicroPlyer™	✓	-	-
Current regulator	-	-	✓
Package	QFN20 (3x3)	QFN20 (3x3)	QFN20 (3x3)
Order code	TMC2300-LA	TMC6300-LA	TMC7300-LA



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