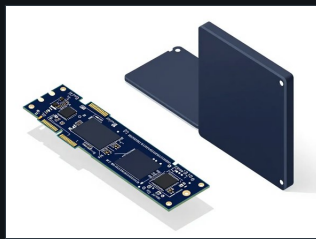


Power Management IC Selection Guide

197 parts • 11 families

From 1µA quiescent-current LDOs to 60V-input, 20A buck-boost solutions. This edition covers the complete M3 Technology line-up for Q1 2026, with TI, MPS, Silergy and Richtek equivalents listed alongside each part so a drop-in can be evaluated on your existing schematic.



197

PART NUMBERS

11

FAMILIES

0.3–60 V

INPUT RANGE

20 A

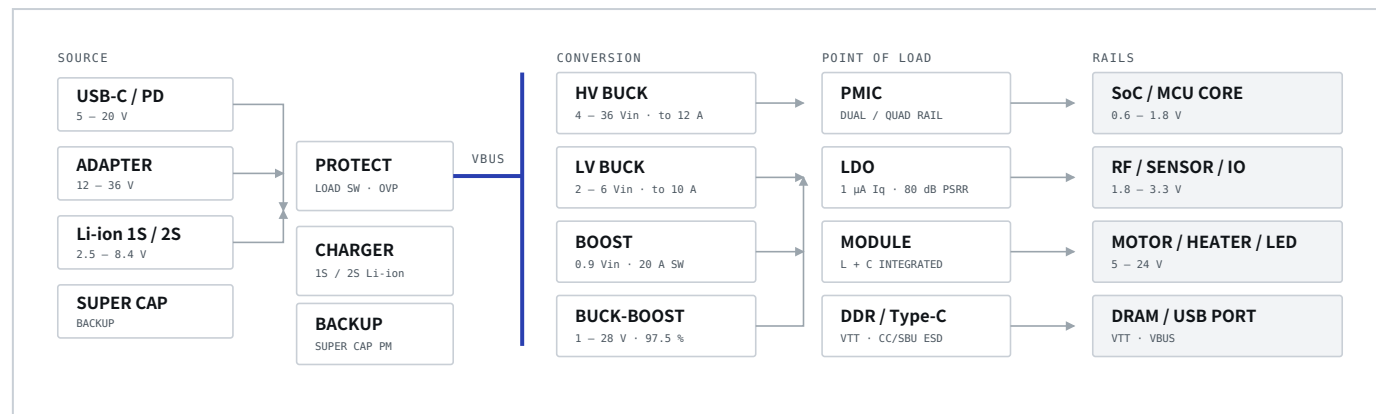
MAX SWITCH CURRENT

1.0 mm²

SMALLEST PACKAGE

Power system diagram

A complete power chain — from the input source through protection and charging, into conversion, and out to the point-of-load rails. Every block below maps to one family in this catalogue.



VIN → protect / charge → VBUS → conversion → point of load → rails

— CONTENTS

Contents

01	LDO Regulators	LDO Regulators	6 parts
02	LV Buck Converters	LV Buck Converters	67 parts
03	HV Buck Converters	HV Buck Converters	54 parts
04	Boost Converters	Boost Converters	13 parts
05	Buck-Boost Converters	Buck-Boost Converters	5 parts
06	Multi-Channel PMIC	Multi-Channel PMIC	14 parts
07	Power Modules (MCM)	Power Modules	3 parts
08	Load Switch / Protection	Load Switch / Protection	18 parts
09	Li-ion Battery Chargers	Li-ion Battery Chargers	6 parts
10	Super-Cap Backup Power	Super-Cap Backup Power	5 parts
11	DDR Termination / Type-C Protection	DDR Termination / Type-C Protection	6 parts

Focus applications

These four areas carry the highest shipping volume today. Samples and datasheets are available for every part listed on the cards below.



DATA COM

Networking equipment

Routers and access points generate several rails from 12V while being judged on light-load efficiency and standby power. An HV COT buck paired with a dual-channel PMIC noticeably shrinks the power section.

[MT3906](#) · [MT3912N](#) · [MT8272N](#) · [MT7107](#)



STORAGE

SSD and data protection

On sudden power loss the super-cap manager holds the rail up long enough for cache to be flushed to NAND (PLP). MT2615 supports a single hybrid capacitor, 5A charging and a monitor function.

[MT2615](#) · [MT2603](#) · [MT2601N](#) · [MT7216](#)



USB-C / PD

USB Type-C and PD

The hard part of PD is CC/SBU over-voltage and reverse current. This family offers true bidirectional blocking and fast role swap, with IEC/UL 62368-1 approval already in place.

[MT7956](#) · [MT7932](#) · [MT7538](#) · [MT3536M](#)



HOME / PERSONAL CARE

Small and personal-care appliances

Cordless designs run on 1S–2S Li-ion, so the battery voltage crosses the target rail partway through discharge. A buck-boost holds output steady across the whole curve.

[MT9528](#) · [MT5635](#) · [MT5088N](#) · [MT8103N](#)

LDO Regulators

LDO Regulators · 6 parts

Linear regulators sit on the noise-sensitive rails — RF modules, sensors, analogue front ends, clock circuits. The direction of this family is clear: push quiescent current down to 1µA and dropout down to 60mV, so the LDO never becomes the leakage source in a long-standby battery product.

- **60V input:** MT7109 handles 60V at 1.5µA quiescent current — suitable for always-on rails in industrial and automotive peripherals
- **1µA-class Iq:** MT7110 and MT7109 draw almost nothing in standby, extending battery-machine standby time
- **High PSRR:** MT7106 and MT7107 deliver 80dB at 100Hz, directly suppressing ripple from the upstream switcher
- **High current, low dropout:** MT7172 (2A) and MT7113 (3A) drop only 140 / 250mV, usable as post-regulators for DDR and SoC rails

TYPICAL USE RF module supply, sensor analogue rails, DDR post-regulation, always-on standby rails

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT7109 NEW	—	3.5~60	200mA	60V input, 1.5µA quiescent current low-dropout regulator Iq 1µA · Acc ±2% · Abs Max 62V · Vout Fixed 1.8V, 2.8V, 3.0V, 3.3V, 3.6V, 5.0V / 9.0V, 12.0V · Dropout 600mV@100mA · OTP · SCP · PSRR 80dB@1kHz	SOT23_5L
MT7110	LP5907	2.5~5.5	250mA	250mA LDO with 1µA quiescent current Iq 1µA · Acc ±2% · Abs Max 6V · Vout Fixed 1.2V, 1.65V, 1.8V, 2.5V and 3.3V · Dropout 150mV@100mA / 250mV@200mA · OTP · SCP · PSRR 80dB@10Hz / 68dB@100Hz	SOT23_5L
MT7106	LP5907	2.5~5.5	250mA	250mA high-PSRR low-dropout regulator Iq 14µA · Acc ±2% · Abs Max 6V · Vout Fixed 0.9V, 1.2V, 1.5V, 1.8V / 2.5V, 2.7V, 2.8V, 3.3V · Dropout 60mV@100mA / 120mV@200mA · OTP · SCP · PSRR 80dB@100Hz / 50dB@100kHz	DFN1x1_4L
MT7107	LP5907	2.5~5.5	250mA	250mA high-PSRR low-dropout regulator Iq 12µA · Acc ±2% · Abs Max 6V · Vout Fixed 0.9V, 1.05V, 1.1V, 1.2V, 1.5V, 1.8V / 2.5V, 2.8V, 3V, 3.3V · Dropout 60mV@100mA / 120mV@200mA · OTP · SCP · PSRR 80dB@100Hz / 50dB@100kHz	SOT23_5L DFN1x1_4L
MT7172 NEW	—	0.8~5.5	2A	2A ultra-low-dropout LDO with soft-start and over-current protection Iq 1µA · Acc ±0.5% · Abs Max 6V · Vout 0.8~3.6 · Dropout 140mV@2A · OTP · SCP · PSRR 70dB@1kHz / 35dB@300kHz	DFN3x3_10L
MT7113	RT9059	1~5.5	3A	3A ultra-low-dropout regulator Acc ±1.5% · VFB 0.5V · Abs Max 6V · Vout ADJ · Dropout 150mV@2A / 250mV@3A · OTP · SCP · PSRR 80dB@1kHz	SOP8_EP DFN3x3_10L

LV Buck Converters

LV Buck Converters · 67 parts

The 2–6V input synchronous buck is the busiest stage in any Li-ion or 5V system. This is the deepest family in the catalogue, spanning 1A to 10A. Most parts use a COT (constant on-time) architecture, giving fast load-transient response with few external components — a good fit for SoC core rails and anything that steps load quickly.

- **Packages down to 1.2×1.2mm:** MT8101 delivers 1A in DFN1.2x1.2; the WCSP_6L MT8361A occupies just 1.4mm²

→ **Up to 97% efficiency:** the MT3194N / MT3126 / MT3196N parts hold 97% through the mid-load region

→ **Pin-to-pin alternatives:** cross-referenced to TPS62843, MP1601, MP2145, G5719, RT8097 and SY8032
- **COT transient response:** output droop stays small when an SoC jumps to full load

→ **Light-load PSM or forced PWM:** pick the low-standby or the low-noise variant on the same pinout

TYPICAL USE Wi-Fi routers, set-top boxes, SSDs, mobile devices, small-appliance main boards

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT8351A(D)(Q) NEW	—	2~5.5	1A	Synchronous step-down converter, VSET pin sets 0.4V to 3.6V Freq 1.5 MHz · COT · Vout Fixed · Eff 92% · Iq 0.35µA · Acc ±1% · Duty 100% · SS · OTP · SCP · Disch 5Ω	DFN2x2_6L
MT8361A(D)(Q) NEW	TPS62843	2~5.5	1A	Synchronous step-down converter, VSET pin sets 0.4V to 3.6V Freq 1.5 MHz · COT · Vout Fixed · Eff 92% · Iq 0.35µA · Acc ±1% · Duty 100% · SS · OTP · SCP · Disch 5Ω	WCSP_6L
MT8101	—	2.5~6	1A	Synchronous step-down converter, fixed 0.9 / 1.1 / 1.2 / 1.3V output Freq 2.3 MHz · COT · Vout Fixed 0.9/1.1 / 1.2/1.3V · Eff 88% · Iq 26µA · Acc ±2% · Duty 100% · SS · OTP · SCP · Disch 15Ω	DFN1.2x1.2_6L
MT8821N(A) NEW	MP21148	2.3~5.5	1A	Synchronous COT step-down with enable and output discharge Freq 2.3 MHz · COT · Vout ADJ · Eff 95% · Iq 25µA · Acc ±0.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 1000Ω	DFN1.5x1.0_6L
MT8191A	—	2.7~6	1A	Synchronous COT step-down with enable, power-good and output discharge Freq 2.5 MHz · COT · Vout ADJ · Eff 90% · Iq 500µA · Acc ±0.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 20Ω	DFN1.5x1.5_6L

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT8091A NEW	MT8191	2.7~6	1A	Synchronous COT step-down with enable, power-good and output discharge Freq 2.5 MHz · COT · Vout ADJ · Eff 90% · Iq 500μA · Acc ±0.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 200	DFN1.5x1.5_6L
MT8891U(B) NEW	XC9291	2.5~6	1A	Synchronous COT step-down with enable and output discharge, PFM mode Freq 6 MHz · COT · Vout Fixed 0.9/1.1 · Eff 85% · Iq 11μA · Acc ±2% · Duty 100% · SS · OTP · SCP · Disch 250	WCSP_5L
MT8892U NEW	XC9282	2.5~6	1A	Synchronous COT step-down with enable and output discharge, forced-PWM mode Freq 6 MHz · COT · Vout Fixed 0.9 · Eff 80% · Iq 600μA · Acc ±2% · Duty 100% · SS · OTP · SCP · Disch 250	WCSP_5L
MT3152N(A)	G5728	2.5~6	1.5A	Synchronous COT buck with output discharge (2A peak) Freq 1.5 MHz · COT · Vout ADJ · Eff 94% · Iq 28μA · Acc ±1.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 500	SOT23_5L DFN2x2_6L
MT3161	MP1601	2.5~6	1.5A	Synchronous COT buck with light-load PSM (2A peak) Freq 2.5 MHz · COT · Vout ADJ · Eff 92% · Iq 15μA · Acc ±1.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 1900	SOT563 QFN1.1x1.1_6L
MT8161N(A)	MP1601 MT3161	2.7~6	1.5A	Synchronous COT buck with light-load PSM (2A peak) Freq 2.5 MHz · COT · Vout ADJ · Eff 95% · Iq 25μA · Acc ±1.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 200	SOT563
MT3132N(A)	G5728	2.5~6	1.5A	Synchronous COT buck with output discharge (2A peak) Freq 2.5 MHz · COT · Vout ADJ · Eff 92% · Iq 28μA · Acc ±2% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 500	SOT23_5L DFN2x2_6L
MT8152N(A)	G5719 MT3102	2.7~6	2A	Synchronous COT buck with power-good and output discharge (3A peak) Freq 1.5 MHz · COT · Vout ADJ · Eff 96% · Iq 28μA · Acc ±1.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 200	SOT23_5L DFN2x2_6L
MT8182A	—	2.7~5.5	2A	Fast-PWM synchronous step-down converter (2.5A peak) Freq 1.5 MHz · COT · Vout ADJ · Eff 92% · Iq 500μA · Acc ±0.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 200	DFN1.5x1.5_6L
MT8183A	—	2.5~5.5	2A	Synchronous step-down DC/DC converter (3A peak) Freq 1.5 MHz · COT · Vout ADJ · Eff 95% · Iq 600μA · Acc ±0.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 200	DFN1.5x1.5_6L

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT3122A NEW	G5719	2.5~6	2A	Synchronous COT buck with power-good and output discharge Freq 2.5 MHz · COT · Vout ADJ · Eff 92% · Iq 500μA · Acc ±1% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 1400Ω	DFN1.5x1.5_6L
MT3112	G5719	2.5~6	2A	Synchronous COT buck with power-good and output discharge, for 1-cell Li-ion designs Freq 2.5 MHz · COT · Vout ADJ · Eff 95% · Iq 15μA · Acc ±2% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 1500Ω	SOT23_5L
MT8102N(A)	G5719 MT3102	2.7~6	2A	Synchronous COT buck with power-good and output discharge (3A peak) Freq 2.5 MHz · COT · Vout ADJ · Eff 93% · Iq 28μA · Acc ±1.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 50Ω	SOT23_5L SOT23_6L DFN2x2_6L
MT8092A NEW	MT8192	2.7~6	2A	Fast-PWM synchronous step-down with enable, power-good and output discharge Freq 2.5 MHz · COT · Vout ADJ · Eff 90% · Iq 25μA · Acc ±0.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 20Ω	DFN1.5x1.5_6L
MT8192N(A)	—	2.7~5.5	2A	Fast-PWM synchronous step-down converter Freq 2.5 MHz · COT · Vout ADJ · Eff 90% · Iq 25μA · Acc ±0.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 20Ω	DFN2x2_6L DFN1.5x1.5_6L
MT3162	MP1605	2.5~6	2A	Synchronous COT buck with light-load PSM Freq 2.5 MHz · COT · Vout ADJ · Eff 95% · Iq 15μA · Acc ±1.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 150Ω	SOT563
MT8162N(A)	MP1605 MT3162	2.7~6	2A	Synchronous COT buck with light-load PSM (2.8A peak) Freq 2.5 MHz · COT · Vout ADJ · Eff 95% · Iq 25μA · Acc ±1.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 20Ω	SOT563
MT8172N	MP1605 MT3162	2.7~6	2A	Synchronous COT buck with light-load PSM (2.8A peak) and power-good Freq 2.5 MHz · COT · Vout ADJ · Eff 95% · Iq 25μA · Acc ±1.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 20Ω	SOT563
MT8253N NEW	MT3133 MT8233	2.5~5.5	3A	Synchronous step-down DC/DC converter Freq 1 MHz · COT · Vout ADJ · Eff 95% · Iq 17μA · Acc ±1% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 15Ω	DFN2x2_8L
MT8103N(A) NEW	M1603 T62A03	2.5~5.5	3A	Synchronous COT buck with power-good and output discharge (4A peak) Freq 1.25 MHz · COT · Vout ADJ · Eff 96% · Iq 18μA · Acc ±1% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 10Ω	SOT563

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT8163A	—	2.7~5.5	3A	Synchronous step-down DC/DC converter Freq 1.4 MHz · COT · Vout ADJ · Eff 95% · Iq 600μA · Acc ±0.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 20Ω	DFN 1.5x1.5_6L
MT8173N(A)	—	2.5~5.5	3A	Synchronous step-down DC/DC converter Freq 1.5 MHz · COT · Vout ADJ · Eff 95% · Iq 18μA · Acc ±0.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 20Ω	DFN1.5x1.0_5L
MT8373N(A) 	—	2.5~5.5	3A	Synchronous step-down DC/DC converter Freq 1.5 MHz · COT · Vout ADJ · Eff 95% · Iq 18μA · Acc ±0.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 12Ω	DFN2x2_8L
MT8133N	MT3133	2.5~5.5	3A	Synchronous step-down DC/DC converter Freq 1.5 MHz · COT · Vout ADJ · Eff 95% · Iq 18μA · Acc ±2% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 50Ω	DFN2x2_8L SOT23_5(6)L
MT8233N 	MT3133	2.5~5.5	3A	Synchronous step-down DC/DC converter Freq 1.5 MHz · COT · Vout ADJ · Eff 95% · Iq 18μA · Acc ±1% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 20Ω	DFN2x2_8L
MT8193N(A)	RT8097 SY8032 G5719C	2.5~5.5	3A	Synchronous COT buck with power-good and output discharge Freq 1.5 MHz · COT · Vout ADJ · Eff 95% · Iq 18μA · Acc ±2% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 20Ω	SOT23_5(6)L DFN2x2_8L
MT8068N	MT3068	2.5~5.5	3A	Synchronous step-down DC/DC converter Freq 1.5 MHz · COT · Vout ADJ · Eff 95% · Iq 18μA · Acc ±2% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 50Ω	DFN3x3_10L
MT8168N(A)	MT3068	2.5~5.5	3A	Synchronous step-down DC/DC converter Freq 1.5 MHz · COT · Vout ADJ · Eff 96% · Iq 18μA · Acc ±2% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 20Ω	DFN3x3_10L
MT8593N(A)	RT8097 SY8032 G5719C	2.5~5.5	3A	Synchronous COT buck with power-good and output discharge Freq 2.5 MHz · COT · Vout ADJ · Eff 94% · Iq 18μA · Acc ±2% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 20Ω	SOT23_5(6)L DFN2x2_8L
MT8568N(A)	MT3068	2.5~5.5	3A	Synchronous step-down DC/DC converter Freq 2.5 MHz · COT · Vout ADJ · Eff 95% · Iq 18μA · Acc ±2% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 20Ω	DFN3x3_10L
MT3124	RT8086 MP2130	2.5~6	3.5A	Synchronous COT buck with power-good Freq 1.2 MHz · COT · Vout ADJ · Eff 95% · Iq 15μA · Acc ±1.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 1000Ω	QFN2x2_12L
MT8124N(A)	MT3124	2.5~5.5	3.5A	Fast-PWM synchronous step-down converter Freq 1.25 MHz · COT · Vout ADJ · Eff 95% · Iq 20μA · Acc ±0.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 20Ω	QFN2x2_12L

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT3153	MT3133	2.5~6	3.5A	Synchronous COT buck with power-good and output discharge Freq 1.5 MHz · COT · Vout ADJ · Eff 95% · Iq 15μA · Acc ±2% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 240Ω	TSOT23_5L
MT8894N(A) NEW	SY8004	2.5~5.5	4A	Synchronous COT step-down with power-good, enable, over-load and over-voltage protection, output discharge Freq 2.1 MHz · COT · Vout ADJ. · Eff 93% · Iq 18μA · Acc ±1% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 8Ω	DFN 1.5x1.5_6L
MT3194N	MP2147	2.7~6	4A	Fast-PWM synchronous step-down converter Freq 1.2 MHz · COT · Vout ADJ · Eff 97% · Iq 18μA · Acc ±1% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 65Ω	QFN2x3_12L
MT8194N	MT3194	2.7~5.5	4A	Fast-PWM synchronous step-down converter Freq 1.2 MHz · COT · Vout ADJ · Eff 97% · Iq 20μA · Acc ±1% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 20Ω	QFN2x3_12L
MT3123 / MT3123A / MT3123B	TLV62090 SY8047 TLV62095	2.5~6	4A	Synchronous COT buck. Base part has power-good; A adds soft-start; B adds soft-start and output discharge Freq 1.25 MHz · COT · Vout ADJ · Eff 95% · Iq 15μA · Acc ±1.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 1000 / 1000 / 260Ω	QFN3x3_16L
MT8123N	MT3123	2.5~5.5	4A	Low-Iq Fast-PWM synchronous step-down converter Freq 1.25 MHz · COT · Vout ADJ · Eff 97% · Iq 18μA · Acc ±1% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 20Ω	QFN3x3_16L
MT3068	RT8068	2.5~6	4A	Synchronous COT buck with power-good and output discharge Freq 1.5 MHz · COT · Vout ADJ · Eff 95% · Iq 15μA · Acc ±2% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 240Ω	DFN3x3_10L
MT8365N(A) NEW	—	2.5~5.5	5A	Synchronous COT step-down with power-good and enable Freq 1.2 MHz · COT · Vout ADJ · Eff 92% · Iq 21μA · Acc ±1% · VFB 0.4V · Duty 100% · SS · OTP · SCP · Disch 10Ω	SOT583_8L
MT3126	RT8086 MP2130	2.5~6	5A	Synchronous COT buck with power-good Freq 1.2 MHz · COT · Vout ADJ · Eff 97% · Iq 15μA · Acc ±1% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 1000Ω	QFN2x2_12L
MT8126	MT3126	2.5~5.5	5A	Fast-PWM synchronous step-down converter Freq 1.25 MHz · COT · Vout ADJ · Eff 95% · Iq 20μA · Acc ±0.5% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 20Ω	QFN2x2_12L

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT8165A	—	2.7~5.5	5A	Fast-PWM synchronous step-down converter Freq 1.35 MHz · COT · Vout ADJ · Eff 95% · Iq 500μA · Acc ±0.5% · VFB 0.61V · Duty 100% · SS · OTP · SCP · Disch 20Ω	QFN3x4_14L
MT3035	MT3033	2.5~6	5A	Synchronous COT buck with soft-start and power-good Freq 1.5 MHz · COT · Vout ADJ · Eff 95% · Iq 15μA · Acc ±2% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 240Ω	DFN3x3_10L
MT3185	TLV62085	2.7~6	5A	Fast-PWM synchronous step-down with power-good Freq 2.5 MHz · COT · Vout ADJ · Eff 97% · Iq 17μA · Acc ±1.0% · VFB 0.8V · Duty 100% · SS · OTP · SCP · Disch 50Ω	DFN2x2_7L
MT3165A	MT3129	2.7~6	5A	Fast-PWM synchronous step-down, forced-PWM mode Freq 1.2MHz · Duty 100% · SS · OTP	QFN3x4_14L
MT3076N(A) NEW	S80706	2.7~6	6A	Fast-PWM synchronous step-down with power-good, enable, VOS pin and hiccup-mode protection Freq 1 MHz · COT · Vout ADJ · Eff 95% · Iq 17μA · Acc ±1.0% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 6Ω	DFN2x2_7L
MT3196N	MP2145	2.7~6	6A	Fast-PWM synchronous step-down converter Freq 1.2 MHz · COT · Vout ADJ · Eff 97% · Iq 18μA · Acc ±1% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 65Ω	QFN2x3_12L
MT8196N	MT3196	2.7~5.5	6A	Fast-PWM synchronous step-down converter Freq 1.2 MHz · COT · Vout ADJ · Eff 97% · Iq 20μA · Acc ±1% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 20Ω	QFN2x3_12L
MT8859A	—	2.7~5.5	6A	Fast-PWM synchronous step-down converter Freq 1.2 MHz · COT · Vout ADJ · Eff 95% · Iq 500μA · Acc ±0.5% · VFB 0.5V · Duty 100% · SS · OTP · SCP · Disch 20Ω	QFN2x3_14L
MT3125	TLV62090 SY8047 TLV62095	2.5~6	6A	Synchronous COT buck with power-good Freq 1.25 MHz · COT · Vout ADJ · Eff 95% · Iq 15μA · Acc ±1% · VFB 0.6V · Duty 100% · SS · OTP · SCP · Disch 1000Ω	QFN3x3_16L
MT8166N(A)	—	2.7~5.5	6A	Fast-PWM synchronous step-down with power-good, soft-start, enable and output discharge Freq 1.35 MHz · COT · Vout ADJ · Eff 97% · Iq 18μA · Acc ±0.5% · VFB 0.61V · Duty 100% · SS · OTP · SCP · Disch 20Ω	QFN3x4_14L

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT8106A	—	2.7~5.5	6A	Fast-PWM synchronous step-down converter Freq 2.2 MHz · COT · Vout ADJ · Eff 94% · Iq 500μA · Acc ±0.5% · VFB 0.61V · Duty 100% · SS · OTP · SCP · Disch 20Ω	QFN3x4_14L
MT3166N	MT3129	2.7~6	6A	Fast-PWM synchronous step-down converter Freq 1.2MHz · Duty 100% · SS · OTP	QFN3x4_14L
MT3166A	MT3129	2.7~6	6A	Fast-PWM synchronous step-down, forced-PWM mode Freq 1.2MHz · Duty 100% · SS · OTP	QFN3x4_14L
MT3176N	MT3129	2.7~6	6A	Fast-PWM synchronous step-down converter Freq 2.2MHz · Duty 100% · SS · OTP	QFN3x4_14L
MT3176A	MT3129	2.7~6	6A	Fast-PWM synchronous step-down, forced-PWM mode Freq 2.2MHz · Duty 100% · SS · OTP	QFN3x4_14L
MT3128N	—	2.7~6	6A/8A	Fast-PWM synchronous buck with PFM mode Freq 1.2 MHz · COT · Vout ADJ · Eff 97% · Iq 18μA · Acc ±1.0% · VFB 0.61V · Duty 100% · SS · OTP · SCP	QFN4x4_20L
MT3128A	—	2.7~6	6A/8A	Fast synchronous buck, forced-PWM mode Freq 1.2 MHz · COT · Vout ADJ · Eff 97% · Iq 500μA · Acc ±1.0% · VFB 0.61V · Duty 100% · SS · OTP · SCP	QFN4x4_20L
MT3127N(A)	—	2.7~6	6A/10A	Fast-PWM synchronous buck with PFM mode. A = forced PWM Freq 1.2 MHz · COT · Vout ADJ · Eff 97% · Iq 18μA · Acc ±1.0% · VFB 0.61V · Duty 100% · SS · OTP · SCP	QFN3x3_9L
MT8129A	—	2.7~5.5	6A/10A	Fast-PWM synchronous step-down converter Freq 1.2 MHz · COT · Vout ADJ · Eff 97% · Iq 500μA · Acc ±0.5% · VFB 0.61V · Duty 100% · SS · OTP · SCP · Disch 20Ω	QFN3x4_14L
MT8139A	—	2.7~5.5	6A/10A	Fast-PWM synchronous step-down converter Freq 2.2 MHz · COT · Vout ADJ · Eff 95% · Iq 500μA · Acc ±0.5% · VFB 0.5V · Duty 100% · SS · OTP · SCP · Disch 20Ω	QFN3x4_14L

HV Buck Converters

HV Buck Converters · 54 parts

Inputs from 4 to 36V, stepping straight from an adapter, PoE feed or 12/24V bus down to system voltage and saving a conversion stage. The family covers both the industrial 12V/24V world and the 20V input of USB PD.

- **36V input ceiling:** MT3901N and MT3991N accept 4–36V, suited to 24V industrial equipment
- **Up to 12A:** MT3912N delivers 12A from QFN3x3, and its 1.5MHz switching allows a small inductor
- **Three light-load modes:** PSM, ultrasonic and forced PWM, balancing standby power against audible noise
- **I²C-programmable output:** MT3526M and MT3536M set 3–28V in 10mV steps, enough to implement USB PD PPS
- **High voltage in SOT23-6:** MT3622 and MT3683 take 24V input in SOT23-6, replacing TPS562200 and SY8113

TYPICAL USE Industrial control, monitors, POS, automotive peripherals, PoE equipment, USB PD chargers

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT3570N(A)	M1470	4.7~18	2A	Synchronous buck with light-load PSM Freq 500 kHz · Acc ±2.5% · VFB 0.8V · Duty 100% · Eff 95% · Current Mode · SS · OTP · SCP · Pin1 GND	SOT23_6L
MT3770N(A)	M1470	4.7~24	2A	Synchronous buck with light-load PSM Freq 500 kHz · Acc ±2.5% · VFB 0.8V · Duty 100% · Eff 95% · Peak Current Mode · SS · OTP · SCP · Pin1 GND	SOT23_6L DFN2x2_6L
MT3622	TPS562200	4.3~24	2A	Fast-PWM synchronous step-down converter Freq 650 kHz · Acc ±2% · VFB 0.765V · Duty 100% · Eff 93% · COT · SS · OTP · SCP · Pin1 GND	SOT23_6L
MT3682	SY8120	4.3~24	2A	Fast-PWM synchronous step-down converter Freq 650 kHz · Acc ±2% · VFB 0.6V · Duty 100% · Eff 93% · COT · SS · OTP · SCP · Pin1 BST	SOT23_6L
MT3562N(A)	MT3510	4.5~18	2A	Fast-PWM synchronous step-down converter Freq 720 kHz · Acc ±2% · VFB 0.804V · Duty 100% · Eff 93% · COT · SS · OTP · SCP · Pin1 BST	SOT23_6L
MT3582N(A)	—	4.5~18	2A	Fast-PWM synchronous step-down converter Freq 720 kHz · Acc ±2% · VFB 0.6V · Duty 100% · Eff 93% · COT · SS · OTP · SCP · Pin1 BST	SOT23_6L

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT3552N(A)	MP1652 DS6252 TPS562207	4.5~18	2A	Fast-PWM synchronous step-down converter Freq 720 kHz · Acc ±2% · VFB 0.804V · Duty 100% · Eff 93% · COT · SS · OTP · SCP · Pin1 VIN	SOT563
MT8952N(A) NEW	MT3552	4.5~18	2A	Fast-PWM synchronous step-down, selectable PFM / forced-PWM mode Freq 744 kHz · Acc ±2% · VFB 0.804V · Duty 100% · Eff 95% · COT · SS · OTP · SCP · Pin1 VIN	SOT563
MT3702N(A) NEW	MT3510	4.7~24	2A	Synchronous step-down with light-load PSM Freq 1400 kHz · Acc ±1.35% · VFB 0.598V · Duty 100% · Eff 92% · Peak Current Mode · SS · OTP · SCP · Pin1 BST	SOT23_6L
MT8972A NEW	—	4.5~18	2A	Fast-PWM synchronous step-down converter Freq 1500 kHz · Acc ±2% · VFB 0.6V · Duty 100% · Eff 92% · COT · SS · OTP · SCP · Pin1 VIN	SOT563
MT8992N(A) NEW	MT3592	4.5~18	2A	Fast-PWM synchronous step-down, selectable PFM / forced-PWM mode Freq 1500 kHz · Acc ±2% · VFB 0.804V · Duty 100% · Eff 93% · COT · SS · OTP · SCP · Pin1 VIN	SOT563
MT8552N(A) NEW	—	4.5~18	2A	Fast-PWM synchronous step-down converter Freq 1500 kHz · Acc ±2% · VFB 0.6V · Duty 100% · Eff 93% · COT · SS · OTP · SCP · Pin1 BST	SOT23_6L
MT3592N(A)	MP1652 DS6252 TPS562207	4.5~18	2A	Fast-PWM synchronous step-down converter Freq 1500 kHz · Acc ±2% · VFB 0.804V · Duty 100% · Eff 94% · COT · SS · OTP · SCP · Pin1 VIN	SOT563
MT3510	SY8120	4.7~18	2.5A	Synchronous buck with light-load PSM Freq 500 kHz · Acc ±2.5% · VFB 0.6V · Duty 100% · Eff 95% · Peak Current Mode · SS · OTP · SCP · Pin1 BST	SOT23_6L
MT3703N(A) NEW	MT3510	4.7~24	2.5A	Synchronous step-down with light-load PSM Freq 1400 kHz · Acc ±1.35% · VFB 0.598V · Duty 100% · Eff 92% · Peak Current Mode · SS · OTP · SCP · Pin1 BST	SOT23_6L
MT8553N(A) NEW	—	4.5~18	2.5A	Fast-PWM synchronous step-down converter Freq 1500 kHz · Acc ±2% · VFB 0.6V · Duty 100% · Eff 93% · COT · SS · OTP · SCP · Pin1 BST	SOT23_6L

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT3571	M1471	4.7~18	3A	Synchronous buck with light-load PSM Freq 500 kHz · Acc ±2.5% · VFB 0.8V · Duty 100% · Eff 95% · Peak Current Mode · SS · OTP · SCP · Pin1 GND	SOT23_6L
MT3771N(A)	M1470	4.7~24	3A	Synchronous buck with light-load PSM Freq 500 kHz · Acc ±2.5% · VFB 0.8V · Duty 100% · Eff 95% · Peak Current Mode · SS · OTP · SCP · Pin1 GND	SOT23_6L
MT3713	MT3513	4.7~24	3A	Synchronous buck with light-load PSM Freq 500 kHz · Acc ±2% · VFB 0.6V · Duty 100% · Eff 95% · Peak Current Mode · SS · OTP · SCP · Pin1 BST	SOT23_6L
MT3623	TPS563200	4.3~24	3A	Fast-PWM synchronous step-down converter Freq 650 kHz · Acc ±2% · VFB 0.765V · Duty 100% · Eff 93% · COT · SS · OTP · SCP · Pin1 GND	SOT23_6L
MT3683	SY8113	4.3~24	3A	Fast-PWM synchronous step-down converter Freq 650 kHz · Acc ±2% · VFB 0.6V · Duty 100% · Eff 93% · COT · SS · OTP · SCP · Pin1 BST	SOT23_6L
MT8683N(A) NEW	MT3683	4~24	3A	Fast-PWM synchronous step-down converter Freq 700 kHz · Acc ±1.35% · VFB 0.6V · Duty 100% · Eff 92% · COT · SS · OTP · SCP · Pin1 BST	SOT23_6L
MT3553(A)(N)	MP1653 DS6253 TPS563207	4.5~18	3A	Fast-PWM synchronous step-down converter Freq 720 kHz · Acc ±2% · VFB 0.804V · Duty 100% · Eff 93% · COT · SS · OTP · SCP · Pin1 VIN	SOT563
MT3563N(A)	—	4.5~18	3A	Fast-PWM synchronous step-down converter Freq 720 kHz · Acc ±2% · VFB 0.804V · Duty 100% · Eff 93% · COT · SS · OTP · SCP · Pin1 BST	SOT23_6L
MT3583N(A)	—	4.5~18	3A	Fast-PWM synchronous step-down converter Freq 720 kHz · Acc ±2% · VFB 0.6V · Duty 100% · Eff 93% · COT · SS · OTP · SCP · Pin1 BST	SOT23_6L
MT8983M NEW	M2330H	4~24	3A	Synchronous step-down with soft-start, bootstrap, enable and mode pin (ultrasonic / PFM / PWM) Freq 1200 kHz · Acc ±1.25% · VFB 0.8V · Duty 100% · Eff 92% · COT · SS · OTP · SCP · Pin1 MODE	SOT583

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT8993N NEW	M2330H	4~24	3A	Synchronous step-down with soft-start, bootstrap, enable and power-good pin, PFM mode Freq 1200 kHz · Acc ±1.25% · VFB 0.8V · Duty 100% · Eff 92% · COT · SS · OTP · SCP · Pin1 PG	SOT583
MT8693N(A) NEW	MT8683	4~24	3A	Fast-PWM synchronous step-down converter Freq 1400 kHz · Acc ±1.35% · VFB 0.6V · Duty 100% · Eff 92% · COT · SS · OTP · SCP · Pin1 BST	SOT23_6L
MT3515N(A)(U)	MP2233	4.5~24	3A	Fast-PWM synchronous step-down converter Freq 1400 kHz · Acc ±1.5% · VFB 0.8V · Duty 100% · Eff 93% · COT · SS · OTP · SCP · Pin1 SS	TSOT23_8L DFN3x3_10L
MT8973A NEW	—	4.5~18	3A	Fast-PWM synchronous step-down converter Freq 1500 kHz · Acc ±2% · VFB 0.6V · Duty 100% · Eff 92% · COT · SS · OTP · SCP · Pin1 VIN	SOT563
MT3593N(A)	MP1653 DS6253 TPS563207	4.5~18	3A	Fast-PWM synchronous step-down converter Freq 1500 kHz · Acc ±2% · VFB 0.804V · Duty 100% · Eff 94% · COT · SS · OTP · SCP · Pin1 VIN	SOT563
MT3513	RT7295 SY8113	4.5~18	3.5A	Synchronous buck with light-load PSM Freq 500 kHz · Acc ±2% · VFB 0.6V · Duty 90% · Eff 95% · Current Mode · SS · OTP · SCP · Pin1 BST	TSOT23_6L
MT3513A	SY8113	4.5~18	3.5A	Synchronous buck, forced-PWM mode Freq 500 kHz · Acc ±2% · VFB 0.6V · Duty 90% · Eff 95% · Current Mode · SS · OTP · SCP · Pin1 BST	TSOT23_6L
MT3503	SY8113	4.5~18	3.5A	Synchronous buck with light-load PSM Freq 1000 kHz · Acc ±2% · VFB 0.6V · Duty 85% · Eff 95% · Current Mode · SS · OTP · SCP · Pin1 BST	TSOT23_6L
MT3503A	SY8113	4.5~18	3.5A	Synchronous buck, forced-PWM mode Freq 1000 kHz · Acc ±2% · VFB 0.6V · Duty 85% · Eff 95% · Current Mode · SS · OTP · SCP · Pin1 BST	TSOT23_6L
MT3505	MP2225	4.5~24	4A	Fast-PWM synchronous step-down, 5A peak output Freq 500 kHz · Acc ±1.5% · VFB 0.6V · Duty 100% · Eff 95% · COT · SS · OTP · SCP · Pin1 PG	TSOT23_8L
MT3935N(A)	MT3905	4.3~26	4A	Fast-PWM synchronous step-down, COT ultra-low-Iq mode. A = COT forced-PWM Freq 500 kHz · Acc ±2% · VFB 0.8V · Duty 100% · Eff 95% · COT · SS · OTP · SCP · Pin1 FB	SOP8_EP DFN4x3_14L

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT3905N(U)(A)(H)	ETA2806 CN3905	4~30	4A	Fast-PWM synchronous buck, 5A peak. U = ultrasonic mode, A = forced PWM, H = ultrasonic plus output-short hiccup protection Freq 500 kHz · Acc ±2% · VFB 0.8V · Duty 100% · Eff 95% · COT · SS · OTP · SCP · Pin1 FB	SOP8_EP DFN4x3_14L
MT8685M NEW	M2348	4~24	4A	Synchronous step-down with soft-start, bootstrap, enable and mode pin (ultrasonic / PFM / PWM) Freq 670 kHz · Acc ±1.25% · VFB 0.8V · Duty 100% · Eff 92% · COT · SS · OTP · SCP · Pin1 MODE	SOT583
MT8905N(U) NEW	MT3905	4~32	5A	Fast-PWM synchronous step-down with soft-start pin. N = pulse-skip mode, U = ultrasonic skip mode Freq 500 kHz · Acc ±2% · VFB 0.8V · Duty 100% · Eff 98% · COT · SS · OTP · SCP · Pin1 FB	SOP8_EP DFN4x3_14L
MT3901N(X)(U)	—	4~36	5A	Synchronous buck with dual-channel current limit. N = with CC foldback, X = without, U = CC foldback plus ultrasonic mode at light load Freq 180 kHz · Acc ±2% · VFB 0.8V · Duty 100% · Eff 98% · COT · SS · OTP · SCP · Pin1 FB	SOP8_EP
MT3991N(U) NEW	—	4~36	5A	Synchronous step-down with programmable current limit Freq 180 kHz · Acc ±2% · VFB 0.8V · Duty 100% · Eff 98% · COT · SS · OTP · SCP · Pin1 FB	SOP8_EP
MT3931U	MT3905	4.3~26	5A	Fast-PWM synchronous step-down, COT ultra-low-Iq mode Freq 200 kHz · Acc ±2% · VFB 0.8V · Duty 100% · Eff 97% · COT · SS · OTP · SCP · Pin1 FB	SOP8_EP
MT3931A	MT3905	4.3~26	5A	Fast-PWM synchronous step-down, COT forced-PWM mode Freq 200 kHz · Acc ±2% · VFB 0.8V · Duty 100% · Eff 97% · COT · SS · OTP · SCP · Pin1 FB	SOP8_EP
MT8965N(A) NEW	RT6255	4.5~18	6A	Fast-PWM synchronous step-down with enable pin and 10Ω output discharge Freq 500 kHz · Acc ±1% · VFB 0.6V · Duty 100% · Eff 95% · COT · SS · OTP · SCP · Pin1 FB	TSOT23_6L DFN2.5x1.5_10L
MT3906	DS6220 MP8765	4.2~28	6A	Fast-PWM synchronous step-down converter Freq 560 kHz · Acc ±1% · VFB 0.6V · Duty 100% · Eff 95% · COT · SS · OTP · SCP · Pin1 VIN	QFN3x3_16L

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT3916	DS6220 MP8765 MT3906	4.2~28	6A	Fast-PWM synchronous step-down, tuned for fast transient response Freq 560 kHz · Acc ±1% · VFB 0.6V · Duty 100% · Eff 95% · COT · SS · OTP · SCP · Pin1 VIN	QFN3x3_16L
MT3526M NEW	MT3886 MT3536	4~33	6A	Synchronous buck with I ² C interface, 3V–21V output in 10mV steps, PPS-capable Freq Programmable. / 100K~1MHz · Acc ±1% · VFB I2C · Duty 100% · Eff 98% · I2C Interface · SS · OTP · SCP · Pin1 VIN	QFN3X3_18L
MT3536M NEW	MT3886 MT3526	4~33	6A	Synchronous buck with I ² C interface, 3V–28V output in 20mV steps, PPS-capable Freq Programmable. / 100K~1MHz · Acc ±1% · VFB I2C · Duty 100% · Eff 99% · I2C Interface · SS · OTP · SCP · Pin1 VIN	QFN3X3_18L
MT3886MFFR NEW	MP8756	4.5~33	6A	Fast-PWM synchronous step-down converter Freq 700 kHz · Acc ±1% · VFB 0.604V · Duty 100% · Eff 94% · COT · SS · OTP · SCP · Pin1 VIN	QFN2X3_12L
MT3956N(A)(U) NEW	—	3~18	6A	Fast-PWM synchronous step-down converter Freq 1500 kHz · Acc ±1% · VFB 0.6V · Duty 100% · Eff 94% · COT · SS · OTP · SCP · Pin1 NC	QFN3x3_16L
MT3968N(A)(U) NEW	—	3~18	8A	Fast-PWM synchronous step-down converter Freq 700 kHz · Acc ±1% · VFB 0.6V · Duty 100% · Eff 94% · COT · SS · OTP · SCP · Pin1 NC	QFN3x3_16L
MT3998MQDR / MT3998MFAR	—	3~28	8A	Fast-PWM synchronous step-down, tuned for fast transient response Freq Adj. / 200K~1.2MHz · Acc ±1% · VFB 0.6V · Duty 100% · Eff 95% · COT · SS · OTP · SCP · Pin1 VCC / MODE	QFN4x4_20L QFN3x3_16L
MT3912N(A)(U) NEW	—	3~18	12A	Fast-PWM synchronous step-down with power-good and enable pin, hiccup-mode short-circuit protection Freq 1500 kHz · Acc ±1% · VFB 0.6V · Duty 100% · Eff 95% · COT · SS · OTP · SCP · Pin1 NC	QFN3x3_16L

Boost Converters

Boost Converters · 13 parts

Used when the battery sits below what the system needs. M3TEK covers both extremes: ultra-low input starting from 0.9V (a single dry cell) at one end, and high-power synchronous boost with 20A switch current at the other.

- **0.9V start-up:** MT5075 and MT5070 start from a single alkaline or NiMH cell, drawing only 9–12μA
- **50V output:** MT5080 integrates a 50V 1A switch in an asynchronous topology, for compact high-voltage bias
- **Boost controller:** MT5086 drives external dual N-MOS at 55μA quiescent current, enabling 100W-class designs
- **20A switch current:** MT5083 / MT5087 / MT5088 reach 30V output, for high-power boost and LED drive
- **Fixed 5.15V options:** MT5033 / MT5036 / MT5037 need no divider resistors and drive USB 5V directly

TYPICAL USE Power banks, dry-cell appliances, LED backlight, USB 5V output, power tools

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT5086	LTC3786	2.7~30	ext. dual N-MOS	2.7V~30V input synchronous boost controller, 55μA quiescent current Freq Adj / 50K~1Mhz · MOSFET Dual N · Vout 30V_Max · Iq 55μA · Ishdn 5 μA · Acc ±1.5% · VFB 1.203V · Eff 95% · EN · SS · SCP	QFN3x3_16L
MT5070	SGM6603 MP3120 TPS61220 A7525	0.9~5	0.45A	Low-input-voltage step-up converter, low quiescent current Freq 0.8 MHz · Vout Fixed:2.7/3.3/5 / ADJ · Iq 12μA · Ishdn 0.01 μA · Acc ±3% · VFB 0.5V · Eff 97% · EN	SOT23_6L
MT5075 NEW	—	0.9~5	0.35/0.45/0.8A	Low-input-voltage step-up converter, low quiescent current Freq 0.8 MHz · Vout Fixed:2.8/3.3/5 · Iq 9μA · Ishdn 0.01 μA · Eff 92% · EN	SOT23_5L
MT5080	IT7453	2.7~6	1A	Asynchronous step-up converter with 50V 1A integrated switch Freq 1.5 MHz · Vout ADJ / ~50Vmax · Iq 160μA · Ishdn 1 μA · Acc ±3% · VFB 1.25V · Eff 83% · EN · SS · OTP	SOT23_5L DFN2x2_6L
MT5037	—	2.5~5.5	4A	High-current synchronous boost, light-load pulse-skip mode Freq 0.8 MHz · Vout Fixed 5.15 / Vadj · Iq 125μA · Ishdn 0.1 μA · Acc ±2% · VFB 0.5V · Eff 95% · EN · SS · OTP · SCP	DFN3x3_10L
MT5033	—	2.5~5.5	6A	High-current synchronous boost, light-load pulse-skip mode Freq 0.8 MHz · Vout Fixed 5.15 / Vadj · Iq 125μA · Ishdn 0.1 μA · Acc ±2% · VFB 0.5V · Eff 95% · EN · SS · OTP · SCP	SOP8_EP

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT5035	MT5033	3~5.5	6.5A	High-current synchronous boost, light-load pulse-skip and thermal foldback Freq 0.55 MHz · Vout Fixed 5.15 / Vadj · Iq 80μA · Ishdn 0.2 μA · Acc ±3% · VFB 0.5V · Eff 95% · EN · SS · OTP · SCP	SOP8_EP
MT5036	—	2.5~5.5	6.6A	High-current synchronous boost, light-load pulse-skip mode Freq 0.8 MHz · Vout Fixed 5.15 / Vadj · Iq 125μA · Ishdn 0.1 μA · Acc ±2% · VFB 0.5V · Eff 95% · EN · SS · OTP · SCP	QFN4x4_16L
MT5083	—	3~30	20A	High-current synchronous boost with light-load PSM Freq Adj / 50K~1MHz · Vout 30V_Max / Vadj · Iq 70μA · Ishdn 3.5 μA · Acc ±1.5% · VFB 1.203V · Eff 95% · EN · SS · OTP	QFN4x4_22L
MT5087N	—	2.7~18	20A	High-current synchronous boost with light-load PSM Freq Adj / 50K~1MHz · Vout 18V_Max / Vadj · Iq 70μA · Ishdn 5 μA · Acc ±1.5% · VFB 1.203V · Eff 95% · EN · SS · OTP	QFN4x4_20L
MT5087A	—	2.7~18	20A	High-current synchronous boost, forced-PWM mode Freq Adj / 50K~1MHz · Vout 18V_Max / Vadj · Iq 140μA · Ishdn 5 μA · Acc ±1.5% · VFB 1.203V · Eff 95% · EN · SS · OTP	QFN4x4_20L
MT5088N	MT5087	2.7~30	20A	High-current synchronous boost with light-load PSM Freq Adj / 50K~1MHz · Vout 30V_Max / Vadj · Iq 70μA · Ishdn 5 μA · Acc ±1.5% · VFB 1.203V · Eff 95% · EN · SS · OTP	QFN4x4_20L
MT5088A	MT5087	2.7~30	20A	High-current synchronous boost with light-load PSM Freq Adj / 50K~1MHz · Vout 30V_Max / Vadj · Iq 70μA · Ishdn 5 μA · Acc ±1.5% · VFB 1.203V · Eff 95% · EN · SS · OTP	QFN4x4_20L

Buck-Boost Converters

Buck-Boost Converters · 5 parts

As a Li-ion cell discharges from 4.2V to 3.0V it crosses the 3.3V or 5V target. Neither buck-only nor boost-only can regulate across that whole range. A four-switch buck-boost holds the output across the entire discharge curve — the key to actually using the whole battery in a cordless product.

- **97.5% efficiency:** MT5628 / MT5629 / MT5639 use a four-switch topology, 3.1–28V in, 1–28V out

→ **Compact 5V solutions:** MT5615 (1A) and MT5635 (3A) fit in TSOT23-8 at 45µA quiescent current
- **12mΩ MOSFETs integrated:** MT5639N integrates all four switches for up to 6A, removing external FETs and drivers

→ **2MHz switching:** pairs with small inductors, suited to handheld and wearable designs

TYPICAL USE Cordless appliances, personal-care devices, power banks, wearables, automotive USB

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT5628N(A) NEW	—	3.1~28	ext. MOSFET	28V wide-range 4-switch buck-boost controller Vout 1V~28V · Freq 600 kHz · Acc ±1% · VFB 1V · MOSFET External · Iq 1.3 mA · Ishdn 1 µA · Eff 97.5% · EN · SS · OTP · SCP	QFN4x4_20L
MT5615 NEW	—	2~5.5	1A	5V 1A synchronous COT buck-boost converter Vout 2~5V · Freq 2000 kHz · Acc ±1% · VFB 0.5V · MOSFET Integrated *4 · Iq 0.045 mA · Ishdn 0.5 µA · Eff 94% · EN · SS · OTP · SCP	TSOT23_8L DFN3x3_8L
MT5635 NEW	MT5615	1.7~5.5	3A	5V input, 3A synchronous buck-boost converter Vout 2~5V · Freq 2000 kHz · Acc ±1% · VFB 0.5V · MOSFET Integrated *4 · Iq 0.045 mA · Ishdn 0.5 µA · Eff 95% · EN · SS · OTP · SCP	TSOT23_8L DFN3x3_8L
MT5629N(A) NEW	—	3.1~28	6A	28V input, up to 6A synchronous 4-switch buck-boost converter Vout 1V~28V · Freq 600 kHz · Acc ±1% · VFB 1V · MOSFET Integrated 17mohm*4 · Iq 1.3 mA · Ishdn 1 µA · Eff 97.5% · EN · SS · OTP · SCP	QFN5x5_28L
MT5639N(A) NEW	MT5629	3.1~28	6A	28V input, up to 6A synchronous 4-switch buck-boost converter Vout 1V~28V · Freq 200 kHz · Acc ±1% · VFB 1V · MOSFET Integrated 12mohm*4 · Iq 1.3 mA · Ishdn 1 µA · Eff 97.5% · EN · SS · OTP · SCP	QFN5x5_28L

Multi-Channel PMIC

Multi-Channel PMIC · 14 parts

One IC supplying two or more independent rails, replacing several discrete bucks. The saving is not only area but the duplicated inductors, capacitors and routing that go with them — most visible on space-constrained module boards such as Wi-Fi, camera and sensor nodes.

- **Dual channel up to 4A×2:** MT3213 supplies two 4A rails from a QFN3x4 package
- **Deep sleep:** MT3263 includes a deep-sleep mode that sharply cuts standby current
- **Load switch plus dual LDO:** MT6420 integrates a 4.5A load switch, two 0.2A LDOs and a reset function for MPU rails
- **High-voltage dual channel:** MT8272N and MT8252N accept 4.5–18V, taking a 12V bus directly
- **Quad-channel current limit:** MT3902U / MT3902X accept up to 36V at 4A per channel, with CC foldback and ultrasonic mode

TYPICAL USE Wi-Fi modules, camera modules, industrial sensor nodes, MPU boards

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT7312	IT7312	2.5~6	1.5A × 2ch	Dual-channel synchronous buck with light-load PSM Freq 2.25 MHz · Iq 60μA · Vout ADJ · Acc ±2% · VFB 0.6V · Eff 92% · Duty 100% · SS · OTP / SCP · Peak Current	DFN3x3-10
MT7321	PAM2306	2.5~6	1.5A × 2ch	Dual-channel synchronous buck with light-load PSM Freq 1.5 MHz · Iq 60μA · Vout ADJ · Acc ±2% · VFB 0.6V · Eff 92% · Duty 100% · SS · OTP / SCP · Peak Current	DFN3x3-12
MT7321A	IT7321	2.5~6	1.5A × 2ch	Dual-channel synchronous buck with light-load PSM Freq 2.25 MHz · Iq 60μA · Vout ADJ · Acc ±2% · VFB 0.6V · Eff 92% · Duty 100% · SS · OTP / SCP · Peak Current	DFN3x3-12
MT3222	MP2122	2.5~6	2.5A × 2ch	Dual-channel synchronous COT buck with light-load PSM Freq 1.5 MHz · Iq 38μA · Vout ADJ · Acc ±1.5% · VFB 0.6V · Eff 95% · Duty 100% · SS · OTP / SCP · COT	TS0T23_8L
MT3253N(A) NEW	—	2.5~6	2.5A × 2ch	Dual-channel synchronous COT buck with light-load PSM Freq 2.5 MHz · Iq 38μA · Vout ADJ · Acc ±1.5% · VFB 0.6V · Eff 93% · Duty 100% · SS · OTP / SCP · COT	TS0T23_8L DFN2.5x1.5_8L

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT3263	—	2.5~6	2.5A × 2ch	Dual-channel synchronous COT buck with light-load PSM and deep-sleep function Freq 2.5 MHz · Iq 38μA · Vout ADJ · Acc ±1.5% · VFB 0.6V · Eff 93% · Duty 100% · SS · OTP / SCP · COT	DFN2.5x1.5_8L
MT8272N(A) NEW	—	4.5~18	2.5A × 2ch	Dual-channel Fast-PWM synchronous step-down with light-load PFM and deep-sleep function Freq 1.5 MHz · Iq 250μA · Vout ADJ · Acc ±2% · VFB 0.6V · Eff 94% · Duty 100% · SS · OTP / SCP · COT	DFN3x3_10L
MT8293	—	2.5~5.5	3A × 2ch	Dual-channel synchronous COT buck with light-load forced PWM Freq 1.25 MHz · Iq 500μA · Vout ADJ · Acc ±0.5% · VFB 0.6V · Eff 93% · Duty 100% · SS · OTP / SCP · COT	DFN4x3_14L
MT3223	—	2.5~6	3A × 2ch	Dual-channel synchronous COT buck with light-load PSM Freq 1.5 MHz · Iq 38μA · Vout ADJ · Acc ±1.5% · VFB 0.6V · Eff 95% · Duty 100% · SS · OTP / SCP · COT	DFN3x3_10L
MT8252N(A) NEW	—	4.5~18	3A × 2ch	Dual-channel Fast-PWM synchronous step-down with light-load PFM and deep-sleep function Freq 0.72 MHz · Iq 250μA · Vout ADJ · Acc ±2% · VFB 0.6V · Eff 96% · Duty 100% · SS · OTP / SCP · COT	DFN3x3_10L
MT3213	—	2.5~6	4A × 2ch	Dual-channel synchronous buck with light-load PSM and power-good Freq 1.25 MHz · Iq 30μA · Vout ADJ · Acc ±1.5% · VFB 0.6V · Eff 95% · Duty 100% · SS · OTP / SCP · Peak Current	QFN3x4-14
MT3902U	—	4~36	4A / ch	Dual-channel buck with quad-channel current limit, CC foldback and ultrasonic mode at light load Freq 0.18 MHz · Iq 100μA · Vout ADJ · Acc ±2% · VFB 0.8V · Eff 98% · Duty 100% · SS · OTP / SCP · COT	QFN5x5_20L
MT3902X	—	4~36	4A / ch	Dual-channel buck with quad-channel current limit, no CC foldback, ultrasonic mode at light load Freq 0.18 MHz · Iq 100μA · Vout ADJ · Acc ±2% · VFB 0.8V · Eff 98% · Duty 100% · SS · OTP / SCP · COT	QFN5x5_20L
MT6420	—	2.7~5.5	4.5A LSW + 0.2A LD0×2	5.5V 4A load switch plus dual-channel LDO, for MPU rails Abs Max 5.5V · SS · OTP / OVP / SCP	DFN3x2_12L

Power Modules (MCM)

Power Modules · 3 parts

The inductor and capacitors are already inside the package, so there is no inductor to select and no layout to tune — drop it in and the rail is stable. A good fit for tight schedules, or for teams without a dedicated power engineer.

- **No external inductor or capacitor:** the MTM series integrates the passives, leaving a single-line BOM
- **96% efficiency:** MTM006N(A) holds 96% at 2.2MHz — equivalent to MPM3833
- **Down to 3×3mm:** MTM002 and MTM003 come in LGA3x3; MTM006N delivers 3A from QFN2.5x3.5
- **Shorter development time:** removes inductor selection, loop compensation and EMI tuning from the schedule

TYPICAL USE

Fast-turnaround projects, space-constrained modules, teams with limited power-design resource

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MTM002	—	2.5~6	1.5A	Synchronous buck module, no external inductor or capacitor required (2A peak) Freq 1.5 MHz · Iq 15μA · Acc ±2% · VFB 0.6V · Duty 100% · Eff 92% · Vout ADJ · SS · OTP / SCP	LGA3x3_7L
MTM003	—	2.5~6	1.5A	Synchronous buck module, no external inductor or capacitor required (2A peak) Freq 2.5 MHz · Iq 15μA · Acc ±2% · VFB 0.6V · Duty 100% · Eff 92% · Vout ADJ · SS · OTP / SCP	LGA3x3_7L
MTM006N(A) NEW	MPM3833	2.5~5.5	3A	Synchronous buck module, no external inductor or capacitor required Freq 2.2 MHz · Iq 20μA · Acc ±1% · VFB 0.6V · Duty 100% · Eff 96% · Vout ADJ · SS · OTP / SCP	QFN2.5x3.5_18L

Load Switch / Protection

Load Switch / Protection · 18 parts

These parts stop faults before power reaches the system — over-voltage, over-current, reverse current, surge. USB Type-C and PD raised the stakes here, because an external port has to be designed on the assumption that any voltage might be plugged into it.

- **IEC/UL 62368-1 approved:** MT7932, MT7231 and MT7232 are already certified and can carry straight into an end product
- **Up to 36V:** MT7956 is a 2-to-1 power MUX for USB PD with over-voltage protection built in
- **Low on-resistance:** MT7621 and MT7622 are 12–13mΩ, keeping the drop small at 5A
- **True bidirectional blocking and fast role swap:** MT7281 / MT7282 / MT7231 / MT7232 support PD role switching
- **I²C-programmable protection:** MT7932 lets the over-current and over-voltage thresholds be set over I²C

TYPICAL USE USB Type-C / PD ports, power banks, hubs, power distribution, hot-swap protection

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT7255	—	2.7~6	3A	Over-voltage and over-current protection IC with output discharge Abs Max 30V · Rds(on) 50 mΩ · ILIM · OVP clamp · SS · SCP · OTP	SOT23_3L DFN2x2_8L
MT7633 NEW	—	2.7~5.5	3.5A	Load switch with 28V output reverse blocking, adjustable current limit and fast role swap Abs Max 6.5V · Rds(on) 40 mΩ · ILIM · FLT · OVP clamp · SS · SCP · OTP IEC/UL 2367	TSOT23_6L
MT7653 NEW	SY6821A	2.7~5.5	4A	Load switch with 28V output reverse blocking and adjustable current limit Abs Max 6.5V · Rds(on) 30 mΩ · ILIM · FLT · SS · SCP · OTP	DFN1.5x1.5_6L
MT7692	SY6283	1.8~5.5	4A	Low-Ron power-distribution load switch with output discharge Abs Max 6.5V · Rds(on) 26 / 48 mΩ · ILIM · OVP clamp · SS · SCP · OTP	DFN1.2x1.6_4L SOT23_5L
MT7693	SY6283	1.8~5.5	4A	Low-Ron power-distribution load switch with reverse blocking (VOUT may exceed VIN in shutdown) Abs Max 6.5V · Rds(on) 26 / 48 mΩ · ILIM · OVP clamp · SS · SCP · OTP	DFN1.2x1.6_4L SOT23_5L
MT7621 NEW	SY6821A	0.3~2	5A	Low-input-voltage 5A current-limited load switch with hiccup mode Abs Max 6V · Rds(on) 12 mΩ · ILIM · FLT · SS · SCP · OTP	DFN1.5x1.5_6L

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT7622 NEW	SY6821A	0.4~3.6	5A	Low-input-voltage 5A current-limited load switch with hiccup mode and 12Ω discharge Abs Max 6V · Rds(on) 13 mΩ · ILIM · FLT · SS · SCP · OTP	DFN1.5x1.5_6L
MT7696 NEW	SY6896	2.7~5.5	5A	High-current protection switch with programmable current limit and soft-start time, reverse blocking Abs Max 18V · Rds(on) 30 mΩ · ILIM · FLT · OVP clamp · SS · SCP · OTP	QFN2x2_9L
MT7256	—	2.7V~6	5A	Over-voltage and over-current protection IC with output discharge Abs Max 30V · Rds(on) 50 mΩ · ILIM · OVP clamp · SS · SCP · OTP	DFN2x2_8L
MT7201(A)	SY6875	2.7~18	5A	Programmable current-limit load switch with output clamping and discharge Abs Max 20V · Rds(on) 25 mΩ · ILIM · OVP clamp · SS · SCP · OTP	DFN3x3_10L
MT7203	—	4.5~18	5A	Load switch with over-voltage protection, blocking-FET control, output clamping and discharge Abs Max 20V · Rds(on) 25 mΩ · ILIM · OVP clamp · SS · SCP · OTP	DFN3x3_10L
MT7281	—	3~24	5A	Unidirectional 5A load switch with true reverse blocking and fast role swap Abs Max 28V · Rds(on) 35 mΩ · ILIM · FLT · OVP clamp · SS · SCP · OTP	QFN4x4_20L
MT7282	—	3~24	5A	28V bidirectional 5A load switch Abs Max 28V · Rds(on) 35 mΩ · ILIM · FLT · OVP clamp · SS · SCP · OTP	QFN4x4_20L
MT7956 NEW	—	4.5~32	5A	2-to-1 power MUX with over-voltage protection, for USB PD Abs Max 36V · Rds(on) 32 / 55 / 400 mΩ · ILIM · OVP clamp · SS · SCP · OTP	QFN5x5_40L
MT7932 NEW	—	3.3~33	5A	Load switch with I ² C interface and programmable over-current / over-voltage protection, for USB PD Abs Max 36V · Rds(on) 25 mΩ · ILIM · FLT · OVP clamp · SS · SCP · OTP IEC/UL 62368-1	QFN3x3_16L
MT7262	—	3~21	6A	21V bidirectional 6A load switch Abs Max 30V · ILIM · FLT · OVP clamp · SS · SCP · OTP	DFN2x2_8L
MT7231	—	3~24	6A	28V unidirectional 6A load switch with true reverse blocking and fast role swap Abs Max 28V · Rds(on) 24 mΩ · ILIM · FLT · OVP clamp · SS · SCP · OTP IEC/UL 62368-1	QFN2.5x3.2_16L
MT7232	—	3~24	6A	28V bidirectional 6A load switch Abs Max 28V · Rds(on) 24 mΩ · ILIM · FLT · OVP clamp · SS · SCP · OTP IEC/UL 62368-1	QFN2.5x3.2_16L

Li-ion Battery Chargers

Li-ion Battery Chargers · 6 parts

Both linear and synchronous switching architectures are covered. Linear parts are simple and inexpensive, suited to 1.5A and below; switching parts run above 95% efficiency with far less heat, for 2A and up or wherever dynamic power-path management is needed.

- **Dynamic power-path management:** MT2575 powers the system while charging, so removing the battery does not interrupt operation
- **Automatic input-current limit:** folds back to whatever the USB port or adapter can supply, preventing input collapse
- **95% efficiency switching:** MT2000 and MT2001 accept 4.5–15V and charge at 3A, with a 7-hour safety timer
- **2-cell boost charging:** MT9528 handles 8.4V two-cell packs and can also buck in reverse — charge and discharge in one chip
- **4.2V or 4.35V:** selectable to match the cell specification

TYPICAL USE Power banks, cordless appliances, power tools, handheld instruments, Bluetooth speakers

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT2575	BQ24075	4.5~6.5	1.5A	1-cell linear charger with automatic input-current foldback for USB and adapter, plus dynamic power-path management Abs Max 20V · Batt VBAT 4.2V/4.35V / VSYS 5.5V · Acc ±1% · Auto recharge · Linear · Cell 1 · Timer Adj · Input OVP 6.6V · SS · OTP / OVP / SCP	QFN3x3-16
MT2580	—	4.5~6.5	1.6A	1-cell linear charger with automatic input-current foldback for USB and adapter Abs Max 20V · Batt VBAT 4.2V/4.35V / VSYS 5.5V · Acc ±1% · Auto recharge · Linear · Cell 1 · Input OVP 6.6V · SS · OTP / OVP / SCP	SOP8-EP
MT2011	—	4.5~6.5	2A	1-cell synchronous switching charger with built-in reverse-current blocking diode Abs Max 20V · Batt 4.2V/4.35V · Acc ±1% · Auto recharge · PWM / 1.5MHz · Cell 1 · Eff 93% · Input OVP 6.7/14V · SS · OTP / OVP / SCP	SOP8-EP
MT2000	BQ24170	4.5~15	3A	1-cell synchronous switching charger with power-path control and dynamic power management Abs Max 20V · Batt 4.2/4.35 · Acc ±1% · Auto recharge · PWM / 1.5MHz · Cell 1 · Eff 95% · Timer 7hr · Input OVP 6.6 / 16.5V · SS · OTP / OVP / SCP	QFN4x4-20
MT2001	BQ24170	4.5~15	3A	1-cell synchronous switching charger Abs Max 20V · Batt 4.2/4.3 · Acc ±1% · Auto recharge · PWM / 1.5MHz · Cell 1 · Eff 95% · Timer 7hr · Input OVP 6.6 / 16.5V · SS · OTP / OVP / SCP	QFN4x4-20

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT9528 NEW	—	4~6	ICHG=2A / Iout=3A	500kHz boost charger for 2-cell Li-ion, with reverse buck converter for output Abs Max 18V · Batt 4.2V/8.4V · Acc ±0.75% · Auto recharge · PWM / 500KHZ · Cell 2 · Eff 97% · Timer 8hr · Input OVP · SS · OTP / OVP / SCP	QFN4x4_20L

Super-Cap Backup Power

Super-Cap Backup Power · 5 parts

On a power interruption these hold the system up for a few hundred milliseconds to a few seconds, giving firmware time to write cache back to non-volatile memory. SSD power-loss protection (PLP) is the classic case; industrial instruments use the same approach for data integrity.

- **Hybrid capacitor support:** MT2603 and MT2615 work with a single hybrid capacitor (1.8–5V), saving a capacitor and its balancing circuit
- **5A charging:** MT2615 charges at 5A, shortening the time from power-up to backup-ready
- **Automatic cell balancing:** MT2600 and MT2601N balance two capacitors internally, avoiding degradation from long-term imbalance
- **Monitor function:** MT2615 reports capacitor status so firmware can confirm the backup energy is sufficient

TYPICAL USE SSD power-loss protection, RAID cards, industrial data loggers, smart meters

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT2600	—	2.5~5.5	2A	Super-capacitor power manager for backup power Abs Max 12V · Caps 2 · Input OVP 6V · SS · OTP / OVP / SCP	DFN3x3_10L
MT2601N	—	2.5~5.5	2A	Super-capacitor power manager for backup power Abs Max 18V · Caps 2 · Input OVP 6V · SS · OTP / OVP / SCP	DFN3x3_10L
MT2601B	—	2.5~5.5	2A	Super-capacitor power manager for backup power (without automatic cell balancing) Abs Max 18V · Caps 2 · Input OVP 6V · SS · OTP / OVP / SCP	DFN3x3_10L
MT2603 NEW	—	2.5~5.5	4A	Hybrid super-capacitor power manager for backup power (capacitor 1.8V–3.8V) Abs Max 18V · Caps 1 · Input OVP 6.05V · SS · OTP / OVP / SCP	DFN3x3_12L
MT2615 NEW	—	3.5~6	5A	High-current hybrid super-capacitor charger with monitor function (capacitor 1.8V–5V) Abs Max 18V · Caps 1 · Input OVP 6.27V · SS · OTP / OVP / SCP	DFN3x3_12L

DDR Termination / Type-C Protection

DDR Termination / Type-C Protection · 6 parts

Two specialised device types. The DDR termination regulator supplies the VTT bus termination voltage and must both source and sink current. The Type-C protection switch guards CC and SBU — the two pins most easily destroyed by an over-voltage event.

- **JEDEC compliant:** MT7217 and MT7216 cover DDR, DDR2, DDR3, LPDDR3 and DDR4 VTT termination
- **Source and sink:** MT7216 handles 3A in both directions and tracks VDDQ/2 to $\pm 1\%$
- **Type-C CC/SBU over-voltage:** MT7931 withstands 32V, MT7538 and MT7530 withstand 24V
- **IEC ESD rated:** meets the ESD test requirements that apply to external ports
- **Dead-battery handling:** integrated CC1/CC2 pull-downs keep the port detectable with a fully flat battery

TYPICAL USE DDR memory termination, USB Type-C port protection, PD devices, notebooks and tablets

PART NO.	EQUIVALENT	VIN (V)	IOUT	FEATURES AND KEY SPECS	PACKAGE (MM)
MT7931 NEW	MT7538	0~32V	—	Type-C CC and SBU over-voltage and IEC ESD protection switch Abs Max 32V · OVP clamp · dead-battery CC pull-down · OTP	QFN3X3_20L
MT7538 NEW	TPD8SXXX	0~24V	—	Type-C CC and SBU pin over-voltage and IEC ESD protection switch Abs Max 28V · OVP clamp · dead-battery CC pull-down · OTP	QFN3x3_16L
MT7530 / MT7531	TPD6SXXX	0~24V	—	Type-C CC and SBU pin over-voltage and IEC ESD protection switch Abs Max 28V · OVP clamp · dead-battery CC pull-down (MT7530) · OTP	QFN3x3_20L
MT7217	—	3.3 / 5	2A	JEDEC-compliant for DDR and DDR2, also supports DDR3, LPDDR3 and DDR4 VTT bus termination LDOIN 0.4~3.5V · VO 0.5~0.9V · VDDQ/2 tracking $\pm 1\%$ · REFOUT +/-10mA · Cout 10uF · VOSEN · UVLO · SS · OTP / OCP	DFN2x2_10L
MT7216 NEW	T51206	3.3	3A	JEDEC-compliant for DDR and DDR2, also supports DDR3, LPDDR3 and DDR4 VTT bus termination LDOIN 1.1~3.5V · VO 0.6~1.25V · VDDQ/2 tracking $\pm 1\%$ · REFOUT +/-10mA · Cout 10uF · VOSEN · UVLO · SS · OTP / OCP	DFN3x3_10L
MT7235	—	2.7~24	5A	24V (28V surge) 5A very-low-forward-voltage ideal diode Abs Max 28V · Fast reverse-current turn-off · OTP	DFN2x3_8L

Samples, datasheets and pricing

Tell us the application, input voltage, output voltage and current, and your expected annual volume — we will come back with recommended parts, datasheets and pricing. Including a brief spec (VIN / VOUT / current / quantity) speeds up the reply.

COMPANY	DIANYUAN CO., LTD. (典垣有限公司)
---------	-----------------------------

VAT NO.	69317593
---------	----------

TEL	+886-2-8285-4381
-----	------------------

ADDRESS	3F., No. 4, Ln. 46, Guanghua Rd., Luzhou Dist., New Taipei City 247, Taiwan
---------	---

HOURS	Mon–Fri 9:00–18:00 (UTC+8)
-------	----------------------------

WEB	dianyuan.vercel.app
-----	---------------------

MANUFACTURER	M3 Technology Inc. (來韻科技, TWSE 6799)	www.m3tekic.com
--------------	--------------------------------------	-----------------

Source: M3TEK Product Selection Guide 2026 Q1. Specifications are subject to change without notice – always confirm against the latest datasheet before designing in.

Parts marked NEW are manufacturer-recommended releases. Equivalents are listed for selection reference only; confirm any replacement by evaluation.