SIMPLE SWITCHER

Experience Ease of Use

for your power supply design

AVNET electronics marketing

Texas Instruments

SIMPLE SWITCHER

Experience Ease of Use

SIMPLE SWITCHER is

A 21-year old brand serving 35,000+ end customers with more than 1.6 billion products shipped worldwide

SIMPLE SWITCHER products are

A comprehensive portfolio of easy-to-use power products that include power modules, regulators and controllers. A wide range of input voltages and output currents that maximize design scalability.

What makes SIMPLE SWITCHER products so easy to use

- Ready-made designs fully supported by WEBENCH® online design tools
- A wide range of application notes, videos, evaluation boards
- Direct factory support from experts through the online community SIMPLE SWITCHER E2E forum

www.simpleswitcher.com

Choosing the right family

	SIMPLE SWITCHER Power Modules		SIMPLE SWITCHER Regulators		SIMPLE SWITCHER Controllers
	Power Modules	Nano Modules	Regulators	Nano Regulators	
Fully WEBENCH enabled	✓	✓	✓	✓	✓
Easy-to-use packaging	✓	✓	✓	✓	✓
Footprint-compatible current options	✓	✓	✓	✓	✓
Smallest solution size	✓	✓		✓	
Integrated FETs	✓	✓	✓	✓	
Integrated inductor	✓	✓			
Lowest noise	✓	✓			

SIMPLE SWITCHER

Products, Tools and Community

www.simpleswitcher.com

Products

Power Modules

Integrated shielded inductor and passive components provide the highest level of integration combined with high performance and ease of use, enabling easy design and quickest time to market.

Nano Modules

The highest level of integration combined with a small solution size and high performance enabling easy design and fast time to market for space-constrained applications.

Regulators

Combining design flexibility with high performance and ease of use.

Nano Regulators

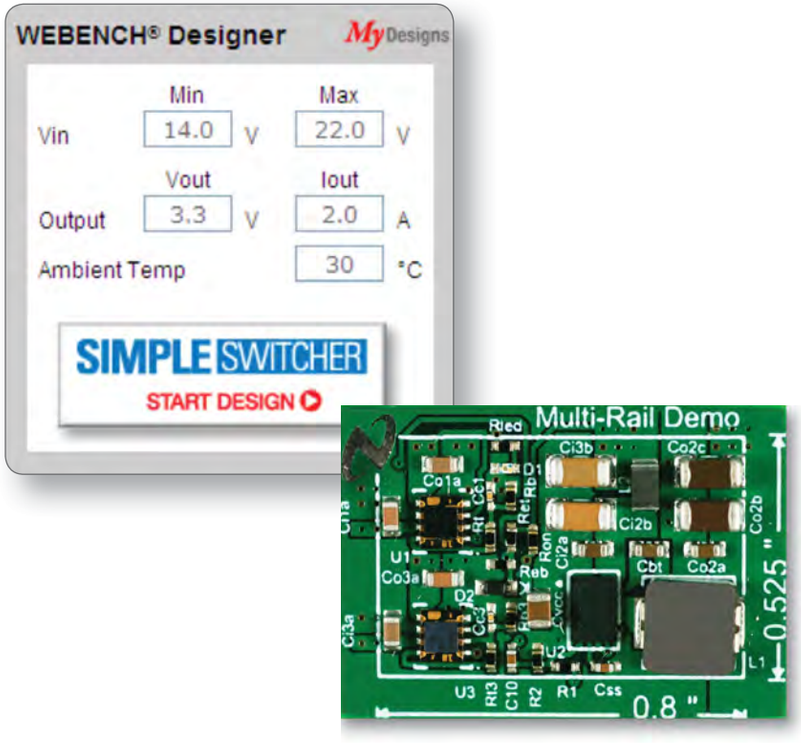
The smallest solution size combined with design flexibility and high performance while delivering ease of use for cost and space-constrained applications.

Controllers

Providing the ultimate flexibility while delivering ease of use.

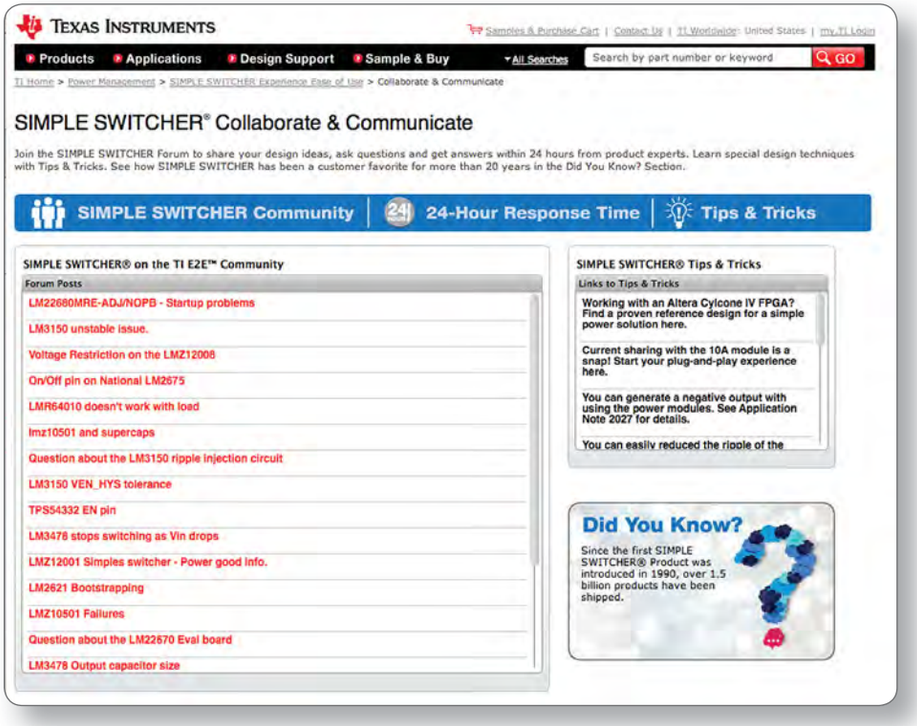
Tools

The SIMPLE SWITCHER family of products utilize WEBENCH Design Center online design tools, feature evaluation boards and reference designs, and include application notes and videos to make design easy.



Community

Join the SIMPLE SWITCHER forum to share your design ideas, ask questions and get answers within 24 hours from product experts. Learn special design techniques with Tips & Tricks. See how SIMPLE SWITCHER has been a customer favorite for more than 20 years in the Did You Know? section.



SIMPLE SWITCHER® Portfolio

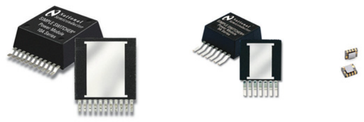
TEXAS INSTRUMENTS

Power Modules

SIMPLE SWITCHER Power Modules

When to use: For low-noise designs that require an extremely fast time to market

- **Easy to use package–**single power pad with leads
- **Best in-class thermal performance–**operates up to 85°C ambient with NO airflow
- **Superior EMI performance–**integrated shielded inductor

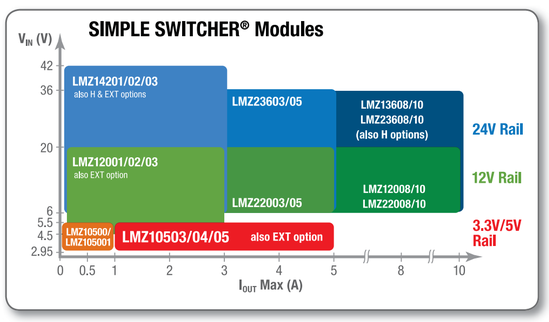


Actual Size

SIMPLE SWITCHER Nano Modules

When to use: For space-constrained applications that require a tiny solution size in an integrated package

- **Smallest solution size–**35mm^2
- **High efficiency–**up to 96%
- **Low output voltage ripple–**less than 10 mV pk-pk
- **Superior EMI performance–**integrated shielded inductor

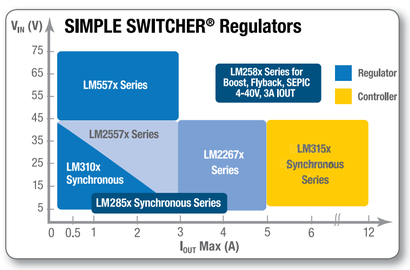


Regulators

SIMPLE SWITCHER Regulators

When to use: For designs that require input voltage up to 75V and a balance between EOU and flexibility

- **Exceptional flexibility–** TO-263THIN packaging, frequency synchronization, adjustable current limit, precision enable, soft start
- **Versatile portfolio–**Both buck and boost solutions

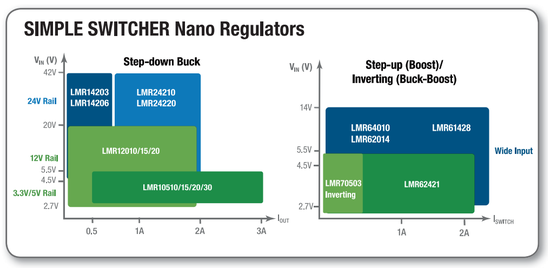


Actual Size

SIMPLE SWITCHER Nano Regulators

When to use: For space-constrained applications that require a small solution size

- **Tiny solution size–**LLP, SOT-23, or µSMD packaging, 1 mm or less in height
- **Versatile portfolio–**Both buck and boost solutions, wide input voltage ranges, adjustable output voltages



Actual Size

Controllers

SIMPLE SWITCHER Controllers

When to use: For designs that require additional design flexibility

- **Flexibility–**scale FETs to meet current needs
- **Low BOM count–**as low as 11 components
- **Easy FET selection–**WEBENCH design tool

Experience Ease of Use

www.simpleswitcher.com and www.em.avnet.com/simpleswitcher

Selection Tables

Power Modules

Product	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Freq (kHz)	Freq Sync	Current Sharing	EMI Cert.	Packaging
LMZ10500/01	0.65/1	2.7 to 5.5	0.6 to 3.6	2000	–	–	✓	LLP-MOD8
LMZ10503/04/05*	3/4/5	2.95 to 5.5	0.8 to 5	1000	–	–	✓	TO-PMOD7
LMZ12001/02/03*	1/2/3	4.5 to 20	0.8 to 6	1000 max	–	–	✓	TO-PMOD7
LMZ14201/02/03*	1/2/3	6 to 42	0.8 to 6	1000 max	–	–	✓	TO-PMOD7
LMZ12008/10	8/10	6 to 20	0.8 to 6	360	–	–	✓	TO-PMOD11
LMZ13608/10	8/10	6 to 36	0.8 to 6	360	–	–	✓	TO-PMOD11
LMZ22003/05	3/5	6 to 20	0.8 to 6	650 to 950	✓	–	✓	TO-PMOD7
LMZ23603/05	3/5	6 to 36	0.8 to 6	650 to 950	✓	–	✓	TO-PMOD7
LMZ22008/10	8/10	6 to 20	0.8 to 6	315 to 600	✓	✓	✓	TO-PMOD11
LMZ23608/10	8/10	6 to 36	0.8 to 6	315 to 600	✓	✓	✓	TO-PMOD11
LMZ14201H/02H/03H	1/2/3	6 to 42	5 to 24	1000 max	–	–	✓	TO-PMOD7
NEW **LMZ13606H/08H**	6/8	6 to 36	3 to 16	360	–	✓	✓	TO-PMOD11
NEW **LMZ23606H/08H**	6/8	6 to 36	3 to 16	315 to 600	✓	✓	✓	TO-PMOD11

*Extended -55° C ambient temperature versions also available

Step Down Regulators

Product	Output Current (A)	Input Voltage (V)	Output Voltage (V)	Frequency (kHz)	Freq Sync	Enable	Soft Start	AECQ-100	Packaging
LM22671/4	0.5	4.5 to 42	1.285 to 37	200 to 1000 Adj	✓/–	✓	✓/–	🚗	PSOP-8
LM22672/5	1	4.5 to 42	1.285 to 37	200 to 1000 Adj	✓/–	✓	✓/–	🚗	PSOP-8
LM22680	2	4.5 to 42	1.285 to 37	200 to 1000 Adj	✓	✓	✓	🚗	PSOP-8
LM22670/73/76	3	4.5 to 42	1.285 to 37	200 to 1000 Adj	✓/–/–	✓/–/✓	–/✓/–	🚗	PSOP-8, TO263-Thin
LM22677/78/79	5	4.5 to 42	1.285 to 37	200 to 1000 Adj	✓/–/–	✓/✓/–	–/–/✓	🚗	TO263-Thin
LM25574/75/76	0.5/1/3	6 to 42	1.23 to 40	50 to 1000	✓	✓	✓	🚗	eTSSOP-16, eTSSOP-20
LM5574/75/76	0.5/1/3	6 to 75	1.23 to 40	50	✓	✓	✓	🚗	eTSSOP-16, eTSSOP-20
LM3100	1.5	4.5 to 36	0.8 to 32	up to 1000, adj	–	✓	✓		eTSSOP-20
LM3102/3	0.75/2.5	4.5 to 42	0.8 to 38	up to 1000, adj	–	✓	✓	🚗	eTSSOP-16, eTSSOP-20
LMR10510/15	1/1.5	3 to 5.5	0.6 to 4.5	1600, 3000	–	✓	✓		LLP-6, SOT-23
NEW **LMR10520/30**	2/3	3 to 5.5	0.6 to 4.5	1600, 3000	–	✓	✓		LLP-6, LLP-10
LMR12010	1	3 to 20	0.8 to 16	1600, 3000	–	✓	✓		TSOT-23
NEW **LMR12015/20**	1.5/2	3 to 20	0.8 to 16	2000	✓	✓	✓		LLP-10
LMR14203/06	0.3/0.6	4.5 to 42	0.765 to 34	1250	–	✓	✓		TSOT-23
LMR24210/20	1/2	4.5 to 42	0.8 to 24	1000 max	–	✓	✓		microSMD 28

Step Up Regulators

Product	Switch Current (A)	Input Voltage (V)	Output Voltage (V)	Frequency (kHz)	Freq Sync	Enable	Soft Start	Packaging
LMR62421	2.1	2.7 to 5.5	3 to 24	1600	–	✓	✓	SOT-23, LLP-6
LMR62014	1.4	2.7 to 14	3 to 20	1600	–	✓	–	SOT-23
NEW **LMR61428**	2.85	1.2 to 14	3 to 14	2000	–	✓	–	MSOP
LMR64010	1	2.7 to 14	3 to 40	1600	–	✓	–	SOT-23
NEW **LMR70503**	0.32	2.7 to 5.5	-0.9 to -5.5	500 min	–	✓	–	microSMD8
LM2585	3	4 to 40	1.23 to 60	100	–	–	–	TO-220, TO-263
LM2586	3	4 to 40	1.23 to 60	100 to 200	✓	✓	–	TO-220
LM2587	5	4 to 40	1.23 to 60	100	–	–	–	TO-220, TO-263
LM2588	5	4 to 40	1.23 to 60	100 to 200	✓	✓	–	TO-220

Controllers

Product ID	Type	Input Voltage (V)	Output Voltage (V)	Frequency (kHz)	Freq Sync	Enable	Soft Start	AECQ-100	Packaging
LM3150	Step-Down	6 to 42	0.6 to 40	up to 1000	–	✓	✓	🚗	eTSSOP-14
LM3481	Step-up, Flyback, SEPIC	2.97 to 48	1.26 to 300	100 to 1000	✓	✓	✓	🚗	MSOP-10
LM3478	Step-up, Flyback	2.97 to 40	1.26 to 300	100 to 1000	–	✓	✓	🚗	MSOP-8, SO-8

SIMPLE SWITCHER

www.simpleswitcher.com

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