



L6981, L6982, L6983

Synchronous step-down converters for industrial applications



A full set of buck regulators with low-quiescent current and embedded protections help reduce the external components in 12/24 V board net systems

The **L6981**, **L6982**, and **L6983** are a series of easy-to-use synchronous monolithic step-down regulators that provide from 1.5 to 3 A DC to the load. They are available in: low-consumption mode (LCM) and low-noise mode (LNM). The LCM version enhances efficiency at light loads while maintaining a controlled output voltage ripple, making it ideal for battery-powered applications. The LNM version ensures constant switching, reducing output voltage ripple during light-load operations, and rendering it suitable for low-noise applications.

KEY FEATURES & BENEFITS

Wide input

- Suitable for 12/24 V buses and batteries

Optimized EMI performance

- Optional spread spectrum
- Low-noise mode to minimize EMI

Power saving

- 90% typical efficiency
- Low-consumption mode

Design flexibility

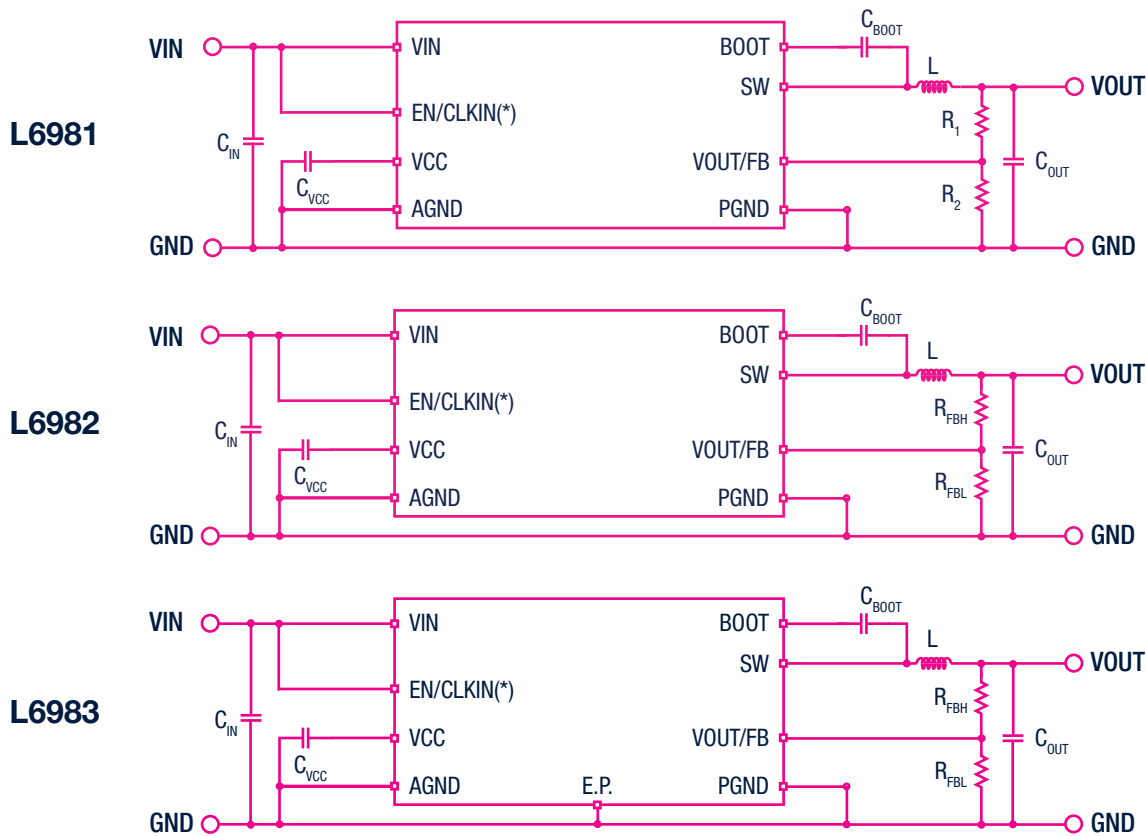
- Able to synchronize with external clock (LNM versions)
- Pulse skipping at light load (LCM versions)
- Supported by eDesignSuite simulation tool (eDS.st.com)

KEY APPLICATIONS

- 24 V bus industrial power systems
- 12/24 V battery powered equipment
- Decentralized intelligent nodes
- Sensors and always-on applications
- Noise-sensitive applications



Typical application circuits



L6981/L6982/L6983 product table

Part numbers	Demo boards	Output voltage (V)	Output current (A)	Package	Light load behavior		
L6981CDR	STEVAL-L6981CDR	Adjustable	1.5	S08	LCM		
	STEVAL-QUADVO1						
L6981C33DR	3,3						
L6981C50DR	5						
L6981NDR	Adjustable	LNM					
L6981N33DR	3,3						
L6981N50DR	5						
L6982CDR	STEVAL-L6982CDR	Adjustable			2	S08	LCM
L6982C33DR	3,3						
L6982C50DR	5						
L6982NDR	Adjustable	LNM					
L6982N33DR	3,3						
L6982N50DR	5						
L6983CQTR	STEVAL-ISA208V1	Adjustable	3	QFN16	LCM		
L6983C33QTR	3,3						
L6983C50QTR	5						
L6983NQTR	Adjustable	LNM					
L6982N33QTR	3,3						
L6983N50QTR	5						



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