

Dual Channel 4A, 42V, Synchronous Step-Down Silent Switcher 2 with 6.2 $\mu$ A Quiescent Current

Manufacturers	<a href="#">Analog Devices, Inc</a>
Package/Case	32-Lead LQFN (6mm x 4mm x 0.94mm w/ EP)
Product Type	Power Management ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for LT8650SIV#PBF or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The LT8650S is a dual step-down regulator that delivers up to 4A of continuous current from both channels and supports loads up to 6A from each channel. The LT8650S features the second generation Silent Switcher architecture to minimize EMI emissions while delivering high efficiency at high switching frequencies. This includes integration of bypass capacitors to optimize high frequency current loops and make it easy to achieve advertised EMI performance by eliminating layout sensitivity.

The fast, clean, low-overshoot switching edges enable high efficiency operation even at high switching frequencies, leading to a small overall solution size. Peak current mode control with a 40ns minimum on-time allows high step down ratios at high switching frequencies.

Burst Mode operation features a 6.2 $\mu$ A quiescent current resulting in high efficiency at low output currents, forced continuous mode allows fixed switching frequency operation over the entire output load range, and spread spectrum operation can further reduce EMI emissions. External VC pins allow optimal loop compensation for fast transient response. The VC pins can also be used for current sharing and the CLKOUT pin enables synchronizing two LT8650S chips to generate a 4-phase, 16A supply.

## Features

Silent Switcher®2 Architecture:

Ultralow EMI on Any PCB n Eliminates PCB Layout Sensitivity

Internal Bypass Capacitors Reduce Radiated EMI

Optional Spread Spectrum Modulation

4A DC from Each Channel Simultaneously

Up to 6A on Either Channel

Ultralow Quiescent Current BurstMode® Operation:

6.2µA IQ Regulating 12VIN to 5VOUT1 and 3.3VOUT2

Output Ripple <10mVP-P

Optional External VC Pin: Fast Transient Response and Current Sharing (Extra 50µA IQ/Channel)

Forced Continuous Mode

High Efficiency at High Frequency

94.6% Efficiency at 2A, 5VOUT from 12VIN at 2MHz

93.3% Efficiency at 4A, 5VOUT from 12VIN at 2MHz

Fast Minimum Switch-On Time: 40ns

Wide Input Voltage Range: 3.0V to 42V

Adjustable and Synchronizable: 300kHz to 3MHz

Small 4mm × 6mm 32-Pin LQFN Package

## Application

General Purpose Step-Down

Automotive and Industrial Supplies

## Related Products



[LT3763EFE](#)

Analog Devices, Inc  
TSSOP28



[LT1038CK](#)

Analog Devices, Inc  
TO-3



[LTC4417IUF](#)

Analog Devices, Inc  
QFN-24



[LTC3440EMS](#)

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[LTC1966CMS8#PBF](#)

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[LTM8045EY#PBF](#)

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[LT4295IUFD#PBF](#)

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