

DC/DC Cntrlr Dual-OUT Step Down 900kHz Automotive 32-Pin QFN EP Tube

Manufacturers	Analog Devices, Inc
Package/Case	QFN-32
Product Type	Power Management ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for LTC3890EUH#PBF or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The LTC3890 is a high performance dual step-down switching regulator DC/DC controller that drives all N-channel synchronous power MOSFET stages. A constant frequency current mode architecture allows a phase-lockable frequency of up to 850kHz. Power loss and noise due to the ESR of the input capacitor are minimized by operating the two controller output stages out-of-phase.

The 50µA no-load quiescent current extends operating run time in battery-powered systems. OPTI-LOOP® compensation allows the transient response to be optimized over a wide range of output capacitance and ESR values. The LTC3890 features a precision 0.8V reference and power good output indicators. A wide 4V to 60V input supply range encompasses a wide range of intermediate bus voltages and battery chemistries.

Independent TRACK/SS pins for each controller ramp the output voltages during start-up. Current foldback limits MOSFET heat dissipation during short-circuit conditions. The PLLIN/MODE pin selects among Burst Mode operation, pulse-skipping mode, or continuous conduction mode at light loads. For a leaded package version (28-lead Narrow SSOP), see the LTC3890-1 data sheet.

LTC3890LTC3890-1LTC3890-2 LTC3890-3Adjustable Current LimitLimitYes No Yes NoCLKOUT/PHASMD forMultiphase OperationYes No YesNoNumber of PGoodOutputs2 1 2 1OVP – Bottom GateCrowbarYesYesNoNoCurrent Limit FoldbackYesYes No NoLight Load Operationwhen Synced to ExternalClockForced ContinuousForced ContinuousPulse SkippingPulse SkippingSENSE Pins CommonMode RangeCommon Mode < 0.5VRequires VFB < 0.65VCommon Mode < 0.5VRequires VFB < 0.65VNot Dependant onVFB. Easy to make anon-synchronousBoost or SEPICNot Dependant onVFB. Easy to make anon-synchronousBoost or SEPICPackage 5 × 5 QFN-32SSOP-28 5 × 5 QFN-32 SSOP-28

Features

Wide VIN Range: 4V to 60V (65V Abs Max)

Low Operating IQ: 50 μ A (One Channel On)

Wide Output Voltage Range: $0.8V \leq V_{OUT} \leq 24V$

RSENSE or DCR Current Sensing

Out-of-Phase Controllers Reduce Required Input Capacitance and Power Supply Induced Noise

Phase-Lockable Frequency (75kHz to 850kHz)

Programmable Fixed Frequency (50kHz to 900kHz)

Selectable Continuous, Pulse-Skipping or Low Ripple Burst Mode[®] Operation at Light Loads

Selectable Current Limit

Very Low Dropout Operation: 99% Duty Cycle

Adjustable Output Voltage Soft-Start or Tracking

Power Good Output Voltage Monitors

Output Overvoltage Protection

Low Shutdown IQ : < 14 μ A

Internal LDO Powers Gate Drive from VIN or EXT VCC

No Current Foldback During Start-Up

Small Low Profile (0.75mm) 5mm \times 5mm QFN Package

Application

Automotive Always-On Systems

Battery Operated Digital Devices

Distributed DC Power Systems

Related Products



[LT3763EFE](#)

Analog Devices, Inc
TSSOP28



[LT1038CK](#)

Analog Devices, Inc
TO-3



[LTC4417IUF](#)

Analog Devices, Inc
QFN-24



[LTC3440EMS](#)

Analog Devices, Inc
MSOP10



[LTC1966CMS8#PBF](#)

Analog Devices, Inc
MSOP-8P



[LTC2990IMS#PBF](#)

Analog Devices, Inc
10MSOP



[LTM8045EY#PBF](#)

Analog Devices, Inc
BGA40



[LT4295IUFD#PBF](#)

Analog Devices, Inc
28-WFQFN