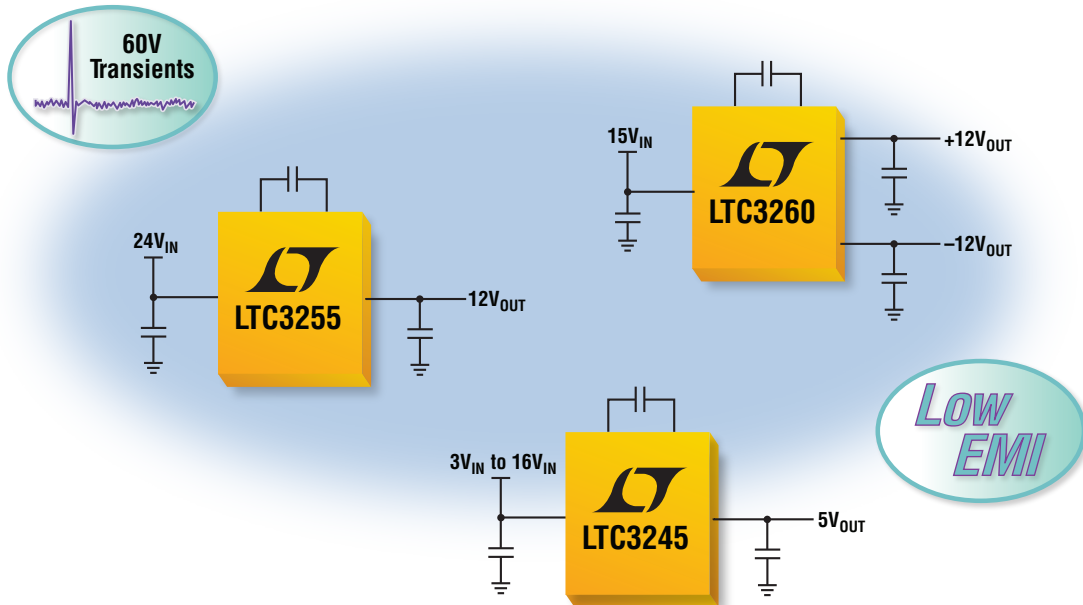


# High Voltage Charge Pump IC Solutions



**Linear Technology's high performance charge pump ICs** offer the widest selection of simple and compact inductorless DC/DC converter designs. These converters can be used to step-up, step-down or invert an input voltage. By eliminating the inductor, these switched capacitor converters provide a small solution footprint and a simpler design. Extended voltage range and transient protection open up applications in the automotive, industrial and avionics markets. Furthermore, innovative design techniques significantly reduce conducted and radiated EMI as well as input and output noise.

## Buck, Buck-Boost, Inverting – No Inductor

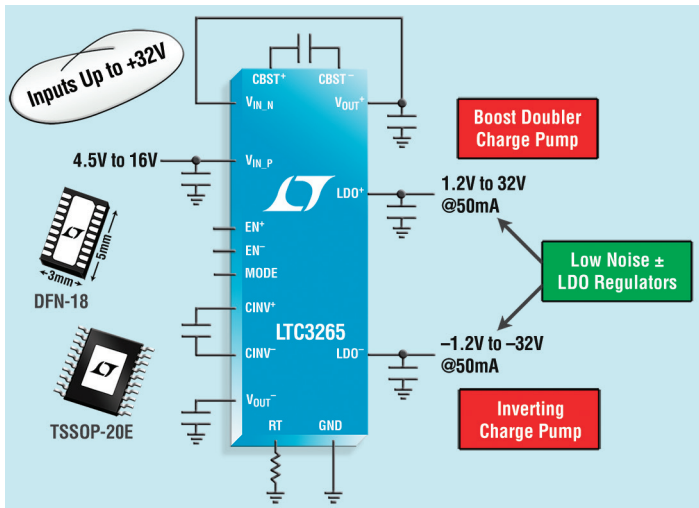
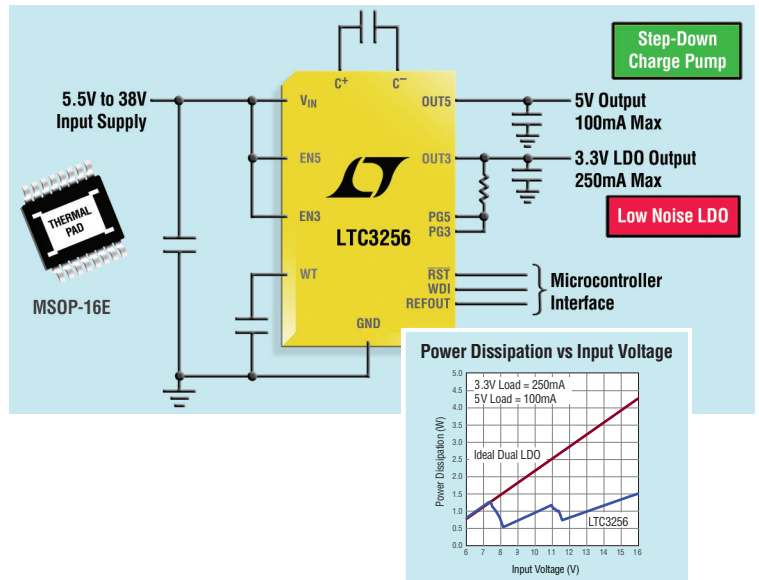
Our new family of high voltage charge pumps simplifies the design of DC/DC power supplies by eliminating the need for an inductor and require only a capacitor as the external storage element. These devices provide output currents up to 350mA and conversion topologies including buck, inverting and buck-boost. Their wide input voltage range from 2.7V up to 48V with 60V transient ride-through plus wide operating temperature range (up to 150°C) make them ideal for automotive, industrial and medical applications.

Part Number	V <sub>IN</sub> Min (V)	V <sub>IN</sub> Max (V)	V <sub>OUT</sub> (V)	I <sub>OUT</sub> Range (mA)	I <sub>Q</sub> (μA)	Function/Topology	Package
LTC <sup>®</sup> 3255	4	48	2.4 – 12.5	50	20	Regulated Step-Down	3 × 3 DFN-10 MSOP-10
LTC3260	4.5	32	1.2V to +V <sub>IN</sub> , -1.2V to -V <sub>IN</sub> , -V <sub>IN</sub> (Unreg.)	100	100	Regulated Inverting + 2 LDOs	3 × 4 DFN-14, MSOP-16
LTC3265	4.5	32	V <sub>LDO+</sub> : 1.2V to V <sub>OUT+</sub> V <sub>LDO-</sub> : -1.2V to V <sub>OUT-</sub> 2 • V <sub>IN,P</sub> (Unreg.), -V <sub>IN,N</sub> (Unreg.)	100	135	Regulated Boost/ Inverting + 2 LDOs	3 × 5 DFN-18, TSSOP-20
LTC3261	4.5	32	-V <sub>IN</sub>	100	60	Regulated Inverting	MSOP-12
LTC3245	2.7	38	2.5 – 5, 3.3, 5	250	18	Regulated Buck-Boost	3 × 4 DFN-12, MSOP-12
LTC3256	5.5	38	5/3.3	100/250	18	Regulated Step-Down + LDO	MSOP-16

# High Voltage Charge Pump ICs

## LTC3256 – Wide $V_{IN}$ Range Dual Output 350mA Step-Down Charge Pump with Watchdog Timer

- Input Voltage Range: 5.5V to 38V
- Independently Enabled 5V and 3.3V Fixed Outputs
- 5V Output: 100mA Max
- 3.3V LDO Output: 250mA Max
- Multimode Step-Down Charge Pump (2:1, 1:1) with Automatic Mode Switching
- Low Quiescent Current
  - 20 $\mu$ A with Both Outputs Regulating (No Load)
  - 0.5 $\mu$ A in Shutdown
- Engineered for Diagnostic Coverage in ISO26262 Systems



## LTC3265 – Low Noise Dual Supply with Boost and Inverting Charge Pumps

- Boost Charge Pump Generates  $2 \cdot V_{IN\_P}$  ( $V_{IN\_P}$  Range: 4.5V to 16V)
- Inverting Charge Pump Generates  $-V_{IN\_N}$  ( $V_{IN\_N}$  Range: 4.5V to 32V)
- Low Noise Positive LDO Post Regulator Up to 50mA
- Low Noise Negative LDO Post Regulator Up to 50mA
- 135 $\mu$ A Quiescent Current in Burst Mode<sup>®</sup> Operation with Both LDO Regulators On
- 50kHz to 500kHz Programmable Oscillator Frequency

## LTC3260 – Low Noise Dual Supply Inverting Charge Pump

- $V_{IN}$  Range: 4.5V to 32V
- Inverting Charge Pump Generates  $-V_{IN}$
- Charge Pump Output Current Up to 100mA
- Low Noise Negative LDO Post Regulator ( $I_{LDO^-}$  = 50mA Max)
- Low Noise Independent Positive LDO Regulator ( $I_{LDO^+}$  = 50mA Max)
- 100 $\mu$ A Quiescent Current in Burst Mode Operation with Both LDO Regulators On

