

Step-down converter supports input voltages of 2 V to 15 V



Texas Instruments Incorporated today introduced a high-efficiency, ultra-low power step-down converter for energy harvesting and low-power applications. The new TPS62120 achieves 96 percent efficiency, and can generate a 75 mA output current from an input voltage of 2 V to 15 V. The high-performance device supports energy harvesting and battery-powered applications, as well as 9-V and 12-V line-powered systems. Visit: www.ti.com/tps62120-pr [1].

The TPS62120 synchronous converter features a power save mode to provide high efficiency over the entire load current range, reaching 75 percent efficiency at loads down to 100 uA. During light load operation, the device operates in a pulse frequency modulation (PFM) mode, consuming only 11 uA of quiescent current. The TPS62120 also maintains smooth, efficient operation at higher currents by transitioning automatically from its power save mode to a fixed-frequency pulse width modulation (PWM) mode.

Features and benefits of the TPS62120:

Flexible voltage range: 2 V to 15 V input voltage and 1.2 V to 5.5 V output enables power generation for a wide range of microcontrollers, such as TI's ultra-low power MSP430 MCUs and the CC430, TI's single-chip MSP430 and low-power RF solution.

Smooth start-up from weak energy sources: wide under voltage lock out (UVLO) hysteresis; operating range from 2.5 V rising to 1.85 V falling.

Very low power: 75 mA output and power save mode with 11 uA quiescent current.

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Availability and pricing

The TPS62120 is available in volume now from TI and its authorized distributors in an 8-pin, 3-mm x 3-mm SOT-23 package. The TPS62122 also is available in a 6-pin, 2-mm x 2-mm QFN package. Suggested resale price for TPS62120 is \$0.95; TPS62122 is \$1.05 in 1,000-unit quantities.

Find out more about TI's power and energy harvesting product portfolio:

- Energy harvesting system block diagram: www.ti.com/energyharvesting-pr [2]
- MSP430 Solar Energy Harvesting Development Tool (eZ430-RF2500-SEH): www.ti.com/msp430solarharvestingdevtool-pr [3]
- TI Power Management products, support and training: www.ti.com/power-pr [4]
- Online training: Perpetually Powered Energy Harvesting Solutions: www.ti.com/perpetuallypoweredtraining-pr [5]
- TI E2E Community to ask questions and help solve problems with fellow engineers: www.ti.com/e2e-pr [6]

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Links:

- [1] <http://www.ti.com/tps62120-pr>
- [2] <http://www.ti.com/energyharvesting-pr>
- [3] <http://www.ti.com/msp430solarharvestingdevtool-pr>
- [4] <http://www.ti.com/power-pr>
- [5] <http://www.ti.com/perpetuallypoweredtraining-pr>
- [6] <http://www.ti.com/e2e-pr>