

A Change of Power

THE CAPABILITY (and complexity) of our packaging machine designs have evolved over time and now have multiple power supplies. We think we should upgrade to newer, higher-efficiency power supplies that we've heard about. We understand that overall machine power consumption will be reduced, but are there any drawbacks in terms of cost, heat generation, form factor, flexibility or other areas?

—From April '11 CONTROL DESIGN

ANSWERS

ROI Savings

The demand for higher-efficiency power supplies is driven by a number of factors, including existing and emerging global "green" initiatives and regulations that are intended to reduce wasted energy in the form of the heat that results from the deployment of low-efficiency power supplies. Also, there are measurable cost savings in the electrical power needed to operate systems with higher-efficiency power supplies. Likewise, state and utility companies encourage the use of

higher-efficiency power supplies because the cost and time to build new power plants is high, especially during these recessionary times.

By employing digital control techniques, advanced circuit topologies and state-of-the-art components, we have been able to provide higher-efficiency power products in substantially smaller packages with expanded features, such as digital interfaces for remotely located control stations. Since we can achieve cost and space savings by substituting digital microcontrollers for bulkier analog/discrete circuits, we have been able to provide these higher-efficiency power supplies at prices comparable to lower-efficiency products. However, not everything is free and some added features, if required, such as external digital management/control interfaces do have added costs associated with them.

One customer reported that by switching to power supplies that draw less current, they saved more than \$100,000 in wiring by using a smaller gauge, particularly with the rising costs in copper.

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