



PowerBlox™

Quick Selector Guide

Exar PowerBlox™ family of synchronous and non synchronous step-down regulators provides a fully integrated single chip solution for point-of-load applications with high current output requirements. The high input voltage range and operating switching frequency options allow the PowerBlox™ family to fit in a wide range of applications and power architectures by enabling step-down DC to DC conversions from various intermediate power bus levels while providing a highly efficient and performing solution in the most compact footprint.

		Output Voltage (V)												
		0.9	1.0	1.1	1.5	1.8	2.5	2.8	3.3	5.0	9.6	12	18	
Input Voltage Rail (V)	2.5	SP7650 SP7651 SP7653 SP7652 SP7655	SP7650 SP7651 SP7653 SP7652 SP7655	SP7650 SP7651 SP7653 SP7652 SP7655	SP7650 SP7651 SP7653 SP7652 SP7655	SP7650 SP7651 SP7653 SP7652 SP7655								
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3A Solution

6A Solution

8A Solution

12A Solution



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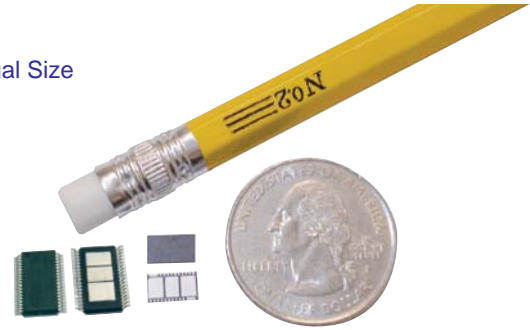
Applications

- Distributed Power Architectures
- Point of Load Converters
- Point of Load Modules
- FPGA, DSPs and Processors Power Supplies

Markets

- Telecom and Networking Equipment
- Set-Top Boxes
- Cable Modems
- Medical Equipment
- Video Processing and Interface Products

Actual Size



PowerBlox™ Family Features

- 3A, 6A, 8A and 12A Synchronous Buck Regulators
- Integrated High and Low Side FETs
- 2.5V up to 28V Wide Input Voltage Conversions
- As Low as 0.8V Output Voltage
- 300Khz to 1.3MHz Operating Frequency
- Up to 95% Efficiency
- Type II & III Compensation
- Multiple Sequencing Options
- Short Circuit, Programmable UVLO and Thermal Protection
- PowerLab Online Design Creation Tool
- 7mmx4mm DFN-26 Package

Feature Options

- Programmable Current Limiting
- Single Input Voltage Rail Operations

Part Number	Current Output	Frequency	Operating Voltage		Minimum Output Voltage	Package
			Min.	Max.		
SP7650	3A	300kHz	2.5V	28V	0.8V	26-Pin DFN
SP7656	3A	600kHz	4.5V	29V	0.6V	8-Pin SOIC
SP7661	3A	600kHz	3.0V	22V	0.8V	26-Pin DFN
SP7651	3A	900kHz	2.5V	20V	0.8V	26-Pin DFN
SP7653	3A	1.3MHz	2.5V	20V	0.8V	26-Pin DFN
SP7652	6A	600kHz	2.5V	28V	0.8V	26-Pin DFN
SP7663	6A	600kHz	3.0V	22V	0.8V	26-Pin DFN
SP7655	8A	300kHz	2.5V	28V	0.8V	26-Pin DFN
SP7662	12A	300kHz	3.0V	22V	0.8V	26-Pin DFN

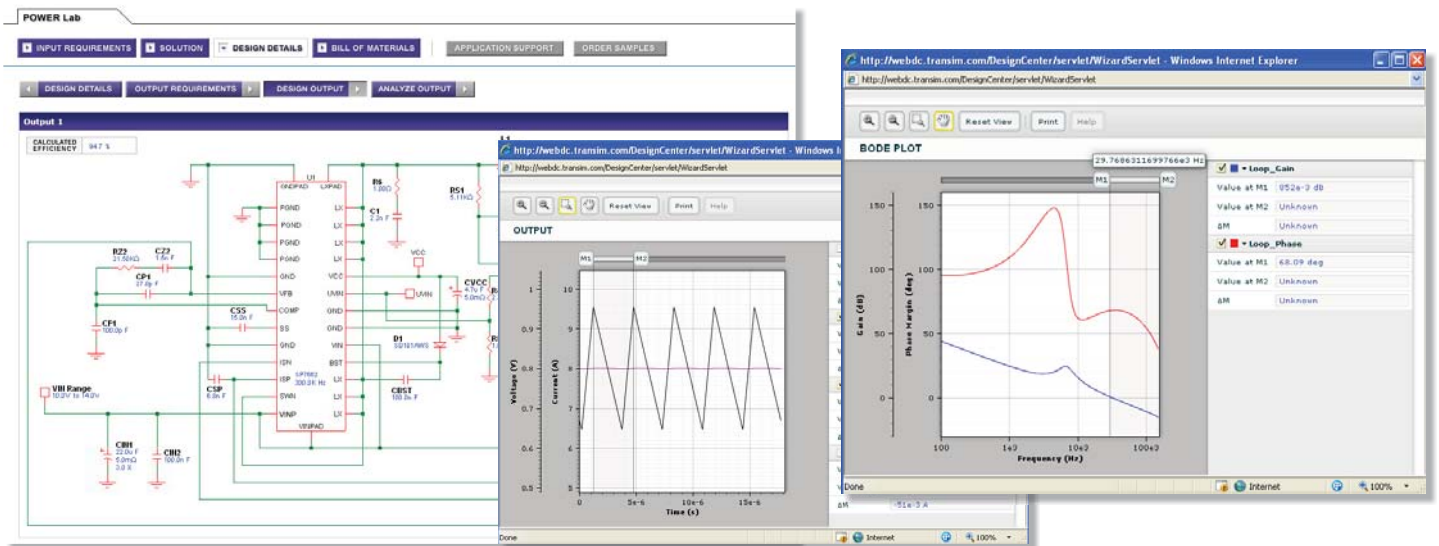
Power Lab™

power design made easy

<http://www.exar.com/powerlab>

High performance design solution generator and simulator

- As simple as entering Vin, Vout and current load
- Schematics and Bill of Material generator
- Extensive waveforms viewer and transient analysis capability
- Supports multiple outputs
- **All in less than 10 minutes!**



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