

# High Efficiency Step-Down Switching Regulator Controllers for Notebook Computer CPUs

DEVICE	V <sub>IN</sub> RANGE	SYNC/ NON-SYNC	OUTPUTS	BURST MODE	LOW BATT	I <sub>Q</sub> μA	I <sub>SD</sub> μA	MAX I <sub>LOAD</sub> (A)	PACKAGE	FEATURES AND APPLICATIONS
<b>LTC1435 Family (Constant Frequency Synchronous, High Efficiency, Wide Input Voltage)</b>										
<b>Single Output</b>										
LTC1435A	3.5-36V	Sync	1.19 to 9V	☑		280	16	10 <sup>1</sup>	G16, S16	99% Duty Cycle, High Efficiency
LTC1436A	3.5-36V	Sync	1.19 to 9V	☑	☑	280	16	10 <sup>1</sup>	GN24	Auxiliary 0.5A Linear Regulator for I/O Supply
LTC1624	3.5-36V	Non-Sync	1.19 to 30V	☑		550	16	10 <sup>1</sup>	S8	Boost, SEPIC, Step-Down or Inverting Regulator
LTC1625	3.7-36V	Sync	1.19 to V <sub>IN</sub>	☑		500	15	20 <sup>1</sup>	GN16, S16	No Sense Resistor, Highest Efficiency
LTC1735	3.5-36V	Sync	0.8 to 6V	☑		450	15	20 <sup>1</sup>	GN16, S16	Adjustable Output from 0.8V to 6V
LTC1736	3.5-36V	Sync	0.925 to 2.00V	☑		450	15	20 <sup>1</sup>	G24	Programmable Output Using 5-bit DAC
<b>Dual Outputs</b>										
LTC1438	3.5-36V	Sync	1.19 to 9V		☑	320	16	10 <sup>1</sup>	G28	Dual 5V/3V, 400kHz, Aux. Regulator
LTC1439	3.5-36V	Sync	1.19 to 9V		☑	320	16	10 <sup>1</sup>	G36, GW36	5V/3A, 3.3V/3.5A and 12V/200mA Regulator
LTC1538	3.5-36V	Sync	1.19 to 9V		☑	320	70	10 <sup>1</sup>	G28	Like LTC1438/39 but 5V Kept Alive in Shutdown
LTC1539	3.5-36V	Sync	1.19 to 9V		☑	320	70	10 <sup>1</sup>	GW36	Like LTC1438/39 but 5V Kept Alive in Shutdown
LTC1628	3.5-36V	Sync	0.8 to 6V	☑		320	16	20 <sup>1</sup>	G28	Dual Phase Operation for Reduced Input Capacitance
LTC1702	2.7-7V	Sync	0.8 to 3V	☑		6mA	40	20 <sup>1</sup>	GN24	No R <sub>SENSE</sub> , 2-Phase Operation

## LTC1142/LTC1147 Family (Very High Efficiency, Burst Mode, Very Low Power)

<b>Single Output</b>										
LTC1147	3.5-16V	Non-Sync	3.3V, 5V	☑		160	10	5 <sup>1</sup>	S8	100% Duty Cycle, >95% Efficiency
LTC1148	3.5-16V	Sync	3.3V, 5V	☑		160	10	10 <sup>1</sup>	S14	Adaptive Non-Overlap Synchronous Gate Drive
LTC1148HV	3.5-20V	Sync	3.3V, 5V	☑		160	10	10 <sup>1</sup>	S14	Same as LTC1148, but with V <sub>IN</sub> to 20V
LTC1149	4-48V	Sync	3.3V, 5V, Adj.	☑		2mA	135	5 <sup>1</sup>	S16	48V (60V max) Input Voltage
LTC1159	4-40V	Sync	3.3V, 5V, Adj.	☑		300	20	5 <sup>1</sup>	G20, S16	40V (60V max) Input Voltage
LTC1266	3.5-20V	Sync	3.3V, 5V, Adj.	☑	☑	170	25	5 <sup>1</sup>	S16	Drives All N-Channel or all P-Channel MOSFETs
<b>Dual Outputs</b>										
LTC1142	3.5-16V	Sync	3.3/5V, Adj.	☑		160	10	5 <sup>1</sup>	G28	High Efficiency 5V/3.3V or Dual Adjustable Outputs
LTC1142HV	4-20V	Sync	3.3/5V, Adj.	☑		160	10	5 <sup>1</sup>	G28	Same as LTC1142 but with V <sub>IN</sub> Up to 20V
LTC1143	3.5-16V	Non-Sync	3.3/5V, Adj.	☑		160	10	5 <sup>1</sup>	S16	Low Cost Dual 5V/3.3V or 3.3V/adj Outputs
LTC1267	4-40V	Sync	3.3/5V, Adj.	☑		320	15	5 <sup>1</sup>	G28	Drives Complementary Power MOSFETs

Notes: 1. Maximum I<sub>LOAD</sub> determined by choice of external MOSFET and Sense Resistor (if applicable).

## PCMCIA Switch and Switch Driver Selection Guide

DEVICE	TYPE	SWITCH V <sub>OUT</sub> (V)	CONFIGURATION	I <sub>OUT</sub>	COMMENTS
LT1312	V <sub>PP</sub>	0, 3.3, 5, 12, Hi-Z	Single	120mA	Useful with Overwinding
LT1313	V <sub>PP</sub>	0, 3.3, 5, 12, Hi-Z	Dual	120mA (x2)	Useful with Overwinding
LT1314	V <sub>PP</sub>	0, 3.3, 5, 12, Hi-Z	Single	120mA	V <sub>PP</sub> Switch
	V <sub>CC</sub>	3.3, 5, Hi-Z	Single		Internal Drivers for V <sub>CC</sub> MOSFETs
LT1315	V <sub>PP</sub>	0, 3.3, 5, 12, Hi-Z	Dual	120mA (x2)	V <sub>PP</sub> Switch
	V <sub>CC</sub>	3.3, 5, Hi-Z	Dual		Internal Drivers for V <sub>CC</sub> MOSFETs
LTC1470	V <sub>CC</sub>	3.3, 5, Hi-Z	Single	1A	Fully Integrated V <sub>CC</sub> Switch with SafeSlot™ Protection
LTC1471	V <sub>PP</sub>	3.3, 5, Hi-Z	Dual	1A (x2)	Fully Integrated V <sub>CC</sub> Switches with SafeSlot™ Protection
LTC1472	V <sub>PP</sub>	0, 3.3, 5, 12, Hi-Z	Single	120mA	Fully Integrated PCMCIA V <sub>CC</sub> and V <sub>PP</sub>
	V <sub>CC</sub>	3.3, 5, Hi-Z	Single	1A	Switch Matrix with SafeSlot™ Protection

## CCFL Lamp Driver Power Supply Selection Guide

CHARACTERISTICS	LT1182	LT1183	LT1184	LT1184F	LT1186F	LT1786F
Floating Lamp Operation	☑	☑		☑	☑	☑
Grounded Lamp Operation	☑	☑	☑	☑	☑	☑
Contrast Supply	Bipolar Contrast Outputs	Unipolar Contrast Outputs				
Voltage Reference Available		☑	☑	☑	☑	
DAC Controlled Brightness					☑	☑
SMBus Controlled Brightness						☑