



## Power Management Solutions for Xilinx Programmable Logic Devices

### VIRTEX®-6 Core Voltage: 1.0V\*\*

Input Supply	≤200mA	≤500mA	≤1A – 1.5A	≤2A – 5A	5A – 10A	Up to 25A
<b>1.8V</b>	LT3020 Linear, LTC3549 Buck	LT3085 Linear, LTC3409 Buck	<b>LT3080 Linear</b> , LTC3026 Linear	LTC3713 Controller	LTC3713 Controller	N/A
<b>2.5V to 5V</b>	LT3020 Linear LTM8020 μModule*	LT3085 Linear, LTM8021 μModule	LTC3411A Buck, LTC3417A Buck, LTC3569 Buck	LTC3414 Buck, LTM4604 μModule, <b>LTM4614 μModule</b>	LTC3608 Buck, LTC3610 Buck, LTM4608 μModule, <b>LTM4616 μModule</b>	LTC3811 Controller, 2 × LTM4601 μModule, <b>LTM4616 μModule</b>
<b>12V to 24V</b>	LT3502 Buck	LT3503 Buck	LT3503 Buck, LT3505 Buck	LTM8023 μModule, LTM4603 μModule, LTC3850 Controller	LTM4601 μModule	LTC3811 Controller, LTC3823 Controller, 2 × LTM4601 μModule

### SPARTAN®-6 Core Voltage: 1.0V\*\*\*

Input Supply	≤200mA	≤500mA	≤1A – 1.5A	≤2A – 5A	5A – 10A	Up to 25A
<b>1.8V</b>	LT1761 Linear, LTC3549 Buck	LT3085 Linear, LTC3409 Buck	<b>LT3080 Linear</b> , LTC3026 Linear	LTC3713 Controller	LTC3713 Controller	N/A
<b>2.5V to 5V</b>	LT3020 Linear, LTC3544 Buck	LT3085 Linear, LTC3025-1	LTC3411A Buck, LTC3417A Buck, LTC3569 Buck	LTC3414 Buck	LTC3608 Buck, LTC3610 Buck, LTC3418 Buck	LTC3811 Controller, <b>LTM4616 μModule</b>
<b>12V to 24V</b>	LT3502 Buck	LT3503 Buck	LT3503 Buck, LT3505 Buck	LT3501 Buck, LTC3850 Controller	LTC3605 Buck	LTC3850 Controller, LTC3811 Controller, LTC3823 Controller

### VIRTEX-5 Core Voltage: 1.0V

Input Supply	≤200mA	≤500mA	≤1A – 1.5A	≤2A – 5A	5A – 10A	Up to 25A
<b>1.8V</b>	LT <sup>®</sup> 3020 Linear LTC <sup>®</sup> 3549 Buck	<b>LT3080 Linear</b> LTC3409 Buck	<b>LT3080 Linear</b> LTC3026 Linear	LTC3713 Controller	LTC3713 Controller	N/A
<b>2.5V to 5V</b>	LT3020 Linear LTC3549 Buck LTC3410 Buck	<b>LT3080 Linear</b> LTC3406A Buck LTC3542 Buck	LTC3561 Buck LTC3411A Buck LTC3564 Buck LTC3568 Buck	LTC3412A Buck LTC3414 Buck LTC3801 Controller LTC3809 Controller	LTC3418 Buck LTC3822 Controller LTM4601 μModule* LTC1778 Controller	LTC3822 Controller LTC3713 Controller LTC3832 Controller LTC1778 Controller
≤12V to 24V	LT3502 Buck	LT3502 Buck	LT3493 Buck LT3685 Buck LT3481 Buck LT3505 Buck	LT3680 Buck LTC1771 Controller LTC1778 Controller LTC3770 Controller	LTM4601 μModule* LTC3832 Controller LTC1778 Controller LTC3823 Controller	2 × LTM4601 μModule* LTC1778 Controller LTC3823 Controller

### VIRTEX-4 & Spartan-3 Family Core Voltage: 1.2V

Input Supply	≤200mA	≤500mA	≤1A – 1.5A	≤2A – 5A	5A – 10A	Up to 25A
<b>1.8V</b>	LT1761 Linear LTC3035 Linear LTC3549 Buck	LT1965 Linear <b>LT3080 Linear</b> LT1763 Linear LTC3409 Buck	LT1965 Linear <b>LT3080 Linear</b> LTC3026 Linear	LTC3713 Controller	LTC3713 Controller	LTC3713 Controller
<b>2.5V to 5V</b>	LT3020 Linear LTC3035 Linear LTC3410 Buck LTC3549 Buck	LT1965 Linear LT1763 Linear LTC3542 Buck LTC3560 Buck	LT1965 Linear <b>LT3080 Linear</b> LTC3411A Buck LTC3564/8 Bucks	LTC3412A Buck LTC3414 Buck LTC3801/9 Controllers LTC1773 Controller	LTC3418 Buck LTC3822 Controller LTM4601 μModule* LTC1778 Controller	LTC3713 Controller LTC3832 Controller LTC1778 Controller LTC3778 Controller
≤12V to 24V	LT3502 Buck	LT1933 Buck LT3493 Buck LT3502 Buck	LT3503 Buck LT3505 Buck LT1936 Buck LT3481 Buck	LT3680 Buck LTC1771 Controller LTM4603 μModule* LTC1778 Controller	LTM4601 μModule* LTC3772 Controller LTC1778 Controller LTC3823 Controller	2 × LTM4601 μModule* LTC1778 Controller LTC3823 Controller

\* Additional products in μModule Family now available. **New products highlighted in bold.**

\*\* 0.9V Core Voltage for –1L Speed Grade

\*\*\* 1.2V Core Voltage for LX and LXT FPGAs, –2 and –3 Speed Grades

## VIRTEX-II PRO™ & VIRTEX-II

Core Voltage: 1.5V

Input Supply	≤200mA	≤500mA	≤1A – 1.5A	≤2A – 5A	5A – 10A	Up to 25A
1.8V	LTC1844 Linear LTC3035 Linear LT1962 Linear LTC3549 Buck	LT1763 Linear LT1965 Linear <b>LT3080 Linear</b> LTC3409 Buck	LT1965 Linear <b>LT3080 Linear</b> LTC3026 Linear	LTC3713 Controller	LTC3713 Controller	LTC3713 Controller
2.5V to 5V	LT1762 Linear LTC3035 Linear LTC3410 Buck LTC3549 Buck	LT1965 Linear <b>LT3080 Linear</b> LT1763 Linear LTC3542 Buck LTC3406A Buck	LT1965 Linear <b>LT3080 Linear</b> LT1963A Linear LTC3561 Buck LTC3411A Buck	LTC3412A Buck LTC3414 Buck LTC3801 Controller LTC3809 Controller	LTC3418 Buck LTC3822 Controller LTM4601 μModule* LTC1778 Controller	LTC3713 Controller LTC3832 Controller LTC1778 Controller LTC3778 Controller
≤12V to 24V	LT3470 Buck LT3502 Buck LT1616 Buck	LT1616 Buck LT1933 Buck LTC3493 Buck	LT3503 Buck LT3505 Buck LT3481 Buck LTC3684 Buck	LT3680 Buck LTC1771 Controller LTM4603 μModule* LTC1778 Controller	LTM4601 μModule* LTC3610 Buck LTC3772 Controller LTC1778 Controller LTC3823 Controller	2 × LTM4601 μModule* LTC1778 Controller LTC3823 Controller LT1952 Controller

## VIRTEX-E, Spartan-IIE & CoolRunner™-II

Core Voltage: 1.8V

Input Supply	≤200mA	≤500mA	≤1A – 1.5A	≤2A – 5A	5A – 10A	Up to 25A
0.9V to 1.8V	LTC3525 Boost LTC3429 Boost LTC3526 Boost	LT1613 Boost	N/A	N/A	N/A	N/A
2.5V to 5V	LTC1844 Linear LTC3035 Linear LT1762 Linear LTC3405A Buck LTC3410 Buck	LT1965 Linear <b>LT3080 Linear</b> LTC3542 Buck LTC3406A Buck	LT1965 Linear <b>LT3080 Linear</b> LT1963A Linear LTC3561 Buck LTC3411A Buck	LTC3414 Buck LTC3801/9 Controllers LTM4603 μModule* LTC1773 Controller	LTC3418 Buck LTC3822 Controller LTM4601 μModule* LTC3610 Buck	LTC3822 Controller LTC3713 Controller LTC3832 Controller LTC3778 Controller
≤12V to 24V	LT3470 Buck LT1934 Buck LT1616 Buck LT3502 Buck	LT1616 Buck LT3502 Buck LT1933 Buck LTC3493 Buck	LT3503 Buck LT3505 Buck LT3481 Buck LTC3684 Buck	LT3680 Buck LTC1771 Controller LTM4603 μModule* LTC1778 Controller	LTM4601 μModule* LTC3610 Buck LTC1778 Controller LTC3823 Controller	2 × LTM4601 μModule* LTC1778 Controller LTC3823 Controller LT1952 Controller

## Power Supplies for I/O

I/O Voltage	Input Voltage	500mA	1A	2A – 5A	6A – 10A	20A
3.3V	12V	LT1616, LT1933	LT1936, LT1767	LT3680, LTC1778, LTC3770	LTM4601, LTC1778	2 × LTM4601, LTC1778
	5V	LTC3406A, LT1962, LT1965	LT1965, LTC3411A	LTC3412/A, LTC3414, LTC3809	LTC3415, LTC3418, LTC1778	LTC1778
2.5V	12V	LT1616, LT1933	LT1936, LT1767	LT3680, LTC1778, LTC3770	LTM4601, LTC1778	LTC1778
	5V	LTC3560, LT1962, LT1965	LT1963A, LT1965, LTC3411A	LTC3412/A, LTC3414, LTC3809	LTM4601, LTC3415, LTC3418	2 × LTM4601, LTC1778
	3.3V	LTC3560, LT1962, LT1965	LT1963A, LT1965, LTC3411A	LTC3412/A, LTC3414, LTC3809	LTC3832, LTC3822, LTC3418	LTC3836, LT3740
1.8V	5V	LTC3560	LTC3411A, LT1767	LTC3412/A, LTC3414, LTC3809	LTM4601, LTC3418	2 × LTM4601, LTC1778
	3.3V	LTC3560	LT1963A, LT1965, LTC3411A	LTC3412/A, LTC3414, LTC3809	LTC3832, LTC3822, LTC3418	LTC3836, LT3740
	2.5V	LTC3560, LTC3406A, LT1965	LT1963A, LT1965, LTC3411A	LTC3412/A, LTC3414, LTC3801	LTC3418, LT3740	LT3740
1.5V	5V	LTC3560	LTC3411A, LT1767	LTC3412/A, LTC3414, LTC3809	LTM4601, LTC3418	2 × LTM4601, LTC1778
	3.3V	LTC3560	LT1963A, LT1965, LTC3411A	LTC3412/A, LTC3414, LTC3809	LTC3832, LTC3822, LTC3418	LTC3836, LT3740
	2.5V	LTC3560, LTC3406A, LTC3021	LT1963A, LT1965, LTC3411A	LTC3412/A, LTC3414, LTC3801	LTC3415, LTC3418, LT3740	LT3740
	1.8V	LTC3406A, LTC3021, LT1965	<b>LT3080</b> , LT1965, LT1764A	LT1764A, 2 × <b>LT3080</b> , LT3150	LT3150, LTC3713	LTC3713

## Dual Output Switching Regulators

Part Number	Architecture	V <sub>IN</sub> Range (V)	Max I <sub>OUT(1)</sub> /I <sub>OUT(2)</sub> (A)	Part Number	Architecture	V <sub>IN</sub> Range (V)	Max I <sub>OUT(1)</sub> /I <sub>OUT(2)</sub> (A)
LTC3547	Monolithic	2.5 – 5.5	0.3/0.3	LTC3546	Monolithic	2.25 – 5.5	2/2 or 3/1
LTC3548	Monolithic	2.5 – 5.5	0.4/0.8	LT3501	Monolithic	3 – 30	3/3
LTC3419	Monolithic	2.5 – 5.5	0.6/0.6	LTC3736/–1	Controller	2.7 – 9.8	5/5
LTC3407–2	Monolithic	2.5 – 5.5	0.8/0.8	LTC3737	Controller	2.7 – 9.8	5/5
LTC3417	Monolithic	2.25 – 5.5	0.8/1.4	LTC3850	Controller	4 – 24	20/20
LTC3417A	Monolithic	2.25 – 5.5	1.0/1.5	LTC3728	Controller	4 – 36	20/20
LT3508	Monolithic	3.7 – 36	1.4/1.4	LTC3708	Controller	4 – 36	20/20
LT1940	Monolithic	3.6 – 25	1.4/1.4	LTC3728	Controller	4 – 36	20/20
LT3506/A	Monolithic	3.6 – 25	1.6/1.6	LTC3827	Controller	4 – 36	25/25
LT3510	Monolithic	3.3 – 25	2/2	LTC3727	Controller	4.5 – 36	25/25

## Additional Power Support Products

- Trackers/Sequencers
- Margining Controllers
- Silicon Oscillators
- μP/DSP/FPGA Supervisor Circuits
- PMBus Interface Products

LTspice® is a SPICE simulator for power supply, amplifier and filter designs



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