



Power Management Solutions for Altera® FPGAs



Stratix® III							Core Voltage: 0.9 or 1.1 V
Input Supply	≤200 mA	≤500 mA	≤1 to 1.5 A	≤2 to 2.5 A	≤3 to 5 A	≤25 A	
2.5 to 5.5 V	NCP584 Linear NCP590 Linear NCP1521/2/3 Buck Controller NCP1582/3/6 Buck Controller NCP1529 Buck Controller	NCP1521/2/3 Buck Controller NCP1582/3/6 Buck Controller NCP1529 Buck Controller	NCP565 Linear NCP5661 Linear NCP1582/3/6 Buck Controller NCP1595 Buck Controller	NCP5662 Linear NCP1582/3/6 Buck Controller	NCP5663 Linear NCP1582/3/6 Buck Controller NCP3101 Buck Converter	NCP1582/3/6 Buck Controller NCP3102 Buck Converter	
≤24 V	NCP1582/3/6 Buck Controller	NCP1582/3/6 Buck Controller	NCP1582/3/6 Buck Controller	NCP1582/3/6 Buck Controller	NCP1582/3/6 Buck Controller NCP3101 Buck Converter	NCP1582/3/6 Buck Controller NCP3102 Buck Converter	
Cyclone® III, Cyclone II, Stratix II, Stratix II GX, Arria™ GX							Core Voltage: 1.2 V
1.8 V	NCP584 Linear	–	–	–	–	–	
2.5 to 5.5 V	NCP590 Linear NCP584 Linear NCP1582/3/6 Buck Controller NCP1521/2/3 Buck Converter	NCP565 Linear NCP5661 Linear NCP1582/3/6 Buck Controller NCP1521/2/3 Buck Converter	NCP565 Linear NCP5661 Linear NCP1582/3/6 Buck Controller	NCP5662 Linear NCP1582/3/6 Buck Controller	NCP5663 Linear NCP1582/3/6 Buck Controller NCP3101 Buck Converter	NCP1582/3/6 Buck Controller NCP3102 Buck Converter	
≤24 V	NCP1582/3/6 Buck Controller	NCP1582/3/6 Buck Controller	NCP1582/3/6 Buck Controller NCP3120/2 Buck Converter	NCP1582/3/6 Buck Controller NCP3121/3 Buck Converter	NCP1582/3/6 Buck Controller NCP3101 Buck Converter	NCP1582/3/6 Buck Controller NCP3102 Buck Converter	
Cyclone, Stratix, Stratix GX							Core Voltage: 1.5 V
1.8 V	NCP603 Linear NCP699 Linear	NCP605/6 Linear	–	–	–	–	
2.5 to 5.5 V	NCP590 Linear NCP603 Linear NCP699 Linear NCP1521/2/3 Buck Converter	NCP565/6 Linear NCP1521/2/3 Buck Converter	NCP565 Linear NCP5661 Linear NCP3163 Buck Converter CS51033 Buck Controller	NCP5662 Linear NCP3163 Buck Converter CS51031 Buck Controller	NCP5663 Linear NCP630 Linear CS51031 Buck Controller NCP3101 Buck Converter	NCP3102 Buck Converter	
≤12 V	NCP551 Linear NCP3163 Buck Converter CS51033 Buck Converter	NCP3335 Linear NCP5500 Linear NCP3163 Buck Converter CS51033 Buck Converter	NCP565 Linear NCP5661 Linear CS51413 Buck Converter CS51033 Buck Controller NCP3120/2 Buck Converter	NCP3163 Buck Converter CS51033 Buck Controller NCP3121/3 Buck Converter	NCP1582/3/6 Buck Controller CS51033 Buck Controller NCP3101 Buck Converter	NCP1582/3/6 Buck Controller NCP3102 Buck Converter	
≤24 V	LM2931 Linear NCP3163 Buck Converter LM2574 Buck Converter	NCP3163 Buck Converter LM2574 Buck Converter	CS51413 Buck Converter LM2574 Buck Converter	NCP3163 Buck Converter LM2576 Buck Converter	CS51033 Buck Controller	–	
MAX® II							Core Voltage: 1.8 V
2.5 to 5.5 V	NCP590 Linear NCP603 Linear NCP699 Linear NCP1521/2/3 Buck Converter	NCP605/6 Linear NCP1521/2/3 Buck Converter	NCP565 Linear NCP5661 Linear NCP3163 Buck Converter	NCP5662 Linear NCP1550 Buck Controller NCP3163 Buck Converter	NCP5663 Linear NCP630 Linear CS51031 Buck Controller NCP3101 Buck Converter	NCP3102 Buck Converter	
≤12 V	NCP551 Linear NCP3163 Buck Converter CS51033 Buck Controller	NCP3335 Linear NCP5500 Linear NCP3163 Buck Converter CS51033 Buck Controller	NCP565 Linear NCP5661 Linear CS51413 Buck Converter CS51033 Buck Controller NCP3120/2 Buck Converter	NCP3163 Buck Converter LM2576 Buck Converter NCP3121/3 Buck Converter	CS51031 Buck Controller NCP1582/3/6 Buck Controller NCP3101 Buck Converter	NCP1582/3/6 Buck Controller NCP3102 Buck Converter	
≤24 V	LM2391 Linear NCP3163 Buck Converter LM2574 Buck Converter	NCP3163 Buck Converter LM2574 Buck Converter	CS51413 Buck Converter LM2574 Buck Converter	NCP3163 Buck Converter LM2576 Buck Converter	CS51033 Buck Controller	–	
MAX 7000B							Core Voltage: 2.5 V
1.8 to 2.5 V	NCP1410 Boost Converter NCP1423 Boost Converter	NCP1421 Boost Converter NCP1422 Boost Converter	–	–	–	–	
3 to 5.5 V	NCP590 Linear NCP603 Linear NCP699 Linear NCP1521/2/3 Buck Converter	NCP605/6 Linear NCP1521/2/3 Buck Converter	NCP565 Linear NCP5661 Linear NCP3163 Buck Converter	NCP5662 Linear NCP1550 Buck Controller NCP3163 Buck Converter	NCP5663/6 Linear NCP630 Linear CS51031 Buck Controller NCP3101 Buck Converter	NCP3102 Buck Converter	
≤12 V	NCP551 Linear NCP3063 Buck Converter LM2574 Buck Converter	NCP3335 Linear NCP5500 Linear NCP3063 Buck Converter LM2574 Buck Converter	NCP565 Linear NCP5661 Linear CS51413 Buck Converter CS51033 Buck Controller NCP3120/2 Buck Converter	NCP3163 Buck Converter LM2576 Buck Converter NCP3121/3 Buck Converter	NCP5663/6 Linear CS51031 Buck Controller NCP1582/3/6 Buck Controller NCP3101 Buck Converter	NCP1582/3/6 Buck Controller NCP3102 Buck Converter	
≤24 V	LM2391 Linear NCP3063 Buck Converter LM2574 Buck Converter	NCP3063 Buck Converter LM2574 Buck Converter	CS51413 Buck Converter LM2574 Buck Converter	NCP3163 Buck Converter LM2576 Buck Converter	CS51033 Buck Controller	–	

MAX 300A, MAX 7000AE						Core Voltage: 3.3 V
Input Supply	≤200 mA	≤500 mA	≤1 to 1.5 A	≤2 to 2.5 A	≤3 to 5 A	≤25 A
1.8 to 3 V	NCP1402 Boost Converter NCP1410 Boost Converter NCP1423 Boost Converter	NCP1421 Boost Converter NCP1422 Boost Converter NCP1450A Boost Converter	–	–	–	–
3 to 3.6 V	NCP1521/2/3 Buck Converter NCP3063 Buck Converter	NCP1521/2/3 Buck Converter NCP3063 Buck Converter	NCP3163 Buck/Boost	NCP3163 Buck/Boost	NCP3101 Buck Converter	NCP3102 Buck Converter
3.3 to 5.5 V	NCP590 Linear NCP603 Linear NCP699 Linear NCP1521/2/3 Buck Converter NCP3063 Buck Converter	NCP3335 Linear NCP5500/1 Linear NCP1521/2/3 Buck Converter NCP3063 Buck Converter	NCP565 Linear NCP1117 Linear NCP5661 Linear NCP3163 Buck Converter	NCP5662 Linear NCP1550 Buck Controller NCP3163 Buck Converter	NCP5663 Linear NCP630 Linear CS51031 Buck Controller NCP3101 Buck Converter	NCP3102 Buck Converter
≤12 V	NCP551 Linear NCP3063 Buck Converter CS51033 Buck Controller	NCP3063 Buck Converter CS51033 Buck Controller	NCP565 Linear NCP5661 Linear CS51413 Buck Converter CS51033 Buck Controller NCP3120/2 Buck Converter	NCP3163 Buck Converter LM2576 Buck Converter NCP3121/3 Buck Converter	CS51031 Buck Controller NCP1582/3/6 Buck Controller NCP3101 Buck Converter	NCP1582/3/6 Buck Controller NCP3102 Buck Converter
≤24 V	LM2931 Linear NCP3063 Buck Converter LM2574 Buck Converter	NCP3063 Buck Converter LM2574 Buck Converter	CS51413 Buck Converter LM2574 Buck Converter	NCP3163 Buck Converter LM2576 Buck Converter	CS51033 Buck Controller	–
MAX 7000S						Core Voltage: 5.0 V
1.8 V	NCP1402 Boost Converter NCP1410 Boost Converter	NCP1421 Boost Converter NCP1422 Boost Converter NCP1450A Boost Converter	–	–	–	–
2.5 to 4.5 V	NCP1402 Boost Converter NCP1410 Boost Converter	NCP1421 Boost Converter NCP1422 Boost Converter NCP1450A Boost Converter	NCP3163 Buck Converter	NCP3163 Buck Converter	NCP1442 Boost Converter CS51033 Buck Controller NCP3101 Buck Converter	NCP3102 Buck Converter
4.5 to 5.5 V	NCP3063 Buck Converter	NCP3063 Buck Converter	NCP3163 Buck Converter	NCP3163 Buck Converter	CS51031 Buck Controller NCP3101 Buck Converter	NCP3102 Buck Converter
≤12 V	NCP3063 Buck Converter LM2574 Buck Converter	NCP3063 Buck Converter LM2574 Buck Converter	NCP565 Linear NCP5661 Linear CS51413 Buck Converter CS51033 Buck Controller NCP3120/2 Buck Converter	NCP5662 Linear NCP3163 Buck Converter LM2576 Buck Converter NCP3121/3 Buck Converter	NCP5663/6/7 Linear CS51031 Buck Controller NCP1582/3/6 Buck Controller NCP3101 Buck Converter	NCP1582/3/6 Buck Controller NCP3102 Buck Converter
≤24 V	NCP3063 Buck Converter LM2574 Buck Converter	NCP3063 Buck Converter LM2574 Buck Converter	CS51413 Buck Converter LM2574 Buck Converter	NCP3163 Buck Converter LM2576 Buck Converter	MC33167 Buck Converter CS51033 Buck Controller	–



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