SOLUTION BRIEF

Powering Intel® Arria® 10 FPGAs and SoCs

with Intel® Enpirion® Power Solutions

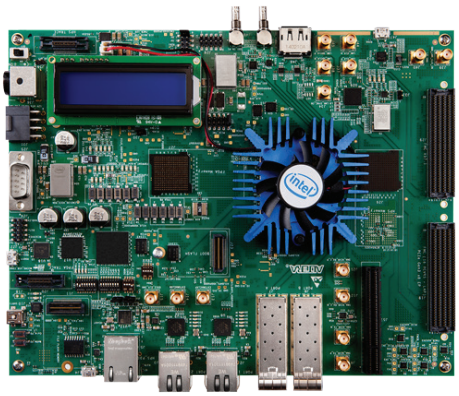
Maximize Power Performance by Powering Intel® Arria® 10 FPGAs and SoCs with Intel Enpirion® Power Solutions

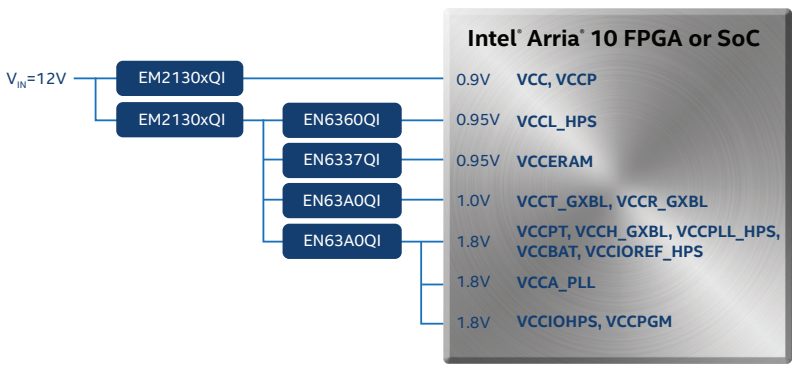
With both FPGA and power expertise, Intel knows how to power FPGAs. Intel Enpirion® Power Solutions are highly integrated and efficient power management devices that maximize power density and save valuable PCB space. Intel Enpirion devices are also designed, tested, and validated to exceed Intel Arria® 10 device power requirements and complement Intel Arria 10 FPGA's full suite of power reduction features, enabling designers to build high-performance yet low-power systems. Take full advantage of Intel Arria 10 device features and performance without sacrificing board space or power budget with Intel Enpirion Power Solutions.

Intel Arria 10 FPGA or SoC Power Reference Design

Powering Intel Arria 10 FPGAs and SoCs is made easy with a Power Solution Reference Design featuring Intel Enpirion Power Solutions. Designed and validated by Intel, this design delivers:

- A complete Intel Arria 10 FPGA or SoC power solution, scalable for 20W to 40W Intel Arria 10 device core voltage (VCC) designs
- ±8.7 mV steady-state Intel Arria 10 device VCC accuracy†
- <±2% Intel Arria 10 device VCC deviation during load transient†





Learn more at https://www.intel.com/content/www/us/en/programmable/products/reference-designs/all-reference-designs/power/arria-10-power-ref-design.html

Recommended Intel Enpirion Power Solutions for Intel Arria 10 FPGAs and SoCs

POWER RAIL CURRENT REQUIREMENT	RECOMMENDED POWER SOLUTIONS
≤0.4A	EP5348UI
≤0.6A	EP5358xUI
≤0.8A	EP5388QI
≤1.0A	EP53A8xQI, EN6310QI
≤1.5A	EP53F8QI, EN5319QI, EZ6301QI
≤2.0A	EN5329QI
≤3.0A	EN5339QI, EN6337QI, EN6338QI, EZ6303QI
≤4.0A	EN6340QI, EN6347QI
≤6.0A	EN6362QI, EN6363QI
≤8.0A	EN6382QI
≤10.0A	EN29A0QI
≤12.0A	EN63A0QI
≤20.0A	EM2120xQI
≤30.0A	EM2130xQI, EM2030xQI
≤40.0A	EM2140xQI, EM2040xQI
≤60.0A	EM2260xQI
≤80.0A	EM2280xQI

Related Links

- Intel Enpirion Power Solutions
  www.intel.com/enpirion
- Intel Arria 10 FPGAs
  www.intel.com/arria10
- Powering FPGAs with Intel Enpirion Power Solutions
  www.intel.com/poweringfpgas

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†Tests measure performance of components on a particular test, in specific systems. Differences in hardware, software, or configuration will affect actual performance. Consult other sources of information to evaluate performance as you consider your purchase. For more complete information about performance and benchmark results, visit www.intel.com/benchmarks.