FACT SHEET

Industry's Lowest Power FPGAs

Whether you're designing today or for the future, power matters. From chip-level to system-level designs, power is the #1 design criterion. Actel's low-power, flash-based FPGAs are optimized to deliver the power and cost that you need to get in the market quickly—and stay in the market for long-term profitability. Actel's flash technology delivers the lowest power and offers a wide range of package size options. You also get the most secure, firm-error immune, live-at-power-up, reprogrammable devices in the industry. For high-volume, low-power, low-cost applications, the Actel IGLOO® and ProASIC®3 series of FPGAs are the perfect choice.

Actel Low-Power Flash FPGAs

	IGLOO Series — Industry's Lowest Power FPGAs			ProASIC3 Series — Low Power FPGAs		
	IGLOO/e	IGLOO PLUS	IGLOO nano (New!)	ProASIC3/E	ProASIC3L	ProASIC3 nano (New!)
Overview	The ultra-low-power, programmable solution	The low-power FPGA with enhanced I/O capabilities	The industry's lowest power, smallest size solution	The low-power, low-cost, FPGA solution	The FPGA that balances low power, performance, and low cost	Lowest cost solution with enhanced I/O capabilities
Applications	Ideal for battery-operated or power-conscious applications, when power and size are key requirements. Provides improved battery runtime or lower operational temperatures.	Addresses the need for compact logic density with high I/O count and capability. Ideal for bridging, I/O expansion, level shifting, and memory interfacing applications optimized for low power.	Designed for consumer, industrial, medical, and other high-volume, low-power applications.	Perfect for designs that require low cost, low power, and performance in small, medium, and large logic densities.	Use in applications that require a balance of performance and low static and dynamic power. Targets applications requiring secure, high-density programmable logic.	Specifically designed for consumer, industrial, medical, and other high-volume, cost-sensitive applications. Cost-effective replacement for ASICs or ASSPs, delivering faster time-to-market, security, and I/O expansion.
Low-Power Modes	Flash*Freeze technology enables 5 µW static power consumption while maintaining FPGA content.	Flash*Freeze mode preserves FPGA content and holds I/O states while the device consumes lowest power.	Flash*Freeze technology enables industry-leading nanoPower consumption while maintaining FPGA content and holding I/O states.	Supports Sleep mode for power reduction when device is not used.	Flash*Freeze technology enables quick switching to and from low-power mode to reduce dynamic power when FPGA operation is not required.	Supports Sleep mode for power reduction when device is not used.
Packaging	Small-footprint packages for portable and area-constrained applications, as small as 4x4 mm.	High I/O count, small footprint, and low-cost packaging.	Largest selection of small-footprint packages, as small as 3x3 mm.	Selected small-footprint and low-cost packages, as well as high pin count packages.	Low-cost packages with high pin count.	Broad selection of small-footprint packages, routable with 2-layer boards in most cases.

Actel's Low-Power FPGAs Feature Summary

	Logic Densities	I/Os	System Performance	Core Voltages	I/O Voltages	Typical Static Power	Power Modes	Packages	Number of ARM® Cortex™-M1 Devices	RAM	User Nonvolatile Memory (FlashROM)	PLL
IGLOO/e	15 k–3 M	49–620	200–250 MHz	1.2 V–1.5 V	1.2 V– 3.3 V	5 µW	Flash*Freeze	µCS, CS FBGA, QFN QFP	4	Up to 504 kb	1 kb	Up to 6
IGLOO PLUS	30 k–125 k	120–212	200–250 MHz	1.2 V–1.5 V	1.2 V– 3.3 V	5 µW	Flash*Freeze	CS, QFP	—	Up to 36 kb	1 kb	Up to 1
IGLOO nano (New!)	10 k–250 k	34–71	200–250 MHz	1.2 V–1.5 V	1.2 V– 3.3 V	2 µW	Flash*Freeze	µCS, CS QFN, QFP	—	Up to 36 kb	1 kb	Up to 1
ProASIC3/E	15 k–3 M	49–620	350 MHz	1.5 V	1.5 V– 3.3 V	3 mW	Sleep	FBGA, QFN QFP	6	Up to 504 kb	1 kb	Up to 6
ProASIC3L	250 k–3 M	68–620	250– 350 MHz	1.2 V–1.5 V	1.2 V– 3.3 V	330 µW	Flash*Freeze	FBGA, QFP	3	Up to 504 kb	1 kb	Up to 6
ProASIC3 nano (New!)	10 k–250 k	34–71	350 MHz	1.5 V	1.5 V– 3.3 V	3 mW	Sleep	QFN, QFP	—	Up to 36 kb	1 kb	Up to 1

For more information, please visit the Actel website at **www.actel.com** or contact your local sales representative.

55900084-2/10.08

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