

# ACTEL Development Tools and FPGAs

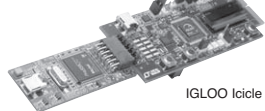


Actel offers low-cost evaluation and starter kits as a quick and cost-effective way to assess low-power and mixed-signal FPGA technology without the expense and time needed to design a customized prototype board. Each kit includes Actel Libero® Integrated Design Environment (IDE) design software with a free Gold license, a FlashPro3-compatible programmer and user's guide, tutorial, sample designs, and board reference files. Actel offers evaluation, starter, and development kits for the following devices: IGLOO®, Fusion, ProASIC®3, ProASICPLUS®, and Axcelerator®. The company also offers its battery-powered IGLOO-based Iccicle Kit to demonstrate extended battery life for portable design.

## IGLOO ICICLE EVALUATION KITS

### IGLOO Development Kit Features:

- Low-power AGL125-QNG132
- Built-in USB rechargeable lithium-ion battery
- USB for Hyperterminal use via a USB-UART chip
- Green OLED 96x16 low-power display
- Three signal LEDs and a special Flash™ Freeze indicator LED



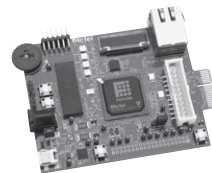
IGLOO Iccicle Kit

MOUSER STOCK NO.	Actel Part No.	Price Each
<a href="#">892-AGL-ICICLE-KIT</a>	AGL-ICICLE-KIT	108.00
<a href="#">892-AGLN-Z-NANO-KIT</a>	AGLN-Z-NANO-KIT	55.00
<a href="#">892-AGLP-EVAL-KIT</a>	AGLP-EVAL-KIT	211.49
<a href="#">892-AGL-DEV-KIT-SCS</a>	AGL-DEV-KIT-SCS	375.00
<b>ARM® M1-enabled IGLOO Solutions</b>		
<a href="#">892-M1AGL-DEV-KIT</a>	M1AGL-DEV-KIT-SCS	375.00

## FUSION KITS

### Fusion Embedded Development Kit:

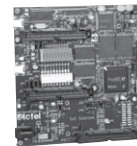
- M1AFS1500 device with dynamic, reconfigurable analog and flash memory
- 512 KB SRAM, 2 MB SPI flash memory on-board
- 10/100 Ethernet and I<sup>2</sup>C interfaces
- USB-to-UART connection for HyperTerminal
- Built-in temperature monitor and voltage potentiometer
- Blue OLED 96x16 pixel display
- FlashPro3 or RealView® debug interface



MOUSER STOCK NO.	Actel Part No.	Price Each
<a href="#">892-AFS-EVAL-KIT</a>	AFS-EVAL-KIT	531.72
<b>ARM M1-enabled Fusion Solutions</b>		
<a href="#">892-M1AFSEMBEDEDKIT</a>	M1AFS-EMBEDED-KIT	219.00
<a href="#">892-M1AFSADV-DK-PWR</a>	M1AFS-ADV-DEV-KIT-PWR	760.00

## ProASIC3 KITS

MOUSER STOCK NO.	Actel Part No.	Price Each
<a href="#">892-A3PE-PROTO-KIT</a>	A3PE-PROTO-KIT	731.00
<a href="#">892-A3PE-BRD1500-SKT</a>	A3PE-BRD1500-SKT	556.25
<b>ARM M1-ENABLED ProASIC3 Solutions</b>		
<a href="#">892-M1A3PL-DEV-KIT</a>	M1A3PL-DEV-KIT-SCS	374.40



## ProASICPLUS KITS

MOUSER STOCK NO.	Actel Part No.	Price Each
<a href="#">892-APA-ISP-DEMO</a>	APA-ISP-DEMO	2138.00
<a href="#">892-APA-EVAL-BRD1</a>	APA-EVAL-BRD1	168.00
<a href="#">892-APA-EVAL-KIT</a>	APA-EVAL-KIT	312.50

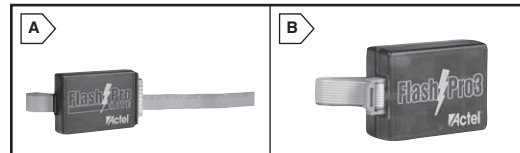
## AXCELERATOR KIT

MOUSER STOCK NO.	Actel Part No.	Price Each
<a href="#">892-AX-EVAL-KIT</a>	AX-EVAL-KIT	375.00

## PROGRAMMING

FlashPro3 and FlashPro Lite are compact and cost-effective ways to program Actel flash devices. They eliminate incompatibility problems and expensive redesign costs, while offering faster time-to-market with their in-system programming (ISP) capability. All programmers can be controlled by the same easy-to-use GUI and connect to a PC through a USB port for FlashPro3 and a parallel port for FlashPro Lite. FlashPro3 supports IGLOO, ProASIC3 and Fusion devices and is powered from the USB port. FlashPro Lite only supports ProASICPLUS devices, and is powered from the target board.

MOUSER STOCK NO.	Actel Part No.	Fig.	Description	Price Each
<a href="#">892-FLASHPROLITE</a>	FLASHPRO LITE	A	Supports ProASICPLUS devices and in-system programming	163.00
<a href="#">892-FLASHPRO3</a>	FLASHPRO 3	B	Supports IGLOO, ProASIC3 and Fusion devices	138.00



## IGLOO FPGAs

### The industry's lowest power FPGAs at 5 μW

Ranging from 15,000 to 3,000,000 system gates, the award-winning flash-based IGLOO family delivers between 10x and 3000x lower static power than competitive programmable logic solutions. The Actel IGLOO family supports a 1.2 V to 1.5 V core voltage and enables quick and easy power control with flexible implementation options, including Flash™ Freeze mode, in which designers need not power off voltage to the device or stop clocks or I/Os. Further, the Flash™ Freeze pin enables designers to quickly and easily enter or exit the special low-power mode within 1 μs. The Actel IGLOO family offers up to 620 user I/Os, six phase-locked loops (PLLs), 504 Kbits of RAM and 250 MHz performance.



MOUSER STOCK NO.	Actel Part No.	Package Type	System Gates	Typical Equivalent Macrocells	VersaTiles (D-flip-flops)	RAM (1024 bits)	Max. User I/O	Single-Ended I/O	Differential I/O Pairs	Price Each	
										1	25
<a href="#">892-AGL015V2QNG68</a>	AGL015V2-QNG68	QFN-68	15,000	128	384	—	49	49	—	6.00	5.14
<a href="#">892-AGL015V5QNG68</a>	AGL015V5-QNG68	QFN-68	15,000	128	384	—	49	49	—	5.50	4.71
<a href="#">892-AGL030V2VQG100</a>	AGL030V2-VQG100	VQFP-100	30,000	256	768	—	77	77	—	9.17	7.86
<a href="#">892-AGL030V2CSG81</a>	AGL030V2-CSG81	PCSP-81	30,000	256	768	—	66	66	—	9.67	8.29
<a href="#">892-AGL030V2QNG132</a>	AGL030V2-QNG132	QFPN-132	30,000	256	768	—	81	81	—	9.17	7.86
<a href="#">892-AGL030V2-UCG81</a>	AGL030V2-UCG81	UCG-81	30,000	256	768	—	66	66	—	9.67	8.29
<a href="#">892-AGL030V5VQG100</a>	AGL030V5-VQG100	VQFP-100	30,000	256	768	—	77	77	—	8.50	7.29
<a href="#">892-AGL030V5CSG81</a>	AGL030V5-CSG81	PCSP-81	30,000	256	768	—	66	66	—	8.83	7.57
<a href="#">892-AGL030V5QNG132</a>	AGL030V5-QNG132	QFPN-132	30,000	256	768	—	81	81	—	8.50	7.29
<a href="#">892-AGL030V5-UCG81</a>	AGL030V5-UCSG81	UCG-81	30,000	256	768	—	66	66	—	8.83	7.57
<a href="#">892-AGL060V2VQG100</a>	AGL060V2-VQG100	VQFP-100	60,000	512	1,536	18	71	71	—	12.83	11.00
<a href="#">892-AGL060V2CSG121</a>	AGL060V2-CSG121	PCSP-121	60,000	512	1,536	—	96	96	—	13.33	11.43
<a href="#">892-AGL060V5VQG100</a>	AGL060V5-VQG100	VQFP-100	60,000	512	1,536	18	71	71	—	11.83	10.14
<a href="#">892-AGL060V5CSG121</a>	AGL060V5-CSG121	PCSP-121	60,000	512	1,536	—	96	96	—	12.17	10.43
<a href="#">892-AGL125V2FGG144</a>	AGL125V2-FGG144	FBGA-144	125,000	1,024	3,072	36	97	97	—	19.33	16.57
<a href="#">892-AGL125V2VQG100</a>	AGL125V2-VQG100	VQFP-100	125,000	1,024	3,072	36	71	71	—	16.00	13.71
<a href="#">892-AGL125V2CSG196</a>	AGL125V2-CSG196	PCSP-196	125,000	1,024	3,072	—	133	133	—	19.50	16.71
<a href="#">892-AGL125V2QNG132</a>	AGL125V2-QNG132	QFPN-132	125,000	1,024	3,072	—	84	84	—	17.17	14.71
<a href="#">892-AGL125V5FGG144</a>	AGL125V5-FGG144	FBGA-144	125,000	1,024	3,072	36	97	97	—	17.83	15.29
<a href="#">892-AGL125V5VQG100</a>	AGL125V5-VQG100	VQFP-100	125,000	1,024	3,072	36	71	71	—	14.83	12.71
<a href="#">892-AGL125V5CSG196</a>	AGL125V5-CSG196	PCSP-196	125,000	1,024	3,072	—	133	133	—	17.50	15.00
<a href="#">892-AGL125V5QNG132</a>	AGL125V5-QNG132	QFPN-132	125,000	1,024	3,072	—	84	84	—	15.83	13.57
<a href="#">892-AGL250V2FGG144</a>	AGL250V2-FGG144	FBGA-144	250,000	2,048	6,144	36	97	97	24	24.67	21.14
<a href="#">892-AGL250V2VQG100</a>	AGL250V2-VQG100	VQFP-100	250,000	2,048	6,144	36	68	68	13	21.17	18.14
<a href="#">892-AGL250V2-CSG196</a>	AGL250V2-CSG196	PCSP-196	250,000	2,048	6,144	36	143	143	30	24.00	20.57
<a href="#">892-AGL250V5FGG144</a>	AGL250V5-FGG144	FBGA-144	250,000	2,048	6,144	36	97	97	24	21.67	18.57
<a href="#">892-AGL250V5-CSG196</a>	AGL250V5-CSG196	PCSP-196	250,000	2,048	6,144	36	143	143	35	21.67	18.57
<a href="#">892-AGL400V2FGG144</a>	AGL400V2-FGG144	FBGA-144	400,000	—	9,216	54	194	97	25	40.74	36.98
<a href="#">892-AGL400V5FGG256</a>	AGL400V5-FGG256	FBGA-256	400,000	—	9,216	54	194	178	38	45.14	40.99
<a href="#">892-AGL400V5FGG484</a>	AGL400V5-FGG484	FBGA-484	400,000	—	9,216	54	194	194	38	55.48	50.37
<a href="#">892-AGL600V2FGG144</a>	AGL600V2-FGG144	FBGA-144	600,000	—	13,824	108	97	97	25	73.03	66.94
<a href="#">892-AGL600V2FGG256</a>	AGL600V2-FGG256	FBGA-256	600,000	—	13,824	108	177	177	43	73.39	72.78
<a href="#">892-AGL600V2FGG484</a>	AGL600V2-FGG484	FBGA-484	600,000	—	13,824	108	235	235	60	95.45	87.50
<a href="#">892-AGL1000V2FGG144</a>	AGL1000V2-FGG144	FBGA-144	1,000,000	—	24,576	144	97	97	25	103.33	94.72
<a href="#">892-AGL1000V2FGG256</a>	AGL1000V2-FGG256	FBGA-256	1,000,000	—	24,576	144	177	177	44	109.39	100.28
<a href="#">892-AGL1000V2FGG484</a>	AGL1000V2-FGG484	FBGA-484	1,000,000	—	24,576	144	300	300	74	126.21	115.69
<a href="#">892-AGL1000V5FGG144</a>	AGL1000V5-FGG144	FBGA-144	1,000,000	—	24,576	144	97	97	25	93.79	85.97
<a href="#">892-AGL1000V5FGG256</a>	AGL1000V5-FGG256	FBGA-256	1,000,000	—	24,576	144	177	177	44	99.55	91.25
<a href="#">892-AGL1000V5FGG484</a>	AGL1000V5-FGG484	FBGA-484	1,000,000	—	24,576	144	300	300	74	114.55	105.00
<a href="#">892-AGLE600V2FGG256</a>	AGLE600V2-FGG256	FBGA-256	600,000	—	13,824	108	165	165	79	105.76	96.94
<a href="#">892-AGLE600V2FGG484</a>	AGLE600V2-FGG484	FBGA-484	600,000	—	13,824	108	270	270	135	122.42	112.22
<a href="#">892-AGLE600V5FGG256</a>	AGLE600V5-FGG256	FBGA-256	600,000	—	13,824	108	165	165	79	95.76	87.78
<a href="#">892-AGLE600V5FGG484</a>	AGLE600V5-FGG484	FBGA-484	600,000	—	13,824	108	270	270	135	111.21	101.94
<a href="#">892-AGLE3000V2FGG484</a>	AGLE3000V2-FGG484	FBGA-484	3,000,000	—	75,264	504	341	341	168	700.91	642.50
<a href="#">892-AGLE3000V2FGG896</a>	AGLE3000V2-FGG896	FBGA-896	3,000,000	—	75,264	504	620	620	310	750.00	687.50
<a href="#">892-AGLE3000V5FGG484</a>	AGLE3000V5-FGG484	FBGA-484	3,000,000	—	75,264	504	341	341	168	637.12	584.03
<a href="#">892-AGLE3000V5FGG896</a>	AGLE3000V5-FGG896	FBGA-896	3,000,000	—	75,264	504	620	620	310	681.82	625.00

