

ACTEL FGAs



RoHS Compliant

MX FIELD PROGRAMMABLE GATE ARRAYS (FGAs)

The low-power MX FGAs offer designers a reliable, single-chip ASIC alternative. Providing an efficient, flexible 5V architecture, MX is an ideal platform for integrating legacy PLDs into a single, low cost device. MX is a high-volume platform that enables solutions without compromising on cost and time.

Features:

- 3.3 and 5.0V CMOS Drive
- 5.0V Tolerant Inputs
- Price and performance leader at 5.0V

MOUSER STOCK NO.	Actel Part No.	Package Type	System Gates	Typical Gates	Logic Modules	Dedicated Flip-Flops	Max. Flip-Flops	SRAM Bits	Max. I/O	3.3V PCI I/O	5V PCI I/O	Routed Clocks	JTAG	33MHz PCI	Price Each	
															1	24
892-A40MX02-PLG44	A40MX02-PLG44	PLCC-44	3,000	2,000	295	—	147	—	34	N	N	1	N	N	17.20	14.28
892-A40MX02-PLG68	A40MX02-PLG68	PLCC-68	3,000	2,000	295	—	147	—	57	N	N	1	N	N	18.00	14.94
892-A40MX02-PQG100	A40MX02-PQG100	PQFP-100	3,000	2,000	295	—	147	—	57	N	N	1	N	N	20.60	17.10
892-A40MX02-VQG80	A40MX02-VQG80	VQFP-80	3,000	2,000	295	—	147	—	57	N	N	1	N	N	25.60	21.25
892-A40MX04-PLG44	A40MX04-PLG44	PLCC-44	6,000	4,000	547	—	273	—	34	N	N	1	N	N	21.80	18.09
892-A40MX04-PLG68	A40MX04-PLG68	PLCC-68	6,000	4,000	547	—	273	—	57	N	N	1	N	N	22.00	18.26
892-A40MX04-PLG84	A40MX04-PLG84	PLCC-84	6,000	4,000	547	—	273	—	69	N	N	1	N	N	22.20	18.43
892-A40MX04-PQG100	A40MX04-PQG100	PQFP-100	6,000	4,000	547	—	273	—	69	N	N	1	N	N	24.00	19.92
892-A40MX04-VQG80	A40MX04-VQG80	VQFP-80	6,000	4,000	547	—	273	—	69	N	N	1	N	N	26.00	21.58
892-A42MX09-PLG84	A42MX09-PLG84	PLCC-84	14,000	9,000	684	348	516	—	72	N	N	2	N	N	38.20	31.71
892-A42MX09-PQG100	A42MX09-PQG100	PQFP-100	14,000	9,000	684	348	516	—	83	N	N	2	N	N	39.40	32.70
892-A42MX09-PQG160	A42MX09-PQG160	PQFP-160	14,000	9,000	684	348	516	—	101	N	N	2	N	N	46.20	38.35
892-A42MX09-TQG176	A42MX09-TQG176	TQFP-176	14,000	9,000	684	348	516	—	104	N	N	2	N	N	51.00	42.33
892-A42MX09-VQG100	A42MX09-VQG100	VQFP-100	14,000	9,000	684	348	516	—	83	N	N	2	N	N	37.60	31.21
892-A42MX16-PLG84	A42MX16-PLG84	PLCC-84	24,000	16,000	1,232	624	928	—	72	N	N	2	N	N	48.60	40.34
892-A42MX16-PQG100	A42MX16-PQG100	PQFP-100	24,000	16,000	1,232	624	928	—	83	N	N	2	N	N	51.00	42.33
892-A42MX16-PQG160	A42MX16-PQG160	PQFP-160	24,000	16,000	1,232	624	928	—	125	N	N	2	N	N	55.20	45.82
892-A42MX16-PQG208	A42MX16-PQG208	PQFP-208	24,000	16,000	1,232	624	928	—	140	N	N	2	N	N	59.60	49.47
892-A42MX16-TQG176	A42MX16-TQG176	TQFP-176	24,000	16,000	1,232	624	928	—	140	N	N	2	N	N	59.60	49.47
892-A42MX16-VQG100	A42MX16-VQG100	VQFP-100	24,000	16,000	1,232	624	928	—	83	N	N	2	N	N	52.40	43.49
892-A42MX24-PLG84	A42MX24-PLG84	PLCC-84	36,000	24,000	1,890	954	1,410	—	72	Y	Y	2	Y	Y	80.80	67.06
892-A42MX24-PQG160	A42MX24-PQG160	PQFP-160	36,000	24,000	1,890	954	1,410	—	125	Y	Y	2	Y	Y	94.00	78.02
892-A42MX24-PQG208	A42MX24-PQG208	PQFP-208	36,000	24,000	1,890	954	1,410	—	176	Y	Y	2	Y	Y	100.80	83.66
892-A42MX24-TQG176	A42MX24-TQG176	TQFP-176	36,000	24,000	1,890	954	1,410	—	150	Y	Y	2	Y	Y	101.40	84.16
892-A42MX36-PQG208	A42MX36-PQG208	PQFP-208	54,000	36,000	2,438	1,230	1,822	2,560	176	Y	Y	6	Y	Y	211.20	175.30

SXA FIELD PROGRAMMABLE GATE ARRAYS (FGAs)

Matching the speed and performance of an ASIC, SX-A devices can be used to generate system-wide savings by integrating multiple functions into a low cost, single-chip solution. The SX-A family decreases the premium for performance while providing a low-power, high-performance solution secure from reverse engineering.



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MOUSER STOCK NO.	Actel Part No.	Package Type	System Gates	Typical Gates	Logic Modules	Dedicated Flip-Flops	Max. Flip-Flops	Max. I/O	Routed Clocks	Hard-Wired Clocks	JTAG	Price Each	
												1	24
892-A54SX08A-FGG144	A54SX08A-FGG144	FBGA-144	12,000	8,000	768	256	512	111	2	1	Yes	37.80	31.37
892-A54SX08A-PQG208	A54SX08A-PQG208	PQFP-208	12,000	8,000	768	256	512	130	2	1	Yes	31.60	26.23
892-A54SX08A-TQG100	A54SX08A-TQG100	TQFP-100	12,000	8,000	768	256	512	81	2	1	Yes	25.20	20.92
892-A54SX08A-TQG144	A54SX08A-TQG144	TQFP-144	12,000	8,000	768	256	512	113	2	1	Yes	29.40	24.40
892-A54SX16A-PQG208	A54SX16A-PQG208	PQFP-208	24,000	16,000	1,452	528	990	175	2	1	Yes	37.80	31.37
892-A54SX16A-TQG100	A54SX16A-TQG100	TQFP-100	24,000	16,000	1,452	528	990	81	2	1	Yes	33.60	27.89
892-A54SX16A-TQG144	A54SX16A-TQG144	TQFP-144	24,000	16,000	1,452	528	990	111	2	1	Yes	33.60	27.89
892-A54SX32A-BGG329	A54SX32A-BGG329	PBGA-329	48,000	32,000	2,880	1,080	1,980	249	2	1	Yes	84.00	69.72
892-A54SX32A-PQG208	A54SX32A-PQG208	CQFP-208	48,000	32,000	2,880	1,080	1,980	174	2	1	Yes	67.20	55.78
892-A54SX32A-TQG100	A54SX32A-TQG100	TQFP-100	48,000	32,000	2,880	1,080	1,980	81	2	1	Yes	58.80	48.80
892-A54SX32A-TQG144	A54SX32A-TQG144	TQFP-144	48,000	32,000	2,880	1,080	1,980	113	2	1	Yes	63.00	52.29
892-A54SX32A-TQG176	A54SX32A-TQG176	TQFP-176	48,000	32,000	2,880	1,080	1,980	147	2	1	Yes	65.20	54.12
892-A54SX72A-PQG208	A54SX72A-PQG208	CQFP-208	108,000	72,000	6,036	2,012	4,024	171	6	1	Yes	130.20	108.07

EX FIELD PROGRAMMABLE GATE ARRAYS (FGAs)

With a focused combination of features, eX can meet the power, speed, package and price requirements of wired and mobile e-appliances. eX enables designers to use a single-chip FPGA for their traditional low-density ASIC requirements without the long lead times and costly NREs. They are low-cost, low-power ASIC alternative for e-appliance/consumer and communications infrastructure applications.



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												1	24
892-EX64-CSG49	EX64-CSG49	CSP-49	3,000	2,000	192	64	128	36	2	1	Yes	8.80	7.30
892-EX64-CSG128	EX64-CSG128	CSP-128	3,000	2,000	192	64	128	84	2	1	Yes	12.60	10.46
892-EX64-TQG64	EX64-TQG64	TQFP-64	3,000	2,000	192	64	128	41	2	1	Yes	7.60	6.31
892-EX64-TQG100	EX64-TQG100	TQFP-100	3,000	2,000	192	64	128	56	2	1	Yes	8.40	6.97
892-EX128-CSG49	EX128-CSG49	CSP-49	6,000	4,000	384	128	256	36	2	1	Yes	17.40	14.44
892-EX128-CSG128	EX128-CSG128	CSP-128	6,000	4,000	384	128	256	100	2	1	Yes	24.40	20.25
892-EX128-TQG64	EX128-TQG64	TQFP-64	6,000	4,000	384	128	256	46	2	1	Yes	15.20	12.62
892-EX128-TQG100	EX128-TQG100	TQFP-100	6,000	4,000	384	128	256	70	2	1	Yes	16.80	13.94
892-EX256-CSG128	EX256-CSG128	CSP-128	12,000	8,000	768	256	512	100	2	1	Yes	27.40	22.74
892-EX256-CSG180	EX256-CSG180	CSP-180	12,000	8,000	768	256	512	132	2	1	Yes	29.60	24.57
892-EX256-TQG100	EX256-TQG100	TQFP-100	12,000	8,000	768	256	512	81	2	1	Yes	22.80	18.92
892-EX256-TQG100	EX256-TQG100	TQFP-100	12,000	8,000	768	256	512	81	2	1	Yes	22.80	18.92

PROGRAMMING

FlashPro3 and FlashPro Lite are compact and cost-effective ways to program Actel flash devices. They eliminate incompatibility problems and expensive redesign costs, and offer faster time to market with their 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 Fusion, IGL00, ProASIC3 and ProASIC3E devices and is powered from the USB port. FlashPro Lite supports ProASIC Plus devices only and is powered from the target board.

MOUSER STOCK NO.	Actel Part No.	Description	Price Each
892-FLASHPROLITE	FLASHPRO LITE	Supports ProASIC Plus devices and in-system programming	156.25
892-FLASHPRO3	FLASHPRO 3	Supports Fusion and ProASIC 3 devices	130.00



Programmable Logic

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