

LATTICE FPGAs



This product is RoHS compliant.



LATTICE FIELD PROGRAMMABLE GATE ARRAYS (FPGAs)

ICE40 MobileFPGA Family

The ICE40™ Los Angeles mobileFPGA™ family is designed for sensor management, video and imaging, custom connectivity and memory/storage expansion for Custom Mobile Device™ solutions. Fabricated on a 40-nm low-power, standard CMOS process, the Los Angeles family has been optimized for mobile consumer applications such as smartphones, tablets, digital still cameras (DSCs), e-book readers, and portable navigation devices (PNDs). The Los Angeles family comes in two power/performance variants:

- LP Series Smartphone – Targeted series optimized for low power
- HX Series Tablet – Targeted series optimized for higher performance



For quantities greater than listed, call for quote.



MOUSER STOCK NO.	Lattice Part No.	Package	Max. Operating Frequency (MHz)	Distributed RAM (Kbit)	No. of Gates	No. of I/Os	No. of Logic Blocks	Operating Supply Voltage (V)	Price Each	
									1	25
HX Series - Low Power/High Performance FPGAs										
842-ICE40HX1K-CB132	ICE40HX1K-CB132	CBGA-132	533	64	1280	95	16	1.2	5.65	4.92
842-ICE40HX1K-TQ144	ICE40HX1K-TQ144	TQFP-144	533	64	1280	95	16	1.2	5.59	4.86
842-ICE40HX1K-VQ100	ICE40HX1K-VQ100	TQFP-100	533	64	1280	72	16	1.2	4.83	4.21
842-ICE40HX4K-CB132	ICE40HX4K-CB132	CBGA-132	533	80	3520	95	20	1.2	7.03	6.12
842-ICE40HX4K-TQ144	ICE40HX4K-TQ144	TQFP-144	533	80	3520	95	20	1.2	6.80	5.91
842-ICE40HX8K-CB132	ICE40HX8K-CB132	CBGA-132	533	128	7680	95	32	1.2	9.50	8.27
842-ICE40HX8K-CM225	ICE40HX8K-CM225	CBGA-225	533	128	7680	178	32	1.2	10.72	9.33
842-ICE40HX8K-CT256	ICE40HX8K-CT256	BGA-256	533	128	7680	206	32	1.2	12.52	10.89
LP Series - Ultra-Low Power FPGAs										
842-ICE40LP1K-CM121	ICE40LP1K-CM121	CBGA-121	533	64	1280	95	16	1.2	5.19	4.52
842-ICE40LP1K-CM36	ICE40LP1K-CM36	CBGA-36	533	64	1280	25	16	1.2	3.86	3.36
842-ICE40LP1K-CM49	ICE40LP1K-CM49	CBGA-49	533	64	1280	35	16	1.2	4.09	3.57
842-ICE40LP1K-CM81	ICE40LP1K-CM81	CBGA-81	533	64	1280	63	16	1.2	4.68	4.06
842-ICE40LP1K-QN84	ICE40LP1K-QN84	QFN-84	533	64	1280	67	16	1.2	4.22	3.67
842-ICE40LP4K-CM121	ICE40LP4K-CM121	CBGA-121	533	80	3520	93	20	1.2	6.87	5.98
842-ICE40LP4K-CM225	ICE40LP4K-CM225	CBGA-225	533	80	3520	167	20	1.2	8.20	7.14
842-ICE40LP4K-CM81	ICE40LP4K-CM81	CBGA-81	533	80	3520	63	20	1.2	6.41	5.58
842-ICE40LP8K-CM121	ICE40LP8K-CM121	CBGA-121	533	128	7680	93	32	1.2	9.39	8.17
842-ICE40LP8K-CM225	ICE40LP8K-CM225	CBGA-225	533	128	7680	178	32	1.2	10.72	9.33
Evaluation Kit									Price Each	
842-CE40LP1KBLINKEVN	ICE40LP1K-BLINK-EVN	iCE40LP1K FPGA Evaluation board. Includes: iCEblink40 LP1K Board, USB Mini Cable, and Quickstart Guide						19.00		

High Performance FPGAs for System Level Connectivity

* Available in Industrial Grade

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Lattice Part No.	Package	Voltage (V)	I/O Combin.	DSP Blocks	Distributed RAM (Kbits)	# of GPLL	Speed Grade	Price Each	
									1	25
842-LFS3GA25E7FN900C	LFSC3GA25E-7FN900C	FPBGA-900	1.2	378	8	104	8	-7	350.00	305.00
* 842-L3GA15EP16FN256C	LFSCM3GA15EP1-6FN256C	FPBGA-256	1.2	139	4	56	8	-6	200.00	175.00
842-L3GA15EP16FN256I	LFSCM3GA15EP1-6FN256I	FPBGA-256	1.2	139	4	56	8	-6	250.00	220.00
842-LFXP2-5E-B2-EVN	LFXP2-5E-B2-EVN	XP2 Brevia Development Kit						49.00		-

ispXPGA Family

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Lattice Part No.	Package	Gates	Voltage (V)	Speed Grade	Balls/Pins	Price Each		
							1	25	100
842-LFX125EB04FN256C	LFX125EB-04FN256C	FPBGA	139K	2.5/3.3	-4	256	48.45	43.70	40.56
842-X200EB04F256I	LFX200EB-04F256I	FPBGA	210K	2.5/3.3	-4	256	106.50	96.50	89.06

Lattice XP Family

The LatticeXP family of FPGA devices combine logic gates, embedded memory and high performance I/Os in a single architecture that is both non-volatile and infinitely reconfigurable to support cost-effective system designs. The re-programmable non-volatile technology used in the LatticeXP family is the next generation ispXPM™ technology. With this technology, expensive external configuration memories are not required and designs are secured from unauthorized read-back. In addition, instant-on capability allows for easy interfacing in many applications.

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MOUSER STOCK NO.	Lattice Part No.	Package	LUTs	Voltage (V)	Speed Grade	Balls/Pins	Price Each		
							1	25	100
XP Family									
842-LFXP10C3FN256I	LFXP10C-3FN256I	FPBGA	10K	1.8/2.5/3.3	-3	256	36.10	31.45	29.06
842-LFXP10E3FN256I	LFXP10E-3FN256I	FPBGA	10K	1.2/3.3	-3	256	36.10	31.45	29.06
842-LFXP15C3FN256C	LFXP15C-3FN256C	FPBGA	15K	1.8/2.5/3.3	-3	256	47.75	41.75	38.50
842-LFXP20C3FN256C	LFXP20C-3FN256C	FPBGA	20K	1.8/2.5/3.3	-3	256	57.25	49.75	46.00
842-LFXP3C3TN100C	LFXP3C-3TN100C	TQFP	3K	1.8/2.5/3.3	-3	100	11.95	10.40	9.62
842-LFXP3C3TN100I	LFXP3C-3TN100I	TQFP	3K	1.8/2.5/3.3	-3	100	13.75	11.95	11.06
842-LFXP3C3TN144C	LFXP3C-3TN144C	TQFP	3K	1.8/2.5/3.3	-3	144	12.95	11.25	10.43
842-LFXP3C3TN144I	LFXP3C-3TN144I	TQFP	3K	1.8/2.5/3.3	-3	144	14.70	12.80	11.87
842-LFXP3C5TN100C	LFXP3C-5TN100C	TQFP	3K	1.8/2.5/3.3	-5	100	15.75	13.75	12.68
842-LFXP6C3QN208C	LFXP6C-3QN208C	PQFP	6K	1.8/2.5/3.3	-3	208	21.05	18.35	16.93
842-LFXP10C3FN256C	LFXP10C-3FN256C	FPBGA	10K	3.465	-3	256	31.40	27.35	25.31
842-LFXP10C4FN256C	LFXP10C-4FN256C	FPBGA	10K	3.465	-4	256	36.10	31.45	29.06
842-LFXP3C3QN208C	LFXP3C-3QN208C	PQFP	3K	3.465	-3	208	13.95	12.15	11.18
842-LFXP3C4TN144C	LFXP3C-4TN144C	TQFP-144	3K	3.465	-4	144	14.70	12.80	11.87
842-LFXP6C4FN256C	LFXP6C-4FN256C	FPBGA	6K	3.465	-4	256	25.10	21.85	20.18
XP2 Family									
842-LFXP40E-5FN484I	LFXP2-40E-5FN484I	FPBGA	40K	1.2/5	-5	484	107.70	93.85	86.68
842-LFXP217E5FN484I	LFXP2-17E-5FN484I	FPBGA	17K	1.2/5	-5	484	47.60	41.45	38.31
842-LFXP217E-5QN208C	LFXP2-17E-5QN208C	PQFP	17K	1.2/5	-5	208	35.90	31.30	28.87
842-LFXP28E5FTN256C	LFXP2-8E-5FTN256C	TQFP	8K	1.2/5	-5	256	19.85	17.30	16.00
842-LFXP2-8E-5TN144C	LFXP2-8E-5TN144C	TQFP	8K	1.2/5	-5	144	16.90	14.70	13.62
842-LFXP217E6FTN256C	LFXP2-17E-6FTN256C	FTBGA	17K	1.26	-6	256	43.65	38.00	35.12
842-LFXP25E5FTN256I	LFXP2-5E-5FTN256I	FTBGA	5K	1.26	-5	256	18.80	16.40	15.12
842-LFXP28E5FTN256I	LFXP2-8E-5FTN256I	FTBGA	8K	1.26	-5	256	23.25	20.25	18.68
842-LFXP2-5E-5QN208C	LFXP2-5E-5QN208C	PQFP	5K	1.2	-5	208	15.70	13.70	12.62
842-LFXP2-5E-5TN144C	LFXP2-5E-5TN144C	TQFP	5K	1.2	-5	144	13.20	11.50	10.62
842-LFXP25E5TN144I	LFXP2-5E-5TN144I	TQFP	5K	1.2	-5	144	15.85	13.80	12.75
842-LFXP28E5TN144I	LFXP2-8E-5TN144I	TQFP	8K	1.2	-8	144	20.25	17.65	16.31
XP3 Family									
842-LFXP3E3TN100C	LFXP3E-3TN100C	TQFP	3.1K	1.2	-3	100	11.95	10.40	9.62

