

# LATTICE Programmable Logic Devices

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Programmable Logic Lattice

## LATTICE ISPMACH 4A CPLDS

The 5Volt ispMACH 4A5 family of CPLDs supports logic macrocell densities from 32 to 256 and I/O counts from 32 to 128. The ispMACH4A5 family delivers up to 5ns SpeedLocked performance (Tpd) and operating frequencies up to 182MHz. The ispMACH 4A5 family offers more programmable logic density and I/O solutions than any other CPLD family in the industry. This breadth of this family, combined with its SpeedLocked performance and low power consumption, make it the best choice for most system logic applications.

For quantities of 250 and up, call for quote.

MOUSER STOCK NO.	Lattice Part No.	Package	Voltage (V)	Tpd (ns)	Fmax	I/O	Price Each		
							1	25	100
842-A3128/6410VNC	M4A3-128/64-10VNC	TQFP-100	5	3.50	167	64	11.96	10.66	10.30
842-A3512/16012YC	M4A3-512/160-12YC	PQFP-208	5	3.50	167	32	49.50	44.10	42.60
842-A364/3255VNC48	M4A3-64/32-55VNC48	TQFP-48	5	3.50	167	32	8.17	7.28	7.03
842-A5128/6410VNC	M4A5-128/64-10VNC	TQFP-100	5	5.5	167	64	12.90	11.50	11.08
842-M4A5128/6410YC	M4A5-128/64-10YC	PQFP-100	5	5.5	167	64	11.72	10.45	10.08
842-M4A5128/6410YNC	M4A5-128/64-10YNC	PQFP-100	5	5.5	167	64	12.87	11.50	11.08
842-M4A5128/6412VI	M4A5-128/64-12VI	TQFP-100	5	5.5	167	64	11.72	10.45	10.08
842-A5128/6412VNI	M4A5-128/64-12VNI	TQFP-100	5	5.5	167	64	12.90	11.50	11.08
842-A5192/9610VNC	M4A5-192/96-10VNC	TQFP-144	5	6.0	160	96	32.26	28.75	27.76
842-M4A5256/12810YNC	M4A5-256/128-10YNC	PQFP-208	5	6.5	154	128	48.76	43.45	41.96
842-M4A532/3210JC	M4A5-32/32-10JC	PLCC-44	5	5.0	182	32	3.65	3.25	3.12
842-M4A532/3210VNC	M4A5-32/32-10VNC	TQFP-44	5	5.0	182	32	4.46	3.97	3.83
842-A532/3210VNC48	M4A5-32/32-10VNC48	TQFP-48	5	5.0	167	32	4.70	4.20	4.05
842-M4A532/3210VNI	M4A5-32/32-10VNI	TQFP-44	5	5.0	167	32	5.45	4.85	4.69
842-M4A564/3210JNC	M4A5-64/32-10JNC	PLCC-44	5	5.0	167	32	5.03	4.48	4.33
842-M4A564/3210VNC	M4A5-64/32-10VNC	TQFP-44	5	5.0	167	32	5.61	5.00	4.83
842-A564/3210VNC48	M4A5-64/32-10VNC48	TQFP-48	5	5.0	167	32	5.61	5.00	4.83
842-M4A596/4810VNC	M4A5-96/48-10VNC	TQFP-100	5	5.5	167	48	13.80	12.30	11.86

## LATTICE PROGRAMMABLE LOGIC DEVICES (CPLDS)

The MachXO family of non-volatile infinitely reconfigurable Programmable Logic Devices (PLDs) is designed for applications traditionally implemented using CPLDs or low-density FPGAs. Widely adopted in a broad range of applications that require general purpose I/O expansion, interface bridging and power-up management functions, MachXO PLDs offer the benefits of increased system integration by providing embedded memory, built-in PLLs, high performance LVDS I/O, remote field upgrade (TransFRM technology) and a low power sleep mode, all in a single-device.

Designed for a broad range of low density applications including system control designs, the MachXO PLD family is used in a variety of end markets including consumer, automotive, communications, computing, industrial and medical.

For quantities of 250 and up, call for quote.

MOUSER STOCK NO.	Lattice Part No.	Package	LUTs	Voltage (V)	I/O	Grade	Price Each		
							1	25	100
842-MXO1200C3FTN256C	LCMXO1200C-3FTN256C	fbGA-256	1200	1.8V/2.5V/3.3V	73	-3	16.91	15.07	14.56
842-MXO1200C3TN100C	LCMXO1200C-3TN100C	TQFP-100	1200	1.8V/2.5V/3.3V	73	-3	13.37	11.91	11.50
842-MXO1200C3TN100I	LCMXO1200C-3TN100I	TQFP-100	1200	1.8V/2.5V/3.3V	73	-3	15.68	13.97	13.49
842-MXO1200C3TN144C	LCMXO1200C-3TN144C	TQFP-144	1200	1.8V/2.5V/3.3V	113	-3	14.77	13.16	12.71
842-MXO2280C3TN100C	LCMXO2280C-3TN100C	TQFP-100	2280	1.8V/2.5V/3.3V	73	-3	21.37	19.04	18.39
842-CMXO2280C3TN100I	LCMXO2280C-3TN100I	TQFP-100	2280	1.8V/2.5V/3.3V	73	-3	25.08	22.34	21.58
842-MXO2280C3TN144C	LCMXO2280C-3TN144C	TQFP-144	2280	1.8V/2.5V/3.3V	73	-3	22.77	20.29	19.60
842-CMXO2280C4TN144C	LCMXO2280C-4TN144C	TQFP-144	2280	1.8V/2.5V/3.3V	113	-4	26.48	23.59	22.79
842-MXO2280C5FTN324C	LCMXO2280C-5FTN324C	fbGA-324	2280	1.8V/2.5V/3.3V	271	-5	36.38	32.41	31.31
842-MXO256C3TN100C	LCMXO256C-3TN100C	TQFP-100	256	1.8V/2.5V/3.3V	78	-3	5.53	4.92	4.76
842-MXO256C3TN100I	LCMXO256C-3TN100I	TQFP-100	256	1.8V/2.5V/3.3V	78	-3	6.35	5.66	5.47
842-LCMXO256C4TN100C	LCMXO256C-4TN100C	TQFP-100	256	1.8V/2.5V/3.3V	78	-4	6.35	5.66	5.47
842-LCMXO256C4TN100I	LCMXO256C-4TN100I	TQFP-100	256	1.8V/2.5V/3.3V	78	-4	7.34	6.54	6.32
842-MXO256C5TN100C	LCMXO256C-5TN100C	TQFP-100	256	1.8V/2.5V/3.3V	78	-5	7.34	6.54	6.32
842-CMXO640C3FTN256I	LCMXO640C-3FTN256I	fbGA-256	640	1.8V/2.5V/3.3V	159	-3	14.77	13.16	12.71
842-MXO640C3TN100C	LCMXO640C-3TN100C	TQFP-100	640	1.8V/2.5V/3.3V	74	-3	9.82	8.75	8.45
842-MXO640C3TN100I	LCMXO640C-3TN100I	TQFP-100	640	1.8V/2.5V/3.3V	73	-3	11.30	10.07	9.73
842-MXO640C3TN144C	LCMXO640C-3TN144C	TQFP-100	640	1.8V/2.5V/3.3V	113	-3	11.22	10.00	9.66
842-MXO640C3TN144I	LCMXO640C-3TN144I	TQFP-100	640	1.8V/2.5V/3.3V	113	-3	12.71	11.32	10.93
842-MXO640C4MN132C	LCMXO640C-4MN132C	csBGA-132	640	1.8V/2.5V/3.3V	101	-4	11.96	10.66	10.30
842-LCMXO4TN144C	LCMXO640C-4TN144C	TQFP-144	640	1.8V/2.5V/3.3V	113	-4	12.71	11.32	10.93
842-MXO640C5TN144C	LCMXO640C-5TN144C	TQFP-144	640	1.8V/2.5V/3.3V	113	-5	14.36	12.79	12.35

## LATTICE ISPCLOCKS

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MOUSER STOCK NO.	Lattice Part No.	Package	Clock Outputs	Supply Voltage (V)	Temperature Grade	Price Each		
						1	25	100
842-CCLK5308S01TN48C	ispPAC-CLK5308S-01TN48C	TQFP-48	8	3.3	Commercial	4.95	4.41	4.26
842-CLK5610AV01TN48C	ispPAC-CLK5610AV-01TN48C	TQFP-48	10	3.3	Commercial	8.75	7.79	7.53
842-CLK5610AV01TN48I	ispPAC-CLK5610AV-01TN48I	TQFP-48	10	3.3	Industrial	10.56	9.41	9.09
842-LK5620AV01TN100C	ispPAC-CLK5620AV-01TN100C	TQFP-100	20	3.3	Commercial	11.80	10.51	10.15
842-C5620V01TN100C	ISPPAC-CLK5620V-01TN100C	TQFP-100	20	3.3	Commercial	25.58	22.79	22.01