

# LATTICE Programmable Logic Devices



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## 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 greater than listed, 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	13.10	11.90	10.91
842-A3512/16012YC	M4A3-512/160-12YC	PQFP-208	5	3.50	167	32	60.00	54.54	50.00
842-A364/3255VNC48	M4A3-64/32-55VNC48	TQFP-48	5	3.50	167	32	8.80	8.00	7.33
842-A5128/6410VNC	M4A5-128/64-10VNC	TQFP-100	5	5.5	167	64	14.10	12.81	11.75
842-M4A5128/6410YC	M4A5-128/64-10YC	PQFP-100	5	5.5	167	64	14.20	12.90	11.83
842-M4A5128/6410YNC	M4A5-128/64-10YNC	PQFP-100	5	5.5	167	64	14.10	12.81	11.75
842-M4A5128/6412VI	M4A5-128/64-12VI	TQFP-100	5	5.5	167	64	14.20	12.90	11.83
842-A5128/6412VNI	M4A5-128/64-12VNI	TQFP-100	5	5.5	167	64	14.10	12.81	11.75
842-A5192/9610VNC	M4A5-192/96-10VNC	TQFP-144	5	6.0	160	96	35.40	32.18	29.50
842-M4A5256/12810YNC	M4A5-256/128-10YNC	PQFP-208	5	6.5	154	128	53.60	48.72	44.66
842-M4A532/3210JC	M4A5-32/32-10JC	PLCC-44	5	5.0	182	32	4.40	4.00	3.66
842-M4A532/3210VNC	M4A5-32/32-10VNC	TQFP-44	5	5.0	182	32	4.70	4.27	3.91
842-A532/3210VNC48	M4A5-32/32-10VNC48	TQFP-48	5	5.0	167	32	5.10	4.63	4.25
842-M4A532/3210VNI	M4A5-32/32-10VNI	TQFP-44	5	5.0	167	32	5.90	5.36	4.91
842-M4A564/3210JNC	M4A5-64/32-10JNC	PLCC-44	5	5.0	167	32	5.40	4.90	4.50
842-M4A564/3210VNC	M4A5-64/32-10VNC	TQFP-44	5	5.0	167	32	6.10	5.54	5.08
842-A564/3210VNC48	M4A5-64/32-10VNC48	TQFP-48	5	5.0	167	32	6.10	5.54	5.08
842-M4A596/4810VNC	M4A5-96/48-10VNC	TQFP-100	5	5.5	167	48	15.10	13.72	12.58

## 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 greater than listed, 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	ftBGA-256	1200	1.8V/2.5V/3.3V	73	-3	20.50	18.63	17.08
842-MXO1200C3TN100C	LCMXO1200C-3TN100C	TQFP-100	1200	1.8V/2.5V/3.3V	73	-3	16.20	14.72	13.50
842-MXO1200C3TN100I	LCMXO1200C-3TN100I	TQFP-100	1200	1.8V/2.5V/3.3V	73	-3	19.00	17.27	15.83
842-MXO1200C3TN144C	LCMXO1200C-3TN144C	TQFP-144	1200	1.8V/2.5V/3.3V	113	-3	17.90	16.27	14.91
842-MXO1200C3FTN256I	LCMXO1200C-3FTN256I	FTBGA-256	1200	1.8V/2.5V/3.3V	211	-3	18.00	15.70	14.50
842-CMXO1200C3MN132C	LCMXO1200C-3MN132C	CSBGA-132	1200	1.8V/2.5V/3.3V	101	-3	17.10	15.54	14.25
842-CMXO1200C3TN144I	LCMXO1200C-3TN144I	TQFP-144	1200	1.8V/2.5V/3.3V	113	-3	16.05	13.95	12.93
842-CMXO1200C4TN144C	LCMXO1200C-4TN144C	TQFP-144	1200	1.8V/2.5V/3.3V	113	-4	16.05	13.95	12.93
842-MXO1200C5TN100C	LCMXO1200C-5TN100C	TQFP-100	1200	1.8V/2.5V/3.3V	73	-5	22.00	20.00	18.33
842-MXO2280C3FTN324C	LCMXO2280C-3FTN324C	CSBGA-132	2280	1.8V/2.5V/3.3V	271	-3	30.20	27.45	25.16
842-MXO2280C4FTN256C	LCMXO2280C-4FTN256C	CSBGA-132	2280	1.8V/2.5V/3.3V	211	-4	26.95	23.45	20.40
842-MXO2280C4FTN324C	LCMXO2280C-4FTN324C	FTBGA-324	2280	1.8V/2.5V/3.3V	271	-4	30.25	26.35	22.90
842-MXO2280C3TN100C	LCMXO2280C-3TN100C	TQFP-100	2280	1.8V/2.5V/3.3V	73	-3	21.30	19.36	17.75
842-CMXO2280C3TN100I	LCMXO2280C-3TN100I	TQFP-100	2280	1.8V/2.5V/3.3V	73	-3	23.40	21.27	19.50
842-MXO2280C3TN144C	LCMXO2280C-3TN144C	TQFP-144	2280	1.8V/2.5V/3.3V	73	-3	23.10	21.00	19.25
842-CMXO2280C4TN144C	LCMXO2280C-4TN144C	TQFP-144	2280	1.8V/2.5V/3.3V	113	-4	24.95	21.75	18.90
842-MXO2280C5FTN324C	LCMXO2280C-5FTN324C	ftBGA-324	2280	1.8V/2.5V/3.3V	271	-5	34.70	31.54	28.91
842-LCMXO256C3MN100C	LCMXO256C-3MN100C	CSBGA-100	256	1.8V/2.5V/3.3V	78	-3	7.20	6.54	6.00
842-MXO256C3TN100C	LCMXO256C-3TN100C	TQFP-100	256	1.8V/2.5V/3.3V	78	-3	6.70	6.09	5.58
842-MXO256C3TN100I	LCMXO256C-3TN100I	TQFP-100	256	1.8V/2.5V/3.3V	78	-3	6.00	5.25	4.81
842-LCMXO256C4TN100C	LCMXO256C-4TN100C	TQFP-100	256	1.8V/2.5V/3.3V	78	-4	6.00	5.25	4.81
842-LCMXO256C4TN100I	LCMXO256C-4TN100I	TQFP-100	256	1.8V/2.5V/3.3V	78	-4	8.90	8.09	7.41
842-MXO256C5TN100C	LCMXO256C-5TN100C	TQFP-100	256	1.8V/2.5V/3.3V	78	-5	8.90	8.09	7.41
842-LCMXO640C3MN100C	LCMXO640C-3MN100C	CSBGA-100	640	1.8V/2.5V/3.3V	74	-3	12.40	11.27	10.33
842-CMXO640C4FTN256C	LCMXO640C-4FTN256C	FTBGA-256	640	1.8V/2.5V/3.3V	159	-4	13.95	12.15	11.18
842-CMXO640C3FTN256I	LCMXO640C-3FTN256I	ftBGA-256	640	1.8V/2.5V/3.3V	159	-3	13.95	12.15	11.18
842-MXO640C3TN100C	LCMXO640C-3TN100C	TQFP-100	640	1.8V/2.5V/3.3V	74	-3	11.90	10.81	9.91
842-MXO640C3TN100I	LCMXO640C-3TN100I	TQFP-100	640	1.8V/2.5V/3.3V	73	-3	13.70	12.45	11.41
842-MXO640C3TN144C	LCMXO640C-3TN144C	TQFP-100	640	1.8V/2.5V/3.3V	113	-3	13.60	12.36	11.33
842-MXO640C3TN144I	LCMXO640C-3TN144I	TQFP-100	640	1.8V/2.5V/3.3V	113	-3	11.95	10.40	9.62
842-MXO640C4MN132C	LCMXO640C-4MN132C	csBGA-132	640	1.8V/2.5V/3.3V	101	-4	11.30	9.85	9.06
842-LCMXO4TN144C	LCMXO640C-4TN144C	TQFP-144	640	1.8V/2.5V/3.3V	113	-4	11.95	10.40	9.62
842-MXO640C5TN144C	LCMXO640C-5TN144C	TQFP-144	640	1.8V/2.5V/3.3V	113	-5	20.88	18.98	17.40

## LATTICE ISPCLOCKS

For quantities greater than listed, call for quote.

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	4.30	4.00	3.75
842-CLK5610AV01TN48C	ispPAC-CLK5610AV-01TN48C	TQFP-48	10	3.3	Commercial	7.58	6.80	6.62
842-CLK5610AV01TN48I	ispPAC-CLK5610AV-01TN48I	TQFP-48	10	3.3	Industrial	9.15	8.55	8.00
842-LK5620AV01TN100C	ispPAC-CLK5620AV-01TN100C	TQFP-100	20	3.3	Commercial	14.30	13.00	11.91
842-C5620V01TN100C	ISPPAC-CLK5620V-01TN100C	TQFP-100	20	3.3	Commercial	31.00	28.18	25.83
842-LK5620AV01TN100I	ispPAC-CLK5620AV-01TN100I	TQFP-100	20	3.3	Commercial	17.20	15.63	14.33

## LATTICE COMPLEX PROGRAMMABLE LOGIC DEVICES (CPLDs)

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Lattice Part No.	Package	Voltage (V)	Tpd (ns)	I/O	Macro Cells	Price Each		
							1	25	100
842-LC4032V10TN48I	LC4032V-10TN48I	TQFP-48	3.3	10.0	48	32	1.79	1.60	1.56
842-LC4032V25TN44C	LC4032V-25TN44C	TQFP-44	3.3	2.5	44	32	4.80	4.36	4.00
842-LC4032V-5TN48C	LC4032V-5TN48C	TQFP-48	3.3	5.0	48	32	3.90	3.54	3.25
842-LC4032V-5TN48I	LC4032V-5TN48I	TQFP-48	3.3	5.0	48	32	5.30	4.81	4.41
842-LC4032V75TN44C	LC4032V-75TN44C	TQFP-44	3.3	7.5	44	32	1.43	1.30	1.25
842-LC4032V75TN48C	LC4032V-75TN48C	TQFP-48	3.3	7.5	48	32	1.79	1.60	1.56
842-LC4032ZE-7MN64I	LC4032ZE-7MN64I	TQFP-64	1.8	7.0	64	32	1.65	1.35	1.31
842-LC4032ZE-7TN48C	LC4032ZE-7TN48C	TQFP-48	1.8	7.0	48	32	1.68	1.52	1.40
842-LC4032V75TN44I	LC4032V-75TN44I	TQFP-44	3.3	2.5	208	32	3.50	3.18	2.91
842-LC4032V10TN44I	LC4032V-10TN44I	TQFP-44	3.3	2.5	128	32	1.43	1.30	1.25
842-LC4032V75TN48I	LC4032V-75TN48I	TQFP-48	3.3	2.5	208	32	3.90	3.54	3.25
842-4032ZC75TN48C	LC4032ZC-75TN48C	TQFP-48	1.8	7.5	208	32	2.00	1.81	1.66
842-4064V25TN100C	LC4064V-25TN100C	TQFP-100	3.3	2.5	272	64	13.00	11.81	10.83
842-LC4064V5TN100C	LC4064V-5TN100C	TQFP-100	3.3	2.5	304	64	9.30	8.45	7.75
842-4064C10TN100I	LC4064C-10TN100I	TQFP-100	1.8	10.0	100	64	4.90	4.45	4.08