

Programmable Logic Devices - continued

Mfr.	Pins	Pkg	Description	P'gation Delay (ns)max	Supply Current (mA)max	Mftrs. List No.	Order Code	Price Each		
								1+	10+	100+
16V8	LAT	20	DIL CMOS EEPLD - 16 i/p, 8 prog. o/p Logic Macrocells	25	90	GAL16V8D25LPN	969-9961	181.00	145.00	124.00
16V8	LAT	20	PLCC CMOS EEPLD, Quarter Power, 16 i/p, 8 prog., o/p Logic Macrocells	25	55	GAL16V8D-25QJN	969-9775	95.00	72.00	65.00
16V8	LAT	20	DIL CMOS EEPLD, Quarter Power, 16 i/p, 8 prog., o/p Logic Macrocells	25	55	GAL16V8D-25QPN	969-9767	95.00	72.00	68.00
16V8	LAT	20	DIL GAL16V8 compatible CMOS, Zero Standby Power, Erasable PLD	15	100	GAL16V8Z-15QP	271-652	400.00	294.00	249.00
18V10	LAT	20	DIL CMOS EEPLD - 18 i/p, 10 prog. o/p Logic Macrocells	20	115	GAL18V10B-20LP	703-540	267.00	199.00	182.00
18CV8	ICT	20	DIL CMOS EEPLD - 18 i/p, 8 prog. o/p Logic Macrocells	15	45	PEEL18CV8P15	120-9621	301.00	237.00	190.00
18CV8	ICT	20	DIL CMOS EEPLD - 18 i/p, 8 prog. o/p Logic Macrocells	25	37	PEEL18CV8P25	120-9622	269.00	212.00	167.00
18CV8	ICT	20	SOIC CMOS EEPLD - 18 i/p, 8 prog. o/p Logic Macrocells	25	37	PEEL18CV8J25	120-9625	269.00	212.00	167.00
20RA10	LAT	24	DIL CMOS EEPLD, High Speed Asynchronous, 20 i/p, 8 prog. o/p Logic Macrocells	15	100	GAL20RA10B-15LP	332-7413	652.00	463.00	448.00
20RA10	LAT	24	DIL CMOS EEPLD, High Speed Asynchronous, 20 i/p, 8 prog. o/p Logic Macrocells	20	100	GAL20RA10B-20LP	332-7425	473.00	373.00	--
20V8	LAT	24	DIL CMOS EEPLD, 20 i/p, 8 prog. o/p Logic Macrocells, Quarter Power	25	55	GAL20V8B-25QP	332-7462	118.00	94.00	84.00

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Mfr.	Pins	Pkg	Description	P'gation Delay (ns) max.	Supply Current (mA) max.	Mftrs. List No.	Order Code	Price Each		
								1+	10+	100+
20V8	LAT	28	PLCC CMOS EEPLD, 20 i/p, 8 prog. o/p Logic Macrocells	15	90	GAL20V8B-15LJN	110-1465	114.00	94.00	80.00
20V8	LAT	28	PLCC CMOS EEPLD (PLCC Package)	25	90	GAL20V8B-25LJ	563-419	192.00	129.00	109.00
20V8	LAT	28	PLCC CMOS EEPLD	25	90	GAL20V8B-25LJN	110-1469	192.00	129.00	109.00
20V8	LAT	24	DIL CMOS EEPLD - 20 i/p 8 prog. o/p Logic Macrocells	25	90	GAL20V8B-25LP	445-381	184.00	120.00	98.00
20V8	LAT	24	DIL CMOS EEPLD, 20 i/p, 8 prog. o/p Logic Macrocells, Quarter Power	25	55	GAL20V8B-25QP	332-7462	118.00	94.00	84.00
20V8	LAT	24	DIL GAL20V8 compatible CMOS, Zero Standby Power, ErasablePLD	15	100	GAL20V8Z-15QP	271-664	664.00	458.00	390.00
20V8	LAT	24	DIL CMOS EEPLD, 20 i/p, 8 prog. o/p Logic Macrocells, Quarter Power	25	55	GAL20V8B-25QP	332-7462	118.00	94.00	84.00
22CV10	ICT	24	DIL CMOS EEPLD - 22 i/p, 10 prog. o/p Logic Macrocells	15	135	PEEL22CV10AP15	120-9623	606.00	482.00	386.00
22CV10	ICT	24	DIL CMOS EEPLD - 22 i/p, 10 prog. o/p Logic Macrocells	25	67	PEEL22CV10AP25	120-9624	509.00	405.00	323.00
22CV10	ICT	28	PLCC CMOS EEPLD - 22 i/p, 10 prog. o/p Logic Macrocells	15	135	PEEL22CV10AJ15	120-9626	533.00	355.00	305.00
22CV10	ICT	28	PLCC CMOS EEPLD - 22 i/p, 10 prog. o/p Logic Macrocells	25	67	PEEL22CV10AJ25	120-9627	513.00	387.00	333.00
22CV10	ICT	24	DIL CMOS EEPLD - 22 i/p, 10 prog. o/p Logic Macrocells	10	135	PEEL22CV10AP10	120-9628	792.00	606.00	521.00
22LV10	LAT	28	PLCC CMOS EEPLD, Low Voltage, 5V tolerant, 22 i/p, 10 prog. o/p Logic Macrocells	7.5	75	GAL22LV10C-7LJ	413-9963	383.00	308.00	278.00
22V10	LAT	28	PLCC CMOS In-System Programmable EEPLD, Low Power, 22 i/p, 10 prog., o/p Logic Macrocells	10	140	ISPGAL22V10C-10LJ	413-9926	378.00	287.00	274.00
22V10	LAT	28	PLCC CMOS In-System Programmable EEPLD, Low Power, 22 i/p, 10 prog., o/p Logic Macrocells (PLCC Package)	10	140mA	ISPGAL22V10C-10LJN	110-1467	378.00	287.00	258.00
22V10	LAT	28	PLCC CMOS In-System Programmable EEPLD, Low Power, 22 i/p, 10 prog., o/p Logic Macrocells	15	140	ISPGAL22V10C-15LJ	413-9914	334.00	269.00	242.00
22V10	LAT	28	PLCC CMOS In-System Programmable EEPLD, Low Power, 22 i/p, 10 prog., o/p Logic Macrocells (PLCC Package)	15	140	ISPGAL22V10C-15LJN	110-1466	334.00	253.00	228.00
22V10	LAT	28	PLCC CMOS EEPLD, Low Power, 22 i/p, 10 prog., o/p Logic Macrocells	7.5	140	GAL22V10D-7LJN	969-9805	694.00	525.00	474.00
22V10	LAT	28	PLCC CMOS EEPLD, Low Power, 22 i/p, 10 prog., o/p Logic Macrocells	10	130	GAL22V10D-10LJN	969-9791	378.00	287.00	258.00
22V10	LAT	28	PLCC CMOS EEPLD, Quarter Power, 22 i/p, 10 prog., o/p Logic Macrocells	10	55	GAL22V10D-10QJN	969-9864	598.00	452.00	434.00
22V10	LAT	24	DIL CMOS EEPLD, Quarter Power, 22 i/p, 10 prog., o/p Logic Macrocells	10	55	GAL22V10D-10QPN	969-9848	598.00	452.00	430.00
22V10	LAT	28	PLCC CMOS EEPLD	15	130	GAL22V10D-15LJN	969-9635	518.00	395.00	367.00
22V10	LAT	24	DIL CMOS EEPLD - 22 i/p, 10 prog. o/p Logic Macrocells	15	130	GAL22V10D-15LPN	969-9643	518.00	395.00	371.00
22V10	LAT	28	PLCC CMOS EEPLD, Quarter Power, 22 i/p, 10 prog., o/p Logic Macrocells	15	55	GAL22V10D-15QJN	969-9830	410.00	310.00	295.00
22V10	LAT	24	DIL CMOS EEPLD, Quarter Power, 22 i/p, 10 prog., o/p Logic Macrocells	15	55	GAL22V10D-15QPN	969-9821	410.00	310.00	295.00
22V10	LAT	24	DIL CMOS EEPLD - 22 i/p, 10 prog. o/p Logic Macrocells	25	130	GAL22V10D-25LPN	969-9651	418.00	302.00	264.00
22V10	LAT	28	PLCC CMOS EEPLD, Quarter Power, 22 i/p, 10 prog., o/p Logic Macrocells	25	55	GAL22V10D-25QJN	969-9813	282.00	213.00	205.00
22V10	LAT	24	DIL CMOS EEPLD - 22 i/p, 10 prog. o/p Logic Macrocells	25	55	GAL22V10D-25QP	116-786	412.00	292.00	253.00
22V10	LAT	24	DIL CMOS EEPLD - 22 i/p, 10 prog. o/p Logic Macrocells	25	55	GAL22V10D-25QPN	969-9660	412.00	292.00	253.00
22V10	LAT	28	SSOP CMOS EEPLD, In-circuit Programmable, 22 i/p, 10 prog. o/p Logic Macrocells	15	140	ISPGAL22V10C15LK	332-7670	370.00	258.00	247.00

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Semiconductors - Integrated Circuits

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Ultra37000 CPLD Family



The Ultra37000<sup>™</sup> family of CMOS CPLDs provides a range of high-density programmable logic solutions with excellent system performance. The architecture is based on a number of logic blocks that are connected by a Programmable Interconnect Matrix (PIM). Each logic block features its own product term array, product term allocator, and 16 macrocells. The PIM distributes signals from the logic block outputs and all input pins to the logic block inputs.



Device	Macrocells	Gate Equivalents	I/O Pins	Vcc	Speed (ns)	Supply Current (mA)	Pins/Package	Mftrs. List No.	Order Code	Price Each		
								1+	10+	100+		
37064	64	2000	69	5	6	10	100 TQFP	CY37064P100-125AXC	891-1347	691.00	587.00	492.00
37064	64	2000	37	5	6	10	44 TQFP	CY37064P44-125AXC	891-1355	471.00	400.00	335.00
37128	128	3800	69	5	6.5	10	100 TQFP	CY37128P100-100AXC	891-1363	1,091.00	835.00	744.00
37128	128	3800	133	5	6.5	10	160 TQFP	CY37128P160-100AXC	891-1371	1,344.00	1,028.00	863.00

XC9500 ISP Programmable CPLDs

XILINX

The XC9500 CPLD family provides advanced in-system programming and test capabilities for high performance, general purpose logic integration. All devices are in-system programmable for a minimum of 10,000 program/erase cycles. Extensive IEEE 1149.1 (JTAG) boundary-scan support is also included on all family members.

- High-performance, Fmax to 125MHz (5V devices) and 200MHz (XL - 3.3V devices)
- In-system programmable via JTAG Interface
- Endurance of 10,000 program/erase cycles with 20 year data retention
- Program/erase over full commercial voltage and temperature range
- Enhanced pin-locking architecture
- Global and product term clocks, output enables, set and reset signals
- Extensive IEEE Std 1149.1 boundary-scan (JTAG) support
- Programmable power reduction mode in each macrocell
- Individual output enable per output pin with local inversion
- Slew rate control on individual outputs
- User programmable ground pin capability
- Extended pattern security features for design protection
- High-drive 24 mA outputs
- 3.3 V or 5 V I/O capability
- Excellent quality and reliability