

Programmable Logic Devices — continued



SEM158

MACH - Macro Array CMOS High-Density



MACH 1 and 2

| Mftrs. List No. | Macrocell | Gate Equivalents | Max. Inputs | Max. Outputs | Max. Flip-Flops | Speed (ns) | Pins/Package |
|-----------------|-----------|------------------|-------------|--------------|-----------------|------------|--------------|
| MACH110-15JC | 32 | 900 | 38 | 32 | 32 | 15 | 44 PLCC |
| MACH111-10JC | 32 | 900 | 38 | 32 | 32 | 10 | 44 PLCC |
| MACH111-15JC | 32 | 900 | 38 | 32 | 32 | 15 | 44 PLCC |
| MACH111SP-10JC | 32 | 900 | 38 | 32 | 32 | 10 | 44 PLCC |
| MACH111SP-15JC | 32 | 900 | 38 | 32 | 32 | 15 | 44 PLCC |
| MACH111SP-15VC | 32 | 900 | 38 | 32 | 32 | 10 | 44 TQFP |
| MACH120-15JC | 48 | 1200 | 56 | 48 | 48 | 15 | 68 PLCC |
| MACH130-15JC | 64 | 1800 | 70 | 64 | 64 | 15 | 84 PLCC |
| MACH131-10JC | 64 | 1800 | 70 | 64 | 64 | 10 | 84 PLCC |
| MACH131-15JC | 64 | 1800 | 70 | 64 | 64 | 15 | 84 PLCC |
| MACH131SP-15VC | 64 | 1800 | 70 | 64 | 64 | 10 | 84 TQFP |
| MACH210-12JC | 64 | 1800 | 38 | 32 | 64 | 12 | 44 PLCC |
| MACH210-15JC | 64 | 1800 | 38 | 32 | 64 | 15 | 44 PLCC |
| MACH211-10JC | 64 | 1800 | 38 | 32 | 64 | 10 | 44 PLCC |
| MACH211-15JC | 64 | 1800 | 38 | 32 | 64 | 10 | 44 PLCC |
| MACH211SP-10JC | 64 | 1800 | 38 | 32 | 64 | 10 | 44 PLCC |
| MACH211SP-15JC | 64 | 1800 | 38 | 32 | 64 | 15 | 44 PLCC |
| MACH211SP-15VC | 64 | 1800 | 38 | 32 | 64 | 10 | 44 TQFP |
| MACH221-10JC | 96 | 2400 | 56 | 48 | 96 | 10 | 68 PLCC |
| MACH221-15JC | 96 | 2400 | 56 | 48 | 96 | 15 | 68 PLCC |
| MACH221SP-15JC | 96 | 2400 | 56 | 48 | 96 | 15 | 68 PLCC |
| MACH230-15JC | 128 | 3600 | 70 | 64 | 128 | 15 | 84 PLCC |
| MACH230-20JC | 128 | 3600 | 70 | 64 | 128 | 20 | 84 PLCC |
| MACH231-10JC1 | 128 | 3600 | 70 | 64 | 128 | 10 | 84 PLCC |
| MACH231-15JC1 | 128 | 3600 | 70 | 64 | 128 | 15 | 84 PLCC |
| MACH231SP-15VC | 128 | 3600 | 70 | 64 | 128 | 15 | 84 TQFP |

| Order Code | Price Each | | |
|------------|------------|-----|------|
| | 1+ | 10+ | 100+ |
| 459-689 | | | |
| 675-088 | | | |
| 675-076 | | | |
| 300-9828 | | | |
| 675-090 | | | |
| 675-106 | | | |
| 300-9774 | | | |
| 703-485 | | | |
| 300-9865 | | | |
| 675-945 | | | |
| 675-957 | | | |
| 703-503 | | | |
| 459-707 | | | |
| 675-404 | | | |
| 675-398 | | | |
| 300-9853 | | | |
| 675-416 | | | |
| 675-647 | | | |
| 300-9889 | | | |
| 300-9877 | | | |
| 675-969 | | | |
| 300-9798 | | | |
| 703-497 | | | |
| 300-9968 | | | |
| 300-9920 | | | |
| 675-970 | | | |

MACH 4

| Mftrs. List No. | Macrocell | Gate Equivalents | I/Os | Flip-Flops | Speed (ns) | Pins/Package |
|------------------|-----------|------------------|------|------------|------------|--------------|
| M4-32/32-10JC | 32 | 1250 | 32 | 32 | 10 | 44 PLCC |
| M4-32/32-15JC | 32 | 1250 | 32 | 32 | 15 | 44 PLCC |
| M4A5-32/32-10JC | 32 | - | 32 | - | 15 | 44 PLCC |
| M4-64/32-10JC | 64 | 2500 | 32 | 96 | 10 | 44 PLCC |
| M4-64/32-15JC | 64 | 2500 | 32 | 96 | 15 | 44 PLCC |
| M4A5-64/32-10JC | 64 | - | 32 | - | 15 | 44 PLCC |
| M4-128N/64-10JC | 128 | 5000 | 64 | 192 | 10 | 84 PLCC |
| M4-128N/64-15JC | 128 | 5000 | 64 | 192 | 15 | 84 PLCC |
| M4A5-128/64-10YC | 128 | 5000 | 64 | 192 | 10 | 100 PQFP |
| M4-128/64-15YC | 128 | 5000 | 64 | 192 | 15 | 100 PQFP |

| Order Code | Price Each | | |
|---------------------|------------|-----|------|
| | 1+ | 10+ | 100+ |
| 301-0016 | | | |
| 300-9993 | | | |
| NEW 354-7942 | | | |
| 301-0065 | | | |
| 301-0030 | | | |
| NEW 354-7954 | | | |
| 301-0090 | | | |
| 301-0089 | | | |
| 301-0119 | | | |
| 301-0107 | | | |

N in the above MACH-4 part numbers signify non-ISP devices.

MAX7000s

These devices are ideal for system-level integration, featuring ISP, six output enable signals, two global clocks, fast input registers and programmable slew-rate control. ISP uses JTAG, allowing for devices to be programmed and the design board functionally tested, saving on manufacturing steps and on testing times.

The PL Byteblaster programming cable and the PLS-WEB CD-ROM is all that is required for prototyping.



SEM731

| Mftrs. List No. | Macrocells | I/O pins | Speed (ns) | Pins/Package |
|------------------|------------|----------|------------|--------------|
| EPM7032SLC44-6 | 32 | 36 | 6 | 44 PLCC |
| EPM7032SLC44-10 | 32 | 36 | 10 | 44 PLCC |
| EPM7032STC44-6 | 32 | 36 | 6 | 44 TQFP |
| EPM7032STC44-10 | 32 | 36 | 10 | 44 TQFP |
| EPM7064SLC44-6 | 64 | 36 | 6 | 44 PLCC |
| EPM7064SLC44-10 | 64 | 36 | 10 | 44 PLCC |
| EPM7064STC44-6 | 64 | 36 | 6 | 44 TQFP |
| EPM7064STC44-10 | 64 | 36 | 10 | 44 TQFP |
| EPM7128SLC84-10 | 128 | 36 | 10 | 84 PLCC |
| EPM7128SLC84-15 | 128 | 36 | 15 | 84 PLCC |
| EPM7128STC100-10 | 128 | 36 | 10 | 100 TQFP |
| EPM7128STC100-15 | 128 | 36 | 15 | 100 TQFP |

| Order Code | Price Each | | |
|------------|------------|-----|------|
| | 1+ | 10+ | 100+ |
| 300-5811 | | | |
| 300-5800 | | | |
| 300-5847 | | | |
| 300-5823 | | | |
| 300-5872 | | | |
| 300-5860 | | | |
| 300-5951 | | | |
| 300-5914 | | | |
| 300-5975 | | | |
| 300-5963 | | | |
| 300-5999 | | | |
| 300-5987 | | | |

PL-Byteblaster programming cable.....Order Code 302-6530 each
 PLS-WEB CD-ROM development software, includes data and application notes ..Order Code 301-0193 each

FLEX 6000

These SRAM based PLDs feature the industry's most efficient architecture offering a flexible and cost-effective alternative to ASICs for production.



SEM737

| Mftrs. List No. | Gates | Flip-Flops | Logic Elements | Operating Voltage | Pins/Package |
|-----------------|-------|------------|----------------|-------------------|--------------|
| EPF6010ATC100-3 | 10k | 800 | 800 | 3.3V | 100 TQFP |
| EPF6016ATC100-3 | 16k | 1320 | 1320 | 3.3V | 100 TQFP |

| Order Code | Price Each | | |
|------------|------------|-----|------|
| | 1+ | 10+ | 100+ |
| 300-6037 | | | |
| 300-6049 | | | |