

## 80186/80C186 Embedded Processor Family

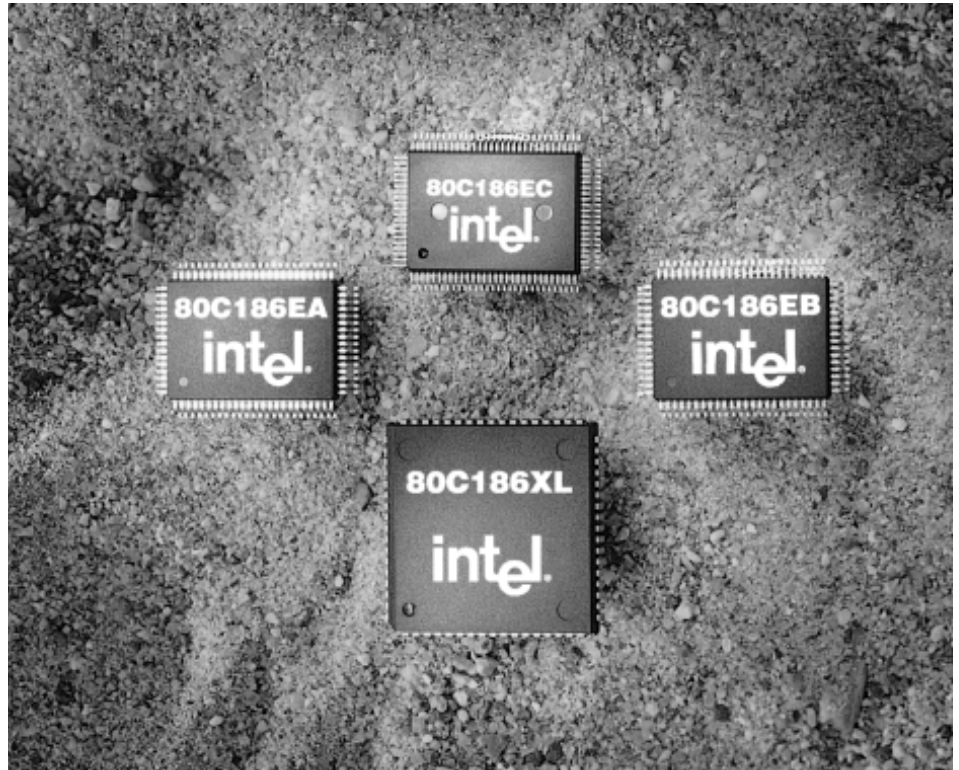
- 16-Bit CPU (Operating Up to 25 MHz)
- 8086 Instruction Set
- 1 Mbyte Addressing
- On-Chip Peripherals: Timers/Counters, DMA Interrupt Controller, Serial Ports, etc.
- Power Management Unit
- 3 Volt Versions (Operating Up to 16 MHz)
- High Performance
- Use PC For Easy Development/ Debug
- Large Address Space
- High Integration Enables Low Cost and Low Chip Count Designs
- Efficient Power Consumption
- Enables Portable, Battery Designs

### Target Applications

- Hard Disk Drives (<1G byte)
- Modems/Fax Boards - Multiplexers
- Portable, Hand-held Terminals
- PBXs

### Product Family

80C186XL	80C188XL
80C186EA	80C188EA
80C186EB	80C188EB
80C186EC	80C188EC
80L186EA	80L188EA
80L186EB	80L188EB
80L186EC	80L188EC



### CONTACT:

Local Intel Sales Office

WWW: <http://www.intel.com/embedded/>

Product	Speed (MHz)	I/O Pins	Serial Ports	Timers/ Counters	Static Design	Sys. Mgt. Mode	A20 Gate	Addr. Space	DMA Channels	WDT
<b>Intel 186 Standard Product Family</b>										
80186/80188	8, 10	0	NO	3	NO	NO	NO	1M	2	NO
80C186XL/188XL	12, 20, 25	0	NO	3	YES	NO	NO	1M	2	NO
80C186XL/188XL	25	0	NO	3	YES	NO	NO	1M	2	NO
<b>Intel 186 Enhanced Product Family</b>										
80C186EA/188EA	13, 20	0	NO	3	YES	NO	NO	1M	2	NO
80C186EA/188EA	25	0	NO	3	YES	NO	NO	1M	2	NO
80L186EA/188EA	8,13	0	NO	3	YES	NO	NO	1M	2	NO
80C186EB/188EB	13, 20, 25	16	2	3	YES	NO	NO	1M	0	NO
80C186EB/188EB	25	16	2	3	YES	NO	NO	1M	0	NO
80L186EB/188EB	16	16	2	3	YES	NO	NO	1M	0	NO
80L186EB/188EB	8, 13, 16	16	2	3	YES	NO	NO	1M	0	NO
80C186EC/188EC	13, 20, 25	22	2	3	YES	NO	NO	1M	4	YES
80C186EC/188EC	25	2	2	3	YES	NO	NO	1M	4	YES
80L186EC/188EC	13	22	2	3	YES	NO	NO	1M	4	YES

Product	Clock Generators	Pwr. Options	Chip Select	Interrupt Controllers	DRAM Refresh	Input Levels	Voltage	Package	Temperature
<b>Intel 186 Standard Product Family (continued)</b>									
80186/80188	YES	NO	13	YES	NO	TTL	5.0V	A68, N68, R	C, E, M
80C186XL/188XL	YES	PS	13	YES	YES	TTL	5.0V	A68, N68, R, S80, SB80	C, E, M
80C186XL/188XL	YES	PS	13	YES	YES	TTL	5.0V	A68, N68, R, S80, SB80	C, E, M
<b>Intel 186 Enhanced Product Family (continued)</b>									
80C186EA/188EA	YES	PS, PD, I	13	YES	YES	CMOS	5.0V	N68, S80, SB80	E
80C186EA/188EA	YES	PS, PD, I	13	YES	YES	CMOS	5.0V	N68, S80, SB80	C
80L186EA/188EA	YES	PS, PD, I	13	YES	YES	CMOS	5.0V	N68, S80, SB80	E
80C186EB/188EB	YES	PD, I	0	YES	YES	CMOS	5.0V	N84, S80, SB80	E, M
80C186EB/188EB	YES	PD, I	10	YES	YES	CMOS	5.0V	N84, S80, SB80	C
80L186EB/188EB	YES	PD, I	10	YES	YES	CMOS	5.0V	N84, S80, SB80	C
80L186EB/188EB	YES	PD, I	10	YES	YES	CMOS	5.0V	N84, S80, SB80	E
80C186EC/188EC	YES	PS, PD, I	10	YES (8259A)	YES	CMOS	5.0V	KU100, S100, SB100	E
80C186EC/188EC	YES	PS, PD, I	10	YES (8259A)	YES	CMOS	5.0V	KU100, S100, SB100	C
80L186EC/188EC	YES	PS, PD, I	10	YES (8259A)	YES	CMOS	5.0V	KU100, S100, SB100	E

**PACKAGING:**

A = 132ld, 68ld (186) Ceramic Pin Grid Array (PGA)  
 FA = 144ld Plastic Quad Flatpack (PQFP)  
 KD = 100ld Plastic Quad Flatpack (PQFP)  
 KU = 132ld, 100ld (186) Plastic Quad Flatpack (PQFP)  
 NG = 100ld (SX), 132ld (DX) Plastic Quad Flatpack (PQFP)  
 R = 68ld Ceramic Leadless Chip Carrier (LCC)  
 N = 68ld, 84ld (EB) Plastic Leaded Chip Carrier (PLCC)  
 S = 80ld, 100ld (EC) Quad Flatpack (QFP-EIAJ)  
 SB = 80ld, 100ld (EC) Shrink Quad Flatpack (SQFP-EIAJ)  
 X = SmartDie™ Products

\* For further information, please call 1 (800) 548-4725 and ask to receive the SmartDie Product Literature Kit No. G1B03. Intel SmartDie Products are functionally equivalent die-level silicon versions of standard Intel products. All SmartDie products are tested to meet commercial specifications to ensure the same quality and reliability levels of packaged products. SmartDie Products offer the user a cost effective packaging alternative for those demanding small form factor applications.

**POWER OPTIONS**

PD = Power Down  
 PS = Power Save  
 I = Idle

**TEMPERATURE RANGES:** (Degrees Centigrade)

C = Commercial (0 - 70)  
 E = Extended (-40 - 85)  
 M = Military (-55 - 125)

\* Intel's Military and Special Products offer industrial-strength semiconductors optimized for wide temperature ranges. Intel Architecture 80C186/80C186 Embedded Processors