Product Brief...

PIC®7000 Series

The Microchip Technology, Inc. PIC®7000 series is a powerful line of 8-bit microcontrollers with a memory-mapped architecture. Each PIC7000-series device contains 128 bytes of RAM, ROM (except the 7000 and 7001 devices), a microprogrammable CPU, and 32 reconfigurable I/O lines. A serial I/O port and a baud-rate generator are provided on the PIC7001 and PIC7041 versions for telecommunications applications. The 32 I/O lines can be used as individual control lines in what is called the single-chip mode, or they can be converted to various address and data bus configuration modes for interfacing peripheral devices or external memories. Up to 64K bytes of external address space are supported.

The PIC7000 series, with its 61-command microprogrammable instruction set, its on-chip ROM options, and its I/O configurations, will meet the needs of the most demanding applications. The entire series is specifically designed to allow customers to easily vary their products in response to market demand.

8-BIT MICROCONTROLLER FEATURES:

- Pin-for-pin compatible with the Texas Instruments TMS7000 series microcontrollers
- 8-bit instruction data word
- Microprocessor and/or emulator — PIC7000
- 2048 bytes of on-chip ROM — PIC7020
- 4096 bytes of on-chip ROM — PIC7040
- External memory expansion capability
- 128 memory-mapped registers
- Full-feature data/program stack
- Two external mask-programmable interrupts
- On-chip 13-bit timer/event counter with interrupt and capture latch
- 32 bits general purpose input/output
- 5V power supply
- TTL-compatible I/O pins
- Single instruction BCD add and subtract
- Microprogrammable instruction set

Features	Family Members				
	7000	7020	7040	7001	7041
On-Chip ROM (Bytes)	None	2K	4K	None	4K
On-Chip RAM (Bytes)	128	128	128	128	128
Interrupt Levels	4	4	4	6	6
General-Purpose Internal Registers	128	128	128	128	128
Timers	13-Bit	13-Bit	13-Bit	13-Bit (Two)	13-Bit (Two)
I/O Lines:					
Bi-Directional	16	16	16	22	22
Input Only	8	8	8	2	2
Output Only	8	8	8	8	8
Additional I/O	—	—	—	Serial Port	Serial Port
Process Technology	NMOS	NMOS	NMOS	NMOS	NMOS

Microchip

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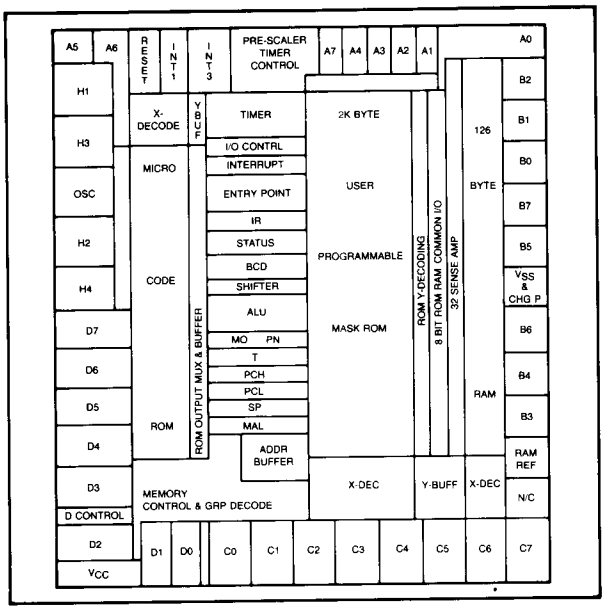
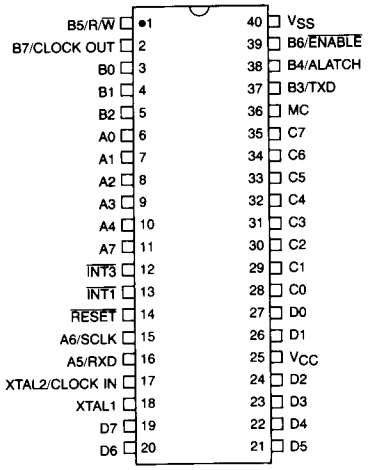
BLOCK DIAGRAM:



PIN CONFIGURATION:

40 Lead Dual In Line

Top View



PIN FUNCTIONS:

Signal	Function	Signal	Function	Signal	Function
A0–A7	I/O Port A: Input lines	$\overline{INT1}$	Mask programmable interrupt	XTAL1	Crystal input for control of internal OSC, leave open for external OSC
B0–B7	I/O Port B: Output lines	$\overline{INT3}$	Mask programmable interrupt		
C0–C7	I/O Port C: General purpose bidirectional lines	$\overline{RESET}$	$\overline{RESET}$	V_{CC}	Supply voltage (5V)
		MC	Memory Control	V_{SS}	Ground reference
D0–D7	I/O Port D: General purpose bidirectional lines (specific)	XTAL2/ CLKIN	Crystal input for control of internal OSC, input pin for external OSC or LRC networks		

ORDERING INFORMATION:

Order forms for all Microchip Technology, Inc. PIC7000 series devices are available from your nearest Microchip Technology sales office (listed below). This form, plus two identically coded EPROMs (2716 or 2732) should be returned to the sales office with your completed prototype order.

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Sales Offices USA: CA, 818-789-0952 or 408-496-0844; **IL,** 312-981-0040; **MA,** 617-272-8030; **NJ,** 201-254-5024; **TX,** 214-934-1654; **EUROPE: London,** Ruislip, (08956), 36141; **Milano,** (2) 498 73 62; **Muenchen,** (089) 95997-46; **Paris,** (1) 43-74-9134; **ASIA: Hong Kong,** (3) 722-6577; **Osaka,** (06) 375-0606; **Seoul,** (2) 739-8543; **Singapore,** (65) 344-4711; **Taipei,** (2) 914-6234; **Tokyo,** (03) 437-0281

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