



## PL/M<sup>TM</sup>. HIGH LEVEL PROGRAMMING LANGUAGE MCS-8 AND MCS-80 CROSS COMPILERS

**Reduces Program Development  
Time and Cost**

**Improves Product Reliability  
and Eases Maintenance**

**Available for 8008 and 8080**

**Comprehensive User Documentation**

**Hexadecimal or BNPf Object  
Code Formats**

**Written in ANSI Standard  
FORTRAN IV**

**Instantly Available on Worldwide  
Timesharing Services**

PL/M is a high-level system programming language, specifically designed to ease the programming task for INTEL's 8-bit microcomputers, the 8008 and the 8080. PL/M is a powerful tool, well suited to the requirements of the microcomputer system designer and implementor. The language has been designed to facilitate the use of modern techniques in structured programming. These techniques can lead to rapid system development and checkout, straightforward maintenance and modification, and high product reliability.

The PL/M compilers convert a free-form symbolic PL/M program into an equivalent 8008 or 8080 object program. The compilers themselves take care of all the details of machine or assembly language programming, which permits the programmer to concentrate entirely on effective software design, and the logical requirements of his system.

Output from the PL/M compiler may be loaded directly into the 8008 or 8080 simulator programs for interactive, symbolic debugging or may be punched to paper tape in hex format for loading into an Intellect<sup>®</sup> Microcomputer Development System. It may also be punched in BNPf format to program ROMs.

The PL/M compilers are written in ANSI standard FORTRAN IV and are designed to run on any large-scale computer system with a minimum 32-bit integer format (word size). They are also available for immediate use on several worldwide timesharing systems.



## SPECIFICATIONS:

### OPERATING ENVIRONMENT:

- Required hardware:
  - 32-bit or larger word size
  - 20–25K words of memory, depending on machine
- Required software:
  - ANSI standard FORTRAN IV compiler

### DOCUMENTATION PACKAGE:

- 8008 and 8080 PL/M Programming Manual
- 8008 (or 8080) PL/M Compiler Operator's Manual

### SHIPPING MEDIA:

- Magnetic tape

### TAPE FORMAT:

9-track EBCDIC  
800 BPI 80-byte unblocked records  
Unlabeled

### TAPE CONTENTS:

- PLM Pass 1 (FORTRAN IV Source)
- PLM Pass 2 (FORTRAN IV Source)
- MERGE Source File Editing Program (FORTRAN IV Source)
- Sample Test Program (PL/M Source)

## PL/M PROGRAMMING EXAMPLE:

```
/* BUBBLE SORT DECLARATION */
SORT: PROCEDURE (N) ADDRESS;
/* N = LENGTH OF A
COUNT = NR. OF SWITCHES PERFORMED TO-DATE
SWITCHED = (BOOLEAN) HAVE WE DONE ANY SWITCHING YET ON THIS SCAN? */
DECLARE (N, I, SWITCHED) BYTE,
        (TEMP, COUNT) ADDRESS;
SWITCHED = 1; /* SWITCHED = TRUE MEANS NOT DONE YET */
COUNT = 0;
DO WHILE SWITCHED;
    SWITCHED = 0; /* BEGIN NEXT SCAN OF A */
    DO I = 0 TO N-2;
        IF A(I) > A(I+1) THEN
            DO; /* FOUND A PAIR OUT OF ORDER */
                COUNT = COUNT + 1;
                SWITCHED = 1; /* SET SWITCHED = TRUE */
                TEMP = A(I); /* SWITCH THEM INTO ORDER */
                A(I) = A(I+1);
                A(I+1) = TEMP;
            END;
        END;
    END;
    /* HAVE NOW COMPLETED A SCAN */
END /* WHILE */;
/* HAVE NOW COMPLETED A SCAN WITH NO SWITCHING */
RETURN COUNT;
END SORT;
```

## ORDERING INFORMATION:

Part No.	Description
Z8008-XCO-FTR	8008 PL/M Compiler
Z8080-XCO-FTR	8080 PL/M Compiler

### Also available on the following timesharing services:

Tymshare	U.S., U.K., France
General Electric	U.S., Canada
Honeywell-Bull	Europe, Australia
Dentsu	Japan
United Computing Systems	U.S.
Timesharing Ltd.	U.K., Belgium



**Intel Corporation**  
3065 Bowers Avenue  
Santa Clara, California 95051  
Tel: (408) 246-7501  
TWX: 910-338-0026  
Telex: 34-6372

### WESTERN

1651 East 4th Street  
Suite 228  
Santa Ana, California 92701  
Tel: (714) 835-9642  
TWX: 910-595-1114

### MID-AMERICA

6350 L.B.J. Freeway  
Suite 178  
Dallas, Texas 75240  
Tel: (214) 661-8829  
TWX: 910-860-5487

### GREAT LAKES REGION

8312 North Main Street  
Dayton, Ohio 45415  
Tel: (513) 890-5350  
Telex: 288-004

### EASTERN

187 Billerica Road  
Chelmsford, Massachusetts 01824  
Tel: (617) 861-1136  
TWX: 710-321-0187

### MID-ATLANTIC

520 Pennsylvania Avenue  
Suite 102  
Fort Washington, Pennsylvania 19034  
Tel: (215) 542-9444  
TWX: 510-661-3055

### EUROPE

**Belgium**  
Intel International  
Parc Seni Rue Du Moulin a Papier  
51-Boite-1  
B 11 61 Brussels  
Tel: 649-20-03  
Telex: 24814

### ORIENT

**Japan**  
Intel Japan Corporation  
Kasahara Building  
1-6-10, Uchikanda  
Chiyoda-ku  
Tokyo 101  
Tel: (03) 295-5441  
Telex: 781-28426