



Software Product Description

PRODUCT NAME: PDP-11 BASIC-PLUS-2/VAX, Version 1.0

SPD 25.10.1

DESCRIPTION:

BASIC is a conversational programming language developed at Dartmouth College that uses simple English-like statements and familiar math notations to perform operations.

The BASIC-PLUS-2 language is a superset of Dartmouth BASIC. In addition to the elementary BASIC statements, BASIC-PLUS-2 also features:

- Terminal-format files
- Virtual arrays
- RMS Record I/O
- Extensive string support
- Full matrix package
- Long variable names
- IF..THEN..ELSE
- ON ERROR condition handlers
- Statement modifiers: IF, WHILE, UNLESS, FOR
- User-defined functions
- Multi-statement lines
- Multi-line statements
- Program segmentation: SUB, CALL, CHAIN, COMMON
- External subprograms

BASIC-PLUS-2 uses the full ASCII character set for its alphabet.

The BASIC-PLUS-2 language processor is composed of a compiler and an Object-Time System/Library.

The BASIC-PLUS-2 compiler produces an object module from a source program. The compiler checks each program line for syntax errors and returns an appropriate message if an error is found. The user can then correct the program (if necessary) and compile it. Program compilations result in an object module that can be linked and executed at the operating system command level. BASIC-PLUS-2 provides a traceback mechanism that traces the path of program execution when an error occurs in a function or subroutine.

The BASIC-PLUS-2 Object-Time System/Library contains the following runtime routines:

- Math routines which include library functions and arithmetic routines
- Routines to handle dynamic allocation of string storage and I/O buffers
- Routines to handle input/output operations

- Error handling routines to process errors in arithmetic, I/O and system operations

BASIC-PLUS-2 allows the user to write subprograms and insert them into OTS or user libraries. These subprograms can be written in BASIC-PLUS-2 or in MACRO assembly language, and are accessed by the CALL statement. Furthermore, BASIC-PLUS-2 programs can access any system library routines that utilize the FORTRAN calling sequence.

BASIC-PLUS-2 Record I/O operations are controlled with the Record Management input/output system. It provides sequential, relative, and indexed file organizations. Features also include primary and alternate keys, fixed and variable length records, and record mapping.

MINIMUM HARDWARE REQUIRED:

Any valid VAX/VMS system configuration.

OPTIONAL HARDWARE:

None

PREREQUISITE SOFTWARE:

VAX/VMS Operating System, Version 1 or later.

OPTIONAL SOFTWARE:

None

TRAINING CREDITS:

None

SUPPORT CATEGORY:

A — Software Support will be provided as stated in the Software Support Categories Addendum to this SPD.

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ADDITIONAL SERVICES:

None

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