

# digital

# Software Product Description

**PRODUCT NAME: VAX-11 BASIC, Version 1.0**

**SPD 25.36.0**

## **DESCRIPTION:**

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

VAX-11 BASIC is the native mode BASIC product for VAX/VMS. As such, it is a shareable, reentrant language that takes full advantage of the VAX-11 floating point and character instructions, as well as the VAX/VMS virtual memory system.

In addition to elementary BASIC features, VAX-11 BASIC provides

- Direct execution of unnumbered statements (immediate mode)
- New commands:
  - LOAD
  - EDIT
  - HELP (INQUIRE)
  - RUN
  - SEQUENCE
- RSTS/E BASIC-PLUS to VAX-11 BASIC translator utility necessary for movement of some programs from RSTS/E to VAX/VMS
- Extensive string support
- Matrix handling manipulation capabilities
- Variable names up to 30 characters, including dollar sign (\$), underscore (\_\_\_) and period (.)
- IF..THEN..ELSE structures
- ON ERROR condition handling
- Multiline statements and multistatement lines
- Ability to invoke all VAX/VMS system services as either CALLs or function references
- Full support of the VAX-11 Symbolic Debugger including line and statement numbers
- Explicit data typing:
  - WORD (16 bit integers)
  - LONG (32 bit integers)
  - STRING (character strings)
  - REAL (32 or 64 bit floating point, switch selectable)
  - INTEGER (16 or 32 bit integer, switch selectable)
- EXTERNAL statement to allow access to global variables, functions, and constants
- Program segmentation:
  - SUB and FUNCTION programs
  - CALL statement
  - Ability to invoke external functions
  - Up to 32 actual arguments per call
  - COMMON and MAP statements
  - Recursive CALL/function invocation
- Compatibility with key RSTS/E BASIC PLUS features, including support for:
  - FIELD
  - CVT
  - CHAIN
  - Virtual arrays
  - Selected SYS calls
- Utilities and Facilities:
  - Cross-reference facilities
  - RSTS/E BASIC PLUS to VAX-11 BASIC translator
  - Resequencer utility

VAX-11 BASIC allows use of the full printable ASCII character set.

The VAX-11 BASIC language processor includes an interactive interface with text editing commands and supporting routines provided by the VMS Common Run-Time Library. The BASIC user has the option of traditional compilation with subsequent linker invocation, or the use of a RUN command that causes the program to be placed into execution.

Subprograms and function programs compiled in VAX-11 BASIC can be included by the LOAD command for access when RUN is used.

Subprograms and function programs in other native-mode languages (FORTRAN and COBOL) can be linked with VAX-11 BASIC programs and/or subprograms and invoked by the CALL statement. Similarly, BASIC subprograms and function programs can be invoked by other native-mode languages.

VAX-11 BASIC I/O operations are provided through the record management input/output system, VAX-11 RMS. It provides sequential, relative, indexed, and block I/O, as well as nonfile structured access to any supported device file organizations.

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**MINIMUM HARDWARE REQUIRED:**

Any valid VAX/VMS, Version 2.0 system configuration with a minimum of 512K bytes of memory.

**OPTIONAL HARDWARE:**

FP780 floating point accelerator

**PREREQUISITE SOFTWARE:**

VAX/VMS Operating System, Version 2.0

**OPTIONAL SOFTWARE:**

None

**TRAINING**

A computer-aided instruction course on BASIC language programming is available from the Educational Services Department. This course, called *The BASIC Primer*, teaches the syntax and use of the most common BASIC language statements to users who have little or no previous computer experience. *The BASIC Primer* does not cover VAX-11 BASIC features, rather, it provides an overview of all specific BASIC language programming. Instruction for the course is contained in two manuals, and evaluation of the student learning is conducted by an on-line testing program. The order number for the course is JB108-A-DC. For additional information, please contact Educational Services, Order Processing Department, Billerica, MA. 01821.

**TRAINING CREDITS:**

None

**SUPPORT CATEGORY:****DIGITAL SUPPORTED**

VAX-11 BASIC is a DIGITAL Supported Software Product.

**SOFTWARE INSTALLATION:****DIGITAL INSTALLED**

DIGITAL installation is required for Software Product Support. There is no charge for installation if performed at the time of system installation. DIGITAL installed software products, except for operating systems, are subject to an add-on installation fee when purchased subsequent to system installation.

**SOFTWARE PRODUCT SUPPORT**

VAX-11 BASIC includes standard warranty services as defined in the Software Support Categories Addendum of this SPD.

**ORDERING INFORMATION:**

All binary licensed software, including any subsequent updates, is furnished under the licensing provisions of DIGITAL's Standard Terms and Conditions of Sale, which provide in part that the software and any part

thereof may be used on only the single CPU on which the software is first installed, and may be copied, in whole or in part (with the proper inclusion of the DIGITAL copyright notice and any DIGITAL proprietary notices on the software) only for use on such CPU. All source licensed software is furnished only under the terms and conditions of a separate Software Program Sources License Agreement between Purchaser and DIGITAL.

A single-use license only option is a license to copy the software previously obtained under license.

Options with no support services are only available after the purchase of one supported license.

The following key (Y, Z) represents the distribution media for the product and must be specified at the end of the order number, e.g., QE095-AY = binaries on RX01 Floppy Diskette.

Y = RX01 Floppy Diskette

Z = No hardware dependency

QE095 -A— Single-use license, binaries, documentation, support services (media: Y)

QE095 -D— Single-use license only, no binaries, no documentation, no support services (media: Z)

**Upgrade Options**

Licensed users of PDP-11 BASIC-PLUS-2/VAX, Version 1.6 may obtain a license for VAX-11 BASIC, Version 1.0 by ordering one of the following upgrades:

QE096 -A— Single-use upgrade license, binaries, documentation, support services (media: Y)

QE096 -D— Single-use license only, no binaries, no documentation, no support services (media: Z)

**Miscellaneous Options**

QE095 -G— Documentation only kit (media: Z)

**ADDITIONAL SERVICES:**

Post-warranty Software Product Services for this software product are available with the prerequisite being the purchase of the VAX/VMS Self-Maintenance Service for Software. Customers should contact their local DIGITAL office for additional information.