digital

Software Product Description

PRODUCT NAME: PDP-11 BASIC-PLUS-2, Version 1.5   **SPD 14.52.5**

DESCRIPTION:

BASIC is a conversational programming language developed at Dartmouth College that uses simple English-like statements and familiar mathematical 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. (On RSTS/E systems, the BASIC-PLUS-2 compiler can produce an image module that can be executed immediately, provided no CALL statement or RMS I/O is referenced.) 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 run-time routines:

- Math routines that 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 through the RMS file structure. This method of Record I/O supports sequential, relative, and indexed file organizations. Note that indexed files require the presence of RMS-11K on the system. RMS features also include primary and alternate keys, fixed and variable length records, and record mapping. RMS-11K is an optionally supported facility of the RSTS/E, RSX-11M, and IAS operating systems.

MINIMUM HARDWARE REQUIRED:

Any valid RSX-11M, IAS, or RSTS/E operating system configuration that includes the Extended Instruction Set and has at least 48K bytes of memory in addition to the minimum required by the operating system. Also, at least 1000 free blocks must be available on the public disk structure.

OPTIONAL HARDWARE SUPPORTED:

Supports any mass storage, unit record, or terminal device supported by the prerequisite software, except DECtape.

PREREQUISITE SOFTWARE:

Any one of the following operating systems that includes RMS-11:

RSX-11M, Version 3 or later, or
RSTS/E, Version 6C or later, or
IAS, Version 2 or later

OPTIONAL SOFTWARE SUPPORTED:

RMS-11K

TRAINING CREDITS:

None

SUPPORT CATEGORY:

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

UPDATE POLICY:

Software Updates, if any, released by DIGITAL during the one (1) year period following installation, will be provided to the customer for a media charge (includes no installation). After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

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 Agreement between Purchaser and DIGITAL.

Standard options with no support services are only available after the purchase of one supported license. When a software license is ordered without support services, the category of support applicable to such software is Category C.

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The following key (D, E, F, Q, T, V, Z) represents the distribution media for the product and must be specified at the end of the order number, e.g., QJ916-AD = binaries on 9-track magnetic tape.

D = 9-track Magnetic Tape
E = RK05 Disk Cartridge
F = 7-track Magnetic Tape
Q = RL01 Disk Cartridge
T = RK06 Disk Cartridge
V = RK07 Disk Cartridge
Z = No hardware dependency

Standard Options

For RSTS/E Systems:
QJ916 -A— Single-use license, binaries, documentation, support services (media: D, E, F, Q, T, V)

QJ916 -C— Single-use license, binaries, documentation, no support services (media: D, E, F, Q, T, V)

QJ916 -D— Single-use license only, no binaries, no documentation, no support services (media: Z)

For RSX-11M Systems:
QJ918 -A— Single-use license, binaries, documentation, support services (media: D, E, Q, T, V)

QJ918 -C— Single-use license, binaries, documentation, no support services (media: D, E, Q, T, V)

QJ918 -D— Single-use license only, no binaries, no documentation, no support services (media: Z)

For IAS Systems:
QJ919 -A— Single-use license, binaries, documentation, support services (media: D, E, T)

QJ919 -C— Single-use license, binaries, documentation, no support services (media: D, E, T)

QJ919 -D— Single-use license only, no binaries, no documentation, no support services (media: Z)

Update Options:

Users of PDP-11 BASIC-PLUS-2, Version 1.0, whose specified Support Category warranty has expired may order the following software update at the then current charge for such update, for use under the existing license. Except where the medium is designated as Z, the update is distributed in source or binary form on the appropriate medium. A software update where the medium is designated as Z grants the user of PDP-11 BASIC-PLUS-2, Version 1.0, the right to copy the previously ordered QJ916-H, QJ918-H, QJ919-H, or QJ916-W, QJ918-W, QJ919-W software update for use on an additional single CPU for which a Product license has been obtained. No installation or other services are included unless specifically stated otherwise.

For RSTS/E Systems:
QJ916 -H— Binaries, documentation (media: D, E, F, T)

QJ916 -H— Right to copy for single-use (under existing license), no binaries, no documentation (media: Z)

For RSX-11M Systems:
QJ918 -H— Binaries, documentation (media: D, E, T)

QJ918 -H— Right to copy for single-use (under existing license), no binaries, no documentation (media: Z)

For IAS Systems:
QJ919 -H— Binaries, documentation (media: D, E, T)

QJ919 -H— Right to copy for single-use (under existing license), no binaries, no documentation (media: Z)

Users of PDP-11 BASIC-PLUS-2, Version 1.0, whose specified Support Category warranty has not expired may order under license the following software update for the then current media charge. The update is distributed in source or binary form on the appropriate medium and includes no installation or other services unless specifically stated otherwise.

For RSTS/E systems:
QJ916 -W— Binaries, documentation (media: D, E, F, T)

For RSX-11M systems:
QJ918 -W— Binaries, documentation (media: D, E, F, T)

For IAS systems:

QJ919 -W— Binaries, documentation (media: D, E, T)

Miscellaneous Options
QJ919 -G— Pre-delivery kit (media: Z)

ADDITIONAL SERVICES:
None

ADDENDUM
SOFTWARE SUPPORT CATEGORIES

Each software product (hereinafter 'SOFTWARE') with a designated Support Category A or B in the applicable Software Product Description (SPD) existing at the time of order will be the current release at the time of delivery and will conform to the SPD. DIGITAL's sole obligation shall be to correct defects (nonconformance of the SOFTWARE to the SPD) as described below. Any SOFTWARE with a designated Support Category C will be furnished on an 'as is' basis.

For SOFTWARE with a designateo Support Category A or B, DIGITAL will provide the services set forth below without additional charge.

CATEGORY A

1. Upon notification by customer to the nearest DIGITAL office that the computer system, including all required prerequisite hardware and software, is ready for the installation of the SOFTWARE, DIGITAL will install such SOFTWARE in any location within the contiguous forty-eight (48) United States, the District of Columbia, or a country in which DIGITAL or a subsidiary of DIGITAL has a software service facility. The notification must be received by DIGITAL and the system must be ready for installation within thirty (30) days after the delivery of the SOFTWARE to customer or DIGITAL will have no obligation to install. Installation will consist of: (1) verification that all components of the SOFTWARE have been received by customer, (2) loading the SOFTWARE, and (3) executing a DIGITAL sample procedure.

2. During the ninety (90) day period after installation, if the customer encounters a problem with the current unaltered release of the SOFTWARE which DIGITAL determines to be a defect in the SOFTWARE, DIGITAL will provide the following remedial service (on site where necessary): (1) if the SOFTWARE is inoperable, apply a temporary correction (TC) or make a reasonable attempt to develop an emergency by-pass, and (2) assist the customer to prepare a Software Performance Report (SPR) and submit it to DIGITAL.

3. During the one (1) year period following installation, if the customer encounters a problem with the SOFTWARE which his diagnosis indicates is caused by a SOFTWARE defect, the customer may submit an SPR to DIGITAL. DIGITAL will respond to problems reported in SPRs which are caused by defects in the current unaltered release of the SOFTWARE via the Maintenance Periodical for the SOFTWARE, which reports SPRs received, code corrections, temporary corrections, generally useful emergency by-passes and/or notice of the availability of corrected code. Software Updates, if any, released by DIGITAL during the one (1) year period, will be provided to the customer on DIGITAL's standard distribution media as specified in the applicable SPD. The customer will be charged only for the media on which such updates are provided, unless otherwise stated in the applicable SPD, at DIGITAL's then current media prices.

CATEGORY B

During the one (1) year period following delivery, the services provided to the customer will be the same as set forth in 3 above.

CATEGORY C

SOFTWARE is provided on an 'as is' basis. Any software services, if available, will be provided at the then current charges.

DIGITAL shall have the right to make additional charges for any additional effort required to provide services resulting from customer use of other than current unaltered release of the SOFTWARE operated in accordance with the SPD.