Software Product Description

PRODUCT NAME: FORTRAN IV/RSTS/E, Version 2.6   SPD 12.41.11

DESCRIPTION:

FORTRAN IV is an extended implementation of the FORTRAN language based on the ANSI FORTRAN, X3.9-1966 standard. It operates under the RSTS/E Operating System. The PDP-11 FORTRAN IV language includes the following extensions to the ANSI 1966 standard:

- General expressions allowed in all meaningful contexts
- Mixed-mode arithmetic
- BYTE data type for character manipulation
- ENCODE, DECODE statements
- PRINT, TYPE, ACCEPT input/output statements
- Direct-access unformatted input/output DEFINE FILE statement
- Comments allowed at end of each source line
- PROGRAM statement
- OPEN and CLOSE file access control statements
- List-directed input/output

The PDP-11 FORTRAN IV compiler is a fast, one-pass compiler. Compiler options allow program size versus execution speed (threaded code vs. in-line code) trade-offs. FORTRAN IV compiler optimizations include:

- Common subexpression elimination
- Local code tailoring
- Array vectoring
- Optional in-line code generation for integer and logical operations

MACRO-11 assembly language subroutines can be called from FORTRAN IV programs.

FORTRAN IV can optionally generate code for the following arithmetic instructions sets:

- EIS
- FIS
- EAE
- FPU

Object Time System

FORTRAN IV includes a set of object modules, called the Object Time System (OTS), that is selectively linked with compiler-produced object modules to produce an executable program.

The RSTS/E system provides several special features for FORTRAN IV. FORTRAN programs may be developed under RSTS/E and output in absolute binary format for execution on a stand-alone PDP-11 system with minimal peripherals, or for loading into ROM or PROM memory.

Although MACRO-11 subroutines may be invoked from FORTRAN IV programs, no facility is provided for monitor communication or input/output from within these MACRO subprograms.

MINIMUM HARDWARE REQUIRED:

Any valid RSTS/E configuration with at least 64K bytes of memory for user job space.

OPTIONAL HARDWARE:

In addition to standard hardware options, the following arithmetic hardware options are available:

- KE11-B Extended Arithmetic Element
- KEV11 Extended Arithmetic Chip

The FORTRAN IV OTS additionally supports the FP11 floating point processor.

PREREQUISITE SOFTWARE:

RSTS/E Operating System
Refer to the RSTS/E Optional Software Cross Reference Table (20.97.xx) for the required version.

OPTIONAL SOFTWARE:

None

TRAINING CREDITS:

None

SOFTWARE INSTALLATION:

CUSTOMER INSTALLED
FORTRAN IV/RSTS/E is a software product engineered to be installed by the customer.

SUPPORT CATEGORY:

DIGITAL SUPPORTED

During the ninety (90) day period either from the date of first use by the customer or thirty (30) days after delivery (F.O.B. DIGITAL's plants), whichever occurs first, DIGITAL will provide the following standard services if the customer encounters a problem with the Software Product:

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D = 9-track 800 BPI Magtape (NRZI)
E = RK05 Disk Cartridge
H = RL02 Disk Cartridge
M = 9-track 1600 BPI Magtape (PE)
Q = RL01 Disk Cartridge
T = RK06 Disk Cartridge
V = RK07 Disk Cartridge
Z = No hardware dependency

QR435 -A— Single-use license, binaries, documentation, support services (media: D, E, H, M, Q, T, V)

QR435 -D— Single-use license only, no binaries, no documentation, no support services (media: Z)

Update Options

Users of FORTRAN IV/RSTS/E whose specified Support Category warranty has expired may order the following software update at the then current charge for such update. The update is distributed in binary form on the appropriate medium and includes no installation or other services unless specifically stated.

QR435 -H— Binaries, documentation (media: D, E, H, M, Q, T, V)

QR435 -H— Right to copy for single-use (under existing license), no binaries, no documentation, no support services (media: Z)

Miscellaneous Options

QR435 -G— Documentation only kit (media: Z)

ADDITIONAL SERVICES:

The following post-warranty Software Product Services for this software product are available to licensed customers:

• Self-Maintenance Service
• Basic Service
• DECsupport Service

The prerequisite being the purchase of the equivalent level RSTS/E Software Product Service. Customers should contact their local DIGITAL office for additional information on the availability of these services.