



Software Product Description

PRODUCT NAME: FORTRAN IV/IAS-RSX, Version 2

SPD 14.63.4

DESCRIPTION:

FORTRAN IV/IAS-RSX is an extended implementation of FORTRAN based on ANS FORTRAN, X3.9-1966. The FORTRAN IV compiler operates under the RSX-11M, RSX-11D, and IAS operating systems. The FORTRAN IV/IAS-RSX language includes the following extensions to the ANSI standard:

- general expressions allowed in DO loop parameters and subscripts
- mixed-mode arithmetic
- ENCODE and DECODE statements
- PRINT, TYPE, and ACCEPT input/output statements
- direct-access unformatted input/output, DEFINE FILE statement
- comments allowed at the end of each source line
- PROGRAM statement
- FORTRAN IV/PLUS compatible language extensions (e.g. OPEN, CLOSE, list directed I/O)

RSX-11M systems supporting the memory management directives provide support for multiple memory-resident virtual arrays. Each array can have up to 32,767 elements.

The FORTRAN IV compiler system is designed to minimize the size of executable programs it produces. The entire system (including the compiler and optimization capabilities) is completely functional in the minimum task partition area of 8K words of memory.

FORTRAN IV/IAS-RSX compiled optimizations include:

- optimization of arithmetic and logical IF statements
- common subexpression elimination
- optional in-line integer code generation
- additional optimization algorithms

Object Time System

The FORTRAN IV/IAS-RSX Object Time System (OTS) is a set of object modules selectively linked with the user's compiler-produced object modules to produce a task image ready for execution. The OTS is reentrant and most of the OTS can be made into a shared library for concurrent use by multiple tasks.

MINIMUM HARDWARE REQUIRED:

Any valid RSX-11M, RSX-11D, or IAS operating system configuration which meets the following main memory and auxiliary storage requirements.

Main Memory: — The FORTRAN IV/IAS-RSX compiler requires a minimum task partition area of 8K words.

The 8K-word compiler under IAS or RSX-11D requires the standard operating system shared library SYSRES; storage for SYSRES is in addition to the 8K words required for FORTRAN IV/IAS-RSX. The 8K-word compiler under RSX-11M requires no additional resident library.

Auxiliary Storage: — FORTRAN IV/IAS-RSX requires up to 210 contiguous disk blocks for the compiler task. An additional 200 disk blocks are required for the Object Time System library file and auxiliary support files, depending on installation options. No temporary disk space is required during compilation.

OPTIONAL HARDWARE SUPPORTED:

FORTRAN IV/IAS-RSX supports optional devices supported by the prerequisite software and in addition:

- KE11-A Extended Arithmetic Element
- KE11-B Extended Arithmetic Element
- KEV11 Extended Arithmetic Chip
- KE11-E Extended Instruction Set
- KE11-F Floating Instruction Set
- FP11 Floating Point Processor

PREREQUISITE SOFTWARE:

One of the following operating systems:

- IAS, Version 2 or later, or
- RSX-11D, Version 6.2 or later, or
- RSX-11M, Version 3.1 or later

OPTIONAL SOFTWARE SUPPORTED:

None

TRAINING CREDITS:

None

SUPPORT CATEGORY:

B — 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,

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 Q = RL01 Disk Cartridge
 T = RK06 Disk Cartridge
 V = RK07 Disk Cartridge
 Z = No hardware dependency

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- QP230 -A— Single-use license, binaries, documentation, support services (media: D, E, F, Q, T, V)
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- QP230 -W— Binaries, documentation (media: D, E, F, T)

Miscellaneous Options:

- QP230 -G— Pre-delivery kit (media: Z)

ADDITIONAL SERVICES:

None

ADDENDUM
SOFTWARE SUPPORT CATEGORIES

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CATEGORY C

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