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

DESCRIPTION:
FORTRAN IV/IAS-RSX is an extended implementation of FORTRAN based on ANSI 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,
if any, will be made available according to then prevailing DIGITAL policies.

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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., QP230-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
QP230 -A— Single-use license, binaries, documentation, support services (media: D, E, F, Q, T, V)  
QP230 -C— Single-use license, binaries, documentation, no support services (media: D, E, F, Q, T, V)  
QP230 -D— Single-use license only, no binaries, no documentation, no support services (media: Z)

Update Options
Users of FORTRAN IV, Version 1C, whose specified Support Category warranty has expired may order under license the following software update at the then current charge for such update. The update is distributed in source or binary form on the appropriate medium and includes no installation or other services unless specifically stated otherwise.

QP230 -H— Binaries, documentation (media: D, E, F, T)

Users of FORTRAN IV, Version 1C, 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.

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

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 designated Support Category A or B, DIGITAL will provide the services set forth below without additional charge.

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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.