

# Software Product Description

**PRODUCT NAME:** OS/8 FORTRAN IV, Version 3C

**SPD 4.10.4**

## **DESCRIPTION:**

FORTRAN IV is a programming language consisting of formatted statements that are very similar to the language of conventional algebra and higher mathematics. OS/8 FORTRAN IV is a FORTRAN IV language compiler which runs under the OS/8 Operating System.

OS/8 FORTRAN IV permits generalized array subscription and 1- to 12-dimensional arrays. Large amounts of data can be easily stored and accessed. FORTRAN IV also offers direct access I/O. With this feature, the user can directly reference any record in a data file. Direct access I/O provides virtual array capability and decreases processing time.

OS/8 FORTRAN IV supports mixed-mode arithmetic, octal constants, logical IF statements, and general integer expressions in IF statements. In addition, OS/8 FORTRAN IV allows initial values in specification statements and provides a full set of Boolean operators, including EQU and XOR.

Text manipulation is aided by Hollerith field specifications for text as well as literals and constants. DATA statements, BLOCK statements and BLOCK DATA statements are supported. The user can also make arithmetic function definitions.

OS/8 FORTRAN IV provides a tree-structured dynamic overlay mechanism that automatically loads overlays on call without the need for explicit call overlay, call link or call chain statements. As many as seven independent overlay levels can be defined with up to 16 overlays in each level and 63 subroutines in any overlay.

All floating point operations are optimized for execution speed. Real-time device independent input/output operations provided by OS/8 FORTRAN IV are greatly enhanced by the inclusion of the FPP-12 Floating Point Processor in the hardware configuration. In this case, the PDP-8 processor functions as a fully parallel I/O processor. While the FPP-12 is processing data, the PDP-8 can be acquiring data, displaying data, reading or writing mass storage files, or driving a plotter. The system is also device independent, allowing run-time device specifications without recompilation or reassembly.

NOTE: OS/8 is functionally equivalent to OS/12, the operating system for the PDP-12.

## **MINIMUM HARDWARE REQUIRED:**

Any valid OS/8 operating system configuration with at least 128K words of mass storage.

## **OPTIONAL HARDWARE SUPPORTED:**

Any mass storage, unit record or terminal device supported by OS/8 with the following additions:

KE8-E Extended Arithmetic Element  
FPP12-AB, -AN, or -AP Floating Point Processor  
FPP12-AE Double-Precision Option (required for double precision operations)

## **PREREQUISITE SOFTWARE:**

OS/8 Operating System, Version 3 or later

## **OPTIONAL SOFTWARE SUPPORTED:**

None

## **TRAINING CREDITS:**

None

## **SUPPORT CATEGORY:**

B, Software Support will be provided as listed in the Software Support Categories Addendum to this SPD.

## **UPDATE POLICY:**

During the first year, Update Policy shall be in accordance with the Software Support Categories Addendum to this SPD. After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

## **ORDERING INFORMATION:**

This software is furnished under a license for use on a single CPU and can be copied and modified (with inclusion of DIGITAL's copyright notice) only for use on such CPU, except as may otherwise be provided in writing by DIGITAL.

Source and/or listing options are only available after the purchase of at least one full-support binary license and after a source license agreement is in effect.

The following key (A, B, C, E, N, R, Y) represents the distribution media for the product and must be specified at the end of the "Q" number, i.e., QF008-AC = binaries on DECTape.

A = Linc Tape  
B = Paper Tape  
C = DECtape  
E = RK Disk (DECpack)  
N = Cassette (TU60)  
R = Microfiche  
Y = Floppy Disk

*Standard Options*

QF008 -A- Single-use license, binaries, documentation, support services (media: B, C, N, Y)  
QK008 -A- Single-use license, binaries, documentation, support services (media: A)

*Source/Listing Options*

QF008 -E- All sources (media: C, E, Y)  
QF008 -F- Listings (media: R)  
QK008 -E- All sources (media: A)

*Update Options*

Users of OS/8 FORTRAN IV whose Standard Binary Program Update Service has expired, may purchase the following. The update distributed in binary form on the appropriate medium includes no installation or other services unless specifically stated otherwise.

QF008 -H- Binaries, documentation, no support services (media: B, C, N, Y)  
QK008 -H- Binaries, documentation, no support services (media: A)  
QF008 -N- Source update (media: C, E, Y)  
QK008 -N- Source update (media: A)

**ADDITIONAL SERVICES:**

None