VAX-11 FORTRAN is an implementation of full-language FORTRAN-77 conforming to American National Standard FORTRAN, ANSI X3.9-1978. It includes optional support for programs conformance to the previous standard, ANSI X3.9-1966. The shareable, re-entrant compiler operates under the VAX/VMS operating system to take advantage of the VAX-11 floating point and character string instruction set and the VAX/VMS virtual memory operating system.

VAX-11 FORTRAN includes the following extensions to the ANSI standard:

- Language elements for keyed and sequential access to VAX-11 RMS multikey ISAM files
- A set of data types beyond those specified for full language FORTRAN-77:
  - LOGICAL*1, BYTE
  - LOGICAL*2
  - INTEGER*2
  - COMPLEX*16, DOUBLE COMPLEX
- Explicit specification of storage allocation units for data types (e.g., REAL*8, INTEGER*4)
- Data initialization in type declaration statements
- DO WHILE, ENDDO statements
- Bit manipulation functions
- Hexadecimal and octal constants and Z and O format edit descriptors applicable to all data types
- ENCODE, DECODE statements
- ACCEPT, TYPE input/output statements
- DEFINE FILE statement
- USEROPEN subroutine invocation at file OPEN time
- INCLUDE statement
- 31-character identifiers that can include dollar sign ($) and underline(_)
- Comments allowed at end of each source line
- Debug statements in source
- Support for calls to VAX/VMS system service procedures
- Generation of symbol tables for the VAX-11 symbolic debugger
- Generation of shareable code
- Up to 255 actual arguments in a CALL statement
- Up to 250 named COMMON blocks per subprogram

VAX-11 FORTRAN compiler optimizations include:

- Constant folding
- Optimizations of arithmetic IF, logical IF, and block IF-THEN-ELSE
- COMMON subexpression elimination
- Removal of invariant expressions from DO loops
- Allocation of general registers across DO loops

MINIMUM HARDWARE REQUIRED:
Any valid VAX/VMS Operating System configuration

OPTIONAL HARDWARE:
FP780 floating point accelerator

PREREQUISITE SOFTWARE:
VAX/VMS Operating System, Version 2.0

OPTIONAL SOFTWARE:
None

TRAINING CREDITS:
None

SUPPORT CATEGORY:
DIGITAL SUPPORTED

VAX-11 FORTRAN is a DIGITAL Supported Software Product.

SOFTWARE INSTALLATION:
CUSTOMER INSTALLED

VAX-11 FORTRAN is a software product engineered to be installed by the customer and includes other Software Product Support Services listed below.

SOFTWARE PRODUCT SUPPORT:

VAX-11 FORTRAN includes standard warranty services as defined in the Software Support Categories Addendum of this SPD.
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
termed 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 propri­
etary 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 Pro­
gram Sources License Agreement between Purchaser
and DIGITAL.
Sources and/or listings options are only available after
the purchase of at least one supported license and after
a source license agreement is in effect.
Options with no support services are only available
after the purchase of one supported license.
A single-use license only option is a license to copy the
software previously obtained under license.
The following key (M, Y, Z) represents the distribution
media for the product and must be specified at the end
of the order number, e.g., QE100-AY = binaries on
RX01 Floppy Diskette.
M  =  9-Track 1600 BPI Magtape (PE)
Y  =  RX01 Floppy Diskette
Z  =  No hardware dependency

QE100  -A— Single-use license, binaries, documenta­
tion, support services (media: Y)
QE100  -D— Single-use license only, no binaries, no
documentation, no support services (media: Z)

Source/Listings Options
QE100  -E— Sources (media: M)

Update Options
Users of VAX-11 FORTRAN IV-PLUS whose speci­
fied 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 binary form on the appropriate medium;
it includes no installation or other services unless spe­
cifically stated.
QE100  -H— Binaries, documentation (media: Y)
QE100  -H— Right to copy for single-use (under exist­
ing license), no binaries, no documenta­
tion (media: Z)

NOTE: VAX-11 FORTRAN sources are written in VAX­
11 BLISS-32; therefore, a VAX-11 BLISS-32
compiler is required for compilation.

Miscellaneous Options
QE100  -G— Documentation only kit (media: Z)

ADDITIONAL SERVICES:
Post-warranty Software Product Services for this soft­
ware are available with the prerequisite being the pur­
chase of the VAX/VMS Self-Maintenance Service for
Software. Customers should contact their local DIGITAL office for additional information.