

Software Product Description

PRODUCT NAME: **Micro/R SX FMS-11, Version 2.2**

SPD 18.34.02

DESCRIPTION

Micro/R SX FMS-11 is a forms-oriented, video I/O management system for the Micro/R SX Operating System. Micro/R SX FMS-11 functions as an independent, software front end that logically off-loads the complexities of interactive video I/O management from the application program.

Forms defined using Micro/R SX FMS-11 can use the following features of DIGITAL's VT100, VT200 and VT300 terminals:

- Reverse video characters
- Bold characters
- Underlined characters
- Blinking characters
- 132-column lines
- Jump and smooth scrolling
- Split screen and reverse screen
- Full 8-bit communication, including escape sequences and access to function keys

Micro/R SX FMS-11 can be used as a general-purpose manager of operator I/O or as a front end in traditional source data entry applications. Possible Micro/R SX FMS-11 applications range from data base inquiry/response/update to uses such as periodically displaying the status of a real-time process or accepting control information from the operator for the process.

Micro/R SX FMS-11 application programs may be coded in MACRO-11 or one of the following high-level languages:

- Micro/R SX FORTRAN-77
- Micro/R SX BASIC-PLUS-2
- Micro/R SX COBOL-81
- Micro/R SX DIBOL

Micro/R SX FMS-11 forms are data structures created using FED, the interactive form editor. Forms normally reside in form library files on disk and are retrieved as needed by application programs at execution time. This

results in a high degree of independence between form definitions and application programs. In many cases form definitions can be modified without requiring recompilation or relinking of the application program.

In the case where extra fast response time is required forms can be linked to applications as a memory-resident form library.

Each data field in FMS-11 forms can be assigned attributes such as validation "picture", embedded text characters, right/left justification, fixed decimal, and "must complete". A default value and a line of explanatory HELP text can be associated with each field of a form. In addition, a separate HELP display can be associated at the form level. Another feature of Micro/R SX FMS-11 is "named data". This allows application parameters to be stored and edited with the form as named strings of constant data and retrieved dynamically by name or number during program execution.

Micro/R SX FMS-11 consists of the following software components:

FED (Form Editor) - Used by the application developer to create and modify video forms by typing them on the screen as they are to appear to the application user. In addition, a variety of editing functions may be invoked using the VT terminal series function keypad. All form attributes, individual field attributes, and named data constants are assigned in this form editing process. The result of a FED session is an intermediate form file, ready for processing by the Form Library Utility.

FUT (Form Library Utility) - Multifunction utility program for manipulating files of Micro/R SX FMS-11 form descriptions. FUT provides a full range of form library management functions, such as merge, insert, update, extract, and delete a form. It can be used to print a complete description of one or more forms from a form file or library or to list the names of all forms in a form library. FUT can produce an object module of forms to be linked with the application when memory-resident forms are desired. Finally, FUT can write out COBOL Data Division code for a form definition, which can then be copied into COBOL programs.

FDV (Form Driver) - Reentrant subroutine called from application programs to control screen processing. The

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FDV manages all screen input and output, display forms, manipulates the screen, performs basic input validation, and responds to the operator's requests for HELP. Applications may interact with the operator one field at a time or on a whole record basis using the form description generated by FED during the form editing process.

All references to fields in a form are by name, so that application programs are not dependent on the physical layout of the form. Furthermore, FDV performs its editing, data preparation, and HELP functions without the knowledge or intervention of the application program. Separate subroutine libraries must be generated for VT52 or VT100/VT200/VT300 support.

SOURCE CODE INFORMATION

Source code for the Form Driver is provided on 9-track 800 BPI Magtape (NRZI).

This source code is provided on an "AS IS" basis without any warranty of any kind either express or implied.

GROWTH CONSIDERATIONS

The minimum hardware/software requirements for any future version of this product may be different from the minimum requirements for the current version.

MINIMUM HARDWARE REQUIRED

The number of required disk blocks for installation ranges from 3000 to 7000 blocks depending upon the options selected. The amount of permanent disk space required ranges from 1000 to 3000 blocks depending upon options selected.

For Application Execution

The Form Driver requires from 6K to 9K bytes of main memory, depending on the options selected when the Form Driver is generated. An additional 1K bytes are required for interface code if the Form Driver is called from any high-level language.

Terminal	Form Development	Application Execution
VT52	N	Y
VT100	Y	Y
VT100 with AVO	Y	Y
VT101	Y	Y
VT102	Y	Y
VT125	Y	Y
VT220	Y	Y
VT240	Y	Y
VT320	Y	Y
VT330	Y	Y
VT340	Y	Y

Key:
 Y = Fully Supported
 N = Not Supported
 AVO = Advanced Video Option

For Application Development

The Form Editor requires 36K bytes and one of the VT100/VT200/VT300 series terminals listed above.

The Form Utility requires 16K bytes. It does not require a VT100 terminal.

PREREQUISITE SOFTWARE

One of the following:

For Application Execution:

Micro/RSX Operating System (Base Kit)*

For Application Development:

Micro/RSX Operating System (Base Kit)*

MACRO-11 or one of the supported languages from the optional software listing below.

Note: Micro/RSX FMS-11 application programs must be developed using MACRO-11 or one of the higher level languages listed in the optional software section. MACRO-11 is contained on the Micro/RSX Advanced Programmer's Kit but is not contained on the Micro/RSX Base Kit.

* Refer to the Micro/RSX Optional Software Cross Reference Table (SPD 20.95.xx) for the required version.

OPTIONAL SOFTWARE

- Micro/RSX FORTRAN-77
- Micro/RSX BASIC-PLUS-2
- Micro/RSX COBOL-81
- Micro/RSX DIBOL

SOFTWARE WARRANTY

Warranty for this software product is provided by DIGITAL with the purchase of a license for the product as defined in the Software Warranty Addendum of this SPD.

INSTALLATION

This software product can be installed by the customer using the step-by-step documentation available for this product. Optionally, you can purchase DIGITAL Installation Services which provide for the installation of the software product by an experienced DIGITAL Software Specialist.

ORDERING INFORMATION

Single-Use licensed software is furnished under the licensing provisions of DIGITAL's Standard Terms and Conditions, which provide, in part, that the software and any part thereof may be used 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 DIGITAL's copyright notice and any proprietary notices on the software) for use on that same CPU.

You will need a separate license for each CPU on which you will be using the software product (except as otherwise specified by DIGITAL). Then, Materials and Service Options are selected to utilize the product effectively. **THE LICENSE OPTIONS ARE DESCRIBED BELOW. IF YOU ARE NOT FAMILIAR WITH THE SERVICE OPTIONS, YOU MAY OBTAIN THE APPROPRIATE SOFTWARE PRODUCT SERVICE DESCRIPTION(S) FROM YOUR LOCAL DIGITAL OFFICE.** If you are already familiar with these options, you may obtain the ordering information directly from the Software Options Chart.

LICENSE OPTIONS

Single-Use License Option

The Single-Use License is your right to use the software product on a single CPU.

You purchase a Single-Use License according to the category to which your CPU belongs:

- Class H Single-Use License (for High End Systems)
 - All UNIBUS models and systems
- Class L Single-Use License (for Low End Systems)
 - All Q-bus models and systems
 - KD11, KDF11, KDJ11 CPU modules
 - DTC11, DCF11, DCJ11 Microprocessor chips

For your first installation of this software product you must purchase as a **minimum**:

- Single-Use License Option, and
- Distribution and Documentation Option

The license gives you the right to use the software on a single CPU and the Distribution and Documentation Option provides the machine-readable software and related documentation.

To use this software product on additional CPUs, you must purchase for each CPU as a **minimum**:

- Single-Use License Option

In addition to the right to use, the license gives you the one-time right to copy the software from your original CPU installation to the additional CPU. Therefore, the Distribution and Documentation Option is not required, but optional.

Single-Use License Option For Forms Driver

If you have Micro/RSX FMS-11 installed on a CPU fully licensed for that product and you wish to use the Forms Driver portion of it on an additional CPU, you can purchase a Single-Use License for Forms Driver. This license gives you the right to use only the Forms Driver and does not include software warranty.

Distribution and Documentation Option

The Distribution and Documentation Option provides the machine-readable software and the basic documentation. You must have, or order, a Single-Use License to obtain this option. You will need this option to install the software for the first time. When revised versions of this software product become available, they may also be obtained by purchasing this option again.

Software Revision Right-To-Copy Option

The Right-To-Copy Option allows a customer with multiple CPUs to copy a revised version of a software product from one CPU to another. Each CPU must be licensed for that product. You first install the revised software on one CPU; then you can make copies for additional CPUs by purchasing the Right-To-Copy Option for each additional CPU.

Documentation-Only Option

The Documentation-Only Option provides one copy of the basic documentation.

Software Product Services

A variety of service options are available. For more information on these or other services, please contact your local DIGITAL office.

SOURCE MATERIALS OPTIONS

You can obtain optional source materials for this software product by signing DIGITAL's Software Program Sources License Agreement and then purchasing the source option(s) you want. The agreement entitles you to use the source materials at one customer facility or location which is specified in the agreement.

Most users do not require source materials. They are used primarily to make modifications to the software product. Source kits provided by DIGITAL do not necessarily contain all source files used by DIGITAL to build binary kits.

Source License and Sources Distribution Option

This option provides you with the machine-readable source code for this software product. It gives you the right to use the source code on any CPU at the facility/location specified in the agreement which has a Single-Use License for the object code.

Sources Update Distribution Option

This option provides you with the revised version of the machine-readable source code for this software product. You must have purchased the Source License and Source Distribution Option to obtain this option.

SOFTWARE OPTIONS CHART

Micro/RSX FMS-11 is available only on RX50 Floppy Diskette and TK50 distribution media.

Note: The availability of these software product options and services may vary by country. Customers should contact their local DIGITAL office for information on availability.

OPTIONS	CLASS L* ORDER NUMBER
LICENSE OPTIONS: A LICENSE IS REQUIRED FOR EACH CPU.	
Single-Use License	QY322-UZ
Single-Use License for Forms Driver	QY323-DZ
MATERIALS AND SERVICE OPTIONS:	
Distribution and Documentation Option	QY322-H3 QY322-H5
Software Revision Right-To-Copy Option	QY322-HZ
Software Revision Right-To-Copy Option for Forms Driver	QY323-HZ
Documentation-Only Option	QY322-GZ
Installation Service Option	QY322-I3 QY322-I5
DECsupport Service	QY322-93 QY322-95
Basic Service	QY322-83 QY322-85
Self-Maintenance Service	QY322-33 QY322-35
SOURCE MATERIALS OPTIONS:	
Source License and Sources Distribution	QJ715-ED
Sources Distribution	QJ715-ND

* Refer to the descriptions of Class H and Class L single-use licenses in the License Option section of this SPD.