

Fujitsu Technology Solutions

Pascal-XT (BS2000/OSD)
Version 2.2B20
May 2009

Release Notice

All rights reserved, including intellectual property rights. Technical data subject to modifications and delivery subject to availability. Any liability that the data and illustrations are complete, actual or correct is excluded. Designations may be trademarks and/or copyrights of the respective manufacturer, the use of which by third parties for their own purposes may infringe the rights of such owner. For further information see http://ts.fujitsu.com/terms_of_use.html

Copyright © Fujitsu Technology Solutions 2009

Release Notice Pascal-XT V2.2B20

1 General	2
1.1 Ordering	2
1.2 Delivery	3
1.3 Documentation	4
2 Software extensions	5
3 Technical information	6
3.1 Resource requirements	6
3.2 Software configuration	7
3.3 Product installation	8
3.3.1 General information	8
3.3.2 Installation procedure for the programming system	9
3.3.3 Creating the syntax file	9
3.3.4 Files generated under the installation ID	10
3.4 Product use	11
3.5 Obsolete functions (and those to be discontinued)	11
3.6 Incompatibilities	11
3.7 Restrictions	12
3.8 Procedure in the event of errors	12
4 Hardware support	13

1 General

*3 This Release Notice is a summary of the major extensions, dependencies and operating information with respect to Pascal-XT V2.2B20 under the BS2000/OSD *) operating system.

*3 The contents have been modified with respect to the release level V2.2A.

*3 It corresponds to the correction level V2.2B20: May 2009.

Changes to V2.2A are marked with *1.
Changes to V2.2B are marked with *2.
Changes to V2.2B10 are marked with *3.

Compiler performance features comply with level 1 requirements of the ISO 7185 and DIN 66256 standards.

Pascal-XT also contains language extensions which make the Pascal-XT programming system particularly suitable for professional software designing purposes.

*1 Pascal-XT has been successfully tested for compliance with the standards by the BSI Quality Assurance. BSI awarded Pascal-XT V2.2B the Certificate of Validation.

This Release Notice is supplied as a file in uppercase/lowercase. Customers will receive an updated version of this file should any subsequent changes be made. To print this file, use:
/PRINT-DOCUMENT FROM-FILE=SYSFGM.PASCAL-XT.022.E, -
/ DOC-FORM=*TEXT(LINE-SPACING=BY-EBCDIC-CONTR)
(English)

The Release Notice is shipped on the product delivery medium.

*3 This Release Notice is also available online at
*3 <http://manuals.ts.fujitsu.com/mainframes.html>

If one or more previous versions are skipped when this product version is used, the information from the Release Notices (and README files) of the previous versions must also be noted.

1.1 Ordering

*3 Pascal-XT V2.2B20 can be ordered from your local distributors.

Pascal-XT can be delivered as a programming system or as a runtime system. The runtime system must exist on all systems on which programs compiled with Pascal-XT are executed.

*3 Pascal-XT V2.2B20 is supplied subject to a single payment or payment by installments.

*) BS2000/OSD (R) is a registered trademark of Fujitsu Technology Solutions

1.2 Delivery

- *3 The Pascal-XT V2.2B20 files are supplied via SOLIS.
- For the Pascal-XT "programming system" delivery unit the following components are required regardless of the HSI:
- *1
- | | |
|-------------------------------|---|
| SYSPRG.PASCAL-XT.022.NXS | Pascal-XT programming system statically linked for the address space below 16MB |
| SYSPRG.PASCAL-XT.022.XS | Pascal-XT programming system statically linked for the address space above 16MB |
| SYSPRG.PASCAL-XT.022.POOL-NXS | starter programm for the common memory pool version in the address space below 16MB |
| SYSPRG.PASCAL-XT.022.POOL-XS | starter programm for the common memory pool version in the address space above 16MB |
| SYSLNK.PASCAL-XT.022.LOADLIB | PLAM library, contains the common memory pool version |
| SYSLIB.PASCAL-XT.022.PASSUP | PLAM library, contains the package specification files of the predefined packages |
| SINPRC.PASCAL-XT.022 | installation procedure |
| SINPRG.PASCAL-XT.022 | installation program |
| SYMSV.PASCAL-XT.022.D | german/ |
| SYMSV.PASCAL-XT.022.E | english message texts for the installation program |
| SYSSDF.PASCAL-XT.022.SYSTEM | SDF system syntax file |
| SYSSDF.PASCAL-XT.022.USER | SDF user syntax file |
- *2 PLAM.HOLDER PLAM library, contains all elements required for using the holder task
- *1
- | | | |
|----------------------------|---|--------------------------|
| YSOML.PASCAL-XT.022.PASLIB | * | runtime system |
| YSFGM.PASCAL-XT.022.D | * | release notice in german |
| YSFGM.PASCAL-XT.022.E | * | this release notice |
- *1 The delivery unit "runtime system" consists only of the files marked with the *.

The current file and volume characteristics are listed in the SOLIS2 delivery cover letter.

1.3 Documentation

- *1 The manuals of the predecessor version are still valid.
- *1 They can be ordered separately:

Title	Order no.	Remark
/1/ Pascal-XT (BS2000/SINIX) V2.1 Beschreibung	U2778-J-Z55-4	
Description	U2778-J-Z55-4-7600	
/2/ Pascal-XT (BS2000) V2.2A Benutzerhandbuch	U2780-J-Z125-6	New edition
User Guide	U2780-J-Z125-6-7600	New edition

In addition, the following manual is recommended for installing the SDF user interface:

/3/ Systemverwalter-Kommandos (SDF-Format)
(System Administrator Commands, SDF Format)

Refer to the current list of publications for the order number of your particular operating system version.

- *3 This Release Notice is available online under
- *3 <http://manuals.ts.fujitsu.com/mainframes.html>.

These manuals may be supplemented with README files. These contain changes and extensions to the manual of the product concerned. The file names are made up as follows:

SYSRME.<product>.<version>.E (file with English text)

When printing the files, you should specify the CONTR-CHAR=EBCDIC operand in the PRINT FILE command.

2 Software extensions

Only the extensions and improvements over the previous versions are described in the following section.

- *1 - Using a value greater than 32759 for MAXLINELENGTH attribute of standard procedure ASSIGNFILE now leads to a FILE_ERROR(1502) instead of a FILE_ERROR(1501).
- *1 - The common memory pool starter now checks whether the starter version is identical to the compiler version, and terminates the program if not.
- *1 - Delivery units Pascal-XT "programming system" and
*1 "runtime system" now contain the files
*1 SYSSII.PASCAL-XT.022 resp. SYSSII.PAS-XT-LZS.022,
*1 which are required for IMON.
- *2 - Because of the year 2000 the entries in the project
*2 file have been changed from two digits to four digits
*2 for the year. This change is done backward compatible.
*2 The project files which have been created by pre version
*2 2.2B10 programming systems will be handled correctly,
*2 but can not be opened by pre version 2.2B10 programming
*2 systems any more after the first use with version 2.2B10.
- A holder task which keeps the code modules preloaded in the common memory pool is now available. The PLAM library PLAM.HOLDER contains all elements required for using the holder task. Information on how to use the holder task is provided in the INFO.HOLDER element in PLAM.HOLDER.

3 Technical information

3.1 Resource requirements

Disk storage requirements:

	Library/phase	PAM pages	Remarks
	PASCAL-XT	3	for the common memory pool version
*3		495	for the statically linked compiler
*1	PASCAL-XT.LOADLIB	567	for the common memory pool version
*3	PASLIB-XT	354	for all versions
	PASSUP-XT	21	for all versions
*1	SDF.USER.SYNTAX	84	for all versions

Minimum main memory requirements:

Variation installed

Statically linked 1476 Kbytes

Common memory pool version 1584 Kbytes

Additional class 6 memory space is required for the SDF P1 variation and class 4 memory space for the SDF P2 variation.

3.2 Software configuration

Für Pascal-XT V<version> wird BS2000 ab Version <version> benötigt, d.h. BS2000/OSD-BC ab <version>[, OSD/XC ab <version>].

- Pascal-XT V2.2 is loadable under the BS2000 >= V9.5 operating system.
 - Pascal-XT V2.2 with the programming system requires SDF (System Dialog Facility) >= V1.4A.
 - Pascal-XT V2.2 requires the EDT >= V16.2 text editor as a subprogram. The EDT object modules are reloaded from the \$.EDTLIB library by default. Users may choose to enter different ID and library names interactively at installation time.
 - Pascal-XT V2.2 requires PLAM libraries (for the predefined packages). The necessary object modules for PLAM are expected in the \$.PLAMLIB library. PLAM >= V1.3 is required, irrespective of the operating system version.
- *1
- Pascal-XT V2.2B requires UTM V3.2 since only the new UTM interface is supported (via the ILCS= Inter-Language Communication Services).
- Pascal-XT subprograms which are linked to a Pascal-XT runtime system <= V2.2A use the previous IUTMHLL interface and can run with both UTM V3.2 and UTM versions earlier than this.
- When the Pascal-XT system is installed, the LMSCONV product included in the BS2000 basic configuration is used. It must be under \$TSOS.

3.3 Product installation

3.3.1 General information

There are two ways of installing the Pascal-XT system:

- 1) as a statically linked version
- 2) as a common memory pool version

There are XS and NXS variations for each type of installation:

XS variation:

The programming system runs in the upper address space (> 16 Mbytes). Only XS computers support this option. This XS variation can only be executed if SDF has been loaded.

NXS variation:

The programming system runs in the lower address space (< 16 Mbytes). Both XS and NXS computers support this option.

You cannot install an XS variation on an NXS computer.

The Pascal-XT programming system needs SDF in order to analyze the commands entered. The necessary syntax files can be installed

*1

*1

as user syntax or merged into the system syntax (see 2.3.3).

The syntax files of version 2.2A and 2.2B are identical.

*1

*1

The PASSUP-XT V2.2B library with the predefined packages can also be used by Pascal-XT V2.2A.

Recommended steps for installing the system:

- Catalog the transfer files under the desired ID.
- Install the Pascal-XT system by calling the SINPRC.PASCAL-XT.022 installation procedure.
- Install the SDF syntax file of the Pascal-XT programming system (see above).
- Following successful installation, delete the transfer files (/ER SYSPRG.PASCAL-XT., SYSLNK.PASCAL-XT., etc.).
- The "runtime system" delivery unit is not installed; all you have to do is transfer the runtime library to any ID.

3.3.2 Installation procedure for the programming system

Call the SINPRC.PASCAL-XT.022 procedure to install the Pascal-XT system. Installation can be performed under any ID.

The installation procedure displays English or German message texts, at the user's choice. Specify the appropriate message file

SYMSV.PASCAL-XT.022.D (German messages) or
SYMSV.PASCAL-XT.022.E (English messages)

as a parameter when you call the installation procedure.

The installation procedure calls up the SINPRG.PASCAL-XT.022 installation program which prompts the user for the following information:

- 1) Do you want to use the statically linked or common memory pool version?
- 2) When installing on an XS system, do you want to use the XS or NXS variation?
- 3) When installing under \$TSOS, do you want to install the Pascal-XT system under some other identifier?
- 4) Do you have the EDT >= V16.2 link module library cataloged as \$.EDTLIB? If your library is not cataloged under \$. (default: \$TSOS) and EDTLIB you need to enter the ID and library name.

The system uses the above information to generate a temporary procedure containing the necessary modifications. This procedure is automatically started and deleted when finished.

3.3.3 Creating the syntax file

The SDF syntax file required by the Pascal-XT system can be installed either as a user syntax file under any Pascal-XT user ID or in the system syntax file under TSOS. In the latter case, you get only one syntax file.

System syntax file SYSSDF.PASCAL-XT.022.SYSTEM

This syntax file must be merged into the system syntax file by using the procedure described below. Under this type of installation, you get only one central syntax file.

*1 A procedure to merge the syntax files will be supplied by SOLIS.
*1 Once the procedure has been executed, the newly created system
*1 syntax file must be activated (see /3/).

User syntax file SYSSDF.PASCAL-XT.022.USER

This syntax file must be installed by the file name of SDF.USER.SYNTAX under every ID that will be used to call up the Pascal-XT system. It may also be copied to an existing user syntax file (see /3/). This type of installation is only recommended if the Pascal-XT system is intended for a small group of users for which the system syntax file does not need to be modified.

3.3.4 Files generated under the installation ID

The installation procedure installs the following files with the SHARE=YES and ACCESS=READ attributes under the installation identifier:

\$instken.PASCAL-XT	Statically linked Pascal-XT programming system
	or
	Starter for calling the Pascal-XT programming system
\$instken.PASLIB-XT	PLAM library containing the runtime system modules, the prelinked debugging aid PATH, and the implementations of the predefined packages. This library is needed for Pascal-XT programs to be linked statically.
\$instken.PASSUP-XT	PLAM library containing the specifications of the predefined packages.
\$instken.PASCAL-XT.LOADLIB	PLAM library which is only generated for the common memory pool version. The programming system is loaded from this library.

The syntax file SDF.USER.SYNTAX is required only when the SYSSDF.PASCAL-XT.022.SYSTEM syntax file is not merged into the system syntax file.

3.4 Product use

*3 Courses for Pascal-XT V2.2B20 are offered by Fujitsu Technology
*3 Solutions GmbH (<http://www.ts.fujitsu.com/services>) angeboten.

3.5 Obsolete functions (and those to be discontinued)

none

3.6 Incompatibilities

To avoid runtime errors you should note the following:

- *1 - Objects generated with Pascal-XT V2.2A can be linked to the
*1 V2.2B runtime system. However, as errors have been eliminated
in the new compiler version, it is advisable to relink the ob-
jects.
- *1 - Objects generated by the V2.2B compiler should not be linked
*1 to a runtime system earlier than V2.2B since errors have
*1 been eliminated in the new runtime system.
- *2 - After using the DEFINE-PROJECT-FILE statement pre version
*2 2.2B10 project files as well as new project files can not be
*2 used by pre version 2.2B10 programming systems any more.
- The use of the predefined package EDTADAPTER is dependant
of the version of the installed EDT. Before use, please check
the interface version (via function EDT_INTERFACE_VERSION).and
lookup the allowed EDT commands in the EDT manual.
- Interface version 1 is not supported anymore since EDT V16.4.
The use of procedure SET_EDT_INTERFACE_VERSION is ineffective.
Executing such commands results in a SYSTEM_ERROR(2251).

3.7 Restrictions

- When installing the Pascal-XT programming system in the upper address space you should note the following:

The RUN statement must not be used to start programs that have been prelinked to the runtime system to form a main module. Main modules that are not linked to the runtime system can be executed with RUN without any problem at all.

- *1 - When using the predefined package EDTADAPTER, then do not send the command HALT to the EDT. Additional calls of the EDT afterwards will have unpredictable results.
- *1 - When using the predefined procedure ASSIGNFILE, the range of values for the attribute MAXLINELENGTH must lie between 1 and 32759.
- *1 - At present the occurrence of a Pascal-XT MEMORY ERROR will lead to an "ABNORMAL PROGRAM TERMINATION" message after ILCS aborted the program.

3.8 Procedure in the event of errors

If an error occurs, the following error documents are needed for-diagnostics:

A detailed description of the error condition, indicating whether and how the error can be reproduced.

4 Hardware support

*3 PASCAL-XT V2.2B20 will run on all processors supported by BS2000 since version 9.5.