# Software Product Description

# DIGITAL CLASSIFIED SOFTWARE

# PRODUCT NAME: PRO/Tool Kit COBOL-81, Version 2.1

SPD 40.24.00

#### **DESCRIPTION:**

PRO/Tool Kit COBOL-81 is a high level language for business data processing that generates programs for execution under control of the P/OS Operating System. It is based upon the 1974 ANSI COBOL Standard X3.23-1974 and includes some of the features planned for the next COBOL standard. This COBOL-81 is compatible with COBOL-81/RSX and COBOL-81/RSTS/E, shares some common syntax with VAX-11 COBOL, and includes various DIGITAL extensions to COBOL, including screen handling at the source language level

PRO/Tool Kit COBOL-81 is designed to meet the low-intermediate level requirements of the United States government, as described in FIPS PUB21-1. Many of the individual modules are designed to meet the high level requirements, as described below:

ANS-74 MODULE	Level Supported by PRO/Tool Kit COBOL-81	FIPS PUB21-1 Requirements for High Level
Nucleus	2*	2
Table Handling	2	2
Sequential I/O	2	2
Relative I/O	2	- 2
Indexed I/O	2**	2
Segmentation	2***	2
Library	1+	2
Debug	***	2
Interprogram Communication	1	2
SORT/MERGE	****	2
Communication	-	2

- \* The Nucleus module complies at level 2, except that the ALTER statement and ALPHABET IS literal clause are not supported.
- \*\* P/OS Hard Disk only.
- \*\*\* The Segmentation module complies at level 2, except that independent segments from level 1 are not included.
- \*\*\*\* PRO/Tool Kit COBOL-81 uses an interactive symbolic debugger, which may be substituted for the Debug module at all but the high level.

- \*\*\*\* Sorts and merges cannot be run from PRO/Tool Kit COBOL-81. Independent sort utilities must be used.
  - + The Library module includes a partial level 2 REPLACING facility.

PRO/Tool Kit COBOL-81 shares many common features with VAX-11 COBOL. These features are implemented with the same syntax and semantics on both compilers. Code developed using PRO/Tool Kit COBOL-81 may be migrated to VAX-11 COBOL.

The following DIGITAL extensions to COBOL are implemented in PRO/Tool Kit COBOL-81:

- Screen handling is implemented as extensions to the DISPLAY and ACCEPT statements. The DIS-PLAY statement enables the programmer to display information or prompts anywhere on a video screen. The ACCEPT statement takes information typed anywhere on the screen and returns the value to a running COBOL-81 program. If requested, the ACCEPT statement can convert data to a numeric format. Supported terminal types are recognized at run-time from information provided by the operating system.
- RMS-STS and RMS-STV special registers may be examined to assist debugging. These registers contain status values from the RMS file system.
- File sharing features enable more than one task to access data at the same time.

The following utilities are provided to assist the PRO/-Tool Kit COBOL-81 programmer:

- BLDODL (Build ODL), which merges Skeleton Overlay Descriptor Language (SKL) files generated by COBOL compilations into a single Overlay Descriptor Language (ODL) file.
- RFRMT (Reformat), a utility that converts source programs from terminal format to conventional ANS COBOL and vice versa.

PRO/Tool Kit COBOL-81 consists of a compiler and an Object Time System/Library. The compiler executes on a Tool Kit host, and produces an object module from a source program. The compiler is capable of producing a source listing with embedded diagnostics indicating the line and position of a source code error, a data-name map, a procedure-name map, and a cross reference listing in alphabetic order.



October 1983 AE-Z764A-TH Object modules produced by the compiler can be linked with other object modules produced for P/OS by either the MACRO-11 Assembler or the COBOL-81 language processor. These subprograms are accessed with the CALL statement.

PRO/Tool Kit COBOL-81 includes an interactive symbolic debugger that includes the following features:

- SET and CANCEL breakpoints by line number, paragraph name, or section name.
- DISPLAY contents of a data name
- DEFINE and UNDEFINE synonyms
- SHOW synonyms or breakpoints
- MOVE literal to data-name
- PROCEED (resume program execution)
- STOP (stops program execution)
- HELP facility

PRO/Tool Kit COBOL-81 file I/O operations are controlled at run time through the RMS data management software. This method of record I/O supports sequential, relative and indexed file operations.

# **MINIMUM HARDWARE REQUIRED:**

For application any valid P/OS system configuration with an RCD51 and MSC-11 memory option and at least 2000 free blocks on the RCD51.

For application execution, any valid P/OS system configuration.

#### **OPTIONAL HARDWARE:**

None

# PREREQUISITE SOFTWARE:

PRO/Tool Kit, Version 1.0

#### **OPTIONAL SOFTWARE:**

None

#### TRAINING CREDITS:

None

#### SUPPORT CATEGORY:

DIGITAL SUPPORTED

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PRO/Tool Kit COBOL-81 is available only on RX50 Double Density 51/4" Diskette distribution media.

QBA19-A3 Single-use license, binaries, documentation, support services.

Miscellaneous Options

QBA19-GZ Documentation-only kit.

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