

**DR DOS SYSTEMS BUILDERS KIT**

**PRODUCT BRIEF**

**Description**

The DR DOS Systems Builders Kit combines the documentation and BIOS source code necessary for system integrators to take advantage of the DOS Application Programming Interface (API), and to implement either a Disk-based or a ROM-based DR DOS system. The BIOS source allows DR DOS to be customised to best suit the implementors target hardware, and ultimately best serve their market.

**Contents**

The DR DOS System Builders Kit includes:

- Full Executable DR DOS Operating System
- DR DOS BIOS Source code and build files  
Providing all the source necessary to customise the DR DOS product to execute from ROM or operate on specialised hardware.
- DR DOS Users and Reference Guide  
Documents the DR DOS user interface and describes all the DR DOS commands, explaining the various features used to execute application programs, and how to use the utility programs.
- DR DOS System and Programmers Guide  
Describes the DR DOS Application Programming Interface (API), using and writing device drivers and the structure of, and how to modify the DR DOS BIOS.
- ROMming Implementation Guide  
Describes in detail how to implement DR DOS in ROM using a working example.

**Tools Required**

In order to re-build the DR DOS BIOS, the system implementor will need to supply the following tools.

- BORLAND TURBO C® V1.5
- LATTICE MAKE V2.20b (or later)
- MICROSOFT® MASM V4.00 (or later)
- MICROSOFT® LINK V3.51 (or later)

These utilities are not supplied with the System Builders Kit as supplied by Digital Research.

## DR DOS OVERVIEW

**D**R DOS is a single-user single-tasking DOS 3.x compatible Operating System designed to operate on IBM PC/XT/AT, PS/2 and Compatibles. Users will be able to run any application that has been written to operate under the DOS Operating System.

DR DOS can run either as a standard Disk based Operating System for Desktop and Laptop PC's, or can be stored in and executed from Read Only Memory (ROM). This is ideal for Portable, Notebook, Pocket and Embedded Systems, especially when coupled with the unique DR DOS power saving technology for battery powered machines. The increased memory available also makes DR DOS the ideal choice for Network users, and Dedicated Network workstations.

For developers of Embedded Systems, this is an ideal opportunity to use an industry standard operating system, rather than invest time and money in producing a propriety solution.

This also means that embedded applications can be developed using readily available DOS tools and utilities, and then supplied in standard .COM or .EXE format.

## DOS COMPATIBILITY

**D**R DOS is regularly tested for compatibility with existing DOS based applications by VERITEST Inc. A test certificate can be obtained from Digital Research listing over 70 of the top DOS applications and system extensions such as Microsoft WINDOWS/386<sup>®</sup>, DESQVIEW 386<sup>™</sup> and NOVELL<sup>®</sup> NETWARE<sup>®</sup>.

## DR DOS in ROM

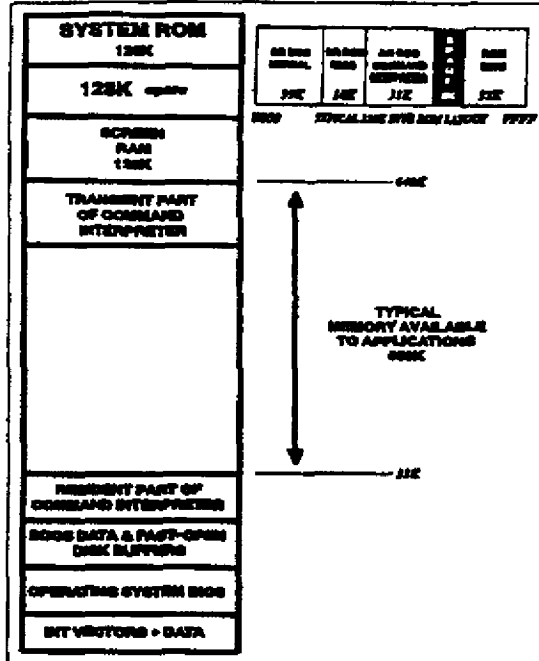
**T**he System Builders Kit contains a sample BIOS in source form for the IBM PC/XT/AT, and PS/2 Series and Compaq Deskpro 386 and 386/SX that can be used as the basis for customisation. This source includes four sample implementations of DR DOS in ROM. The system implementor will be required to describe their hardware in terms of:

- The type and amount of ROM available
- Presence of hard and/or floppy disk drives
- Specify if the DR DOS Kernel is to execute from ROM or from RAM
- Specify the location of system files such as COMMAND.COM, CONFIG.SYS and AUTOEXEC.BAT
- Availability of custom hardware
- Optimize the size of the DR DOS BIOS

In this way, the system integrator can fine tune the DR DOS Operating System to offer performance, flexibility and technical advances unequalled by other operating systems. With the DR DOS Kernel executing from ROM, users can benefit from over 609K available memory to run DOS applications, Network software and TSR programs.

**CONFIDENTIAL TREATMENT REQUESTED**

System integrators may consider implementing changes to their hardware at the design stage to take full advantage of the ability of DR DOS to execute from ROM. For example, many PC/XT/AT motherboards do not provide sockets to support 128K of ROM as standard. Also many ROMBIOS vary in size from 32K to 64K which will affect how much ROM will be required.



AN EXAMPLE DR DOS ROM BASED SYSTEM

**OTHER CONSIDERATIONS**

Once the System integrator has defined their hardware, the DR DOS ROMDisk utility provided will help to produce files that are ready for programming into their ROM chips, which may be EPROM or FLASH EPROM. In order to achieve this they will require the appropriate hardware which gives the ability to erase and program these chips.

As well as licensing DR DOS, the system integrator will need to ensure that they adhere to the licensing requirements of their chosen ROMBIOS when supplying this on their hardware. For PC compatible hardware, an IBM PC compatible ROMBIOS will be required for use with DR DOS.

On NON-PC compatible hardware, the system integrator can define the level of functionality required in the BIOS for their hardware, and configure the DR DOS BIOS accordingly.

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System integrators also have the ability to add custom utilities to the DR DOS system. This may be as simple as a utility to update the real time Clock on their hardware, or a sophisticated utility to configure the CMOS RAM. By the addition of these custom utilities, the system integrator can offer significant added value to the final system solution.

### AVAILABILITY

The DR DOS System Builders Kit is sold to system integrators to allow customisation of the product. It includes a full executable DR DOS Operating System, and is available in English, French or German versions. It can be purchased directly from Digital Research Customer Services on (0635) 35354.

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