Inventronik GmbH.

Kompetente Lösungen für Ihre Ideen

CF-Cards for Suska-III-C

Technical Documentation

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Introduction

The Suska-III-C Hardware allows the use of compact flash (CF) cards as hard disk drives. Inventronik GmbH's portfolio of embedded product includes CF cards pre-installed with HDDRIVER hard disk management software and administration tools. These cards can be used with all TOS operating systems beginning with version 1.04 as well as with emuTos, MagiC and MINT. For best compatibility there are two different versions available. The TOS compatible CF card 'CF-TOS' and the TOS/Windows™ compatible version CF-TOSWIN.

CF-TOS card

The card 'CF-TOS' is a TOS compatible hard disk drive. For best compatibility this card is pre-configured with four partitions of about 500MB each and requires TOS operating system versions 1.04 or up.

The hard disk driver HDDRIVER and the complete software included with HDDRIVER (in it's most recent version 8.23) is pre-installed on the C partition. To create a driver floppy disk, it is sufficient to copy the contents of the HDDRIVER directory to a floppy disk. The configuration of the CF-TOS card provides about 2GB of available hard drive storage. With this CF card it is not possible to exchange data directly (via a card reader) between Suska-III-C and a Windows™ PC.

CF-TOSWIN card

The card CF-TOSWIN is compatible with TOS and Windows™ operating systems. It is configured with one partition of 512MB. This partition size requires a TOS operating system version 1.04 or up.

TOS is not able to boot from TOS/Windows™ compatible partitions, so HDDRIVER is not pre-installed on the CF card as hard disk driver. The additional software included with HDDRIVER in it's most recent version 8.23 is pre-installed for your convenience. To create a driver floppy disk, it is sufficient to copy the content of the HDDRIVER directory to a floppy disk.

The CF disk is usable if HDDRIVER is started from another partition like any ACSI or SCSI disk, installed with the HDDRIVER utilities. Another possibility is to start HDDRIVER from a connected floppy disk drive (the driver must be located in the AUTO directory of the floppy). The arrangement as TOS/Windows™ compatible disk provides 512MB of available hard drive storage.

A data exchange between Suska-III-C and a Windows™ PC is possible using a simple card driver. This makes the installation of new software is very comfortable. The data transfered is installable on a CF card of the CF-TOS type using a third hard drive for example connected to the ACSI or the SCSI interface of Suska-III-C.

Operation

The operation of the CF cards described above is fairly simple. Just plug the pre-installed cards into the CF card holder on the front of Suska-III-C. After the boot process (see hints above), the CF disks are operable without any additional requirements.

Driver Installation

For the process required to install the HDDRIVER we refer to the detailed documentation included with the HDDRIVER. Normally it should not be necessary to change the installation of the CF-TOS or CF-TOSWIN cards. However, if it should be necessary, the installation can be done using the tools on the diskette together with the CF card. Another recommendation is to install from an image file which has been saved as a backup.

Handling of Card Images

Creating an image of the CF cards to store on big hard disk drives of PCs or digital versatile disks (DVD) is recommended. The recovery of defective data on the cards would then be very simple. We will describe the recovery process using the program dd (disk dump) included with every Linux distribution. For Windows™ users, there are several commercial products for the backup management or cloning of hard drives which we will not describe further.

Creating an Image with Disk Dump (dd)

For the data transfer, an internal or external CF card reader is required. We assume an already installed and recent Linux operating system. If an external card reader is used, it is connected to a USB interface, and is managed by Linux normally as device sdb, sdc or sde depending on the number of connected hard drives.

After insertion of the CF card, create an image as follows (the image is for example stored to /home/wf/wftmp and is named cf-tos.img, the card reader is assumed sdb). The commands for the creation are entered via a terminal and look as follows:

dd if=/dev/sdb of=/home/wf/wftmp/cf-tos.img

When superuser rights are required (depends on the Linux installation) the command is:

sudo dd if=/dev/sdb of=/home/wf/wftmp/cf-tos.img

And for the recovery from PC to CF card:

dd if=/home/wf/wftmp/cf-tos.img of=/dev/sdb

respective:

sudo dd if=/home/wf/wftmp/cf-tos.img of=/dev/sdb

For more information concerning disc dump (dd) or the use of the Linux operating system refer to "man dd", numerous news groups or online documentation.

Scope of Supply

The CF cards are delivered with the following positions:

1. CF-TOS respective CF-TOSWIN card.

2. Installation manual of the HDDRIVER.

3. Serial number of the HDDRIVER.

4. Driver disk.

5. This documentation.

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