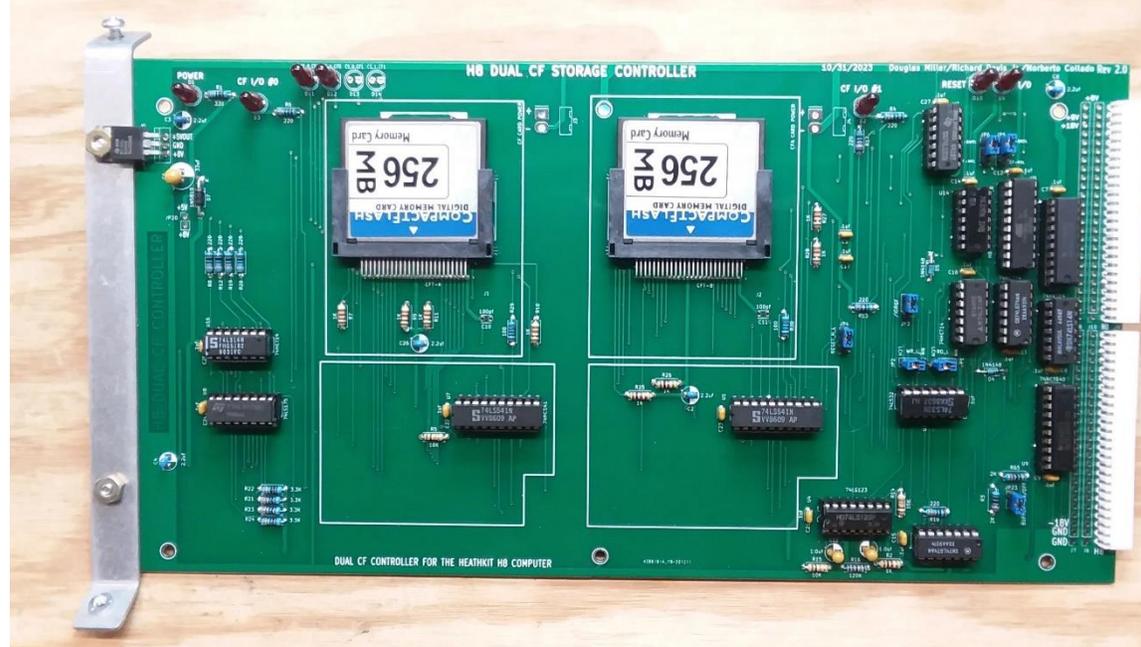


2023

H8-CF-Controller HDOS Boot 32KB Monitor



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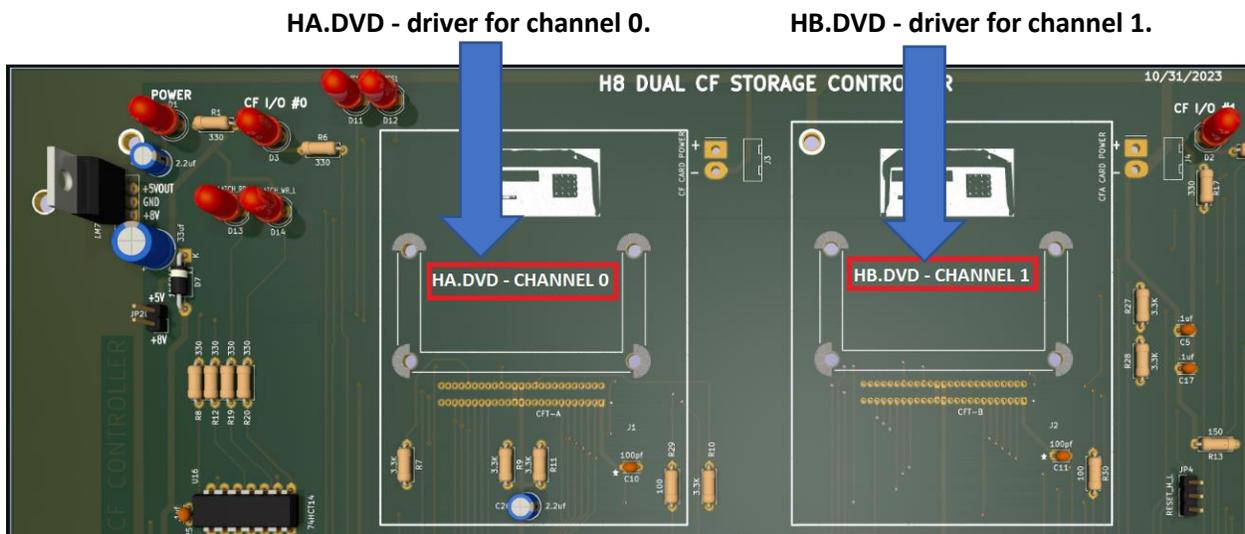
H8 Dual CF (Compact Flash) Drivers and Applications for *HDOS* *ONLY* For 32K Monitor on Z180 V5, Z40 V4, and 8080A V1 CPU boards V1.0

INTRODUCTION

Note: Link to Image and HDOS Drivers:

http://koyado.com/heathkit/New-H8-Website/download/hcf_32kmonitor_20230330_1930.zip

This document explains how to install and use the Dual CF board drivers and applications. There are separate HDOS drivers for each channel: **HA.DVD** and **HB.DVD**



The drivers support multiple logical drives on a single device. Due to the sector limit of 65535 on HDOS, the maximum size of a logical drive is ~16MB. Either HDOS 2.0 or HDOS 3.0 may be used however HDOS 3.02 is recommended for the best overall experience.

For the purposes of this document and to help better understand, the

Dual CF Drive hierarchy is as follows:

CF Channel: 0 or 1

- Logical Drive: 0-n (Where n = the maximum number of logical drives-1)
 - Partition: SY0-SY7 for HDOS, A-E for CP/M

NOTE: Please read this documentation thoroughly before attempting.

WHAT YOU NEED

- H8 w/8080 or Z80 CPU, 64K RAM, H8-4 Serial board, H17 w/2 drives
- H8 Dual CF Controller Board (v2.x) w/2 256MB (or larger) CF cards
- At least 4 hard sector floppy disks (or soft sector if using a VSG)
- PC w/RS-232 serial interface and H8Utility program installed
- RS-232 cable connected between the PC and H8
- Z67-IDE+ booting HDOS

DRIVER INSTALLATION

Using a bootable HDOS floppy disk (which must have: INIT.ABS, PIP.ABS, SET.ABS and SYSGEN.ABS), do the following:

- Boot HDOS on SY0:
- Place the driver disk in SY1: and mount it.
- Use PIP to copy the following files to your SY0: disk.

HA.DVD

HB.DVD

- Use PIP to copy the following files to your SY1: disk.

HCFPREP.ABS

HCFPART.ABS

HCFADDBT.ABS

HCFFXBO.ABS

- Delete DK.DVD and LP.DVD files if they exist on the HDOS boot disk.
 - INIT may fail loading the Hx.DVD drivers if these are present.
- Leave the driver disk in SY1:, reboot HDOS and mount SY1:

❖ HCFPREP.ABS - Preparing the CF for use as a drive

- SY1:HCFPREP 200 <channel> (where <channel> is 0 or 1)
- Read the warnings and proceed by typing "YES" and press <RETURN>
- HCFPREP will display the maximum number of logical drives that can be created. You will be prompted for the number of logical drives you want to create (default is 1). Enter the desired number of logical drives to create and press <RETURN>. You may press <CTRL-C> at any time to abort.
- At the prompt to proceed, press P <RETURN> to continue. HCFPREP will now initialize each logical drive for the partition manager.

❖ HCFPART.ABS - Creating partitions with the partition manager

NOTE: HDOS can only support 256 clusters so the bigger the partition, the more sectors that will be used by a single file. The partition manager has some predefined partition choices. Option 'G' is the recommended choice which creates 8 HDOS drives (SY0-SY7) within the partition. There is a custom option which allows you to customize your own partitions.

Partition the CF drive using HCFPART and the following instructions:

- SY1:HCFPART Hx: (where x is A for channel 0 and B for channel 1)
- At the prompt to proceed, press P <RETURN> to continue or <CTRL-C> to abort.
- Ignore the WARNING / Error messages regarding Bad Sector Table(s) and Superblock Checksum(s) and press <RETURN> at the prompt.
- The existing partition map will be displayed and you will be asked if it is OK. Press 'Y' to proceed.
- A list of predefined partitions will be displayed. Unless you are familiar with partitioning, it is recommended that you select 'G' which creates 8 equal size HDOS drives or select 'A' for all CP/M.
- The partition map will be redisplayed. Press 'Y' to continue.
- Press <RETURN> when prompted to enter a boot string.
- Press <RETURN> to NOT print the partition information.

NOTE: Repeat the above steps 3-8 for each logical drive until done.

INITIALIZING THE PARTITION(S)

Now that you have prepared and partitioned the CF drive, you may now initialize each logical drive partition using the HDOS INIT utility.

NOTE: You may only use one logical drive at a time on each channel. To select the desired logical drive, use the HDOS SET command.

1. SET Hx: DRVNUM n
 - a. Where 'x' is 'A' for HA.DVD Channel 0 or 'B' for HB.DVD Channel 1
 - b. Where 'n' is the logical drive number 0 - # of drives created-1

> INIT

2. At the "Proceed..." prompt, Type 'YES' and press <RETURN>.
3. Press <RETURN> after removing the floppies.
4. Follow the prompts and answer the questions. When prompted for: "Clear the entire partition?", type 'NO' and press <RETURN>. It's not necessary or desired to re-INITialize the CF drive.
5. At the "Enter Bad Sectors" prompt, press <RETURN>.
6. At the "Ready?" prompt, press <CTRL-D>.

7. At the "Device <SY0:>?" prompt, enter the next partition Hxn: and press <RETURN> -or- press <CTRL-D> twice to quit and proceed to step 9.

NOTE: Repeat the above steps 5-8 for each HDOS drive (Hx1-Hx7)

8. At the "Do you have..." prompt, reinsert the HDOS boot disk into SY0: and press <RETURN> to return to the HDOS prompt.

NOTE: Repeat the above steps 1-9 for each logical drive (0-n).

MAKING THE CF BOOTABLE FROM THE 32K MONITOR FOR Z180 V5.0/Z80 V4.X/8080A V1.0 CPU Boards

❖ **HCFADDBT.ABS** – Will make the partition bootable from the 32KB monitor.

- SY1: HCFADDBT 200 <channel> Where **channel** is 0 or 1)
 - It will go through all logical drives / partitions

In order to make a logical drive / partition bootable, you must run SYSGEN on each one you want to boot from. Do the following:

- SET Hx: DRVNUM n
 - Where 'x' is 'A' for HA.DVD Channel 0 or 'B' for HB.DVD Channel 1
 - Where 'n' is the logical drive number 0 - # of drives created-1

> **SYSGEN *.***

- Follow the prompts and choose device Hx0: as the destination.

NOTE: Do NOT SYSGEN drives Hx1-Hx7 as they won't be bootable.

Repeat the above steps as necessary for each logical drive.

NOTE: SYSGEN will swap the SY.DVD and Hx.DVD drivers on the destination CF drive. It is recommended that you rename the Hx.DVD file on the CF drive to DK.DVD (for H17) in order to avoid confusion with the drivers.

❖ **HCCFXBO.ABS** - Will fix the HDOS partitions and make them bootable

To be able to boot a logical drive, the booter that INIT installed must be fixed up. There is necessary information that must be written which INIT doesn't do. After all logical drives / partitions are INITIALIZED do the following:

- SY1:HCCFXBO 200 <channel> (Where channel is 0 or 1)
 - It will go through all logical drives / partitions.

BOOTING THE CF DRIVE

* To boot the CF from floppy, do the following:

- At the 32KB Monitor Console type:

H8: Boot FF-x:n

- Where x is the 0 for drive 0 or 1 for drive 1. Where “n” is the partition# for drive 0 or drive 1”
- Example:

NOTE: As only 1 CF card adapter is installed, you will see the CF timeout below when probing for the second CF card.

At MAX CPU speed it takes about 3 seconds to boot HDOS. No need to use floppies as you can backup the CF card using your PC Windows 10 OS. “**HDD RAW Copy Tool**” is a great tool to create backups.

SOURCE Device Selection - HDD Raw Copy Tool 1.02 Free

HDD RAW COPY TOOL 1.02 Free WWW.HDDGURU.COM



Please refer to the “[hcfreadme.txt](#)” for further information.

Link: <http://koyado.com/heathkit/New-H8-Website/download/hcfreadme.txt>

