

Documentation extraite de http://members.tripod.com/kmi9000/kmi_cmi.htm

Floppy controller QFC9:

WD1791 controller + FDC9229B PLL

QASAR control port:

FCE0-FCE1 (8" version)

FC70-FC71 ("Mini-Floppy" revision)

EPROM revisions:

DQFC910: for 8" drives (access selection via "HEAD LOAD")

DQFC911: for 3.5"/5.25" "Mini-Floppy" drives (access selection via "DS")

QDOS filesystem:

derived from Motorola's MDOS filesystem, 512512 Bytes total per drive or partition, fixed 128-Byte sector size, fixed 512-Byte cluster size, 8-Byte file size granularity, flat filesystem (no sub-directories), place for up to 160 files in root directory (see also OS-9 backup/conversion commands for QDOS below)

QDOS file extensions:

2-letter file extensions, upper-case file names (8 letters max.)

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QDOS 8" floppy format (Series I/II/IIx)

Drive: Mitsubishi M2896-63, Qume Q242, YE Data YD180

360rpm, single density (FM), soft sectored (1 index hole), 77 tracks/side, 26 sectors/track, 128

Bytes/sector, 500KBit/sec raw

single-sided -> total: 2002 sectors = 250.25KB formatted

double-sided -> total: 4004 sectors = 500.5KB formatted

Note:

There are two variants of the double-sided QDOS format: QDOS-6809 and QDOS-6800 ("old QDOS"), differing in the low-level sector-numbering scheme for side 1 (which is handled by the low-level driver and is transparent to the user as long as the device parameters are set appropriately).

For compatibility, Series IIx machines (running QDOS-6809) still employ the (old) QDOS-6800 format for *CMI sound-disks* (with the *system-disk* however having the new QDOS-6809 format).

QDOS Winchester drive format (Q077):

Drive: ???

QDOS parameters:

???

OS9 parameters:

7 heads, 219 tracks/head, 32 sectors/track, 256 Bytes/sector

total: 49056 sectors = 12264KB formatted

(OS9 devices: /wdv0, /wdv1)

QDOS-only system:

bootstrap in sector 0017, loads kernel via RIB in sector 0018

QDOS.SY (QDOS kernel, RIB at sector 0018)

QDOSOV0.SY (QDOS overlay: disk allocation)

QDOSOV1.SY (QDOS overlay: I/O and memory functions)

QDOSOV2.SY (QDOS overlay: I/O functions)

QDOSOV3.SY (QDOS overlay: file functions)

QDOSOV4.SY (QDOS overlay: file functions)

QDOSOV5.SY (QDOS overlay: chain file execution)

QDOSOV6.SY (QDOS overlay: shell (command interpreter))

QDOSER.SY (error messages)

typ. address space layout (CPU P2):
0000-007F: system variables
0080-00FF: bootstrap
0100-1FFF: QDOS system (kernel, overlays)
2000-3FFF: 8KB user program space
4000-7FFF: 16KB user program space
8000-BFFF: 16KB user program space or VRAM

CMI-6809 system:

bootstrap in sector 0017, loads kernel via RIB in sector 0018
CMIDOS.SY (customized QDOS kernel, RIB in sector 0018)
CMI.SY (CMI system code, loaded by kernel)
CMIERR.SY (error messages)
PROVER0.SY (page R system overlay)
PROVER1.SY (page R system overlay)
PRGROM.SY (page R graphics bitmaps + code)
LBFILE.SY (disk library)
Note: CMIDOS.SY is a customized QDOS kernel, containing only the necessary QDOS system services. CMI.SY is the cmi system software, containing a proprietary multi-tasking system for CPU P2 with a graphics/light pen user interface and real-time code for CPU P1. (Although QDOS-6809 supports Q256 and Q096 systems, CMI.SY for the CMI Series IIX runs only on Q256 hardware.)

typ. address space layout (CPU P2):
0000-BFFF: variable mapping (CMI system)
. 4000-7FFF: optionally mapped to CMI-07 RAM (AIC09)
. 8000-BFFF: optionally mapped to VRAM
C000-C7FF: RAM
C800-CFFF: RAM, for communication with CMI-28 (MIDI)
D000-DFFF: RAM
E000-E7FF: channel hardware
E800-EFFF: RAM
F000-FFFF: peripherals

typ. address space layout (CPU P1):
0000-BFFF: variable mapping (CMI system)
. 4000-7FFF: optionally mapped to CMI-07 RAM (AIC09)
. 8000-BFFF: optionally mapped to VRAM
C000-C7FF: RAM
C800-CFFF: RAM, for communication with CMI-28 (MIDI)
D000-DFFF: TVT/TVT2
E000-E7FF: channel hardware
E800-EFFF: RAM
F000-FFFF: peripherals