Vision QD6580

Vision QD6580 is VL-bus 2-channel IDE controller, used by QDI company in 1993 - 1994

Features
- two IDE channels
- PIO mode 3 and 4 with IORDY support
- Read-Ahead FIFO
- Post-Write Buffer

Used in: various controllers, e.g. QD6580, QD6580W/757, QD6580W/777, QD6580W/787
Manufacturer support: none.
Documentation available: none.
Drivers available: DOS, Win 3.1x, WinNT 3.5, OS/2 2.1

Programming

QD6580 has base address 0x30 or 0xB0 (jumper selectable).

base + 0 - R/W timing register for channel 0

> bit 0 to bit 3 - active time, count of VLB clocks
> > 0000 = 17 clocks 1111 = 2 clocks
> bit 4 to bit 7 - recovery time, count of VLB clocks
> > 0000 = 15 clocks 1101 = 2 clocks
> Power-on-setting: 0 for ID3=0, 0x0A for ID3=1

base + 1 - R/O - config register

> bit 0 - IDE controller base address: 0 = 0x170, 1 = 0x1F0
> bit 1 - QD chip base address: 0 = 0x30, 1 = 0xB0
> bit 2 - ID3, bus speed: 0 = >33 MHz 1 = <=33 MHz
> bit 3 - 1
> upper nibble: 1010 or 0101 is QD6580

base + 2 - R/W timing register for channel 1

> bit 0 to bit 3 - active time, count of VLB clocks
> > 0000 = 17 clocks 1111 = 2 clocks
> bit 4 to bit 7 - recovery time, count of VLB clocks
> > 0000 = 15 clocks 1101 = 2 clocks
> Power-on-setting: 0 for ID3=0, 0x0A for ID3=1

base + 3 - R/W control register

bit 0 - read - status of jumper JP5, no jumper = 1, jumper present = 0

     0 = Both Primary and Secondary IDE ports enable

       (channel 0 is hda and hdb, channel 1 is hdc and hdd)

     1 = Only Primary IDE port enable

       (channel 0 is hda, channel 1 is hdb)

     write - must be 1

bit 1 - read - status of jumper JP1, no jumper = 1, jumper present = 0

     0 = for disk and/or non-disk (ATAPI) peripherals

     1 = for disk peripherals only

     write - must be 1

bit 2 - read always 0, write - must be 1

bit 3 - read always 0, write - must be 1

bit 4 - read always 0, write - must be 1

bit 5 - R/O - status of ??

bit 6 - R/W - always set to 1 by DOS driver

bit 7 - R/W - this bit is set to 1 for non-ATAPI devices, probably Read ahead and/or post-write control?