

Future Domain IDE-16030

Data bus: 16-bit ISA

Peripheral bus IDE (ATA-2); dual channel

Command set ATA-2, SFF-8020, ATAPI CD-ROM, QIC-157 tape standards

Transfer method PIO mode 0, double-word (32-bit)

IDE interrupts IRQ 14; IRQ 15; IRQ 10; IRQ 11

IDE I/O ports 1F0h; 170h; 160h/168h; 1E8h

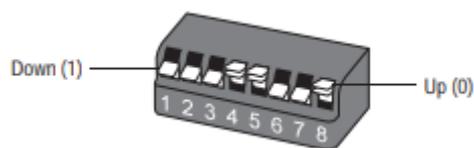
IDE-16030 dual-channel controller with BIOS (ISA-bus).

Contents

Future Domain IDE-16030.....	1
BIOS Memory Address	1
IDE Channels	2
Drivers	2
Troubleshooting	3

BIOS Memory Address

The IDE-16030 host adapter contains an advanced BIOS that supports hard drives larger than 528 MB and bootability from either IDE channel. In order to enable the advanced BIOS, switch BIOS down. The following figure illustrates a switch block and its up (0) and down (1) settings.



Use MEM-1 and MEM-0 to set the memory address for the host adapter BIOS. These switches allow you to avoid conflicts with either the system BIOS or with other add-in cards by changing the assigned BIOS address.

BIOS Memory Address			
Address	MEM-0	MEM-1	BIOS
C8000	0	0	1
CA000	1	0	1
CE000	0	1	1
DE000	1	1	1

IDE Channels

The IDE-16030 has two IDE channels; primary IDE-A (J1) and secondary IDE-B (J2) which support up to four IDE devices. Use switches IOS-0 and IOS-1 to set the I/O ports. Set switch IDE-B down to enable the IDE-B channel.

Note: I/O ports and IRQs are grouped in pairs

IDE Channels				
IO Port / IRQ				
IDE-A	IDE-B	IOS-0	IOS-1	IDE-B
1F0/14	170/15	0	0	1
170/15	160/10	1	0	1
160/10	150/11	0	1	1
150/11	170/15	1	1	1
	Disabled			0

You can attach the boot drive to the primary or secondary IDE channel. The hard drive boot sequence is 1F0h, 170h, 168h, 1E8h.

Make sure all hard disk drives connected to the IDE-16030 are set to **Not Installed** in system CMOS Setup. Refer to your computer documentation for more information.

Note: The system BIOS (CMOS defaults) is typically set to control the primary IDE channel. In order to use the IDE-16030 host adapter BIOS, you must set the Hard Drive Type in the system CMOS Setup to **Not Installed** and then save system settings. Refer to your computer user documentation for more information.

Drivers

Future Domain PowerIDE! Drivers (Adaptec & ADI/2).

Officially for these Adaptec controllers:

- IDE-16000/16002/16003/16010 series of controllers (ISA-bus)
- IDE-16020 controller with BIOS (ISA-bus)
- IDE-16030/16032/16042/16052 dual-channel controller with BIOS (ISA-bus)
- IDE-32000 dual-channel controller with BIOS (VL-bus)

<http://vogonsdrivers.com/getfile.php?fileid=2028&menustate=0>

Notes:

- The diagnostic that comes with the Future Domain drivers sees the card and the hard drive, but the PowerIDE! installer seems fussy about installing under Win9x. Looks like I need to manually put ATASPI16.SYS and FDATAHD.SYS in the config.sys if I want to use it under DOS.

- System says Windows 9x detected, refuses to install the dos driver. Solved by booting from floppy disk. Then it cannot find the compatible chip, but still 2 driver lines ATASPI16.SYS and FDATAHD.SYS are installed. => 1800 / 1800. Same super slow result like without driver.

Troubleshooting

The IDE-16030 has been configured to work with either single or dual IDE channel motherboards. The host adapter will display the following BIOS messages during the power-on self-test (POST):

```
Scanning for IDE controllers and devices...
Controller 0 at IO port XXXh, IRQ YY...
    Device 0 - ZZZ F/W Rev.
    Device 1 - ZZZ F/W Rev.
Controller 1 at IO port XXXh, IRQ YY...
    Device 0 - ZZZ. F/W Rev.
    Device 1 - ZZZ F/W Rev
```

Where:

XXX = the I/O port location of the IDE channels

YY = the IRQ selection of the IDE channels

ZZZ = the name of the IDE or EIDE devices

If you do not see the BIOS message or if you are having problems installing your EIDE host adapter, try the following:

1. Make sure the IDE-16052 BIOS is enabled, i.e., switch BIOS is set down.
2. Change the memory address of the BIOS. It might be conflicting with a video controller or other controller using a ROM BIOS.

Note: Make sure the EIDE adapter is not conflicting with another add-in host adapter or IDE channel on the motherboard.

If there is another EIDE host adapter or IDE connector on the motherboard, check the number of IDE connectors. If there is only one connector, then the primary IDE channel (I/O port 1F0h, IRQ 14) is in use. If there are two connectors, the primary and secondary IDE channels (I/O port 170h, IRQ 15) are in use.

To avoid conflicts, use an alternate IDE channel.

3. Make sure the EIDE device is correctly configured either as device 0 (master) or device 1 (slave). Refer to the device documentation for more information.

4. The IDE channel (1E8h/IRQ 11) might conflict with the COM 3 alternate status register (3EEh) when using certain types of communication software. Attach your serial device to a different COM port, or use a different I/O port for the IDE device.