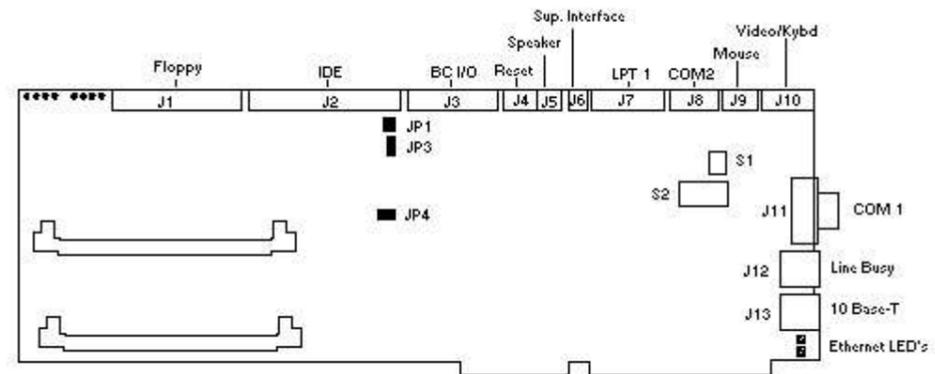


BC 4035 Quick Reference Guide

Board Layout



Connectors

J1 - Floppy diskette

1 ground	2 speed	3 ground
4 n/c	5 ground	6 n/c
7 ground	8 index	9 ground
10 motor on	11 ground	12 drive sel 2
13 ground	14 motor sel 1	15 ground
16 motor on 2	17 ground	18 direction
19 ground	20 stop step	21 ground
22 write data	23 ground	24 write gate
25 ground	26 track 0	27 ground
28 write protect	29 ground	30 read data
31 ground	32 side select	33 ground
34 disk change		

J2 - IDE Hard Disk

1 reset	2 ground	3 data 7
4 data 8	5 data 6	6 data 9
7 data 5	8 data 10	9 data 4
10 data 11	11 data 3	12 data 12
13 data 2	14 data 13	15 data 1
16 data 14	17 data 0	18 data 15
19 ground	20 n/c	21 n/c
22 ground	23 iow	24 ground
25 ior	26 ground	27 n/c
28 bale	29 n/c	30 ground
31 idint	32 n/c	33 sa1
34 n/c	35 sa0	36 sa2
37 cs5	38 hcs1	39 n/c
40 n/c		

J3 - BC I/O

1 gnd	2 n/c	3 ledsel-
4 lanled	5 ideled	6 txdiled
7 rxdiled	8 n/c	9 dtriled
10 dcdiled	11 spkr	12 resetsw-
13 ack	14 poll	15 mseclk
16 mse data	17 kelk	18 kdata
19 + 5vf	20 vsync	21 hsync
22 gnd	23 blu	24 grn
25 red	26 gnd	

J4 - Control Panel Connector

- 1 Resistor pull-up for Power on LED
 - 2 not used
 - 3 Reset switch (ground to reset computer)
 - 4 IDE Drive LED
 - 5 Ground
-

J5 - Speaker Connector

- 1 Speaker data
- 2 n/c

- 3 Ground
 - 4 +5V (speaker power)
-

J6 - Supervisory Port

- 1 ack (to supervisor)
 - 2 not used
 - 3 poll (from supervisor)
 - 4 not used
-

J7 - LPT1

This header requires a optional I/O adapter from Cubix. Attempting to connect a device directly to this connector will damage the board.

J8 - COM 2

- | | |
|-----------------------------|-----------------------------|
| 1 DCD (data carrier detect) | 2 RD (receive data) |
| 3 TD (transmit data) | 4 DTR (data terminal ready) |
| 5 GND (ground) | 6 DSR (data set ready) |
| 7 RTS (request to send) | 8 CTS (clear to send) |
| 9 RI (ring indicator) | |

Note: The COM2 header requires a optional I/O adapter from Cubix. Attempting to connect a serial device directly to this connector will damage the board.

J9 - PS/2 Mouse Connector

This header requires a optional I/O adapter from Cubix. Attempting to connect a PS/2 mouse directly to this connector will damage the board.

J10 - Video/Kybd Mux Connector

This header is for connection to the Optional Cubix Video Mux.

- | | |
|---------|-------------|
| 1 Red | 2 Ground |
| 3 Green | 4 Ground |
| 5 Blue | 6 Ground |
| 7 Hsync | 8 Ground |
| 9 Vsync | 10 mse data |
| 11 Kelk | 12 mse clk |

J11 - COM 1

1 DCD (data carrier detect)
 3 TD (transmit data)
 5 GND (ground)
 7 RTS (request to send)
 9 RI (ring indicator)

2 RD (receive data)
 4 DTR (data terminal ready)
 6 DSR (data set ready)
 8 CTS (clear to send)

J12 - Line Busy

1 n/c
 3 tip
 5 n/c

2 n/c
 4 ring
 6 n/c

J13 - 10 Base-t Ethernet

1 transmit data (+)
 3 Receive data (+)
 5 n/c
 7 n/c

2 transmit data (-)
 4 n/c
 6 receive data (-)
 8 n/c

Switch & Jumper Settings

Jumper JP1 & JP3 - CPU Speed

Factory configured - should not be changed.

JP1- Pins 1-2	JP1- Pins 3 -4	JP3	CPU Speed
OFF	ON	1-2	SX-25, DX-25, DX2-50
OFF	OFF	1-2	SX-33, DX-33, DX2-66, DX4-100
ON	OFF	2-3	DX-40 (must have 40MHz chipset)

Warning! P1 and JP3 are configured at the factory for the CPU type installed and should not be changed

Jumper JP4 - Processor Type

JP4	CPU Type
OFF	DX, DX2
ON	SX
Warning! JP4 is configured at the factory for the CPU type installed and should not be changed.	

Switch 1 - Reset on Loss of DCD or DSR

Reset Condition	Position	
	1	2
Reset when DSR drops on COM1	ON	OFF
Reset when DCD drops on COM1	OFF	ON
Reset when DCD or DSR drops on COM1	ON	ON
*Reset Disabled	OFF	OFF
*Factory Setting	OFF	OFF
Note: If positions 1 and 2 are both set to ON, then loss of DSR will reset the BC 4035.		

Switch 2 - Board Options and Interrupts

Function	Position						
	1	2	3	4	5	6	7
*Enable Video Controller	---	ON	---	---	---	---	---
Disable Video Controller	---	OFF	---	---	---	---	---
Cubix Supervisory Interrupt to IRQ 10	---	---	ON	OFF	---	---	---
*Cubix Supervisory Interrupt to IRQ 15	---	---	OFF	ON	---	---	---
No Cubix Supervisory Interrupt	---	---	OFF	OFF	---	---	---
*PS/2 Mouse Interrupt on IRQ 12	---	---	---	---	ON	---	---
PS/2 Mouse Interrupt on IRQ 12 Disabled	---	---	---	---	OFF	---	---
Ethernet Interrupt on IRQ 3	ON	---	---	---	---	ON	OFF
*Ethernet Interrupt on IRQ 5	ON	---	---	---	---	OFF	ON
Disable Ethernet Controller	OFF	---	---	---	---	OFF	OFF
*Factory Settings	ON	ON	OFF	ON	ON	OFF	ON

IRQ, I/O, SIMM's & Memory Map

SIMM Definitions

SIMM Type	Banks	Total Memory
1M x 36	Single	4MB

2M x 36	Double	8MB
4M x 36	Single	16MB
8M x 36	Double	32MB

Simm Module Configuration

All BC 4030 system memory is provided in 72-pin by 36 bit standard 70ns SIMM modules in 4MB or 16MB versions. For the proper placing of SIMM modules, see table below.

SIMM SOCKET 1	SIMM SOCKET 2	TOTAL MB
4		4
8		8
8	4	12
8	8	16
16		16
32		32
32	4	36
32	8	40
32	16	48
32	32	64

IRQ Information

IRQ	Description
0	Timer Clock
1	Keyboard
2	Second PIC controller
3	COM2 / Ethernet (S2)
4	COM1
5	Available / Ethernet (S2)
6	Floppy disk controller
7	LPT1
8	Real time clock
9	Redirected IRQ 2
10	Available / IES (S2)
11	Available / SCSI
12	Available / Mouse (S2)
13	Math coprocessor
14	Hard disk controller
15	Available / IES (S2)

I/O Map

ISA Ports	Description
0000 - 00FF	Various "AT" functions in 499/82C206chip and keyboard controller
01F0 - 01FF	IDE hard drive interface
02F8 - 02FF	COM2
0300 - 0317	Ethernet controller
03A0	Cubix Supervisory System interface
03B4 - 03B5	VGA
03BC - 03BF	LPT1
03C0 - 03CF	VGA
03D4 - 03D5	VGA
03F0 - 03F7	Floppy / IDE
03F8 - 03FF	COM1

Memory Map

F800-FFFF	Reserved for AMI ROM BIOS.
F700-F7FF	Available
F000-F6FF	Reserved for AMI ROM BIOS
D000-EFFF	Available as Expanded(EMS) or Upper Memory (UMB)
C800-CFFF	Remote Boot EPROM if enabled.Otherwise available.
C000-C7FF	Reserved for VGA BIOS
B800-BFFF	VGA/CGA Video Memory
B000-B7FF	VGA/Mono Video Memory
A000-AFFF	VGA Video Memory
0000-9FFF	Conventional DOS