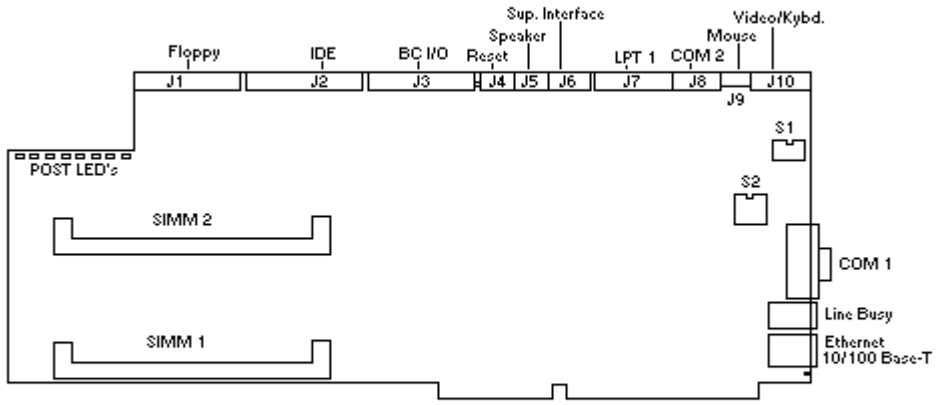
BC 5190/5120/LE
Quick Reference Guide

Board Layout



Connectors

J1	Floppy Drive
J2	IDE Drive
J3	BC I/O
J7	LPT1
J8	COM2
J11	COM1
J12	Line Busy
J13	Ethernet

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 connector

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 kclk	18 kdata
19 + 5vf	20 vsync	21 hsync
22 gnd	23 blu	24 grn
25 red	26 gnd	

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 - COMM 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.

J11 - COMM 1

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)	

J12 - Line Busy (RJ11)

1 n/c	2 n/c
3 tip	4 ring
5 n/c	6 n/c

J13 - 10 Base-t Ethernet (RJ45)

1 transmit data (+)	2 transmit data (-)
3 Receive data (+)	4 n/c
5 n/c	6 receive data (-)
7 n/c	8 n/c

Switch Settings

Switch 1 - Reset on Loss of DCD or DSR

	sw1	sw2
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 settings (default)	off	off

Note: If positions 1 and 2 are both set to ON, then loss of DSR or DCD will reset the BC processor.

Switch 2 - Board Options and Interrupts

	sw1	sw2	sw3	sw4	sw5
Supervisory IRQ to 10	on	off			
Supervisory IRQ to 15	off	on			
Disable Supervisory IRQ	off	off			
PS/2 Mouse on IRQ 12			on		
Disable PS/2 Mouse			off		
VGA Enabled					on
VGA Disabled					off
Factory settings (default)	off	on	on	off	on

Simms, IRQ's and Memory Map

Simm Module Configuration

All system memory is provided in 72-pin by 36 bit standard 70ns SIMM modules. For the proper placing of SIMM modules, see table below. Note that both banks must be filled with the same type of SIMM. No empty banks are allowed.

Simm Socket 1	Simm Socket 2	Total

4	4	8
8	8	16
16	16	32
32	32	64
64	64	128

IRQ Information

IRQ	Description
0	Timer Click
1	Keyboard
2	Second PIC controller
3	COM2
4	COM1
5	Available/Ethernet
6	Floppy Disk Controller
7	LPT1
8	Real-Time Clock
9	Redirected IRQ2
10	Available/IES (s2)
11	Available
12	Available/PS2 Mouse (s2)
13	Math Coprocessor
14	Fixed Disk Controller
15	Available/IES (s2)

I/O Map

0000-00FF	Various "AT" functions
01F0-01F7	IDE hard drive interface
02F8-02FF	COM 2
03A0	Cubix supervisory interface
03A8-03AF	IES serial port
03B4-03B5	VGA
03BC-O3BF	LPT1
03C0-03CF	VGA
03D4-03D5	VGA

03F0-03F7	Floppy/IDE
03F8-03FF	COM 1
PCI PORTS	
0CF8-0CFF	Used by PCI chipset
FF80-FF9F	Used by Ethernet controller

Memory Configuration

10000-7FFFF	127MB	Extended Memory
E000-FFFF	128KB	Reserved for system and PCI ROM BIOS
C800-DFFF	96K	Available as Expanded (EMS) or Upper Memory (UMB)
C000-C7FF	32K	VGA BIOS
B800-BFFF	32K	VGA/CGA Video Memory
B000-B7FF	32K	VGA/Mono Video Memory
A000-AFFF	64K	VGA Video Memory
0000-9FFF	640K	Conventional DOS