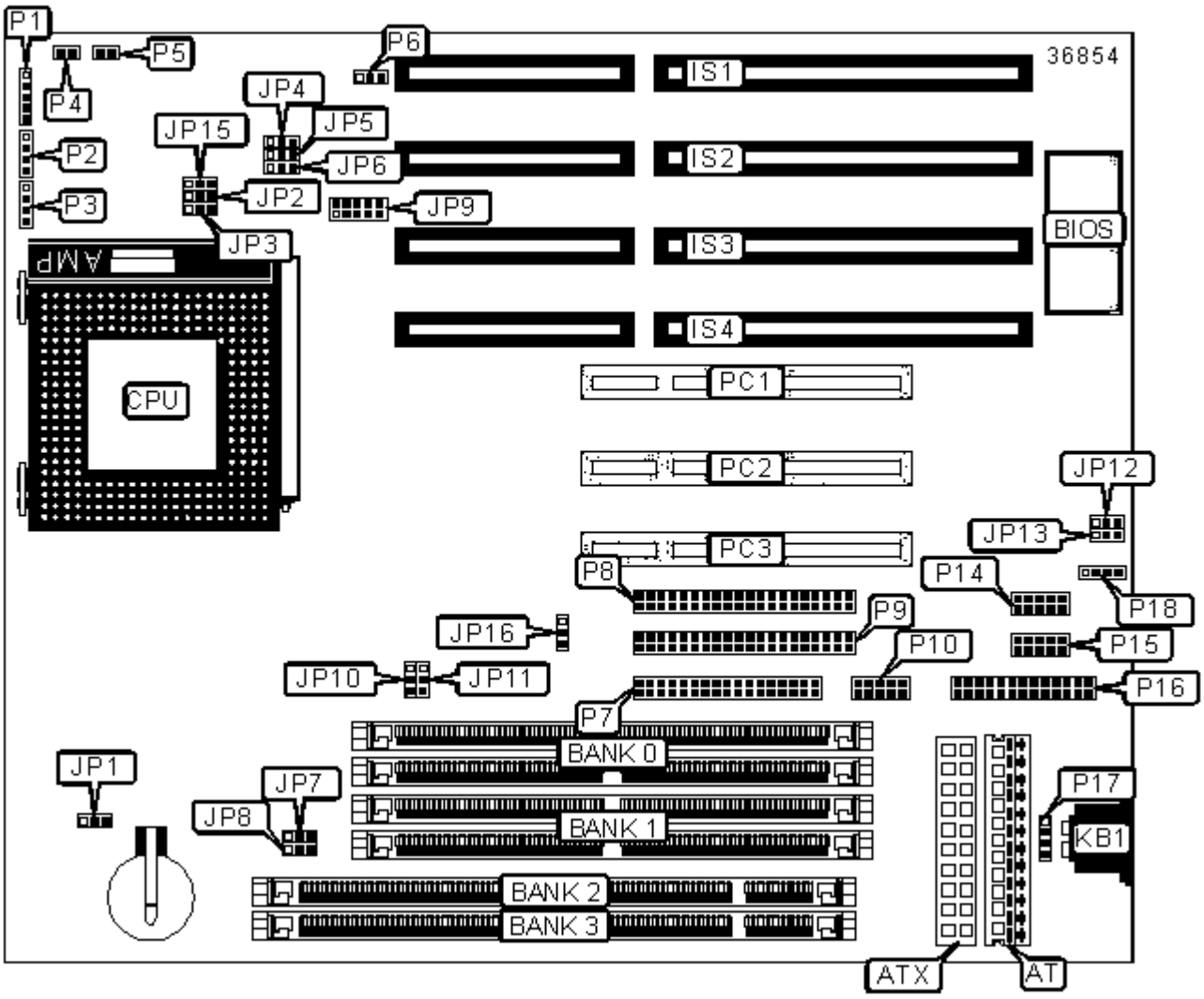
OCEAN INFORMATION SYSTEMS, INC.

RHINO 15

Device Type	Mainboard
Processor	CX 6X86/AM K5/AM K6/Pentium/Pentium MMX
Processor Speed	90/100/120/133/150/166/180/200/233MHz
Chip Set	Intel 430TX
Maximum Onboard Memory	256MB (EDO & SDRAM supported)
Cache	256/512KB
BIOS	Award
Dimensions	216mm x 228mm
I/O Options	32-bit PCI slots (3), 16-bit ISA slots (4), floppy drive interface, IDE interfaces (2), AT Keyboard port, parallel interface, PS/2 mouse interface, serial interfaces (2), USB interface, ATX power connector, AT power connector



CONNECTIONS			
Purpose	**Location**	**Purpose**	**Location**
AT power connector	AT	Floppy drive interface	P7
ATX power connector	ATX	IDE interface 1	P8
AT keyboard port	KB1	IDE interface 2	P9

16-bit ISA slots	IS1 - IS4	USB interface	P10
Power LED & keylock	P1	Serial interface	P14
Speaker	P2	Serial interface	P15
IDE interface LED	P3	Parallel interface	P16
Power switch	P4	PS/2 mouse interface	P17
Reset switch	P5	Unidentified	P18
CPU fan power	P6	32-bit PCI slots	PC1 - PC3

USER CONFIGURABLE SETTINGS			
Function		**Label**	**Position**
»	Modem-ring detected on COM2 selected	JP12	Pins 2 & 3 closed
	Modem-ring detected on COM1 selected	JP12	Pins 1 & 2 closed
»	Factory configured - do not alter	JP13	Unidentified
»	Factory configured - do not alter	JP16	Unidentified

SIMM CONFIGURATION		
Size	**Bank 0**	**Bank 1**
8MB	(2) 1M x 36	None
16MB	(2) 2M x 36	None
16MB	(2) 1M x 36	(2) 1M x 36
24MB	(2) 2M x 36	(2) 1M x 36
32MB	(2) 4M x 36	None
32MB	(2) 2M x 36	(2) 2M x 36
40MB	(2) 4M x 36	(2) 1M x 36
48MB	(2) 4M x 36	(2) 2M x 36
64MB	(2) 8M x 36	None
64MB	(2) 4M x 36	(2) 4M x 36
72MB	(2) 8M x 36	(2) 1M x 36
80MB	(2) 8M x 36	(2) 2M x 36

96MB	(2) 8M x 36	(2) 4M x 36
128MB	(2) 8M x 36	(2) 8M x 36
128MB	(2) 16M x 36	None
136MB	(2) 16M x 36	(2) 1M x 36
144MB	(2) 16M x 36	(2) 2M x 36
160MB	(2) 16M x 36	(2) 4M x 36
192MB	(2) 16M x 36	(2) 8M x 36
256MB	(2) 16M x 36	(2) 16M x 36
Note: Board accepts EDO memory. Note: Bank 1 and Bank 2 can not be used at the same time.		

DIMM CONFIGURATION		
Size	**Bank 2**	**Bank 3**
8MB	(1) 1M x 64	None
16MB	(1) 2M x 64	None
16MB	(1) 1M x 64	(1) 1M x 64
24MB	(1) 2M x 64	(1) 1M x 64
32MB	(1) 4M x 64	None
32MB	(1) 2M x 64	(1) 2M x 64
40MB	(1) 4M x 64	(1) 1M x 64
48MB	(1) 4M x 64	(1) 2M x 64
64MB	(1) 8M x 64*	None
64MB	(1) 4M x 64	(1) 4M x 64
72MB	(1) 8M x 64*	(1) 1M x 64
80MB	(1) 8M x 64*	(1) 2M x 64
96MB	(1) 8M x 64*	(1) 4M x 64
128MB	(1) 16M x 64*	None
128MB	(1) 8M x 64*	(1) 8M x 64
136MB	(1) 16M x 64*	(1) 1M x 64

144MB	(1) 16M x 64*	(1) 2M x 64
160MB	(1) 16M x 64*	(1) 4M x 64
192MB	(1) 16M x 64*	(1) 8M x 64
256MB	(1) 16M x 64*	(1) 16M x 64

Note: Board accepts EDO & SDRAM memory.
Note: Bank 1 and Bank 2 can not be used at the same time.
*Note: Bank 0 and Bank 1 can not be used.

DIMM/SIMM VOLTAGE CONFIGURATION			
Voltage		**JP7**	**JP8**
»	3.3V	Pins 1 & 2 closed	Pins 1 & 2 closed
	5V	Pins 2 & 3 closed	Pins 2 & 3 closed

CPU SPEED SELECTION (CX 6X86)								
CPU speed	**Clock speed**	**Multiplier**	**JP1**	**JP2**	**JP3**	**JP10**	**JP11**	**JP15**
150MHz	60MHz	2x	1 & 2	1 & 2	2 & 3	1 & 2	2 & 3	Open
166MHz	66MHz	2x	2 & 3	1 & 2	2 & 3	2 & 3	2 & 3	Open

Note: Pins designated should be in the closed position.

CPU SPEED SELECTION (AM K5)								
CPU speed	**Clock speed**	**Multiplier**	**JP1**	**JP2**	**JP3**	**JP10**	**JP11**	**JP15**
90MHz	60MHz	1.5x	1 & 2	1 & 2	1 & 2	1 & 2	2 & 3	Open
100MHz	66MHz	1.5x	2 & 3	1 & 2	1 & 2	2 & 3	2 & 3	Open
120MHz	60MHz	1.5x	1 & 2	1 & 2	2 & 3	1 & 2	2 & 3	Open
133MHz	66MHz	1.5x	2 & 3	1 & 2	1 & 2	2 & 3	2 & 3	Open
150MHz	60MHz	2.5x	1 & 2	2 & 3	2 & 3	1 & 2	2 & 3	Open
166MHz	66MHz	2.5x	2 & 3	2 & 3	2 & 3	2 & 3	2 & 3	Open

Note: Pins designated should be in the closed position.

CPU SPEED SELECTION (AM K6)								
CPU speed	**Clock speed**	**Multiplier**	**JP1**	**JP2**	**JP3**	**JP10**	**JP11**	**JP15**
166MHz	66MHz	2.5x	2 & 3	2 & 3	2 & 3	2 & 3	2 & 3	Open
200MHz	66MHz	3x	2 & 3	2 & 3	1 & 2	2 & 3	2 & 3	Open
233MHz	66MHz	3.5x	2 & 3	1 & 2	1 & 2	2 & 3	2 & 3	Open
Note: Pins designated should be in the closed position.								

CPU SPEED SELECTION (PENTIUM)								
CPU speed	**Clock speed**	**Multiplier**	**JP1**	**JP2**	**JP3**	**JP10**	**JP11**	**JP15**
90MHz	60MHz	1.5x	1 & 2	1 & 2	1 & 2	1 & 2	2 & 3	Open
100MHz	66MHz	1.5x	2 & 3	1 & 2	1 & 2	2 & 3	2 & 3	Open
120MHz	60MHz	2x	1 & 2	1 & 2	2 & 3	1 & 2	2 & 3	Open
133MHz	66MHz	2x	2 & 3	1 & 2	2 & 3	2 & 3	2 & 3	Open
150MHz	60MHz	2.5x	1 & 2	2 & 3	2 & 3	1 & 2	2 & 3	Open
166MHz	66MHz	2.5x	2 & 3	2 & 3	2 & 3	2 & 3	2 & 3	Open
180MHz	60MHz	3x	1 & 2	2 & 3	1 & 2	1 & 2	2 & 3	Open
200MHz	66MHz	3x	2 & 3	2 & 3	1 & 2	2 & 3	2 & 3	Open
Note: Pins designated should be in the closed position.								

CPU SPEED SELECTION (PENTIUM MMX)								
CPU speed	**Clock speed**	**Multiplier**	**JP1**	**JP2**	**JP3**	**JP10**	**JP11**	**JP15**
200MHz	66MHz	3x	2 & 3	2 & 3	1 & 2	2 & 3	2 & 3	Open
233MHz	66MHz	3.5x	2 & 3	1 & 2	1 & 2	2 & 3	2 & 3	Open
Note: Pins designated should be in the closed position.								

CPU VOLTAGE SELECTION (DUAL)				
Voltage	**JP4**	**JP5**	**JP6**	**JP9**

2.5V	1 & 2	1 & 2	1 & 2	Open
2.8V	1 & 2	1 & 2	1 & 2	1 & 2
2.9V	1 & 2	1 & 2	1 & 2	3 & 4
3.2V	1 & 2	1 & 2	1 & 2	5 & 6
Note: Pins designated should be in the closed postion.				

CPU VOLTAGE SELECTION (SINGLE)					
Voltage		**JP4**	**JP5**	**JP6**	**JP9**
»	3.3V	2 & 3	2 & 3	2 & 3	7 & 8
	3.5V	2 & 3	2 & 3	2 & 3	9 & 10
Note: Pins designated should be in the closed postion.					