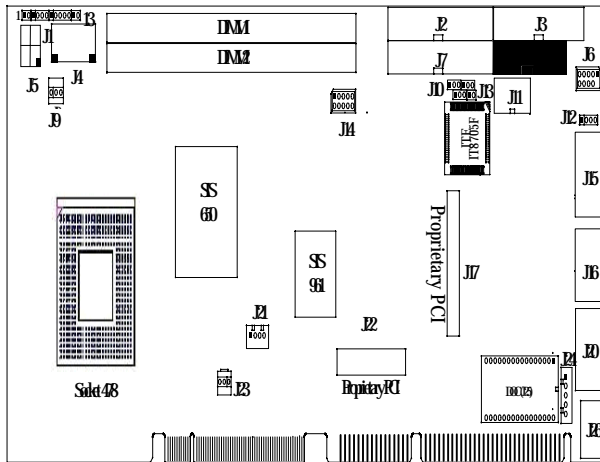
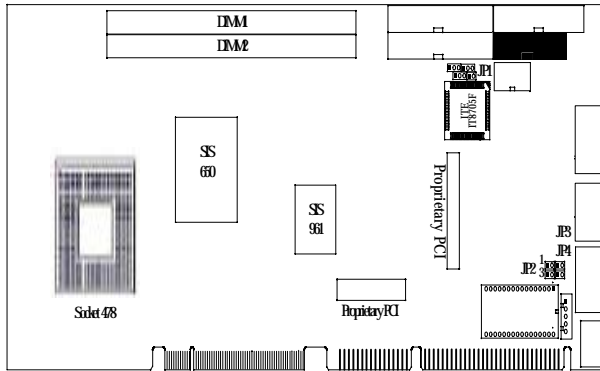


# AR-B1782 MANUAL

Version 1.01

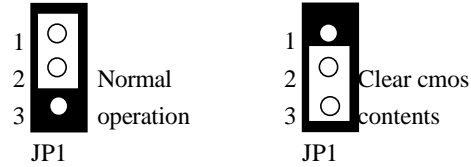
## 1. SETTING UP THE SYSTEM



### 1.1 PACKING LIST

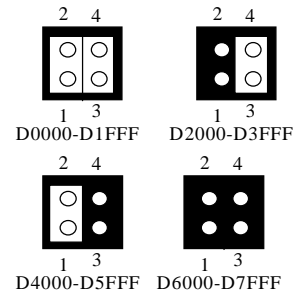
- The quick setup manual
- 1 AR-B1782 CPU board
- 1 Hard disk drive adapter cable
- 1 Floppy disk drive adapter cable
- 1 Parallel port and serial port adapter cable mounted on one bracket
- 1 Software utility CD
- 1 Audio interface cable mounted on one bracket
- 1 ATX power control interface cable

### 1.2 RTC CMOS CLEAR JUMPER SETTING (JP1)



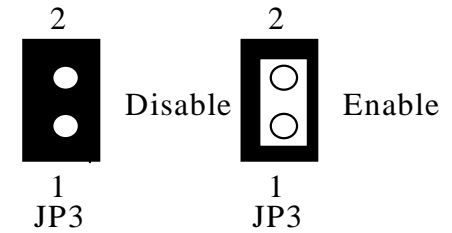
- 1-2 Normal operation★
- 2-3 Clear CMOS contents

### 1.3 DISK-ON-CHIP MEMORY ADDRESS SPACE SELECTION (JP2)



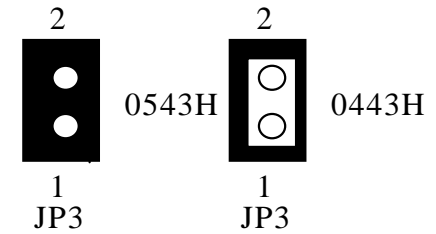
Memory address Space	Pin 1-2	Pin 3-4
D0000-D1FFF★	SHORT	SHORT
D2000-D3FFF	NC	SHORT
D4000-D5FFF	SHORT	NC
D6000-D7FFF	NC	NC

### 1.4 WATCH-DOG TIMER JUMPER SETTING (JP4, JP3)



#### JP4 Dis/Enable WDT function

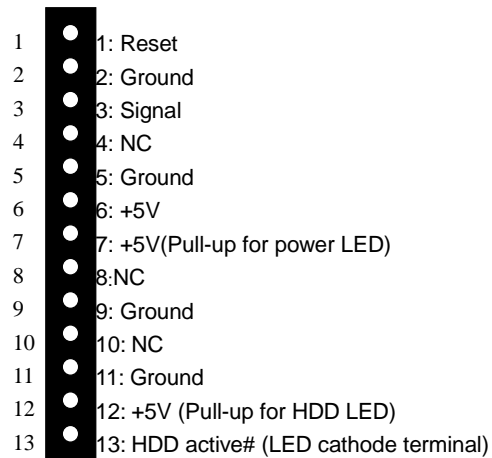
NC Disable  
SHORT Enable★



#### JP3 I/O address for S/W programming

NC 0543H  
SHORT 0443H★

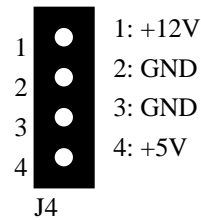
### 1.5 FRONT PANEL INTERFACE (J1)



**J1**

PIN No.	Signal Description
System reset	
1	Reset
2	Ground
External speaker	
3	Signal
4	NC
5	Ground
6	+5V
Power indicator	
7	+5V (Pull-up for power LED)
8	NC
9	Ground
10	NC
11	Ground
IDE active indicator	
12	+5V (Pull-up for HDD LED)
13	HDD active# (LED cathode terminal)

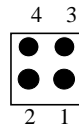
### 1.6 POWER CONNECTOR (J4)



**J4**

PIN No.	Signal Description
1	+12V
2	GND
3	GND
4	+5V

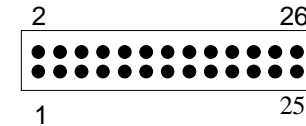
### 1.7 ATX12V POWER CONNECTOR (J5)



**J5**

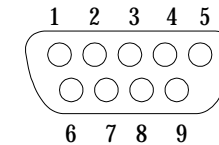
PIN No.	Signal Description
1	GND
2	GND
3	+12V
4	+12V

### 1.8 PARALLEL PORT (J8)



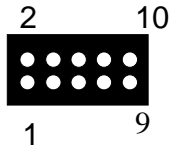
PIN No.	Signal Description	PIN No.	Signal Description
1	Strobe#	14	Auto Form Feed#
2	Data0	15	Error#
3	Data1	16	Initialization#
4	Data2	17	Printer Select IN#
5	Data3	18	Ground
6	Data4	19	Ground
7	Data5	20	Ground
8	Data6	21	Ground
9	Data7	22	Ground
10	Acknowledge#	23	Ground
11	Busy	24	Ground

### 1.9 COM1 SERIAL INTERFACE (J15)



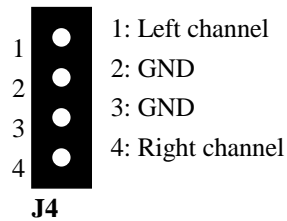
PIN No.	Signal Description
1	Data Carrier Detect
2	Data Set Ready
3	Received Data
4	Request To Send
5	Transmit Data
6	Clear To Send

### 1.10 COM2 INTERFACE (J11)



PIN No.	Signal Description
1	Data Carrier Detect
2	Data Set Ready
3	Received Data
4	Request To Send
5	Transmit Data
6	Clear To Send
7	Data Terminal Ready
8	Ring Indicator
9	Ground
10	Not used

### 1.11 CD-ROM AUDIO IN (J12)



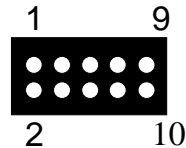
PIN No.	Signal Description
1	Left channel
2	GND
3	GND
4	Right channel

### 1.12 ATX POWER BUTTON INTERFACE (J13)

It connects to power button

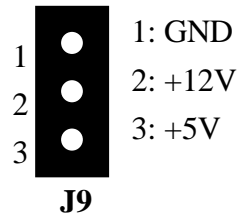


### 1.13 EXTERNAL USB (J14)



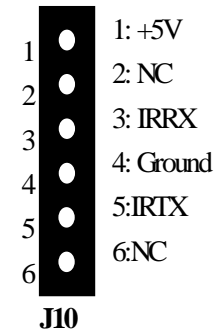
PIN No.	Signal Description	PIN No.	Signal Description
1	+5V	2	Ground
3	USBP0-	4	Ground
5	USBP0+	6	USBP1+
7	Ground	8	USBP1-
9	Ground	10	+5V

### 1.14 CPU/SYSTEM FAN (J9/J23)



PIN No.	Signal Description
1	Ground
2	+12V
3	RPM signal

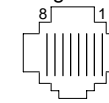
### 1.15 STANDARD IRDA (J10)



PIN No.	Signal Description
1	+5V
2	NC
3	IRRX
4	Ground
5	IRTX
6	NC

### 1.16 ETHERNET RJ-45 CONNECTOR (J16)

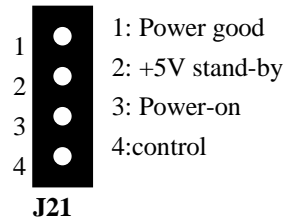
The Ethernet RJ-45 connectors are the standard network headers. The following table is the pin assignment.



RJ-45 Pin Assignment

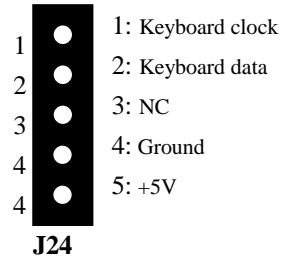
LAN1, LAN2	FUNCTION
1	TPTX+
2	TPTX -
3	TPRX+
4	Not Used
5	Not Used
6	TPRX -
7	Not Used
8	Not Used

### 1.17 ATX POWER CONTROLLER (J21)



PIN No.	Signal Description
1	Power good
2	5V stand-by
3	Power-on control
4	Ground

### 1.18 EXTERNAL KEYBOARD (J24)

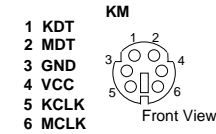


PIN No.	Signal Description
1	Keyboard clock
2	Keyboard data
3	NC

### 1.19 PROPRIETARY PCI INTERFACE #1 / #2(J22/J17)

PIN No.	Signal Description	PIN No.	Signal Description
1	+12V	2	AGND
3	+12V	4	AGND
5	VSYNC	6	RED
7	GND	8	GREEN
9	HSYNC	10	BLUE
11	PCICLK	12	GND
13	GND	14	PIRQ
15	PREQ	16	PGNT
17	AD31	18	PCIRESET
19	AD29	20	+3.3V
21	DEVSEL	22	+3.3V
23	AD27	24	AD30
25	AD25	26	AD28
27	C/BE3	28	GND
29	+3.3V	30	AD26
31	+3.3V	32	AD24
33	AD23	34	IDSEL
35	AD21	36	AD22
37	AD19	38	AD20
39	GND	40	GND
41	AD17	42	AD18
43	C/BE2	44	AD16
45	IRDY	46	FRAME
47	PERR	48	TRDY
49	SERR	50	PAR
51	C/BE1	52	STOP
53	AD14	54	AD15
55	AD12	56	AD13
57	GND	58	AD11
59	AD10	60	LOCK
61	AD8	62	AD9
63	GND	64	C/BE0
65	AD7	66	AD6
67	AD5	68	AD4
69	AD3	70	GND
71	AD1	72	AD2
73	+5V	74	AD0
75	+5V	76	GND
77	+5V	78	+3.3V
79	+5V	80	+3.3V

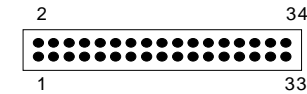
### 1.20 PS/2 KEYBOARD & MOUSE (J26)



PIN No.	Signal Description
1	Keyboard Data
2	Mouse Data
3	Ground
4	+5V
5	Keyboard Clock
6	Mouse Clock

### 1.21 FDD PORT CONNECTOR (J3)

The AR-B1782 provides a 34-pin header type connector for supporting up to two floppy disk drives. To enable or disable the floppy disk controller, please use the BIOS Setup program.



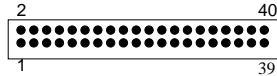
J3: FDD Port connector

Pin	Signal	Pin	Signal
1-33(odd)	GROUND	18	DIRECTION
2	DRVEN 0	20	-STEP OUTPUT PULSE
4	NOT USED	22	-WRITE DATA
6	DRVEN 1	24	-WRITE GATE
8	-INDEX	26	-TRACK 0
10	-MOTOR ENABLE 0	28	-WRITE PROTECT
12	-DRIVE SELECT 1	30	-READ DATA
14	-DRIVE SELECT 0	32	-SIDE 1 SELECT
16	-MOTOR ENABLE 1	34	DISK CHANGE

FDD Pin Assignment

## 1.22 HARD DISK (IDE) CONNECTOR (J2/J7)

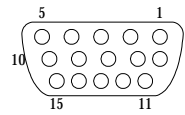
A 40-pin header type connector (J2/J7) is provided to interface with up to two embedded hard disk drives (IDE AT bus). This interface, through a 40-pin cable, allows the user to connect up to two drives in a “daisy chain” fashion. To enable or disable the hard disk controller, please use the BIOS Setup program. The following table illustrates the pin assignments of the hard disk drive’s 40-pin connector.



Pin	Signal	Pin	Signal
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	NOT USED
21	IDEDREQ	22	GROUND
23	-IOW A	24	GROUND
25	-IOR A	26	GROUND
27	IDEIORDYA	28	GROUND
29	-DACKA	30	GROUND
31	AINT	32	GROUND
33	SA 1	34	Not Used
35	SA 0	36	SA 2
37	CS 0	38	CS 1
39	HD LED A	40	GROUND

**Hard Disk (J2/J7) Connector**

## 1.23 VGA INTERFACE (J20)



1	Red	6	GND	11	N.C
2	Green	7	GND	12	N.C
3	Blue	8	DDCD	13	H.S
4	N.C	9	N.C	14	V.S
5	GND	10	DDCK	15	N.C

CONNECTOR	FUNCTION	REMARK
J1	Front Panel interface	
J2	IDE1 (Primary) interface	2x20 shrouded header
J3	Floppy connector	2x17 shrouded header
J4	Power connector	
J5	ATX12V power connector	
J6	External Audio signal interface	
J7	IDE2 (Secondary) interface	2x20 shrouded header
J8	Parallel port connector	2x13 shrouded header
J9	CPU Fan interface	
J10	Standard IrDA (Infrared) port	
J11	COM2 serial port	2x5 shrouded header
J12	CD-ROM Audio in interface	4-pin Mini-Din
J13	ATX power button interface	2-pin Mini-Din
J14	External USB interface	
J15	COM1 serial interface	DSUB-9
J16	RJ-45 Ethernet connector	
J17	Proprietary PCI #2 interface	
J18	CPU (mPGA478) socket	
J20	VGA interface	DSUB-15
J21	ATX power control interface	Connect to Backplane
J22	Proprietary PCI #1 interface	
J23	System Fan interface	
J24	External Keyboard interface	Connect to Backplane
J25	M-SYSTEM Disk-On-Chip socket	
J26	PS/2 keyboard & mouse connector	6-pin Mini-Din

### Note:

If the content in setting is inconsistent with the CD-ROM, please refer to the setting as the priority.