

PCA-6145B/6145L Half-size 486 All-in-one CPU Card with Panel/CRT/Ethernet and SSD

Startup Manual

Packing List

Packing list

Before you begin installing your card, please make sure that the following materials have been shipped:

- 1 PCA-6145B/6145L CPU card
- 1 6-pin mini-DIN keyboard & PS/2 mouse adapter (P/N: 1700060201)
- 1 hard disk drive (IDE) interface cable (40-pin) (P/N: 1701400601)
- 1 floppy disk drive interface cable (34-pin) (P/N: 1701340700)
- 1 parallel port adapter (26-pin) and COM2 adapter (9-pin) kit (P/N: 17011260303)
- 1 startup manual
- 1 CD-ROM or disks for utility, drivers, and manual (in PDF format)
- 1 warranty certificate

If any of these items are missing or damaged, contact your distributor or sales representative immediately.

Note1: For detailed information of the PCA-6145B/6145L, please refer to the enclosed CD-ROM or disk (in PDF format).

Note2: Acrobat Reader is required to view any PDF file. Acrobat Reader can be downloaded at: www.adobe.com/Prodindex/acrobat/readstep.html (Acrobat is a trademark of Adobe.)

For more information on this and other Advantech products, please visit our website at:

<http://www.advantech.com>
<http://www.advantech.com/epc>

For technical support and service, please visit our support website at:

<http://support.advantech.com>

This manual is for the PCA-6145B/6145L series Rev.C1

Part No. 2006614520
Printed in Taiwan

1st Edition
Oct. 1999

Specifications

Specifications

System

- **CPU:** Intel®80486DX/DX2/DX4 series
AMD 80486DX2/DX4 series, 5x86-133
Cyrix 80486DX2/DX4 series, 5x86-100/120
- **BIOS:** AWARD Flash BIOS, supports plug & play
- **Chipset:** VIA VT82C496G
- **Secondary level cache:** 128 KB
- **Green function:** Supports power management option via BIOS, activated by keyboard or mouse activity. Supports doze, sleep, and suspended mode. APM 1.1 compliant
- **RAM:** 1 MB to 32 MB, one 72-pin SIMM socket, accepts 1, 2, 4, 8, 16, and 32 MB SIMMs and EDO RAM
- **EIDE interface:** Supports up to two IDE devices. BIOS supports up to 8.4 GB HDD. 32-bit host data transfer, PIO Mode 3 transfer capabilities (>10 MB/sec)
- **Floppy disk drive interface:** Supports up to two floppy disk drives, 5¼" (360 KB and 1.2 MB) and/or 3½" (720 KB, 1.44 MB, and 2.88 MB)
- **Parallel port:** One enhanced parallel port, supports EPP/ECP parallel mode
- **Serial ports:** Two 16C550 UARTs, one RS-232, one RS-232/422/485 interface
- **Watchdog timer:** 63-level timer interval, with jumperless setup, generates system reset or IRQ15
- **Keyboard/mouse connector:** Mini DIN connector for keyboard and PS/2 mouse, 5-pin male keyboard connector is also available
- **I/O bus expansion:** PC/104 connector with face-up installation
- **SSD:** Supports M-systems DiskOnChip® 2000 flash disk
- **Flash Backup:** CMOS Data

Ethernet Controller Functions (PCA-6145B only)

- **Controller:** UMC UM9008, built-in 8 KB x 16 SRAM
- I/O address switchless setting
- Software compatible with NE-2000
- Loopback capability for diagnostics
- **Connector:** RJ-45
- **Boot ROM:** Built-in system BIOS (optional)

Local Bus VGA Functions

- **Controller:** VL-bus C&T 65545 VGA controller with Windows accelerator
- **Display memory:** 1 MB on-board DRAM
- **Display resolution:**
Supports resolutions up to 1280 x 1024
- Non-interlaced CRT display up to 1024 x 768 with 256 colors
- Flat panel display up to 640 x 480 resolution
- Support True-color and Hi-color display capability
- **Display output:** DB-15 VGA connector, 22 x 2-pin header general purpose flat panel display connector
- **Display BIOS:** Default CRT/Toshiba TFT panel BIOS, Flash BIOS can be easily updated

Mechanical and Environmental

- **Board size:** 185 mm x 122 mm
- **Max. power requirements:** +5 V, 3.5 A
- **Power supply voltage:** +5 V (4.75 V to 5.25 V)
- **Operating temperature:** 32 ~ 140 °F (0 ~ 60 °C)
- **Storage temperature:** -40 ~ +176°F (-40 ~ +80 °C)
- **Humidity:** 5 to 95%, non-condensing
- **Board size:** 7.3" (L) x 4.8" (W) (185 mm x 122 mm)
- **Board weight:** 0.5 kg(1.2 lb.)

Jumpers and Connectors

Connectors on the board link it to external devices such as hard disk drives, a keyboard, or floppy drives. In addition, the board has a number of jumpers which you use to configure it for your application.

The table below lists the function of each of the board jumpers and connectors. Later sections in this chapter give instructions on setting jumpers and detailed information on each jumper setting. Chapter 2 gives instructions for connecting external devices to your card.

PCA-6145B/PCA-6145L Jumpers

| Number | Function |
|------------|---------------------|
| JP1 | Turbo LED |
| JP2 | Turbo Switch |
| JP3 | HDD LED |
| JP4 | Clock select |
| JP5 | Clock select |
| JP6 | Clock select |
| JP7 | CPU type select |
| JP8 | CPU type select |
| JP9 | Battery backup |
| JP11 | CPU type select |
| JP13 | CPU type select |
| JP14 | Voltage selection |
| JP15 | PS/2 mouse set |
| JP20, JP21 | CPU type select |
| JP22-JP24 | S.S.D. Function set |
| JP28 | LCD Control |
| JP29 | Watchdog timer |
| JP30 | Rest switch |
| JP35-JP39 | COM2 select |

PCA-6145B/PCA-6145L Connectors

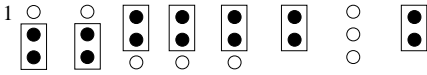
| Number | Function |
|--------|-----------------------------|
| CN1 | Enhanced IDE connector |
| CN2 | LCD connector |
| CN3 | FDD connector |
| CN4 | Parallel port connector |
| COM1 | Serial port 1 connector |
| COM2 | Serial port 2 connector |
| J1 | SBC power connector |
| J2 | VGA connector |
| J3 | Ethernet connector |
| J4 | External Keyboard connector |
| J5 | Keyboard connector |
| J6 | Keyboard lock |
| J7 | Speaker |

CPU type select

In order for the system to function properly, the jumpers must be set to accommodate the CPU installed on the CPU card.

CPU type select

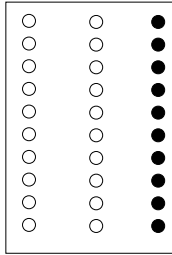
JP4 JP5 JP6 JP7 JP8 JP11 JP13 JP14



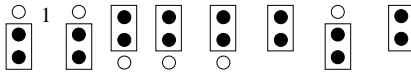
CPU type

Intel
DX-33(5V)
DX2-66

JRN1 JRN2 JRN3



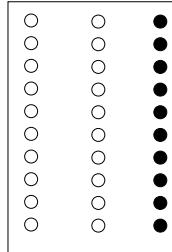
JP4 JP5 JP6 JP7 JP8 JP11 JP13 JP14



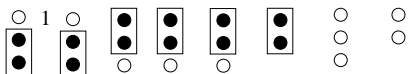
CPU Type

Intel
P24D
DX4-100 (5V)

JRN1 JRN2 JRN3



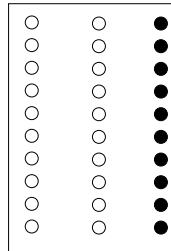
JP4 JP5 JP6 JP7 JP8 JP11 JP13 JP14



CPU Type

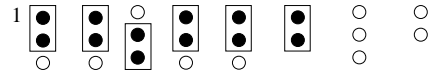
SGSDX4-100
AMD
5x86-133
Intel
DX4-100
AMD
DX4-100 (SV8B)
Cyrix
5x86-100
(3.3V)

JRN1 JRN2 JRN3



CPU type select

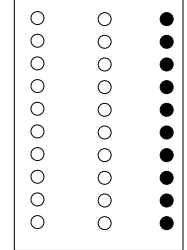
JP4 JP5 JP6 JP7 JP8 JP11 JP13 JP14



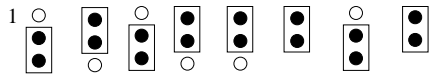
CPU Type

Cyrix
5x86-120
AMD
DX4-120
(3.3V)(SV8B)

JRN1 JRN2 JRN3



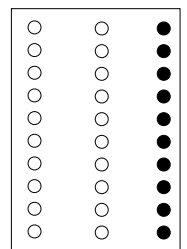
JP4 JP5 JP6 JP7 JP8 JP11 JP13 JP14



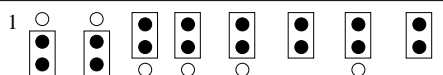
CPU Type

Intel
P24D
DX4-75(5V)

JRN1 JRN2 JRN3



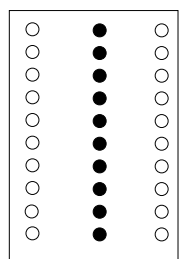
JP4 JP5 JP6 JP7 JP8 JP11 JP13 JP14



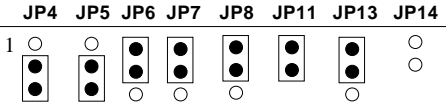
CPU Type

Cyrix
DX2-66
SGS
DX2-66(5V)

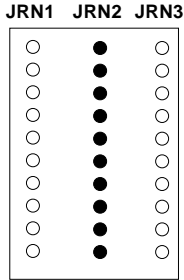
JRN1 JRN2 JRN3



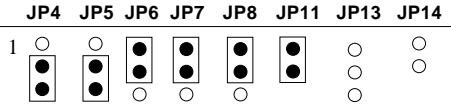
CPU type select



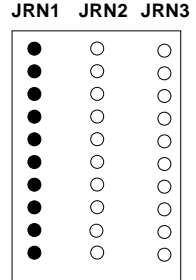
CPU Type
TI DX2-66
(3.3V)



CPU type select

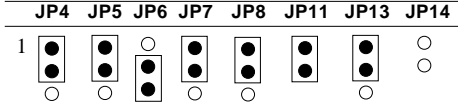


CPU Type
AMD
DX4-100
(NV8T)
(3.3 V)

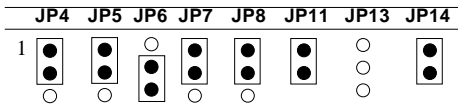
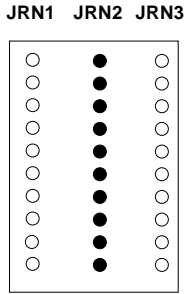


- Note:**
1. AMD 5X86-133 JP20 **ON** other **OFF**
 2. AMD DX2-80 JP21 **ON** other **OFF**

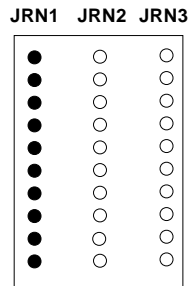
Default setting: Intel DX4-100



CPU Type
Cyrix
DX2-80
TI DX2-80
(3.3V)





CPU Type
AMD
DX-40
DX2-80(5V)


















Watchdog timer (JP29)

Watchdog timer system reset/IRQ15 select (JP29)



| | Reset (default) | IRQ15 |
|------|---|---|
| JP29 |  |  |

COM2 settings for RS-232/422/485 (JP35-39)



COM2 settings for RS-232/422/485 (COM2)

| | RS-232 (default) | RS-422 | RS-485 |
|------|---|---|---|
| JP35 |  |  |  |
| JP36 |  |  |  |
| JP37 |  |  |  |
| JP38 |  |  |  |
| JP39 |  |  |  |



Battery backup select

| | Battery Backup (default) | Clean CMOS |
|-----|---|---|
| JP9 |  |  |

PS/2 mouse setting

| | PS2 Mouse (default) | PS2 Mouse (disabled) |
|------|---|---|
| JP15 |  |  |

LCD type control

| | LCD (default) | EL |
|------|---|---|
| JP28 |  |  |

PCA-6145B/PCA-6145L PCB Layout

