

PCA-6194 LGA 775 Intel® Core™ 2 Duo / Pentium® D / Pentium 4 / Celeron® D Processor Card with PCI-ISA Bus / IPMI / VGA / DVI / Dual Gigabit LAN

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Packing List

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

- 1 PCA-6194 Intel® Core™ 2 Duo / Pentium® D / Pentium 4 / Celeron® D processor-based single board computer
- 1 PCA-6194 Startup Manual
- 1 CD with driver utility and manual (in PDF format)
- 1 FDD cable p/n: 1700340640
- 1 Ultra ATA 66/100 HDD cable p/n: 1701400452
- 2 SATA data cables p/n: 1700003194
- 2 SATA power cables p/n: 1703150102
- 1 Printer (parallel) port & COM port cable kit p/n: 1701260305
- 1 Dual COM port cable kit (Dual LAN Port version only) p/n: 1701092300
- 1 Y-cable for PS/2 keyboard and PS/2 mouse p/n: 1700060202
- 1 ATX 12 V power converter cable p/n: 170304015K
- 1 DVI cable (PCA-6194F, PCA-6194G2-D0 only) p/n: 1700000821
- 1 USB cable with 4 ports p/n: 1700002314
- Warranty card

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

Note 1: For detailed contents of the PCA-6194, please refer to the enclosed CD-ROM (in PDF format).

Note 2: 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/eplatform>

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

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

This manual is for the PCA-6194 series Rev. A1.

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Specifications

Standard SBC Functions

- **CPU:** Supports Intel LGA 775 Core 2 Duo / Pentium D / Pentium 4 / Celeron D processors up to 2.66/3.6/3.8/3.33 GHz, FSB 533/800/1066 MHz
- **BIOS:** Award® 16 Mb Flash memory via SPI bus
- **Chipset:** Intel Q965 with ICH8DO
- **System memory:** Dual Channel; Four 240-pin DIMM sockets for up to 8 GB DDR2 533/667/800 SDRAM
- **SATA/IDE interface:** Supports up to six independent SATA2 hard drives (up to 300 MB/s) with software RAID 0, 1, 5, 10 functions; supports up to one IDE hard disk drives, or two enhanced IDE devices.
- **FDD interface:** Supports up to two FDDs
- **Serial ports:** Two serial RS-232 ports; COM2 can be configured to RS-232/422/485 via a pin header
- **Parallel port:** One parallel port, supports SPP/EPP/ECP mode
- **Keyboard/mouse connector:** Supports one standard PS/2 keyboard and mouse connector and one external 6-pin header.
- **Watchdog timer:** 255 level timer intervals
- **USB (2.0):** Six Universal Serial Bus ports on board

VGA Interface

- **Chipset:** Intel Q965 integrated
- **Display memory:** Shared with 256 MB system memory
- **Video Output:** Up to 2048 x 1536 @ 75 Hz refresh
- **DVI interface:** Up to 1600 x 1200 (PCA-6194F, PCA-6194G2-D0 only)

Ethernet Interface

- **Chipset:**
 - LAN1: Intel 82566DM (PCIe GbE)
 - LAN2: Intel 82573V (PCIe GbE)
- **Connection:** On-board RJ-45 connector x 2

Mechanical and Environmental

- **Dimensions:** (L x W): 338 x 122 mm
- **Power supply voltage:** +5 V ±12 V
- **Power requirements:**
 - Configuration 1: Intel Pentium D 960 (3.60 GHz, 130 W) & 4 GB of DDRII 800
 - Configuration 2: Intel Core 2 Duo E6700 (2.66 GHz, 65 W) & 4 GB of DDRII 800
- **Test program, Intel Max power 100% + BurnIn Test 4.0**

+12 V	Config1: 13 A / Config2: 6.6 A
+5 V	10 A
+3.3 V	0 A
+5 VSB	0.7 A
-12 V	0 A
-5 V	0 A
- **Operating temperature:** 0 ~ 60° C (depending on CPU)
- **Weight:** 0.5 kg (weight of board)

Connectors and Jumpers

The board has a number of connectors and jumpers that allow you to configure your system to suit your application.

The table below lists the function of each of the connectors and jumpers.

Connectors

Label	Function
IDE1	Primary IDE connector
FDD1	Floppy drive connector
LPT1	Parallel port
VGA1	VGA connector
VCN1	DVI connector (PCA-6194F & PCA-6194G2-D0 only)
COM1	Serial port:COM1 (9-pin connector)
COM2	Serial port:COM2 (9-pin connector)
KBMS1	PS/2 keyboard and mouse connector
KBMS2	External keyboard/mouse connector
ATX1	ATX 12V Auxiliary power connector (for CPU)
CPUFAN1	CPU1 fan connector
ATXF1	ATX feature connector
JFP1	Power and Reset Button connector
JFP2	HDD LED/SNMP SMBus/Speaker connector
JFP3	Power LED and keyboard lock connector
JIR1	Reserved
JOBS1	HW Monitor Alarm Close: Enable OBS Alarm Open: Disable OBS Alarm
LAN1 ~ 2	Gigabit LAN R-J45 connectors
LANLED1	LAN1 and LAN2 LED connector
HDAUD1	Hi-definition audio link connector
SATA1 ~ 6	Serial ATA 1 ~ 6
IPMB1	IPMB connector
BMC1	BMC connector
USB1 ~ 3	USB port pin headers
SPI	BIOS SPI Interface
GPIO1	GPIO pin header (SMD pitch-2.0 mm)
JCASE1	Case open

Jumpers

Label	Function
CMOS1	CMOS clear
JWDT1	Watchdog timer output selection
JSETCOM2	COM2 RS-232/422/485 selection

CMOS1: CMOS clear function

Closed Pins	Result
1-2	Keep CMOS data*
2-3	Clear CMOS



* default setting

JWDT1: Watchdog timer output option

Closed Pins	Result
1-2	Reserved
2-3	System reset *



* default setting

JSETCOM2: COM2 RS-232/422/485 selection

RS-232*	RS-422	RS-485

* default setting

Software Installation

The CD disc contains a driver installer program that will lead you through the installation of various device drivers needed to take full advantage of your CPU card.

Caution

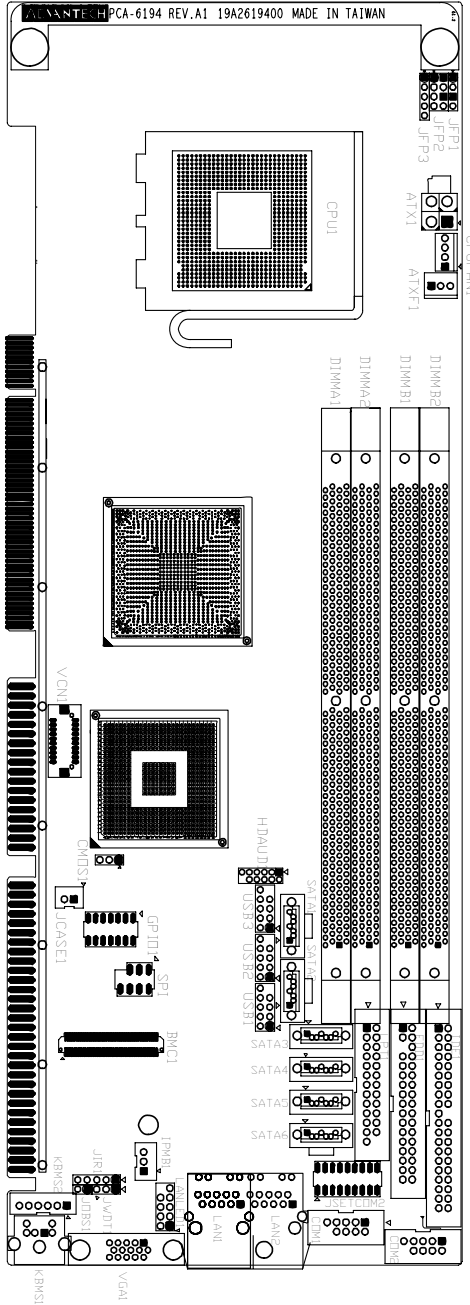
The computer is provided with a battery-powered Real-time Clock circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to manufacturer's instructions

Safety Information

This device complies with the requirements in Part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Board Layout



Board Layout: Jumper and Connector Location