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Find the *Advantech EVA-X4300* at our website: ***Click HERE***

ADVANTECH

# PCA-6742 EVA-X4300 Half-Size CPU Card
# Startup Manual

## Packing List

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

- 1 PCA-6742 Series Half-size CPU Card
- 1 keyboard / PS2 mouse cable p/n:1700060202
- 1 COM2 + parallel port cable p/n:1701260305
- 1 USB cable with 4 ports (2.0 mm pitch) p/n:1700008887
- 1 Jumper pack p/n:9689000002
- 1 Warranty Certificate

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

Note 1: For detailed contents of the PCA-6742 Series, please refer to the enclosed CD-ROM or disk (in PDF format).

## Standard SBC Functions

- CPU: Advantech EVA-X4300 up to 300MHz

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:**

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This manual is for the PCA-6742 Series Rev.A1.

Part No. 2002674212 3rd Edition,
Printed in China June, 2013

## Specifications

- BIOS: Award integrated 256KB ROM in Advantech EVA-X4300
- System memory: Onboard 64 MB DDR2 and optionally supports up to 128 MB
- Enhanced IDE interface: 1 EIDE channel for two devices. BIOS auto-detects up to UDMA -100
- USB interface: Supports 4 USB 2.0 ports and USB 1.1under DOS
- Serial ports: One RS-232 on real I/O, one RS-232/RS-422/RS-485 on one 2.54mm pitch wafer box and two RS-232 on one 2.0mm pitch wafer box
- Parallel port: One parallel port, supports SPP/EPP mode
- Infrared port: One, supports IrDA version 1.0 SIR protocol up to 115K bps, supports SHARP ASK-IR protocol up to 57600 bps.
- Keyboard/mouse connector: Mini-Din connector supports standard PC/AT keyboard and PS/2 mouse
- Watchdog timer: 255 level timer interval. System reset or IRQ11

### Local-bus Flat Panel/VGA Interface

- Chipset: SM712 graphic chip
- Display memory: 4 MB display memory
- Display type: Supports CRT, TFT and LVDS (optional) LCDs. Able to display both CRT and flat panel simultaneously
- Flat-panel display mode: Panel resolution supports up to 1024 x 768 @ 18/24-bit TFT LCD Panel and LVDS LCD Panel (Optional)
- CRT display mode: CRT monitor resolutions up to 1024 x 768 @ 24-bit true color

### Ethernet Interface (PCA-6740)

- Chipset: Realtek RTL8100CL
- Ethernet interface: PCI 10/100 Mbps Ethernet. IEEE 802.3 U protocol compatible
- Connection: On-board RJ-45 connector
- Built-in boot ROM

### Solid State Disk

- Supports CompactFlash™ Type I/II, shared with secondary IDE



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## Mechanical and Environmental

- Dimensions (L x W): 185 mm x 122 mm
- Power supply voltage: +5 V (4.75 V ~ 5.25 V)
- Power requirements: 1.6 A @ 5 V
- Operating temperature: 0 ~ 60° C (32 ~ 140° F)
- Weight: 0.185 kg ( 0.4 lbs.)

# Jumpers and Connectors

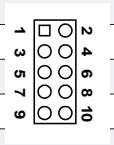
Connectors on the board link it to external devices such as hard disk drives, a keyboard or expansion bus connectors. In addition, the board has a number of jumpers that allow you to configure your system to suit your application.

The tables below list the functions of each of the board's jumpers and connectors:

| Jumpers | |
|---|---|
| **Label** | **Function** |
| CMOS1 | CMOS Clear |
| JSETCOM2 | COM2 function selection |
| JWDT1 | Watchdog timer output selection |
| JOBS1 | HW Monitor Alarm |
| VGASW1 | LCD settings |
| VGASW2 | LCD settings |

| Connectors | |
|---|---|
| **Label** | **Function** |
| JFP1(1-2) | HDD LED |
| JFP1(3-4) | Power LED |
| JFP1(5-6) | N/C |
| JFP1(7-8) | Reset switch |
| JFP1(9-10) | N/C |
| JFP2(1-2) | Fail LED |
| JFP2(3-4) | Buzzer Enable |
| JIR1 | IR connector |
| IDE1 | IDE connector (Primary channel) |
| CF1 | CF connector (Secondary channel) |
| LPT1 | Parallel port |
| USB12 | USB port 1,2 |
| USB34 | USB port 3,4 |
| COMD1 | Serial Port: COM1 |
| COM2 | Serial Port: COM2 (RS232/422/485) |
| COM34 | Serial Port COM3/COM4 |
| KBMS1 | PS/2 keyboard and mouse connector |
| KBMS2 | External keyboard and mouse connector |

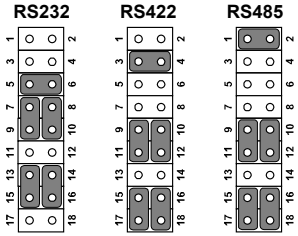
| Front Panel Connectors (JFP1) | |
|---|---|
| Pin | Signal |
| 1 | HDD LED+ |
| 2 | HDD LED- |
| 3 | Power LED+ |
| 4 | Power LED- |
| 5 | N/C |
| 6 | N/C |
| 7 | Reset Switch |
| 8 | GND |
| 9 | 5 VSB (Reserved) |
| 10 | Power Switch (Reserved) |




| CMOS1 CMOS Clear | |
|---|---|
| Setting | Function |
| 1-2 | CMOS Clear |
| 2-3 | Normal operation |




**JSETCOM2 COM2 Function Selection**




| JWDT1 Watchdog Timer Output Selection | |
|---|---|
| Setting | Function |
| 1-2 | IRQ11 |
| 2-3 | System reset |




| JOBS1 HW Monitor Alarm | |
|---|---|
| Setting | Function |
| 1-2 Closed | Enable OBS alarm |
| 1-2 Open | Disable OBS alarm |

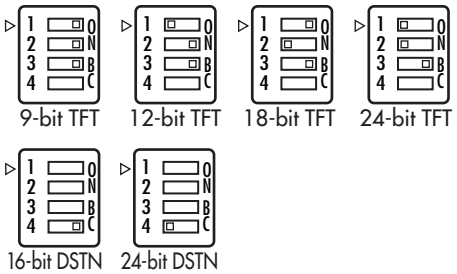





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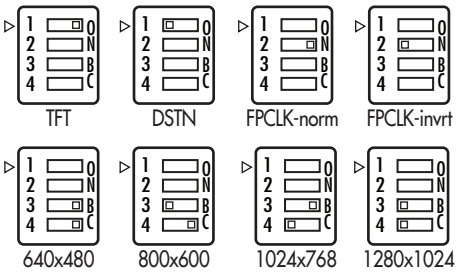
| VGASW1 | | | | | |
|---|---|---|---|---|---|
| Setting | | | | | Function |
| **1** | **2** | **3** | **4** | | **(Switch)** |
| 0 | 0 | 0 | - | | 9-bit TFT |
| 1 | 0 | 0 | - | | 12-bit TFT |
| 0 | 1 | 0 | - | | 18-bit TFT |
| 1 | 1 | 0 | - | | 24-bit TFT |
| - | - | - | 0 | | 16-bit DSTN |
| - | - | - | 1 | | 24-bit DSTN |

Key: 0 means ON; 1 means OFF; - means doesn't matter.

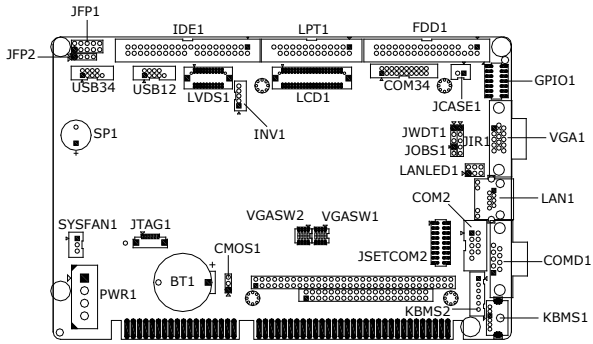



| VGASW2 | | | | | |
|---|---|---|---|---|---|
| Setting | | | | | Function |
| **1** | **2** | **3** | **4** | | **(switch)** |
| 0 | - | - | - | | TFT |
| 1 | - | - | - | | DSTN |
| - | 0 | - | - | | FPCLK normal |
| - | 1 | - | - | | FPCLK inverted |
| - | - | 0 | 0 | | 640 x 480 |
| - | - | 1 | 0 | | 800 x 600 |
| - | - | 0 | 1 | | 1024 x 768 |
| - | - | 1 | 1 | | 1280 x 1024 |

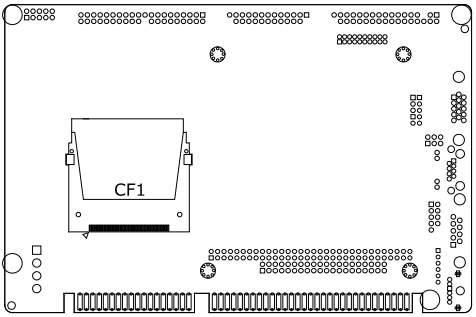
Key: 0 means ON; 1 means OFF; - means doesn't matter.




## Locating Connectors and Jumpers




*Jumper and Connector Locations (Component Side)*

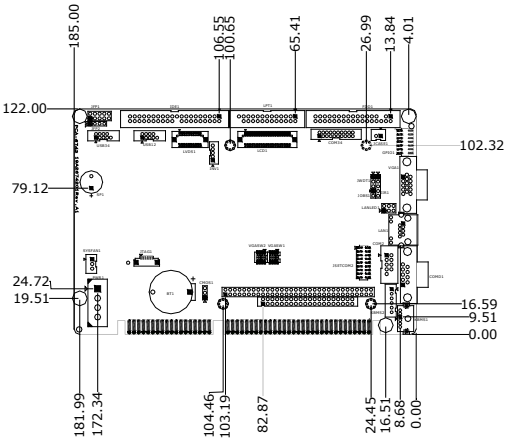



*Jumper and Connector Locations (Solder Side)*

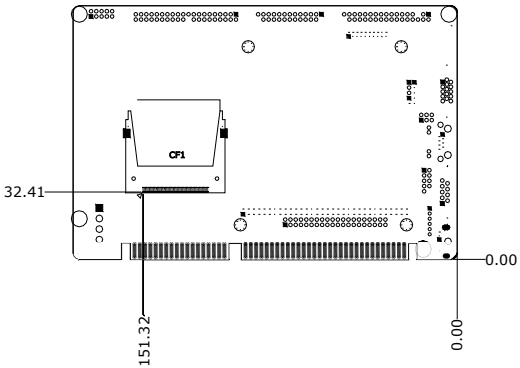


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## Mechanical Drawings




*Board Dimensions (Component Side)*




*Board Dimensions (Solder Side)*

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


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