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:

http://www.advantech.com/support

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

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

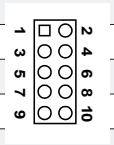
Connectors on the board link it to external devices such as hard disk drives, a keyboard or expansion bus connectors. In addition, the board has a number of jumpers that allow you to configure your system to suit your application.

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

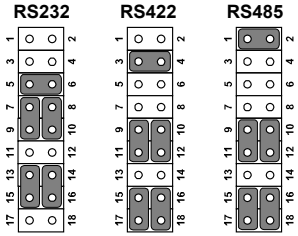
Connectors	
Label	**Function**
JFP1(1-2)	HDD LED
JFP1(3-4)	Power LED
JFP1(5-6)	N/C
JFP1(7-8)	Reset switch
JFP1(9-10)	N/C
JFP2(1-2)	Fail LED
JFP2(3-4)	Buzzer Enable
JIR1	IR connector
IDE1	IDE connector (Primary channel)
CF1	CF connector (Secondary channel)
LPT1	Parallel port
USB12	USB port 1,2
USB34	USB 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

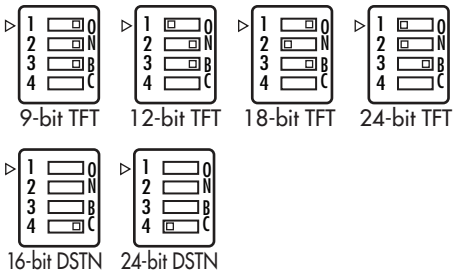


JWDT1 Watchdog Timer Output Selection	
Setting	Function
1-2	IRQ11
2-3	System reset

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

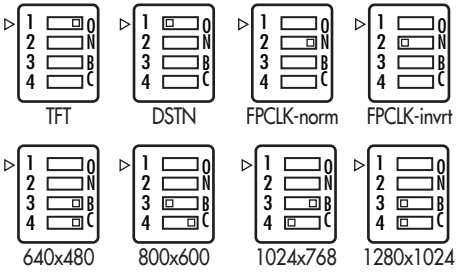
VGASW1					
Setting					Function
1	**2**	**3**	**4**		**(Switch)**
0	0	0	-		9-bit TFT
1	0	0	-		12-bit TFT
0	1	0	-		18-bit TFT
1	1	0	-		24-bit TFT
-	-	-	0		16-bit DSTN
-	-	-	1		24-bit DSTN

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

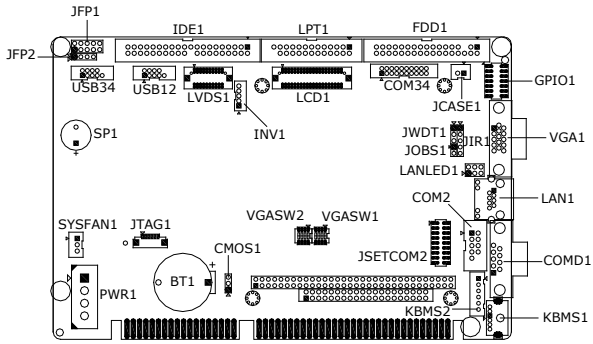


VGASW2					
Setting					Function
1	**2**	**3**	**4**		**(switch)**
0	-	-	-		TFT
1	-	-	-		DSTN
-	0	-	-		FPCLK normal
-	1	-	-		FPCLK inverted
-	-	0	0		640 x 480
-	-	1	0		800 x 600
-	-	0	1		1024 x 768
-	-	1	1		1280 x 1024

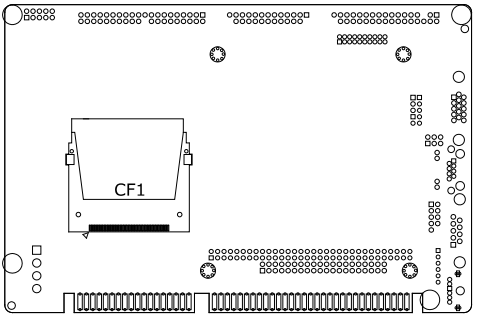
Key: 0 means ON; 1 means OFF; - means doesn't matter.



Locating Connectors and Jumpers

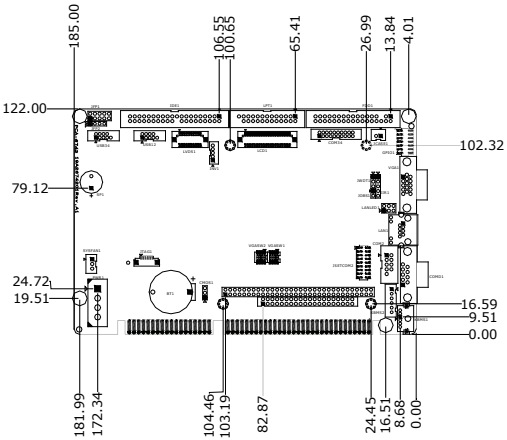


Jumper and Connector Locations (Component Side)

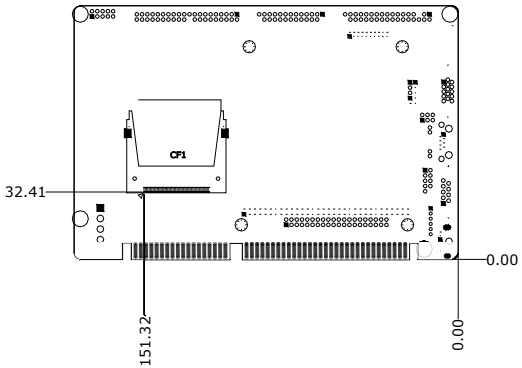


Jumper and Connector Locations (Solder Side)

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.