

# cPCI-SBC01

## (EMB-CPU01)

## **User's Manual**



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#### 1. cPCI-SBC01 Introduction

#### Introduction

- It is the low cost Single Board Computer(SBC) which equipped a low power and low heat processor.
- It provides solution to be suitable for Embedded market wanting low power and small size.

#### Features

- Low cost, Low power and fan-less Single Board Computer
- AMD Geode LX800 500MHz processor
- 256Mb ~ 1Gb memory
- IDE Hard disk interface, (option)CF card
- VGA, (option) TFT LCD video output
- 2xUSB, 1xAudio (Transition board 2xUSB, 2xPS2, RS232, 1xFDD, 1xLPT)
- Ethernet 10/100/1000M
- Embedded model available
- Operating Systems Windows 2000/XP

#### Specifications

#### H/W

- AMD Geode LX800 500MHz processor
- 256MB, up to 1GB DDR SODIMM SDRAM
- Compact Flash card (2G/4G/8G) (option) 1.8inch IDE HDD
- 1920\*1440 VGA output, (option) TFT LCD video output
- AC'97 codec sound

#### Physical Dimension

- 160 x 100 x 30 mm
- Front I/O : Power switch, D-sub video connector, 2xUSB, Ethernet, 2xStatus LED, Audio
- Rear (transition) board : 2xUSB, 2xPS2, RS232, 1xFDD, 1xLPT
- On-Board : LCD output, IDE

#### Application

- Factory Automation
- Data acquisition
- Medical and Robotics
- Auto PC
- UMPC(Ultra Mobile PC)
- Instrument control PC





#### 2. cPCI-SBC01 Appearance



- The cPCI-SBC01 board can use to personal PC with the external Power +5V. In front side of the cPCI-SBC01 have the Connector Out (VGA, Power S/W, Ethernet, 2xUSB, Power LED, Audio-Jack).
- The cPCI-SBC01 board connects the Back-Plane at rear side. It can control the other devices through compact PCI interface.



#### 3. cPCI-SBC01 Assembly(Memory, Hard Disk)

- 1. Memory(SODIMM SDRAM) Connection
  - Memory Connection with J4 connector(256M ~ 1G)



CF card connector board
(It is necessary to change the board if it connects 1.8" hard.)



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- Hard Disk Connection (This picture is CF card connection.)



Notice) It is necessary to change the board if it connects 1.8" hard. The picture shows differently above picture



#### 4 .Peripheral Device Control through Compact PCI Interface(Back-Plane)



The cPCI-SBC01 can control the other Compact PCI products as to connect Back-Plane like above picture.



#### 5. Expansion Port through Transition Board



The transition board can use through the Back-Plane. And It is possible to use the expansion ports with connect the cPCI-SBC01. (Special Purchase)

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#### 6. WINDOWS & Driver Installation

 To connect a USB KEYBOARD and USB MOUSE and USB CD-ROM(WINDOWs CD) at Board. And, connect the power(5V, 3A) after connection to a DSUB 15 PIN VGA PORT and light up the switch.

Notice) There isn't an external power supply need in case of Back-Plane use.

 When the computer boots, press the "F1" at the keyboard. And display the BIAS SET\_UP.



3. After choose the "Boot Order", Press "Enter".



 After choose the "USB CD-ROM Drive <- Conflict 4" at 1 line, and press down the "Esc".





- 5. After choose the "Save values and Exit", and escape the display.
- 6. Booting is performed with a USB CD-ROM, you are able to progress a windows install guide.
- 7. After finished the Windows installation, you have to install the last Board driver.
  - There is Driver to CD-ROM enclosed like product.

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AES	
🛅 AUDIO	
🗀 LAN	
🛅 LAN_DIAG	
🛅 LCD	
🛅 Touch	
🛅 VGA	

7.1 AUDIO Driver Installation

- MyComputer => Property => Hardware => Device Manager
- Choose "Audio device".
- Click the right mouse, select the "driver update".
- Starting Hardware Update Wizard
- Choose the Driver in AUDIO folder in CD ROM.
- 7.2 LAN Driver Installation
  - Execute SET-UP file in LAN folder in CD-ROM.
- 7.3 LCD Driver Installation(DISPLAY)
  - Choose the DRIVER in LCD folder in CD ROM.
- 7.4 VGA Driver Installation
  - Choose the DRIVER in VGA folder only used VGA.
- 7.5 Touch Installation(When 7" LCD want to use.)
  - After execute the Setup file in Touch folder in CD-ROM, display the icon of



TouchWare at the wallpaper.



- Double click the TouchWare.
- Click the "HW Info".

Calibrate Setting Option/T	ool   HW Info	×
Calibration Calibrate the touch-pan 1, Firstly installed on you 2, Change your video re 3, Touch points are not screen.	el whenever you ur system solution matching onto the	0
Control Point © 5 Points Default	C 9Points	C 25 Points Calibrate
		Help OK

- Click the "Auto Search Touch" button, check the connection port.

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Calibrate Setting Option	/Tool HW Info	Calibrate Setting Option/Tool HW Info
- Controller Information -		Controller Information
Controller Model Firmware Version Driver Version	TD01S4510R  1.0  1.2	Controller Model TD01S4510R Firmware Version TouchWare TouchWare
Connect Information		Found Touch Controller at Port1
PORT	COM1 💌	PORT 확인 🔽
SPEED	19200 BPS	SPEED
	Auto Search Touch	Auto Search Touch
	Help OK	HelpOK

- After finding the port at Touch Controller, press "OK".
- Choose the "Calibrate" button.



TECHDINE TOUCHWARE	ool   HW Info	<b>x</b>
<b>Calibration</b> Calibrate the touch-pane 1, Firstly installed on you 2, Change your video re 3, Touch points are not a screen.	el whenever you ur system solution, matching onto the	0 0 0
Control Point © 5 Points Default	C 9 Points	C 25 Points Calibrate
		Help OK

When show the below display, press the lighting point.
(You should continuously press until completed progress bar.)

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Push 'ESC' To Quit		Push 'ESC' To Quit	
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Push 'ESC' To Quit			
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- Press "Yes", and then finished the install.

7.6 The optimum display set for the LCD.

- Change the resolution 800x400 because LCD resolution is optimum 800x480.



- Choose the "Property" in wallpaper.

Arrange Icons By	•
Refresh	
Paste	
Paste Shortcut	
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NVIDIA Control P	anel
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- Click the "Advancd" in "Setting" in "Display Registration Information" display.

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Color Manag	gement	📃 🧖 🔤 🖉	orce 8600 GT
General	Adapter	Monitor	Troubleshoot
Adapter Type —			
	GeForce 8600 G	iT	
		_	
			Properties
Adapter Informati	on		
Chip Type:	GeForce 8600	GT	
DAC Type:	Integrated RAM	MDAC	
Memory Size:	512 MB		
Adapter String:	GeForce 8600	GT	
Bios Information:	Version 60.84.	46.00.00	
List All Modes			
Lot All Modes.			

- Click the "List All Modes" in "Adaptor"
- Choose the "800 x 480 true color".
- Press "OK" and hit "Execute".

Plug and Play Monitor and NVIDIA GeForce 8600 GT ? 🔀	Plug and Play Monitor and NVIDIA GeForce 8600 GT 😰 🔀	Display Properties
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B48 by 480, True Color (32 bit), 60 Hertz	Memory Size: 512 MB	.0
	Adapter String: GeForce 8600 GT	
OK Cancel	Bios Information: Version 60.84.46.00.00	Diedar
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		Screen resolution
		Less More Highest (32 bit)
List All Modes	List All Modes	Sou by sou pixels
		Troubleshoot Advanced
OK Cancel Apply	OK. Cancel Apply	OK Cancel Apply

 If you see the red circle in the "Display Registration Information". All progress succeed.