



MPC102-832

All-in-One 10.4" SVGA TFT Fanless Medical Touch Panel Computer with Intel[®] Atom[™] N2600 Processor Onboard

User's Manual



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Safety Precautions

Before getting started, please read the following important safety precautions.

- 1. The MPC102-832 does not come equipped with an operating system. An operating system must be loaded first before installing any software into the computer.
- 2. Be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and place all electronic components in any static-shielded devices. Most electronic components are sensitive to static electrical charge.
- 3. Disconnect the power cord from the MPC102-832 before any installation. Be sure both the system and external devices are turned OFF. A sudden surge of power could ruin sensitive components that the MPC102-832 must be properly grounded.
- 4. The brightness of the flat panel display will be getting weaker as a result of frequent usage. However, the operating period varies depending on the application environment.
- 5. Turn OFF the system power before cleaning. Clean the system using a cloth only. Do not spray any liquid cleaner directly onto the screen. The MPC102-832 comes with a touchscreen. Although the touchscreen is chemical resistant, it is recommended that you spray the liquid cleaner on a cloth first before wiping the screen. In case your system comes without the touchscreen, you must follow the same procedure and not spray any cleaner on the flat panel directly.
- 6. Avoid using sharp objects to operate the touchscreen. Scratches on the touchscreen may cause malfunction or internal failure to the touchscreen.
- 7. The flat panel display is not susceptible to shock or vibration. When assembling the MPC102-832, make sure it is securely installed.
- 8. Do not open the system's back cover. If opening the cover for maintenance is a must, only a trained technician is allowed to do so. Integrated circuits on computer boards are sensitive to static electricity. To avoid damaging chips from electrostatic discharge, observe the following precautions:
 - Before handling a board or integrated circuit, touch an unpainted portion of the system unit chassis for a few seconds. This will help to discharge any static electricity on your body.
 - When handling boards and components, wear a wrist-grounding strap, available from most electronic component stores.

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CHAPTER 1 INTRODUCTION

This chapter contains general information and detailed specifications of the MPC102-832. Chapter 1 includes the following sections:

- General Description
- Specifications
- Dimensions
- I/O Outlets
- Package List

1.1 General Description

The MPC102-832 is a fan-less and compact-size touch panel computer, equipped with a 10.4" TFT LCD display and low power consumption Intel[®] Atom TM N2600 1.6GHz processor with FSB 533MHz. The MPC102-832 supports Windows[®] 7 32-bit,, WES 7. The panel computer provides a Mini card slot for wireless module. Its excellent ID and friendly user interface make it a professional yet easy-to-use panel computer. The MPC102-832 is an ideal for space-limited applications in factory automation, machine maker operating systems, building automation, and more.

• MPC102-832: 10.4" TFT SVGA Fanless Touch Panel Computer

Reliable and Stable Design The MPC102-832 adopts a fanless cooling system, which makes it suitable for vibration environments.

➤ Embedded O.S. Supported The MPC102-832 not only supports Windows® 7, but also supports embedded OS, such as WES 7. For storage device, the MPC102-832 supports CompactFlash[™] card(optional) and 2.5" SATA device.

- Medical-grade Product Design The MPC102-832 has an incredible design to be used in different medical environments.
- The front bezel meets the IP65 standard and whole enclosure meets IPX1 standard. For connecting other devices, the MPC102-832 also features several interfaces: USB, Ethernet, and RS-232/422/485.

1.2 Specifications

1.2.1 Main CPU Board

- CPU
 - Intel[®] Atom[™] N2600 1.6GHz processor onboard
- System Chipset
 - Intel[®] NM10 Express
- BIOS
 - America Megatrends BIOS
- System Memory
 - One 204-pin DDR3 800MHz SO-DIMM socket
 - Maximum memory up to 2GB

1.2.2 I/O System

- Standard I/O
 - 1x RS-232/422/485
 - 1x isolated RS232 with 4KV
 - 2 x USB 2.0
- Ethernet
 - 2x 10/100/1000Mbps Ethernet
- Audio
 - 1x Line-out
- Expansion
 - 1 x PCIe mini card(optional)
- Storage
 - 1x half-slim SATA SSD
 - 1x slot for CompactFlash[™] (optional)
- Power connector
 - MPC102-832-DC : DC power 10~30VDC (phoenix type)
 - MPC102-832-J : AC 100~240V to DC 12V adapter(Screw type)

- 1.2.3 System Specification
- 10.4" TFT LCD
- **Heat Dispensing Design**
- **Disk drive housing:**
 - One half-slim SATA SSD drive
- **Net Weight**
 - 1.8 Kgs (3.96 lb)
- **Dimension (Main Body Size)**
 - 292.5x 45.8 x 235.8mm
- **Operation Temperature**
 - 0°C to 40°C
- **Relative Humidity**
 - 10% to 95% @ 40°C, Non-Condensing
- Vibration
 - 5 to 500 Hz, 2.0 G random
- **Power input**
 - 10~30VDC with phoenix power connector
 - External 60W AC Adapter
 - Power Input: 100VAC to 240VAC
 - Power Output: 12VDC, Max. 5A



NOTE: All specifications and images are subject to change without notice.

NOTE: The DC power source to be used with MPC102-832 must be galvanically isolated according to IEC60601-1 safety of medical devices!

1.3 Dimensions

This diagram shows you dimensions and outlines of the MPC102-832.



Phoenix plug for DC version

0

Din-jack for AC version





276.00



1.4 I/O Outlets

Please refer to the following illustration for I/O locations of the MPC102-832.



No	Function	No	Function
1	POWER SWITCH (ATX)	7	Ethernet (RJ-45)
2	Power Input connector (Screw)	8	Dual USB 2.0 ports
3	Power Input connector (Phoenix)	9	AUDIO (LINE-OUT)
4	Isolated COM 3(RS-232)	10	Touch LED indicator
5	COM 1 (RS-232/422/485)	11	Touch on/off button
6	Display Port	12	HDD & Power LED indicator



1.5 Packing List

When you receive the MPC102-832, the bundled package should contain the following items:

- MPC102-832 x 1
- Driver CD x1
- Wall-Mount Kit x1
- HDD Mylar x 1
- Screws for HDD x4
- Panel Mount Kit x 6 (optional)
- Phoenix connector x1 (for MPC102-832-DC)
- Power Adapter & power cord (for MPC102-832-J)

If you can not find the package or any items are missing, please contact AXIOMTEK distributors immediately.

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CHAPTER 2 HARDWARE INSTALLATION

The MPC102-832 provides rich I/O ports and flexible expansions for you to meet different demand. The chapter will show you how to install the hardware. It includes:

- CompactFlash[™] Card
- Jumper and Switch Setting & COM port Connector
- Ethernet
- Mounting Way
- Hard disk
- Dram
- Wireless LAN Card
- Power Input

2.1 CF card Installation

The MPC102-832 provides one CF slot for users to install CompactFlash[™] card. Please refer to the following instructions for installation:

- Step 1 Turn off the system, and unplug the power cord.
- Step 2 Remove the mylar on the side of the system.



Step 3 Locate the CompactFlashTM socket, and insert the card into the socket. <u>NOTE</u>: If using CF card, there is no IPX1 features for whole enclosure.

2.2 Jumper and Switch Setting & COM port Connector

Jumper is a small component consisting of jumper clip and jumper pins. Install jumper clip on 2 jumper pins to close. And remove jumper clip from 2 jumper pins to open. The following illustration shows how to set up jumper.

jumper clip op









123

all open

Before applying power to MPC102-832, please make sure all of the jumpers and switch are in factory default position. Below you can find a summary table and onboard default settings.

Jumper	Description	Setting	
JP4	Auto Power On Default: Disable	2-3 close	
JP5	CF Voltage Selection Default: +3.3V		1-2 close
JP6	Restore BIOS Optimal Defaults (Clear Default: Normal Operation	1-2 close	
JP7	00M4 D0 000/400/405 Mada 0ating		3-5, 4-6 close
JP8	COM1 RS-232/422/485 Mode Setting		3-5, 4-6 close
JP9	Default. NG-252		1-2 close
	COM1 Data/Power Selection	Pin 1: DCD	3-5 close
JPTU	Default: RS-232 Data	Pin 9: RI	4-6 close
JP11	COM2 Data/Power Selection	Pin 1: DCD	3-5 close
	Default: RS-232 Data	Pin 9: RI	4-6 close

2.2.1 COM1 Configuration (JP7, JP8, JP9)

The COM1 and COM2 are a standard DB-9 connector. Those connectors are equipped with The MPC102-832 has two serial ports. COM1 is RS-232/422/485, while COM2 is RS-232. The following table shows you set COM1 port mode:

Description	Jumper Setting				
RS-232 (Default)	JP7 2 4 6 0 0 1 3 5	JP8 2 4 6 0 0 1 3 5	JP9 2 4 6 8 		
RS-422	JP7 2 4 6 0 0 1 3 5	JP8 2 4 6 0 0 1 3 5	JP9 2 4 6 8 0 0 0 0 1 3 5 7		
RS-485	JP7 2 4 6 	JP8 2 4 6 1 3 5	JP9 2 4 6 8 		

2.2.2 COM port Power Configuration (JP10, JP11)

All of the serial ports can output data or power through jumper setting. The following table shows you how to do that.

Description	Jumper Setting
Pin1: DCD	2 4 6
Pin9: RI	
(Default)	
Pin1: +5V Pin9: +12V	
Pin1: +5V Pin9: RI	
Pin1: DCD Pin9: +12V	



2.2.3 Auto Power On (JP4)

If JP4 is enabled for power input, the system will be automatically power on without pressing soft power button. If JP4 is disabled for power input, it is necessary to manually press soft power button to power on the system.

Function	า			Setting	
Enable au	ito powe	er on		1-2 close	
Disable (Default)	auto	power	on	2-3 close	123

2.2.4 Restore BIOS Optimal Defaults (JP6)

Put jumper clip to pin 2-3 for a few seconds then move it back to pin 1-2. Doing this procedure can restore BIOS optimal defaults.

Function	Setting
Normal operation (Default)	1-2 close
Restore BIOS optimal defaults	2-3 close

1	2	3

2.2.5 COM port Connector

The pin assignment of RS-232/RS-422/RS-485 is listed on the following table. If you need COM1 port to support RS-422 or RS-485 mode, please refer to Jumper Settings

Pin	RS-232	RS-422	RS-485
1	DCD	TX-	Data-
2	RXD	TX+	Data+
3	TXD	RX+	No use
4	DTR	RX-	No use
5	GND	GND	GND
6	DSR	No use	No use
7	RTS	No use	No use
8	CTS	No use	No use
9	RI	No use	No use



2.3 Ethernet

The MPC102-832 is equipped with a high performance Plug and Play Ethernet interface, full compliant with IEEE 802.3 standard, and can be connected with a RJ-45 LAN connector.

Please refer to detailed pin assignment list below:

Pin	100Base-T	1000Base-T		
1	TX+	BI-DA+		
2	TX-	BI-DA-		
3	RX+	BI-DB+		
4	NC	BI-DB-		
5 NC 6 RX-		BI-DC+		
		BI-DC-		
7	NC	BI-DD+		
8	NC	BI-DD-		



RJ-45

2.4 Mountings – Panel/Wall/Desktop/VESA

There are several mounting ways for the MPC102-832, Panel, Wall, Desktop and VESA mountings.

2.4.1 Panel Mounting(optional)

The MPC102-832 is designed for panel mount application. A set of standard mounting kit are bundled with the system package that you can use it to mount the MPC102-832. **Step 1 Remove the mylar and rubbers on panel mount holes.**





Step 2 Use the panel mount kit to mount.



NOTE: If using panel mount, there is no IPX1 features for whole enclosure.

2.4.2 Wall-Mounting

The MPC102-832 is designed for Wall mounting application. Please refer to the following steps:

Find out the screws as marked on the back side of chassis.



2.4.3 Desktop-Mounting

The MPC102-832 is designed for desktop mounting application. Please refer to the following steps:

Step 1 Find out the screws as marked on the back side of chassis.





Step 2 Assemble the desktop stand to the chassis, and fix the screws.

2.4.4 VESA-ARM Mounting

Step 1 Find out the screws as marked on the back side of chassis.



Step 2 Assemble the VESA-ARM to the back side of the chassis, and fix the screws.





Step 3 VESA mounting Installation completed.

Caution : Use recommended/suitable mounting apparatus to avoid risk of injury.

2.5 HDD Installation

The MPC102-832 provides a convenient Hard Disk Drive (HDD) bracket for users to install 2.5" SATA HDD. Please follow the steps:

Step 1 Unscrew six screws to remove the rear chassis.



Step 2 Fix the HDD bracket into the system, and plug the data and power cable to HDD. Installation completes.



2.6 **DRAM Installation**

The MPC102-832 provides one 204-pin DDR3 800MHz SO-DIMM socket that support system memory up to 2GB. Please follow steps below to install the memory modules:

Step 1 Open the back cover and find ou the DIMM slot on mainboard (SBC87832).



Step 2 Insert the DRAM to the DIMM socket, and then push it down firmly until it is clipped by the socket.



Step 3 Install the memory module into the socket and push it firmly down until it is fully seated. The socket latches are levered upwards and clipped on to the edges of the DIMM.



2.7 Wireless LAN Card Installation

The MPC102-832 provides one Mini card slot for user to install one wireless LAN card. When installing the wireless LAN card, refer to the following instructions and illustration:



Step 1 Open the back cover and find out the mini-card slot on mainboard (SBC87832).

Step 2 The socket latches are clipped on to the edges of the Mini card. Install wireless LAN card to the socket.





<u>NOTE</u>: Please have the extented bracket when using half-size mini card.

2.8 Power Input (Phoenix type)

MPC102-832 equips with a phoenix type power connector. It adopts 10VDC to 30VDC. Please follow the signs on power connector to connect DC power source.



+: Power positive G: Safety ground -: Power negative

NOTE: The safety ground must be connected to ensure the unit working appropriately. NOTE: The DC power source to be used with MPC102-832 must be galvanically isolated according to IEC60601-1 safety of medical devices!

Hardware Installation

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CHAPTER 3 AMI BIOS SETUP UTILITY

This chapter provides users with detailed description how to set up basic system configuration through the AMIBIOS8 BIOS setup utility.

3.1 Starting

To enter the setup screens, follow the steps below:

Turn on the computer and press the key immediately.

After you press the <Delete> key, the main BIOS setup menu displays. You can access the other setup screens from the main BIOS setup menu, such as the Chipset and Power menus.

3.2 Navigation Keys

The BIOS setup/utility uses a key-based navigation system called hot keys. Most of the BIOS setup utility hot keys can be used at any time during the setup navigation process. These keys include <F1>, <F10>, <Enter>, <ESC>, <Arrow> keys, and so on.

1	<u>NOTE</u> :	Some of	navigation	keys	differ	from	one	screen	to anothe	r.
---	---------------	---------	------------	------	--------	------	-----	--------	-----------	----

← Left/Right	The Left and Right <arrow> keys allow you to select a setup screen.</arrow>
↑ ↓ Up/Down	The Up and Down <arrow> keys allow you to select a setup screen or sub-screen.</arrow>
+– Plus/Minus	The Plus and Minus <arrow> keys allow you to change the field value of a particular setup item.</arrow>
Tab	The <tab> key allows you to select setup fields.</tab>
F1	The <f1> key allows you to display the General Help screen.</f1>
F10	The <f10> key allows you to save any changes you have made and exit Setup. Press the <f10> key to save your changes.</f10></f10>
Esc	The <esc> key allows you to discard any changes you have made and exit the Setup. Press the <esc> key to exit the setup without saving your changes.</esc></esc>
Enter	The <enter> key allows you to display or change the setup option listed for a particular setup item. The <enter> key can also allow you to display the setup subscreens.</enter></enter>

3.3 Main Menu

When you first enter the Setup Utility, you will enter the Main setup screen. You can always return to the Main setup screen by selecting the Main tab. There are two Main Setup options. They are described in this section. The Main BIOS Setup screen is shown below.

Aptio Setup Uti	up Utility - Copyright (C) 2012 American Megatrends , Inc .	
Main Advanced C	hipset Boot Security Sav	e & Exit
BIOS Version Build Date VBIOS Version	SBC87832 X010 08/03/2012 10539	Set the Date. Use Tab to switch between Data elements.
System Date System Time	[Tue 08/08/2012] [10:45:53]	
Access Level	Administrator	→ ← : Select Screen ↑↓ : Select Item Enter : Select +/- : Change Opt F1 : General Help F2 : Previous Values F3 : Optimized Defaults F4 : Save & Exit ESC : Exit
Version 2.15.	1227. Copyright (C) 2012 A	merican Megatrends, Inc .

System Time/Date

Use this option to change the system time and date. Highlight System Time or System Date using the <Arrow> keys. Enter new values through the keyboard. Press the <Tab> key or the <Arrow> keys to move between fields. The date must be entered in MM/DD/YY format. The time is entered in HH:MM:SS format.

3.4 Advanced Menu

• Launch PXE OpROM

Use this item to enable or disable the boot ROM function of the onboard LAN chip when the system boots up.

• Launch Storage OpROM

Enable or disable boot option for legacy mass storage devices with Option ROM.

The Advanced menu allows users to set configuration of the CPU and other system devices. You can select any of the items in the left frame of the screen to go to the sub menus:

- ACPI Settings
- CPU Configuration
- IDE Configuration
- USB Configuration
- NCT6627UD Superior IO Configuration
- ► NCT6627UD HW Monitor
- JMB36X ATA Controller Configuration

For items marked with "▶", please press <Enter> for more options.

Aptio Setup Utility - Copyright (C) 2012 American Megatrends , Inc . Main Advanced Chipset Boot Security Save & Exit	
Legacy OpROM Support Launch PXE OpROM [Disabled] Launch Storage OpROM [Enabled]	Enable or Disable Boot Option for Legacy Network Devices.
 ACPI Settings CPU Configuration IDE Configuration USB Configuration NCT6627UD Super IO Configuration NCT6627UD H/W Monitor JMB36X ATA Controller Configuration 	→ ← : Select Screen ↑↓ : Select Item Enter : Select +/- : Change Opt. F1 : General Help F2 : Previous Values F3 : Optimized Defaults F4 : Save & Exit ESC : Exit

• ACPI Settings

You can use this screen to select options for the ACPI Settings, and change the value of the selected option. A description of the selected item appears on the right side of the screen.

Aptio Setup Util Advanced	ity - Copyright (C) 2012 Ame	erican Megatrends , Inc .
ACPI Settings	IS2 / Suspend to RAM) 1	Select the highest ACPI sleep sate the system will enter when the SUSPEND button is pressed.
		→ ← : Select Screen ↑↓ : Select Item Enter : Select +/- : Change Opt.
		F1 : General Help F2 : Previous Values F3 : Optimized Defaults F4 : Save & Exit ESC : Exit
Version 2.15.1	227. Copyright(C)2012 Am	nerican Megatrends, Inc .

> ACPI Sleep State

Use this item to select the highest ACPI sleep state the system will enter.

• CPU Configuration

This screen shows the CPU Configuration, and you can change the value of the selected option.

Aptio Setup U	tility - Copyright (C) 2012 Aı	merican Megatrends , Inc .
CPU Configuration Processor Type Processor Speed System Bus Speed Ratio Statis Actual Ratio System Bus Speed Processor Stepping Microcode Revision L1 Cache RAM	Intel(R) Atom (TM) CPU N2 1600 MHZ 400 MHZ 16 16 400 MHZ 30661 266 2x56 K 2x56 K	Enabled for windows XP and Linux (OS optimized for Hyper-Threading Technology) and Disabled for other OS (OS not optimized for Hyper-Threading Technology).
Processor Core Hyper-Threading	Dual Supported	→ ←: Select Screen ↑ ↓ : Select Item Enter : Select
Hyper-Threading Execute Disable Bit	[Enabled] [Enabled]	F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.15.	1227. Copyright (C) 2012 A	merican Megatrends, Inc .

> Hyper Threading Technology

Use this item to enable or disable Hyper-Threading Technology, which makes a single physical processor perform multi-tasking function as two logical ones.

> Execute Disable Bit

This item helps you enable or disable the No-Execution Page Protection Technology

• IDE Configuration

Aptio Setup Utility	- Copyright (C) 201	2 American Megatrends , Inc .
SATA Port 0 SATA Port 1 SATA Controller(s) Configure SATA as	Not Present Not Present [Enabled] [AHCI]	SATA Ports (0-3) Device Names if Present and Enabled.
		→ ← : Select Screen ↑↓ : Select Item Enter : Select +/- : Change Opt. F1 : General Help F2 : Previous Values F3 : Optimized Defaults F4 : Save & Exit ESC : Exit
Version 2.15.122	27. Copyright(C)20	12 American Megatrends, Inc .

SATA Controller(s)

The optional settings are: [Disabled]; [Enabled].

> Configure SATA as

The optional settings are: [IDE]; [AHCI].

• USB Configuration

You can use this screen to select options for the USB Configuration, and change the value of the selected option. A description of the selected item appears on the right side of the screen.

USB Configuration	Enables Legacy USB support. AUTO option disables legacy
USB Devices: None	support if no USB devices are connected. DISABLE option will keep USB devices available
Legacy USB Support [Enabled]	only for EFI applications.
	→ ← : Select Screen ↓ ↓ : Select Item Enter : Select +/- : Change Opt.
	F1 : General Help F2 : Previous Values F3 : Optimized Defaults F4 : Save & Exit ESC : Exit

Legacy USB Support

The optional settings are: [Auto]; [Disabled]; [Enabled].

• NCT6627UD Super IO Configuration

You can use this screen to select options for the Super IO Configuration, and change the value of the selected option. A description of the selected item appears on the right side of the screen

Aptio Setup Utility - Copyright (C) 2012 An	nerican Megatrends , Inc .
NCT6627UD Super IO Configuration	Set Parameters of Serial Port 0 (COMA)
NCT6627UD Super IO NCT6627UD Serial Port 0 Configuration Serial Port 1 Configuration Serial Port 2 Configuration	
Condition Configuration	 → ←: Select Screen ↑↓ : Select Item Enter : Select +/-: Change Opt. F1 : General Help F2 : Previous Values F3 : Optimized Defaults F4 : Save & Exit ESC : Exit
Version 2.15.1227. Copyright (C) 2012 A	merican Megatrends, Inc .

> Serial Port Configuration

Use this item to set parameters of serial port 0~3.

• PC Health Status

This screen shows the Hardware Health Configuration, and a description of the selected item appears on the right side of the screen.

Aptio Setup Utility	- Copyright (C) 2012	American Megatrends , Inc .
Advanced		
PC Health Status		Enable or Disable Smart Fan
Smart Fan Function SYS Temperature CPU Temperature SysFan Speed	[Disabled] : +35 C : +40 C : N/A	
CpuFan Speed VCORE +1.05 v +3.3 v +12 V	: N/A +0.936 V +1.040 V +3.312 V +12.057 V	 → ← : Select Screen ↑↓ : Select Item Enter : Select +/-: Change Opt. F1 : General Help F2 : Previous Values F3 : Optimized Defaults F4 : Save & Exit ESC : Exit
Version 2.15.122	7 . Copyright(C):	2012 American Megatrends, Inc .

3.5 Chipset Menu

The Chipset menu allows users to change the advanced chipset settings. You can select any of the items in the left frame of the screen to go to the sub menus:

• Host Bridge

Host Bridge For items marked with "▶", please press <Enter> for more options.

• South Bridge

South Bridge For items marked with "▶", please press <Enter> for more options.

Aptio Setup Utility - Copyright (C	Setup Utility - Copyright(C)2012 American Megatrends,Inc.	
Main Advanced Chipset Boot Securi	ty Save & Exit	
 Host Bridge South Bridge 	Host Bridge Parameters	
	→ ← : Select Screen ↑↓ : Select Item Enter : Select +/- : Change Opt. F1 : General Help F2 : Previous Values F3 : Optimized Defaults F4 : Save & Exit ESC : Exit	
Version 2.15.1227. Copyright(C)2012 American Megatrends, Inc.	

• Memory Frequency and Timing

This item is for memory frequency and timing settings. Press <Enter> to go to the sub menu.



3.6 Boot Menu

The Boot menu allows users to change boot options of the system.

Boot Settings Configuration		
Aptio Setup Utility - Copyright (C) 2012 American Megatrends , Inc .		
Main Advanced Chipset	Boot Security Sav	e & Exit
Boot Configuration Setup Prompt Timeout Bootup NumLock State Quiet Boot CSM16 Module Verison	1 [On] [Disabled] 07. 68	Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting .
GateA20 Active Option ROM Messages Interrupt 19 Capture Boot Option Priorities	[Upon Request] [Force BIOS] [Enabled]	→ → Select Screen †↓ : Select Item Enter : Select +/- : Change Opt. F1 : General Help F2 : Previous Values F3 : Optimized Defaults F4 : Save & Exit ESC : Exit
Version 2.15.1227. Co	opyright (C) 2012 Ar	merican Megatrends, Inc .

> Setup Prompt Timeout

Use this item to set number of seconds to wait for setup activation key.

Bootup NumLock State

Use this item to select the power-on state for the NumLock.. The optional settings are: [On]; [Off].

GateA20 Active

If Upon Request is selected, GA20 can be disabled using BIOS services. If Always is selected, disabling G20 is not allowed; this option is useful when any RT code is executed above 1MB.

 Option ROM Messages
 Set display mode for option ROM. Configuration options are Force BIOS and Keep Current.

Interrupt 19 Capture If this item is anabled, this function makes the option POM to tran lat

- If this item is enabled, this function makes the option ROM to trap Interrupt 19.
- Boot Option Priorities These are settings for boot priority. Specify the boot device priority sequence from the available devices.

3.7 Security Menu

The Security menu allows users to change the security settings for the system.

Main Advanced Chipset	Boot Security	2 American Megatrends , Inc . Save & Exit
Password Description If ONLY the Administrator's part then this only limits access to s only asked for when entering S If ONLY the user's password is is a power on password and m boot or enter Setup. In Setup t	ssword is set, Setup and is Setup. s set, then this just be entered to he User will	Set Administrator Password
have Administrator rights. The password length must be in the following range: Minimum length Maximum length Administrator Password	3 20	→ ← : Select Screen ↑ ↓ : Select Item Enter : Select +/- : Change Opt. F1 : General Help F2 : Previous Values F3 : Optimized Defaults

Administrator Password

This item indicates whether an administrator password has been set. If the password has been installed, Installed displays. If not, Not Installed displays.

> User Password

This item indicates whether a user password has been set. If the password has been installed, Installed displays. If not, Not Installed displays.

3.8 Exit Menu

The Save & Exit menu allows users to load system configuration with optimal or failsafe default values.

Aptio Setup Utility - Copyright (C) 2012	American Megatrends , Inc .
Main Advanced Chipset Boot Security	ave & Exit
Save Changes and Exit Discard Changes and Exit Save Changes and Reset Discard Changes and Reset Save Options Save Changes Discard Changes	Exit system setup after saving the changes.
Restore Defaults Save as User Defaults Restore User Defaults Boot Override	 → ← : Select Screen †↓ : Select Item Enter : Select +/- : Change Opt. F1 : General Help F2 : Previous Values F3 : Optimized Defaults F4 : Save & Exit ESC : Exit

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Save Changes and Exit

When you have completed the system configuration changes, select this option to leave Setup and reboot the computer so the new system configuration parameters can take effect. Select Save Changes and Exit from the Exit menu and press <Enter>. Select Ok to save changes and exit.

Discard Changes and Exit

Select this option to quit Setup without making any permanent changes to the system configuration. Select Discard Changes and Exit from the Exit menu and press <Enter>. Select Ok to discard changes and exit.

Save Changes and Reset

When you have completed the system configuration changes, select this option to leave Setup and reboot the computer so the new system configuration parameters can take effect. Select Save Changes and Reset from the Save & Exit menu and press <Enter>. Select Yes to save changes and reset.

Discard Changes and Reset

Select this option to quit Setup without making any permanent changes to the system configuration and reboot the computer. Select Discard Changes and Reset from the Save & Exit menu and press <Enter>. Select Yes to discard changes and reset.

Save Changes

When you have completed the system configuration changes, select this option to save changes. Select Save Changes from the Save & Exit menu and press <Enter>. Select yes to save changes.

Discard Changes

Select this option to quit Setup without making any permanent changes to the system configuration. Select Discard Changes from the Save & Exit menu and press <Enter>. Select Yes to discard changes.

Restore Defaults

It automatically sets all Setup options to a complete set of default settings when you select this option. Select Restore Defaults from the Save & Exit menu and press <Enter>.

Save as User Defaults

Select this option to save system configuration changes done so far as User Defaults. Select Save as User Defaults from the Save & Exit menu and press <Enter>.

Restore User Defaults

It automatically sets all Setup options to a complete set of User Defaults when you select this option. Select Restore User Defaults from the Save & Exit menu and press <Enter>.

Boot Override

Select a drive to immediately boot that device regardless of the current boot order.

<u>NOTE</u>: If you want to use a CF card that capacity is less than 2GB (such as 1GB, 512MB), we recommend you may switch "AHCI mode" to "IDE mode" with "Configure SATA as" of the BIOS setting. And please make sure that users of Windows embedded OS need to install with "IDE" driver.

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CHAPTER 4 DRIVERS INSTALLATION

4.1 System

MPC102-832 supports Windows7, WES and WES 7. To facilitate the installation of system driver, please carefully read the instructions in this chapter before start installing.

1. Insert Driver CD and select the "\Drivers".



2. Select all files and follow the installing procedure.

4.2 Touch Screen

The MPC102-832 uses the 5-wire analog resistve. There are the specification and driver installation which are listed below.

4.2.1 Specification

Touch Screen	5-wire Analog Resistive type
Touch Screen Controller	PenMount 6000 USB Touch Screen Controller IC
Communications	USB interface
Baud Rate	19200 baud rate fixed
Resolution	800 x 600 (10 bit A/D converter inside)
Power Input	5V
Power Consumption	Active: 24.6mA / Idle Mode: 13.4mA

4.2.2 Driver Installation- Windows 7

The MPC102-832 provides a touch screen driver that users can install it under the operating system Windows 7. To facilitate installation of the touch screen driver, you should read the instructions in this chapter carefully before you attempt installation.

1. Insert Driver CD and follow the path to select the "\Drivers\Step 5 - Touch".



2. Follow the installing procedure and press OK.

3. Click Start menu and select "PenMount Utilities"; and then, a "PenMount Control Panel" pops out.

🖉 PenMount Control Panel	- 🗆 🗙
Device Tools About	
Select a device to configure.	
6	
PenMount 6000 USB	
1	
Configure Refresh	
	ОК

4. Select the "Standard Calibrate" tab.

VErate Setting Edge Compensation J	About
	Advanced Mode 9 💌
Standard Galbration	Advanced Calibration
Turn off EEPRCM storage.	

5. Calibration:

To adjust the display with touch panel, click "Calibration" and follow the calibrate point to do calibration; there are five points on screen for calibration.

2	
	Touch the red square.

6. Press OK.

NOTE: The windows may be out of rang, because the resolution requests 1024x768 or above when using WIN 7.

NOTE: For the better system performance, please close the Windows AERO or change to Windows Basic mode.

4.3 Embedded O.S.

The GOT-5100T provides the WES 7. The O.S. is supported devices which are listed below.

4.3.1 WES/WES 7

Here are supported onboard devices:

- Onboard Multi I/O
- SATA HDD
- USB
- Compact Flash
- CRT/LCD display
- 10/100/1000 base-T Ethernet
- Onboard Audio
- Touch Screen

PenMount Touch screen

Before you can use and calibrate it, here is what you should do:

- 1. Set up Penmount touch device driver by executing C:\Penmount\ Windows 2000-XP V5.0\setup.exe. When the installation is finished, an icon "PM" appears on the Taskbar.
- 2. Calibrate Penmount touch by clicking on the "PM" icon, and the go on the calibration
- 3. Restart the computer.

Please be informed if you use the Windows XP OS, the graphic driver supported by Intel is EMGD, there are three known issues as below:



The Intel EMGD package does not include an HDMI audio driver, there will be an unknown device under device manager.

NOTE

3D function is not supported.

E LVDS and CRT can't be disabled at the same time.

4.3.2 Windows CE.NET 7.0

Here are supported onboard devices:

- Onboard Multi I/O
- SATA HDD
- USB
- CRT/LCD display
- 10/100/1000 base-T Ethernet
- Onboard Audio
- Touch Screen

Calibration Touch screen

In this image we add PenMount Touch drivers and utilities. It is customized for 800 x 600.

Calibration:

- 1. Click "Calibratyion" on desktop to calibrate touch screen.
- 2. In the start\programs menu, select "save registry", thus Calibration data will be saved and effective in next booting.