WTP-9A66 Series

User's Manual

P/N: **205G00WTP9A660**, Version V1.0

The information contained in this document is subject to change without any notices.

Acknowledgments

Greeting & Setup

Thank you for purchasing the WTP-9A66 Panel PC. We wish that this unit will be durable and reliable in providing your needs. Please follow the instructions below to ensure the unit continues to have high performance

Unpacking

After opening the carton, there will be a unit with an accessory box. Examine the contents to see if there are damages to the unit and if all accessories are present.

Setting up

Please read this manual carefully and remember to keep this manual for future reference.

Safety Instructions & Cleaning

The unit has undergone various tests in order to comply with safety standards. Inappropriate use may be dangerous. Please remember to follow the instructions below to insure your safety during the installation and operating process.

Transporting & Placement of unit

1. When moving the unit on a cart; be very cautious. Quick stops,

excessive forces and uneven surfaces may cause the cart to overturn thus risking the unit to fall to the ground.

2. If the Monitor display unit does fall to the ground, immediately turn the power off and disconnect cords. Then contact a service technician for repairs. Continual use of the unit may result cause a fire or electric shock. Also, do not repair the unit on your own.
3. Having two or more people transporting the display unit is recommended. In addition, when installing the open frame by suspending it also requires two or more people.
4. Before suspending the unit, make sure the material used for suspension is sturdy and stable. If not properly suspended, the display unit may fall and cause serious injury to people standing nearby as well as to the unit itself.
5. If you wish to mount the display unit, remember to use only the mounting hardware recommended by the manufacturer.

Electrical and Power Source Related

1. This Monitor display unit must operate on a power source as shown on the specification label. If you are not sure what type of power supply used in the area, consult your dealer or local power supplier.
2. The power cords must not be damaged. Applied pressure, added heat, and tugging may damage the power cord.
3. The power cord must be routed properly when setup takes place. We advise that this aspect measure is to prevent people from stepping on the cords or while the unit is suspended to prevent flying objects from getting tangled with the unit.
4. Do not overload the AC outlets or extension cords. Electrical shocks or fires may occur from overloading.
5. Do not touch the power source during a thunderstorm.

6. If your hands are wet, do not touch the plug.
7. Use your thumb and index finger, grip firmly on the power cord to disconnect from the electrical socket. By pulling the power cord, may result in damaging it.
8. If the unit is not going to be in use for an extended period of time, remember to disconnect the unit.
9. Connect the unit to a power source with the same numerical value as spec. label shown. Please use only the power cord provided by the dealer to ensure safety and EMC compliance.

Various Factors of Environment

1. Do not insert objects into the openings.
2. Do not have liquids seep into the internal areas of the Monitor display unit.
3. Having liquids seep in or inserting objects into the unit may result in electric shocks from taking and/or short circuiting the internal parts.
4. Do not place the Monitor display unit in the presence of high moisture areas.
5. Do not install the Monitor display unit in a wet environment.
6. Do not place near unit near heat generating sources.
7. Do not place the unit in a location where it will come in contact with fumes or steam.
8. Remember to keep the Monitor display unit away from the presence of dust.
9. If water has flow in or seep in, immediately disconnect the open frame unit. Then contact a service technician for repairs.

Ventilation Spacing

1. Do not cover or block the openings on the top and back sides of the

display unit. Inadequate ventilation may cause overheating thus reducing the lifespan of the unit.

2. Unless proper ventilation is present, do not place unit in an enclosed area; such as a built-in shelf. Keep a minimum distance of 10 cm between the display unit and wall.

Cleaning the unit

1. Remember to turn off the power source and to unplug the cord from the outlet before cleaning the unit.
2. Carefully dismount the unit or bring the unit down from suspension to clean.
3. Use only a dry soft cloth or clean room wiper when cleaning the LCD panel or touch screen surface. Use a soft cloth moistened with mild detergent to clean the display housing.
4. Remember to avoid having liquids seep into the internal components.

Servicing, Repairing, Maintenance & Safety Checks

1. If the unit is not functioning properly, observe the performance level of the display closely to determine what type of servicing is needed.
2. Do not attempt to repair the Monitor display unit on your own. Disassembling the cover exposes users' to high voltages and other dangerous conditions. Notify and request a qualified service technician for servicing the unit.
3. If any of the following situations occur turn the power source off and unplug the unit. Then contact a qualified service technician
   i. A liquid was spilled on the unit or objects have fallen into the unit.
   ii. The unit is soaked with liquids.
   iii. The unit is dropped or damaged.
   iv. If smoke or strange odor is flowing out of the open frame unit.

v. If the power cord or plug is damaged.

vi. When the functions of the unit are dysfunctional.

4. When part replacement is needed. Make sure service technician uses replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. If unauthorized parts are used it may result in starting a fire, electrical shock and/or other dangers.

Battery Installation

Follow below instructions and notice the caution for replacing and disposing of the RTC Lithium battery CR2032 for safety consideration.

CAUTION:

There is danger of explosion, if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instruction.

The specification is subject to change without notice.

Version Change History

Date	Version	Description	Remark
2014/9/24	V1.0	First release	Ivy

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How to Use This Manual

This manual is written for the system integrator, PC technician and knowledgeable PC end user. It describes how to configure your WTP-9A66 Panel PC to meet various operating requirements. The user's manual is divided into three chapters, with each chapter addressing a basic concept and operation of the server board.

Chapter 1: System Overview - presents what you have inside the box and gives you an overview of the product specifications and basic system architecture for the WTP-9A66 Panel PC.

Chapter 2: System Installation - describes how to set up the system.

Chapter 3: BIOS Setup Information - specifies the meaning of each setup parameter, how to get advanced BIOS performance and update to a new BIOS. Additionally, the POST checkpoint list will give you a guide for troubleshooting.

The contents of this manual are subject to change without prior notice. These changes will be incorporated in new editions of this manual.

System Overview

System Specification

CPU	Intel® Core™ i5-3317U	
Chipset	Intel® BD82HM65 PCH	
Audio	Realtek ALC262 audio codec, 2+2 watts power amplifier	
LAN	Marvell 88E8071 Giga LAN x 2	
Memory	Two 1066/1333 MHz DDR3 SODIMM socket support dual Channel, non-ECC, up to 8GB	
I/O	EC	
Serial ATA	SATA 2, 300 MB/s transfer rate x 2	
Serial port	RS232,422,485 x 1, RS232 x 5	
USB	External	USB 2.0 x 4 (Type A)
	Internal	3.3V Socket x 3
		5V Pin Head x 4 (1 reserved for touch screen)
WDT	Generates system reset; 256 segments, 0, 1, 2…255 sec/min.	

BIOS

Brand: AMI

Flash ROM size: 4M bytes
Support RTC wakeup /Wake on LAN /Power on after power failure/PnP/ACPI/RTC

Display

Panel

Size	15”	19”
Brand	*TIANMA*	AUO
Model	*TM150TDS50*	G190EG01 V1
Resolution (pixel)	*1,024 (H) x 768 (V)*	SXGA (1280 x 1024)
Number of Colors	16.7M	16.7M
View Angle (H/V)	*80°/ 80°/80°/80° (typ.)*	Horizontal 170 Vertical 160
Brightness (cd/m2)	400	350
Contrast Ratio	600:1	1000:1
Power Consumption (W)		
Interface	2ch LVDS	2ch LVDS
Supply Voltage (V)	5	5
Backlight	LED	LED
life time<Hrs>	50000hrs	50000hrs

Touch Screen: capacitive types

	HIGGSTEC
Type	P-CAP
Glove	*Need special conductive stylus*
Stylus	*Only very thin latex glove*
Vandal	*NA*
Interface	*USB*
Light Transmission	*90%± 3%*
Hardness	*Mohs 7*
Glass thickness	*2.8 mm*
Linearity	*99.0%*
Resolution	*4096X4096*
Lifetime	*100 million touches*

Touch Controller

RES EETI ,IC8051F321,MCU,TOUCH,28P,0.5MM,SMT,QFN

Storage

HDD	2.5” SATA HDD drive bay x 1 (with anti-vibration mechanism)

Expansion

Mini-PCIe	52 pin card-edge type compatible to PCI Express*Base specification 2.0 x 2

External I/O

USB	USB 2.0 x 4
COM	DB-9 x 3 (RS232 x 2, RS232/RS422/RS485 x 1)
LAN	RJ-45 x 2 (Gigabit Ethernet)
Audio	3.5mm phone jack connector * 2 (Line-out, and Mic-in)
DVI output	DVI-I x 1

Power

Power	DC-In connector x 1 (Jack with locker)
Switch	Reset key

LED indicator on	Green: power On/Off
Aluminum bezel	Orange: HDD status
Power Input	DC12V~28V
Power Adapter	AC 90 ~ 264V / 47 ~ 63 Hz / DC output 12V (15”)
	AC100~240V / 47 ~ 63 Hz / DC output 12V (17”,19”)

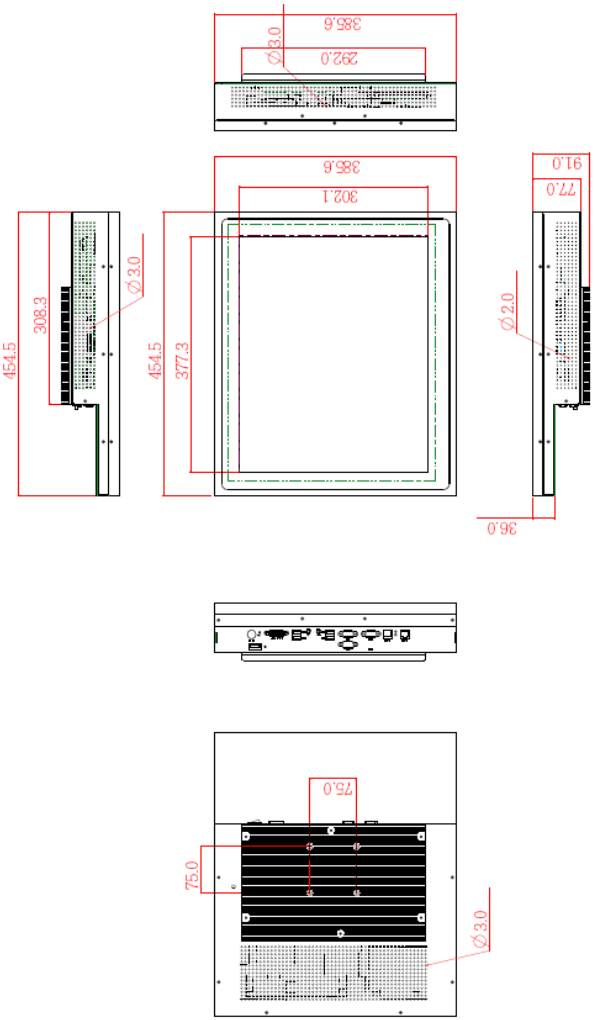
Mechanical & Environmental

Material construction	Front bezel is Aluminum or SECC, others are SECC enclosure
Aluminum bezel Color	Black / Silver
Front Panel Protection	IP66 / NEMA4X
ID design	Panel mount / Open frame
Operation Temperature	15” & 19”: 12V DC Input 0~50℃ (IEC60068-2-56, air flow cooling) 17”: 12V DC Input 0~45℃ (IEC60068-2-56, air flow cooling)
Storage Temperature	-20~60℃
Operation Relative Humidity	10%~90%, non-condensing
Storage Relative Humidity	10%~90%, non-condensing
Mounting	Panel mount/VESA (75x75)

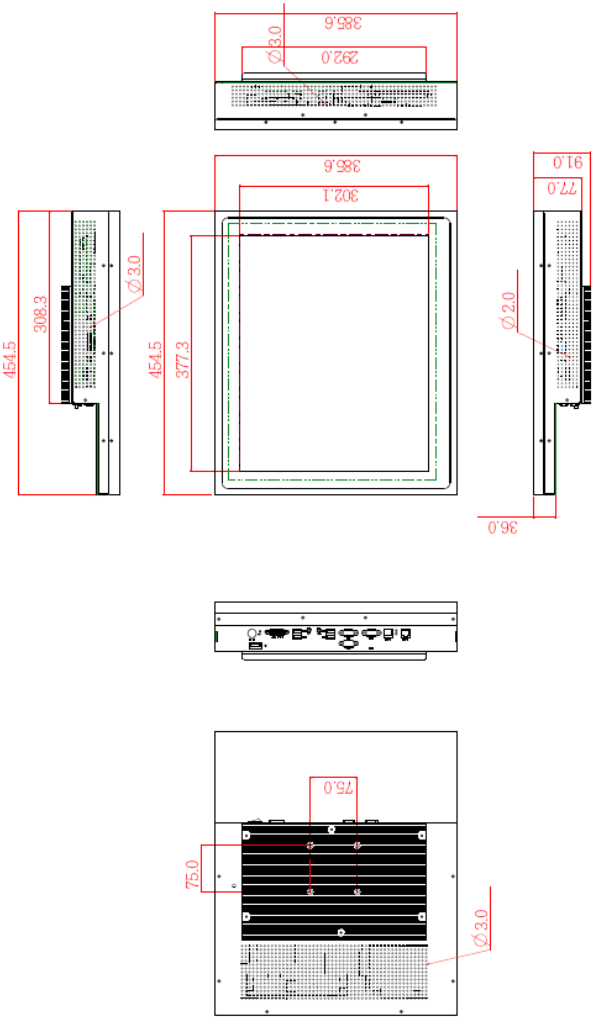
	Net Weight	**Gross Weight**
19”	9	11.7
21”	9.8	15

System View

WTP-9A66 Outline Drawing



WTP-9A66 Outline Drawing



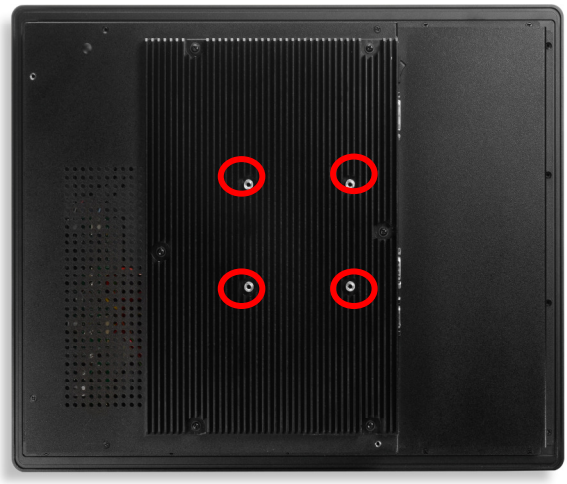
I/O connectors

Note: Share the same place with DVI output, DVI and VGA not simultaneously

VESA mount installation

Please use the supplied 4 x M4-L10 screws for VESA mounting. And as below VESA mounting holder is just a diagrammatic drawing. You can choose any standard VESA 75x75 mm mounting holder to mount our machine.

For use only with UL listed Wall Mount Bracket with minimum weight/load bearing capacity 10 Kg



Unpacking

After unpacking the shipping carton, you should find these standard items:

- The WTP-9A66 Panel PC series

- Accessory box including the followings:

  - AC-DC adapter x 1
  - AC power cord x 1
  - Screws (M3x0.5PxL6) x 8
  - Screws (M4x0.7PxL44) x 8
  - CD-ROM for drivers, utility, user manual(in PDF format)

Inspect all the items. If any item is damaged or missing, notify your dealer immediately.

Getting Started

This chapter tells you how to set up the system.

Setting up the System

The following is a summary of the steps in setting up the system for use.

CAUTION: Make sure that power to the system and each of the devices to be connected is switched OFF before plugging in the connectors.

1. Make any required external connections such as the keyboard, and mouse.
2. Plug the appropriate end of the power cord into the power connector of the system. Then plug the other end of the power cord to an electrical outlet.
3. Press the power switch of the system to turn on the system's power.
4. If necessary, run the BIOS SETUP program to configure the system (see Chapter 3).
5. Install the software drivers if necessary.

Installing System Software

Recent releases of operating systems from major vendors include setup programs, which load automatically and guide you through hard disk preparation and operating system installation. The guidelines below will help you determine the steps necessary to install your operating system on the Panel PC hard drive.

NOTE: Some distributors and system integrators may have already pre-installed system software prior to shipment of your Panel PC.

Installing software requires an installed HDD. Software can be loaded in the WTP-9A66 Panel PC using any of below methods:

Method 1: Use the Ethernet

You can use the Ethernet port to download software from the net to the HDD that has been pre-installed in WTP-9A66 Panel PC

Method 2: Use the COM Port

By connecting another PC to the WTP-9A66 Panel PC with an appropriate cable, you can use transmission software to transmit Operation System Software to the HDD that has been pre-installed in the WTP-9A66 Panel PC.

Method 3: Use a External CD-ROM

In order to boot up system from USB-CD/DVD drive, please connect USB-CD/DVD drive, turn on computer power, keep on pressing “F11” key, go into BIOS quick boot menu, select “USB-CD ROM”, WAIT FOR 20 SECONDS, then press enter, system OS will boot up from USB-CD/DVD drive directly

Then you can use the external CD-ROM to transmit the software to the HDD that has been pre-installed in the WTP-9A66 Panel PC

Installing the Drivers

After installing your system software, you will be able to set up the LAN, VGA, Audio and USB functions. All drivers are stored in a CD disc, which can be found in your accessory pack.
The various drivers and utilities in the disc have their own text files that help users install the drivers and understand their functions.

Follow the sequence below to install the drivers:

Step 1 – Install Intel® INF Driver
Step 2 – Install Intel® VGA Driver
Step 3 – Install Intel® LAN Driver
Step 4 – Install Audio Driver

Step 1 – Install Intel® INF Driver

1. Open fie of **chipset**
2. Click on the **setup.exe**
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically
5. Reboot system

Step 2 –Install Intel® VGA Driver

1. Open fie of **VGA**
2. Select the OS folder your system is
3. Click on the **.exe** file located in the OS folder
4. Follow the instructions that the window shows
5. The system will help you install the driver automatically
6. Reboot system

Step 3 – Install Intel® LAN Driver

1. Open fie of **LAN**
2. Click on the **setup.exe**

3. Follow the instructions that the window shows
4. The system will help you install the driver automatically
5. Reboot system

Step 4 – Install Audio Driver

1. Open fie of **LAN**
2. Click on the **setup.exe**
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically
5. Reboot system

BIOS Setup Information

BIOS Introduction

The AMI BIOS (Basic Input / Output System) installed in your computer system's ROM supports Intel processors. The BIOS provides critical low-level support for a standard device such as disk drives, serial ports and parallel ports. It also adds virus and password protection as well as special support for detailed fine-tuning of the chipset controlling the entire system.

BIOS Setup

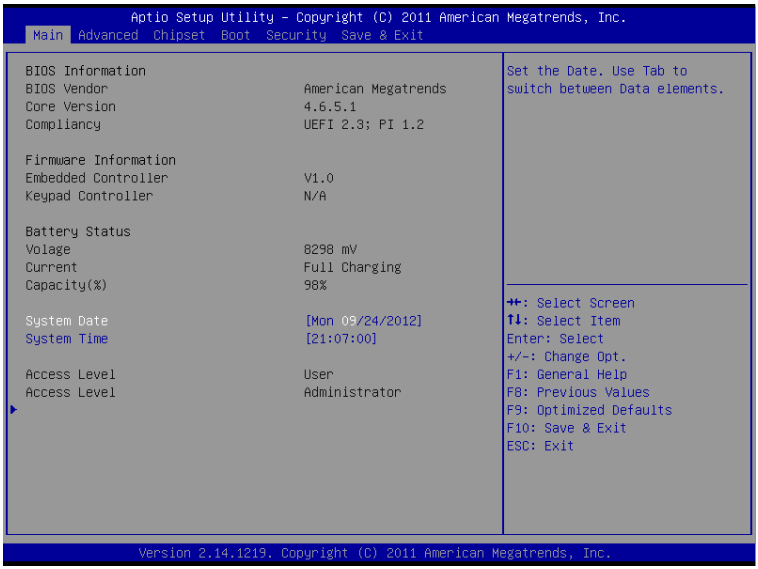
The AMI BIOS provides a Setup utility program for specifying the system configurations and settings. The BIOS ROM of the system stores the Setup utility. When you turn on the computer, the AMI BIOS is immediately activated. Pressing the <Del> key immediately allows you to enter the Setup utility. If you are a little bit late pressing the <Del> key, POST (Power On Self Test) will continue with its test routines, thus preventing you from invoking the Setup. If you still wish to enter Setup, restart the system by pressing the "Reset" button or simultaneously pressing the <Ctrl>, <Alt> and <Delete> keys. You can also restart by turning the system Off and back On again. The following message will appear on the screen:

Press <DEL> to Enter Setup

In general, you press the arrow keys to highlight items, <Enter> to select, the <PgUp> and <PgDn> keys to change entries, <F1> for help and <Esc> to quit.

When you enter the Setup utility, the Main Menu screen will appear on the screen. The Main Menu allows you to select from various setup functions and exit choices.

Main



This section provides information on the BIOS information, Memory information, and Battery information

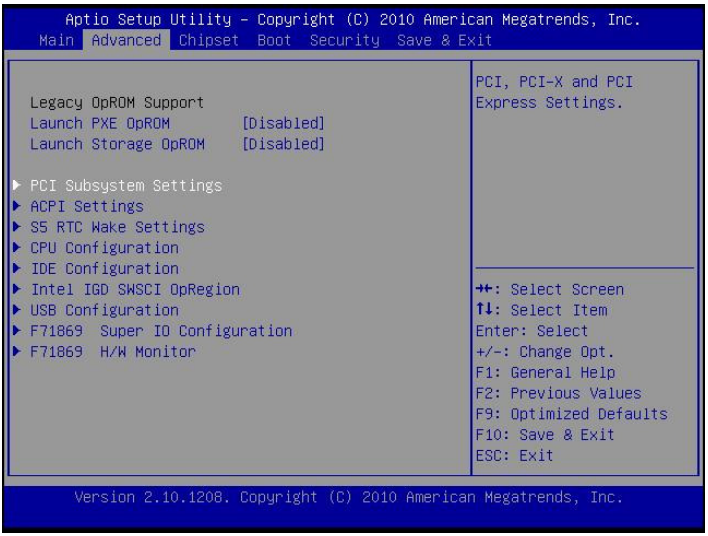
System Date

Set the system date. Use the <Tab> key to switch between data elements.

System Time

Set the system time. Use the <Tab> key to switch between time elements.

Advanced



Launch OpROM Support

Launch PXE OpROM

Enables or disables Boot Option for Legacy Network Devices.

Launch Storage OpROM

Enables or disables Boot Option for Legacy Mass Storage Devices with Option ROM.

PCI Subsystem Settings

PCI ROM Priority

In Case of multiple Option ROMs (Legacy and EFI Compatible), specifies what PCI Option ROM to launch.

PCI Latency Timer

Value to be programmed into PCI Latency Timer Register.

VGA Palette Snoop

Enables or disables VGA Palette Registers Snooping.

PERR# Generation

Enables or Disables PCI Device to Generate PERR#.

SERR# Generation

Enables or Disables PCI Device to Generate SERR#.

Relaxed Ordering

Enables or Disables PCI Express Device Relaxed Ordering.

Extended Tag

If ENABLED allows Device to use 8-bit Tag field as a requester.

No Snoop

Enables or Disables PCI Express Device No Snoop option.

Maximum Payload

Set Maximum Payload of PCI Express Device or allow System BIOS to select the value

Maximum Read Request

Set Maximum Read Request Size of PCI Express Device or allow System BIOS to select the value.

ASPM Support

Set the ASPM Level: Force L0 – Force all links to L0 State : AUTO – BIOS auto configure : DISABLE – Disables ASPM.

Extended Synch

If ENABLED allows generation of Extended Synchronization patterns.

ACPI Settings

Enables ACPI Auto Conf

Enables or Disables BIOS ACPI Auto Configuration.

Enable Hibernation

Enables or Disables System ability to Hibernate (OS/S4 Sleep State). This option may be not effective with some OS.

ACPI Sleep State

Select the highest ACPI sleep state the system will enter, when the SUSPEND button is pressed.

S5 RTC Wake Settings

Wake System with Fixed Time

Enables or disables system wake on alarm event. When enabled, the system will wake on the time specified.

Wake system with Dynamic Time

Enables or disables system wake on alarm event. When enabled, the system will wake on the current time+Increase minute(s).

CPU Configuration

Hyper-Threading

Enabled for Windows XP and Linux (OS optimized for Hyper-Threading Technology) and Disabled for other OS (OS optimized for Hyper-Threading Technology)

Core-Multi Processing

Enable or Disable Core-Multi Processing mode.

Execute Disable Bit

XD can prevent certain classes of malicious buffer overflow attacks when combined with a supporting OS (Windows Server 2003 SP1, Windows XP SP2, SuSE Linux 9.2, RedHat Enterprise 3 Update 3.)

Limit CPUID Maximum

Disabled for Windows XP.

IDE Configuration

ATA or IDE Configuration

Select ATA or IDE configuration.

Configure SATA AS

Select a configuration for SATA controller.

HDD Acoustic Power Ma

Option to enable or disable HDD Acoustic Power Management.

DiPM

Option to enable or disable DiPM

Intel IGD SWSCI OpRegion

DVMT Mode Select

Selects DVMT Mode used by Internal Graphics Device.

DVMT/FIXED Memory

Selects DVMT/FIXED Mode Memory size used by Internal Graphics Device.

IGD – Boot Type

Select the Video Device which will be activated during POST. This has no effect if external graphics present.

LCD Panel Type

Select LCD panel used by Internal Graphics Device by selecting the appropriate setup item.

Panel Scaling

Select the LCD panel scaling option used by the Internal Graphics Device.

GMCH BLC Control

Back Light Control Setting

BIA Control

Spread Spectrum clock

>>Hardware: Spread is controlled by chip;

>>Software: Spread is controlled by BIOS.

TV1 Standard

TV2 Standard

Active LFP

Select the Active LFP Configuration.

No LVDS:VBIOS does not enable LVDS.

INT-LVDS:VBIOS enables LVDS driver by Integrated encoder.

SDV0 LVDS:VBIOS enables LVDS driver by SDV0.

USB Configuration

Legacy USB Support

Allows USB devices to be used in MS-DOS.

EHCI Hand-off

This is a workaround for 0Ses without EHCI hand-off support. The EHCI ownership change should be claimed by EHCI driver.

USB transfer time-out

The time-out value for Control, Bulk, and Interrupt transfers.

Device reset time-out

USB mass storage device Start Unit command time-out.

Device power-up delay

Maximum time the device will take before it properly reports itself to the HOST Controller.

'Auto' uses default value: for a Root port it is 100 ms, for a Hub port the delay is taken from Hub descriptor.

F71869 Super IO Configuration

Serial Port 0 Configuration

Set Parameters of Serial Port 0 (COM A).

Serial Port 1 Configuration

Set Parameters of Serial Port 1 (COM B).

F71869 H/W Monitor

Monitor hardware status

Second Super IO Configuration

Serial Port 1 Configuration

Set Parameters of Serial Port 1 (COM C).

Serial Port 2 Configuration

Set Parameters of Serial Port 2 (COM D).

Serial Port 3 Configuration

Set Parameters of Serial Port 3 (COM E).

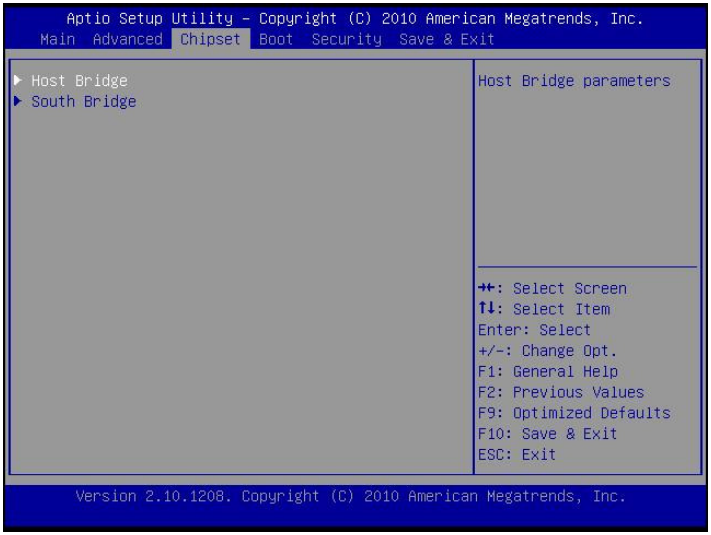
Serial Port 4 Configuration

Set Parameters of Serial Port 4 (COM F).

Serial Port Console Redirection

Serial Port Console Redirection.

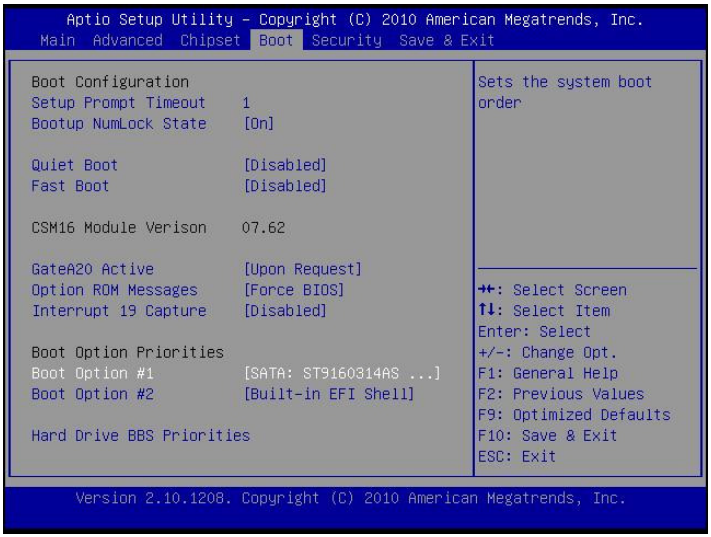
Chipset



Host Bridge/South Bridge

This screen provides information on Host Bridge/South Bridge parameters.

Boot



Setup Prompt Timeout

Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.

Bootup Numlock State

Selects the keyboard NumLock state.

Quiet Boot

Allows you to determine whether to display the AMI Logo at system startup. **Disabled** displays normal POST message.

Fast Boot

Enables or disables the quick boot function to speed up the system boot-up process to shorten the waiting time for entering the operating system and to deliver greater efficiency for daily use.

GateA20 Active

This option is useful when any RT code is executed above 1MB.

Upon Request GA20 can be disabled using BIOS services. (Default)

Always Do not allow disabling GA20.

Option ROM Messages

Sets display made for option ROM.

Interrupt 19 Capture

Enables or disables Option ROMs to Trap Int 19.

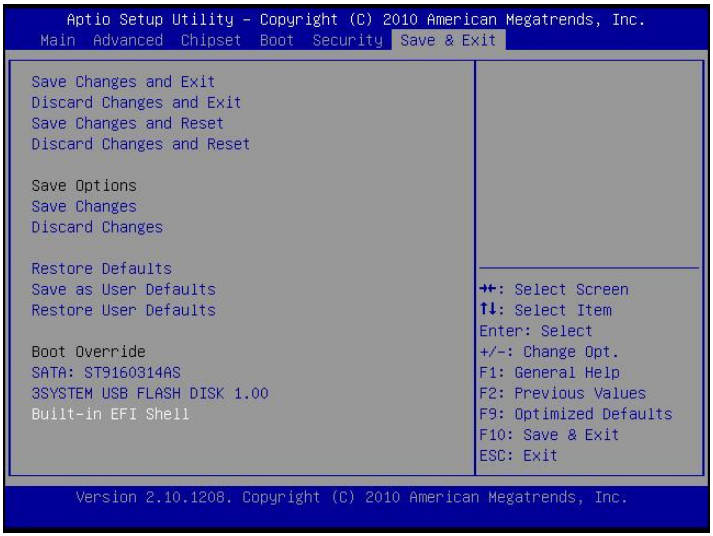
Boot Option Priorities

Specifies the sequence of loading the operating system from the installed hard drives.

Security

Enables or disables the security chip. It is recommended that you use this function with the Administrator/User password.

Save & Exit



Save Changes and Exit

Exit system setup after saving the changes.

Discard Changes and Exit

Exit system setup without saving any changes.

Save Changes and Reset

Reset the system after saving the changes.

Discard Changes and Reset

Reset system setup without saving the changes.

Save Changes

Save the changes done so far to any of setup options.

Discard Changes

Discard the changes done so far to any of setup options.

Restore Defaults

Restore/load default values for all the setup options.

Save as User Defaults

Save the changes done so far as User Defaults.

Restore User Defaults

Restore the User Defaults to all the setup options.

EFIGUI_FLASH

Press <Enter> to execute the simple EFI GUI Flash Program.

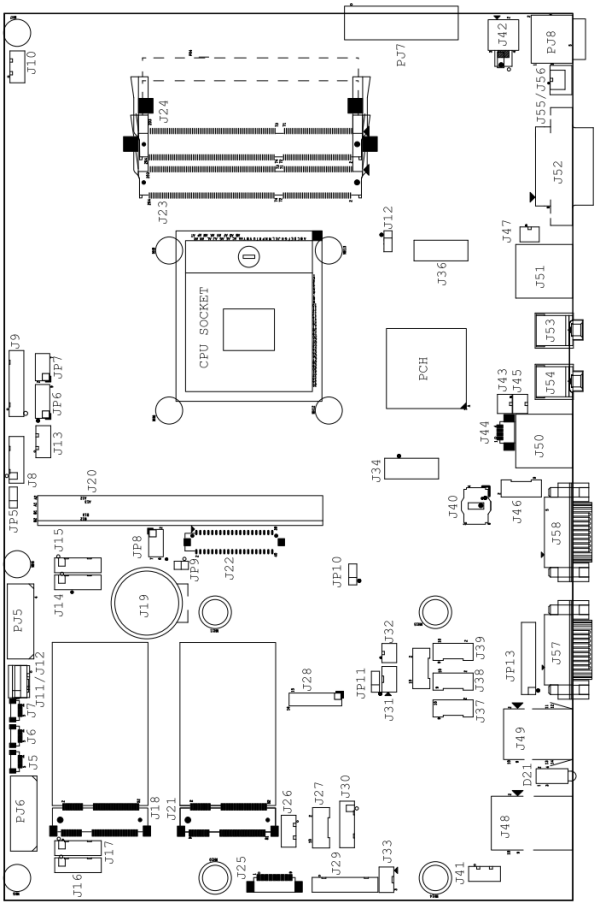
Appendix

A. Jumper settings and Connectors

This appendix gives the definitions and shows the positions of jumpers, headers and connectors. All of the configuration jumpers on WTP9A66 series are in the proper position.

Note: Some of jumpers or connectors will be removed base on system configuration.

Jumper and Connector Definition Block



JP5 –Backlight Adjust

Description	Jumper Setting
analog Inverter	**1-2 (default)**
PWM Inverter	2-3

JP6 – Touch Panel Wire Selection

Description	Jumper Setting
4 wire	1-2, 3-4, 5-6, 7-8, 9-10
5 wire	**3-4, 5-6, 7-8, 9-10 (default)**
8 wire	1-2

JP7 – Touch Panel Type Selection

Description	Jumper Setting
3M type	**1-2, 3-4 (default)**
ELO type	5-6,7-8

JP8– Panel Power Selection

Description	Jumper Setting
+5VS (for 17"/19"/21.5")	**1-2,3-4 (default)**
+3.3VS (for 10"/12"/15")	5-6,7-8

JP9 –TPM Settings

Description	Jumper Setting
Clear ME RTC registers	1-2
Keep ME RTC registers	**OPEN (default)**

JP10 – CMOS Clear

Description	Jumper Setting
Normal Open	**1-2 (default)**
CMOS Clear	2-3

JP11 – Thermal sensor

Description	Jumper Setting
Auto detect	**1-2(default)**
always 25 ℃	2-3
always -40 ℃	NC

JP12 – SATA or SATA DOM Selection

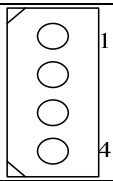
Description	Jumper Setting
SATA DOM	1-2 ---power +5V
SATA	**2-3(default)--- GND**

JP13 – COM1 Function Selection

Description	Jumper Setting
RS-232	**5-6, 9-11, 10-12, 15-17, 16-18(default)**
RS-422	3-4, 7-9, 8-10, 13-15, 14-16, 21-22
RS-485	1-2, 7-9, 8-10, 19-20

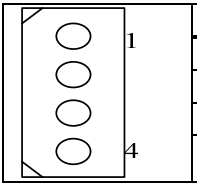
Connector Definition

PJ5 – HDD Power Connector



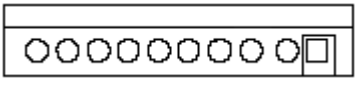
Pin #	Signal Description
1	+12V
2	Ground
3	Ground
4	+5V

PJ6 – HDD Power Connector



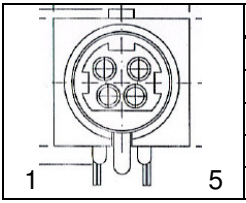
Pin #	Signal Description
1	+12V
2	Ground
3	Ground
4	+5V

PJ7 – Battery Connector



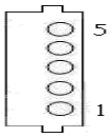
Pin #	Signal Description
1	BATT+
2	BATT+
3	BATT+
4	BAT_T
5	BAT_C
6	BAT_D
7	BATT_EN#
8	BATT-
9	BATT-
10	BATT-

PJ8 – Power Jack Connector



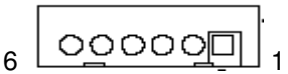
Pin #	Signal Description
1	DC In
2	DC In
3	Ground
4	Ground
5	Ground

J5,J6,J7 – Internal USB +3.3V Interface



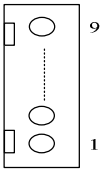
Pin #	Signal Description
1	+3.3VS
2	Data -
3	Data +
4	Ground
5	Ground

J8 – LCD Inverter Interface



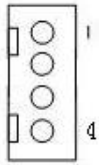
Pin #	Signal Description
1	+12V
2	+12V
3	Backlight Adjust
4	Backlight Enable
5	Ground
6	Ground

J9 –Resistor Touch Panel Interface



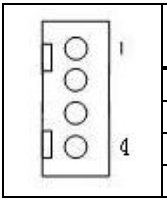
Pin #	Signal Description		
	8-wire	4-wire	5-wire
1	UL(X+)	UL(X+)	UL(X+)
2	UR(Y+)	UR(Y+)	UR(Y+)
3	N/A	N/A	PRCBE
4	LR(X-)	LR(X-)	LR(X-)
5	LL(Y-)	LL(Y-)	LL(Y-)
6	X+_DRIVE	N/A	N/A
7	Y+_DRIVE	N/A	N/A
8	X-_DRIVE	N/A	N/A
9	Y-_DRIVE	N/A	N/A

J10,J11/J12 –PWM CPU FAN, SYSTEM FAN



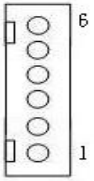
Pin #	Signal Description		
	J10(SYSTEM)	J11(CPU) 2.54mm	J12(CPU) 2.0mm
1	AUX PWM	CPU PWM	SYS PWM
2	AUX RPM	CPU RPM	SYS RPM
3	VAUXFAN	VCPUXFAN	VSYSXFAN
4	GND	GND	GND

J13 –F/W IC-EETI control



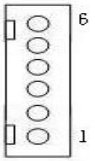
Pin #	Signal Description
1	+3.3V_TP
2	C2CK
3	C2D
4	Ground

J14, J15 – Internal USB 5V Interface



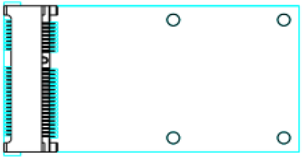
Pin #	Signal Description
1	+5VSB
2	+5VSB
3	Data -
4	Data +
5	Ground
6	Ground

J16, J17 – Internal USB 5V (QM67 only Support)



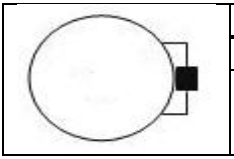
Pin #	Signal Description
1	+5VSB
2	+5VSB
3	Data -
4	Data +
5	Ground
6	Ground

J18, J21 – mini PCI Express Socket



Pin #	Signal Description	Pin #	Signal Description
1	WAKE#	2	+3.3VSB
3	Reserved	4	GND
5	Reserved	6	+1.5VS
7	CLKREQ#	8	Reserved
9	GND	10	Reserved
11	REFCLK-	12	Reserved
13	REFCLK+	14	Reserved
15	GND	16	Reserved
17	Reserved	18	GND
19	Reserved	20	Reserved
21	GND	22	PERST#
23	PERn0	24	+3.3VSB
25	PERp0	26	GND
27	GND	28	+1.5VS
29	GND	30	SMB_CLK
31	PETn0	32	SMB_DATA
33	PETp0	34	GND
35	GND	36	USB_D-
37	GND	38	USB_D+
39	+3.3VSB	40	GND
41	+3.3VSB	42	Reserved
43	GND	44	Reserved
45	CL_CLK	46	Reserved
47	CL_ DATA	48	+1.5VS
49	Controller Link RST#	50	GND
51	Reserved	52	+3.3VSB

J19 – Battery Socket



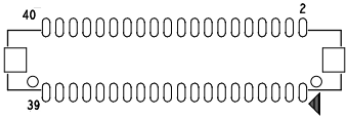
Pin #	Signal Description
1	RTC +3.3V
2	GND

J20 –Standard PCIE X16 Slot Interface

Pin #	Side B	Side A	Pin #	Side B	Side A
1	+12V	PRSNT1#	42	PETn6	GND
2	+12V	+12V	43	GND	PERp6
3	+12V	+12V	44	GND	PERn6
4	GND	GND	45	PETp7	GND
5	SMCLK	**PCIE_TXN6**	46	PETn7	GND
6	SMDAT	**PCIE_TXP6**	47	GND	PERp7
7	GND	**PCIE_RXN6**	48	Reserved	PERn7
8	+3.3V	**PCIE_RXP6**	49	GND	GND
9	Reserved	+3.3V	50	PETp8	Reserved
10	+3.3V	+3.3V	51	PETn8	GND
11	WAKE#	PERST#	52	GND	PERp8
12	Reserved	GND	53	GND	PERn8
13	GND	PCIEx16_CLK+	54	PETp9	GND
14	PETp0	PCIEx16_CLK-	55	PETn9	GND
15	PETn0	GND	56	GND	PERp9
16	GND	PERp0	57	GND	PERn9
17	Reserved	PERn0	58	PETp10	GND
18	GND	GND	59	PETn10	GND
19	PETp1	Reserved	60	GND	PERp10
20	PETn1	GND	61	GND	PERn10
21	GND	PERp1	62	PETp11	GND
22	GND	PERn1	63	PETn11	GND
23	PETp2	GND	64	GND	PERp11
24	PETn2	GND	65	GND	PERn11
25	GND	PERp2	66	PETp12	GND
26	GND	PERn2	67	PETn12	GND
27	PETp3	GND	68	GND	PERp12
28	PETn3	GND	69	GND	PERn12
29	GND	PERp3	70	PETp13	GND
30	**PCIEx1_CLK+**	PERn3	71	PETn13	GND
31	**PCIEx1_CLK-**	GND	72	GND	PERp13
32	GND	Reserved	73	GND	PERn13
33	PETp4	Reserved	74	PETp14	GND
34	PETn4	GND	75	PETn14	GND

35	GND	PERp4	76	GND	PERp14
36	GND	PERn4	77	GND	PERn14
37	PETp5	GND	78	PETp15	GND
38	PETn5	GND	79	PETn15	GND
39	GND	PERp5	80	GND	PERp15
40	GND	PERn5	81	Reserved	PERn15
41	PETp6	GND	82	**PCICLK_33M**	GND

J22 – LVDS Interface



Pin #	Signal Description	Pin #	Signal Description
1	+LCD (+5V/ +3.3V)	2	+LCD (+5V/ +3.3V)
3	+LCD (+5V/ +3.3V)	4	+LCD (+5V/ +3.3V)
5	Ground	6	Ground
7	Ground	8	Ground
9	A_RxIn0-	10	B_RxIn0-
11	A_RxIn0+	12	B_RxIn0+
13	Ground	14	Ground
15	A_RxIn1-	16	B_RxIn1-
17	A_RxIn1+	18	B_RxIn1+
19	Ground	20	Ground
21	A_RxIn2-	22	B_RxIn2-
23	A_RxIn2+	24	B_RxIn2+
25	Ground	26	Ground
27	A_CKIN-	28	B_CKIN-
29	A_CKIN+	30	B_CKIN+
31	Ground	32	Ground
33	A_RxIn3-	34	B_RxIn3-
35	A_RxIn3+	36	B_RxIn3+
37	Ground	38	Ground
39	Ground	40	Ground

J23,J24 – DDR3 SO-DIMM Interface

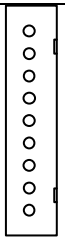
J23→ H9.2 Near CPU

J24→ H5.2 Near External

Pin	Symbol	Pin	Symbol	Pin	Symbol	Pin	Symbol	Pin	Symbol	Pin	Symbol
1	VREFDQ	69	DQ27	137	DQS4	2	VSS	70	DQ31	138	VSS
3	VSS	71	VSS	139	VSS	4	DQ4	72	VSS	140	DQ38
5	DQ0	73	CKE0	141	DQ34	6	DQ5	74	NC	142	DQ39
7	DQ1	75	VDD	143	DQ35	8	VSS	76	VDD	144	VSS
9	VSS	77	NC	145	VSS	10	DQS0#	78	NC	146	DQ44
11	DM0	79	BA2	147	DQ40	12	DQS0	80	NF/A14	148	DQ45
13	VSS	81	VDD	149	DQ41	14	VSS	82	VDD	150	VSS
15	DQ2	83	A12	151	VSS	16	DQ6	84	A11	152	DQS5#
17	DQ3	85	A9	153	DM5	18	DQ7	86	A7	154	DQS5
19	VSS	87	VDD	155	VSS	20	VSS	88	VDD	156	VSS
21	DQ8	89	A8	157	DQ42	22	DQ12	90	A6	158	DQ46
23	DQ9	91	A5	159	DQ43	24	DQ13	92	A4	160	DQ47
25	VSS	93	VDD	161	VSS	26	VSS	94	VDD	162	VSS
27	DQS1#	95	A3	163	DQ48	28	DM1	96	A2	164	DQ52
29	DQS1	97	A1	165	DQ49	30	RESET#	98	A0	166	DQ53

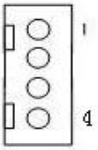
31	VSS	99	VDD	167	VSS	32	VSS	100	VDD	168	VSS
33	DQ10	101	CK0	169	DQS6#	34	DQ14	102	CK1	170	DM6
35	DQ11	103	CK0#	171	DQS6	36	DQ15	104	CK1#	172	VSS
37	VSS	105	VDD	173	VSS	38	VSS	106	VDD	174	DQ54
39	DQ16	107	A10	175	DQ50	40	DQ20	108	BA1	176	DQ55
41	DQ17	109	BA0	177	DQ51	42	DQ21	110	RAS#	178	VSS
43	VSS	111	VDD	179	VSS	44	VSS	112	VDD	180	DQ60
45	DQS2#	113	WE#	181	DQ56	46	DM2	114	S0#	182	DQ61
47	DQS2	115	CAS#	183	DQ57	48	VSS	116	ODT0	184	VSS
49	VSS	117	VDD	185	VSS	50	DQ22	118	VDD	186	DQS7#
51	DQ18	119	A13	187	DM7	52	DQ23	120	NC	188	DQS7
53	DQ19	121	NC	189	VSS	54	VSS	122	NC	190	VSS
55	VSS	123	VDD	191	DQ58	56	DQ28	124	VDD	192	DQ62
57	DQ24	125	NC	193	DQ59	58	DQ29	126	VREFCA	194	DQ63
59	DQ25	127	VSS	195	VSS	60	VSS	128	VSS	196	VSS
61	VSS	129	DQ32	197	SA0	62	DQ3#	130	DQ36	198	EVENT#
63	DM3	131	DQ33	199	VDDSPD	64	DQ3	132	DQ37	200	SDA
65	VSS	133	VSS	201	SA1	66	VSS	134	VSS	202	SCL
67	DQ26	135	DQS4#	203	VTT	68	DQ30	136	DM4	204	VTT

J25 – CAP Front Bezel Button Connector (For WMP-226/227)



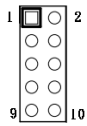
Pin #	Signal Description
1	+3.3V
2	+3.3V
3	KP_SCL
4	KP_SDA
5	HEATER_LED#
6	KP_INT#
7	SATA_LED#
8	Ground
9	Ground

J26 – SDP (EC Simple Debug Port)



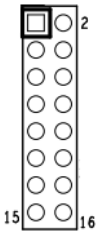
Pin #	Signal Description
1	+5V
2	P80_DAT
3	P80_CLK
4	Ground

J27 – EC JTAG



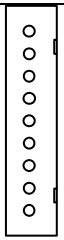
Pin #	Signal Description	Pin #	Signal Description
1	EC_TRST#	2	+3.3V
3	EC_TMS	4	EC_RDY#
5	EC_TDI	6	GND
7	EC_TCK	8	GND
9	EC_TDO	10	GND

J28 –TPM / ID-394



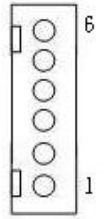
Pin #	Signal Description	Pin #	Signal Description
1	LPC AD0	2	PCI reset
3	LPC AD1	4	SERIRQ
5	LPC AD2	6	+3.3V
7	LPC AD3	8	+5V
9	LPC Frame	10	PCI CLKRUN
11	Debug CLK	12	SMB CLK
13	GND	14	SMB DATA
15	SUS_STAT#	16	+3.3V

J29 – Front Bezel Button Connector



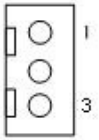
Pin #	Signal Description
1	Power Button
2	+3.3V
3	Sound Volume Up
4	Sound Volume Down
5	Ground
6	LCD BackLight Up
7	LCD BackLight Down
8	Touch Screen Forbid
9	LCD BackLight ON/OFF

J30 – PS2 KB/MS connector



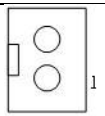
Pin #	Signal Description
1	Keyboard data
2	Mouse data
3	GND
4	5V
5	Keyboard clock
6	Mouse clock

J31 – Light Sensor Connector (For Outdoor)



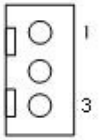
Pin #	Signal Description
1	Light Sensor
2	NC
3	+3.3V

J32 – EC Reset



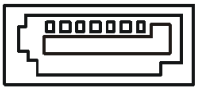
Pin #	Signal Description
1	VCC_POR#
2	GND

J33 – HEATER, CLEAR ME LED INDICATE



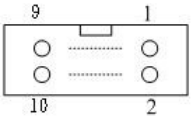
Pin #	Signal Description
1	+3.3V_UC
2	HEATER_LED#
3	KEYLOCK_LED#

J34, J36 – Standard SATA Interface



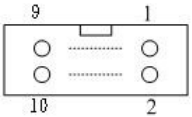
Pin #	Signal Description
1	Ground
2	Tx+
3	Tx-
4	Ground
5	Rx-
6	Rx+
7	Ground

J35 – RS-232 TTL Connector



Pin #	Signal Description	Pin #	Signal Description
1	DCD#	2	DSR#
3	SIN	4	RTS#
5	SOUT	6	CTS#
7	DTR#	8	RI#
9	GND	10	+5VS

J46,J37,J38,J39 – COM3, COM4, COM5, COM6 Serial Port



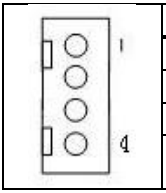
Pin #	Signal Description	Pin #	Signal Description
1	232_DCD	2	232_DSR
3	232_SIN	4	232_RTS
5	232_SOUT	6	232_CTS
7	232_DTR	8	232_RI
9	GND	10	+5VS

J40 – BIOS SOCKET


Pin1

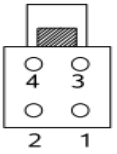
Pin #	Signal Description	Pin #	Signal Description
1	CS#	5	VDD
2	SO	6	HOLD#
3	WP#	7	SCK
4	VSS	8	SI

J41 – POWER & HDD LED (For WMP-176/196)



Pin #	Signal Description
1	SATA LED
2	+3.3V
3	+3.3V
4	Power LED

J42 – ATX 12V Connect (For Heater Power)

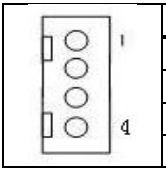


Pin #	Signal Description
1	+12V
2	+12V
3	Ground
4	Ground

J43 , J45 – Passive Speaker Connect

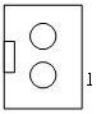
J43(Right Channel)		J45(Left Channel)	
Pin #	**Signal Description**	**Pin #**	**Signal Description**
1	AMP. Out +	1	AMP. Out +
2	AMP. Out -	2	AMP Out -

J44 – Handset Connect



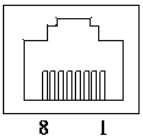
Pin #	Signal Description
1	HOOK_ON#
2	Handset speaker
3	Handset MIC
4	GND

J47 – Power Switch connect



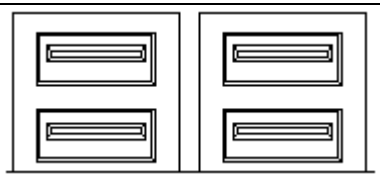
Pin #	Signal Description
1	Power ON
2	GND

J48, J49 – Ethernet Port



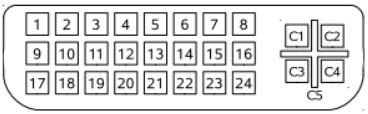
Pin #	Signal Description
1	Data0+
2	Data0-
3	Data1+
4	Data2+
5	Data2-
6	Data1-
7	Data3+
8	Data3-

J50, J51 – USB1/2,3/4 Port



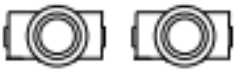
Pin #	Signal Description
1	+5V
2	Data-
3	Data+
4	GND

J52 – DVI-I Interface



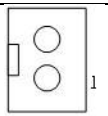
Pin #	Signal Description	Pin #	Signal Description
1	TMDS Data2-	2	TMDS Data2+
3	TMDS Data2 shield	4	NC
5	NC	6	DDC Clock
7	DDC Data	8	Analog VSYNC
9	TMDS Data1-	10	TMDS Data1+
11	TMDS Data1 Shield	12	NC
13	NC	14	+5V
15	GND	16	Hot Plug Detect
17	TMDS Data0-	18	TMDS Data0+
19	TMDS Data0 Shield	20	NC
21	NC	22	TMDS Clock Shield
23	TMDS Clock+	24	TMDS Clock-
C1	Analog Red	C2	Analog Green
C3	Analog Blue	C4	Analog HSYNC
C5	GND	C6	GND

J53,J54 – Audio Connector



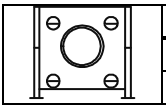
Pin #	Signal Description
J53	Microphone (stereo) Pink
J54	Line Out (stereo) Green

J55 – Reset connector



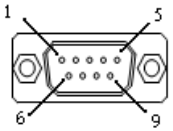
Pin #	Signal Description
1	SYS_RESET#
2	GND

J56 – Reset Button



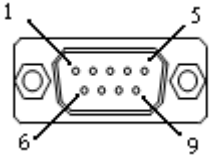
Pin #	Signal Description
1	SYS_RESET#
2	GND

J57 – COM1 Connector



Pin #	Signal Description		
	RS-232	RS-422	RS-485
1	Carrier Detect	Transmit Data -	Transmit Data -
2	Receive Data	Transmit Data +	Transmit Data +
3	Transmit Data	Receive Data +	NC
4	Data Terminal Ready	Receive Data -	NC
5	Ground	NC	NC
6	Data Set Ready	NC	NC
7	Request to Send	NC	NC
8	Clear to Send	NC	NC
9	Ring Indicator	NC	NC

J58 – COM2 Connector



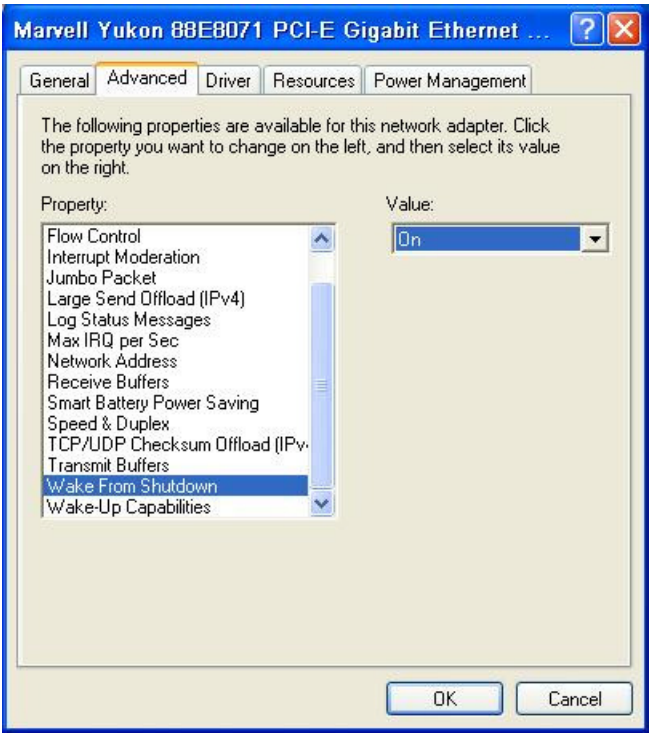
Pin #	Signal Description	Pin #	Signal Description
1	232_DCD	2	232_SIN
3	232_SOUT	4	232_DTR
5	GND	6	232_DSR
7	232_RTS	8	232_CTS
9	232_RI	10	Not Used

B. Wake UP on LAN Function

Please make sure the AC power is ON before use the function.

1. Boot into OS (windows XP).

2. In start menu control panel System device manager Network adapters double click Marvell Yukon 88E8071 Advance Wake from Shutdown Item select Wake on Magic packet from power off state.



Please shutdown system and wait for wake on LAN after finish these procedures.