

# MITAC Desktop Board PD10BI

## Product Guide

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# Desktop Board Features

This chapter briefly describes the features of Desktop Board PD10BI.

Table 1 summarizes the major features of the Desktop Board.

## Feature Summary

**TABLE 1. MITAC DESKTOP BOARD PD10BI FEATURES**

<b>Form Factor</b>	Low-profile Mini-ITX (20 millimeters [0.79 inches] x 170.18 millimeters [6.7 inches] x 170.18 millimeters [6.7 inches])	
<b>Processor Chipset</b>	Fanlessly-cooled, soldered-down dual-core/quad-core Intel Bay Trail Processor with integrated graphics and memory controller	
<b>Memory</b>	<ul style="list-style-type: none"> <li>● Support for dual channel DDR3L 1333/1600 SO-DIMMs</li> <li>● Support for up to 8 GB of system memory on a single SO-DIMM (or 4 GB each by 2 SO-DIMM)</li> </ul>	
	● 204-pin DDR3L SO-DIMM	2
<b>Graphics</b>	<ul style="list-style-type: none"> <li>● Integrated graphics:               <ul style="list-style-type: none"> <li>■ Digital displays (High Definition Multimedia Interface(HDMI))</li> <li>■ Analog displays (VGA)</li> <li>■ Internal flat panel displays:                   <ul style="list-style-type: none"> <li>◆ LVDS</li> <li>◆ Embedded DisplayPort* eDP*</li> </ul> </li> </ul> </li> <li>● External graphics support via a PCI Express 1.0a x1 graphics add-in card connector</li> </ul>	
<b>Audio</b>	<ul style="list-style-type: none"> <li>● 2 + 2 Channel High Definition Audio ( HD Audio) using a Realtek* ALC888S audio codec supporting:               <ul style="list-style-type: none"> <li>■ Analog stereo line-out (back panel jack)</li> <li>■ In-chassis stereo speakers support (3 W/3 Ω via an internal header)</li> <li>■ S/PDIF digital audio output (internal header)</li> <li>■ DMIC digital microphone input (internal header)</li> <li>■ Analog line-in (back panel jack)</li> <li>■ Front panel HD Audio/AC'97 headphones/mic support (internal header)</li> </ul> </li> <li>● 8-channel (7.1) HD Audio via the HDMI interface</li> </ul>	
<b>Expansion Capability</b>	● PCI Express 1.0a x1 add-in card connector Option: PCI Express 1.0a x1 add-in card connector by 2 lanes	1
	● PCI Express Full-/Half-Mini Card slot	1
	● PCI Express Half-Mini Card slot	1
<b>Peripheral Interfaces</b>	● USB 2.0 front panel ports	4 (Headers)
	● USB 2.0 back panel connectors (black)	2
	● USB 2.0 high-current/fast-charging ports (Yellow)	2
	● SATA 3.0 Gb/s	2
	● SATA 3.0 Gb/s port	1

	(multiplexed with an mSATA port, routed to the PCI Express Full-/Half-Mini Card slot)	
<b>Legacy I/O</b>	<ul style="list-style-type: none"> <li>● Legacy I/O Controller (NCT6683D) that provides: <ul style="list-style-type: none"> <li>■ Hardware management support</li> </ul> </li> </ul>	
	<ul style="list-style-type: none"> <li>■ Serial ports onboard headers</li> </ul>	2
	<ul style="list-style-type: none"> <li>■ Parallel port via an onboard header</li> </ul>	1
<b>LAN Support</b>	Realtek RTL8111G-CG Gigabit (10/100/1000 Mb/s) Ethernet LAN controller including an RJ-45 back panel connector with integrated status LEDs	
<b>BIOS</b>	<ul style="list-style-type: none"> <li>● BIOS resident in a Serial Peripheral Interface (SPI) Flash device</li> <li>● Support for Advanced Configuration and Power Interface (ACPI), and System Management BIOS (SMBIOS)</li> </ul>	
<b>Hardware Management</b>	Nuvoton NCT6683D based subsystem, including: <ul style="list-style-type: none"> <li>● Voltage sense to detect out of range power supply voltages</li> <li>● Thermal sense to detect out of range thermal values</li> <li>● 3-pin system fan header with speed control</li> </ul>	
<b>Power Requirement</b>	<ul style="list-style-type: none"> <li>● DC connectivity via back-panel DC jack(2.5mm/ ID, 5.5mm/ OD)</li> <li>● Internal 2 pin power connector</li> </ul>	
<b>Environment</b>	<ul style="list-style-type: none"> <li>● Operating Temperature: 0 °C to +50 °C</li> <li>● Storage Temperature: -20°C to +70°C</li> </ul>	

# Desktop Board Components

Figure 1 shows the approximate location of the major components on the top side of MiTAC Desktop Board PD10BI.

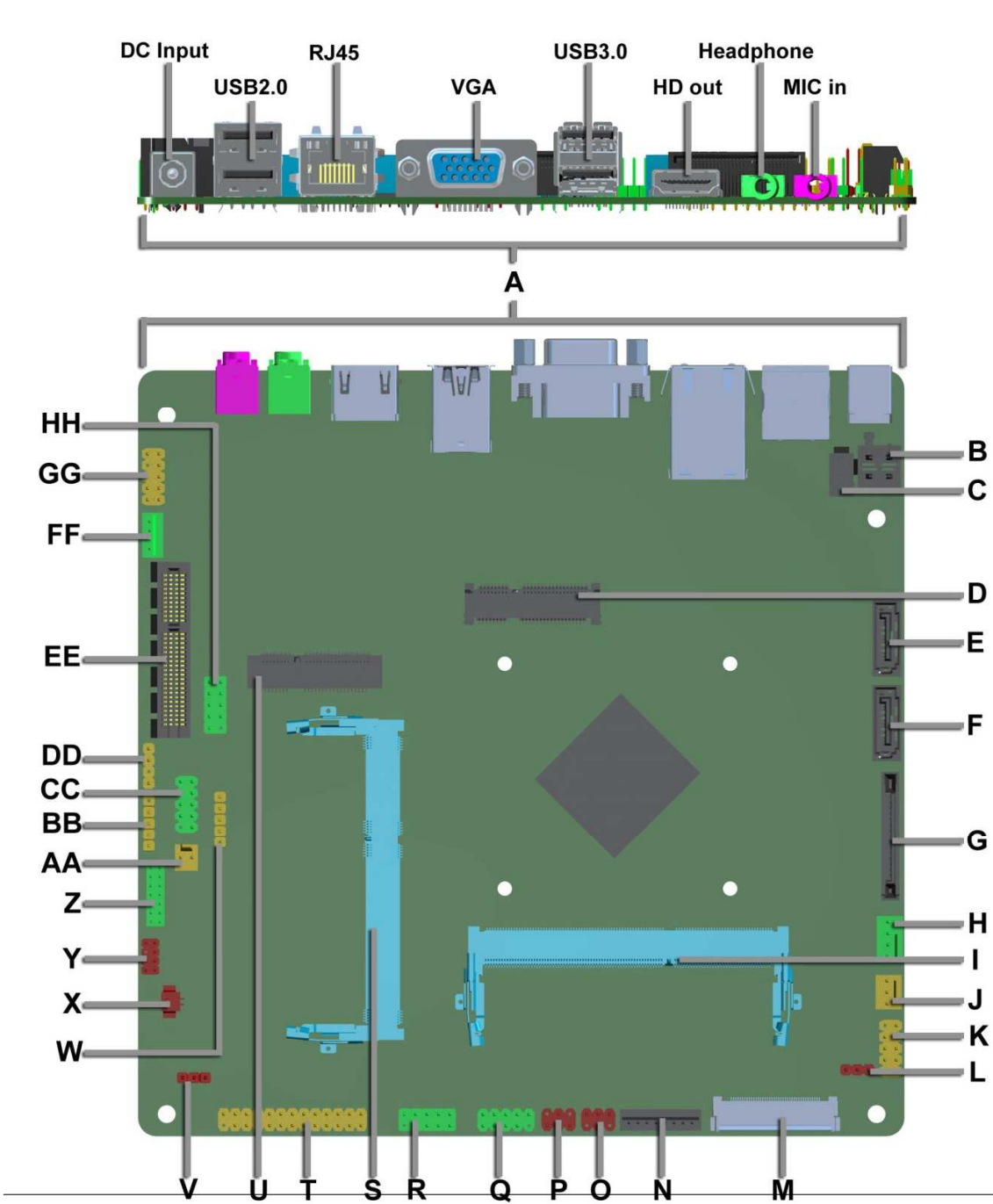


Figure 1. MiTAC Desktop Board PD10BI Components (Top)

**TABLE 2. MITAC DESKTOP BOARD PD10BI COMPONENTS (SHOWN IN FIGURE 1)**

<b>A</b>	<b>Back Panel Connectors</b>
<b>B</b>	<b>Power 4pin header</b>
<b>C</b>	<b>Power 2pin header</b>
<b>D</b>	<b>Half length miniPCIe connector</b>
<b>E</b>	<b>SATA 3G header</b>
<b>F</b>	<b>SATA 3G header</b>
<b>G</b>	<b>SATA power header</b>
<b>H</b>	<b>CPU FAN header</b>
<b>I</b>	<b>DDR3 memory slot</b>
<b>J</b>	<b>System FAN header</b>
<b>K</b>	<b>Front I/O header</b>
<b>L</b>	<b>Alternate Power LED Header 1x3</b>
<b>M</b>	<b>LVDS connector</b>
<b>N</b>	<b>LVDS power header (3V, 5V, 12V)</b>
<b>O</b>	<b>LVDS power 1x8 pin header</b>
<b>P</b>	<b>LVDS inverter board header</b>
<b>Q</b>	<b>Dual-Port USB 2.0 Header</b>
<b>R</b>	<b>Internal COM port header</b>
<b>S</b>	<b>DDR3 memory slot</b>
<b>T</b>	<b>Parallel Port 2x13 pin header</b>
<b>U</b>	<b>Full length miniPCIe connector</b>
<b>V</b>	<b>Clear CMOS header</b>
<b>W</b>	<b>Single-Port USB 2.0 Header</b>
<b>X</b>	<b>Battery header</b>
<b>Y</b>	<b>Custom Header</b>
<b>Z</b>	<b>Debug header</b>
<b>AA</b>	<b>Chassis Intrusion Header</b>
<b>BB</b>	<b>Digital microphone header</b>
<b>CC</b>	<b>Dual-Port USB 2.0 Header</b>
<b>DD</b>	<b>SPDIF Out header</b>
<b>EE</b>	<b>PCIe X1 slot</b>
<b>FF</b>	<b>Internal speaker header</b>
<b>GG</b>	<b>Front Audio header</b>
<b>HH</b>	<b>Internal COM port header</b>

## Processor

MITAC Desktop Board PD10BI includes a passively-cooled, Intel Bay Trail-D processor with integrated graphics and memory controller. The processor is soldered to the Desktop Board and is not customer upgradeable.



### NOTE

*The board is designed to be passively cooled in a properly ventilated chassis. Chassis venting locations are recommended above the processor heatsink area for maximum heat dissipation effectiveness.*

## System Memory



### NOTE

*To be fully compliant with all applicable SDRAM memory specifications, the board should be populated with DIMMs that support the Serial Presence Detect (SPD) data structure. If your memory modules do not support SPD, you will see a notification to this effect on the screen at power up. The BIOS will attempt to configure the memory controller for normal operation.*

The Desktop Board has two 204-pin DDR3L SO-DIMM sockets with gold-plated contacts. These sockets support:

- Support for DDR3L 1333/1600 MHz SO-DIMMs (DDR3L 1600 MHz SO-DIMMs operate at 1333 MHz only)
- Serial Presence Detect (SPD) memory only
- Non-ECC memory
- Up to 8 GB of memory (on a single SO-DIMM or 4 GB each by 2 SO-DIMM)

# Connecting to the Internal Headers and Connectors

## Front panel main header

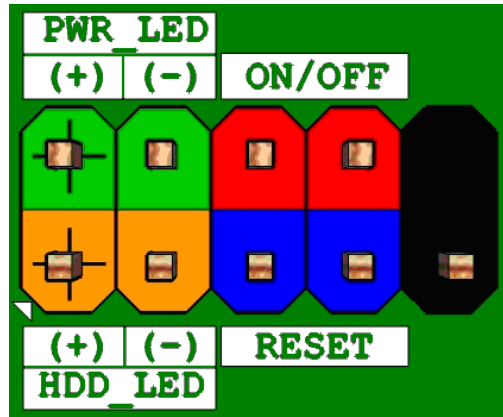


Figure 2 Front panel main header pin-out

Pin	Signal Name	Description	Pin	Signal Name	Description
1	HDD_POWER_LED	Pull-up resistor (750 ) to +5V	2	POWER_LED_MAIN	[Out] Front panel LED (main color)
3	HDD_LED#	[Out] Hard disk activity LED	4	POWER_LED_ALT	[Out] Front panel LED (alt color)
5	GROUND	Ground	6	POWER_SWITCH#	[In] Power switch
7	RESET_SWITCH#	[In] Reset switch	8	GROUND	Ground
9	+5V_DC	Power	10	KEY	No pin

TABLE 2 FRONT PANEL MAIN HEADER SIGNALS

## Chassis Intrusion Detection Header

The chassis intrusion detection header must be 1x2, 2.54mm pitch, colored black and with extended back, as defined in below

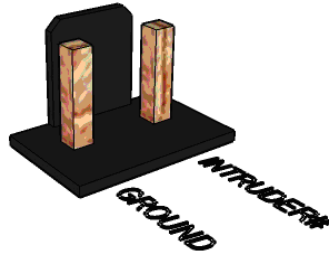


Figure 3 Chassis intrusion detection header

Pin	Signal Name
1	Intrusion Detection
2	Ground

TABLE 3 CHASSIS INTRUSION DETECTION HEADER SIGNALS

i

## HD Audio front panel audio header

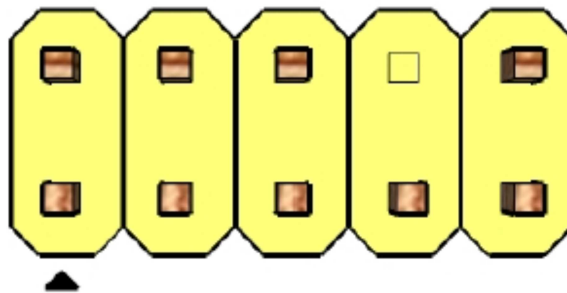


Figure 4 HD Audio front panel audio header pin-out diagram



Pin	Signal name	Description
1	MIC	Front panel microphone input signal (biased when supporting stereo microphone)
2	AUD_GND	Ground used by analog audio circuits
3	MIC BIAS	Microphone power / additional MIC input for stereo microphone support
4	PRESENCE#	Active low signal that signals BIOS that an Intel HD Audio dongle is connected to the analog header_ PRESENCE# = 0 when an Intel HD Audio dongle is connected.
5	FP_OUT_R	Right channel audio signal to front panel (Headphone drive capable)
6	AUD_GND	Ground used by analog audio circuits
7	RESERVED	Reserved
8	KEY	No Pin
9	FP_OUT_L	Left channel audio signal to front panel (headphone drive capable)
10	AUD_GND	Ground used by analog audio circuits

**TABLE 4 HD AUDIO FRONT PANEL AUDIO HEADER**

## Internal Speaker header

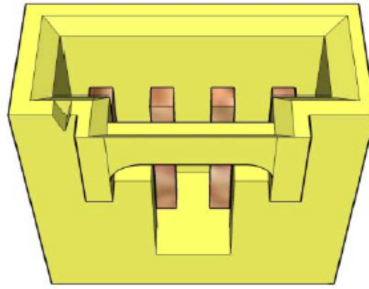


Figure 5 Internal Speaker header pin-out diagram

Pin	Signal Name
1	A_GND
2	Front_L
3	Front_R
4	A_GND

TABLE 5 INTERNAL SPEKAER HEADER

## Front panel USB header (Dual Ports)

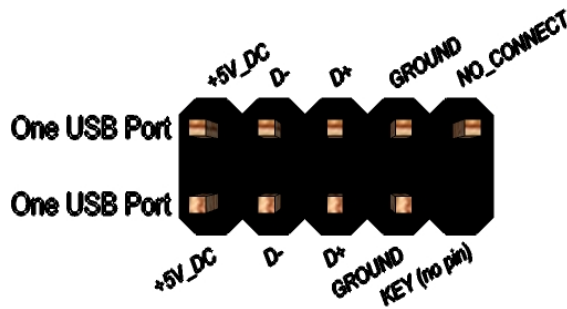


Figure 6 Front panel USB header pin-out

Pin	Signal	Pin	Signal
1	+5V DC	2	+5V DC
3	Data (negative)	4	Data (negative)
5	Data (positive)	6	Data (positive)
7	Ground	8	Ground
9	Key (no pin)	10	No Connect

TABLE 6 FRONT PANEL USB HEADER SIGNALS

## Front panel USB header (Single Ports)

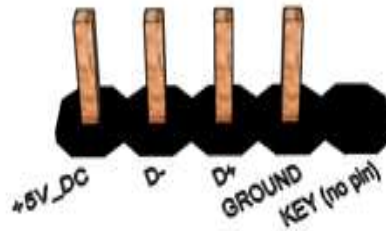


Figure 7 Front panel USB header pin-out

Pin	Signal
1	+5V DC
3	Data (negative)
5	Data (positive)
7	Ground
9	Key (no pin)

TABLE 7 FRONT PANEL USB HEADER SIGNALS

## LVDS inverter power header

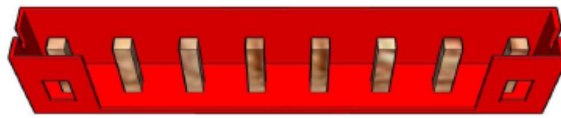
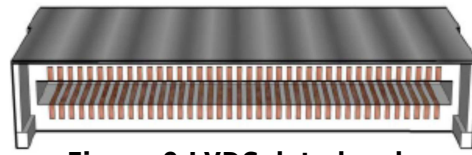


Figure 8 LVDS inverter power header

Pin	Signal Name	Description
1	BKLT_EN	Backlight enable
2	BKLT_PWM	Backlight PWM control
3	12V/19V	Inverter power
4	12V/19V	Inverter power
5	GND	Ground
6	GND	Ground
7	BRIGHTNESS_UP	BRIGHTNESS UP
8	BRIGHTNESS_DOWN	BRIGHTNESS DOWN

TABLE 8 8-PIN LVDS INVERTER POWER HEADER PIN-OUT REFERENCE

## LVDS data header



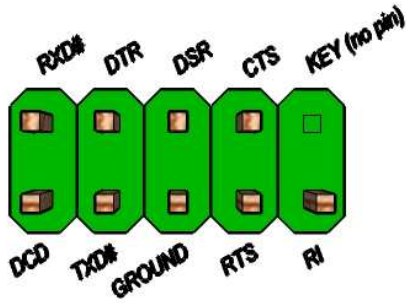
**Figure 9 LVDS data header**

Pin	Signal	Description
1	LA_DATAP3	LVDS Channel A diff data output - positive
2	LA_DATAN3	LVDS Channel A diff data output - negative
3	LA_DATAP2	LVDS Channel A diff data output - positive
4	LA_DATAN2	LVDS Channel A diff data output - negative
5	LA_DATAP1	LVDS Channel A diff data output - positive
6	LA_DATAN1	LVDS Channel A diff data output - negative
7	LA_DATAP0	LVDS Channel A diff data output - positive
8	LA_DATAN0	LVDS Channel A diff data output - negative
9	LB_DATAP3	LVDS Channel B diff data output-positive
10	LB_DATAN3	LVDS Channel B diff data output-negative
11	LB_DATAP2	LVDS Channel B diff data output-positive
12	LB_DATAN2	LVDS Channel B diff data output-negative
13	LB_DATAP1	LVDS Channel B diff data output-positive
14	LB_DATAN1	LVDS Channel B diff data output-negative
15	LB_DATAP0	LVDS Channel B diff data output-positive
16	LB_DATAN0	LVDS Channel B diff data output-negative
17	GND	Ground
18	3.3V/5V/12V	Selectable LCD power output
19	3.3V/5V/12V	Selectable LCD power output
20	3.3V/5V/12V	Selectable LCD power output
21	NC	NC
22	EDID_3.3V	VCC3
23	GND	Ground
24	GND	Ground
25	GND	Ground
26	LA_CLKP	LVDS Channel A diff data output - positive
27	LA_CLKN	LVDS Channel A diff data output - negative
28	GND	Ground
29	GND	Ground
30	GND	Ground
31	EDID_CLK	EDID/DDC clock signal

32	BKLT_EN	
33	BKLT_CTRL	
34	LB_CLKP	LVDS Channel B diff data output - positive
35	LB_CLKN	LVDS Channel B diff data output - negative
36	BKLT_PWR	Selectable BKLT power output
37	BKLT_PWR	Selectable BKLT power output
38	BKLT_PWR	Selectable BKLT power output
39	NC	NC
40	EDID_DATA	EDID/DDC data signal

**TABLE 9 40-PIN LVDS DATA HEADER PIN-OUT REFERENCE**

## Serial port header

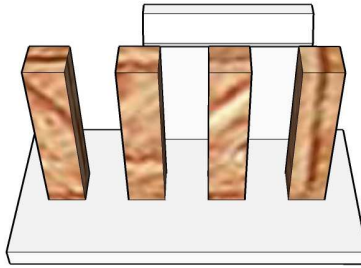


**Figure 10 Serial port header pin-out**

Pin	Signal	Pin	Signal
1	DCD (Data Carrier Detect)	2	RXD# (Receive Data)
3	TXD# (Transmit Data)	4	DTR (Data Terminal Ready)
5	Ground	6	DSR (Data Set Ready)
7	RTS (Request To Send)	8	CTS (Clear To Send)
9	RI (Ring Indicator)	10	Key (no pin)

**TABLE 10 SERIAL PORT HEADER SIGNALS**

## Processor fan header

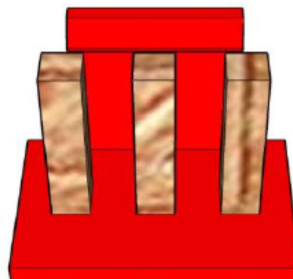


**Figure 11: Processor fan header**

Pin	Signal
4	FAN_CTRL
3	FAN_TACH
2	VCC-12V
1	GND

**TABLE 11: PROCESSOR FAN HEADER**

## System fan header

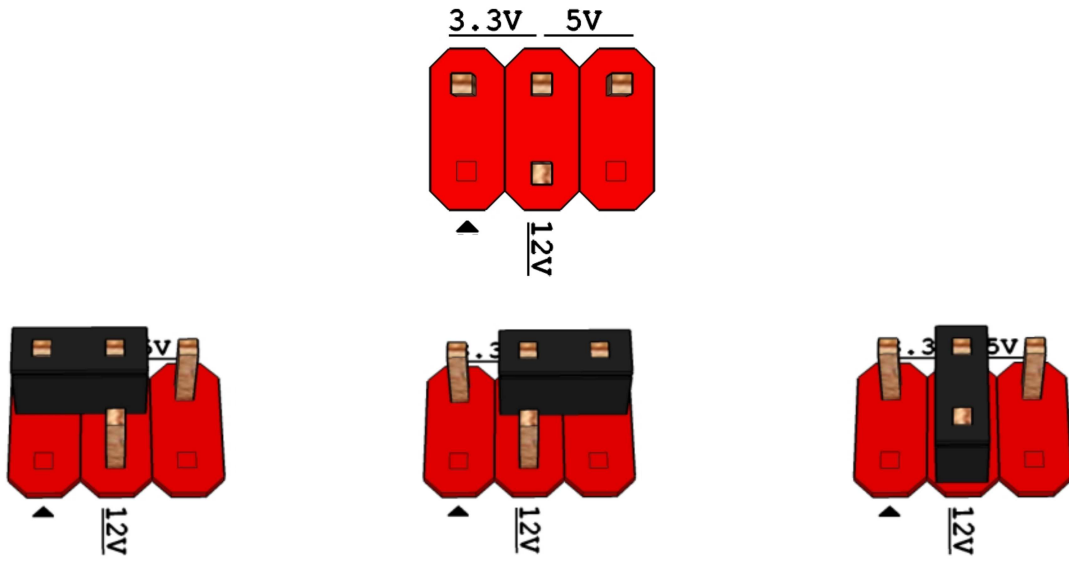


**Figure 12: System fan header**

Pin	Signal
4	FAN_TACH L
3	FAN_CTR
1	GND

**TABLE 12: SYSTEM FAN HEADER**

## Panel voltage selection header



Pins 2&4: jumper position for 3.3V

Pins 6&4: jumper position for 5V

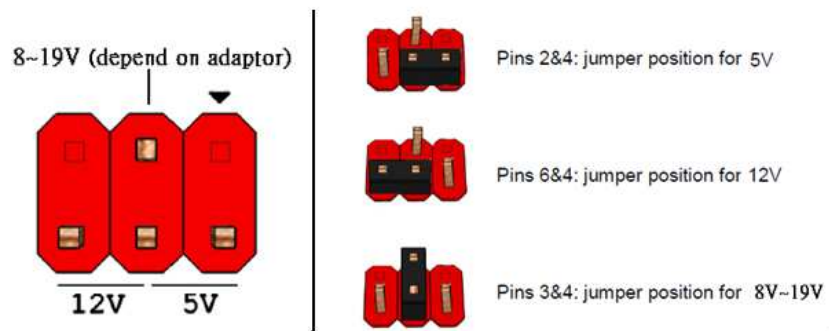
Pins 3&4: jumper position for 12V

**Figure 13: LVDS panel voltage selection header**

Pin	Signal Name
1	NC
2	VCC3/3V
3	12V
4	LCD SEL PWR
5	NC
6	VCC/5V

**TABLE 13: LVDS PANEL VOLTAGE SELECTION HEADER**

## Inverter power voltage selection header



**Figure 14: Inverter power voltage selection header**

Pin	Signal Name
1	Key
2	5V
3	8V~19V
4	LCD_VCC
5	Key
6	12V

**TABLE 14: INVERTER POWER VOLTAGE SELECTION HEADER**



## Alternate Power LED header



Figure 15 Alternate Power LED header

Pin	Signal Name
1	MAIN COLOR LED
2	KEY
3	ALT COLOR LED

TABLE 15: ALTERNATE POWER LED HEADER

## Parallel Port 2x13 pin header

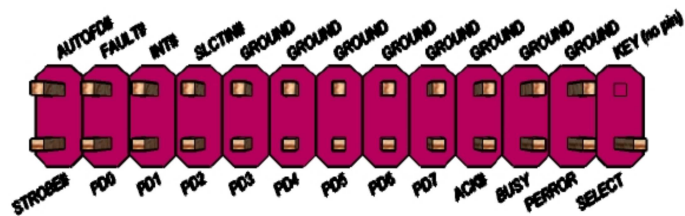


Figure 16 Parallel Port 2x13 pin header

Pin	Standard Signal Name	ECP Signal Name	EPP Signal Name
1	STROBE#	STROBE#	WRITE#
2	AUTOFD#	AUTOFD#, HOSACK	DATASTB#
3	PD0	PD0	PD0
4	FAULT#	FAULT#, PERIPHREQST#	FAULT#
5	PD1	PD1	PD1
6	INT#	INT#, REVERSERQST#	RESET#
7	PD2	PD2	PD2
8	SLCTIN#	SLCTIN#	ADDRSTB#
9	PD3	PD3	PD3
10	GROUND	GROUND	GROUND
11	PD4	PD4	PD4
12	GROUND	GROUND	GROUND
13	PD5	PD5	PD5
14	GROUND	GROUND	GROUND
15	PD6	PD6	PD6
16	GROUND	GROUND	GROUND
17	PD7	PD7	PD7
18	GROUND	GROUND	GROUND
19	ACK#	ACK#	INTR
20	GROUND	GROUND	GROUND
21	BUSY	BUSY#, PERIPHACK	WAIT#
22	GROUND	GROUND	GROUND
23	PERROR	PE, ACKREVERSE#	PE
24	GROUND	GROUND	GROUND
25	SELECT	SELECT	SELECT
26	KEY (no pin)	KEY (no pin)	KEY (no pin)

**TABLE 16: PARALLEL PORT 2X13 PIN HEADER**

## SATA power header

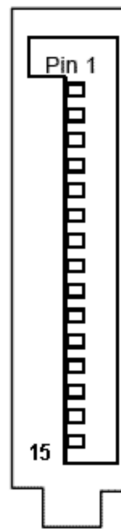


Figure 17 SATA power header

Pin #	Mating	Function
—	—	Coding notch
1	3rd	3.3 V
2	3rd	
3	2nd	
4	1st	Ground
5	2nd	
6	2nd	
7	2nd	5 V
8	3rd	
9	3rd	
10	2nd	Ground
11	3rd	Staggered spinup/activity (in supporting drives)
12	1st	Ground
13	2nd	12 V
14	3rd	
15	3rd	

TABLE 17: SATA POWER HEADER

## Digital microphone header

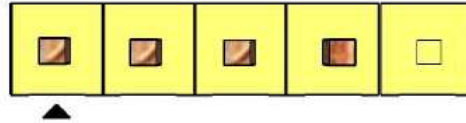


Figure 18 Digital microphone header

Pin.	Signal name.	Description.
1.	VCC3.	3.3V_DC.
2.	DMIC_DATA.	DMIC_DATA signal.
3.	GND.	Ground.
4.	DMIC_CLK.	DMIC_CLK signal.
5.	Key (no pin).	Key (no pin).

TABLE 18: DIGITAL MICROPHONE HEADER

## Custom Header

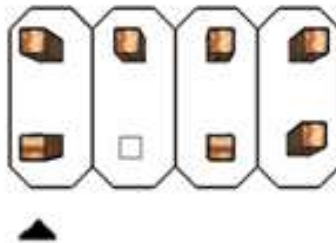


Figure 19 Custom Header

Pin.	Signal name.	Description.
1.	NC.	No connection.
2.	GND.	Ground.
3.	Key (no pin).	Key (no pin).
4.	SMB_CLK.	SMBus clock.
5.	3VSB.	3V_DC.
6.	SMB_DAT.	SMBus data.
7.	PWRBT_N.	Power button signal.
8.	HDMI_CEC.	HDMI CEC signal.

TABLE 19: CUSTOM HEADER

## SPDIF Out header

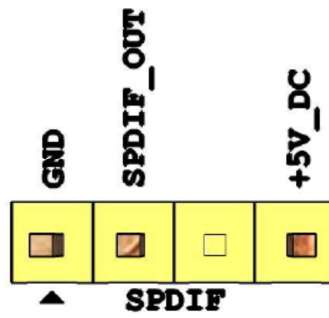


Figure 20 SPDIF Out header

Pin	Signal Name	Description
1	GND	Ground
2	SPDIF_OUT	SPDIF signal from the codec
3	Key (no pin)	Key (no pin)
4	+5V_DC	5 V power (for optical/TOSLINK module)

TABLE 20: SPDIF OUT HEADER

## eDP connector

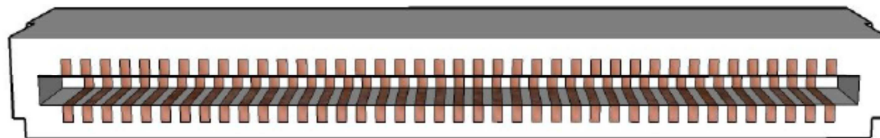
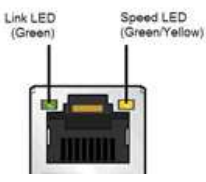


Figure 21 eDP connector

PIN	SIGNAL NAME	PIN	SIGNAL NAME
1	ODD_LANE3_P	21	N/C
2	ODD_LANE3_N	22	EDID_3.3 V
3	ODD_LANE2_P	23	LCD_GND
4	ODD_LANE2_N	24	LCD_GND
5	ODD_LANE1_P	25	LCD_GND
6	ODD_LANE1_N	26	ODD_CLK_P
7	ODD_LANE0_P	27	ODD_CLK_N
8	ODD_LANE0_N	28	BKLT_GND
9	EVEN_LANE3_P	29	BKLT_GND
10	EVEN_LANE3_N	30	BKLT_GND
11	EVEN_LANE2_P	31	EDID_CLK
12	EVEN_LANE2_N	32	BKLT_ENABLE
13	EVEN_LANE1_P	33	BKLT_PWM_DIM
14	EVEN_LANE1_N	34	EVEN_CLK_P
15	EVEN_LANE0_P	35	EVEN_CLK_N
16	EVEN_LANE0_N	36	BKLT_PWR
17	EDID_GND	37	BKLT_PWR
18	LCD_VCC	38	BKLT_PWR
19	LCD_VCC	39	N/C
20	LCD_VCC	40	EDID_DATA

**TABLE 21: EDP CONNECTOR**

## RJ45 LED behavior

Diagram	LED	Color	State	Condition
	Link	N/A	Off	LAN link is not established
		Green	On	LAN link is established
			Blinking	LAN activity occurring
	Speed	N/A	Off	10 Mb/s data rate
		Green	On	100 Mb/s data rate
		Yellow	On	1000 Mb/s data rate

**TABLE 22: RJ45 LED BEHAVIOR**

Note: LAN solution must be tested for IEEE802.3 conformance

# CMOS Clear

**CMOS Clear**

1-2	Normal
2-3	Clear CMOS

**TABLE 23: CMOS CLEAR BEHAVIOR**

# MITAC Desktop Board PD10BI BIOS Specification

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# 1. Main Page

Main		Advanced	Chipset	Security	Boot	Save & Exit
<b>BIOS Information</b>						<b>Item help</b>
BIOS Vender	American Megatrends					
Core Version	5.009					
Compliancy	UEFI 2.3; PI 1.2					
BIOS Version	D7360X01					
Build Date	12/22/2012					
<b>Processor Information</b>						
Intel(R) Pentium(R) CPU J2900 @ 2.41GHz						
<b>Memory Information</b>						
Total Memory	8192 MB (DDR3L)					
Memory Slot 0	4096MB					
Memory Slot 1	4096MB					
System Language	[English]					
System Date	[Mon, mm/dd/yyyy]					
System Time	[hh:mm:ss]					
→←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit						
Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.						

Field Name	<b>BIOS Vender</b>
Default Value	AMI Megatrends
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>Core Version</b>
Default Value	4.6.5.1
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>Complacency</b>
Default Value	UEFI 2.3; PI 1.2
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>BIOS Version</b>
Default Value	Display the version of the BIOS

Comment	This field is not selectable. There is no help text associated with it.
---------	---

Field Name	<b>Build Date</b>
Default Value	Display build time of the BIOS
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>Processor Information</b>
Value	Display the installed CPU brand.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>Total Memory</b>
Value	Display the installed memory size.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>Memory Slot 0</b>
Default Value	Memory in the DIMM.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>Memory Slot 1</b>
Default Value	Memory in the DIMM.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>System Language</b>
Default Value	English
Possible Value	English
Help	Choose the system default language

Field Name	<b>System Date</b>
Default Value	[xxx, mm dd yyyy]
Possible Value	[xxx, xx:xx:xxxx]
Help	Set the Date. Use Tab to switch between Date elements.

Field Name	<b>System Time</b>
Default Value	[hh :mm :ss]
Possible Value	[xx :xx :xx]
Help	Set the Time. Use Tab to switch between Time elements.

## 2. Advanced Page

Main	Advanced	Chipset	Security	Boot	Save & Exit	
Wireless LAN 1 RF					[Enabled]	<b>Item help</b>
Wireless LAN 2 RF					[Enabled]	
Wake On Lan					[Enabled]	
<ul style="list-style-type: none"> <li>▶ ACPI Settings</li> <li>▶ SMART settings</li> <li>▶ NCT6683D Super IO Configuration</li> <li>▶ S5 RTC Wake Settings</li> <li>▶ CPU Configuration</li> <li>▶ PPM Configuration</li> <li>▶ SATA Configuration</li> <li>▶ AMI Graphic Output Protocol Policy</li> <li>▶ Network Stack Configuration</li> <li>▶ CSM Configuration</li> <li>▶ Trusted Computing</li> <li>▶ USB Configuration</li> </ul>						
▶ RealTek PCIe GBE Family Controller (MAC:00:22:4D:7F:87:60)						→←: Select Screen ↑↓: Select Item Enter: Select  +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.						

Field Name	<b>Wireless LAN 1 RF</b>
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Enable/Disable Wireless LAN 1 RF

Field Name	<b>Wireless LAN 2 RF</b>
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Enable/Disable Wireless LAN 2 RF

Field Name	<b>Wake On Lan</b>
Default Value	[Enabled]
Possible Value	Enabled Disabled

Help	Enable or Disable Wake On Lan.
------	--------------------------------

Field Name	<b>ACPI Settings</b>
Help	System ACPI Parameters.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>SMART Settings</b>
Help	System SMART settings.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>NCT6683D Super IO Configuration</b>
Help	System Super IO Chip Parameters.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>S5 RTC Wake Settings</b>
Help	Enable system to wake from S5 using RTC alarm
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>CPU Configuration</b>
Help	CPU Configuration Parameters
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>PPM Configuration</b>
Help	PPM Configuration Parameters.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>SATA Configuration</b>
Help	SATA Devices Configuration.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>AMI Graphic Output Protocol Policy</b> (Hidden when system in legacy mode)
Help	User Select Monitor Output by Graphic Output Protocol.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>Network Stack Configuration</b>
Help	Network stack Settings.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>CSM Configuration</b>
Help	CSM configuration: Enable/Disable, Option ROM execution settings, etc.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>Trusted Computing</b>
Help	Trusted Computing Settings
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>USB Configuration</b>
Help	USB Configuration Parameters.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>RealTek PCIe GBE Family Controller (MAC:00:22:4D:7F:87:60)</b>
Help	Get driver information and configure Realtek Ethernet controller parameter.
Comment	Press Enter when selected to go into the associated Sub-Menu.

## 2.1 ACPI Settings

Main	Advanced	Chipset	Security	Boot	Save & Exit
<b>ACPI Settings</b>					<b>Item help</b>
Enable ACPI Auto Configuration					[Disabled]
Enable Hibernation					[Enabled]
ACPI Sleep State					[S3 (Suspend to RAM)]
					→←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Version 2.02.1205. Copyright (C) 2010 American Megatrends, Inc.					

Field Name	<b>Enable ACPI Auto Configuration</b>
Default Value	[Disabled]
Possible Value	Enabled Disabled
Help	Enables or Disables BIOS ACPI Auto Configuration.

Field Name	<b>Enable Hibernation</b>
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Enables or Disables System ability to Hibernate (OS/S4 Sleep State). This option may be not effective with some OS.

Field Name	<b>ACPI Sleep State</b>
Default Value	[S3 (Suspend to RAM)]
Possible Value	Suspend Disabled S3 (Suspend to RAM)
Help	Select the highest ACPI sleep state the system will enter when the SUSPEND button is pressed.

## 2.2 SMART Settings

Main	Advanced	Chipset	Security	Boot	Save & Exit
<b>SMART Settings</b>  SMART Self Test [Disabled]					<b>Item help</b>  →←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.					

Field Name	<b>SMART Self Test</b>
Default Value	[Disabled]
Possible Value	Disabled Enabled
Help	Run SMART Self Test on all HDDs during POST.

## 2.3 NCT6683D Super IO Configuration

Main	Advanced	Chipset	Security	Boot	Save & Exit
NCT6683D Super IO Configuration					<b>Item help</b>
Super IO Chip		NCT6683D			
Serial Port 1		[Enabled]			
Serial Port 2		[Enabled]			
Parallel Port Device Mode		[Enabled] [ECP and EPP 1.7 Mode]			
					→←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Version 2.02.1205. Copyright (C) 2010 American Megatrends, Inc.					

Field Name	<b>Serial Port 1</b>
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Enable or Disable Serial Port (COM)

Field Name	<b>Serial Port 2</b>
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Enable or Disable Serial Port (COM)

Field Name	<b>Parallel Port</b>
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Enable or Disable Parallel Port (LPT/LPTE)

Field Name	<b>Device Mode</b>
Default Value	[Output only]
Possible Value	Output only Bi-directional EPP



	ECP
Help	Change the Printer Port mode.

## 2.4 S5 RTC Wake Settings

Main	Advanced	Chipset	Security	Boot	Save & Exit	
Wake system from S5					[Disabled]	<b>Item help</b>  →←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Wake up hour					0	
Wake up minute					0	
Wake up second					0	
Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.						

Field Name	<b>Wake system from S5</b>
Default Value	[Disabled]
Possible Value	Disabled Fixed Time Dynamic Time
Help	Enabler or disable System wake on alarm event, Select FixedTime, system will wake on the hr::min::sec specified. Select DynamicTime , system will wake on the current time + Increase minute (s)

Field Name	<b>Wake up hour(Show when Wake system from S5 set to Fixed Time)</b>
Default Value	0
Possible Value	0-23
Help	Select 0-23 For example enter 3 for 3am and 15 for 3pm

Field Name	<b>Wake up minute(Show when Wake system from S5 set to Fixed Time)</b>
Default Value	0
Possible Value	0-59
Help	0 - 59

Field Name	<b>Wake up second</b> (Show when Wake system from S5 set to Fixed Time)
Default Value	0
Possible Value	0 - 59
Help	0 - 59

Field Name	<b>Wake up minute increase(Show when Wake system from S5 set to Dynamic Time)</b>
Default Value	1
Possible Value	1-5
Help	1 - 5

## 2.5 CPU Configuration

Main	Advanced	Chipset	Security	Boot	Save & Exit
<b>CPU Configuration</b>					<b>Item help</b>
Intel(R) Core(TM) CPU [CPU NAME] @ [CPU Freq.] GHz CPU Signature 30673 Microcode Patch 31e Max CPU Speed 2000 MHz Min CPU Speed 800 MHz Processor Cores 4 Intel HT Technology Supported Intel VT-x Technology Supported  L1 Data Cache 32 KB x 4 L1 Code Cache 32 KB x 4 L2 Cache 256 KB x 4 L3 Cache 6144 KB 64-bit Supported  Hyper-threading [Enabled] Intel Virtualization Technology [Enabled]					→←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.					

Field Name	<b>CPU Configuration</b>
Default Value	[Intel CPU Brand String]
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>CPU Signature</b>
Default Value	Displays CPU Signature
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>Microcode Patch</b>
------------	------------------------

Default Value	CPU Microcode Patch Revision
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>Max CPU Speed</b>
Default Value	Displays the Max CPU Speed
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>Min CPU Speed</b>
Default Value	Displays the Min CPU Speed
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>CPU Speed</b>
Default Value	Displays the CPU Speed
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>Processor Cores</b>
Default Value	Displays number of cores.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>Intel HT Technology</b>
Default Value	When Hyper-threading is enabled, 2 logical CPUs per core is present.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>Intel VT-x Technology</b>
Default Value	CPU VMX hardware support for virtual machines.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>64-bit</b>
Default Value	Displays if 64-bit supported
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>L1 Data Cache</b>
Default Value	L1 Data Cache Size
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>L1 Code Cache</b>
Default Value	L1 Code Cache Size
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>L2 Cache</b>
Default Value	L2 Cache Size
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>L3 Cache</b>
Default Value	L3 Cache Size
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>Hyper-threading (Hided if HT not Supported)</b>
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Enabled for Windows XP and Linux (OS optimized for Hyper-Threading Technology) and Disabled for other OS (OS not optimized for Hyper-Threading Technology). When Disable only one thread per enabled core is enabled.

Field Name	<b>Intel Virtualization Technology</b>
Default Value	[Disabled]
Possible Value	Enabled Disabled
Help	When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology



## 2.6 PPM Configuration

Main	Advanced	Chipset	Security	Boot	Save & Exit
<b>PPM Configuration</b>  EIST [Enabled] Turbo Mode [Enabled] CPU C state Report [Enabled]					<b>Item help</b>  →←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.					

Field Name	<b>EIST</b>
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Enable/Disable Intel SpeedStep.

Field Name	<b>Turbo Mode</b>
Default Value	[Enabled]
Possible Value	Disabled Enabled
Help	Turbo Mode.

Field Name	<b>CPU C state Report</b>
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Enable/Disable CPU C state report to OS.

## 2.7 SATA Configuration

Main	Advanced	Chipset	Security	Boot	Save & Exit
<b>SATA Configuration</b>  SATA Speed Support [Gen2] SATA Mode [AHCI]  Serial ATA Port 0 Empty Serial ATA Port 1 Empty					<b>Item help</b>  →←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.					

Field Name	<b>SATA Speed Support</b>
Default Value	[Gen2]
Possible Value	Gen1 / Gen2
Help	SATA Speed Support Gen1 or Gen2

Field Name	<b>SATA Mode</b>
Default Value	[AHCI Mode]
Possible Value	IDE Mode / AHCI Mode
Help	Select IDE / AHCI

Field Name	<b>SATA Port 0</b>
Default Value	Not Present
Possible Value	SATA Device Model Name

Field Name	<b>SATA Port1</b>
Default Value	Not Present
Possible Value	SATA Device Model Name

## 2.8 AMI Graphic Output Protocol Policy

Main	Advanced	Chipset	Security	Boot	Save & Exit
<b>Intel(R) Valley View Graphics Controller</b>  <b>Intel(R) GOP Driver [7.1.1005]</b> Output Select [Output Devices] Brightnesst Setting 255					<b>Item help</b>  →←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.					

Field Name	<b>Display Device Name</b>
Default Value	By Graphic card
Possible Value	By Graphic card
Help	NA

Field Name	<b>Display Device Driver Version Information</b>
Default Value	By Graphic card
Possible Value	By Graphic card
Help	NA

Field Name	<b>Output Select</b>
Default Value	Dynamic generate by graphic GOP driver, no fixed name for LCD/HDMI-Out
Possible Value	Output Device 1 Output Device 2
Help	Output Interface

Field Name	<b>Brightnesst Setting</b> (Hidden when primary display is not edp/LVDS)
Default Value	255
Possible Value	0~255
Help	Set Gop Brightnesst value



## 2.9 Network Stack Configuration

Main	Advanced	Chipset	Security	Boot	Save & Exit
Network stack [Enabled] Ipv4 PXE Support [Enabled] Ipv6 PXE Support [Enabled]					<b>Item help</b>  →←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.					

Field Name	<b>Network stack</b>
Default Value	[Enabled]
Possible Value	Disabled Enabled
Help	Enable/Disable UEFI network stack.

Field Name	<b>Ipv4 PXE Support</b>
Default Value	[Enabled]
Possible Value	Disabled Enabled
Help	Enable Ipv4 PXE Boot Support. If disabled IPV4 PXE boot option will not be created.

Field Name	<b>Ipv6 PXE Support</b>
Default Value	[Enabled]
Possible Value	Disabled Enabled
Help	Enable Ipv6 PXE Boot Support. If disabled IPV6 PXE boot option will not be created.

## 2.10 CSM Configuration

Main	Advanced	Device	Chipset	Security	Boot	Save & Exit
Compatibility Support Module Configuration						Item help
CSM Support				[Enabled]		
CSM Module Version				07.74		
GateA20 Active				[Upon Request]		
Option ROM Message				[Force BIOS]		
INT19 Trap Response				[Immediate]		
Boot option filter				[UEFI only]		
Option ROM execution order						→←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Network				[UEFI]		
Storage				[UEFI]		
Video				[UEFI]		
Other PCI devices				[UEFI]		
Version 2.15.1326. Copyright (C) 2012 American Megatrends, Inc.						

Field Name	<b>Compatibility Support Module Configuration</b>
------------	---

Field Name	<b>CSM Support</b>
Default Value	[Enabled]
Possible Value	Disabled Enabled
Help	Enable / Disable CSM Support.

Field Name	<b>CSM16 Module Version</b>
Default Value	07.74
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>GateA20 Active</b>
Default Value	[Upon Request]
Possible Value	Upon Request Always
Help	UPON REQUEST - GA20 can be disabled using BIOS services. ALWAYS - do not allow disabling GA20; this option is useful when any RT code is executed above 1MB..

Field Name	<b>Option ROM Message</b>
Default Value	[Force BIOS]
Possible Value	Force BIOS Keep Current
Help	Set display mode for Option ROM

Field Name	<b>INT19 Trap Response</b>
Default Value	[Immediate]
Possible Value	Immediate Postponed
Help	BIOS reaction on INT19 trapping by Option ROM: IMMEDIATE - execute the trap right away; POSTPONED - execute the trap during legacy boot.

Field Name	<b>Boot option filter</b>
Default Value	[UEFI only]
Possible Value	UEFI only Legacy only
Help	This option controls Legacy/UEFI ROMs priority.

Field Name	<b>Network</b>
Default Value	[UEFI]
Possible Value	Do not launch UEFI Legacy
Help	Controls the execution of UEFI and Legacy PXE OpROM

Field Name	<b>Storage</b>
Default Value	[UEFI]
Possible Value	Do not launch UEFI Legacy
Help	Controls the execution of UEFI and Legacy Storage OpROM

Field Name	<b>Video</b>
Default Value	[UEFI]
Possible Value	Do not launch UEFI Legacy
Help	Controls the execution of UEFI and Legacy Video OpROM

Field Name	<b>Other PCI devices</b>
Default Value	[UEFI]
Possible Value	UEFI

	Legacy
Help	Determines OpROM execution policy for devices other than Network, Storage, or Video



## 2.11 Trusted Computing

Main	Advanced	Chipset	Security	Boot	Save & Exit
<b>Configuration</b>  Security Device Support [Enable] TPM State [Enabled] Pending operation [None]					<b>Item help</b>
<b>Current Status Information</b> TPM Enabled Status: [Enabled] TPM Active Status: [Activated] TPM Owner Status: [Unowned]					→←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.					

Field Name	<b>Security Device SUPPORT</b>
Default Value	[Enable]
Possible Value	Enable Disable
Help	Enables or Disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A interface will not be available.

Field Name	<b>TPM State</b>
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Enable/Disable Security Device. NOTE: Your Computer will reboot during restart in order to change State of the Device.

Field Name	<b>Pending operation</b>
Default Value	[None]
Possible Value	None Enable Take Ownership Disable Take Ownership TPM Clear
Help	Schedule an Operation for the Security Device. NOTE: Your

	Computer will reboot during restart in order to change State of Security Device.
--	--

Field Name	<b>TPM Enabled Status:</b>
Default Value	[Enabled]
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>TPM Active Status:</b>
Default Value	[Activated]
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>TPM Owner Status:</b>
Default Value	[Owned]
Comment	This field is not selectable. There is no help text associated with it.

## 2.12 USB Configuration

Main	Advanced	Chipset	Security	Boot	Save & Exit
<b>USB Configuration</b>  <b>USB Devices:</b> 1 Keyboard, 1 Mouse, 2 Hubs  Legacy USB Support [Enabled] USB 3.0(XHCI) Support [Enabled] USB 2.0(EHCI) Support [Disabled]					<b>Item help</b>  →←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.					

Field Name	<b>USB Devices:</b>
Default Value	Connected USB devices
Comment	This field is not selectable. There is no help text associated with it

Field Name	<b>Legacy USB Support</b>
Default Value	[Enabled]
Possible Value	Disabled Enabled Auto
Help	Enables Legacy USB support. AUTO option disables legacy support if no USB devices are connected. DISABLE option will keep USB devices available only for EFI applications.

Field Name	<b>USB 3.0(XHCI) Support</b>
Default Value	[Enabled]
Possible Value	Enabled Disabled Auto Smart Auto
Help	Mode of operation of XHCI controller

Field Name	<b>USB2.0(EHCI) Support</b>
Default Value	[Enabled]
Possible Value	Disabled Enabled

Help	Control the USB EHCI (USB 2.0) functions. One EHCI controller must always be enabled.
------	---

**2.13 Realtek PCIe GBE Family Controller (MAC:00:22:4D:7F:87:60)**  
**(If Network Stack IPv4/IPv6 enabled, create by RealTek UEFI PXE Driver)**

Main		Advanced	Chipset	Security	Boot	Save & Exit
<b>Driver Information</b>						<b>Item help</b>
Driver Name:	Realtek UEFI UNDI Driver					
Driver Version	2.017					
Driver Released Date:	2012/10/19					
<b>Device Information</b>						→←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Device Name:	Realtek PCIe GBE Family Controller					
PCI Slot:	02:00:00					
MAC Address:	00:22:4D:7F:87:60					
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Field Name	<b>Driver Name:</b>
Default Value	Installed UEFI Driver Name
Comment	This field is not selectable. There is no help text associated with it

Field Name	<b>Driver Version:</b>
Default Value	Installed UEFI Driver Version
Comment	This field is not selectable. There is no help text associated with it

Field Name	<b>Driver Released Date:</b>
Default Value	Installed UEFI Driver Release Date
Comment	This field is not selectable. There is no help text associated with it

Field Name	<b>Device Name:</b>
Default Value	UEFI driver support device
Comment	This field is not selectable. There is no help text associated with it

Field Name	<b>PCI Slot:</b>
Default Value	Device PCI Bus/Device/Number
Comment	This field is not selectable. There is no help text associated with it

Field Name	<b>MAC Address:</b>
Default Value	LAN Device Mac address

Comment	This field is not selectable. There is no help text associated with it
---------	--

### 3. Chipset

Main	Advanced	Chipset	Security	Boot	Save & Exit
Output Panel Type				[LVDS]	<b>Item help</b>
LVDS Interface Type				[Dual Channel]	
LVDS Panel Type				[VBIOS Default]	
DeepSx Power Policies				[Disabled]	→←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Front Panel Audio				[Auto]	
DVMT Pre-Allocated				[64MB]	
DVMT Total Gfx Mem				[256MB]	
Restore AC Power Loss				[Last State]	
Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.					

Field Name	<b>Output Panel Type</b>
Default Value	[LVDS]
Possible Value	eDP LVDS
Help	Select output Panel Type

Field Name	<b>LVDS Interface Type</b> (Hidden when Output Panel Type is eDP)
Default Value	[Dual Channel]
Possible Value	Dual Channel Single Channel
Help	Sets LVDS connectivity.

Field Name	<b>LVDS Panel Type</b> (Hidden when Output Panel Type is eDP)
Default Value	[VBIOS Default]
Possible Value	VBIOS Default 640x480 LVDS 800x600 LVDS 1024x768 LVDS1 1280x1024 LVDS 1400x1050(RB) LVDS1 1400x1050 LVDS 1600x1200 LVDS 1366x768 LVDS



	1680x1050	LVDS
	1920x1200	LVDS
	1440x900	LVDS
	1600x900	LVDS
	1024x768	LVDS2
	1280x800	LVDS
	1920x1080	LVDS
	2048x1536	LVDS
Help	Select LVDS panel used by Internal Graphics Device by selecting the appropriate setup item.	

Field Name	<b>DeepSx Power Policies</b>
Default Value	Disabled
Possible Value	Disabled Enabled
Help	Configure the DeepSx Mode configuration.

Field Name	<b>Front Panel Audio</b>
Default Value	Auto
Possible Value	Auto High Definition Front Panel Legacy Front Panel Disabled
Help	Automatically or Manually select the type of audio front panel installed.

Field Name	<b>DVMT Pre-Allocated</b>
Default Value	[64M]
Possible Value	64M / 96M / 128M / 256M / 384M
Help	Select DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory size used by the Internal Graphics Device.

Field Name	<b>DVMT Total Gfx Mem</b>
Default Value	[256MB]
Possible Value	128MB / 256MB / Max
Help	Select DVMT 5.0 Total Graphic Memory size used by the Internal Graphics Device.

Field Name	<b>Restore AC Power State</b>
Default Value	[Latest State]
Possible Value	Power off Power on Last State

Help	Select AC power state when power is re-applied after a power failure.
------	---

## 4. Security

Main	Advanced	Chipset	Security	Boot	Save & Exit				
<p><b>Password Description</b></p> <p>If Only the Administrator's password is set then this only limits access to Setup and is only asked for when entering Setup</p> <p>If ONLY the User's password is set, then this Is a power on password and must be entered to boot or enter Setup. In Setup the User will. have Administrator rights.</p> <p>The password length must be in the following range:</p> <table border="0"> <tr> <td>Minimum Length</td> <td>3</td> </tr> <tr> <td>Maximum Length</td> <td>20</td> </tr> </table> <p><a href="#">Administrator Password</a></p> <p><a href="#">User Password</a></p> <p>HDD Security Configuration</p> <p><a href="#">P0:Device Name</a></p> <p>▶ <a href="#">Secure Boot menu</a></p>					Minimum Length	3	Maximum Length	20	<p><b>Item help</b></p> <p>→←: <b>Select Screen</b></p> <p>↑↓: <b>Select Item</b></p> <p>Enter: <b>Select</b></p> <p>+/- : <b>Change Opt</b></p> <p>F1: <b>General Help</b></p> <p>F2: <b>Previous Values</b></p> <p>F3: <b>Optimized Defaults</b></p> <p>F4: <b>Save &amp; Reset</b></p> <p>ESC: <b>Exit</b></p>
Minimum Length	3								
Maximum Length	20								
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Field Name	<b>Administrator Password</b>
Help	Set Administrator Password
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>User Password</b>
Help	Set User Password.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>P0: Device Name</b>
Help	HDD Security Configuration for selected drive
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>Secure Boot menu</b>
Help	Customizable Secure Boot settings.
Comment	Press Enter when selected to go into the associated Sub-Menu.

## 4.1 HDD Security Configuration

Main	Advanced	Chipset	Security	Boot	Save & Exit
<p>HDD Password Description</p> <p>Allow Access to Set, Modify and Clear Hard Disk User and Master Password. User Password need to be installed for Enabling Security. Master Password can Be Modified only when successfully unlocked With Master Password in POST.</p> <p>HDD PASSWORD CONFIGURATION:</p> <p>Security Supported : Yes</p> <p>Security Enabled : No</p> <p>Security Locked : No</p> <p>Security Frozen : No</p> <p>HDD User Pwd Status : NOT INSTALLED</p> <p>HDD Master Pwd Status : NOT INSTALLED</p> <p><a href="#">Set User Password</a></p>					<p><b>Item help</b></p> <p>→←: Select Screen</p> <p>↑↓: Select Item</p> <p>Enter: Select</p> <p>+/- : Change Opt</p> <p>F1: General Help</p> <p>F2: Previous Values</p> <p>F3: Optimized Defaults</p> <p>F4: Save &amp; Reset</p> <p>ESC: Exit</p>
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Field Name	<b>Set User Password</b>
Help	Set HDD User Password
Comment	Press Enter when selected to go into the associated Sub-Menu.

## 4.2 Secure Boot Mode

Main	Advanced	Chipset	Security	Boot	Save & Exit
System Mode Setup Secure Boot Disabled					<b>Item help</b>
Secure Boot [Disable] Secure Boot Mode [Custom] ► Key Management					→←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
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Field Name	<b>Secure Boot Control</b>
Default Value	[Disabled]
Possible Value	Enabled / Disabled
Help	Secure Boot can be enabled if 1.System running in User mode with enrolled Platform Key(PK) 2.CSM function is disabled

Field Name	<b>Secure Boot Mode</b>
Default Value	[Custom]
Possible Value	Standard / Custom
Help	Secure Boot mode selector. 'Custom' Mode allows physically present users ability to override Image Execution policy and manage Secure Boot Keys.

### 4.3 Key Management

Main	Advanced	Chipset	Security	Boot	Save & Exit
Factory Default Key Provision				[Disabled]	
▶ Enroll All Factory Default Keys					
▶ Save All Secure Boot Variables					
Platform Key				NOT INSTALLED	
▶ Delete PK					
▶ Set new PK					
Key Exchange Key				NOT INSTALLED	
▶ Delete KEK					
▶ Set new KEK					
▶ Append KEK					
Authorized Signature				NOT INSTALLED	
▶ Delete DB					
▶ Set new DB					
▶ Append DB					
Authorized TimeStamps				NOT INSTALLED	
▶ Delete DBT					
▶ Set new DBT					
▶ Append DBT					
Forbidden Signature				NOT INSTALLED	
▶ Delete DBX					
▶ Set new DBX					
▶ Append DBX					
<p>→←: Select Screen            ↑↓: Select Item            Enter: Select            +/- : Change Opt            F1: General Help            F2: Previous Values            F3: Optimized Defaults            F4: Save &amp; Reset            ESC: Exit</p>					
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Field Name	<b>Factory Default Key Provisioning</b>
Default Value	[Disabled]
Possible Value	Enabled Disabled
Help	Install Factory default Secure Boot Keys when System is in Setup Mode.

Field Name	<b>Enroll All Factory Default Key</b>
------------	---------------------------------------

Help	Force System to User Mode - install all Factory Default keys(PK,KEK,db,dbx). Change takes effect after reboot
Comment	

Field Name	<b>Delete All Secure Boot Variables</b>
Help	Force System to Setup Mode - clear all Secure Boot Variables(PK,KEK,db,dbx). Change takes effect after reboot
Comment	

Field Name	<b>Save All Secure Boot Variables</b>
Help	Store content of each Secure Boot Variable(data formatted as EFI_SIGNATURE_LIST) to a file with matching name on selected file system's root folder.
Comment	

Field Name	<b>Platform Key</b>
Default Value	NOT INSTALLED
Possible Value	INSTALLED NOT INSTALLED
Help	

Field Name	<b>Delete PK</b>
Help	Delete the Variable from NVRAM. Removing PK will reset System to Setup Mode
Comment	

Field Name	<b>Set new PK</b>
Help	Insert Factory Default Keys or load from a file formatted as: 1.Public Key Certificate in: a)EFI_SIGNATURE_LIST, b)EFI_CERT_X509 (DER encoded), c)EFI_CERT_RSA2048 (bin), d)EFI_CERT_SHA256 (bin) 2.Efi Time-Based Authenticated Variable
Comment	

Field Name	<b>Key Exchange Key Database</b>
Default Value	NOT INSTALLED
Possible Value	INSTALLED NOT INSTALLED
Help	

Field Name	<b>Delete KEK</b>
Help	Delete the Variable from NVRAM. Removing PK will reset System to Setup Mode
Comment	

Field Name	<b>Set new KEK</b>
------------	--------------------



Help	Insert Factory Default Keys or load from a file formatted as: 1.Public Key Certificate in: a)EFI_SIGNATURE_LIST, b)EFI_CERT_X509 (DER encoded), c)EFI_CERT_RSA2048 (bin), d)EFI_CERT_SHA256 (bin) 2.Efi Time-Based Authenticated Variable
Comment	

Field Name	<b>Append KEK</b>
Help	Insert Factory Default Keys or load from a file formatted as: 1.Public Key Certificate in: a)EFI_SIGNATURE_LIST, b)EFI_CERT_X509 (DER encoded), c)EFI_CERT_RSA2048 (bin), d)EFI_CERT_SHA256 (bin) 2.Efi Time-Based Authenticated Variable
Comment	

Field Name	<b>Authorized Signature</b>
Default Value	NOT INSTALLED
Possible Value	INSTALLED NOT INSTALLED
Help	

Field Name	<b>Delete DB</b>
Help	Delete the Variable from NVRAM. Removing PK will reset System to Setup Mode

Field Name	<b>Set new DB</b>
Help	Insert Factory Default Keys or load from a file formatted as: 1.Public Key Certificate in: a)EFI_SIGNATURE_LIST, b)EFI_CERT_X509 (DER encoded), c)EFI_CERT_RSA2048 (bin), d)EFI_CERT_SHA256 (bin) 2.Efi Time-Based Authenticated Variable

Field Name	<b>Append DB</b>
Help	Insert Factory Default Keys or load from a file formatted as: 1.Public Key Certificate in: a)EFI_SIGNATURE_LIST, b)EFI_CERT_X509 (DER encoded), c)EFI_CERT_RSA2048 (bin), d)EFI_CERT_SHA256 (bin) 2.Efi Time-Based Authenticated Variable

Field Name	<b>Authorized TimeStamps</b>
Default Value	NOT INSTALLED
Possible Value	INSTALLED NOT INSTALLED
Help	

Field Name	<b>Delete DBT</b>
Help	Delete the Variable from NVRAM. Removing PK will reset System to Setup Mode

Field Name	<b>Set new DBT</b>
Help	Insert Factory Default Keys or load from a file formatted as: 1.Public Key Certificate in: a)EFI_SIGNATURE_LIST, b)EFI_CERT_X509 (DER encoded), c)EFI_CERT_RSA2048 (bin), d)EFI_CERT_SHA256 (bin) 2.Efi Time-Based Authenticated Variable

Field Name	<b>Append DBT</b>
Help	Insert Factory Default Keys or load from a file formatted as: 1.Public Key Certificate in: a)EFI_SIGNATURE_LIST, b)EFI_CERT_X509 (DER encoded), c)EFI_CERT_RSA2048 (bin), d)EFI_CERT_SHA256 (bin) 2.Efi Time-Based Authenticated Variable

Field Name	<b>Forbidden Signature</b>
Default Value	NOT INSTALLED
Possible Value	INSTALLED NOT INSTALLED
Help	

Field Name	<b>Delete DBX</b>
Help	Delete the Variable from NVRAM. Removing PK will reset System to Setup Mode

Field Name	<b>Set new DBX</b>
Help	Insert Factory Default Keys or load from a file formatted as: 1.Public Key Certificate in: a)EFI_SIGNATURE_LIST, b)EFI_CERT_X509 (DER encoded), c)EFI_CERT_RSA2048 (bin), d)EFI_CERT_SHA256 (bin) 2.Efi Time-Based Authenticated Variable

Field Name	<b>Append DBX</b>
Help	Insert Factory Default Keys or load from a file formatted as: 1.Public Key Certificate in: a)EFI_SIGNATURE_LIST,

	<p>b)EFI_CERT_X509 (DER encoded), c)EFI_CERT_RSA2048 (bin), d)EFI_CERT_SHA256 (bin) 2.Efi Time-Based Authenticated Variable</p>
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## 5 Boot

Boot mode select = UEFI

Main	Advanced	Chipset	Boot	Security	Save & Exit
<b>Boot Configuration</b>					<b>Item help</b>
Setup Prompt Timeout				1	
Bootup NumLock State				[On]	
Fast Boot				[Disabled]	
Boot mode select				[UEFI]	
<b>FIXED BOOT ORDER Priorities</b>					
Boot Option #1				[UEFI CD/DVD]	
Boot Option #2				[UEFI Hard Disk]	
Boot Option #3				[UEFI USB KEY]	
Boot Option #4				[UEFI Network]	
Boot Option #5				[UEFI USB CD/DVD]	
Boot Option #6				[UEFI USB Hard Disk]	
▶ CSM parameters					
UEFI CD/DVD ROM Drive BBS Priorities					
UEFI Hard Disk Drive BBS Priorities					
UEFI NETWORK Drive BBS Priorities					
UEFI USB CD/DVD ROM Drive BBS Priorities					
UEFI USB Hard Disk Drive BBS Priorities					
UEFI USB KEY Drive BBS Priorities					
					→←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
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**Boot mode select = LEGACY**

Main	Advanced	Chipset	Security	Boot	Save & Exit
<b>Boot Configuration</b>					<b>Item help</b>
Setup Prompt Timeout					1
Bootup NumLock State					[On]
Fast Boot					[Enabled]
Boot mode select					[Legacy]
<b>FIXED BOOT ORDER Priorities</b>					
Boot Option #1					[CD/DVD]
Boot Option #2					[Hard Disk]
Boot Option #3					[USB KEY]
Boot Option #4					[Network]
Boot Option #5					[USB CD/DVD]
Boot Option #6					[USB Hard Disk]
Boot Option #7					[USB Floppy]
CD/DVD ROM Drive BBS Priorities Hard Disk Drive BBS Priorities NETWORK Drive BBS Priorities USB CD/DVD ROM Drive BBS Priorities USB Hard Disk Drive BBS Priorities USB KEY Drive BBS Priorities USB Floppy Drive BBS Priorities					<b>→←: Select Screen</b> <b>↑↓: Select Item</b> <b>Enter: Select</b> <b>+/- : Change Opt</b> <b>F1: General Help</b> <b>F2: Previous Values</b> <b>F3: Optimized Defaults</b> <b>F4: Save &amp; Reset</b> <b>ESC: Exit</b>
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Field Name	<b>Setup Prompt Timeout</b>
Default Value	1
Possible Value	1~65535
Help	Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.

Field Name	<b>Boot NumLock State</b>
Default Value	[On]

Possible Value	On Off
Help	Select the keyboard NumLock state

Field Name	<b>Fast Boot</b>
Default Value	[Disabled]
Possible Value	Enabled Disabled
Help	Enables or disables boot with initialization of a minimal set of devices required to launch active boot option. Has no effect for BBS boot options.

Field Name	<b>Boot mode select</b>
Default Value	[UEFI]
Possible Value	LEGACY ( <b>Restore non-Windows 8 Default</b> ) UEFI
Help	Select boot mode LEGACY/UEFI.

### Boot mode select = UEFI

Field Name	<b>Boot Option #1</b>
Default Value	[UEFI CD/DVD]
Possible Value	CD/DVD, Hard Disk, Network, USB CD/DVD, USB Hard Disk, USB KEY, USB Floppy, UEFI
Help	Set boot Priority

Field Name	<b>Boot Option #2</b>
Default Value	[UEFI Hard Disk]
Possible Value	CD/DVD, Hard Disk, Network, USB CD/DVD, USB Hard Disk, USB KEY, USB Floppy, UEFI
Help	Set boot Priority

Field Name	<b>Boot Option #3</b>
Default Value	[UEFI USB KEY]
Possible Value	CD/DVD, Hard Disk, Network, USB CD/DVD, USB Hard Disk, USB KEY, USB Floppy, UEFI
Help	Set boot Priority

Field Name	<b>Boot Option #4</b>
Default Value	[UEFI Network]
Possible Value	CD/DVD, Hard Disk, Network, USB CD/DVD, USB Hard Disk, USB KEY, USB Floppy, UEFI
Help	Set boot Priority

Field Name	<b>Boot Option #5</b>
Default Value	[UEFI USB CD/DVD]
Possible Value	CD/DVD, Hard Disk, Network, USB CD/DVD, USB Hard Disk, USB KEY, USB Floppy, UEFI
Help	Set boot Priority



Field Name	<b>Boot Option #6</b>
Default Value	[UEFI USB Hard Disk]
Possible Value	CD/DVD, Hard Disk, Network, USB CD/DVD, USB Hard Disk, USB KEY, USB Floppy, UEFI
Help	Set boot Priority

**Boot mode select = LEGACY**

Field Name	<b>Boot Option #1</b>
Default Value	[CD/DVD]
Possible Value	CD/DVD, Hard Disk, Network, USB CD/DVD, USB Hard Disk, USB KEY, USB Floppy, UEFI
Help	Set boot Priority

Field Name	<b>Boot Option #2</b>
Default Value	[Hard Disk]
Possible Value	CD/DVD, Hard Disk, Network, USB CD/DVD, USB Hard Disk, USB KEY, USB Floppy, UEFI
Help	Set boot Priority

Field Name	<b>Boot Option #3</b>
Default Value	[USB KEY]
Possible Value	CD/DVD, Hard Disk, Network, USB CD/DVD, USB Hard Disk, USB KEY, USB Floppy, UEFI
Help	Set boot Priority

Field Name	<b>Boot Option #4</b>
Default Value	[Network]
Possible Value	CD/DVD, Hard Disk, Network, USB CD/DVD, USB Hard Disk, USB KEY, USB Floppy, UEFI
Help	Set boot Priority

Field Name	<b>Boot Option #5</b>
Default Value	[USB CD/DVD]
Possible Value	CD/DVD, Hard Disk, Network, USB CD/DVD, USB Hard Disk, USB KEY, USB Floppy, UEFI
Help	Set boot Priority

Field Name	<b>Boot Option #6</b>
Default Value	[USB Hard Disk]
Possible Value	CD/DVD, Hard Disk, Network, USB CD/DVD, USB Hard Disk, USB KEY, USB Floppy, UEFI
Help	Set boot Priority

Field Name	<b>Boot Option #7</b>
Default Value	[USB Floppy]
Possible Value	CD/DVD, Hard Disk, Network, USB CD/DVD, USB Hard Disk, USB KEY, USB Floppy, UEFI
Help	Set boot Priority

Field Name	<b>CD/DVD ROM Drive BBS Priorities</b>
Help	Specifies the Boot Device Priority sequence from available CDROM/DVD Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>Hard Disk Drive BBS Priorities</b>
Help	Specifies the Boot Device Priority sequence from available Hard Disk Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>NETWORK Drive BBS Priorities</b>
Help	Specifies the Boot Device Priority sequence from available NETWORK Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>USB CD/DVD ROM Drive BBS Priorities</b>
Help	Specifies the Boot Device Priority sequence from available USB CDROM/DVD Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>USB Hard Disk Drive BBS Priorities</b>
Help	Specifies the Boot Device Priority sequence from available USB Hard Disk Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>USB KEY Drive BBS Priorities</b>
Help	Specifies the Boot Device Priority sequence from available USB Key Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>USB Floppy Drive BBS Priorities (UEFI Boot Mode Not Support)</b>
Help	Specifies the Boot Device Priority sequence from available USB Floppy Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>UEFI CD/DVD ROM Drive BBS Priorities</b>
Help	Specifies the Boot Device Priority sequence from available CDROM/DVD Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>UEFI Hard Disk Drive BBS Priorities</b>
Help	Specifies the Boot Device Priority sequence from available Hard Disk Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>UEFI NETWORK Drive BBS Priorities</b>
Help	Specifies the Boot Device Priority sequence from available NETWORK Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>UEFI USB CD/DVD ROM Drive BBS Priorities</b>
Help	Specifies the Boot Device Priority sequence from available USB CDROM/DVD Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>UEFI USB Hard Disk Drive BBS Priorities</b>
Help	Specifies the Boot Device Priority sequence from available USB Hard Disk Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>UEFI USB KEY Drive BBS Priorities</b>
Help	Specifies the Boot Device Priority sequence from available USB Key Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

## 6 Save & Exit

Main	Advanced	Chipset	Security	Boot	Save & Exit
<p>Save Changes and Reset</p> <p>Discard Changes and Reset</p> <p>Save Options</p> <p>Restore user Defaults</p> <p>Restore Defaults</p> <p>Restore Defaults</p> <p>Save as user Defaults</p> <p>Restore user Defaults</p> <p>Restore Windows 8-64 bits Defaults</p> <p>Restore Windows 8-32 bits Defaults</p> <p>Restore Windows 7 Defaults</p> <p>Boot Override</p> <p>UEFI: Built-in UEFI Shell</p> <p>Windows Boot Manager</p>					<p><b>Item help</b></p> <p>→←: Select Screen</p> <p>↑↓: Select Item</p> <p>Enter: Select</p> <p>+/- : Change Opt</p> <p>F1: General Help</p> <p>F2: Previous Values</p> <p>F3: Optimized Defaults</p> <p>F4: Save &amp; Reset</p> <p>ESC: Exit</p>
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Field Name	<b>Save Changes and Reset</b>
Help	Reset the system after saving the changes.
Comment	

Field Name	<b>Discard Changes and Reset</b>
Help	Reset system setup without saving any changes.
Comment	

Field Name	<b>Save Options</b>
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Field Name	<b>Save Changes</b>
Help	Save Changes done so far to any of the setup options.
Comment	

Field Name	<b>Discard Changes</b>
Help	Discard Changes done so far to any of the setup options.
Comment	

Field Name	<b>Restore Defaults</b>
Help	Restore/Load Default values for all the setup options.
Comment	

Field Name	<b>Save as User Defaults</b>
Help	Save the changes done so far as User Defaults.
Comment	

Field Name	<b>Restore User Defaults</b>
Help	Restore the User Defaults to all the setup options.
Comment	

Field Name	<b>Restore Windows 8-64 bits Defaults</b>
Help	Restore/Load Windows 8-64 bits Default values for all the setup options.
Comment	

Field Name	<b>Restore Windows 8-32 bits Defaults</b>
Help	Restore/Load Windows 8-32 bits Default values for all the setup options.
Comment	

Field Name	<b>Restore Windows 7 Defaults</b>
Help	Restore/Load Windows 8-32 bits or Windows 7 Default values for all the setup options.
Comment	

Field Name	<b>Boot Override</b>
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