

MITAC Desktop Board  
PH11SI  
Product Guide

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# Desktop Board Features

This chapter briefly describes the features of Desktop Board PH11SI.

Table 1 summarizes the major features of the Desktop Board.

## Feature Summary

<b>Form Factor</b>	Thin Mini-iTX (170mm x 170mm), 6 layers	
<b>Processor</b>	CPU Type : Intel Skylake-S Desktop platform CPU Core : Dual Core / Quad Core Socket : Socket LGA1151 TDP : Support up to 65W CPU types	
<b>Chipset</b>	Chipset Series : Intel® H110 Chipset	
<b>Graphics</b>	Integrated GFX by CPU Graphic Core : Gen9 Graphic Memory : Shared Memory 3D : DX12, OpenGL 4.3/4.4 Computing : OpenCL 2.0	
<b>Memory</b>	Memory Socket: 260-pin So-DIMM socket	2
	Memory Type: DDR4 @ 1.2V, 2133MHz (Unbuffered Non-ECC) Memory Channel: Dual Channel Memory Capacity : Support total up to 16 GB ECC Support : No	
<b>SIO Controller</b>	IT8519E	
<b>LAN Controller</b>	Realtek RTL8111G, 10/100/1000 support	
<b>Audio Controller</b>	Codec: HD audio codec, Realtek ALC662 AMP for internal speaker	
<b>Display Controller</b>	Parade DP701	
<b>Expansion slot</b>	PCI-E Mini Card (Half) x 1, Signal: PCIe, USB2.0 for WiFi/BT module PCI-E Mini Card (Full) x 1, Signal: PCIe, SATA3.0 for mSATA or TV card	
<b>External I/O</b>	HD-out	1
	VGA out	1
	USB3.0	4
	RJ-45 (with integrated status LEDs)	1
	Line-out	1
	Mic-in	1
	DC-in Jack (19V DC; 5mm/ ID, 7.5mm/ OD)	1
<b>Internal I/O</b>	LVDS connector	1
	Converter BD header	1
	Light sensor header	1
	USB 2.0 header	5
	SATA Connector	2
	SATA Power	1
	CPU Fan header	1

	Speaker header	1
	Side SW/LED header	1
	DMIC header	1
	19V 2 pin power header (Option#1) 12V 4 pin power header (Option#2)	
<b>Power</b>	Option#1: 19V DC-in, 19V 2pin power header Option#2: 12V DC-in, 12V 4pin power header	
<b>BIOS</b>	AMI BIOS	
<b>Compliance</b>	CE FCC	

**TABLE 1. MITAC DESKTOP BOARD PH11SI FEATURES**

## Desktop Board Components

Figure 1 shows the approximate location of the major components on the top side of MiTAC Desktop Board PH11SI.

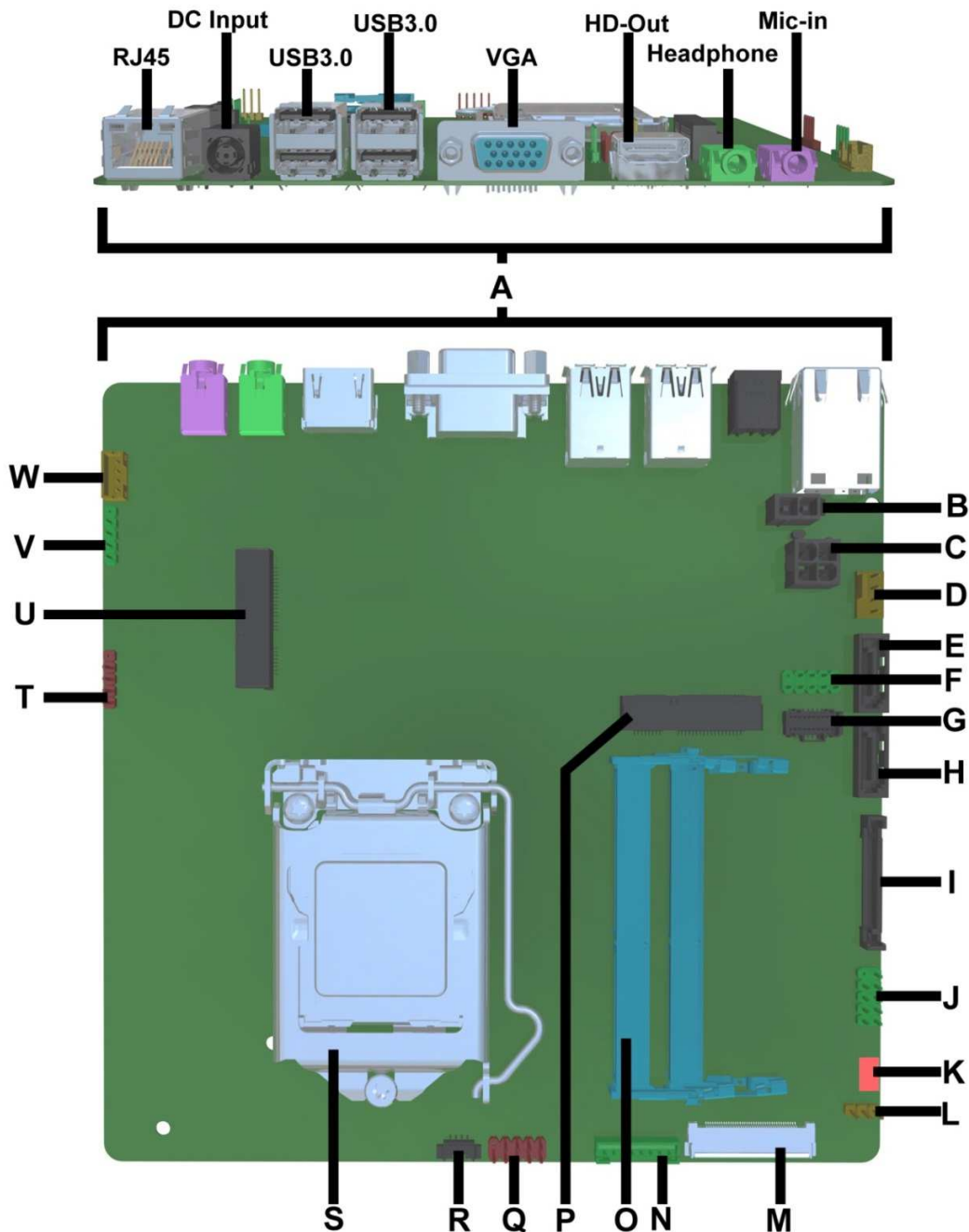


Figure 1. MiTAC Desktop Board PH11SI Components (Top)

**TABLE 2. MiTAC DESKTOP BOARD PH11SI COMPONENTS (SHOWN IN FIGURE 1)**

<b>A</b>	<b>Back Panel Connectors</b>
<b>B</b>	<b>12V out for Wireless charger Module (For MiTAC AiO)</b>
<b>C</b>	<b>12V in for Wireless charger Module</b>
<b>D</b>	<b>Fan Connector</b>
<b>E</b>	<b>SATA connector</b>
<b>F</b>	<b>Dual-Port USB 2.0 Header</b>
<b>G</b>	<b>Front I/O header (For MiTAC AiO)</b>
<b>H</b>	<b>SATA connector</b>
<b>I</b>	<b>SATA power connector</b>
<b>J</b>	<b>Front I/O header</b>
<b>K</b>	<b>CPU FAN header</b>
<b>L</b>	<b>Backlight power select</b>
<b>M</b>	<b>LVDS connector</b>
<b>N</b>	<b>Backlight power header</b>
<b>O</b>	<b>DIMM sockets</b>
<b>P</b>	<b>Mini PCIE slot (full length)</b>
<b>Q</b>	<b>Dual-Port USB 2.0 Header for TP &amp;Card reader header (For MiTAC AiO)</b>
<b>R</b>	<b>NFC/RFID header (For MiTAC AiO)</b>
<b>S</b>	<b>CPU socket</b>
<b>T</b>	<b>Single-Port USB 2.0 Header for WebCAM header (For MiTAC AiO)</b>
<b>U</b>	<b>Mini PCIE slot (half length)</b>
<b>V</b>	<b>Single USB 2.0 Header for DMIC (For MiTAC AiO)</b>
<b>W</b>	<b>Internal speaker</b>

## Processor

The board supports 6th generation Intel Core processors. Other processors may be supported in the future. This board supports processors with a maximum wattage of 65 W Thermal Design Power (TDP).



### **NOTE**

*This board has specific requirements for providing power to the processor. Additional power required will depend on configurations chosen by the integrator.*

## System Memory



### **NOTE**

*To be fully compliant with all applicable DDR SDRAM memory specifications, the board should be populated with DIMMs that support the Serial Presence Detect (SPD) data structure. This allows the BIOS to read the SPD data and program the chipset to accurately configure memory settings for optimum performance. If non-SPD memory is installed, the BIOS will attempt to correctly configure the memory settings, but performance and reliability may be impacted or the DIMMs may not function under the determined frequency.*

The Desktop Board has two 260-pin DDR4 SO-DIMM sockets with gold-plated contacts.

# Connecting to the Internal Headers and Connectors

## Front panel main header

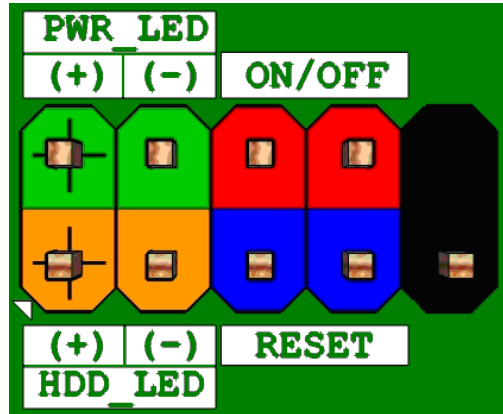


Figure 2 Front panel main header pin-out

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

## Internal speaker

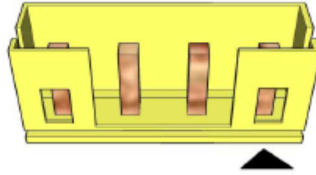


Figure 3 Internal speaker

Pin	Signal Name
1	Front_L-
2	Front_L+
3	Front_R+
4	Front_R-

TABLE 3 INTERNAL HEADER SIGNALS

## TP & Card reader USB

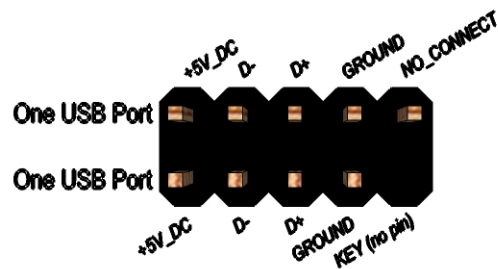


Figure 4 TP & Card reader USB pin-out

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

TABLE 4 TP & CARD READER USB SIGNALS



## WebCAM header



Figure 5 WebCAM header pin-out

Pin	Signal name
1	VCC
2	Data (negative)
3	Data (positive)
4	Ground
5	Key (no pin)

TABLE 5 WEBCAM HEADER SIGNALS

## Side IO USB header

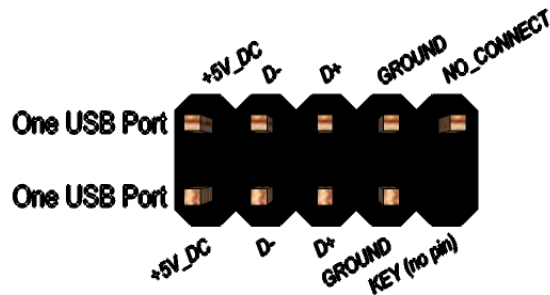
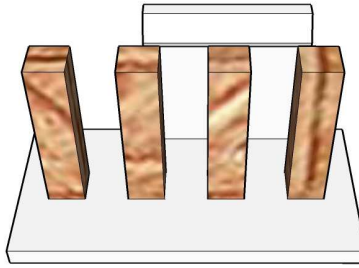


Figure 6 Side IO USB header pin-out

Pin	Signal	Pin	Signal
1	5V_USB	2	5V_USB
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 SIDE IO USB HEADER SIGNALS

## Processor fan header

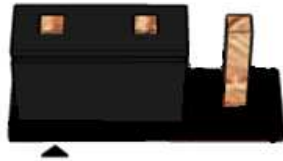


**Figure 7 Processor fan header pin-out**

Pin	Signal
1	Ground
2	+12V
3	CPU_FAN_TACH
4	CPU_FAN_CTRL

**TABLE 7 PROCESSOR FAN HEADER**

## Inverter power voltage selection header



Pins 1&2: jumper position for 12V



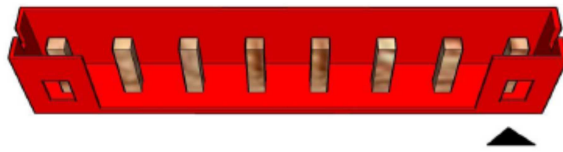
Pins 2&3: jumper position for 19V

**Figure 8 Inverter power voltage selection**

Pin	Signal Name
1	12VDUAL_HDMI
2	BKLT_PWR
3	+19V_A

**TABLE 8 INVERTER POWER VOLTAGE SELECTION HEADER**

## LVDS inverter power header

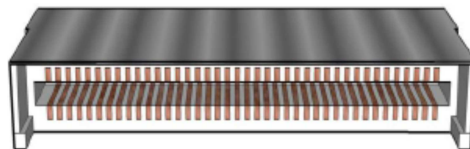


**Figure 9 LVDS inverter power header**

Pin	Signal Name	Description
1	LVDS_BKTEN_R	Backlight enable
2	LVDS_PWM	Backlight PWM control
3	12V/19V	Inverter power
4	12V/19V	Inverter power
5	GND	Ground
6	GND	Ground
7	BRIGHT_UP-	BRIGHTNESS UP
8	BRIGHT_DOWN-	BRIGHTNESS DOWN

**TABLE 9 8-PIN LVDS INVERTER POWER HEADER PIN-OUT REFERENCE**

## LVDS data header



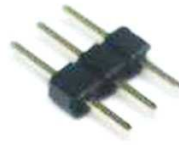
**Figure 10: Processor fan header**

Pin	Signal	Description
1	TD0P	LVDS Channel A diff data output - positive
2	TD0N	LVDS Channel A diff data output - negative
3	TC0P	LVDS Channel A diff data output - positive
4	TC0N	LVDS Channel A diff data output - negative
5	TB0P	LVDS Channel A diff data output - positive
6	TB0N	LVDS Channel A diff data output - negative
7	TA0P	LVDS Channel A diff data output - positive
8	TA0N	LVDS Channel A diff data output - negative

9	TD1P	LVDS Channel B diff data output-positive
10	TD1N	LVDS Channel B diff data output-negative
11	TC1P	LVDS Channel B diff data output-positive
12	TC1N	LVDS Channel B diff data output-negative
13	TB1P	LVDS Channel B diff data output-positive
14	TB1N	LVDS Channel B diff data output-negative
15	TA1P	LVDS Channel B diff data output-positive
16	TA1N	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	TCK0P	LVDS Channel A diff data output - positive
27	TCK0N	LVDS Channel A diff data output - negative
28	GND	Ground
29	GND	Ground
30	GND	Ground
31	NC	NC
32	BKLT_EN	
33	LVDS_PWM	
34	TCK1P	LVDS Channel B diff data output - positive
35	TCK1N	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	NC	NC

**TABLE 10: 40-PIN LVDS DATA HEADER PIN-OUT REFERENCE**

## CMOS Clear Header

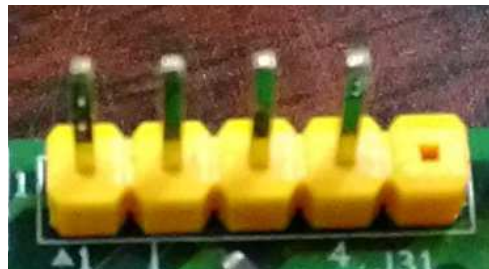


**Figure 11 CMOS Clear Header**

CMOS Clear	
1-2	Clear CMOS
2-3	Normal

**TABLE 11 CMOS CLEAR BEHAVIOR**

## DMIC Header

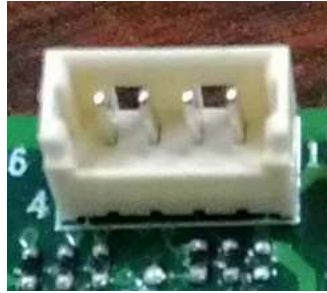


**Figure 12 DMIC Cable pin-out**

Pin	Signal Name	Description
1	VCC	Power
2	DMIC_DATA_R	DMIC DATA
3	Ground	Ground
4	DMIC_CLK_R	DMIC CLOCK
5	KEY	NO pin

**TABLE 12 DMIC CABLE SIGNALS**

## Ambient Light Sensor header

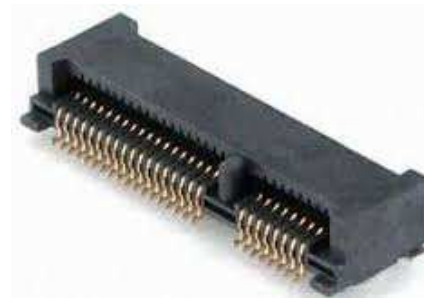


**Figure 13 Ambient Light Sensor header pin-out**

Pin	Signal Name	Description
1	VCC3_HDMI	Power
2	Ground	Ground
3	Sensor_CLK	Front SW/LEDs CLOCK
4	Sensor_DATA	Front SW/LEDs DATA

**TABLE 13 AMBIENT LIGHT SENSOR CABLE SIGNALS**

## MiniPCle slot



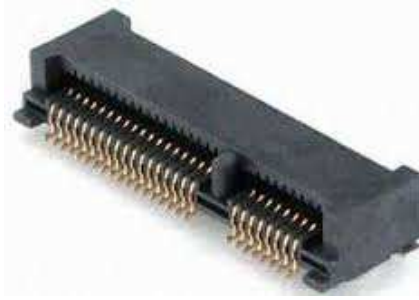
**Figure 14 MiniPCle slot For WLAN pin-out**

Pin	Signal Name	Description
1	WAKE-	Wake up
2	3VSB	Power
3	NC	NC
4	Ground	Ground
5	NC	NC
6	V_1P5	Power
7	CLKREQ_WLAN-	CLKREQ
8	NC	NC
9	Ground	Ground
10	NC	NC
11	PCH_100M_WIRELESS-	CLOCK(negative)
12	NC	NC

13	PCH_100M_WIRELESS	CLOCK(positive)
14	NC	NC
15	Ground	Ground
16	NC	NC
17	NC	NC
18	Ground	Ground
19	NC	NC
20	WLAN_DISABLE-	DAC output
21	Ground	Ground
22	PCIE_RST-	Reset
23	PCle_WIRELESS_RX-	Receive(negative)
24	3VSB	Power
25	PCle_WIRELESS_RX+	Receive(positive)
26	Ground	Ground
27	Ground	Ground
28	V_1P5	Power
29	Ground	Ground
30	SMB_CLK_RESUME	SMbus CLOCK
31	PCle_WIRELESS_TX-	Transmit(negative)
32	SMB_DATA_RESUME	SMbus DATA
33	PCle_WIRELESS_TX+	Transmit(positive)
34	Ground	Ground
35	Ground	Ground
36	USB_PCH_DN10	DATA(negative)
37	Ground	Ground
38	USB_PCH_DP10	DATA(Positive)
39	3VSB	Power
40	Ground	Ground
41	3VSB	Power
42	NC	NC
43	Ground	Ground
44	3VSB	Power
45	NC	NC
46	NC	NC
47	NC	NC
48	V_1P5	Power
49	NC	NC
50	Ground	Ground
51	NC	NC
52	3VSB	Power
GND1	Ground	Ground
GND2	Ground	Ground

**TABLE 14 MINI PCIE SLOT FOR WLAN SIGNALS**

## MiniPCle slot



**Figure 15 MiniPCle slot For SSD/TV card pin-out**

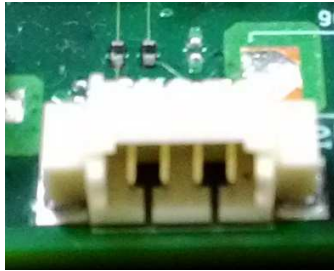
Pin	Signal Name	Description
1	NC	NC
2	3VSB	Power
3	NC	NC
4	Ground	Ground
5	NC	NC
6	V_1P5	Power
7	CLKREQ_TV-	CLKREQ
8	NC	NC
9	Ground	Ground
10	NC	NC
11	PCH_100M_TVBD-	CLOCK(negative)
12	NC	NC
13	PCH_100M_TVBD	CLOCK(positive)
14	NC	NC
15	Ground	Ground
16	NC	NC
17	NC	NC
18	Ground	Ground
19	NC	NC
20	NC	NC
21	Ground	Ground
22	PCIE_RST-	Reset
23	PCle_TVBD_RX-_R	Receive(negative)
24	3VSB	Power
25	PCle_TVBD_RX+_R	Receive(positive)
26	Ground	Ground
27	Ground	Ground
28	V_1P5	Power
29	Ground	Ground
30	SMB_CLK_MAIN	SMbus CLOCK
31	PCle_TVBD_TX-_R	Transmit(negative)
32	SMB_DATA_MAIN	SMbus DATA



33	PCIe_TVBD_TX+_R	Transmit(positive)
34	Ground	Ground
35	Ground	Ground
36	USB_PCH_DN9	DATA(negative)
37	Ground	Ground
38	USB_PCH_DP9	DATA(Positive)
39	3VSB	Power
40	Ground	Ground
41	3VSB	Power
42	NC	NC
43	Ground	Ground
44	3VSB	Power
45	NC	NC
46	NC	NC
47	NC	NC
48	V_1P5	Power
49	NC	NC
50	Ground	Ground
51	NC	NC
52	3VSB	Power
GND1	Ground	Ground
GND2	Ground	Ground

**TABLE 15 MINIPCIe SLOT FOR SSD/TV CARD SIGNALS**

## NFC/RFID header pin-out

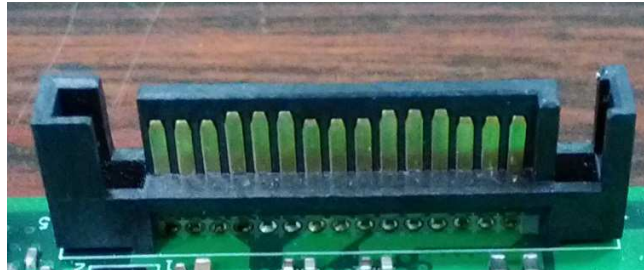


**Figure 16 NFC/RFID header pin-out**

Pin	Signal Name	Description
1	Ground	Ground
2	VCC	Power
3	UART0_TXD	UART Transmit
4	UART0_RXD	UART Receive
GND1	Ground	Ground
GND2	Ground	Ground

**TABLE 16 NFC/RFID SIGNALS**

## SATA Power

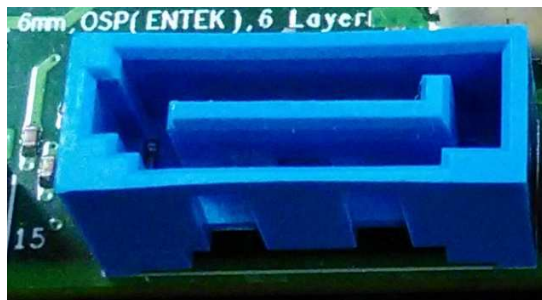


**Figure 17 SATA Power Cable pin-out**

Pin	Signal Name	Description
1	VCC3	Power
2	VCC3	Power
3	VCC3	Power
4	GND	Ground
5	GND	Ground
6	GND	Ground
7	VCC	Power
8	VCC	Power
9	VCC	Power
10	GND	Ground
11	RES	NC
12	GND	Ground
13	+12V	Power
14	+12V	Power
15	+12V	Power

**TABLE 17 SATA POWER CABLE SIGNALS**

## SATA ODD



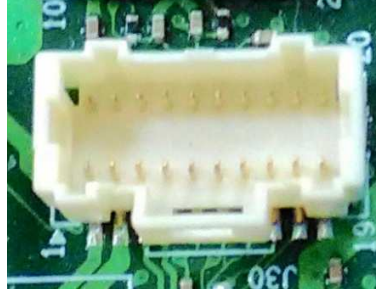
**Figure 18 ODD Cable pin-out**

Pin	Signal Name	Description
1	GND	Ground
2	SATAHDR_TXP0_C	SATA DATA Transmit(positive)
3	SATAHDR_TXN0_C	SATA DATA Transmit(negative)
4	GND	Ground

5	SATAHDR_RXN0_C	SATA DATA Receive(negative)
6	SATAHDR_RXP0_C	SATA DATA Receive(positive)
7	GND	Ground
8	G1	NC
9	G2	NC

**TABLE 18 ODD CABLE SIGNALS**

## Front SW/LEDs

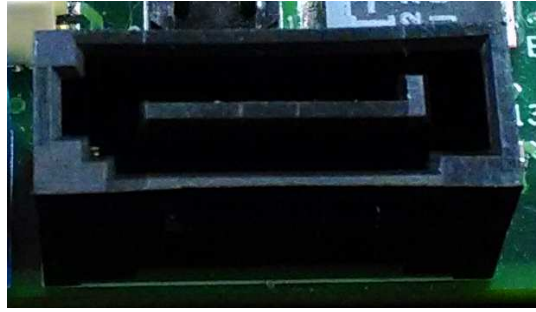


**Figure 19 Front SW/LEDs Y Cable pin-out**

Pin	Signal Name	Description
1	VCC	Power
2	V_5P0_REG	Power
3	VCC3	Power
4	PWRBT_N	Power button
5	GRN_BLNK_HRD	Indicator light (Green)
6	HDMIBT_N	HDMI button
7	YLW_BLNK_HRD	Indicator light (Yellow)
8	Sensor_CLK	Front SW/LEDs CLOCK
9	SATA_LED-	Hard disk activity LED
10	Sensor_DATA	Front SW/LEDs DATA
11	NIGHT_MODE	Night mode
12	HDMI_ON	HDMI Condition : ON
13	CM3633_INT-	UART Transmit
14	ECOBT_N	ECO button
15	ECO_LED	ECO Indicator light
16	Ground	Ground
17	ECO_ON	ECO Condition : ON
18	Ground	Ground
19	VCC	power
20	Ground	Ground
GND1	Ground	Ground
GND2	Ground	Ground

**TABLE 19 FRONT SW/LEDs Y CABLE SIGNALS**

## SATA HDD

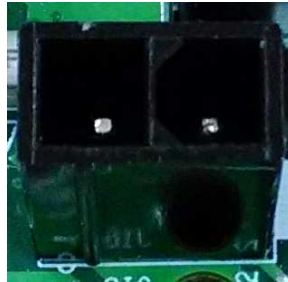


**Figure 20 HDD Cable pin-out**

Pin	Signal Name	Description
1	GND	Ground
2	SATAHDR_TXP1_C	SATA DATA Transmit(positive)
3	SATAHDR_TXN1_C	SATA DATA Transmit(negative)
4	GND	Ground
5	SATAHDR_RXN1_C	SATA DATA Receive(negative)
6	SATAHDR_RXP1_C	SATA DATA Receive(positive)
7	GND	Ground
8	G1	NC
9	G2	NC

**TABLE 20 HDD CABLE SIGNALS**

## Wireless Charger Header



**Figure 21 Wireless Charging Module pin-out**

Pin	Signal Name	Description
1	GND	Ground
2	+19V_charge	Charge Power

**TABLE 20 WIRELESS CHARGING MODULE SIGNALS**

# MITAC Desktop Board PH11SI BIOS Specification

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## Main Page

Main	Advanced	Chipset	Security	Boot	Save & Exit
<b>BIOS Information</b>					<b>Item help</b>
BIOS Vender			American Megatrends		
Core Version			5.11		
Compliancy			UEFI 2.4 ; PI 1.3		
BIOS Version			D7520A01		
Build Date			05/25/2015		
EC Version			04A		
<b>Processor Information</b> Intel(R) CORE(TM) i5-6400 CPU @ 2.70GHZ					
<b>Memory Information</b>					→←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Total Memory			8192 MB (DDR3 1333)		
Memory Frequency			2133 MHz		
System Date			[Fri mm/dd/yyyy]		
System Time			[hh:mm:ss]		
Version 2.17.1249. Copyright (C) 2015 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	5.011
Comment	This field is not selectable. There is no help text associated with it.

Field Name	<b>Compliancy</b>
Default Value	UEFI 2.4 ; PI 1.3
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>EC 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>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 Frequency</b>
Value	Display the installed memory frequency.
Comment	This field is not selectable. There is no help text associated with it.

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.

## Advanced Page

Main	Advanced	Chipset	Security	Boot	Save & Exit	
Wireless RF					[Enabled]	<b>Item help</b>
Wake on Lan					[Enabled]	
RealTek LAN Controller					[Enabled]	
▶ RealTek PCIe GBE Family Controller (MAC:00:22:4D:B5:ED:D4)						→←-: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
▶ ACPI Settings						
▶ Fan Speed Configuration						
▶ SMART Settings						
▶ S5 RTC Wake Settings						
▶ CPU Configuration						
▶ SATA Configuration						
▶ AMI Graphic Output Protocol Policy						
▶ Network Stack Configuration						
▶ CSM Configuration						
▶ USB Configuration						
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Field Name	<b>Wireless RF</b>
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Enable or Disable Wireless RF switch.

Field Name	<b>Wake On Lan</b>
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Enable or Disable Wake On Lan. (The item will be hid when set DeepSx Power Policies Enabled in S4-S5 )

Field Name	<b>RealTek PCIe GBE Family Controller (MAC: 00:22:4D:B5:ED:D4)</b>
Help	Get driver information and configure Realtek Ethernet controller parameter.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>LAN Controller</b>
Default Value	[Enabled]
Possible Value	Enabled



	Disabled
Help	Enable or Disable onboard NIC.

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>Fan Speed Configuration</b>
Help	Fan Control Configuration.
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>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>SATA Configuration</b>
Help	SATA Devices Options Settings.
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>AMI Graphic Output Protocol Policy (Hidden if “Launch CSM” = Enabled)</b>
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 setting, etc
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.

**Realtek PCIe GBE Family Controller (MAC:00:22:4d:AF:ED:D4)**

Main		Advanced	Chipset	Boot	Security	Save & Exit
<b>Driver Information</b>						<b>Item help</b>
Driver Name:	Realtek UEFI UNDI Driver					
Driver Version	2.035					
Driver Release Date:	2015/03/30					
<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					
PCI Slot:	01:00:00					
MAC Address:	00:22:4D:B5:FA:DB					
<b>Patent Information</b>						
This product is covered by one or More of the following patents: US6,570,884, US6,115,776 and US6,327,625						
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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 Release 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.

## 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
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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. For example, WindowsXP.

Field Name	<b>ACPI Sleep State</b>
Default Value	[Both S1 and S3 available for OS to choose from]
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.

## Fan Speed Configuration

Main	Advanced	Chipset	Security	Boot	Save & Exit
<b>Fan Speed Configuration</b>  Fan Speed Control [Auto] CPU Fan Speed [Normal]					<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
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Field Name	<b>Fan Speed Control</b>
Default Value	[Auto]
Possible Value	Auto / Manual
Help	Set Fan Speed mode. Attention: Select Manual Silent or Normal mode may be NOT cooling system enough.

Field Name	<b>CPU Fan Speed</b>
Default Value	[Normal]
Possible Value	Silent / Normal / Optimize
Help	Adjust CPU Fan Speed PWM Duty.

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



## S5 RTC Wake Settings

Main	Advanced	Chipset	Security	Boot	Save & Exit
Wake system with Fixed Time				[Disabled]	
Wake up hour				0	
Wake up minute				0	
Wake up second				0	
					<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
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Field Name	<b>Wake system with Fixed Time</b>
Default Value	[Disabled]
Possible Value	Fixed Time Disabled
Help	Enable or Disable System wake on alarm event. System will wake on the hr::min::sec specified. For Win8.1, disable fast startup.

Field Name	<b>Wake up hour</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</b>
Default Value	0
Possible Value	0-59
Help	0 - 59

Field Name	<b>Wake up second</b>
Default Value	0
Possible Value	0 - 59
Help	0 - 59

## CPU Configuration

Main	Advanced	Chipset	Security	Boot	Save & Exit
<b>CPU Configuration</b>					
Intel(R) Core(TM) CPU [CPU NAME] @ [CPU Freq.] GHz					<b>Item help</b>
CPU Signature					506e3
Microcode Patch					Not loaded
Max CPU Speed					2700 MHz
Min CPU Speed					800 MHz
CPU Speed					3100 MHz
Processor Cores					4
Hyper threading Technology					Not Supported
Intel VT-x Technology					Supported
Intel SMX Technology					Not Supported
64-bit					Supported
L1 Data Cache					32 KB x 4
L1 Code Cache					32 KB x 4
L2 Cache					256 KB x 4
L3 Cache					6MB
L4 Cache					Not Present
Hyper-threading					[Enabled]
Active Processor Cores					[All]
Intel Virtualization Technology					[Enabled]
Hardware Prefetcher					[Enabled]
Adjacent Cache Line Prefetch					[Enabled]
Intel(R) SpeedStep(tm)					[Enabled]
Turbo Mode					[Enabled]
CPU C states					[Enabled]
Enhanced C-states					[Enabled]
Package C State limit					[AUTO]
Intel TXT(LT) Support					[Disabled]
→←: 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>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.
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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>Hyper threading 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>Intel SMX Technology</b>
Default Value	Secure Mode extensions support.
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>Hyper-threading (Hidden 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>Active Processor Cores</b>
Default Value	[All]
Possible Value	All 1/2/3/4/5/6/7/8
Help	Number of cores to enable in each processor package.

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



Field Name	<b>Hardware Prefetcher</b>
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	To turn on/off the Mid Level Cache (L2) streamer prefetcher.

Field Name	<b>Adjacent Cache Line Prefetch</b>
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	To turn on/off prefetching of adjacent cache lines.

Field Name	<b>Intel(R) SpeedStep(tm)</b>
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Allows more than two frequency ranges to be supported.

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

Field Name	<b>CPU C states</b>
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Enable or disable CPU C states.

Field Name	<b>Enhanced C-states</b>
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Enable/Disable C1E. When enabled, CPU will switch to minimum speed when all cores enter C-State.

Field Name	<b>Package C state limit</b>
Default Value	[AUTO]
Possible Value	C0/C1 C2 C3 C6 C7 C7s C8 AUTO
Help	Package C State limit

Field Name	<b>Intel TXT(LT) Support</b>
Default Value	[Disabled]
Possible Value	Disabled Enable
Help	Enables or Disables Intel(R) TXT(LT) support

## SATA Configuration

Main	Advanced	Chipset	Security	Boot	Save & Exit
<p>SATA Mode Selection AHCI</p> <p>Serial ATA Port 0 Empty</p> <p>Serial ATA Port 1 Empty</p> <p>MSATA Port Empty</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>SATA Mode Selection</b>
Default Value	[AHCI]
Possible Value	AHCI
Help	Determines how SATA controller(s) operate.

Field Name	<b>Serial ATA Port 0</b>
Default Value	Empty
Possible Value	SATA Device Model Name

Field Name	<b>Serial ATA Port 1</b>
Default Value	Empty
Possible Value	SATA Device Model Name

Field Name	<b>MSATA Port</b>
Default Value	Empty
Possible Value	SATA Device Model Name

## AMI Graphic Output Protocol Policy

Main	Advanced	Chipset	Security	Boot	Save & Exit
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<p><b>Intel (R) Skylake Graphics Controller</b></p> <p><b>Intel (R) GOP Driver [9.0.1022]</b></p> <p>Output Select [Output Devices]</p>	<p><b>Item help</b></p>
	<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>
<p>Version 2.17.1249. Copyright (C) 2015 American Megatrends, Inc.</p>	

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 Output Device 3
Help	Output Interface

## 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: Restore Legacy defaults F4: Save & Reset ESC: Exit
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Field Name	<b>Network stack</b>
Default Value	[Enabled]
Possible Value	Disabled (Restore Legacy Default) Enabled (Restore UEFI Default)
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.

## CSM Configuration

Main	Advanced	Chipset	Security	Boot	Save & Exit
<b>Compatibility Support Module Configuration</b>					<b>Item help</b>
CSM Support					[Disabled]
CSM16 Module Version					07.78
<b>Option Rom execution</b>					
Network					[UEFI]
Video					[UEFI]
					→←: Select Screen ↑↓: Select Item <b>Enter: Select</b> +/- : Change Opt <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>CSM support</b>
Default Value	Disabled
Possible Value	[Enabled] (Restore Legacy Default) [Disabled] (Restore UEFI Default)
Help	Enable/Disable CSM Support.
Comment	This option controls if CSM will be launched. (It can't be selected, it only shows the status of the PXE OpROM's status , it can be changed by Restore UEFI defaults & Restore Legacy defaults.)

Field Name	<b>CSM16 Module Version</b>
Default Value	07.78
Comment	This field is not selectable. There is no help text associated with it.

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>Video</b>
Default Value	[UEFI]
Possible Value	[Legacy] (Restore Legacy Default) [UEFI] (Restore UEFI Default)
Help	Controls the execution of UEFI and Legacy Video OpROM.

## USB Configuration

Main	Advanced	Chipset	Security	Boot	Save & Exit
<b>USB Configuration</b>  USB Devices: <b>1 Keyboard, 1 Mouse, 2 Hubs</b>  Legacy USB Support <span style="float: right;">[Enabled]</span> XHCI Hand-off <span style="float: right;">[Disabled]</span> USB Mass Storage Driver Support <span style="float: right;">[Enabled]</span> Port 60/64 Emulation <span style="float: right;">[Disabled]</span>					<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
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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 device available only for EFI applications.

Field Name	<b>XHCI Hand-off</b>
Default Value	[Disabled]
Possible Value	Disabled Enabled
Help	This is a workaround for Oses without XHCI hand-off support. The XHCI ownership change should be claimed by XHCI driver.

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

Field Name	<b>Port 60/64 Emulation</b>
Default Value	[Disabled]
Possible Value	Disabled Enabled

Help	Enables I/O port 60h/64h emulation support. This should be enabled for the complete USB keyboard legacy support for non-USB aware OSes.
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## Chipset Page

Main	Advanced	Chipset	Security	Boot	Save & Exit
<div style="display: flex; justify-content: space-between;"> <span>▶ System Agent (SA) Configuration</span> <span>Item help</span> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <span>▶ PCH-IO Configuration</span> </div>					<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>System Agent (SA) Configuration</b>
Help	System Agent (SA) Parameters
Comment	Press Enter when selected to go into the associated Sub-Menu.

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

## System Agent (SA) Configuration

Main	Advanced	Chipset	Security	Boot	Save & Exit
<p>▶ Graphics Configuration</p> <p>▶ Memory Configuration</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>Graphics Configuration</b>
Help	Config Graphics Settings.
Comment	Press Enter when selected to go into the associated Sub-Menu.

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

## Graphics Configuration

Main	Advanced	Chipset	Security	Boot	Save & Exit
<b>Graphics Configuration</b>					<b>Item help</b>
<b>IGFX VBIOS version</b> 1024 DVMT Pre-Allocated [32M] DVMT Total Gfx Mem [256M] Primary IGFX Boot Display [LVDS Panel]					→←: 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	IGFX VBIOS version
Default Value	1024
Comment	Show Legacy VBIOS's version.(The Item only show up in the Legacy mode.)

Field Name	<b>DVMT Pre-Allocated</b>
Default Value	[32M]
Possible Value	32M / 64M / 96M / 128M / 160M / 192M / 224M / 256M / 288M / 320M / 352M / 384M / 416M / 448M / 480M / 512M/ 1024M/ 1536M/ 2048M/ 4M/ 8M/ 12M/ 16M/ 20M/ 24M/ 28M/ (32M/F7)/ 36M/ 40M/ 44M/ 48M/ 52M/ 56M/ 60M
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	[256M]
Possible Value	128MB / 256MB / MAX
Help	Select DVMT5.0 Total Graphic Memory size used by the Internal Graphics Device.

Field Name	<b>Primary IGFX Boot Display</b>
Default Value	[LVDS Panel]
Possible Value	LVDS Panel / VGA Display
Help	Select the Video Device Which will be activated In the DOS.

## Memory Configuration

Main	Advanced	Chipset	Boot	Security	Save & Exit
<b>Memory Information</b>					<b>Item help</b>
Memory Frequency					2133 Mhz
Total Memory					8192 MB
DIMM#0					8192 MB
DIMM#1					
					→←: 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>Memory Frequency</b>
Default Value	Show Memory Frequency.
Comment	This field is not selectable. There is no help text associated with it.

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

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

## PCH-IO Configuration

Main	Advanced	Chipset	Security	Boot	Save & Exit
<p>▶ HD Audio Configuration</p> <p>DeepSx Power Policies [Disabled]</p> <p>State After G3 [S5 State]</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>HD Audio Configuration</b>
Help	Customizable Secure Boot settings
Comment	HD Audio Subsystem Configuration Settings

Field Name	<b>DeepSx Power Policies</b>
Default Value	[Disabled]
Possible Value	Disabled Enabled in S4-S5
Help	Configure the DeepSx Mode configuration.

Field Name	<b>State After G3</b>
Default Value	[S5 State]
Possible Value	S0 State S5 State
Help	Specify what state to go to when power is re-applied after a power failure (G3 state).

## HD Audio Configuration

Main	Advanced	Chipset	Boot	Security	Save & Exit
<b>HD Audio Configuration</b>					<b>Item help</b>
HD Audio [Auto]					→←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Restore Legacy defaults F4: Save & Reset ESC: Exit
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Field Name	<b>HD Audio</b>
Value	[Auto]
Possible Value	Auto / Enable / Disable
Help	Control Detection of HD-Audio device. Disabled = HDA will be unconditionally disabled Enable = HDA will be unconditionally enabled Auto = HDA will be enabled if present, disabled otherwise.

## Security Page

Main	Advanced	Chipset	Security	Boot	Save & Exit				
<p><b>Password Description</b></p> <p>If the Administrator's password is set, then this only limits access to Setup and is only asked for when entering Setup.</p> <p>The password length must be in the following range:</p> <table style="width: 100%; border: none;"> <tr> <td style="padding: 2px;">Minimum Length</td> <td style="text-align: right; padding: 2px;">3</td> </tr> <tr> <td style="padding: 2px;">Maximum Length</td> <td style="text-align: right; padding: 2px;">20</td> </tr> </table> <p style="color: blue; margin-top: 10px;">Administrator Password</p> <p style="color: blue; margin-top: 10px;">▶ Secure Boot menu</p>					Minimum Length	3	Maximum Length	20	<p style="text-align: center;"><b>Item help</b></p> <hr/> <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>
Minimum Length	3								
Maximum Length	20								
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Field Name	<b>Administrator Password</b>
Help	Set Setup Administrator Password
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.

## Secure Boot Mode

Main	Advanced	Chipset	Security	Boot	Save & Exit
System Mode Setup Secure Boot Not Active  Secure Boot [Disabled] Secure Boot Mode [Standard] ► Key Management					<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
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Field Name	<b>Secure Boot</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 enables users to change Image Execution policy and manage Secure Boot Keys..

Field Name	<b>Key Management</b>
Help	Enables experienced users to modify Secure Boot variables
Comment	Press Enter when selected to go into the associated Sub-Menu.



## Key Management

Main	Advanced	Chipset	Security	Boot	Save & Exit																								
Provision Factory Default keys <span style="float: right;">[Disabled]</span>					<b>Item</b> <b>help</b>																								
<ul style="list-style-type: none"> <li>▶ Enroll All Factory Default Keys</li> <li>▶ Save All Secure Boot Variables</li> </ul>																													
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Secure Boot variable</th> <th style="text-align: center;">Size</th> <th style="text-align: center;">Key#</th> <th style="text-align: left;">Key source</th> </tr> </thead> <tbody> <tr> <td>▶ Platform Key(PK)</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td>▶ Key Exchange Key</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td>▶ Authorized Signatures</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td>▶ Forbidden Signatures</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td>▶ Authorized TimeStamps</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td></td> </tr> </tbody> </table>					Secure Boot variable	Size	Key#	Key source	▶ Platform Key(PK)	0	0		▶ Key Exchange Key	0	0		▶ Authorized Signatures	0	0		▶ Forbidden Signatures	0	0		▶ Authorized TimeStamps	0	0		
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Field Name	<b>Provision Factory Default Keys</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, dbt). Change takes effect after reboot
Comment	

Field Name	<b>Save All Secure Boot Variables</b>
Help	Save NVRAM content of all Secure Boot variables to the files (EFI_SIGNATURE_LIST data format) in root folder on a target files system device.
Comment	

Field Name	<b>Platform Key (PK)</b>
Default Value	Size:0, Key#:0, Key source: *
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.Authenticated UEFI Variable  Key source: Default, Custom, Mixed (*) modified through Setup menu
comment	Press Enter when selected to go into the associated Sub-Menu “Key Management”.

Field Name	<b>Key Exchange Key</b>
Default Value	Size:0, Key#:0, Key source: *
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.Authenticated UEFI Variable  Key source: Default, Custom, Mixed (*) modified through Setup menu
comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>Authorized Signature</b>
Default Value	Size:0, Key#:0, Key source: *
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.Authenticated UEFI Variable  Key source: Default, Custom, Mixed (*) modified through Setup menu
comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>Forbidden Signature</b>
Default Value	Size:0, Key#:0, Key source: *
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.Authenticated UEFI Variable  Key source: Default, Custom, Mixed (*) modified through Setup menu
comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	<b>Authorized TimeStamps</b>
Default Value	Size:0, Key#:0, Key source: *
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.Authenticated UEFI Variable

	Key source: Default, Custom, Mixed (*) modified through Setup menu
comment	Press Enter when selected to go into the associated Sub-Menu.

## Boot Page

Main	Advanced	Chipset	Security	Boot	Save & Exit
<b>Boot Configuration</b>					<b>Item help</b>
Setup Prompt Timeout				1	
Bootup NumLock State				[On]	
Quiet Boot				[Enabled]	
Fast Boot				[Enabled]	
Boot mode select				[LEGACY]	
<b>FIXED BOOT ORDER Priorities</b>					
Boot Option #1				[Hard Disk]	
Boot Option #2				[CD/DVD]	
Boot Option #3				[USB Hard Disk]	
Boot Option #4				[USB CD/DVD]	
Boot Option #5				[USB Key]	
Boot Option #6				[USB USB Floppy]	
Boot Option #7				[USB Lan]	
Boot Option #8				[Network]	
<ul style="list-style-type: none"> <li>▶ CD/DVD ROM Drive BBS Priorities</li> <li>▶ Hard Disk Drive BBS Priorities</li> <li>▶ NETWORK Drive BBS Priorities</li> <li>▶ USB CD/DVD ROM Drive BBS Priorities</li> <li>▶ USB Hard Disk Drive BBS Priorities</li> <li>▶ USB KEY Drive BBS Priorities</li> </ul>					
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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>Quiet Boot</b>
Default Value	[Enabled]

Possible Value	Enabled Disabled
Help	Enables or Disables Quiet Boot option

Field Name	<b>Fast Boot</b>
Default Value	[Enabled]
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	[LEGACY] (Restore Legacy Default) [UEFI] (Restore UEFI Default)
Possible Value	LEGACY UEFI
Help	Select boot mode LEGACY/UEFI.

Field Name	<b>Boot Option #1</b>
Default Value	[Hard Disk]
Possible Value	Hard Disk, CD/DVD, USB Hard Disk, USB CD/DVD, USB Key, USB Floppy , USB Lan, Network, Disabled
Help	Sets the system boot order

Field Name	<b>Boot Option #2</b>
Default Value	[CD/DVD]
Possible Value	Hard Disk, CD/DVD, USB Hard Disk, USB CD/DVD, USB Key, USB Floppy , USB Lan, Network, Disabled
Help	Sets the system boot order

Field Name	<b>Boot Option #3</b>
Default Value	[USB Hard Disk]
Possible Value	Hard Disk, CD/DVD, USB Hard Disk, USB CD/DVD, USB Key, USB Floppy , USB Lan, Network, Disabled
Help	Sets the system boot order

Field Name	<b>Boot Option #4</b>
Default Value	[USB CD/DVD]
Possible Value	Hard Disk, CD/DVD, USB Hard Disk, USB CD/DVD, USB Key, USB Floppy , USB Lan, Network, Disabled
Help	Sets the system boot order

Field Name	<b>Boot Option #5</b>
Default Value	[USB Key]
Possible Value	Hard Disk, CD/DVD, USB Hard Disk, USB CD/DVD, USB Key, USB Floppy , USB Lan, Network, Disabled
Help	Sets the system boot order

Field Name	<b>Boot Option #6</b>
Default Value	[USB Floppy]
Possible Value	Hard Disk, CD/DVD, USB Hard Disk, USB CD/DVD, USB Key, USB Floppy , USB Lan, Network, Disabled
Help	Sets the system boot order

Field Name	<b>Boot Option #7</b>
Default Value	[USB Lan]
Possible Value	Hard Disk, CD/DVD, USB Hard Disk, USB CD/DVD, USB Key, USB Floppy , USB Lan, Network, Disabled
Help	Sets the system boot order

Field Name	<b>Boot Option #8</b>
Default Value	[Network]
Possible Value	Hard Disk, CD/DVD, USB Hard Disk, USB CD/DVD, USB Key, USB Floppy , USB Lan, Network, Disabled
Help	Sets the system boot order

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.

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.

### 1.1 (List Boot Device Type) Drive BBS Priorities

Main	Advanced	Chipset	Security	Boot	Save & Exit
Boot Option #1 [Boot Device Name 1] Boot Option #2 [Boot Device Name 2]					<b>Item help</b> →←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Restore Legacy defaults F4: Save & Reset ESC: Exit
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Field Name	<b>Boot Option #1</b>
Default Value	
Possible Value	Boot Device Name 1 of this type
Help	Sets the system boot order

Field Name	<b>Boot Option #2</b>
Default Value	
Possible Value	Boot Device Name 2 of this type
Help	Sets the system boot order

### Save & Exit Page

Main	Advanced	Chipset	Security	Boot	Save & Exit	
Save Options  Save Changes and Reset Discard Changes and Reset Discard Changes and Exit  Default Options Restore UEFI Defaults Restore Legacy Defaults Save as user Defaults Restore user Defaults  Boot Override						<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
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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 Exit</b>
Help	Exit system setup with without saving any changes.
Comment	

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

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 UEFI Defaults</b>
Help	(Clear CMOS Defaults): Restore/Load UEFI (such as Windows 8 / 10 64BIT .)Default values for all the setup options.
Comment	

Field Name	<b>Restore Legacy Defaults</b>
Help	Restore/Load Legacy (such as Windows XP / Windows 7 / Windows 8 32BIT.) 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	