

MITAC 3.5" SBC M/B PD11KS

Product Guide

Desktop Board Features

This chapter briefly describes the features of 3.5" SBC M/B PD11KS.
Table 1 summarizes the major features of the M/B

Feature Summary

MECHANICAL	
FORM FACTOR	3.5" SBC Embedded: 4" x 5.8" (102mm x 147mm)
SYSTEM	
PROCESSOR	Intel® Kaby Lake-U i3-7100U (Dual Core, 3MB Cache, 2.40 GHz) Option: KBL celeron 3965U / i5-7300U / i7-7600U SKL celeron 3955U / i3-6100U / i5-6300U / i7-6600U
CHIPSET	Intel® SoC integrated
MEMORY	DDR4 2133/2400, 260-pin SO-DIMM x 2, Max. 32 GB (Non-ECC)
GRAPHICS	Intel® HD Graphics
ETHERNET	Intel® I219LM Giga LAN + I211AT Giga LAN
AUDIO	Realtek ALC283
I/O CHIPSET	Nuvoton NCT6104D
TPM	Nuvoton NPCT650ABCYX TPM2.0
EXPANSION SLOT	Storage: PCI Express Full-Length Mini Card slot (USB / PCIe / SATA) Wireless: M.2 2230 E key (PCIe / USB)
BIOS	AMI BIOS
H/W MONITOR	Temperature Monitor, Voltage Monitor, Fan Monitor
WATCHDOG TIMER	1~255 Steps by Software Program
SMART FAN CONTROL	CPU Fan / System Fan
GRAPHICS	
HDMI	Up to 4096 x 2160 @24 Hz
DISPLAYPORT	Up to 4096 x 2304 @60 Hz
LVDS	Up to 1920 x 1200 @60 Hz
eDP(Optional)	Up to 4096 x 2304 @60 Hz
REAR I/O	
USB	USB 3.0 x 4
DISPLAY I/O	HDMI x 1, DP x 1
AUDIO I/O	Audio combo jack (Mic-in and Line-out) x 1
LAN I/O	RJ-45 x 2
INTERNAL CONNECTORS	

STORAGE	SATAIII x 1
USB	USB2.0 x 2
DISPLAY I/O	LVDS x 1, Backlight Connector x 1
AUDIO I/O	Audio Header Supporting System Stereo Speaker or Buzzer x 1 Audio Header without Amplifier x 1 (for Extra Amplifier Board for System Speaker)
SERIAL PORT	RS-232 x 4 (One Supports RS-232/422/485)
GPIO	MiAPI Header (Programmable. Support GPIO x 10) x 1
FAN	4PIN PWM Fan Header x 1
POWER	8~24V ATX Power Connector x 1, AT/ATX Mode Select Jumper x 1
OTHERS	MiAPI: Programmable header (support GPIO x10, SMBUSx1, UARTx1, Watchdogx1) with API library supported for Windows OS Chassis Front Panel Header (2x5PIN) x 1 CMOS Jumper x 1
POWER REQUIREMENT	
POWER INPUT	Power header 4PIN DC-in 8~24V
ENVIRONMENTAL	
OPERATING TEMPERATURE	0 ~ 60°C (32 ~ 140°F)
STORAGE TEMPERATURE	-20 ~ 80°C (-4 ~ 176°F)
OPERATING HUMIDITY	10% ~ 95% R/H, non-condensing
CERTIFICATION	CE & FCC
OS	
OS SUPPORT	KBL: Windows 10 64bit, Linux (support by request) SKL: Windows 7 32/64bit, Windows 8.1 64bit, Windows 10 64bit, Linux (support by request)

TABLE 1. MITAC DESKTOP BOARD PD11KS FEATURES

3.5" SBC M/B Components

Figure 1 shows the approximate location of the major components on the top side of MITAC 3.5" SBC M/B PD11KS.

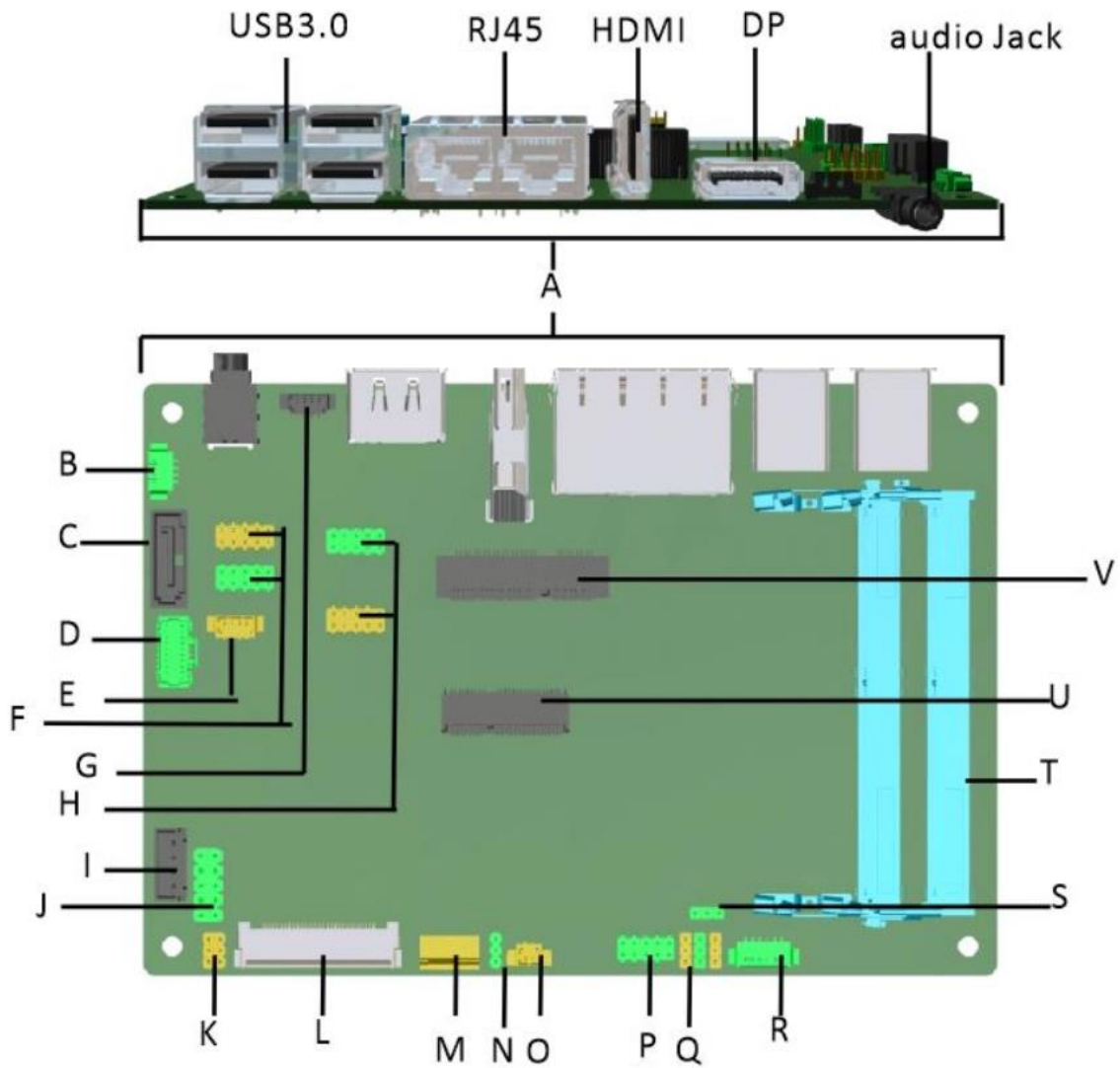


FIGURE 1. MITAC 3.5" SBC M/B COMPONENTS

Label	Description
A	Back Panel Connectors
B	Internal Speaker Header
C	SATA Header
D	MIAPI Header
E	SATA Power Header
F	Rs232 Header
G	External Speaker Header
H	Rs232 header
I	DC Power Input Header
J	Front Panel Header
K	LCD Power Select Header
L	LVDS/EDP Header
M	Fan Header
N	Back Light Power Select Header
O	RTC Battery Header
P	USB2.0 Header
Q	AT / ATX Mode Select Header
R	Backlight Power Header
S	Clear CMOS Header
T	DDR4 SODIMM socket
U	M.2 E key connector
V	Mini PCIE connector

TABLE 2. MITAC 3.5" SBC M/B COMPONENT LIST (SHOWN IN FIGURE 1)

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

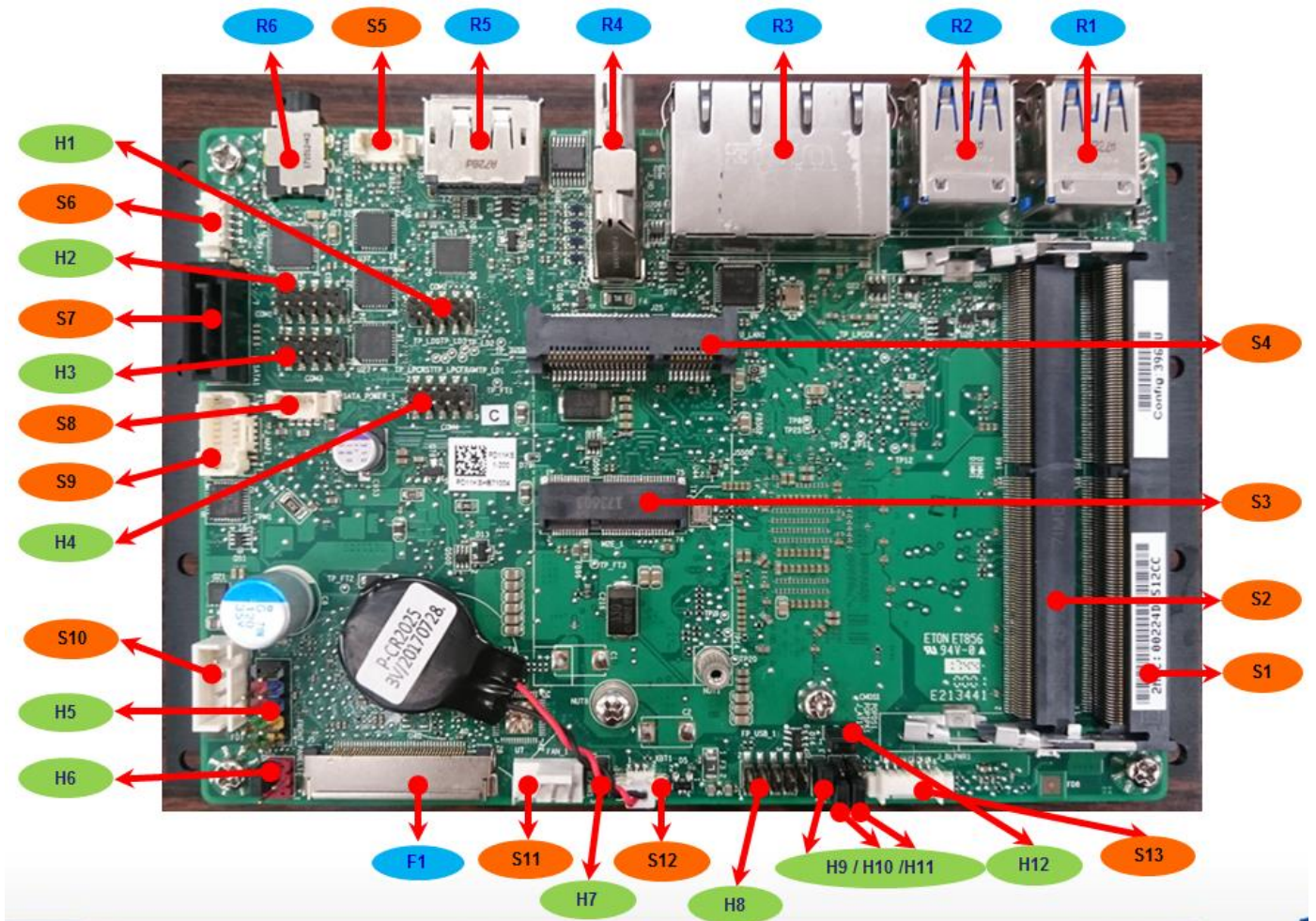
NOTE

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.

PD11KS Major I/O MAP



PD11KS I/O List

Item	Feature Description	PIN DEFINE
R1	Dual USB3.0 Connector	
R2	Dual USB3.0 Connector	
R3	Dual RJ45 Connector	Table 1
R4	HDMI Connector	
R5	Display Port Connector	
R6	Audio Jack	
F1	LVDS/eDP Connector	Table 2
S1	DDR4 Memory Slot1	
S2	DDR4 Memory Slot2	
S3	M.2 Slot KEY-E	
S4	Mini PCIe Slot	
S5	External Speaker Slot	Table 3
S6	Internal Speaker Slot	Table 4
S7	SATA Slot	
S8	SATA Power Slot	Table 5
S9	MiAPI Slot	Table 6
S10	DC IN Slot	Table 7
S11	FAN Socket	Table 8
S12	Coin Battery Power Cable Socket	
S13	Panel Backlight Control Cable Socket	Table 9
H1~H4	COM Port Header (RS232 & RS232/422/485)	Table 10
H5	Front Panel Header	Table 11
H6	Panel Power Selection Header	Table 12
H7	Panel Backlight Power Selection Header	Table 13
H8	Dual USB2.0 Header	Table 14
H9	AT/ATX Mode Selection Header	Table 15
H10	PD11KS SKU Setting Header(Speaks)	
H11	PD11KS SKU Setting Header(LVDS)	
H12	CMOS Clear Header	Table 20

R3 (Dual RJ45 Connector)

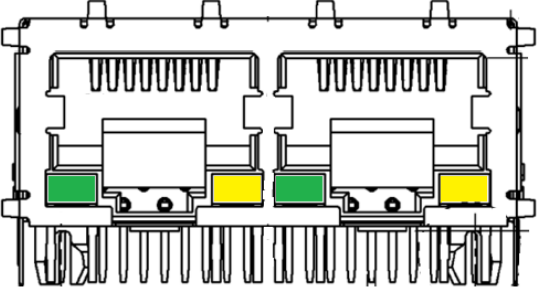
Diagram	LED	Color	State	Condition
	Link	N/A	Off	LAN link is not established
		Green	On	LAN link is established
			Blinking	LAN activity occurring
	Speed	N/A	Off	10 Mb/s data rate
		Green	On	100 Mb/s data rate
		Yellow	On	1000 Mb/s data rate

Figure 1 LAN Connector (2D)▲

Table 1: RJ45 LED behavior ▲

F1 (LVDS/eDP Connector)

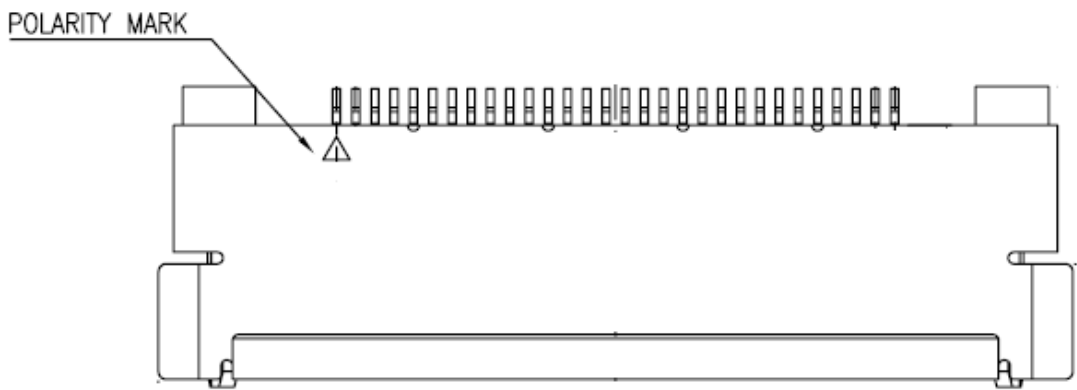


Figure 2 LVDS/ eDP Connector (2D)▲

Table 2: LVDS/ eDP Connector pin definition ▼

PIN	LVDS Define	eDP Define
1	LVDS0_LINK3_CON_DP	NC
2	LVDS0_LINK3_CON_DN	GND
3	LVDS0_LINK2_CON_DP	eDP_TX3_DN
4	LVDS0_LINK2_CON_DN	eDP_TX3_DP
5	LVDS0_LINK1_CON_DP	GND
6	LVDS0_LINK1_CON_DN	eDP_TX2_DN
7	LVDS0_LINK0_CON_DP	eDP_TX2_DP
8	LVDS0_LINK0_CON_DN	GND
9	LVDS1_LINK3_CON_DP	eDP_TX1_DN
10	LVDS1_LINK3_CON_DN	eDP_TX1_DP
11	LVDS1_LINK2_CON_DP	GND
12	LVDS1_LINK2_CON_DN	eDP_TX0_DN
13	LVDS1_LINK1_CON_DP	eDP_TX0_DP
14	LVDS1_LINK1_CON_DN	GND
15	LVDS1_LINK0_CON_DP	eDP_AUX_DN
16	LVDS1_LINK0_CON_DN	eDP_AUX_DP
17	GND	GND
18		Panel VDD
19		Panel VDD
20		Panel VDD
21		Panel VDD
22		Panel VDD
23		GND
24		GND
25		GND
26	LVDS0_CLK_CON_DP	GND
27	LVDS0_CLK_CON_DN	Hot Plug Detect
28		GND
29		GND
30		GND
31	DDC_SCL	GND
32		Backlight Enable

33		Backlight Control	
34	LVDS1_CLK_CON_DP		NC
35	LVDS1_CLK_CON_DN		NC
36		Backlight VCC	
37		Backlight VCC	
38		Backlight VCC	
39		Backlight VCC	
40	DDC_SDA		NC

S5 (External Speaker Socket)

Figure 3 External Speaker Socket (2D)▲

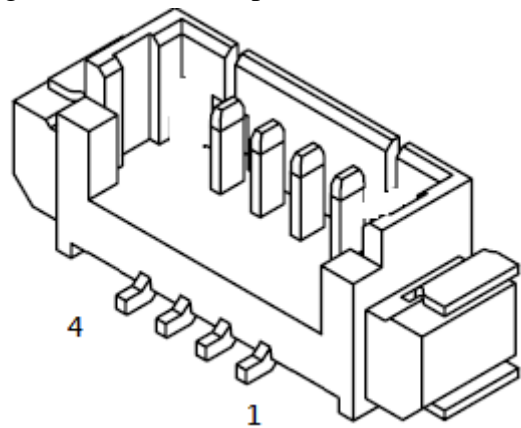


Table 3: External Speaker Socket pin definition ▼

Pin	Signal Name	Description
1	VDD	+12V
2	LINE OUT L	[Out] Left channel
3	LINE OUT R	[Out] Right channel
4	GND	Ground

S6 (Internal Speaker Socket)

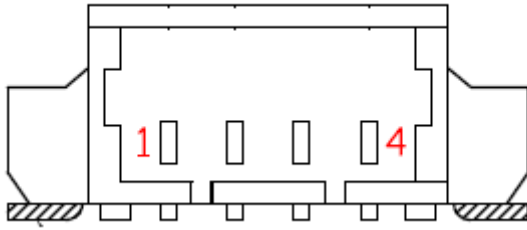


Figure 4 Internal Speaker Socket (2D)▲

Table 4: Internal Speaker Socket pin definition ▼

Pin	Signal Name	Description
1	LINE OUT L-	[Out] Left channel-
2	LINE OUT L+	[Out] Left channel+
3	LINE OUT R-	[Out] Right channel-
4	LINE OUT R+	[Out] Right channel +

S8 (SATA Power Socket)

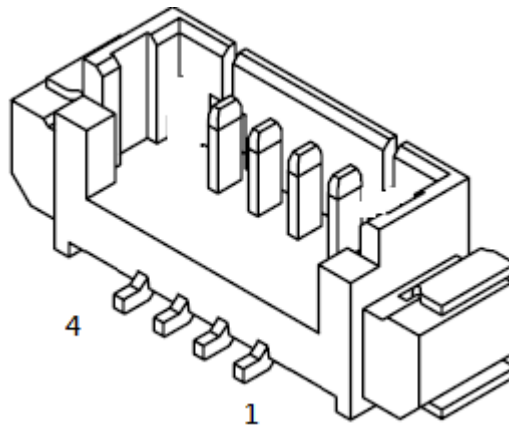


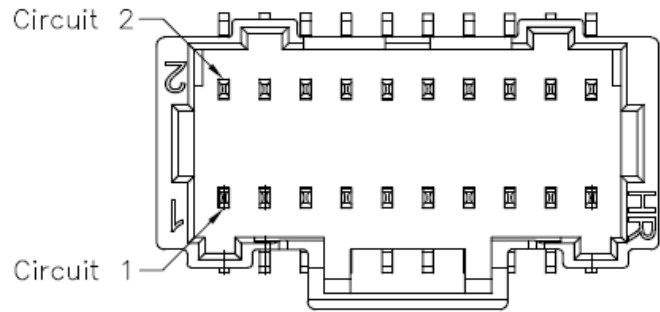
Figure 5 SATA Power Socket (2D)▲

Table 5: SATA Power Socket pin definition ▼

Pin	Signal Name	Description
1	VCC3	[Out] +3V
2	GND	[Out] Ground
3	VCC	[Out] +5V
4	12V	[Out] +12V

S9 (MiAPI Socket)

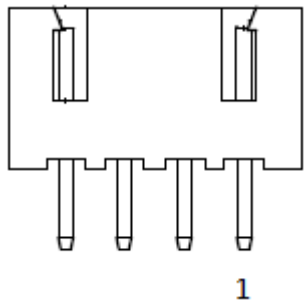
Figure 6 MiAPI Socket (2D)▼



1	MAPI_GPIO1	2	VCC
3	MAPI_GPIO2	4	MAPI_GPIO6
5	MAPI_GPIO3	6	MAPI_GPIO7
7	MAPI_GPIO4	8	MAPI_GPIO8
9	MAPI_GPIO5	10	MAPI_GPIO9
11	WD_Time	12	MAPI_GPIO10
13	Power Button	14	SMBUS_DATA
15	UART_TX	16	SMBUS_CLK
17	UART_RX	18	5VSB
19	GND	20	NA

Table 6: MiAPI Socket pin definition ▲

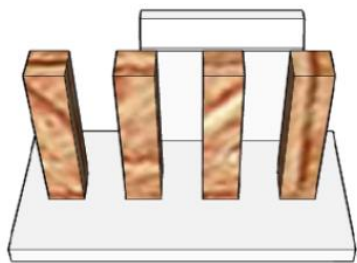
S10 (DC IN Power Socket)



Pin	Signal Name	Description
1	VDD	[IN] 8~24V
2	VDD	[IN] 8~24V
3	GND	Ground
4	GND	Ground

Socket pin definition ▲

S11 (FAN Socket)



Pin	Signal Name	Description
1	GND	Ground
2	VDD	[Out] 12V
3	CPU_FAN_TACH	FAN speed detect
4	CPU_FAN_CTRL	FAN speed control

Table 8: FAN pin definition)▲

S13 (Panel Backlight Control Cable Socket)

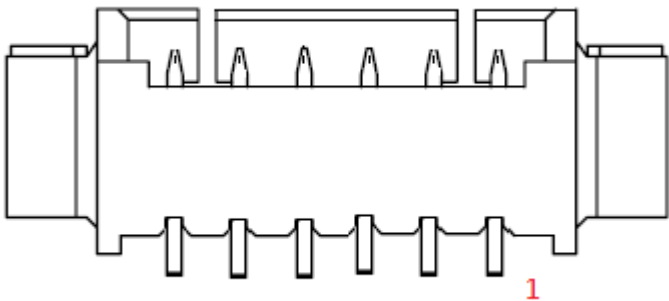


Figure 9 Backlight control cable Socket (2D)▲

Pin	Signal Name	Description
1	BKTL_EN	[Out] Lift channel-
2	BKLT_CTRL	[Out] Lift channel+
3	BKLT_PWR	[Out] Right channel-
4	BKLT_PWR	[Out] Right channel +
5	GND	Ground
6	GND	Ground

Table 9: Backlight control cable Socket pin definition



H1& H2 & H3 & H4 (COM Port Header)

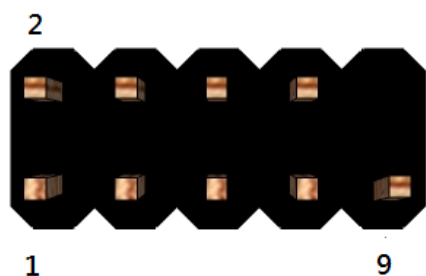
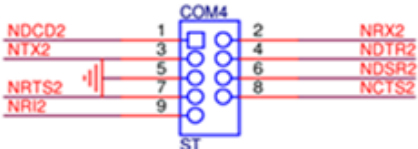


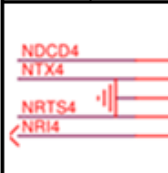
Figure 10 RS232 COM Port Header (2D)▲

H1 (COM2) port support RS-232, RS422 & RS485 by BIOS setting.
H2, H3, H4 (COM1, COM3, COM4) ports support RS-232 only.

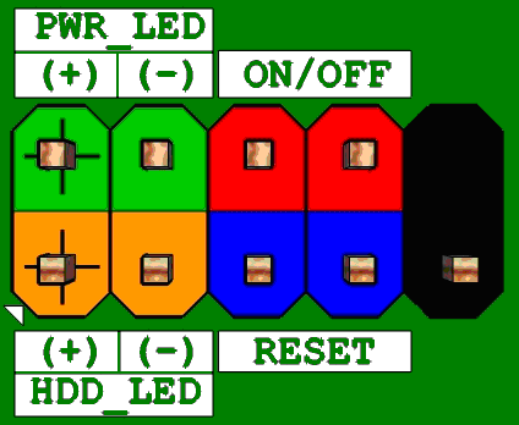
Pin	Signal	Pin	Signal
1	DCD (Data Carrier Detect)	2	RXD# (Receive Data)
3	TXD# (Transmit Data)	4	DTR (Data Terminal Ready)
5	Ground	6	DSR (Data Set Ready)
7	RTS (Request To Send)	8	CTS (Clear To Send)
9	RI (Ring Indicator)	10	Key (no pin)

Table 10: RS232 COM Port pin definition ▲

COM1 COM3 COM4	RS-232	9 pin 2.0mm pitch	
			
Pin No.	RS-232	RS-422	RS-485
1	DCD	NO support RS-422	NO support RS-485
2	RX		
3	TX		
4	DTR		
5	GND		
6	DSR		
7	RTS		
8	CTS		
9	RI		

COM 2	RS-232 RS-232 RS-485	9 pin 2.0mm pitch	
			
Pin No	RS-232	RS-422	RS-485
1	DCD	TX-	DATA-
2	RX	TX+	DATA+
3	RTX	RX-	NC
4	DTR	RX+	NC
5	GND	GND	GND
6	DSR	NC	NC
7	RTS	NC	NC
8	CTS	NC	NC
9	RI	NC	NC

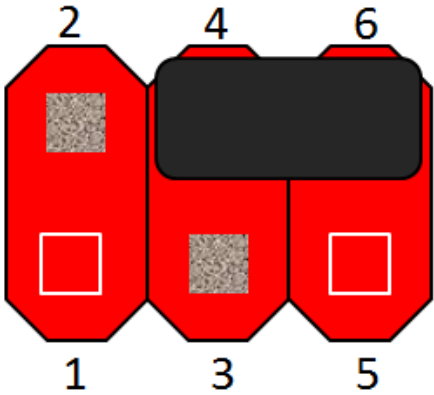
H5 (Front Panel Header)



Pin	Signal Name	Description	Pin	Signal Name	Description
1	HDD_POWER_LED	Pull-up resistor (510Ω) 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	VCC(+5V)	Power	10	KEY	No pin

Table 11 Front panel main header signals ▲

H6 (Panel Power Selection Header)



Pins 6&4: Jumper position for +5V mode(Default)

Figure 12 Panel Power Selection Headers ▲

Pin	Signal Name	Description
1	NC	No Pin

2	VCC3	+3V
3	12V	+12V
4	PANEL_PWR	[Out] output panel power
5	NC	No Pin
6	VCC	+5V

Table 12: Panel Power selection header pin definition ▲

H7 (Panel Backlight Power Selection Header)



Pins 1&2: jumper position for +12V mode



Pins 2&3: jumper position for +5V

mode

Pin	Signal Name	Description
1	12V	+12V
2	BKLT_PWR	Backlight Power
3	VCC	+5V

Table 13: Panel Backlight Power selection header pin definition ▲

H8 (Dual USB2.0 Header)

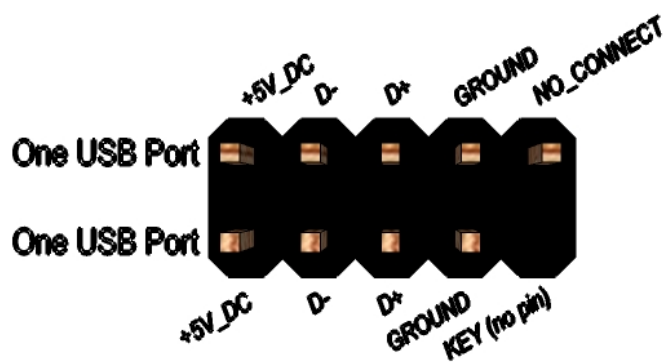


Figure 14 Dual USB2.0 header pin-out

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 14 Dual USB2.0 header pin definition ▲

H9 (AT/ATX Mode Selection Header)



Pins 1&2: jumper position for AT mode



Pins 2&3: jumper position for Non-AT mode (Default)

Pin	Signal Name	Description
1	PSON_AT_N	Power on signal(Always on)
2	SW_PWRBT_N	Power switch signal
3	NC	No connection

Table 15 AT/ATX Mode Selection Header pin definition ▲

H10 (PD11KS SKU Setting Header (Speaker))



Pins 1&2: jumper position for Inner speaker



Pins 2&3: jumper position for External speaker (need to use external audio boards)

H11 (PD11KS SKU Setting Header (POPDS1 LVDS))



Pins 1&2: jumper position for LVDS application



Pins 2&3: jumper position for Box PC application

POPDS1	
1-2	LVDS always on
2-3	LVDS always off

H12 (CMOS Clear Header)

The setting of this jumper is to clear CMOS RTC RAM, and reset the BIOS settings to default.



Pins 1&2: Normal



Pins 2&3: jumper position for CMOS Reset

CMOS Clear	
1-2	Normal
2-3	Clear CMOS

Table 20: CMOS Clear behavior ▲

MITAC 3.5" SBC M/B PD11KS

BIOS Specification

MAIN PAGE

Main Advanced Chipset Security Boot Save & Exit			
BIOS Information			Item help
BIOS Vender	American Megatrends		
Core Version	5.12		
Compliancy	UEFI 2.6 ; PI 1.4		
BIOS Version	D7760A01		
Build Date	04/21/2017		
ME FW Version	11.8.50.3399		
Processor Information			
Intel(R) CORE(TM) i5-7300U CPU @ 2.60GHz			
Memory Information			
Total Memory	32768 MB		
Memory Frequency	2133 MHz		
SATA Devices			
SATA1	Empty		
MSATA	Empty		
System Date	[Www 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 2.18.1264. Copyright (C) 2017 American Megatrends, Inc.			

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

Field Name	Core Version
Default Value	5.12
Comment	This field is not selectable. There is no help text associated with it.

Field Name	Compliancy
Default Value	UEFI 2.6 ; PI 1.4
Comment	This field is not selectable. There is no help text associated with it.

Field Name	BIOS Version
Default Value	Display the version of the BIOS

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

Field Name	ME FW Version
Value	ME Firmware Version.
Comment	This field is not selectable. There is no help text associated with it.

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

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

Field Name	Memory Frequency
Value	Display the installed memory frequency.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	SATA1
Value	Display the installed SATA port device.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	MSATA
Value	Display the installed SATA port device.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	System Date
Default Value	[Www mm/dd/yyyy]
Possible Value	Www : Mon/Tue/Wed/Thu/Fri/Sat/Sun mm : 1-12 dd : 1-31 yyyy : 1998-9999
Help	Set the Date. Use Tab to switch between Date elements.

Field Name	System Time
Default Value	[hh :mm :ss]
Possible Value	hh : 0-23 mm : 0-59 ss : 0-59
Help	Set the Time. Use Tab to switch between Time elements.

ADVANCED PAGE

Main	Advanced	Chipset	Security	Boot	Save & Exit
<div>▶ CPU Configuration</div> <div>▶ Trusted Computing</div> <div>▶ ACPI Settings</div> <div>▶ SMART Settings</div> <div>▶ Super IO Configuration</div> <div>▶ Hardware Monitor</div> <div>▶ S5 RTC Wake Settings</div> <div>▶ Network Stack Configuration</div>					
					<div>Item help</div> <div>→←: Select Screen</div> <div>↑↓: Select Item</div> <div>Enter: Select</div> <div>+/- : Change Opt</div> <div>F1: General Help</div> <div>F2: Previous Values</div> <div>F3: Optimized Defaults</div> <div>F4: Save & Reset</div> <div>ESC: Exit</div>
Version 2.18.1264. Copyright (C) 2017 American Megatrends, Inc.					

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

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

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

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

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

Field Name	Hardware Monitor
------------	-------------------------

Help	Monitor hardware status
Comment	Press Enter when selected to go into the associated Sub-Menu.

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

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

CPU CONFIGURATION

Main	Advanced	Chipset	Security	Boot	Save & Exit
CPU Configuration					
Type	Intel(R) Core(TM) CPU i5-7300U @ 2.60 GHz				
ID	0x806E9				
Speed	2700 MHz				
L1 Data Cache	32 KB x 2				
L1 Code Cache	32 KB x 2				
L2 Cache	256 KB x 2				
L3 Cache	3MB				
L4 Cache	N/A				
VMX	Supported				
SMX/TXT	Supported				
Hardware Prefetcher	[Enabled]				
Adjacent Cache Line Prefetch	[Enabled]				
Active Processor Cores	[All]				
Hyper-Threading	[Enabled]				
Intel Trusted Execution Technology	[Disabled]				
					Item help →←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Version 2.18.1264. Copyright (C) 2017 American Megatrends, Inc.					

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

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

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

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

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

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

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

Field Name	L4 Cache
Default Value	L4 Cache Size
Comment	This field is not selectable. There is no help text associated with it.

Field Name	VMX
Default Value	VMX Supported or Not
Comment	This field is not selectable. There is no help text associated with it.

Field Name	SMX/TXT
Default Value	SMX/TXT Supported or Not
Comment	This field is not selectable. There is no help text associated with it.

Field Name	Hardware Prefetcher
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	To turn on/off the MLC streamer prefetcher.

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

Field Name	Active Processor Cores
Default Value	[All]
Possible Value	All 1
Help	Number of cores to enable in each processor package.

Field Name	Hyper-Threading
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).

Field Name	Intel Trusted Execution Technology
Default Value	[Disabled]
Possible Value	Enabled Disabled
Help	Enables utilization of additional hardware capabilities provided by Intel (R) Trusted Execution Technology. Changes require a full power cycle to take effect.

TRUSTED COMPUTING (OPTIONAL)

Main	Advanced	Chipset	Security	Boot	Save & Exit
TPM20 Device Found Vender : NTC Firmware Version: 1.3 Security Device Support [Enable] Pending operation [None] TPM2.0 UEFI Spec Version [TCG_2]					Item help →←: 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	Security Device SUPPORT
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	Pending operation
Default Value	[None]
Possible Value	None 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	TPM2.0 UEFI Spec Version
Default Value	[TCG_2]
Possible Value	TCG_1_2 TCG_2
Help	Select the TCG2 Spec Version Support,TCG_1_2: the Compatible mode for Win8/Win10,TCG_2: Support new TCG2 protocol and event format for Win10 or later.

ACPI SETTINGS

Main	Advanced	Chipset	Security	Boot	Save & Exit
ACPI Settings					Item help →←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Enable ACPI Auto Configuration [Disabled] Enable Hibernation [Enabled] ACPI Sleep State [S3 (Suspend to RAM)]					
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Field Name	Enable ACPI Auto Configuration
Default Value	[Disabled]
Possible Value	Enabled Disabled
Help	Enables or Disables BIOS ACPI Auto Configuration.

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

Field Name	ACPI Sleep State
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.

SMART SETTINGS

Main	Advanced	Chipset	Security	Boot	Save & Exit
SMART Settings					Item help
SMART Self Test [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	SMART Self Test
Default Value	[Disabled]
Possible Value	Disabled Enabled
Help	Run SMART Self Test on all HDDs during POST.

SUPER IO CONFIGURATION

Main	Advanced	Chipset	Security	Boot	Save & Exit
SIO Configuration					
<div> <div> ▶ Serial Port 1 Configuration ▶ Serial Port 2 Configuration ▶ Serial Port 3 Configuration ▶ Serial Port 4 Configuration </div> <div> Item help →←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit </div> </div>					
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Field Name	Serial Port 1 Configuration
Help	Set Parameters of Port 1 (COMA)
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	Serial Port 2 Configuration
Help	Set Parameters of Port 2 (COMB)
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	Serial Port 3 Configuration
Help	Set Parameters of Port 3 (COMC)
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	Serial Port 4 Configuration
Help	Set Parameters of Port 4 (COMD)
Comment	Press Enter when selected to go into the associated Sub-Menu.

Serial Port 1 Configuration

Main	Advanced	Chipset	Security	Boot	Save & Exit
Serial Port 1 Configuration					
Serial Port Device Settings Change Settings					Item help →←: Select Screen ↑ ↓ : Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
[Enabled] IO=3E8h; IRQ=7; [Auto]					
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Field Name	Serial Port
Default Value	[Enabled]
Possible Value	Disabled Enabled
Help	Enable or Disable Serial Port(COM)

Field Name	Device Settings
Default Value	Device Super IO COM1 Address and IRQ.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	Change Settings
Default Value	[Auto]
Possible Value	Auto IO=3E8h; IRQ=7; IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12; IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12; IO=2F0h; IRQ=3,4,5,6,7,9,10,11,12; IO=2E0h; IRQ=3,4,5,6,7,9,10,11,12;
Help	Select an optimal settings for Super IO Device

Serial Port 2 Configuration

Main	Advanced	Chipset	Security	Boot	Save & Exit
Serial Port 2 Configuration					
Serial Port [Enabled] Device Settings IO=2E8h; IRQ=5; Change Settings [Auto] Mode Configuration [3T/5R RS232]					Item help →←: 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	Serial Port
Default Value	[Enabled]
Possible Value	Disabled Enabled
Help	Enable or Disable Serial Port(COM)

Field Name	Device Settings
Default Value	Device Super IO COM2 Address and IRQ.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	Change Settings
Default Value	[Auto]
Possible Value	Auto IO=2E8h; IRQ=7; IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12; IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12; IO=2F0h; IRQ=3,4,5,6,7,9,10,11,12; IO=2E0h; IRQ=3,4,5,6,7,9,10,11,12;
Help	Select an optimal settings for Super IO Device

Field Name	Mode Configuration
Default Value	[3T/5R RS232]
Possible Value	1T/1R RS422 3T/5R RS232 1T/1R RS485 TX ENABLE Low Active 1T/1R RS422 with termination resistor 1T/1R RS485 with termination resistor TX ENABLE Low Active

	Disabled
Help	Configure serial port as RS232/RS422/RS485.

Serial Port 3 Configuration

Main	Advanced	Chipset	Security	Boot	Save & Exit
Serial Port 3 Configuration					
Serial Port					Item help
Device Settings					→←: Select Screen ↑ ↓ : Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Change Settings					
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Field Name	Serial Port
Default Value	[Enabled]
Possible Value	Disabled Enabled
Help	Enable or Disable Serial Port(COM)

Field Name	Device Settings
Default Value	Device Super IO COM3 Address and IRQ.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	Change Settings
Default Value	[Auto]
Possible Value	Auto IO=3F8h; IRQ=4; IO=3F8h; IRQ=3,4,5,6,7,9,10,11,12; IO=2F8h; IRQ=3,4,5,6,7,9,10,11,12; IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12; IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12;
Help	Select an optimal settings for Super IO Device

Serial Port 4 Configuration

Main	Advanced	Chipset	Security	Boot	Save & Exit
Serial Port 4 Configuration					
Serial Port					Item help
Device Settings					→←: Select Screen ↑ ↓ : Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Change Settings					
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Field Name	Serial Port
Default Value	[Enabled]
Possible Value	Disabled Enabled
Help	Enable or Disable Serial Port(COM)

Field Name	Device Settings
Default Value	Device Super IO COM4 Address and IRQ.
Comment	This field is not selectable. There is no help text associated with it.

Field Name	Change Settings
Default Value	[Auto]
Possible Value	Auto IO=2F8h; IRQ=3; IO=3F8h; IRQ=3,4,5,6,7,9,10,11,12; IO=2F8h; IRQ=3,4,5,6,7,9,10,11,12; IO=3E8h; IRQ=3,4,5,6,7,9,10,11,12; IO=2E8h; IRQ=3,4,5,6,7,9,10,11,12;
Help	Select an optimal settings for Super IO Device

HARDWARE MONITOR

Main	Advanced	Chipset	Security	Boot	Save & Exit
PC Health Status					Item help
CPU temperature					→←: Select Screen
CPU VR temperature					↑↓: Select Item
DIMM temperature					Enter: Select
Fan Speed					+/- : Change Opt
1V StandBy					F1: General Help
CPU Vcore					F2: Previous Values
System Memory					F3: Optimized Defaults
+12V StandBy					F4: Save & Reset
					ESC: Exit
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S5 RTC WAKE SETTINGS

Main	Advanced	Chipset	Security	Boot	Save & Exit	
	Wake system from S5			[Disabled]		Item help
	Wake up hour			0		
	Wake up minute			0		
	Wake up second			0		
						→←: 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	Wake system from S5
Default Value	[Disabled]
Possible Value	Disabled Fixed Time
Help	Enabler or disable System wake on alarm event, Select FixedTime, system will wake on the hr::min::sec specified.

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

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

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

NETWORK STACK CONFIGURATION

Main	Advanced	Chipset	Security	Boot	Save & Exit
<div> <div>Network stack</div> <div>[Disabled]</div> </div> <div> <div>Ipv4 PXE Support</div> <div>[Disabled]</div> </div> <div> <div>Ipv6 PXE Support</div> <div>[Disabled]</div> </div>					<div>Item help</div> <div> →←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit </div>
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Field Name	Network stack
Default Value	[Disabled]
Possible Value	Disabled (Restore non-Windows 8 Default) Enabled
Help	Enable/Disable UEFI Network stack.

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

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

CHIPSET PAGE

Main	Advanced	Chipset	Security	Boot	Save & Exit
▶ System Agent (SA) Configuration					
▶ PCH-IO Configuration					
					Item help
					→←: 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	System Agent (SA) Configuration
Help	System Agent (SA) Parameters
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	PCH-IO Configuration
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	
System Agent (SA) Configuration										Item help	
<ul style="list-style-type: none"> ▶ Memory Configuration ▶ Graphics Configuration 										→←: 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	Memory Configuration
Help	Memory Configuration Parameters
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	Graphics Configuration
Help	Graphics Configuration
Comment	Press Enter when selected to go into the associated Sub-Menu.

Memory Configuration

Main	Advanced	Chipset	Boot	Security	Save & Exit
Memory Configuration					
					Item help
Memory Frequency					→←: Select Screen
DIMM#1					↑↓: Select Item
DIMM#2					Enter: Select
					+/- : Change Opt
					F1: General Help
					F2: Previous Values
					F3: Optimized Defaults
					F4: Save & Reset
					ESC: Exit
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Field Name	Memory Frequency
Help	Memory speed
Comment	This field is not selectable. There is no help text associated with it.

Field Name	DIMM#[1:2]
Help	Memory in the DIMM.
Comment	This field is not selectable. There is no help text associated with it.

Graphics Configuration

Main	Advanced	Chipset	Security	Boot	Save & Exit
Graphics Configuration					
DVMT Pre-Allocated [32M]					Item help
DVMT Total Gfx Mem [256M]					→←: 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	DVMT Pre-Allocated
Default Value	[32M]
Possible Value	32M / 64M / 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	DVMT Total Gfx Mem
Default Value	[256M]
Possible Value	128MB / 256MB / MAX
Help	Select DVMT5.0 Total Graphic Memory size used by the Internal Graphics Device.

PCH-IO CONFIGURATION

Main	Advanced	Chipset	Security	Boot	Save & Exit
PCH-IO Configuration					
<div>▶ HD Audio Configuration</div> <div> DeepSx Power Policies [Disabled] Wake On LAN [Enabled] State After G3 [S5 State] </div>					
<div>Item help</div> <div> →←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit </div>					
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Field Name	HD Audio Configuration
Help	HD Audio Subsystem Configuration Settings
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	DeepSx Power Policies
Default Value	[Disabled]
Possible Value	Enabled in S4-S5 Disabled
Help	configure the DeepSx Mode configuration.

Field Name	Wake On LAN
Default Value	[Enabled]
Possible Value	Enabled Disabled
Help	Enabled/Disabled integrated LAN to wake the system.

Field Name	State After G3
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
HD Audio Subsystem Configuration Settings					Item help
HD Audio [Auto]					→←: 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	HD Audio
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
<div><div><div>Password Description</div><div>If Only the Administrator's password is set, then this only limits access to Setup and is only asked for when entering Setup. 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.. The password length must be in the following range: Minimum length3 Maximum length20 <div>Administrator Password</div><div>User Password</div> HDD Security Configuration: <div>HDD Security drive</div> <div>► Secure Boot</div><div>► Secure Flash Update</div></div></div></div>				<div><div>Itemhelp</div><div>→←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit</div></div>	
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Field Name	Administrator Password
Help	Set Administrator Password

Field Name	User Password
Help	Set User Password.

Field Name	HDD Security drive
Help	HDD Security Configuration for selected drive
Comment	Press Enter when selected to go into the associated Sub-Menu.

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

Field Name	Secure Flash Update
Help	Secure Flash Update support
Comment	Press Enter when selected to go into the associated Sub-Menu.

HDD SECURITY

Main	Advanced	Chipset	Security	Boot	Save & Exit																		
<p>HDD Password Description :</p> <p>Allows Access to Set, Modify and Clear HardDisk User and Master Passwords. 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>If the 'Set HDD Password' option is grayed out, do power cycle to enable the option again.</p> <p>HDD PASSWORD CONFIGURATION:</p> <table><tr><td>Security Supported</td><td>:</td><td>Yes</td></tr><tr><td>Security Enabled</td><td>:</td><td>No</td></tr><tr><td>Security Locked</td><td>:</td><td>No</td></tr><tr><td>Security Frozen</td><td>:</td><td>No</td></tr><tr><td>HDD User Pwd Status</td><td>:</td><td>NOT INSTALLED</td></tr><tr><td>HDD Master Pwd Status</td><td>:</td><td>INSTALLED</td></tr></table> <p>Set User Password</p>					Security Supported	:	Yes	Security Enabled	:	No	Security Locked	:	No	Security Frozen	:	No	HDD User Pwd Status	:	NOT INSTALLED	HDD Master Pwd Status	:	INSTALLED	<p>Item help</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 & Reset</p> <p>ESC: Exit</p>
Security Supported	:	Yes																					
Security Enabled	:	No																					
Security Locked	:	No																					
Security Frozen	:	No																					
HDD User Pwd Status	:	NOT INSTALLED																					
HDD Master Pwd Status	:	INSTALLED																					
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Field Name	Set User Password
Help	Set HDD User Password. *** Advisable to Power Cycle System after Setting Hard Disk Passwords ***. Discard or Save changes option in setup does not have any impact on HDD when password is set or removed. If the 'Set HDD User Password' option is grayed out, do power cycle to enable the option again

SECURE BOOT

Main	Advanced	Chipset	Security	Boot	Save & Exit
System Mode				Setup	Item help
Vender keys				Not Modified	
Secure Boot Enable				[Disabled] Not Active	→←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit
Secure Boot Mode				[Custom]	
▶ Restore Factory Keys					
▶ Reset To Setup Mode					
▶ Key Management					
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Field Name	Secure Boot Enable
Default Value	[Disabled]
Possible Value	Enabled Disabled
Help	Secure Boot activated when Platform Key(PK) is enrolled, System mode is User/Deployed, and CSM function is disabled

Field Name	Secure Boot Mode
Default Value	[Custom]
Possible Value	Standard Custom
Help	Customizable Secure Boot mode: In Custom mode Secure Boot Policy variables can be configured by a physically present user without full authentication

Field Name	Key Management
Help	Enables expert users to modify Secure Boot Policy variables without full authentication
Comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	Restore Factory Keys
Help	Force System to User Mode. Configure NVRAM to contain OEM-defined factory default Secure Boot keys

Field Name	Reset to Setup Mode
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Help	Delete NVRAM content of all UEFI Secure Boot key databases
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Key Management

Main	Advanced	Chipset	Security	Boot	Save & Exit																												
<div>Factory Key Provision<div>[Disabled]</div><div><div>▶ Restore Factory Keys</div><div>▶ Reset To Setup Mode</div><div>▶ Export Secure Boot variables</div><div>▶ Enroll Efi Image</div></div><div>Device Guard ready</div><div><div>▶ Remove 'UEFI CA' from DB</div><div>▶ Restore DB defaults</div></div><table><thead><tr><th>Secure Boot variable</th><th>Size</th><th>Key#</th><th>Key Source</th></tr></thead><tbody><tr><td>▶ Platform Key(PK)</td><td>0</td><td>0</td><td>No Key</td></tr><tr><td>▶ Key Exchange Key</td><td>0</td><td>0</td><td>No Key</td></tr><tr><td>▶ Authorized Signatures</td><td>0</td><td>0</td><td>No Key</td></tr><tr><td>▶ Forbidden Signatures</td><td>0</td><td>0</td><td>No Key</td></tr><tr><td>▶ Authorized TimeStamps</td><td>0</td><td>0</td><td>No Key</td></tr><tr><td>▶ OsRecovery Signatures</td><td>0</td><td>0</td><td>No Key</td></tr></tbody></table></div>					Secure Boot variable	Size	Key#	Key Source	▶ Platform Key(PK)	0	0	No Key	▶ Key Exchange Key	0	0	No Key	▶ Authorized Signatures	0	0	No Key	▶ Forbidden Signatures	0	0	No Key	▶ Authorized TimeStamps	0	0	No Key	▶ OsRecovery Signatures	0	0	No Key	<div>Item help</div> <div><div>→←: Select Screen</div><div>↑↓: Select Item</div><div>Enter: Select</div><div>+/- : Change Opt.</div><div>F1: General Help</div><div>F2: Previous Values</div><div>F3: Optimized Defaults</div><div>F4: Save & Reset</div><div>ESC: Exit</div></div>
Secure Boot variable	Size	Key#	Key Source																														
▶ Platform Key(PK)	0	0	No Key																														
▶ Key Exchange Key	0	0	No Key																														
▶ Authorized Signatures	0	0	No Key																														
▶ Forbidden Signatures	0	0	No Key																														
▶ Authorized TimeStamps	0	0	No Key																														
▶ OsRecovery Signatures	0	0	No Key																														
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Field Name	Factory Key Provision
Default Value	[Disabled]
Possible Value	Enabled Disabled
Help	Provision factory default keys on next re-boot only when System in Setup Mode

Field Name	Restore Factory Keys
Help	Force System to User Mode. Configure NVRAM to contain OEM-defined factory default Secure Boot keys

Field Name	Reset to Setup Mode
Help	Delete NVRAM content of all UEFI Secure Boot key databases

Field Name	Export Secure Boot variables
Help	Copy NVRAM content of Secure Boot variables to files in a root folder on a file

	system device
--	---------------

Field Name	Enroll Efi Image
Help	Allow the image to run in Secure Boot mode. Enroll SHA256 Hash certificate of a PE image into Authorized Signature Database (db)

Field Name	Remove 'UEFI CA' from DB
Help	Device Guard ready system must not list 'Microsoft UEFI CA' Certificate in Authorized Signature database (db)

Field Name	Remove DB defaults
Help	Restore DB variable to factory defaults

Field Name	Platform Key (PK)
Default Value	Size:0, Key#:0, Key source: No Key
Help	Enroll Factory Defaults or load certificates from a file: 1.Public Key Certificate in: a)EFI_SIGNATURE_LIST b)EFI_CERT_X509 (DER encoded) c)EFI_CERT_RSA2048 (bin) d)EFI_CERT_SHA256,384,512 2.Authenticated UEFI Variable 3.EFI PE/COFF Image(SHA256) Key Source: Factory,External,Mixed
comment	Press Enter when selected to go into the associated Sub-Menu "Key Management".

Field Name	Key Exchange Key
Default Value	Size:0, Key#:0, Key source: No Key
Help	Enroll Factory Defaults or load certificates from a file: 1.Public Key Certificate in: a)EFI_SIGNATURE_LIST b)EFI_CERT_X509 (DER encoded) c)EFI_CERT_RSA2048 (bin) d)EFI_CERT_SHA256,384,512 2.Authenticated UEFI Variable 3.EFI PE/COFF Image(SHA256) Key Source: Factory,External,Mixed
comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	Authorized Signature
Default Value	Size:0, Key#:0, Key source: No Key
Help	Enroll Factory Defaults or load certificates from a file: 1.Public Key Certificate in: a)EFI_SIGNATURE_LIST b)EFI_CERT_X509 (DER encoded)

	c)EFI_CERT_RSA2048 (bin) d)EFI_CERT_SHA256,384,512 2.Authenticated UEFI Variable 3.EFI PE/COFF Image(SHA256) Key Source: Factory,External,Mixed
comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	Forbidden Signature
Default Value	Size:0, Key#:0, Key source: No Key
Help	Enroll Factory Defaults or load certificates from a file: 1.Public Key Certificate in: a)EFI_SIGNATURE_LIST b)EFI_CERT_X509 (DER encoded) c)EFI_CERT_RSA2048 (bin) d)EFI_CERT_SHA256,384,512 2.Authenticated UEFI Variable 3.EFI PE/COFF Image(SHA256) Key Source: Factory,External,Mixed
comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	Authorized TimeStamps
Default Value	Size:0, Key#:0, Key source: No Key
Help	Enroll Factory Defaults or load certificates from a file: 1.Public Key Certificate in: a)EFI_SIGNATURE_LIST b)EFI_CERT_X509 (DER encoded) c)EFI_CERT_RSA2048 (bin) d)EFI_CERT_SHA256,384,512 2.Authenticated UEFI Variable 3.EFI PE/COFF Image(SHA256) Key Source: Factory,External,Mixed
comment	Press Enter when selected to go into the associated Sub-Menu.

Field Name	OsRecovery Signatures
Default Value	Size:0, Key#:0, Key source: No Key
Help	Enroll Factory Defaults or load certificates from a file: 1.Public Key Certificate in: a)EFI_SIGNATURE_LIST b)EFI_CERT_X509 (DER encoded) c)EFI_CERT_RSA2048 (bin) d)EFI_CERT_SHA256,384,512 2.Authenticated UEFI Variable 3.EFI PE/COFF Image(SHA256) Key Source: Factory,External,Mixed
comment	Press Enter when selected to go into the associated Sub-Menu.

SECURE FLASH UPDATE

Main	Advanced	Chipset	Security	Boot	Save & Exit
► Path for ROM Image			Item help		
<p>Notice :</p> <p>ROM Image must in the root folder of storage device.</p> <p>File name must match with current BIOS project.</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 & Reset</p> <p>ESC: Exit</p>		
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Field Name	Path for ROM Image
Help	Enter the path to the Secure flash option

BOOT PAGE

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

Field Name	Bootup NumLock State
Default Value	[On]
Possible Value	On Off
Help	Select the keyboard NumLock state

Field Name	Boot Mode Select
Default Value	[UEFI]
Possible Value	LEGACY (Support Skylake series for Win7) UEFI
Help	Select boot mode LEGACY/UEFI

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

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

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

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

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

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

Field Name	Boot Option #7
Default Value	[Network]
Possible Value	Hard Disk, USB Hard Disk, USB CD/DVD, USB Key, USB Floppy , USB Lan, Network

Help	Sets the system boot order
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Field Name	(UEFI) USB Floppy Drive BBS Priorities
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	(UEFI) USB CD/DVD ROM Drive BBS Priorities
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	(UEFI) USB Hard Disk Drive BBS Priorities
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	(UEFI) USB KEY Drive BBS Priorities
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	(UEFI) Hard Disk Drive BBS Priorities
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	(UEFI) NETWORK Drive BBS Priorities
Help	Specifies the Boot Device Priority sequence from available NETWORK Drives.
Comment	Press Enter when selected to go into the associated Sub-Menu.

(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]	
				Item help	
				→←: 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	Boot Option #1
Default Value	
Possible Value	Boot Device Name 1 of this type
Help	Sets the system boot order

Field Name	Boot Option #2
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	
<div>Save Options</div> <div>Discard Changes and Exit</div> <div>Save Changes and Reset</div> <div>Discard Changes and Reset</div> <div>Restore Defaults</div>						Item help
						→←: 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	Discard Changes and Exit
Help	Exit system setup with without saving any changes.

Field Name	Save Changes and Reset
Help	Reset the system after saving the changes.

Field Name	Discard Changes and Rest
Help	Reset system setup without saving any changes.

Field Name	Restore Defaults
Help	Restore/Load Legacy Default values for all the setup options.

RECOVERY PAGE (ACTIVE FOR SECURE FLASH UPDATE ONLY)

Main	Advanced	Chipset	Security	Boot	Save & Exit	Recovery
<p>Please select block you want to update</p> <p>Reset NVRAM [Disabled]</p> <p>► Process with flash update</p>						<p>Item help</p>
						<p>→←: Select Screen ↑↓: Select Item Enter: Select +/- : Change Opt F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset ESC: Exit</p>
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Field Name	Reset NVRAM
Default Value	[Disabled]
Possible Value	Enabled Disabled
Help	Set this option to reset NVRAM to default values

Field Name	Process with flash update
Help	Select this to start flash update