

### FWS-7820

Network Appliance

User's Manual 2<sup>nd</sup> Ed

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#### Packing List

Network Appliance

Before setting up your product, please make sure the following items have been shipped:

Item		Quantity
•	FWS-7820	1
•	EAR bracket kit	1
•	Console cable	1

If any of these items are missing or damaged, please contact your distributor or sales representative immediately.

#### About this Document

This User's Manual contains all the essential information, such as detailed descriptions and explanations on the product's hardware and software features (if any), its specifications, dimensions, jumper/connector settings/definitions, and driver installation instructions (if any), to facilitate users in setting up their product.

Users may refer to the AAEON.com for the latest version of this document.

#### Safety Precautions

Please read the following safety instructions carefully. It is advised that you keep this manual for future references

- 1. All cautions and warnings on the device should be noted.
- All cables and adapters supplied by AAEON are certified and in accordance with the material safety laws and regulations of the country of sale. Do not use any cables or adapters not supplied by AAEON to prevent system malfunction or fires.
- 3. Make sure the power source matches the power rating of the device.
- 4. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
- Always completely disconnect the power before working on the system's hardware.
- No connections should be made when the system is powered as a sudden rush of power may damage sensitive electronic components.
- If the device is not to be used for a long time, disconnect it from the power supply to avoid damage by transient over-voltage.
- 8. Always disconnect this device from any AC supply before cleaning.
- 9. While cleaning, use a damp cloth instead of liquid or spray detergents.
- 10. Make sure the device is installed near a power outlet and is easily accessible.
- 11. Keep this device away from humidity.
- 12. Place the device on a solid surface during installation to prevent falls
- 13. Do not cover the openings on the device to ensure optimal heat dissipation.
- 14. Watch out for high temperatures when the system is running.
- 15. Do not touch the heat sink or heat spreader when the system is running
- 16. Never pour any liquid into the openings. This could cause fire or electric shock.

- As most electronic components are sensitive to static electrical charge, be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and contain all electronic components in any static-shielded containers.
- 18. If any of the following situations arises, please the contact our service personnel:
  - i. Damaged power cord or plug
  - ii. Liquid intrusion to the device
  - iii. Exposure to moisture
  - Device is not working as expected or in a manner as described in this manual
  - v. The device is dropped or damaged
  - vi. Any obvious signs of damage displayed on the device

19. DO NOT LEAVE THIS DEVICE IN AN UNCONTROLLED ENVIRONMENT WITH TEMPERATURES BEYOND THE DEVICE'S PERMITTED STORAGE TEMPERATURES (SEE CHAPTER 1) TO PREVENT DAMAGE.



This device complies with Part 15 FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

#### Caution:

There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions and your local government's recycling or disposal directives.

#### Attention:

Il y a un risque d'explosion si la batterie est remplacée de façon incorrecte. Ne la remplacer qu'avec le même modèle ou équivalent recommandé par le constructeur. Recycler les batteries usées en accord avec les instructions du fabricant et les directives gouvernementales de recyclage.

#### China RoHS Requirements (CN)

产品中有毒有害物质或元素名称及含量

AAEON Embedded Box PC/ Industrial System

	有毒有害物质或元素						
部件名称	铅	汞	镉	六价铬	多溴联苯	多溴二苯醚	
	(Pb)	(Hg)	(Cd)	(Cr(VI))	(PBB)	(PBDE)	
印刷电路板	0	0					
及其电子组件	0	0	0	0	0	0	
外部信号	0	0		0	0	0	
连接器及线材	0	0	0	0	0	0	
外壳	0	0	0	0	0	0	
中央处理器	0	0	0	0	0	0	
与内存	0	0	0	0	0	0	
硬盘	0	0	0	0	0	0	
电源	0	0	0	0	0	0	
): 表示该有毒有害物质在该部件所有均质材料中的含量均在							

SJ/T 11363-2006 标准规定的限量要求以下。

X:表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T 11363-2006 标准规定的限量要求。

备注:

一、此产品所标示之环保使用期限,系指在一般正常使用状况下。 二、上述部件物质中央处理器、内存、硬盘、光驱、触控模块为选购品。

#### China RoHS Requirement (EN)

Poisonous or Hazardous Substances or Elements in Products

AAEON Embedded Box PC/ Industrial System

	Poisonous or Hazardous Substances or Elements						
Component	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)	
PCB & Other Components	0	0	0	0	0	0	
Wires & Connectors for External Connections	0	0	0	0	0	0	
Chassis	0	0	0	0	0	0	
CPU & RAM	0	0	0	0	0	0	
Hard Disk	0	0	0	0	0	0	
PSU	0	0	0	0	0	0	

O: The quantity of poisonous or hazardous substances or elements found in each of the component's parts is below the SJ/T 11363-2006-stipulated requirement.

X: The quantity of poisonous or hazardous substances or elements found in at least one of the component's parts is beyond the SJ/T 11363-2006-stipulated requirement.

Note: The Environment Friendly Use Period as labeled on this product is applicable under normal usage only

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# Chapter 1

Product Specifications

#### 1.1 Specifications

Platform	
Form Factor	1U Rackmount Network Platform
Processor	Intel® 6th Generation Core™/ Xeon
	Processors
Chipset	Intel® C236
	- DDR4 1600/1866/2133 UDIMM/ECC
System Memory	- Up to 64GB - 288-pin DIMM x 4
Network	
Ethernet	Intel® i210 GbE x 2, Intel® 82580 x4
Bypass	Onboard 2 pairs bypass, others depend on NIM
	module
NIM Slot	4 (Max. 5 slots by project base)
Display	
Graphic Controller	Intel® Integrated
Connector	VGA cable (Optional)

Storage	
HDDs	Internal 3.5" SATA HDD x 1 or 2.5" SATA HDD x 2
	(Optional)*
	*(mSATA/ CF/ CFast will be disabled if 2nd SATA
	HDD is used)
CF/CFast/mSATA	CF socket x 1 (Optional BOM CFast™ socket or
	mSATA slot)

Expansion/Internal Interface	
PCIe slot	PCIe [x4] signal use [x8] slot (3rd NIM slot will be
	disabled if PCIe Riser supported)
Mini-PCIe slot	_
Keyboard and Mouse	Pin-header
Universal Serial Bus	USB 3.0 x 2, Box Header (2.0mm)

Miscellaneous	
RTC	Internal RTC
Watchdog Timer	1~255 steps by software programmable, 1 sec
	per step
Software Button	GPIO Programmable push button x 1
ТРМ	TPM2.0 9665 (TPM v1.2 9660 optional)
GPIO	8bits, BIOS default 4 bits input, 4bits output.
FAN	2

Miscellaneous	
MTBF (Hours)	71,852
Color	Black

Environmental Parameters and D	imension
Power Requirement	250W ATX PSU
Operation Temp.	32°F ~ 104°F (0°C ~ 40°C)
Storage Temp.	-4°F ~ 140°F (-20°C ~ 60°C)
Operating Humidity	10% ~ 80% relative humidity, non-condensing
Storage Humidity	10% ~ 80% @ 40°C, non-condensing
Vibration	0.5 Grms/ 5 ~ 500Hz/ operation (3.5" H.D.D)
	1.5 Grms/ 5 ~ 500Hz/ no operation
Shock	10G peak acceleration (11 m sec. duration),
	operation
	20G peak acceleration (11 m sec. duration),
	non-operation
Chassis Dimension (W x D x H)	16.93" x 18.7" x 1.73" (430mm x 475mm x 44mm)

Chapter 1 – Product Specifications

I/O Interfaces	
	- Power LED x 1
Front Panel	- Status LED x 1
	- HDD Active LED x 1
	- USB 3.0 Ports x 2
	- RJ-45 Console x 1
	- Parallel LCM display and 4 keypad x 1 (Optional
	w/ NIM slot)
	- Software Programmable Switch x 1 - Bypass LED x 2
	- AC Power Input x 1
Rear Panel	- Power Switch x 1
	- VGA port (Optional)
	- Rear Expansion Slot x 1 (Optional PCIe [x4]
	signal use [x8] slot, 3rd NIM slot will be
	disabled if PCIe Riser supported)

*Note 1:* 2nd SATA is Co-layout with mSATA/CF/CFast. The default is CF and you can choose any one from the 4 options.

*Note 2:* PCIe[x4] riser card shares 1 NIM slot signal and the NIM slot next to LCM will be disabled.

## Chapter 2

Hardware Information

#### 2.1 Dimensions

#### System



Vetwork Appliance

FWS-7820





PER-T393





#### 2.2 Jumpers and Connectors

#### Component Side



#### Solder Side







#### 2.3 List of Jumpers

Please refer to the table below for all of the board's jumpers that you can configure for your application

Label	Function
CN40	RTC Reset
CN39	Secondary RTC Reset
CN23	CF Power Selection
JP1	Auto Power Button



Normal (Default)



Clear CMOS

### 2.3.2 Secondary RTC Reset (CN39)



Normal (Default)



RTC TEST

#### 2.3.3 Auto Power Button Selection (CN23)



Don't use Auto PWRBTN (Default)



Use Auto PWRBTN

2.3.4 CFD Voltage 3.3/5V Selection (JP1)



+3.3 V (Default)



#### 2.4 List of Connectors

Please refer to the table below for all of the board's connectors that you can configure for your application

Label	Function
ATX_CPU1	8-Pin 12V Power Connector
ATX1	24-Pin ATX Power Connector
CN1	PS/2 keyboard & Mouse Connector
CPU_FAN1	CPU_FAN1
CPU_FAN2	CPU_FAN2
SYS_FAN1	SYS_FAN1
CN11	Power button
CN12	PCIE Slot For FWS-7820 Pin Define
CN14	COM Port
CN17	LCM Connector
CN18&CN27	SATA Port Connector
CN19& CN20	HDD Power Connector
CN22	LPC Connector
CN24	Compact Flash SOCKET
CN25	mSATA SOCKET
CN26	CFAST SOCKET
CN28	HDMI Connector
CN30	CPLD Programming Pin Header
CN33	Battery Pin Header
CN41	Key PAD Connector
CN43	Digital I/O
DIMM1	Channel A DDR4 U-DIMM

DIMM2	Channel A DDR4 U-DIMM
DIMM3	Channel B DDR4 U-DIMM
DIMM4	Channel B DDR4 U-DIMM
FP1	Front Panel Pin Header
FP2	Front Panel Pin Header
PCIE1	NIM Card Connector
PCIE2	NIM Card Connector
PCIE4	NIM Card Connector
USB1& USB2	USB3.0 Port
VGA1	VGA Port

#### 2.4.1 Digital I/O: 2.0mm Pin Header 2 x 5P (CN43)

Pin	Signal	Signal Type
1	DIOO	Input / Output
2	DIO1	Input / Output
3	DIO2	Input / Output
4	DIO3	Input / Output
5	DIO4	Input / Output
6	DIO5	Input / Output
7	DIO6	Input / Output
8	DIO7	Input / Output
9	+3.3V	PWR
10	GND	GND

#### 2.4.2 LCM Connector: 1.0mm FPC 1 x 16P (CN17)

Pin	Signal	Signal Type
1	LCMGND	GND
2	LCMVCC	PWR
3	VEE	PWR
4	SLIN#	Output
5	INIT#	Output
6	AFD#	Output
7	DATAO	Input / Output
8	DATA1	Input / Output
9	DATA2	Input / Output
10	DATA3	Input / Output

-

11	DATA4	Input / Output
12	DATA5	Input / Output
13	DATA6	Input / Output
14	DATA7	Input / Output
15	+5V	PWR
16	LCD#	Output

#### 2.4.3 Key PAD Connector: 2.54mm Pin Header 1 x 4P (CN41)

Pin	Signal	Signal Type
1	KEY PAD Down	Input
2	KEY PAD Up	Input
3	KEY PAD Right	Input
4	KEY PAD Left	Input

#### 2.4.4 COM Port: 2.0mm BOX Header 2 x 5P (CN14)

RS232		
Pin	Signal	Signal Type
1	DCD	Input
2	RXD	Input
3	TXD	Output
4	DTR	Output
5	GND	GND
6	DSR	Input
7	RTS	Output
8	CTS	Input

9	RI / +5V / +12V	Input / PWR
10	N.C.	

#### 2.4.5 VGA Port: 2.0mm Box Header (VGA1)

Pin	Signal	Signal Type
1	Red	Output
2	+5V_CRT	PWR
3	Green	Output
4	GND	GND
5	Blue	Output
6	CRT_PLUG#	Input
7	NC.	
8	DDC_DATA	Input / Output
9	GND	GND
10	CRT_OHSYNCF	Output
11	GND	GND
12	CRT_OVSYNCF	Output
13	GND	GND
14	DDC_CLK	Input / Output
15	GND	GND
16	NC	

#### 2.4.6 HDD Power Connector: 2.5mm Wafer 1 x 4P (CN19 & CN20)

Pin	Signal	Signal Type
1	+12V	PWR

2	GND	GND
3	GND	GND
4	+5V	PWR

#### 2.4.7 USB 3.0 Port: 2.0mm Box Header 2 x 10P (USB1 & USB2)

Pin	Signal	Signal Type
1	+5V_USB	PWR
2	USB3_RX1_DN	DIFF
3	USB3_RX1_DP	DIFF
4	GND	GND
5	USB3_TX1_DN	DIFF
6	USB3_TX1_DP	DIFF
7	GND	GND
8	USBP_0N	DIFF
9	USBP_0P	DIFF
10	NC	
11	USBP_1P	DIFF
12	USBP_1N	DIFF
13	GND	GND
14	USB3_TX2_DP	DIFF
15	USB3_TX2_DN	DIFF
16	GND	GND
17	USB3_RX2_DP	DIFF
18	USB3_RX2_DN	DIFF
19	+5V_USB	PWR
20	NC	

\_
# 2.4.8 PS/2 Keyboard & Mouse Connector: 2.54mm Pin Header 2 x 4P (CN1)

Pin	Signal	Signal Type
1	KB_DATA	Input / Output
2	KB_CLK	Output
3	GND	GND
4	+5V_KB	PWR
5	MS_DATA	Input / Output
6	MS_CLK	Output
7	NC	
8	Кеу	

# 2.4.9 Front Panel Pin Header (FP1)

Pin	Signal	Signal Type
1	External Speaker (+)	Output
2	Key Board Lock (+)	Output
3	NC	Floting
4	GND	POWER
5	External Speaker (-)	Output
6	I2C Bus SMB Clock	Input / Output
7	External Speaker (-)	Output
8	I2C Bus SMB Data	Input / Output

## 2.4.10Front Panel Pin Header (FP2)

Pin	Signal	Signal Type
1	Power On Button(+)	Input
2	Reset Switch (+)	Input
3	Power On Button(-)	POWER
4	Reset Switch (-)	POWER
5	HDD LED (+)	POWER
6	Power LED(+)	POWER
7	HDD LED (-)	Output
8	Power LED(-)	Output

# 2.4.11 LPC Connector: 1.0mm Box Wafer 1 x 12P (CN22)

Pin	Signal	Signal Type
1	LADO	Input / Output
2	LAD1	Input / Output
3	LAD2	Input / Output
4	LAD3	Input / Output
5	+3.3V	PWR
6	LFRAME#	Input
7	LREST##	Output
8	GND	GND
9	LCLK	Output
10	LDRQ0	Input
11	LDRQ1	Input
12	SERIRQ	Input / Output

# 2.5 PER-T393 Front Panel Jumpers and Connectors List

Label	Function
SW1	Software Reset
LED1	POWER+STATE+HDD LED Instruction
CN4	COMSOLE+ 2PORT USB3.0
CN5	2PORT RJ45 Management LAN PORT
CN6	4PORT RJ45 LAN PORT
LED2	BYPASS LED Instruction

1. Remove the highlighted screws



2. From the front of the system, slide it upwards to remove



3. Remove the four highlighted screws to remove the HDD bracket



4. Put the provided screws (not the ones from step 3) into cushions



5. Attach the assembled screws to the top and bottom of the inside of the bracket



6. Place the HDDs into the bracket, tighten the screws to secure





7. Place the assembled HDDs back into the system, secure with screws and reattach the SATA and power cables.







#### 2.7 Installing 3.5" Hard Disk

#### 1. Remove the highlighted screws



2. From the front of the system, slide it upwards to remove



3. Remove the screws to remove the bracket



4. Place the 3.5" HDD on the bracket, secure with screws on the underside



Chapter 2 – Hardware Information

5. Put the assembled HDD on the HDD bay, secure with screws and reattach the SATA and power cables



Chapter 2 – Hardware Information

#### 2.8 Installing CPU and Heat Sink

#### 1. Remove the highlighted screws to remove the fan duct





2. Lift the socket arm up to open the CPU socket



3. Remove the cover and place the CPU into the socket. Make sure the two fillisters are properly locked.



Chapter 2 – Hardware Information

4. Push the arm down to lock the CPU into place



5. Place the heat sink onto the CPU. Make sure the direction of the heat sink is not against the airflow



6. Close the air duct and secure with screws







### 2.9 Installing Expansion Card

#### 1. Remove the highlighted screws



2. From the front of the system, slide it upwards to remove



3. Remove the screw to remove the cover bracket



4. Firmly insert the expansion card into the slot and secure the screw.



# Chapter 3

AMI BIOS Setup

#### 3.1 System Test and Initialization

The system uses certain routines to perform testing and initialization. If an error, fatal or non-fatal, is encountered, a few short beeps or an error message will be outputted. The board can usually continue the boot up sequence with non-fatal errors.

The system configuration verification routines check the current system configuration against the values stored in the CMOS memory. If they do not match, an error message will be outputted, in which case you will need to run the BIOS setup program to set the configuration information in memory.

There are three situations in which you will need to change the CMOS settings:

- You are starting your system for the first time
- You have changed your system's hardware
- The CMOS memory has lost power and the configuration information is erased

The system's CMOS memory uses a backup battery for data retention, which is to be replaced once emptied.

#### 3.2 AMI BIOS Setup

The AMI BIOS ROM has a pre-installed Setup program that allows users to modify basic system configurations, which is stored in the battery-backed CMOS RAM and BIOS NVRAM so that the information is retained when the power is turned off.

To enter BIOS Setup, press <Del> or <F2> immediately while your computer is powering up.

The function for each interface can be found below.

Main – Date and time can be set here. Press <Tab> to switch between date elements

Advanced – Advanced setup parameters

Chipset - For hosting bridge parameters

Security - The setup administrator password can be set here

Boot - Enable/ Disable quiet Boot Option

Save & Exit – Save your changes and exit the program

Event Logs - Smbios Event Log configuration

#### 3.3 Setup Submenu: Main



# 3.4 Setup Submenu: Advanced

Aptio Setup Utility Main Advanced Chipset Security	Copyright (C) 2016 American Megatrends, Inc. Boot Save & Exit Event Logs
<ul> <li>CPU Configuration</li> <li>Trusted Computing</li> <li>SATA Configuration</li> <li>PCH-FW Configuration</li> <li>SIO Configuration</li> <li>Hardware Monitor</li> <li>USB Configuration</li> <li>Digital IO Port Configuration</li> <li>Power Management</li> <li>LAN Bypass Configuration</li> <li>Serial Port Console Redirection</li> </ul>	CPU Configuration Parameters ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2 17 1255	onuright (C) 2016 American Megatrends Inc

# 3.4.1 Advanced: CPU Configuration

Aptio Setup Utility	y – Copyright (C) 2016 Am	erican Megatrends, Inc.
Advanced		
Intel(R) Xeon(R) CPU E3-1225 v5 v CPU Signature Microcode Patch Max CPU Speed Min CPU Speed CPU Speed Processor Cores Hyper Threading Technology Intel VT-x Technology	8 3.30GHz 506E3 82 3300 MHz 800 MHz 3200 MHz 4 Not Supported Supported	Allows more than two frequency ranges to be supported.
Intel VIX Technology 64-bit EIST Technology CPU C3 state CPU C6 state CPU C7 state	Supported Supported Supported Supported Supported Supported	++: Select Screen 14: Select Item Enter: Select +<-: Change Ont
L1 Data Cache L1 Code Cache L2 Cache L3 Cache L4 Cache L4 Cache	32 kB x 4 32 kB x 4 256 kB x 4 8 MB Not Present	F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Intel Virtualization Technology Intel(R) SpeedStep(tm)	[Enabled] [Disabled]	▼

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Intel Virtualization	Disabled	
Technology	Enabled	Default
En/Disable CPU Virtualization Technology function		
Intel(R)	Disabled	Default
SpeedStep(tm)	Enabled	
When enabled, OS sets CPU frequency according load. When disabled, CPU frequency		
is set at max non-turbo.		

# 3.4.2 Advanced: Trusted Computing

Aptio Setup Util: Advanced	ity – Copyright (C) 2016 A	American Megatrends, Inc.
TPM20 Device Found Security Device Support TPM State Pending operation Platform Hierarchy Storage Hierarchy Endorsement Hierarchy HashPolicy TPM 20 InterfaceType	[Enable] [Enabled] [None] [Enabled] [Enabled] [Sha-1] [TIS] [Enabled]	Enables or Disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INTIA interface will not be available.
Device Pelect	(HUTO)	<pre>+: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>

Security Device Support	Disable		
	Enable	Default	
Enable or Disables BIOS suppo	rt for security device.	O.S. will not show Security Device.	
TCG EFI protocol and INT1A int	erface will not be ava	ilable.	
TPM State	Disable		
	Enable	Default	
Enable or Disables security device.			
Pending operation	None	Default	
	TPM clear		
Schedule an Operation for the Security Device.			
Platform Hierarchy	Disable		

	Enable	Default
Enable or Disables Platform Hierarchy.		
Storage Hierarchy	Disable	
	Enable	Default
Enable or Disables Storage Hierarchy.		

# 3.4.3 Advanced: SATA Configuration

Aptio S Advanced	etup Utility – Copyright (C) 201	.6 American Megatrends, Inc.
SATA Controller(s) SATA Mode Selection	[Enabled] [AHCI]	Enable or disable SATA Device.
Serial ATA Port 1 Port 1 Hot Plug Serial ATA Port 2 Port 2 Hot Plug	Empty [Enabled] [Disabled] Empty [Enabled] [Disabled]	++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Vancia	n 9 17 1955 Convidet (C) 2016	
Versio	n 2.17.1255. Copyright (C) 2016	American Megatrenos, inc.

SATA Controllers	Disabled	
	Enabled	Default
En/Disable SATA Controller.		
SATA Mode Selection	АНСІ	Default
	RAID	

AHCI: Configure SATA controllers to operate in AHCI mode		
Port	Disabled	
	Enabled	Default
En/Disable Port.		
Hot Plug	Disabled	Default
	Enabled	
En/Disable Hot Plug function		

# 3.4.4 Advanced: PCH-FW Configuration

Aptio Setup Utility – Advanced	Copyright (C) 2016 American	Megatrends, Inc.
WE FW Version ME Firmware Mode ME Firmware Type WE Firmware SKU ▶ Firmware Update Configuration	11.0.0.1202 Normal Mode Full Sku Firmware Corporate SKU	Configure Management Engine Technology Parameters
		<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
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Firmware Update Configuration	Disabled	Default
	Enabled	
Enable/Disable Me FW image Re-Flash function.		

# 3.4.5 Advanced: SIO Configuration

Aptio Setup Utility – Copyright (C) 2016 American Advanced	Megatrends, Inc.
AMI SID Driver Version : A5.05.03 Super ID Chip Logical Device(s) Configuration > [*Active*] Serial Port 1 [*Active*] Serial Port 2 [*Active*] Parallel Port WARNING: Logical Devices state on the left side of the	View and Set Basic properties of the SIO Logical device. Like IO Base, IRQ Range, DMA Channel and Device Mode.
	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
Version 2.17.1255. Copyright (C) 2016 American M	egatrends, Inc.

# 3.4.5.1 SIO Configuration: Serial Port 1 Configuration

Aptio Setup Utility – ( Advanced	Copyright (C) 2016 American	Megatrends, Inc.
Serial Port 1 Configuration		Enable or Disable this Logical
		bevice.
Logical Device Settings: Current : IO=3F8h; IRQ=4;		
Possible:	[Use Automatic Settings]	
WARNING: Disabling SIO Logical Device side effects. PROCEED WITH CAUTION.	es may have unwanted	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt, F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
	pyright (C) 2016 American M	egatrends, Inc.

Use This Device	Disabled	
	Enabled	Default
Enable or Disable this Log	jical Device.	
Possible:		
Change Settings	Auto	Default
	IO=3F8h; IRQ=4;	
	10=2F8h; 1RQ=3;	
Allows user to change Device's Resource settings. New settings will be reflected on This		
Setup Page after System restarts.		

# 3.4.5.2 SIO Configuration: Serial Port 2 Configuration

Serial Port 2 Configuration       Enable or Disable this Logical Device.         Use This Device       [Enabled]         Logical Device Settings:       Current : IO=2F8h; IRQ=3;         Possible:       [Use Automatic Settings]         WARNING: Disabling SIO Logical Devices may have unwanted       +*: Select Screen         11: Select Item         Enter: Select Item         Free:	Aptio Setup Utility - Advanced	Copyright (C) 2016 American	Megatrends, Inc.
Use This Device [Enabled] Logical Device Settings: Current : IO=2F9h; IRQ=3; Possible: [Use Automatic Settings] MARNING: Disabling SIO Logical Devices may have unwanted #*: Select Screen 14: Select Item Enter: Select Item Enter: Select Item Enter: Select Help F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	Serial Port 2 Configuration		Enable or Disable this Logical
Logical Device Settings: Current : ID=2F8h; IRQ=3; Possible: [Use Automatic Settings] WARNING: Disabling SID Logical Devices may have unwanted #*: Select Screen 14: Select Item Enter: Select Item Enter: Select Item Enter: Select Item Enter: Select Item Enter: Select Screen 14: Select Item Enter: Select Item Enter: Select Screen 14: Select Item Enter: Select Screen 14: Select Item Enter: Select Item En			Device.
Possible: [Use Automatic Settings] WARNING: Disabling SIO Logical Devices may have unwanted **: Select Screen 14: Select Item Enter: Select */~: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	Logical Device Settings: Current : IO=2F8h; IRQ=3;		
WARNING: Disabling SIO Logical Devices may have unwanted ++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	Possible:	[Use Automatic Settings]	
++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	WARNING: Disabling SIO Logical Devic	es may have unwanted	
++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit			
			++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

Use This Device	Disabled	
	Enabled	Default
Enable or Disable this Log	jical Device.	
Possible:		
Change Settings	Auto	Default
	IO=2F8h; IRQ=3;	
	IO=3F8h; IRQ=4;	
Allows user to change Device's Resource settings. New settings will be reflected on This		
Setup Page after System restarts.		

#### 3.4.5.3 SIO Configuration: Parallel Port Configuration



Use This Device	Disabled		
	Enabled	Default	
Enable or Disable this Log	jical Device.		
Possible: (Parallel Port)	Auto	Default	
	IO=378h; IRQ=5;		
Allows user to change Device's Resource settings. New settings will be reflected on This			
Setup Page after System restarts.			
Mode:	SPP Mode	Default	
	EPP Mode		
	ECP Mode		
	ECP mode & ECP mode		
Change the Printer Port mode.			

## 3.4.6 Advanced: Hardware Monitor

Aptio Setup Utility – Advanced	Copyright (C) 2016 American	Megatrends, Inc.
Aptio Setup Utility - Advanced Pc Health Status > Smart Fan Function CPU temperature(OTS) System temperature Fan1 Speed Fan2 Speed Fan3 Speed VCORE VMEM +12V +5V SVDUAL VBAT	Copyright (C) 2016 American : +32 % : +38 % : N/A : N/A : N/A : +1.140 V : +1.212 V : +1.212 V : +1.2192 V : +4.809 V : +4.848 V : +2.736 V	Megatrends, Inc. Smart Fan function setting ++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values
		F3: Optimized Defaults F4: Save & Exit ESC: Exit

CPU Fan 1 Smart Control	Disabled	
	Enabled	Default
Allows BIOS to En/Disable	e CPU Fan 1 Smart Control	
CPU Fan 2 Smart Control	Disabled	
	Enabled	Default
Allows BIOS to En/Disable CPU Fan 2 Smart Control		
SYS Fan 1 Smart Control	Disabled	
	Enabled	Default
Allows BIOS to En/Disable System Fan 1 Smart Control		

# 3.4.6.1 Hardware Monitor: Smart Fan Function (Full on Mode)

	Aptio Advanced	Setup Utility – Copyright	(C) 2016 American	Megatrends, Inc.
Smart	Fan 1 Mode	[Full on	Mode]	Smart Fan 3 Mode Select
Smart	Fan 2 Mode	[Full on	Mode]	
Smart				
				++: Select Screen 14: Select Item
				+/-: Change Opt. E1: General Heln
				F2: Previous Values F3: Optimized Defaults
				F4: Save & Exit ESC: Exit
	Versi	on 2.17.1255. Conuright ()	C) 2016 American Mu	evatrends Inc

Smart Fan Mode	Full on Mode		
	Automatic Mode	Default	
	Manual Mode		
Full on Mode: Always on. Manual Mode: Depends on PWM Duty. Automatic Mode:			
FAN Speed is depends on CPU Temperature.			

# 3.4.6.2 Hardware Monitor: Smart Fan Function (Manual Mode)

Aptio Setu; Advanced	p Utility – Copyright (C) 2016 Ameri	ican Megatrends, Inc.
Smart Fan 1 Mode Manual PWM Setting Smart Fan 2 Mode Manual PWM Setting Smart Fan 3 Mode Manual PWM Setting	[Manual Mode] 35 [Manual Mode] 35 [Manual Mode] 100	Smart Fan 3 Mode Select
		+: Select Screen 1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

Options summary:

Smart Fan Mode	Full on Mode			
	Automatic Mode	Default		
	Manual Mode			
Full on Mode: Always on. Manual Mode: Depends on PWM Duty. Automatic Mode:				
FAN Speed is depends on CPU Temperature.				
Manual PWM Setting	0 – 255			
		Default (35)		
Manual Mode PWM Duty value Range:[0 - 255]				

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#### 3.4.6.3 Hardware Monitor: Smart Fan Function (Automatic Mode)

Aptio Setup Utility Advanced	y – Copyright (C) 2016 America	an Megatrends, Inc.
Aptio Setup Utilit Advanced Smart Fan 1 Mode Temperature Source Fan off temperature limit Fan start temperature limit Fan start PWM PWM SLOPE SETTING Full Speed Temperature Smart Fan 2 Mode Temperature Source Fan off temperature limit Fan start temperature limit Fan start temperature Smart Fan 3 Mode Temperature Source Fan off temperature limit Fan start temperature limit	<pre>J - Copyright (C) 2016 America [Automatic Mode] [CPU temperature(DTS)] 15 45 35 [0 PHM] 72 [Automatic Mode] [CPU temperature(DTS)] 15 45 35 [0 PHM] 72 [Automatic Mode] [System temperature] 15 45 35</pre>	an Megatrends, Inc. Smart Fan 1 Mode Select ++: Select Screen 1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Fvit
Fan start PMM PWM SLOPE SETTING Full Speed Temperature	35 [8 РИМ] 72	ESC: Exit

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FAN Control Mode	Full on Mode	Default		
	Automatic Mode			
	Manual Mode			
Smart Fan Mode Select.				
Tamparatura Courca	CPU temperature	Default		
lemperature source	System temperature			
Select temperature Source.				
Fan off temperature limit	0 ~ 127	Default (15)		
Temperature Limit Value of Fan Off. Note: Some fans have the minimum speed even if				
the PWM value is 0				
Fan start temperature limit	0 ~ 127	Default (45)		
Temperature Limit Value of FAN Start Control				
Fan start PWM	0 ~ 255	Default (35)		
---	---------	--------------		
Fan will start with this PWM value.				
PWM SLOPE SETTING	0 ~ 15	Default (8)		
PWM SLOPE Selection				
Full Speed Temperature	0 ~ 127	Default (72)		
Temperature Limit Value of FAN Full Speed				

## 3.4.7 Advanced: USB Configuration

Aptio Setup Utility - Advanced	Copyright (C) 2016 American	Megatrends, Inc.
USB Configuration		Enables Legacy USB support.
USB Devices: 1 Keyboard, 1 Mouse, 1 Hub		support if no USB devices are connected. DISABLE option will keep USB devices available
Legacy USB Support		only for EFI applications.
		++: Select Screen
		Enter: Select +/-: Change Opt.
		F1: General Help F2: Previous Values
		F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2 17 1255 Co	nuright (C) 2016 American M	egatrends Inc

Options summary:

Legacy USB Support	Enabled	Default
	Disabled	
	Auto	
Enables BIOS Support for Lagosy LISP Support When enabled LISP can be functional		

Enables BIOS Support for Legacy USB Support. When enabled, USB can be functional

in legacy environment like DOS.

AUTO option disables legacy support if no USB devices are connected

# 3.4.8 Advanced: Digital IO Port Configuration

Ap Advanced	tio Setup Utility – Copyright	(C) 2016 American Megatrends, Inc.
Advanced Digital IO Port Output Level DIO Port2 Output Level DIO Port3 Output Level DIO Port4 Output Level DIO Port5 DIO Port5 DIO Port5 DIO Port7 DIO Port8	Configuration [Output] [High ] [Output] [High ] [Output] [High ] [Output] [High ] [Input ] [Input ] [Input ]	Set DIO as Input or Output ++: Select Screen 1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

DIO_P#1~4	Input		
	Output	Default	
Allows BIOS to select input/ou	Allows BIOS to select input/output function to corresponding DIO ping.		
DIO_P#5~8	Input	Default	
	Output		
Allows BIOS to select input/output function to corresponding DIO ping.			
DIO_P#1~4 Direction	Low		
	Hi	Default	
Allows BIOS to select high/low voltage level to output to corresponding DIO ping.			

# 3.4.9 Advanced: Power Management

Aptio Setup Advanced	Utility – Copyright (C) 2016 Amer	rican Megatrends, Inc.
Power Management		Select system power mode.
Power Mode Restore AC Power Loss	(ATX Type) [Last State]	
Wake Events RTC wake system from S5	[Disabled]	
		↔: Select Screen 1∔: Select Item Enter: Select
		+/-: Change Opt. F1: General Help
		F3: Optimized Defaults F4: Save & Exit
		ESC: Exit
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Power Mode	АТХ Туре	Default
	АТ Туре	
Select system power mode.		
Restore AC Power Loss	Last State	Default
	Always on	
	Always off	
RTC wake system from S5	Disabled	Default
	Fixed Time	
	Dynamic Time	

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Fixed Time: System will wake on the hr::min::sec specified./n Dynamic Time: System will wake on the current time + Increase minute(s)

# 3.4.10 Advanced: LAN Bypass Configuration

Aptio Setup Utility - Advanced	- Copyright (C) 20	016 American Megatrends, Inc.
LAN Bypass Configuration		▲ Configure LAN Bypass Status
LAN Bypass Kit 1 Configuration Mode for Power-on Mode for Power-off LAN Bypass Kit 2 Configuration Mode for Power-on Mode for Power-off LAN Bypass Kit 3 Configuration Mode for Power-off	(PassTru) (PassTru) (PassTru) (PassTru) (PassTru)	
LAN Bypass Kit 4 Configuration Mode for Power-on Mode for Power-off LAN Bypass Kit 5 Configuration Mode for Power-on Mode for Power-off	(PassTru) (PassTru) (PassTru) (PassTru)	++: Select Screen 1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values
LAN Bypass Kit 6 Configuration Mode for Power-on Mode for Power-off LAN Bypass Kit 7 Configuration Mode for Power-off Mode for Power-off	(PassTru) (PassTru) (PassTru) (PassTru)	F3: Optimized Defaults F4: Save & Exit ESC: Exit
LAN Bypass Kit 8 Configuration Mode for Power-on Mode for Power-off LAN Bypass Kit 9 Configuration Mode for Power-on Mode for Power-off LAN Bypass Kit 10 Configuration Mode for Power-on Mode for Power-off	(PassTru) (PassTru) (PassTru) (PassTru) (PassTru) (PassTru)	<pre>f4: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
WDT Configuration	[System Reset]	Ţ

LAN Bypass Status LED	LED OFF	Default
Configuration	red led on	
	RED LED BLINK	
	RED LED FAST BLINK	

	green led on	
	green led blink	
	green led fast	
	BLINK	
Select LAN Bypass Status LED	Configuration.	

LAN Bypass Kit Configuration			
Mode for power-on	PassTru	Default	
	Bypass		
Mode for power-off	PassTru	Default	
	Bypass		
Select LAN Bypass Kit Configuration.			
WDT Configuration	Force Bypass		
	System Reset	Default	
Select WDT Configuration.			

# 3.4.11 Advanced: Serial Port Console Redirection

Aptio Setup Utility – ( Advanced	Copyright (C) 2016 American	Megatrends, Inc.
COMO Console Redirection Console Redirection Settings Legacy Console Redirection Legacy Console Redirection Settings Serial Port for Out-of-Band Management Windows Emergency Management Services Console Redirection Console Redirection Settings	[Enabled] ht∕ s (EMS) [Disabled]	Console Redirection Enable or Disable.
		++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
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Console Redirection	Enabled	Default	
	Disabled		
Console Redirection Enable or Disable.			
Legacy Console Redirection	Com0	Default	
Select Legacy Console Redirection port			
Consola Declination (EVAC)	Enabled		
Console Realrection(EMS)	Disabled	Default	
Microsoft Windows Emergency Management Services (EMS) allows for remote			
management of a Windows Server OS through a serial port.			

# 3.4.11.1 Serial Port Console Redirection: COM0 Console Redirection

#### Aptio Setup Utility – Copyright (C) 2016 American Megatrends, Inc. Advanced СОМО Emulation: ANSI: Extended Console Redirection Settings ASCII char set. VT100: ASCII char set. VT100+: Extends Terminal Type Bits per second VT100 to support color, function keys, etc. VT-UTF8: Data Bits [8] Uses UTF8 encoding to map Parity [None] Unicode chars onto 1 or more Stop Bits bytes. Flow Control [None] VT-UTF8 Combo Key Support [Enabled] Recorder Mode [Disabled] Resolution 100x31 [Disabled] Legacy OS Redirection Resolution [80x24] Putty KeyPad ++: Select Screen Redirection After BIOS POST [Always Enable] ↑↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

## Settings

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Terminal Type	VT100	
	VT100+	
	VT-UTF8	
	ANSI	Default
Bits per second	9600	
	19200	
	38400	
	57600	
	115200	Default

Data Bits	7	
	8	Default

Parity	None	Default
	Even	
	Odd	
	Mark	
	Space	
	·	
Stop Bits	1	Default
	2	
		<b>I</b>
Flow Control	None	Default
	Hardware RTS/CTS	
		<b>I</b>
VT-UTF8 Combo Key	Enabled	Default
Support	Disabled	
Recorder Mode	Enabled	
	Disabled	Default
Resolution 100x31	Enabled	
	Disabled	Default
Legacy OS Redirection	80x24	Default
Resolution	80x25	

Putty Keypad	VT100	Default	
	LINUX		
	XTERMR6		
	SCO		
	escn		
	VT400		
Redirection After BIOS	Always Enabe	Default	
POST	BootLoader		

# 3.4.11.2 Serial Port Console Redirection: Console Redirection Settings

Aptio Setup Advanced	Utility – Copyright (C)	2016 American	Megatrends, Inc.
Out-of-Band Mgmt Port Terminal Type Bits per second Flow Control Data Bits Parity Stop Bits	[COMO] [VT-UTF8] [115200] [None] 8 None 1		Hicrosoft Windows Emergency Management Services (EMS) allows for remote management of a Windows Server OS through a serial port. ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.	17.1255. Copyright (C) 2	016 American M	egatrends, Inc.

# Options Summary:

Out of Donal Marrat Dont	CON 40	Defeuilt
Out-of-Band Might Port	COIVIO	
	COM1	
Terminal Type	VT100	
	VT100+	
	VT-UTF8	Default
	ANSI	
Bits per second	9600	
	19200	
	57600	
	115200	Default
Flow Control	None	Default
	Hardware RTS/CTS	
	Software Xon/Xoff	
	Sottware Xon/Xoff	

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# 3.5 Setup submenu: Chipset

Aptio Setup Utility – Copyright (C) 2016 American Main Advanced <mark>Chipset</mark> Security Boot Save & Exit Event Log	Megatrends, Inc. (S
<ul> <li>≻ System Agent (SA) Configuration</li> <li>▶ PCH-IO Configuration</li> </ul>	System Agent (SA) Parameters
	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
Version 2.17.1255. Copyright (C) 2016 American Me	

# 3.5.1 Chipset: System Agent (SA) Configuration

Aptio Setup Chipset	Utility – Copyright (C) 2016 Amer:	ican Megatrends, Inc.
System Agent Bridge Name	Skylake	Configure PEG 0:1:0 Max Speed
Memory Configuration Memory Frequency Total Memory DIMM#0 DIMM#1 DIMM#2 DIMM#2	2133 MHz 8192 MB Not Present 8192 MB Not Present Not Present	
<ul> <li>Graphics Configuration</li> </ul>	(HULO)	<pre>##: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
Version 2.	17.1255. Copyright (C) 2016 America	an Megatrends, Inc.

PEG Port Gen Speed	Auto	Default
	Gen1	
	Gen2	
	Gen3	
Configure PEG Port Gen Speed.		

# 3.5.1.1 System Agent (SA) Configuration: Graphics Configuration

Aptio Setup Utilit Chipset	y – Copyright (C) 2016 Ame	rican Megatrends, Inc.
Graphics Configuration		Select which of IGFX/PEG/PCI
Primary Display Primary IGFX Boot Display	[Auto] [VBIOS Default]	Primary Display Or select SG for Switchable Gfx.
		++: Select Screen T4: Select Item Enter: Select +/-: Change Ont
		F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Vacion 2, 47, 425	Conumitant (C) 2016-Arrow	can Marateands Toe

Primary Display	Auto	Default		
	IGFX			
	PEG			
	PCIE			
Select which of IGFX/PEG/PCI G	Select which of IGFX/PEG/PCI Graphics device should be Primary Display Or select SG			
for Switchable Gfx.	for Switchable Gfx.			
Primary IGFX Boot Display	VBIOS Default	Default		
	CRT			
Select the Video Device which will be activated during POST. This has no effect if				
external graphics present. Secondary boot display selection will appear based on your				
selection. VGA modes will be supported only on primary display.				

# 3.5.2 Chipset: PCH-IO Configuration

Aptio Setup Utili Chipset	ity – Copyright (C) 2016 f	American Megatrends, Inc.
PCH-IO Configuration		Select PCI Express port speed.
PCIEX4_1 Gen Speed PCIEX4_2 Gen Speed PCIEX4_3 Gen Speed PCIEX4_4 Gen Speed	[Auto] [Auto] [Auto] [Auto]	++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F2: Previous Values
		F3: Uptimized Defaults F4: Save & Exit ESC: Exit

PCIEX4_1 Gen Speed	Auto	Default
	Gen1	
	Gen2	
	Gen3	
Select PCI Express port sp	eed.	

### 3.6 Setup submenu: Security

Aptio Setup ( Main Advanced IntelRCSet	H <mark>ility – Copyright (C) 201</mark> ∷up Server Mgmt Security	6 American Megatrends, Inc. Boot Save & Exit
Password Description		Set Administrator Password
If ONLY the Administrator's then this only limits access only asked for when enterin If ONLY the User's password is a power on password and boot or enter Setup. In Set have Administrator rights. The password length must be in the following range: Minimum length	s password is set, ss to Setup and is ng Setup. d is set, then this must be entered to sup the User will e	
Administrator Password User Password	20	++: Select Screen f1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

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#### Change User/Administrator Password

You can set a User Password once an Administrator Password is set. The password will be required during boot up, or when the user enters the Setup utility. Please Note that a User Password does not provide access to many of the features in the Setup utility.

Select the password you wish to set, press Enter to open a dialog box to enter your password (you can enter no more than six letters or numbers). Press Enter to confirm your entry, after which you will be prompted to retype your password for a final confirmation. Press Enter again after you have retyped it correctly.

#### Removing the Password

Highlight this item and type in the current password. At the next dialog box press Enter to disable password protection.

# 3.7 Setup submenu: Boot

Aptio Setup U Main Advanced IntelRCSet	H <mark>tility – Copyright (C) 2016 Am</mark> up Server Mgmt Security <mark>Boo</mark>	erican Megatrends, Inc. tSave & Exit
Boot Configuration Quiet Boot Launch PXE ROM Boot Option Priorities	[Disabled] [Disabled]	Enables or disables Quiet Boot option
		++: Select Screen 1↓: Select Item Enter: Select +/-: Change Opt.
		F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.17	.1255. Copyright (C) 2016 Amer	ican Megatrends, Inc.

Quiet Boot	Disabled	Default
	Enabled	
En/Disable showing boot lo	go.	
Launch PXE OpROM	Disabled	Default
	Enabled	
En/Disable Legacy Boot Op	tion.	

# 3.8 Setup submenu: Save & Exit

Aptio Setup Utility – Copyright (C) 2016 Am Main Advanced IntelRCSetup Server Mgmt Security Boc	merican Megatrends, Inc. )t_Save & Exit
Save Changes and Reset Discard Changes and Reset Restore Defaults	Reset the system after saving the changes.
	<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
Version 2.17.1255. Copyright (C) 2016 Amer	rican Megatrends, Inc.

# 3.9 Setup submenu: Event Logs

Aptio Setup Utility – Copyright (C) 2016 America Main Advanced Chipset Security Boot Save & Exit <mark>Event L</mark>	an Megatrends, Inc. .ogs
<ul> <li>Change Smbios Event Log Settings</li> <li>View Smbios Event Log</li> </ul>	Press ‹Enter> to change the Smbios Event Log configuration.
	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save &amp; Exit ESC: Exit</pre>
Version 2.17.1255. Copyright (C) 2016 American	Megatrends, Inc.

# 3.9.1 Event Logs: Change Smbios Event Log Settings

Aptio Setup Utility - )	Copyright (C) 2016 American Event Lo	Megatrends, Inc. <mark>gs</mark>
Enabling/Disabling Options Smbios Event Log	[Enabled]	Change this to enable or disable all features of Smbios Event Logging during boot.
Erasing Settings Erase Event Log When Log is Full	[No] [Do Nothing]	
Smbios Event Log Standard Settings Log System Boot Event MECI METW	[Enabled] 1 60	
Custom Options Log OEM Codes Convert OEM Codes	[Enabled] [Disabled]	++: Select Screen 14: Select Item Enter: Select
NOTE: All values changed here do not until computer is restarted.	take effect	+/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

Smbios Event Log	Disabled	
	Enabled	Default
Change this to enable or di	sable all features of S	mbios Event Logging during boot.
Erase Event Log	No	Default
	Yes, Next reset	
	Yes, Every reset	
Choose options for erasing Smbios Event Log.		Erasing is done prior to any logging
activation during reset.		
When Log is Full	Do Nothing	Default
	Erase Immediately	
Choose options for reaction	ns to a full Smbios Ev	ent Log.

Log System Boot Event	Disabled	
	Enabled	Default
Choose option to enable/	disable logging of Sys	stem boot event.
MECI	0-255	Default (1)
Mutiple Event Count Incre	ement: The number	of occurrences of a duplicate event that
must pass before the mul	tiple-event counter of	log entry is updated. The value ranges
from 1 to 255.		
METW	0-99	Default (60)
Mutiple Event Time Windo	ow: The number of r	ninutes which must pass between
duplicate log entries whic	h utilize a multiple-ev	ent counter. The value ranges from 0 to
99 minutes.		
Log OEM Codes	Disabled	
	Enabled	Default
Enable or disable the logg	ging of EFI Status Cod	es as OEM Codes (if not already
converted to legacy).		
Log System Boot Event	Disabled	Default
	Enabled	
Enable or disable the con	verting of EFI Status C	odes to Standard Smbios Types (Not al
may be translated).		

	Aptio	Setup Utility -	- Copyright (C) 2	016 American Event Lo:	Megatrends, Inc. gs
DATE 01/01/09 01/01/09 01/01/09	TIME 16:29:37 16:29:37 16:29:53	ERROR CODE Smbios 0x16 Smbios 0x17 Smbios 0x17	SEVERITY N/A N/A N/A		DESCRIPTION Log Area Reset
					++: Select Screen f1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
	Vers:	ion 2.17.1255. (	Copyright (C) 201	.6 American M	egatrends, Inc.

# Chapter 4

Drivers Installation

#### 4.1 Drivers Installation

The drivers can be found in the product page for FWS-7820 at aaeon.com. Please follow the sequence below to install the drivers.

#### Step 1 - Install Chipset Driver

- 1. Open the Step 1 Chipset folder followed by the SetupChipset.exe file
- 2. Follow the instructions
- 3. Drivers will be installed automatically

#### Step 2 - Install Graphic Driver

- 1. Open the Step 2 Graphic folder and select your OS
- 2. Open the Setup.exe file in the folder
- 3. Follow the instructions
- 4. Drivers will be installed automatically

#### Step 3 – Install LAN Driver

- 1. Open the Step 3 LAN folder and select your OS
- 2. Open the.exe file in the folder
- 3. Follow the instructions
- 4. Drivers will be installed automatically

#### Step 4 - Install USB3.0 Driver

- 1. Open the Step 4 USB3.0 folder followed by the Setup.exe file
- 2. Follow the instructions
- 3. Drivers will be installed automatically

#### Step 5 – Install ME Driver

- 1. Open the Step 5 ME folder followed by the SetupME.exe file
- 2. Follow the instructions
- 3. Drivers will be installed automatically

#### Step 6 – Install Intel RST Driver

- 1. Open the Step 6 Intel RST folder followed by the SetupRST.exe file
- 2. Follow the instructions
- 3. Drivers will be installed automatically

#### Step 7 – Install Serial Port Driver (Optional)

Note: Patch file for Serial port when encountering [time out error] during Burning test procedure

#### For Windows XP 32-bit

- Open the Step 7 –Serial Port Driver (Optional) folder followed by the patch.bat file
- 2. Follow the instructions
- 3. Drivers will be installed automatically

#### For Windows 7 32/64-bit

1. To run [Change User Account Control Settings] in Control panel\User

Accounts and Family Safety



2. Change User Account Control Settings to [Never notify]



#### 3. Reboot



4. To run patch.bat with [Run as administrator].



Computer Management (Loca System Tools Computer Management (Loca System) Computer Management Computer Management Computer Management Computer Management Cost Anagement Services and Applications	General Port Settings Driver Details of Communications Port (COM4) Driver Powider: Microsoft Driver Powider: 6/21/2006 Driver Venion: 6.1.7600.16 Digital Signer: Microsoft W Driver Details To view details Update Driver	Driver File Details

### For Windows 8 32/64-bit

1. Right click [Command Prompt] and [run as administrator]

Engl	Rhader		Sticky Notes	Control Fland
Calendar	StyDnier	Control Fund	Windows Fax and Scan	Default Programs
Carriera	Sports	Maragement and	Windows Journal	The Explorer
Desktop	a Store	theil® Rapid Storage	Windows Media Player	Help and Support
feator	Tavel		WordFlad	E has
Games	Viceo	Carculator	XPS Vewer	Talk Manager
internet Diplorer	Weather	Character Map		Westows Defender
🖂 Mai		Math Hout Parel	Nagater	Windows Cety Transfer
Mips		Motopad	Narator	S Windows Laup Transfer Reports
Messaging		are faire	On Screen Keyboard	Windowi Fourcheil
C Mak		Remote Desktop Convection	Windows Speech Recognition	
E News		Snggang Roal		
People		Sound Recorder	Command Promps	
Photos		Steps Recorder	Company	

2. Run Command Prompt by administrator



3. To run patch.bat in UART driver folder path

A	dministrator: Command Prompt	<del>X</del>
ICeleron 1220E performancel IAMD Windows Driverl 3d2011 x3289.jpg 3d2066 GTK680.jpg IIMBA-Q87A 1.01 performancel 9 File(s) 30 Dir(s)	[gu-r5670c] 3dmark vantage.jpg 3d2011 P8773.jpg [[HBA-Q874] 32,832,081 bytes 180,239,616 bytes free	^
G:∖>cd imba-q87a		
G:\IMBA-Q87A>dir/w Volume in drive G is KINGST Volume Serial Number is 54F Directory of G:\IMBA-Q87A	0N FE9C	
[.] [Step8 - TPM] [Step1 - IN] [Step3 - USB3.0] [Step4 - AU 0 File(s) 11 Dir(s)	[Step5 - LAN] [Step2 F] [Step9 - RST] [Step7 D10] [Step6 - ME] Ø bytes 180.239,616 bytes free	– UGA] – UART]
G:∖IMBA-Q87A>cd step7 - UART		
G:\IMBA-Q87A\Step7 - UART>pat	tch	v

#### 4. Update successful

```
      Administrator: Command Prompt
      -
      ×

      G:\IMBA-Q87A>dir/w
      Volume in drive G is KINGSTON
      *

      Volume in drive G is KINGSTON
      Volume Serial Number is 54F5-FE9C
      *

      Directory of G:\IMBA-Q87A
      [.]
      [.]
      [Step5 - LAN]
      [Step2 - UGA]

      [Step8 - TPM]
      [Step1 - INF]
      [Step5 - ME]
      *
      *

      [J]
      [Step4 - AUDIO]
      [Step5 - ME]
      *
      *

      [J]
      [Step4 - AUDIO]
      [Step5 - ME]
      *
      *

      [J]
      [Step5 - ME]
      %
      %
      %

      [J]
      [Step7 - UART]
      [Step5 - ME]
      %
      %

      [G:\IMBA-Q87A>cd step7 - UART]
      %
      %
      %
      %

      SUCCESS: The file (or folder): "C:\Windows\system32\drivers\serial.sys
      %
      %
      %

      Successfully processed 1 files; Failed processing 0 files
      i file(s) copied.
      %
      %

      update successful.
      .
      .
      %
      %
      %

      G:\IMBA-Q87A\Step7 - UART>_________
      *
      *
      *
```

5. Restart

Settings	
Control Read	
Control Parks	
Personalization	
PCinfo	
Help	
Sieep	
Orses of ages, turns of the PC. a	nd then haves it on again.
Apertant Restart	Talline .
国 ()	THE CONTRACT OF THE CONTRACT.
Notifications Power	Feyboard
	anne PC settimes

6. Com port driver\serial.sys, provider will change to [Windows(R) Win7 DDK provider]



# Appendix A

Watchdog Timer Programming

FW/S-7820

#### A.1 Watchdog Timer Initial Program

Note

0x2E or 0x4E

Table 1 : SuperIO relative register table Default Value

0x2E(Note1)

Index

Data	Data 0x2F(Note2)		SIO MB PnP Mode Data Register 0x2F or 0x4F			]	
Table 2	2 : Wato	hdog rela	ative re	gister table			
LDN		LDN		Register	BitNum	Value	Note
Timer Counte	er	<b>0x07</b> (No	ote3)	<b>0x73</b> (Note4)		(Note24)	Time of watchdog timer (0~255) This register is byte access
Counting Unit		<b>0x07</b> (No	ote5)	<b>0x72</b> (Note6)	<b>7</b> (Note7)	<b>1</b> (Note8)	Select time unit. 1: second 0: minute
Watch Enable (KRST)	dog	<b>0x07</b> (No	ote9)	<b>0x72</b> (Note10)	<b>4</b> (Note11)	<b>1</b> (Note12)	0: Disable 1: Enable
Timeo Status	ut	0x07(No	ote13)	<b>0x71</b> (Note14)	<b>0</b> (Note15)	1	1: Clear timeout status

SIO MB PnP Mode Index Register

#### 

#### // SuperIO relative definition (Please reference to Table 1)

#define byte SIOIndex //This parameter is represented from Note1 SIOData //This parameter is represented from Note2 #define byte #define void IOWriteByte(byte IOPort, byte Value); #define byte IOReadByte(byte IOPort); // Watch Dog relative definition (Please reference to Table 2) #define byte TimerLDN //This parameter is represented from Note3 TimerReg //This parameter is represented from Note4 #define byte #define byte TimerVal // This parameter is represented from Note24 UnitLDN //This parameter is represented from Note5 #define byte #define byte UnitReg //This parameter is represented from **Note6** #define byte UnitBit //This parameter is represented from Note7 UnitVal //This parameter is represented from Note8 #define byte #define byte EnableLDN //This parameter is represented from Note9 #define byte EnableReg //This parameter is represented from Note10 EnableBit //This parameter is represented from Note11 #define byte #define byte EnableVal //This parameter is represented from Note12 #define byte StatusLDN // This parameter is represented from Note13 #define byte StatusReg // This parameter is represented from Note14 StatusBit // This parameter is represented from Note15 #define bvte \*\*\*\*\*\*

#### VOID Main(){

- // Procedure : AaeonWDTConfig
- // (byte)Timer : Time of WDT timer.(0x00~0xFF)
- // (boolean)Unit : Select time unit(0: second, 1: minute).

# AaeonWDTConfig();

// Procedure : AaeonWDTEnable

// This procudure will enable the WDT counting.

### AaeonWDTEnable();

}

// Procedure : AaeonWDTEnable
VOID AaeonWDTEnable (){

}

}	
// Pro VOID }	cedure : AaeonWDTConfig AaeonWDTConfig (){ // Disable WDT counting WDTEnableDisable(EnableLDN, EnableReg, EnableBit, 0); // Clear Watchdog Timeout Status WDTClearTimeoutStatus(); // WDT relative parameter setting WDTParameterSetting();
VOID }	WDTEnableDisable(byte LDN, byte Register, byte BitNum, byte Value){ SIOBitSet(LDN, Register, BitNum, Value);
VOID }	WDTParameterSetting(){ // Watchdog Timer counter setting SIOByteSet(TimerLDN, TimerReg, TimerVal); // WDT counting unit setting SIOBitSet(UnitLDN, UnitReg, UnitBit, UnitVal);

WDTEnableDisable(EnableLDN, EnableReg, EnableBit, 1);

VOID WDTClearTimeoutStatus(){ SIOBitSet(StatusLDN, StatusReg, StatusBit, 1);
FWS-7820

## VOID **SIOExitMBPnPMode()**{ IOWriteByte(SIOIndex, 0x02); IOWriteByte(SIOData, 0x02);

VOID SIOEnterMBPnPMode(){ Switch(SIOIndex){ Case 0x2E:

Case 0x4E:

}

}

## VOID SIOSelectLDN(byte LDN){

IOWriteByte(SIOIndex, 0x07); // SIO LDN Register Offset = 0x07 IOWriteByte(SIOData, LDN);

IOWriteByte(SIOIndex, 0x87); IOWriteByte(SIOIndex, 0x01); IOWriteByte(SIOIndex, 0x55); IOWriteByte(SIOIndex, 0x55);

IOWriteByte(SIOIndex, 0x87); IOWriteByte(SIOIndex, 0x01); IOWriteByte(SIOIndex, 0x55); IOWriteByte(SIOIndex, 0xAA);

Break:

Break;

}

#### 

#### VOID SIOBitSet(byte LDN, byte Register, byte BitNum, byte Value){

Byte TmpValue;

SIOEnterMBPnPMode(); SIOSelectLDN(byte LDN); IOWriteByte(SIOIndex, Register); TmpValue = IOReadByte(SIOData); TmpValue &= ~(1 << BitNum); TmpValue |= (Value << BitNum); IOWriteByte(SIOData, TmpValue); SIOExitMBPnPMode();

## }

#### VOID SIOByteSet(byte LDN, byte Register, byte Value){

SIOEnterMBPnPMode(); SIOSelectLDN(LDN); IOWriteByte(SIOIndex, Register); IOWriteByte(SIOData, Value); SIOExitMBPnPMode();

}

# Appendix B

I/O Information

FWS-7820

⊿	4	FW	S-7	820											
	⊿		Inp	ut/o	butį	put	(10)								
			j 🜉	[00	000	000	0000	0000	) -	000	0000	0000	000	CF7]	PCI Express Root Complex
			j 🜉	[00	000	000	0000	002	) -	000	0000	0000	000	021]	Programmable interrupt controller
			j,	[00	000	000	0000	0024	4 -	000	0000	0000	000	025]	Programmable interrupt controller
			j,	[00	000	000	0000	002	3 -	000	0000	0000	000	029]	Programmable interrupt controller
			j 🜉	[00	000	000	0000	002	C -	000	000	0000	0000	02D]	Programmable interrupt controller
			j,	[00	000	000	0000	002	E -	000	0000	0000	000	02F]	Motherboard resources
			j,	[00	000	000	0000	003	) -	000	0000	0000	000	031]	Programmable interrupt controller
			j,	[00	000	000	0000	0034	4 -	000	0000	0000	000	035]	Programmable interrupt controller
			j,	[00]	000	000	0000	003	3 -	000	0000	0000	000	039]	Programmable interrupt controller
			<u>به</u> ر	[00	000	000	0000	003	с-	000	000	0000	0000	03D]	Programmable interrupt controller
			j,	[00]	000	000	0000	004	) -	000	0000	0000	000	043]	System timer
			<u>به</u> ر	[00	000	000	0000	004	E -	000	0000	0000	000	04F]	Motherboard resources
			j,	[00]	000	000	0000	005	) -	000	0000	0000	000	053]	System timer
				[00]	000	000	0000	006	) -	000	0000	0000	000	060]	Standard PS/2 Keyboard
			j,	[00	000	000	0000	0006	1 -	000	0000	0000	000	061]	Motherboard resources
			<u>ا</u> ب	[00]	000	000	0000	006	3 -	000	0000	0000	000	063]	Motherboard resources
				[00]	000	000	0000	006	4 -	000	0000	0000	000	064]	Standard PS/2 Keyboard
			<u>ا</u> ب	[00]	000	000	0000	006	5 -	000	0000	0000	000	065]	Motherboard resources
			j 🜉	[00]	000	000	0000	0006	7 -	000	0000	0000	000	067]	Motherboard resources
			<u>ا</u> ب	[00]	000	000	0000	0007	) -	000	0000	0000	000	070]	Motherboard resources
			j 🜉	[00]	000	000	0000	0007	) -	000	0000	0000	000	077]	System CMOS/real time clock
			j,	[00]	000	000	0000	8000	) -	000	0000	0000	000	080]	Motherboard resources
			j 🜉	[00]	000	000	0000	0009	2 -	000	0000	0000	000	092]	Motherboard resources
			, 🜉	[00]	000	000	0000	000A	0 -	000	000	0000	0000	0A1]	Programmable interrupt controller
			j 🜉	[00]	000	000	0000	000A	4 -	000	000	0000	0000	0A5]	Programmable interrupt controller
			<u>ا</u> ب	[00]	000	000	0000	000A	8 -	000	000	0000	0000	0A9]	Programmable interrupt controller
			j,	[00]	000	000	0000	000A	с -	000	0000	000	0000	0AD	<ol> <li>Programmable interrupt controlle</li> </ol>
			<u>ا</u> ب	[00]	000	000	0000	00B	0 -	000	0000	0000	0000	0B1]	Programmable interrupt controller
			j,	[00]	000	000	0000	00B	2 -	000	0000	0000	0000	0B3]	Motherboard resources
			ļ,	[00	000	000	0000	000B	4 -	000	0000	0000	0000	0B5]	Programmable interrupt controller
			j,	[00	000	000	0000	000B	8 -	000	0000	0000	0000	0B9]	Programmable interrupt controller

~

		[000000000000B0	- 000000000000B1]	Programmable interrupt controller
	j,	[000000000000B2	- 000000000000B3]	Motherboard resources
	1	[000000000000B4	- 000000000000B5]	Programmable interrupt controller
	j 🛄	[00000000000088	- 0000000000000B9]	Programmable interrupt controller
	1	[000000000000BC	- 000000000000BD	] Programmable interrupt controller
	j,	[000000000000F0 ·	- 00000000000000F0]	Numeric data processor
	1	[000000000002F8 ·	- 000000000002FF]	Communications Port (COM2)
	÷.	[0000000000378 -	- 0000000000037F]	Printer Port (LPT1)
		[000000000003B0	- 000000000003BB]	Intel(R) HD Graphics 530
		[000000000003C0	- 000000000003DF]	Intel(R) HD Graphics 530
	<u>م</u>	[00000000003F8 ·	- 000000000003FF]	Communications Port (COM1)
	1	[0000000000004D0	- 0000000000004D1]	Programmable interrupt controller
	j,	[00000000000680 -	- 00000000000069F]	Motherboard resources
	1	008000000000000000000	- 0000000000087F]	Motherboard resources
	j,	[000000000000A00	- 000000000000A2F]	Motherboard resources
	1	[00000000000A30	- 00000000000A3F]	Motherboard resources
	j,	[00000000000A40	- 000000000000A4F]	Motherboard resources
	1	[000000000000D00	- 00000000000FFFF]	PCI Express Root Complex
	j,	[0000000000164E	- 00000000000164F]	Motherboard resources
	j,	[00000000001800 -	- 0000000000018FE]	Motherboard resources
	j,	[00000000001854	- 000000000001857]	Motherboard resources
	j,	[00000000000E000 ·	- 00000000000EFFF]	Intel(R) 100 Series/C230 Series Chipset Family PCI Root Port #20 - A16A
		[0000000000F000 ·	- 00000000000F03F]	Intel(R) HD Graphics 530
	j,	[0000000000F040 ·	- 00000000000F05F]	Intel(R) 100 Series/C230 Series Chipset Family SMBus - A123
	C 🗃	[0000000000F060 ·	- 00000000000F07F]	Standard SATA AHCI Controller
	C 🙀	[0000000000F080 ·	- 00000000000F083]	Standard SATA AHCI Controller
	C 🗃	[0000000000F090 ·	- 00000000000F097]	Standard SATA AHCI Controller
	j,	[0000000000FF00 -	- 00000000000FFFE]	Motherboard resources
		[0000000000FFFF	- 00000000000FFFF]	Motherboard resources
	j,	[0000000000FFFF	- 00000000000FFFF]	Motherboard resources
		[0000000000FFFF	- 00000000000FFFF]	Motherboard resources
n	Inte	errupt request (IRO)		

Interrupt re
 Memory

٨

Memory
[0000]
[0000]

	[00000000000A0000 - 000000000BFFFF]	Intel(R) HD Graphics 530
j,	[0000000000A0000 - 000000000BFFFF]	PCI Express Root Complex
j,	[00000008B000000 - 0000000DFFFFFF]	PCI Express Root Complex
	[00000000C000000 - 0000000CFFFFFF]	Intel(R) HD Graphics 530
	[0000000DE000000 - 0000000DEFFFFF]	Intel(R) HD Graphics 530
2	[0000000DF000000 - 0000000DF07FFF]	Intel(R) 82580 Gigabit Network Connection #4
j,	[0000000DF000000 - 0000000DF2FFFF]	PCI Express standard Root Port
<u>.</u>	[0000000DF080000 - 0000000DF0FFFF]	Intel(R) 82580 Gigabit Network Connection
÷.	[0000000DF100000 - 0000000DF17FFF]	Intel(R) 82580 Gigabit Network Connection #3
÷.	[0000000DF180000 - 0000000DF1FFFF]	Intel(R) 82580 Gigabit Network Connection #2
¢.	[0000000DF200000 - 0000000DF203FFF]	Intel(R) 82580 Gigabit Network Connection #4
¢.	[0000000DF204000 - 0000000DF207FFF]	Intel(R) 82580 Gigabit Network Connection
2	[0000000DF208000 - 0000000DF20BFFF]	Intel(R) 82580 Gigabit Network Connection #3
2	[0000000DF20C000 - 0000000DF20FFF]	Intel(R) 82580 Gigabit Network Connection #2
•	[0000000DF300000 - 0000000DF31FFFF]	Intel(R) I210 Gigabit Network Connection
j,	[0000000DF300000 - 0000000DF3FFFF]	Intel(R) 100 Series/C230 Series Chipset Family PCI Root Port #20 - A16A
	[0000000DF320000 - 0000000DF323FFF]	Intel(R) I210 Gigabit Network Connection
j,	[0000000DF400000 - 0000000DF40FFF]	High Definition Audio Controller
ų.	[0000000DF410000 - 0000000DF41FFFF]	Intel(R) USB 3.0 eXtensible Host Controller - 0100 (Microsoft)
j,	[0000000DF420000 - 0000000DF423FFF]	High Definition Audio Controller
j,	[0000000DF424000 - 0000000DF427FFF]	Intel(R) 100 Series/C230 Series Chipset Family PMC - A121
C 🗃	[0000000DF428000 - 0000000DF429FFF]	Standard SATA AHCI Controller
j,	[0000000DF42A000 - 0000000DF42A0FF]	Intel(R) 100 Series/C230 Series Chipset Family SMBus - A123
	[0000000DF42B000 - 0000000DF42B7FF]	Standard SATA AHCI Controller
	[0000000DF42C000 - 0000000DF42C0FF]	Standard SATA AHCI Controller
ļ,	[0000000DF42E000 - 0000000DF42EFFF]	Intel(R) 100 Series/C230 Series Chipset Family Thermal subsystem - A131
Ņ	[0000000DFFE0000 - 0000000DFFFFFF]	Motherboard resources
Ņ	[00000000E0000000 - 0000000EFFFFFF]	Motherboard resources
Ņ	[0000000FD000000 - 0000000FDABFFFF]	Motherboard resources
j,	[0000000FD000000 - 0000000FE7FFFF]	PCI Express Root Complex
j,	[0000000FDAC0000 - 0000000FDACFFFF	] Motherboard resources
j,	[0000000FDAD0000 - 0000000FDADFFFF	] Motherboard resources

~

- Ÿ.	[00000000DF410000 - 00000000DF41FFFF] Intel(R) USB 3.0 eXtensible Host Controller - 0100 (Microsoft)
, 👰	[0000000DF420000 - 0000000DF423FFF] High Definition Audio Controller
	[0000000DF424000 - 0000000DF427FFF] Intel(R) 100 Series/C230 Series Chipset Family PMC - A121
	[0000000DF428000 - 0000000DF429FFF] Standard SATA AHCI Controller
, p	[0000000DF42A000 - 0000000DF42A0FF] Intel(R) 100 Series/C230 Series Chipset Family SMBus - A123
	[0000000DF42B000 - 0000000DF42B7FF] Standard SATA AHCI Controller
	[0000000DF42C000 - 0000000DF42C0FF] Standard SATA AHCI Controller
, E	[0000000DF42E000 - 0000000DF42EFFF] Intel(R) 100 Series/C230 Series Chipset Family Thermal subsystem - A131
p,	[0000000DFFE0000 - 0000000DFFFFFF] Motherboard resources
j,	[0000000E0000000 - 0000000EFFFFFF] Motherboard resources
ı,	[0000000FD000000 - 0000000FDABFFFF] Motherboard resources
j,	[0000000FD000000 - 00000000FE7FFFFF] PCI Express Root Complex
j,	[0000000FDAC0000 - 0000000FDACFFFF] Motherboard resources
j,	[0000000FDAD0000 - 0000000FDADFFF] Motherboard resources
ļЩ,	[0000000FDAE0000 - 0000000FDAEFFFF] Motherboard resources
ļ,	[0000000FDAF0000 - 0000000FDAFFFFF] Motherboard resources
j,	[0000000FDB00000 - 0000000FDFFFFF] Motherboard resources
j,	[00000000FE000000 - 00000000FE01FFFF] Motherboard resources
j,	[00000000FE036000 - 00000000FE03BFFF] Motherboard resources
j,	[0000000FE03D000 - 00000000FE3FFFFF] Motherboard resources
ļ٩	[00000000FE40F000 - 00000000FE40FFFF] Intel(R) Management Engine Interface
ļ٩	[00000000FE410000 - 00000000FE7FFFFF] Motherboard resources
ļ,	[00000000FED00000 - 00000000FED003FF] High precision event timer
j,	[00000000FED10000 - 00000000FED17FFF] Motherboard resources
j,	[00000000FED18000 - 00000000FED18FFF] Motherboard resources
j,	[00000000FED19000 - 00000000FED19FFF] Motherboard resources
١Ņ	[00000000FED20000 - 00000000FED3FFFF] Motherboard resources
p	[00000000FED40000 - 00000000FED44FFF] Trusted Platform Module 2.0
ļ٩	[00000000FED45000 - 00000000FED8FFFF] Motherboard resources
j,	[00000000FED90000 - 00000000FED93FFF] Motherboard resources
j,	[00000000FEE00000 - 00000000FEEFFFFF] Motherboard resources
j,	[00000000FF000000 - 00000000FFFFFFF] Intel(R) 82802 Firmware Hub Device

[00000000FF000000 - 0000000FFFFFFF] Motherboard resources

Appendix B – I/O Information

a 🔳 Interrupt request (IRQ) 1 (ISA) 0x00000000 (00) System timer (ISA) 0x00000001 (01) Standard PS/2 Keyboard (ISA) 0x00000003 (03) Communications Port (COM2) (ISA) 0x00000004 (04) Communications Port (COM1) (ISA) 0x0000008 (08) System CMOS/real time clock (ISA) 0x000000C (12) PS/2 Compatible Mouse (ISA) 0x000000D (13) Numeric data processor (ISA) 0x000000E (14) Motherboard resources ISA) 0x00000051 (81) Microsoft ACPI-Compliant System (ISA) 0x00000052 (82) Microsoft ACPI-Compliant System ISA) 0x00000053 (83) Microsoft ACPI-Compliant System 🖳 (ISA) 0x00000054 (84) Microsoft ACPI-Compliant System 👰 (ISA) 0x00000055 (85) Microsoft ACPI-Compliant System (ISA) 0x00000056 (86) Microsoft ACPI-Compliant System 🖳 (ISA) 0x00000057 (87) Microsoft ACPI-Compliant System ISA) 0x00000058 (88) Microsoft ACPI-Compliant System (ISA) 0x00000059 (89) Microsoft ACPI-Compliant System ISA) 0x0000005A (90) Microsoft ACPI-Compliant System ISA) 0x0000005B (91) Microsoft ACPI-Compliant System (ISA) 0x0000005C (92) Microsoft ACPI-Compliant System (ISA) 0x0000005D (93) Microsoft ACPI-Compliant System 🖳 (ISA) 0x0000005E (94) Microsoft ACPI-Compliant System ISA) 0x0000005F (95) Microsoft ACPI-Compliant System 🜉 (ISA) 0x00000060 (96) Microsoft ACPI-Compliant System 👰 (ISA) 0x00000061 (97) Microsoft ACPI-Compliant System (ISA) 0x0000062 (98) Microsoft ACPI-Compliant System 👰 (ISA) 0x00000063 (99) Microsoft ACPI-Compliant System 🖳 (ISA) 0x00000064 (100) Microsoft ACPI-Compliant System 🖳 (ISA) 0x00000065 (101) Microsoft ACPI-Compliant System 🜉 (ISA) 0x00000066 (102) Microsoft ACPI-Compliant System 🜉 (ISA) 0x00000067 (103) Microsoft ACPI-Compliant System ISA) 0x00000068 (104) Microsoft ACPI-Compliant System

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📕 (ISA) 0x00000069 (105)	Microsoft ACPI-Compliant System
📕 (ISA) 0x0000006A (106)	Microsoft ACPI-Compliant System
📕 (ISA) 0x000006B (107)	Microsoft ACPI-Compliant System
(ISA) 0x000006C (108)	Microsoft ACPI-Compliant System
(ISA) 0x000006D (109)	Microsoft ACPI-Compliant System
🖳 (ISA) 0x0000006E (110)	Microsoft ACPI-Compliant System
📕 (ISA) 0x0000006F (111)	Microsoft ACPI-Compliant System
🜉 (ISA) 0x00000070 (112)	Microsoft ACPI-Compliant System
🜉 (ISA) 0x00000071 (113)	Microsoft ACPI-Compliant System
🜉 (ISA) 0x00000072 (114)	Microsoft ACPI-Compliant System
🜉 (ISA) 0x00000073 (115)	Microsoft ACPI-Compliant System
🌉 (ISA) 0x00000074 (116)	Microsoft ACPI-Compliant System
🌉 (ISA) 0x00000075 (117)	Microsoft ACPI-Compliant System
🌉 (ISA) 0x00000076 (118)	Microsoft ACPI-Compliant System
🌉 (ISA) 0x00000077 (119)	Microsoft ACPI-Compliant System
🜉 (ISA) 0x00000078 (120)	Microsoft ACPI-Compliant System
🜉 (ISA) 0x00000079 (121)	Microsoft ACPI-Compliant System
🌉 (ISA) 0x0000007A (122)	Microsoft ACPI-Compliant System
🌉 (ISA) 0x0000007B (123)	Microsoft ACPI-Compliant System
[툎 (ISA) 0x0000007C (124)	Microsoft ACPI-Compliant System
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🌉 (ISA) 0x0000082 (130)	Microsoft ACPI-Compliant System
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[토토 (ISA) 0x0000087 (135)	Microsoft ACPI-Compliant System
[토토 (ISA) 0x0000088 (136)	Microsoft ACPI-Compliant System
👰 (ISA) 0x0000089 (137)	Microsoft ACPI-Compliant System

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🖳 (ISA) 0x000000AB (171)	Microsoft ACPI-Compliant System
📳 (ISA) 0x00000AC (172)	Microsoft ACPI-Compliant System
🜉 (ISA) 0x00000AD (173)	Microsoft ACPI-Compliant System
👰 (ISA) 0x000000AE (174)	Microsoft ACPI-Compliant System
👰 (ISA) 0x000000AF (175)	Microsoft ACPI-Compliant System
👰 (ISA) 0x000000B0 (176)	Microsoft ACPI-Compliant System
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🌉 (ISA) 0x00000107 (263)	Microsoft ACPI-Compliant System
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📳 (ISA) 0x0000010A (266)	Microsoft ACPI-Compliant System
(ISA) 0v000010B (267)	Microsoft ACPI-Compliant System

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👰 (ISA) 0x0000018B (395)	Microsoft ACPI-Compliant System
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📕 (ISA) 0x0000018F (399)	Microsoft ACPI-Compliant System

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🌉 (ISA) 0x000001A0 (416)	Microsoft ACPI-Compliant System
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👰 (ISA) 0x000001A2 (418)	Microsoft ACPI-Compliant System
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🌉 (ISA) 0x000001A4 (420)	Microsoft ACPI-Compliant System
🌉 (ISA) 0x000001A5 (421)	Microsoft ACPI-Compliant System
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🜉 (ISA) 0x000001A9 (425)	Microsoft ACPI-Compliant System
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🖳 (ISA) 0x000001AB (427)	Microsoft ACPI-Compliant System
🖳 (ISA) 0x000001AC (428)	Microsoft ACPI-Compliant System
1 (ISA) 0x000001AD (429)	Microsoft ACPI-Compliant System
15A) 0x000001AE (430)	Microsoft ACPI-Compliant System
(ISA) 0x000001AF (431)	Microsoft ACPI-Compliant System
[특텔 (ISA) 0x000001B0 (432)	Microsoft ACPI-Compliant System

ļ,	(ISA)	0x00000	1B1 (433)	Microsoft ACPI-Compliant System
, E	(ISA)	0x00000	1B2 (434)	Microsoft ACPI-Compliant System
, E	(ISA)	0x00000	1B3 (435)	Microsoft ACPI-Compliant System
, L	(ISA)	0x00000	1B4 (436)	Microsoft ACPI-Compliant System
, L	(ISA)	0x00000	1B5 (437)	Microsoft ACPI-Compliant System
Ņ	(ISA)	0x00000	1B6 (438)	Microsoft ACPI-Compliant System
, E	(ISA)	0x00000	1B7 (439)	Microsoft ACPI-Compliant System
, E	(ISA)	0x00000	1B8 (440)	Microsoft ACPI-Compliant System
Ņ	(ISA)	0x00000	1B9 (441)	Microsoft ACPI-Compliant System
, E	(ISA)	0x00000	1BA (442)	Microsoft ACPI-Compliant System
ļ.	(ISA)	0x00000	1BB (443)	Microsoft ACPI-Compliant System
ļ.	(ISA)	0x00000	1BC (444)	Microsoft ACPI-Compliant System
Ņ	(ISA)	0x00000	1BD (445)	Microsoft ACPI-Compliant System
, L	(ISA)	0x00000	1BE (446)	Microsoft ACPI-Compliant System
, E	(ISA)	0x00000	1BF (447)	Microsoft ACPI-Compliant System
Ņ	(ISA)	0x00000	1C0 (448)	Microsoft ACPI-Compliant System
, E	(ISA)	0x00000	1C1 (449)	Microsoft ACPI-Compliant System
Ņ	(ISA)	0x00000	1C2 (450)	Microsoft ACPI-Compliant System
ļ.	(ISA)	0x00000	1C3 (451)	Microsoft ACPI-Compliant System
ļ.	(ISA)	0x00000	1C4 (452)	Microsoft ACPI-Compliant System
ļ.	(ISA)	0x00000	1C5 (453)	Microsoft ACPI-Compliant System
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, E	(ISA)	0x00000	1C7 (455)	Microsoft ACPI-Compliant System
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Ņ	(ISA)	0x00000	1C9 (457)	Microsoft ACPI-Compliant System
, L	(ISA)	0x00000	1CA (458)	Microsoft ACPI-Compliant System
, L	(ISA)	0x00000	1CB (459)	Microsoft ACPI-Compliant System
, L	(ISA)	0x00000	1CC (460)	Microsoft ACPI-Compliant System
ļ.	(ISA)	0x00000	1CD (461)	Microsoft ACPI-Compliant System
Ņ	(ISA)	0x00000	1CE (462)	Microsoft ACPI-Compliant System
Ņ	(ISA)	0x00000	1CF (463)	Microsoft ACPI-Compliant System
Ņ	(ISA)	0x00000	1D0 (464)	Microsoft ACPI-Compliant System
, E	(ISA)	0x00000	1D1 (465)	Microsoft ACPI-Compliant System

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🖳 (ISA) 0x000001D7 (471)	Microsoft ACPI-Compliant System
📜 (ISA) 0x000001D8 (472)	Microsoft ACPI-Compliant System
📕 (ISA) 0x000001D9 (473)	Microsoft ACPI-Compliant System
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📕 (ISA) 0x000001E2 (482)	Microsoft ACPI-Compliant System
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📜 (ISA) 0x000001E4 (484)	Microsoft ACPI-Compliant System
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📜 (ISA) 0x000001E6 (486)	Microsoft ACPI-Compliant System
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📜 (ISA) 0x000001E9 (489)	Microsoft ACPI-Compliant System
📜 (ISA) 0x000001EA (490)	Microsoft ACPI-Compliant System
📜 (ISA) 0x000001EB (491)	Microsoft ACPI-Compliant System
📜 (ISA) 0x000001EC (492)	Microsoft ACPI-Compliant System
📜 (ISA) 0x000001ED (493)	Microsoft ACPI-Compliant System
📜 (ISA) 0x000001EE (494)	Microsoft ACPI-Compliant System
📜 (ISA) 0x000001EF (495)	Microsoft ACPI-Compliant System
📜 (ISA) 0x000001F0 (496)	Microsoft ACPI-Compliant System
📜 (ISA) 0x000001F1 (497)	Microsoft ACPI-Compliant System
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📳 (ISA) 0x000001F4 (500)	Microsoft ACPI-Compliant System
📳 (ISA) 0x000001F5 (501)	Microsoft ACPI-Compliant System
👰 (ISA) 0x000001F6 (502)	Microsoft ACPI-Compliant System
[興 (ISA) 0x000001F7 (503)	Microsoft ACPI-Compliant System
👰 (ISA) 0x000001F8 (504)	Microsoft ACPI-Compliant System
📳 (ISA) 0x000001F9 (505)	Microsoft ACPI-Compliant System
📳 (ISA) 0x000001FA (506)	Microsoft ACPI-Compliant System
📳 (ISA) 0x000001FB (507)	Microsoft ACPI-Compliant System
📳 (ISA) 0x000001FC (508)	Microsoft ACPI-Compliant System
[툎 (ISA) 0x000001FD (509)	Microsoft ACPI-Compliant System
[툎 (ISA) 0x000001FE (510)	Microsoft ACPI-Compliant System
19 (ISA) 0x000001FF (511)	Microsoft ACPI-Compliant System
[텔 (PCI) 0x000000B (11)	Intel(R) 100 Series/C230 Series Chipset Family Thermal subsystem - A131
📳 (PCI) 0x000000B (11)	Intel(R) 100 Series/C230 Series Chipset Family SMBus - A123
إ (PCI) 0x00000010 (16)	High Definition Audio Controller
🕞 (PCI) 0x00000010 (16)	Standard SATA AHCI Controller
PCI) 0xFFFFFFCC (-52)	Intel(R) Management Engine Interface
(PCI) 0xFFFFFFCD (-51)	Intel(R) I210 Gigabit Network Connection
(PCI) 0xFFFFFFCE (-50)	Intel(R) I210 Gigabit Network Connection
(PCI) 0xFFFFFFCF (-49)	Intel(R) I210 Gigabit Network Connection
(PCI) 0xFFFFFFD0 (-48)	Intel(R) I210 Gigabit Network Connection
(PCI) 0xFFFFFFD1 (-47)	Intel(R) I210 Gigabit Network Connection
(PCI) 0xFFFFFFD2 (-46)	Intel(R) I210 Gigabit Network Connection
(PCI) 0xFFFFFFD3 (-45)	Intel(R) USB 3.0 eXtensible Host Controller - 0100 (Microsoft)
Nr FFFFFD4 (-44) 🖳 🖳	Intel(R) HD Graphics 530
(PCI) 0xFFFFFFD5 (-43)	Intel(R) 82580 Gigabit Network Connection #4
(PCI) 0xFFFFFFD6 (-42)	Intel(R) 82580 Gigabit Network Connection #4
(PCI) 0xFFFFFFD7 (-41)	Intel(R) 82580 Gigabit Network Connection #4
(PCI) 0xFFFFFD8 (-40)	Intel(R) 82580 Gigabit Network Connection #4
(PCI) 0xFFFFFFD9 (-39)	Intel(R) 82580 Gigabit Network Connection #4
(PCI) 0xFFFFFFDA (-38)	Intel(R) 82580 Gigabit Network Connection #4
(PCI) 0xFFFFFFDB (-37)	Intel(R) 82580 Gigabit Network Connection #4

(PCI) 0xFFFFFFDC (-36)	Intel(R) 82580 Gigabit Network Connection #4
(PCI) 0xFFFFFFDD (-35)	Intel(R) 82580 Gigabit Network Connection #4
(PCI) 0xFFFFFFDE (-34)	Intel(R) 82580 Gigabit Network Connection #4
(PCI) 0xFFFFFFDF (-33)	Intel(R) 82580 Gigabit Network Connection
(PCI) 0xFFFFFFE0 (-32)	Intel(R) 82580 Gigabit Network Connection
(PCI) 0xFFFFFFE1 (-31)	Intel(R) 82580 Gigabit Network Connection
(PCI) 0xFFFFFFE2 (-30)	Intel(R) 82580 Gigabit Network Connection
(PCI) 0xFFFFFFE3 (-29)	Intel(R) 82580 Gigabit Network Connection
(PCI) 0xFFFFFFE4 (-28)	Intel(R) 82580 Gigabit Network Connection
(PCI) 0xFFFFFFE5 (-27)	Intel(R) 82580 Gigabit Network Connection
(PCI) 0xFFFFFFE6 (-26)	Intel(R) 82580 Gigabit Network Connection
(PCI) 0xFFFFFFF7 (-25)	Intel(R) 82580 Gigabit Network Connection
(PCI) 0xFFFFFFE8 (-24)	Intel(R) 82580 Gigabit Network Connection
(PCI) 0xFFFFFFE9 (-23)	Intel(R) 82580 Gigabit Network Connection #3
(PCI) 0xFFFFFFEA (-22)	Intel(R) 82580 Gigabit Network Connection #3
(PCI) 0xFFFFFFEB (-21)	Intel(R) 82580 Gigabit Network Connection #3
(PCI) 0xFFFFFFEC (-20)	Intel(R) 82580 Gigabit Network Connection #3
(PCI) 0xFFFFFFED (-19)	Intel(R) 82580 Gigabit Network Connection #3
(PCI) 0xFFFFFFEE (-18)	Intel(R) 82580 Gigabit Network Connection #3
(PCI) 0xFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	Intel(R) 82580 Gigabit Network Connection #3
(PCI) 0xFFFFFFF0 (-16)	Intel(R) 82580 Gigabit Network Connection #3
(PCI) 0xFFFFFFF1 (-15)	Intel(R) 82580 Gigabit Network Connection #3
(PCI) 0xFFFFFFF2 (-14)	Intel(R) 82580 Gigabit Network Connection #3
(PCI) 0xFFFFFFF3 (-13)	Intel(R) 82580 Gigabit Network Connection #2
(PCI) 0xFFFFFFF4 (-12)	Intel(R) 82580 Gigabit Network Connection #2
(PCI) 0xFFFFFFF5 (-11)	Intel(R) 82580 Gigabit Network Connection #2
(PCI) 0xFFFFFFF6 (-10)	Intel(R) 82580 Gigabit Network Connection #2
🔮 (PCI) 0xFFFFFFF7 (-9)	Intel(R) 82580 Gigabit Network Connection #2
🔮 (PCI) 0xFFFFFFF8 (-8)	Intel(R) 82580 Gigabit Network Connection #2
🔮 (PCI) 0xFFFFFFF9 (-7)	Intel(R) 82580 Gigabit Network Connection #2
👰 (PCI) 0xFFFFFFFA (-6)	Intel(R) 82580 Gigabit Network Connection #2
(PCI) 0xFFFFFFFB (-5)	Intel(R) 82580 Gigabit Network Connection #2
(PCI) 0xEEEEEEC (-4)	Intel(R) 82580 Gigabit Network Connection #2

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(PCI) 0xFFFFFDF (-33)	Intel(R) 82580 Gigabit Network Connection
(PCI) 0xFFFFFFE0 (-32)	Intel(R) 82580 Gigabit Network Connection
(PCI) 0xFFFFFFE1 (-31)	Intel(R) 82580 Gigabit Network Connection
(PCI) 0xFFFFFFE2 (-30)	Intel(R) 82580 Gigabit Network Connection
(PCI) 0xFFFFFFE3 (-29)	Intel(R) 82580 Gigabit Network Connection
(PCI) 0xFFFFFFE4 (-28)	Intel(R) 82580 Gigabit Network Connection
(PCI) 0xFFFFFFE5 (-27)	Intel(R) 82580 Gigabit Network Connection
(PCI) 0xFFFFFFE6 (-26)	Intel(R) 82580 Gigabit Network Connection
(PCI) 0xFFFFFFF7 (-25)	Intel(R) 82580 Gigabit Network Connection
(PCI) 0xFFFFFFE8 (-24)	Intel(R) 82580 Gigabit Network Connection
(PCI) 0xFFFFFFE9 (-23)	Intel(R) 82580 Gigabit Network Connection #3
(PCI) 0xFFFFFFEA (-22)	Intel(R) 82580 Gigabit Network Connection #3
(PCI) 0xFFFFFEB (-21)	Intel(R) 82580 Gigabit Network Connection #3
(PCI) 0xFFFFFFEC (-20)	Intel(R) 82580 Gigabit Network Connection #3
(PCI) 0xFFFFFFED (-19)	Intel(R) 82580 Gigabit Network Connection #3
(PCI) 0xFFFFFFEE (-18)	Intel(R) 82580 Gigabit Network Connection #3
(PCI) 0xFFFFFFFF (-17)	Intel(R) 82580 Gigabit Network Connection #3
(PCI) 0xFFFFFFF0 (-16)	Intel(R) 82580 Gigabit Network Connection #3
(PCI) 0xFFFFFFF1 (-15)	Intel(R) 82580 Gigabit Network Connection #3
(PCI) 0xFFFFFFF2 (-14)	Intel(R) 82580 Gigabit Network Connection #3
(PCI) 0xFFFFFFF3 (-13)	Intel(R) 82580 Gigabit Network Connection #2
(PCI) 0xFFFFFFF4 (-12)	Intel(R) 82580 Gigabit Network Connection #2
(PCI) 0xFFFFFFF5 (-11)	Intel(R) 82580 Gigabit Network Connection #2
(PCI) 0xFFFFFFF6 (-10)	Intel(R) 82580 Gigabit Network Connection #2
👰 (PCI) 0xFFFFFFF7 (-9)	Intel(R) 82580 Gigabit Network Connection #2
(PCI) 0xFFFFFFF8 (-8)	Intel(R) 82580 Gigabit Network Connection #2
👰 (PCI) 0xFFFFFFF9 (-7)	Intel(R) 82580 Gigabit Network Connection #2
👰 (PCI) 0xFFFFFFFA (-6)	Intel(R) 82580 Gigabit Network Connection #2
(PCI) 0xFFFFFFB (-5)	Intel(R) 82580 Gigabit Network Connection #2
(PCI) 0xFFFFFFFC (-4)	Intel(R) 82580 Gigabit Network Connection #2
IIII (PCI) 0xFFFFFFFD (-3)	Intel(R) 100 Series/C230 Series Chipset Family PCI Root Port
IIII (PCI) 0xFFFFFFFE (-2)	PCI Express standard Root Port

Memory

Appendix B – I/O Information

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#20 - A16A

# Appendix C

Standard LAN Bypass Platform Setting

## C.1 Status LED

### Table1: LED Status

	STA_LED2	STA_LED1	STA_LED0
LED Off	0	0	0
Red LED On	0	0	1
Red LED Blink	0	1	0
Red LED Fast Blink	0	1	1
Reserved	1	0	0
Green LED Blink	1	0	1
Green LED Fast Blink	1	1	0
Green LED On	1	1	1

Table2: Status LED and register mapping table

CPLD Slave Address 0x90 (Note1)			te1)	
	Attribute	Offset(SMBUS)	BitNum	Value
STA_LED2	R/W	0x00 (Note2)	2	(Table 1)
STA_LED1	R/W	0x00 (Note2)	1	(Table 1)
STA_LED0	R/W	0x00 (Note2)	0	(Table 1)

#### Sample Code:

```
#define ByteCPLD_SLAVE_ADDRESS //This parameter is represented from Note1
#define ByteOFFSET
                             //This parameter is represented from Note2
                      *****
bData = aaeonSmbusReadByte(CPLD_SLAVE_ADDRESS, OFFSET);
switch( LED_FLAG)
{
case 0:
{
    //LED Off
    //BIT2=0, BIT1=0, BIT0=0
     bData = bData & 0xF8;
     break;
}
case 1:
{
    //Red LED On
    //BIT2=0, BIT1=0, BIT0=1
     bData = (bData \& 0xF8) | 0x01;
     break;
}
case 2:
{
    //Red LED Blink
    //BIT2=0, BIT1=1, BIT0=0
     bData = (bData \& 0xF8) | 0x02;
     break;
}
case 3:
{
    //Red LED Fast Blink
    //BIT2=0, BIT1=1, BIT0=1
     bData = (bData \& 0xF8) | 0x03;
     break;
}
case 4:
{
    //Green LED On
    //BIT2=1, BIT1=1, BIT0=1
```

} default:

break;

break;

break;

break;

//Green LED Blink //BIT2=1, BIT1=0, BIT0=1 bData = (bData & 0xF8) | 0x05;

//Green LED Fast Blink //BIT2=1, BIT1=1, BIT0=0 bData = (bData & 0xF8) | 0x06;

```
}
```

SmbusWriteByte(CPLD\_SLAVE\_ADDRESS, 0x00, bData);

bData = (bData & 0xF8) | 0x07;

} case 5: {

} case 6: {

Appendix C – Standard Firewall Platform Setting

## C.2 LAN Bypass

## Table1: LAN Kit ID Select

LAN_ID3	LAN_ID2	LAN_ID1	LAN_ID0	LAN kit selected
0	0	0	0	LAN Kit 1 Selected
0	0	0	1	LAN Kit 2 Selected
0	0	1	0	LAN Kit 3 Selected
0	0	1	1	LAN Kit 4 Selected
0	1	0	0	LAN Kit 5 Selected
0	1	0	1	LAN Kit 6 Selected
0	1	1	0	LAN Kit 7 Selected
0	1	1	1	LAN Kit 8 Selected
1	0	0	0	LAN Kit 9 Selected
1	0	0	1	LAN Kit 10 Selected

## Table2: LAN Bypass register table

Function	Description
LAN_ID3	- Use for selecting which I ANI kit will be
LAN_ID2	configured, refert to Table 1 of ID Select
LAN_ID1	table of LAN kit.
LAN_ID0	I ney should be set before ACI_EN.
PWR_ON	Use for configuring LAN Bypass function behavior to LAN kit, when system power on. 1: Bypass 0: Pass Through
PWR_OFF	Use for configuring LAN Bypass function behavior to LAN kit, when system power off. 1: Bypass 0: Pass Through
WDT_EN	Use for configuring WDT function

	behavior to LAN kit, when WDT triggered. 0: Normal WDT reset (Default)
	1: Force Bypass
ACT_EN	Use for activating programming of LAN kit. It is edge triggering (falling edge 1 to 0) and should be set to high(1) as its normal state.

#### Table3: LAN Bypass register mapping table

CPLD Slave Address 0x90 (Note1)				
	Attribute	Offset(SMBUS)	BitNum	Value
LAN_ID3	R/W	0x01(Note2)	3	(Table 1)
LAN_ID2	R/W	0x01(Note2)	2	(Table 1)
LAN_ID1	R/W	0x01(Note2)	1	(Table 1)
LAN_ID0	R/W	0x01(Note2)	0	(Table 1)
PWR_ON	R/W	0x01(Note2)	6	(Table 2)
PWR_OFF	R/W	0x01(Note2)	5	(Table 2)
WDT_EN	R/W	0x01(Note2)	4	(Table 2)
ACT_EN	R/W	0x01(Note2)	7	(Table 2)

## Sample Code

#define ByteCPLD\_SLAVE\_ADDRESS //This parameter is represented from Note1
#define ByteOFFSET //This parameter is represented from Note2

// Select Lan Pair BYTE bLanSel = LAN\_PAIR;

```
Network Appliance
```

```
bData = bData | 0x04;
else
      bData = bData & 0xFB;
// Set Reg01h bit1
if(bLanSel & 0x02)
      bData = bData | 0x02;
else
      bData = bData \& 0xFD;
// Set Reg01h bit0
if(bLanSel & 0x01)
      bData = bData | 0x01;
else
      bData = bData & 0xFE;
// Power On Action (Reg01h bit6)
if(SET PASS THROUGH) // Pass Through
      bData = bData & 0xBF;
else
                              // Bypass
      bData = bData | 0x40;
// Power Off Action (Reg01h bit5)
if(SET_PASS_THROUGH) // Pass Through
      bData = bData & 0xDF;
else
                              // Bypass
      bData = bData | 0x20;
// WDT Action (Reg01h bit4)
if(SET WDT RESET)// Reset
      bData = bData & 0xEF;
else
                        // Bypass
      bData = bData | 0x10;
SmbusWriteByte(CPLD SLAVE ADDRESS, OFFSET, bData);
// Apply Settings (Reg01h bit7)
bData = SmbusReadByte(CPLD_SLAVE_ADDRESS, OFFSET);
SmbusWriteByte(CPLD SLAVE ADDRESS, OFFSET, bData & 0x7F);
```

Sleep(500); bData = SmbusReadByte(CPLD\_SLAVE\_ADDRESS, OFFSET); SmbusWriteByte(CPLD\_SLAVE\_ADDRESS, OFFSET, bData | 0x80);

\*\*\*\*\*\*

## C.3 Software Reset Button (General Propose Input)

lable I: Soft Res	able 1: Soft Reset Button register mapping table				
	Attribute	Register(I/O)	BitNum	Value	
BTN_STS	R	0xA05(Note1)	4(Note2)	(Note3)	

. .

#### Table 2: LAN Bypass register table

Function	Description		
BTN_STS	Reading this register returns the pin level status which is normal high active low. 0: Pin Level States Low. 1: Pin Level States High.		

#### Sample Code:

```
#define Word
         btn sts
                //This parameter is represented from Note1
         BTN STS R //This parameter is represented from Note2
#define Byte
Byte GET_Value (Word IoAddr, Byte BitNum, Byte Value) {
   BYTE TmpValue;
   TmpValue = inportb (loAddr);
   return (TmpValue & (1 < < BitNum))
******
VOID Main(){
   Byte RstBtn;
   RstBtn = GET Value (BTN STS, BTN STS R); // Active Low
```