IFC-810/812/815/815W/817/819/821W

Intel® Core 8/9/10th

English version user manual

Published: 05/11/2024

Version 1.0

Disclaimer

1. The company reserves the right to make changes to this manual, and will not notify you of subsequent changes to the product.

2. We will not be responsible for any direct, indirect, intentional or unintentional damages and hidden dangers caused by installation, improper use, or use beyond specifications.

3. Before ordering product, please ask dealer to learn more about whether the product performance meets your needs.

Directory

1 Product Introduction	3
1.1 Package Contents	3
1.2 Product Specification	4
1.3 Product View	6
1.4 Interface Description	8
2 Installation	9
2.1 Hard disk, WIFI, 4G, RAM installation	9
2.2 Antenna Install	10
2.3 Machine Installation and Fixing	10
2.5 Mechanism size	12
3 IO Interface	16
3.1 Serial port	16
3.2 EXT-IO(With tablet extension cable)	17
3.3 Watch Dog	18
4 BIOS Function	19
4.1 UEFI Summary	19
4.2 UEFI Parameter settings	19
4.3 UEFI Basic Function Settings	19

1 Product Introduction

TFT LCD touch panel computer, using Intel Core i5-8260U/ i5-10210U/i7-10610U/i5-1135G7 processor, SODIMM DDR4 memory, supports dual display, dual SSD storage, wide voltage 9-36V input, compact, fanless, high computing performance, front panel protection level IP65, die-casting aluminum alloy body and full flat 5-wire resistive touch screen, with Waterproof and dustproof, suitable for harsh industrial environments

Application

Applied Factory Automation System monitor Self-service Kiosk Wind power monitoring Environmental monitoring Coal mine monitoring Equipment Oil drilling Pharmaceutical equipment Car

1.1 Package Contents

Please ensure that the following items are included together before powering on. If any of the following items is missing or damaged, please contact your sales representative in time.

Quantity	Describe
1 set	Panel PC
1 piece	2.5" hard drive bracket
1 piece	AC power adapter
1 set	Installation buckle
1 piece	Touch pen (resistive screen)
1 pieces	EXT IO cable (Optional)

optional equipment

Material coding	Describe
?	US power cord
?	European power cord
?	Japanese power cord
?	Wireless card
?	VESA75 bracket

One-click restore system

"One-Key System Restore", is an easy-to-use application that can help you back up and restore your computer's system partition (C partition) data; it runs without entering the Windows operating system. For specific technical implementation details, please contact your supplier to obtain corresponding technical support.

Remote switch button interface (optional)

The hardware switch interface, when the operator is far away from the computer and it is inconvenient to switch the computer, it is left to customer to place the power switch of computer in a convenient place for operation.

Integrated power amplifier and two 1W 8Ω speakers (optional)

Onboard HDA audio controller and stereo power amplifier output can be used to output voice and alarm signals.

1.2 Product Specification

	SC101-8260U	SC101-8260U	SC121-8260U	SC121-8260U	SC15-8260U	SC15-8260U
	-RBE	-PIE	-RBE	-PBE	-RBE	-PBE
Display Size	10.1"	10.1"	12.1"	12.1"	15"	15"
	TFT LCD	TFT LCD	TFT LCD	TFT LCD	TFT LCD	TFT LCD
Resolution	1280 x 800(可选	1280 x 800(可选	1024 x 768	1024 x 768	1024 x 768	1024 x 768
	1024x600)	1024x600)				
Brightness	400	500	500	500	300	300
Color	16.2M	16.2M/262k	16.7M/262k	16.7M/262k	16.7M	16.7M
View Angle	-85~85°(H)	-85~85°(H)	-89~89°(H)	-89~89°(H)	-85~85°(H)	-85~85°(H)
view / angle	-85~85°(V)	-85~85°(V)	-89~89°(\/)	-89~89°(\/)	-85~85°(V)	-85~85°(\/)
Backlight	30,000	50,000	30,000	30,000	45,000	45,000
Lifetime						
	Resistive touch	Capacitive	Resistive touch	Capacitive	Resistive	Capacitive
		touch		touch	touch	touch
Light	≥76%	≥76%	≥76%	≥76%	≥76%	≥76%
Transmittance						
Life Time	Minimum	Minimum	Minimum	Minimum	Minimum	Minimum
	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
	hits	hits	hits	hits	hits	hits
Size	289.5 x 192.4 x	289.5 x 192.4 x	318.8 x245	318.8 x245	376.1 x 285.3	376.1 x 285.3 x
	68.0mm	68.0mm	x65.5mm	x65.5mm	x 68.9mm	68.9mm
Weight	2.52kg	2.52kg	2.82kg	2.82kg	4.84kg	4.84kg
Power	28W	28W	30W	30W	32W	32W
consumption						

Note: 19", 21.5" slightly

ProcessorIntel® Core i5-8260U 1.6GHz,up to 3.9GHzIntel® Core i5-10210U 1.3GHz,up to 4.2GHzIntel® Core i7-10210U 1.6GHz,up to 4.2GHz
Intel® Core i5-10210U 1.3GHz,up to 4.2GHz Intel® Core i7-10210U 1.6GHz,up to 4.2GHz
Intel® Core i7-10210U 1.6GHz,up to 4.2GHz
Intel® Core i7-10610U 1.8GHz,up to 4.9GHz
Intel® Core i7-1135G7 2.4GHz,up to 4.2GHz
Intel® Core i7-1165G7 2.4GHz,up to 4.7GHz
System RAM DDR4 SO-DIMM X 2
Network 2x 2.5 GbE RJ45 Intel® i225V (4 x 2.5GbE RJ45 Intel i225V)
I/O port 4 x USB2.0 , 2 x USB3.0 (J4125/J6412)
2 x USB2.0 , 4 x USB3.0 (8th/10th/11th generation Intel Core i5/i7)
2 x DB-9 COM1&COM2,RS-232/422/485
1 x Audio Line-out
2 x 8Ω 1W Power amplifier output (optional)
1 x AT/ATX Dial switch
1 x HDMI
1 x expand IO: Integrated 4-way 3-line COM, 10-way GPIO, 1 remote switch
Storage 1 x M.2 2242/2260/2280 SATA
1 x SATA(2.5" SATA)
1 x M.2 2280(Support NVME protocol)
Expansion slot M.2 3042/3052 3G/4G/5G Module, onboard SIM card slot
M.2 2230 WiFi Bluetooth
Support System Windows® 10/11, WES 10, LINUX
Power supply
power input 9 ~ 36 V DC
material
Front Aluminum Alloy
Back Aluminum Alloy
IP protection Front IP65
level
Environment
Operating -20°C to 60°C
temperature
Storage -30°C to +70°C
temperature
Relative humidity 10~90% @30 °C, Non-condensing
certified
Safety
EMC

1.3 Product View



Back View



Port View









1.4 Interface Describe

SC800M series provides abundant I/O interfaces, the functions of each interface are described as follows, including a flexible configurable I/O interface.



Name	Function
HDMI	HD display interface
USB4&5	USB2.0 X 2
LAN1&2	Intel I225 2.5G Ethernet interface x2
COM1&2	COM1, COM2 Port, Can be configured via BIOS as RS232/422/485
EXT-IO	Mixed interface COM3~6 (RS232), GPI1~5, GPO1~5
LAN3&4	Intel I225 2.5G Ethernet interface x2 (Optional)
USB2&3	USB3.0 X 2
USB0&1	USB3.0 X 2
Dial switch	AT/ATX Toggle switch Audio output port
Switch	Power button
LINE-OUT	Audio output
DC-IN	Power interface
13	SSD Hard disk interface
14	Amplifier output speaker 1W 8 Ω (Optional)
15	Power Indicator

2 Installation

Allen screwdriver to remove the 7 screws on the rear panel and front panel

2.1 Hard disk,WIFI,4G,RAM installation





M2_HDD1 supports M.2 (SATA) hard disk, M.2 (NVMe) hard disk 2280 M2_HDD2supports M.2(SATA)hard disk2240,2260,2280 EXTIO1 gusset support 2.5 inch hard disk WIFI1 supports M.2 interface WIFI (Bluetooth) module WWAN1 supports M.2 interface 4G or 5G module (eg: RM500Q) DDR4 supports DDR4 2133~3200 SO-DIMM memory

2.2 Antenna Install



The default is only WIFI, Bluetooth antenna. If you install 4G and 5G antennas, you need to consult again

2.3 Machine installation and fixing

Take a 10.1" computer as a sample. Panel embedded installation, there are 6 butterfly buckle slots around the machine, When using panel embedded installation, these 6 butterfly buckles are used to fix the fuselage.



VESA75/100 installation, on the back of computer, designed a standard VESA75/100 mounting hole, When installing in this way, and a VESA75/100 bracket is required for installation in this way





2.4 Mechanism size

Unit: mm



IFC-810 size: 10.1"



IFC-812 size: 12.1"















IFC-819 size:19"



IFC-821W size: 21.5"

3 IO Interface

3.1 Serial port

SC800M series can support up to 6 serial ports, the following is a list of working modes supported by each serial port:

Serial	COM1	COM2	COM3	COM4	COM5	COM6
Working mode	COMT	COMZ	COMB		001013	COMO
RS232	support	support	support	support	support	support
RS485	support	support	not support	not support	not support	not support
RS422	support	support	not support	not support	not support	not support

Note:

COM3~6 are 3-wire serial ports (TXD / RXD /GND)

By default, COM1~6 are factory set to RS232 mode;

The pin definitions corresponding to different interface types are as follows:

COM1, COM2 Pin signal definition

	DB9 Pin Name								
Mode	Pin1	Pin2	Pin3	Pin4	Pin5	Pin6	Pin7	Pin8	Pin9
RS485	DATA-	DATA+							
RS422	TX-	TX+	RX+	RX-					
RS232	DCD#	RXD	TXD	DTR#	GND	DSR#	RTS#	CTS#	RI# Chargeable

Set working mode of COM1,2

Step 1: Power on the machine, press the Delete key to enter the BIOS setting interface, and navigate to the following path:

Advanced - SIO MISC Configuration - COM1 MODE Select RS232/422/485 option;

Advanced	οιιιιτy – Copyright (C) 2019 Ame
PCB Version Watch Dog Timer COM1 Mode COM2 Mode	[Ver B(WDT)] [Disabled] [RS232] [RS232]
COM4 Mode	[RS232] [RS232] COM1 Mode RS232 RS485
	RS422

Step 2: After setting the BIOS options, press the F10 key, select [YES] in the pop-up dialog box to save the settings and exit.

3.2 EXT-IO (With EXT IO cable)

ccessory 1 *DB9 + 2 F Init Price: \$	1 (optional) ^P in switch \$6				
ccessory 2 *DB9 + 10 nit Price: \$	2 (optional) *GPIO+2Pin switc \$10	h			
5	SC800M series	GPIO us	e instruction	s	
No.	C800M series	GPIO uso Default	e instruction Register	S Bit	
No. Pin 1	C800M series	GPIO uso Default Input	e instruction Register 0xA07	Bit bit0	
No. Pin 1 Pin 2	C800M series Designation GP80 GP81	GPIO uso Default Input Input	e instruction Register 0xA07 0xA07	Bit bit0 bit1	
No. Pin 1 Pin 2 Pin 3	C800M series Designation GP80 GP81 GP82	GPIO uso Default Input Input Input	e instruction Register 0xA07 0xA07 0xA07	Bit bit0 bit1 bit2	
No. Pin 1 Pin 2 Pin 3 Pin 4	C800M series Designation GP80 GP81 GP82 GP83	GPIO uso Default Input Input Input Input	e instruction Register 0xA07 0xA07 0xA07 0xA07 0xA07	Bit bit0 bit1 bit2 bit3	
No. Pin 1 Pin 2 Pin 3 Pin 4 Pin 5	C800M series Designation GP80 GP81 GP82 GP83 GP84	GPIO use Default Input Input Input Input Input	e instruction Register 0xA07 0xA07 0xA07 0xA07 0xA07 0xA07	Bit bit0 bit1 bit2 bit3 bit4	
No. Pin 1 Pin 2 Pin 3 Pin 4 Pin 5 Pin 6	C800M series Designation GP80 GP81 GP82 GP83 GP84 GP70	GPIO uso Default Input Input Input Input Input Output	Register 0xA07	Bit bit0 bit1 bit2 bit3 bit4 bit0	
No. Pin 1 Pin 2 Pin 3 Pin 4 Pin 5 Pin 6 Pin 7	C800M series Designation GP80 GP81 GP82 GP83 GP84 GP70 GP71	GPIO uso Default Input Input Input Input Output Output	Register 0xA07 0xA07	S Bit bit0 bit1 bit2 bit3 bit4 bit0 bit1	
No. Pin 1 Pin 2 Pin 3 Pin 4 Pin 5 Pin 6 Pin 7 Pin 8	C800M series Designation GP80 GP81 GP82 GP83 GP84 GP70 GP71 GP72	GPIO uso Default Input Input Input Input Output Output Output	e instruction Register 0xA07 0xA07 0xA07 0xA07 0xA07 0xA07 0xA06 0xA06 0xA06	Bit bit0 bit1 bit2 bit3 bit4 bit0 bit1	
No.Pin 1Pin 2Pin 3Pin 4Pin 5Pin 6Pin 7Pin 8Pin 9	C800M series Designation GP80 GP81 GP82 GP83 GP84 GP70 GP71 GP72 GP73	GPIO uso Default Input Input Input Input Output Output Output Output	e instruction Register 0xA07 0xA07 0xA07 0xA07 0xA07 0xA07 0xA06 0xA06 0xA06 0xA06 0xA06	Bit bit0 bit1 bit2 bit3 bit4 bit0 bit1 bit2	
No.Pin 1Pin 2Pin 3Pin 4Pin 5Pin 6Pin 7Pin 8Pin 9Pin 10	C800M series Designation GP80 GP81 GP82 GP83 GP84 GP70 GP71 GP72 GP73 GP74	GPIO uso Default Input Input Input Input Input Output Output Output Output Output	Instruction Register 0xA07 0xA07 0xA07 0xA07 0xA07 0xA07 0xA07 0xA07 0xA06 0xA06 0xA06 0xA06	Bit bit0 bit1 bit2 bit3 bit4 bit0 bit1 bit2 bit3 bit4 bit0 bit1 bit2 bit3 bit1 bit2 bit3 bit3 bit3 bit3 bit4	
No.Pin 1Pin 2Pin 3Pin 4Pin 5Pin 6Pin 7Pin 8Pin 9Pin 10Pin 11	C800M series Designation GP80 GP81 GP82 GP83 GP84 GP70 GP71 GP72 GP73 GP74 GND	GPIO uso Default Input Input Input Input Input Output Output Output Output Output	e instruction Register 0xA07 0xA07 0xA07 0xA07 0xA07 0xA07 0xA06 0xA06 0xA06 0xA06 0xA06	Bit bit0 bit1 bit2 bit3 bit4 bit0 bit1 bit2 bit3 bit4 bit0 bit1 bit2 bit3 bit4 bit1 bit2 bit3 bit4	

10 GPIOs, 5 inputs and 5 outputs by default, can also be configured to 10 inputs or 10 outputs in BIOS SETUP.

GPIO port access

Output port access:

Use the function outportb() to directly output a byte of data to the specified port. To make the corresponding GPO port output low level, write 0 to the corresponding port. For example, the following example is to make GPO1 output low level:

TEMP=inportb(0x50c); First read the content of port 0x50c TEMP=TEMP&0xfe ; Then set bit0 of port 0x50c to 0 outportb(0x50c,TEMP); write data to port

To make the corresponding GPO port output high level, write 1 to the corresponding port, for example, the following example is to make GPO1 output high level:

TEMP=inportb(0x50c); First read the content of port 0x50c TEMP=TEMP|0x01 ; Then set bit0 of port 0x50c to 1 outportb(0x50c,TEMP); write data to port

Input port access:

Use the function inport () to read a byte from the port, and then check the above table to get the corresponding bit. $_{\circ}$

3.3 Watch Dog

#define SIO_CONFIG_INDEX 0x2E #define SIO_CONFIG_DATA 0x2F void WatchDogTimer(UINT16 TimerValue) // 1 < TimerValue < 65535 , Unit = Second { // Enter Configuration Mode. IoWrite8(SIO_CONFIG_INDEX, 0x87); IoWrite8(SIO_CONFIG_INDEX, 0x01); IoWrite8(SIO CONFIG INDEX, 0x55); IoWrite8(SIO_CONFIG_INDEX, 0x55); IoWrite8(SIO CONFIG INDEX, 0x07); IoWrite8(SIO_CONFIG_DATA, 0x07); IoWrite8(SIO_CONFIG_INDEX, 0x72); IoWrite8(SIO CONFIG DATA, 0x90); //Enable WDT IoWrite8(SIO CONFIG INDEX, 0x74); IoWrite8(SIO_CONFIG_DATA, (UINT8)((TimerValue & 0xFF00)>>8)); //MSB IoWrite8(SIO_CONFIG_INDEX, 0x73); IoWrite8(SIO_CONFIG_DATA, (UINT8)(TimerValue & 0x00FF)); //LSB } void DisableWdt() { // Enter Configuration Mode. IoWrite8(SIO CONFIG INDEX, 0x87); IoWrite8(SIO_CONFIG_INDEX, 0x01); IoWrite8(SIO_CONFIG_INDEX, 0x55); IoWrite8(SIO_CONFIG_INDEX, 0x55); IoWrite8(SIO CONFIG INDEX, 0x07); IoWrite8(SIO CONFIG DATA, 0x07); IoWrite8(SIO CONFIG INDEX, 0x72); IoWrite8(SIO_CONFIG_DATA, 0x00); //Disable WDT IoWrite8(SIO CONFIG INDEX, 0x74); IoWrite8(SIO_CONFIG_DATA, 0x00); //MSB IoWrite8(SIO CONFIG INDEX, 0x73); IoWrite8(SIO_CONFIG_DATA, 0x00); //LSB

}

4 BIOS Function

4.1 UEFI Summary

UEFI (Unified Extensible Firmware Interface: Standard Extensible Firmware Interface), is a new generation of computer firmware, used to replace the traditional BIOS. UEFI firmware is stored in the flash memory of the main board. Its main functions include: initializing system hardware, setting the working status of each system component, adjusting the working parameters of each system component, diagnosing the function of each component of the system and reporting faults, and providing hardware for the upper-level software system. Operate the control interface, boot the operating system, etc. UEFI provides users with a menu-style man-machine interface, which is convenient for users to configure various system parameter settings, control power management modes, and adjust resource allocation of system equipment. Correctly setting various parameters of UEFI can make the system work stably and reliably, and at the same time improve the overall performance of the system. Improper or even wrong UEFI parameter settings will greatly reduce system performance, make the system unstable, or even fail to work normally.

4.2 UEFI Parameter settings

Whenever the system is powered on and booted up normally, you can see the information prompted to enter the UEFI setup program. At this time (other times are invalid), press the key specified by the prompt message (usually the key or <F2> key) to enter the UEFI setup program. All setting values (except date and time) modified through UEFI setting program are saved in the flash memory of the system, even if the power is turned off or the motherboard battery is unplugged, its content will not be lost;

Stored in the CMOS memory of the system, the CMOS memory is powered by a battery, even if the external power supply is cut off, its content will not be lost unless the operation of clearing the CMOS content is performed. Notice! The setting of UEFI directly affects the performance of the computer. Setting wrong parameters will cause damage to the computer, and even the computer cannot be turned on. Please use the built-in default value of UEFI to restore the normal operation of the system. As our company continues to develop and update UEFI, its setting interface will also be slightly different. The following screen is for your reference, and it may not be exactly the same as the UEFI setting program you are currently using.

4.3 UEFI Basic Function Settings

When the SETUP program starts, you can see the main screen as follows:

Aptio Setup Utility - Main Advanced Chipset Security	Copyright (C) 2013 American Boot Save & Exit	Megatrends, Inc.
BIOS Information Project Version Build Date and Time	ITCA4 V1.04 x64 07/01/2019 17:16:03	Choose the system default language
Processor Information Intel(R) Celeron(R) CPU J1900 @ 1.9	9GHz	
Memory Information Total Memory	4096 MB (DDR3L)	
System Language	[English]	
System Date System Time	[Mon 10/14/2019] [17:27:48]	++: Select Screen 11: Select Item
Access Level	Administrator	Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save & Exit ESC: Exit
Version 2.16.1242. C	opyright (C) 2013 American M	egatrends, Inc.

4.3.1 Main

System Date

Select this option, use < + > / < - > to set the current date. Expressed in month/day/year format. The reasonable scope of each item is: Month/month (1-12), Date/day (01-31), Year/year (up to 2099), Week/week (Mon.~Sun.).

System Time

Select this option, use < + > / < - > to set the current time. Expressed in hour/minute/second format. The reasonable range of each item is: Hour/hour (00-23), Minute/minute (00-59), Second/second (00-59).

PS: The RTC time of the 6th, 7th and 8th generation Core will be adjusted according to the OS

Advanced

Aptio Setup Utility – Copyright (C) 2013 American Main <mark>Advanced</mark> Chipset Security Boot Save & Exit	Megatrends, Inc.
 ACPI Settings Lan PXE Config SIO MISC Configuration IT8786 Super IO Configuration Wakeup Configuration CPU Configuration IDE Configuration Network Stack Configuration CSM Configuration USB Configuration 	System ACPI Parameters.
	<pre>++: Select Screen 1↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save & Exit ESC: Exit</pre>

ACPI Settings

Aptio Setup Utility – Advanced	Copyright (C) 2013 American	Megatrends, Inc.
ACPI Settings		Enables or Disables BIOS ACPI
Enable ACPI Auto Configuration		nato con igu ación.
Enable Hibernation ACPI Sleep State Lock Legacy Resources	[Enabled] [S3 (Suspend to RAM)] [Disabled]	
		<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save & Exit ESC: Exit</pre>
Version 2.16.1242. Co	pyright (C) 2013 American M	egatrends, Inc.

Lan PXE Configuration

Aptio Advanced	Setup Utility – Copyright (C) 2013 America	an Megatrends, Inc.
PXE Boot	[Disabled]	Enable or Disable
		<pre>f↓: Select Screen f↓: Select Item Enter: Select +/-: Change Opt. F1: General Help</pre>
		F2: Previous Values F9: Optimized Defaults F10: Save & Exit ESC: Exit
Vers	ion 2.16.1242. Copyright (C) 2013 American	Megatrends, Inc.

SIO MISC Configuration

Aptio Setup Ut. Advanced	ility – Copyright (C) 2013 Am	erican Megatrends, Inc.
Watch Dog Timer COM1 Mode COM2 Mode COM3 Mode COM4 Mode GP01 Ouput Value GP02 Ouput Value GP03 Ouput Value GP04 Ouput Value GP05 Ouput Value GP06 Ouput Value	[Disabled] [RS232] [RS232] [RS232] [RS232] [Low] [Low] [Low] [Low] [Low] [Low]	Enable or Disable WDT ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save & Exit ESC: Exit
Version 2.16.	1242. Copyright (C) 2013 Amer	ican Megatrends, Inc.

Watch Dog Timer

After setting to Enable, you can set minutes (seconds)

IT8786 Super IO Configuration

Aptio Setup Utility Advanced	– Copyright (C) 2013 American	Megatrends, Inc.
IT8786 Super IO Configuration		Set Parameters of Serial Port 1 (COMA)
<pre>Super IO Chip > Serial Port 1 Configuration > Serial Port 2 Configuration > Serial Port 3 Configuration > Serial Port 4 Configuration > Serial Port 5 Configuration > Serial Port 6 Configuration</pre>	IT8786	
		<pre> ++: Select Screen 1↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save & Exit ESC: Exit</pre>
Version 2.16.1242.	Copyright (C) 2013 American M	legatrends, Inc.

Wake up Configuration

Aptio Setup U Advanced	tility – Copyright (C) 2013 Ame	erican Megatrends, Inc.
Wakeup Configuration		Enable or disable System wake
Wake system from S5	[Disabled]	
		<pre>++: Select Screen f↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values</pre>
		F9: Uptimized Defaults F10: Save & Exit ESC: Exit
Version 2.16	.1242. Copyright (C) 2013 Amer.	ican Megatrends, Inc.

CPU Configuration

Aptio Setup Utility - Advanced	Copyright (C) 2013 American	Megatrends, Inc.
CPU Configuration		Socket specific CPU Information
 Socket 0 CPU Information CPU Thermal Configuration 		
CPU Speed 64-bit	2001 MHz Supported	
Active Processor Cores Limit CPUID Maximum Execute Disable Bit Hardware Prefetcher Adjacent Cache Line Prefetch Intel Virtualization Technology	[A11] [Disabled] [Enabled] [Enabled] [Enabled] [Enabled]	→+: Select Screen
Power Technology	[Energy Efficient]	<pre> f4: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save & Exit ESC: Exit</pre>
Version 2 16 1242 - Co	nuniaht (C) 2013 American M	

IDE Configuration

Aptio Setup Utility – (Advanced	Copyright (C) 2013 American	Megatrends, Inc.
IDE Configuration		Enable ∕ Disable Serial ATA
Serial-ATA (SATA) SATA Test Mode	[Enabled] [Disabled]	
SATA Speed Support SATA ODD Port SATA Mode	[Gen2] [No ODD] [AHCI Mode]	
Serial-ATA Port 0 SATA PortO HotPlug	[Enabled] [Disabled]	
Serial-ATA Port 1 SATA Port1 HotPlug	[Enabled] [Disabled]	→+: Select Screen ↑↓: Select Item
SATA PortO kimtigo SSD 12 (128.0GB)		Enter: Select +/−: Change Opt. F1: General Help
SATA Port1 Not Present		F2: Previous Values F9: Optimized Defaults F10: Save & Exit ESC: Exit
Version 2.16.1242. Co:	ругight (С) 2013 American Ми	egatrends, Inc.

Network Stack Configuration

Aptio Setu Advanced	up Utility – Copyright (C) 2013 Amer	ican Megatrends, Inc.
Network Stack Ipv4 PXE Support Ipv6 PXE Support PXE boot wait time	[Enabled] [Enabled] [Enabled] 0	Enable/Disable UEFI Network Stack
		<pre>++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save & Exit ESC: Exit</pre>
Version 2	2.16.1242. Copyright (C) 2013 Americ	an Megatrends, Inc.

CSM Configuration

Aptio Setup Utility – Advanced	Copyright (C) 2013 American	Megatrends, Inc.
Compatibility Support Module Configuration		Enable/Disable CSM Support.
CSM Support	[Enabled]	
CSM16 Module Version	07.74	
GateA2O Active Option ROM Messages INT19 Trap Response	[Upon Request] [Force BIOS] [Immediate]	
Boot option filter	[UEFI and Legacy]	
Option ROM execution		++: Select Screen
Storage Video Other PCI devices	(UEFI) (Legacy) (Legacy)	<pre>fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save & Exit ESC: Exit</pre>
Version 2.16.1242. Co	nuright (C) 2013 American M	egatrends. Inc.

USB Configuration

Aptio Setup Utility – C Advanced	Copyright (C) 2013 American	Megatrends, Inc.
USB Configuration		Enables Legacy USB support.
USB Module Version	8.11.01	support if no USB devices are connected. DISABLE option will
USB Devices: 1 Drive, 1 Keyboard, 2 Mice, 1	Point, 3 Hubs	keep USB devices available only for EFI applications.
Legacy USB Support XHCI Hand-off EHCI Hand-off USB Mass Storage Driver Support	[Enabled] [Enabled] [Disabled] [Enabled]	
USB hardware delays and time-outs:		
USB transfer time-out	[20 sec]	++: Select Screen
Device reset time-out Device nower-up delau	[20 SEC]	I∔: Select Item Enter: Select
bevice power up delay	[hdco]	+/-: Change Opt.
Mass Storage Devices:		F1: General Help
Generic Flash Disk 8.07	[Auto]	F2: Previous Values F9: Optimized Defaults F10: Save & Exit ESC: Exit
Vancian 2 16 1242 Par	unight (C) 2012 Amonicon W	orotaondo. Tao

4.3.2 Chipset

Aptio Setup Util: Main Advanced Chipset Secur	y – Copyright (C) 2013 American Megatrends, Inc. ty Boot Save & Exit
▶ North Bridge ▶ South Bridge	North Bridge Parameters
	++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save & Exit ESC: Exit
Version 2.16.124	. Copyright (C) 2013 American Megatrends, Inc.

North Bridge

Aptio Setup Utility Chipset	– Copyright (C) 2013 Amer.	ican Megatrends, Inc.
LCD Control Primary IGFX Boot Display Active LFP LCD Panel Type Backlight Control LVDS Channel Select LVDS Mode Brightness Mode Setting Panel Color Depth	[VBIOS Default] [LVDS] [1024x768] [PWM Normal] [Singe Channel] [VESA] [External] [24 Bit]	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
		<pre> ++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save & Exit ESC: Exit</pre>
Version 2.16.1242.	Copyright (C) 2013 America	an Megatrends, Inc.

South Bridge

Aptio Setup Utility – Copyright (C) 2013 American <mark>Chipset</mark>	Megatrends, Inc.			
 USB Configuration PCI Express Configuration 	USB Configuration Settings ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save & Exit ESC: Exit			
version 2.16.1242. copyright (c) 2013 American Megatrends, inc.				

USB Configuration

Aptio Setup Utility – <mark>Chipset</mark>	Copyright (C) 2013 American	Megatrends, Inc.			
USB Configuration USB OTG Support USB VBUS XHCI Mode USB2 Link Power Management USB 2.0(EHCI) Support USB Per Port Control USB Port 0 USB Port 1 USB Port 2 USB Port 3	[Disabled] [On] [Auto] [Enabled] [Disabled] [Enabled] [Enabled] [Enabled] [Enabled] [Enabled]	Enable/Disable USB OTG Support **: Select Screen f1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save & Exit ESC: Exit			
Version 2.16.1242. Copyright (C) 2013 American Megatrends, Inc.					

PCI Express Configuration

PCI Express ConfigurationEnable or Disable the PCIPCI Express Port 0[Enabled]PCI Express Port 0Iterabled]Speed[Auto]Extra Bus Reserved1Reseved Memory10Prefetchable Memory Alignment1Prefetchable Memory Alignment1Reserved I/04PCI Express Port 1[Enabled]Hot Plug[Enabled]Speed[Auto]Extra Bus Reserved0Reseved Memory Alignment1Hot Plug[Enabled]Speed[Auto]Extra Bus Reserved0Reseved Memory Alignment1Prefetchable Memory 100Prefetchable Memory 110Reseved Memory 110Reseved Memory Alignment1Prefetchable Memory 110Prefetchable Memory 111Reserved I/04PCI Express Port 2[Enabled]Hot PlugSpeed[Gen 1]Extra Bus Reserved0Fitzers Port 2[Enabled]Speed[Gen 1]Extra Bus Reserved0Fitzers Port 2[Gen 1]Extra Bus Reserved <th>Aptio Setup L Chipset</th> <th>ltility – Copyright (C) 2013 Ame</th> <th>erican Megatrends, Inc.</th>	Aptio Setup L Chipset	ltility – Copyright (C) 2013 Ame	erican Megatrends, Inc.
PCI Express Port 1[Enabled]Hot Plug[Enabled]Speed[Auto]Extra Bus Reserved0Reseved Memory10Reseved Memory Alignment1Prefetchable Memory Alignment1Prefetchable Memory Alignment1Reserved I/O4PCI Express Port 2[Enabled]Hot Plug[Enabled]Speed[Gen 1]Extra Bus Reserved0	PCI Express Configuration PCI Express Port 0 Hot Plug Speed Extra Bus Reserved Reseved Memory Reseved Memory Alignment Prefetchable Memory Prefetchable Memory Alignme Reserved I/O	[Enabled] [Enabled] [Auto] 1 10 1 10 10 10 4	▲ Enable or Disable the PCI Express Port 0 in the Chipset.
	PCI Express Port 1 Hot Plug Speed Extra Bus Reserved Reseved Memory Reseved Memory Alignment Prefetchable Memory Alignme Reserved I/O PCI Express Port 2 Hot Plug Speed Extra Bus Reserved	[Enabled] [Enabled] [Auto] 0 10 1 1 10 1 10 1 4 ent 1 4 [Enabled] [Enabled] [Gen 1] 0	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F9: Optimized Defaults F10: Save & Exit ESC: Exit</pre>

4.3.3 BOOT

Apt	io Setup Utility – Copyright (C Boot) 2013 American Megatrend:	;, Inc.
Boot Option #1 Boot Option #2	[PO: kimtig [Generic F1	o SSD 128] ash Disk] **: Select fl: Select Enter: Sel +/-: Chang F1: Genera F2: Previo F9: Optim. F10: Save ESC: Exit	system boot order : Screen : Item Lect ge Opt. al Help Dus Values ized Defaults & Exit
Ve	ersion 2.16.1242. Copyright (C)	2013 American Megatrends,	Inc.

Save Changes and Reset

This option is used to save changes and reboot (F10).

Discard Changes and Reset

This option is used to discard changes made and reboot.