User Manual Ver1.0

eBOX-3000-ETC

Fanless Industrial Computer

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Manual conventions



WARNING:

Warnings appear where overlooked details may cause damage to the equipment or result in personal injury. Warnings should be taken seriously.



CAUTION:

Cautionary messages should be heeled to help reduce the chance of losing data or damaging the product.



NOTE:

These messages inform the reader of essential but non-critical information. These messages should be read carefully as any directions or instructions contained therein can help avoid making mistakes.

Declaration of Conformity

This restriction is subject to provide protection for system operation in business environment, which will produce, use and transmit radio frequency energy. Without notice of the instructions of the correct installation and use, it may cause harmful interference to radio communication. The interference prevention cannot be guaranteed even with proper installation according to the manual. If the device gets bad affect on the signal of radio / TV. User could insure by turn device on/off. When this device produces some harmful interference, user can use the following

measure to solve interference problem:

- Set the receiving antenna's direction or location.
- Increase the distance between this device and receiver.
- Plug in this device's power connector into different circuits of the power outlet with receiver

If you need technical support, please inform the dealer or experienced radio/TV technical personnel.



NOTE:

If user changes the setting unauthorized or repairs the device without any approval of the relevant authority, then user's rights of controlling this device will be canceled.

Technical Support and Service

Please visit the Nodka website http://en.nodka.com to get more details.

If you need additional assistance, please contact your system reseller or vendor. Please have the following information ready before you call:

- 1. Product name and serial number
- 2. The product specification
- Description of your software (operational system, vision, application software, etc.)
- 4. A complete description of the problem
- 5. The exact wording of any error messages

Ordering Information

ort ty

Optional equipment:

Name	Description
Power cable	Power cable L= 1.8M+ external PSU
Hard disk	Support 2.5", MSATA
Memory	Support DDR4 2400, 2 x 260-pin, SO-DIMM Slot, Up to 32 GB Memory Size
СРU	Optional Intel® Core TM 6th / 7th generation i7 / i5 / i3 / Pentium / Celeron, LGA1151 Inter [®] Celeron TM Series: G3930 Inter [®] Pentium TM Series: G4600 Inter [®] Core TM Series: I5-6500T/6500/7500/7500T, I7-6700/6700T, I3-6100/7100



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Chapter 1

Overview

1.1 Introductions

eBOX-3000-ETC is a fanless mini PC based on Intel® Core[™] i3/i5/i7/Celeron high performance processor, impact and with large aluminum fin radiator, with no cable inside. The performance has increased 30% than the 6th/7th generation Intel® Core[™] processor. It uses dual channel DDR4 SODIMM, up to 32GB. There are 2 Intel210AT Ethernet slots, and can be extended to 6 groups. The design of VGA, DVI and HDMI interfaces to support multi screen synchronous/asynchronous. 4 USB 3.0 plus 4 USB 2.0. 4 x RS232 can be extended to 8 COMs.

OS support: Windows7, Windows10 and Linux.

1.2 Key Features

- Based on Intel Core 6th/7th generation i7/i5/i3/ Pentium/Celeron
- Aluminum alloy box
- Support 2 x 2.5 " HDD Bay/ mSATA
- > 2x Intel i210 Gbe LAN controller
- ➢ 8 x USB2.0/3.0, 4 x RS-232
- 1x PCIe x16 slot or 1x 32bits PCI
- I/O: VGA/ DVI /HDMI/ 2 x GLAN/ 8 x USB/ 4 x RS232/ PCIe x16+ PCI
- Support win7, Win7 Embedded, Win10, Linux

1.3 External Overview



Figure 1-1 Front and rear overview of eBOX-3000-ETC

1.4 Specifications

SYSTEM		eBOX-3000-ETC
Processor	CPU	Intel® Core™ 6th / 7th generation i7 / i5 / i3 / Pentium / Celeron
	Chipset	Intel H110 Express Chipset
	BIOS	AMI EFI 64Mbit
Memory	Architecture	DDR4-2400MHz
	Capacity	Up to 32GB
	DIMM	2 x 260-pin SODIMM
Display	VGA	Up to 1920 x 1200
	DVI	Support 1920 x 1200
	HDMI	1920 x1200
	Display	Yes, VGA + DVI+HDMI
LAN	LAN1	Intel i210 Gbe LAN controller (can be extended to 3* LAN ports)
	LAN2	Intel i210 Gbe LAN controller (can be extended to 3* LAN ports)
Audio	Port	Realtek ACL662 Audio controller, Line-out, Mic-in.
	Amplifier	N/A
I/O	СОМ	4 x RS-232 (can be extended to 8*COM)
	LPT(optional)	1* LPT
	USB	4 x USB3.0/2.0/1.1, 4x USB2.0/1.1
Other	Digital IO(optional)	8-way DIO and 8-way DO
	WatchDog	0~255 seconds programmable
Expansion	MiniPCle	2 * full size PCIe with SIM holder (can be extended to LAN or
slot		COM)
	PCIe & PCI	1 x PCIe x16 slot or 1 x 32bits PCI
Storage	HDD (optional)	2 x 2.5" HDD Bay (Max rate SATA III 6.0 Gb/s)
Medium	SSD (optional)	1 * MSATA
OS	Microsoft Windows	Windows 7, Windows 7 Embedded, Windows 10
	Linux	Ubuntu
Power	Туре	AT
	Input voltage	AC 90~ 264V

	Power Adapter	Optional				
Power	No-load	27Watt				
Dissipation	Full-load	55Watt (According to the CPU set, total power not exceeding 100W \rangle				
Mechanism	Box structure	Aluminum alloy BOX				
Parameters	Mounting	Rack-mounted				
	Dimensions	(L*W*H) 483mm x 252mm x 88mm (19.02" x 9.92" x 3.46")				
	NW	7.2kg				
Environment-	Work	-20 ~ 60°C (-4°F~140°F) (Wide temperature SSD),				
al	Temperature	0 ~ 45° C (32 °F ~113 °F) (General temperature HDD/SSD)				
	Storage					
	Temperature	$-40 \sim 80^{\circ}$ C (-40 ~ 176°F)				
	Relative humidity	5~95% (Non condensation)				
	Shake	SSD applied: 1.5 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1				
		hr/axis				
	Shock	SSD applied: 10 G, IEC 60068-2-64, Half-sine wave, 11ms				
		duration				
	EMC	CE/FCC Class A				
	Safety Certification	CCC				

1.5 Dimensions

Unit: mm



Figure 1-2 Dimensions of eBOX-3000-ETC

1.6 Assembly and disassembly

eBOX-3000- ETC has a unique structure design which makes COM port settings easily and quickly as well as the replacement of the hard disk.

1.6.1 Hard disk replacement

Step1. Find the orange HDD cover.



Step 2. Pull out the blue sign.



Step 3. Paste the pull & push sticker and the height adjusting frame on HDD.



Step 4. Insert the hard disk into the slot along the chute. Cover the orange hard disk cover.

Chapter 2

System installation

2.1 Connectors Definition



Figure 2-1 Definition of connectors

2.1.1 COM Ports

eBOX-3000-ETC has 4 COMs, which can be extended to 8 COMs. COM 1~4 are R232 type DB9 connector. PIN9 on DB9 defaults RI. The definitions are as follows:

	אום	SIGNAL
	PIN	RS232
	1	DCD
	2	RXD
• • • • •	3	TXD
	4	DTR
8°.	5	GND
	6	DSR
	7	RTS
	8	CTS
	9	RI

2.1.2 USB

We provide 2 X 2 standard double-deck USB port in front panel and 2 x 2 standard double-deck USB interface on I/O interfaces; you can use the 8 USB interfaces at the same time.

	PIN	SIGNAL
	1	+5V
	2	Date-
	3	Date+
	4	GND

2.1.3 Audio interface (LINE_OUT)

We provide a standard Ø3. 5 Phone Jack audio output interface (LINE_OUT), you can use it directly.

2.1.4 Ethernet Interfaces (LAN1, LAN2)

We provide two 10/100/1000Mbps RJ-45 Ethernet interfaces, you can use it directly. There are two status indicators, links status on the left side, data transmission status on the right side. Four more LAN interfaces can be extended by Mini PCIe slot.

	PIN	SIGNAL	PIN	SIGNAL
1-120	1	TX0+	5	TX2+
	2	TX0-	6	TX2-
	3	TX1+	7	TX3+
	4	TX1-	8	TX3-

Indicators of LAN connector.

Network	Left (LILED) double colors		Right (ACTLE	D) single color
status	(Orange / Green)		(Yel	low)
1000M	N/A	Constant ON	FLASH	OFF
100M	Constant ON	N/A	FLASH	OFF
10M	OFF	OFF	FLASH	OFF
A otivio		ODANCE	Data	No Data
Active	ACTIVE GREEN ORANGE	Transferring	Transferring	
description	Linking indicator		Active status indicator	

2.1.5 PS2 Keyboard/Mouse Connector

Slot	Pin	Definition	Pin	Definition
	1	KB_Data	2	MS_DATA
	3	GND	4	+5V
	5	KB_Clock	6	MS_Clock

2.1.6 VGA interface

We provide a standard DB15 monitor interface, you can connect it directly.

	PIN	SIGNAL	PIN	SIGNAL
\bigcirc	1	RED	9	+5V
	2	GREEN	10	GND
	3	BLUE	11	NC
	4	NC	12	DDC_Data
	5	GND	13	HSYNC
	6	GND	14	VSYNC
	7	GND	15	DDC_Clock
	8	GND		

2.1.7 DVI interface

We provide a DVI-D interface in the rear panel which makes double display with VGA

possible. The definition is as below.

		1		
DVI-1 Connector	PIN	FUNCTION	PIN	FUNCTION
	1	TMDS Data 2-	13	TMDS Data 3+
	2	TMDS Data 2+	14	`+5V DCPower
	3	TMDS Data 2/4 Shield	15	Earth (+5 circuit)
1 .	4	TMDS Data	16	HPD
16 ⁸ C1 C2	5	TMDS Data	17	TMDS Data 0-
	6	DDC clock	18	TMDS Data 0+
	7	DDC Data	19	TMDS Data 0/5 Shield
	8	Analog Vertical Synchronization	20	TMDS Data 5-
	9	TMDS Data 1-	21	TMDS Data 5+
17 24 3 64	10	TMDS Data 1+	22	TMDS Data clock Shield
	11	TMDS Data 1/3 Shield	23	TMDS Data clock+
	12	TMDS Data 3-	24	TMDS Data clock-
	C1	Analog Vertical Synchronization	C4	Analog horizontal synchronization
	C2	Analog Green	C5	Analog Earth(RGB circuit)
	C3	Analog Blue		

2.1.8 Switch button (PWR)

On rear panel, we provide an ATX power touch switch button (PWR) to power up.

2.1.9 Power connector

PRODUCT offers a 2-pins power input.

	PIN	SIGNAL
	1	GND
1 2	2	12V

2.1.10 PWR, hard drive status indicators

We provide a set of indicators to show the status of the power and the hard drive. Continuous green light indicates that the power is switched on. Flashing red light on hard drive indicator means that the hard drive is reading/writing data.

2.1.11DIO interface



PIN	SIGNAL	PIN	SIGNAL	PIN	SIGNAL
1	R0_NO	10	DI3	19	R4_NO
2	R6_NO	11	DI5	20	R4_COM
3	R0_COM	12	DI7	21	DIO
4	R1_NO	13	DI.COM or DI.GND	22	DI2
5	R7_NO	14	R2_NO	23	DI4
6	R1_COM	15	R6_COM	24	DI6
7	R5_NO	16	R2_COM	25	R7_COM
8	R5_COM	17	R3_NO		
9	DI1	18	R3_COM		

2.2 BIOS Setup

The BIOS is programmed onto the BIOS chip, the BIOS setup program allows changes to certain system settings. This chapter outlines the options that can be changed.



NOTE:

Some of the BIOS options may very throughout the life cycle of the product and are subject to change without prior notice.

2.2.1 Starting setup

The AMI is activated when the computer is turned on. The setup program can be activated in one of two ways:

1. Press the **DEL** key as soon as the system is turned on.

2. Press the **DEL** key when the **Press Del to enter SETUP** tip appears on the screen. If the message disappears before the **DEL** key is pressed, restarted the computer and try again. General Introduction

2.2.2 Using setup

Use the arrow keys to highlight items. Press ENTER to select, use the PAGE UP and

PAGE DOWN keys to change entries. Press F1 for help and press ESC to quit.

Navigation keys are shown as table below.

Table 2-1 Keys of BIOS navigation

Кеу	Function
Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item on the left side
Right arrow	Move to the item on the right side
ESC	Reset
+	Increase the numeric value or make changes
-	Decrease the numeric value make changes

F1	General help, only for the status page setup menu and option page setup menu
F2	Previous value
F3	Optimized defaults
F4	Save all the CMOS changes and reset

The menu bar which is anchored to the top of the BIOS screen has the following main items:

items:

- > Main Changes the basic system configuration.
- Advanced Changes the advanced system settings
- > Chipset Changes the chipset settings.
- Security Sets user and supervisor passwords.
- Boot Changes the system boot configuration.
- Exit Selects exit options and loads default settings.

2.2.3 Main settings

Aptio Setup Utility – Main Advanced Chipset Security	Copyright (C) 2017 American Boot Save & Exit	Megatrends, Inc.
BIOS Information		Set the Date. Use Tab to switch between Date elements.
BIOS Version Build Date and Time	S298A 0.01 x64 10/31/2017 17:11:13	
Memory Frequency Total Memory	1600 MHz 2048 MB	
System Date System Time	[Wed 01/24/2018] [10:58:29]	
Access Level	Administrator	<pre>++: Select Screen f↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.18.1256. Co	pyright (C) 2017 American M	egatrends. Inc.

The Main menu has two user configurable fields.

System Time:

Set the system time, the time format is HH: MM: SS

System Date:

Set the system date, the date format is MM/DD/YY

Day: Note that the 'Day' automatically changes when you set the date.

2.2.4 Advanced setting

The Advanced BIOS Setup screen is shown as below. The sub menus are described on the following pages.

Aptio Setup Utility – Co Main Advanced Chipset Security Bo	right (C) 2018 American Megatrends, Inc. Save & Exit
 CPU Configuration ACPI Settings SATA Configuration Display Configuration AC Power Loss Wake up Settings Watch Dog Configuration Super IO Configuration Hardware Monitor CSM Configuration USB Configuration 	CPU Configuration Parameters
	++: Select Screen ++: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit F12: Save BIOS Screen ESC: Exit
Version 2.18.1263. Copy	ght (C) 2018 American Megatrends, Inc.

a. Advance - CPU Configuration

Choose CPU configuration menu in **Advanced** menu to view detailed CPU specifications or enable the Intel Virtualization Technology.

Aptio Setup Utility - Advanced	Copyright (C) 2018 American	Megatrends, Inc.
CPU Configuration		To turn on/off the MLC
CPU Signature ID CPU Speed L1 Data Cache L1 Instruction Cache L2 Cache L3 Cache L4 Cache L4 Cache	Intel(R) Celeron(R) CPU G3930 @ 2.90GHz 0x906E9 2900 MHz 32 KB x 2 32 KB x 2 256 KB x 2 256 KB x 2 2 MB N/A Supported	Streamer prefetcher.
SMX/IXI Handware Prefetcher Intel Virtualization Technology Intel(R) SpeedStep(tm) C states Intel(R) Speed Shift Technology	Not Supported [Enabled] [Enabled] [Disabled] [Enabled] [Enabled]	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit F12: Save BIOS Screen ESC: Exit</pre>
Version 2.18.1263. Co	pyright (C) 2018 American M	egatrends, Inc.

b. Advance - ACPI Configuration

Aptio Setup Utility - Advanced	Copyright (C) 2018 American	Megatrends, Inc.
ACPI Settings		Enables or Disables BIOS ACPI
Enable ACPI Auto Configuration		Nuclo configuración.
ACPI Hibernate state ACPI Sleep State	[Disabled] [Suspend Disabled]	
		<pre>++: Select Screen f↓: Select Item</pre>
		Enter: Select +/−: Change Opt.
		F1: General Help F2: Previous Values
		F3: Uptimized Defaults F4: Save & Exit F12: Save BIDS Screen
		ESC: Exit
Version 2.18.1263. Co	pyright (C) 2018 American M	legatrends, Inc.

c. SATA Configuration

Aptio Setup Utility - (Advanced	Copyright (C) 2018 American	Megatrends, Inc.
Aptio Setup Utility - (Advanced SATA Configuration SATA Controller(s) SATA Mode Selection SATA Controller Speed MSATA Port 1 MSATA Port 1 Hot Plug SATA Port 1 Hot Plug SATA Port 2 SATA Port 2 Hot Plug	Copyright (C) 2018 American [Enabled] [AHCI] [Default] FORESEE 32GB S (32.0GB) [Enabled] [Disabled] [Disabled] [Disabled] [Disabled] [Enabled] [Disabled] [Disabled]	<pre>Megatrends, Inc. Enable/Disable SATA Device. ++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit F12: Save BIOS Screen</pre>
		ESC: Exit
Version 2.18.1263. Co	pyright (C) 2018 American M	egatrends, Inc.

d. Display Configuration



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e. AC Power Loss



f. Wake up Settings

Aptio Setu Advanced	up Utility – Copyright (C) 2018 America	n Megatrends, Inc.
Wake up Settings		Enable or disable System wake on alarm event. When enabled,
Wake system from s5 Wake on LAN	[Disabled] [Disabled]	System will wake on the hr::min::sec specified
		<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit F12: Save BIOS Screen ESC: Exit</pre>
Version 2	2.18.1263. Copyright (C) 2018 American	Megatrends, Inc.

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g. Super IO Configuration

Aptio Setup Utility - Advanced	Copyright (C) 2018 American	Megatrends, Inc.
Super IO Configuration		Set Parameters of Serial Port 1 (COMA)
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 > Parallel Port Configuration	IT8786	
		<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit F12: Save BIOS Screen ESC: Exit</pre>
Version 2.18.1263. Co	pyright (C) 2018American M	egatrends, Inc.

h. USB Configuration

Aptio Setup Utility – Advanced	Copyright (C) 2018 American	Megatrends, Inc.
USB Configuration		Enables Legacy USB support. AUTO option disables legacu
USB Module Version	19	support if no USB devices are connected. DISABLE option will
USB Controllers: 1 XHCI		keep USB devices available only for EFI applications.
USB Devices: 1 Drive, 1 Keyboard, 1 Mouse		
Legacy USB Support XHCI Hand-off USB Mass Storage Driver Support	(Enabled) (Enabled) (Enabled)	
Port 60/64 Emulation	[Disabled]	→+: Select Screen
USB hardware delays and time–outs:		†↓: Select Item
USB transfer time–out	[20 sec]	Enter: Select
Device reset time—out	[20 sec]	+/-: Change Opt.
Device power–up delay	[Auto]	F1: General Help
Mass Storade Devices:		F2: Previous values
SanDisk	[Auto]	F4: Save & Exit
	2110(0)	F12: Save BIOS Screen
		ESC: Exit
Vérsion 2.18.1263. Co	pyright (C) 2018 American M	egatrends, Inc.

2.2.5 Chipset configuration

Aptio Setup Chipset	Utility – Copyright (C) 2018 American Megatrends, Inc.
PCH-IO Configuration > PCI Express Configuration > LAN Configuration > USB Configuration > HD Audio Configuration		PCI Express Configuration settings
		<pre>++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit F12: Save BIOS Screen ESC: Exit</pre>
Version 2.1	8.1263. Copyright (C)	2018 American Megatrends, Inc.
Antio Setur I	Utilitu – Copuright (C	2018 American Megatrends Inc
Chipset	500000 1811 (5.	
PCI Express Configuration PCI Express Clock Gating DMI Link ASPM Control PCIE Port assigned to LAN Port8xh Decode Peer Memory Write Enable Compliance Test Mode PCIE-USB Glitch W/A PCIe function swap ▶ PCI Express Gen3 Eq Lanes	[Enabled] [Enabled] Disabled [Disabled] [Disabled] [Disabled] [Disabled] [Enabled]	▲ PCI Express Clock Gating Enable/Disable for each root port.
 PCI Express Root Port 1 PCI Express Root Port 2 PCI Express Root Port 3 PCI Express Root Port 4 PCI Express Root Port 5 PCI Express Root Port 6 PCI Express Root Port 7 PCI Express Root Port 8 PCI Express Root Port 9 PCI Express Root Port 10 PCI Express Root Port 11 		++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit F12: Save BIOS Screen ESC: Exit
PCI Express Root Port 12 PCI Express Root Port 12		

2.2.6 BOOT Configuration



2.2.7 Security settings

Aptio Setup Main Advanced Chipset	Utility – Copyright (C) 2011 A Boot Security Save & Exit	merican Megatrends, Inc.
Password Description If ONLY the Administrator' then this only limits acce only asked for when enteri If ONLY the User's passwor	s password is set, ss to Setup and is ng Setup. d is set then this	Set Administrator Password
is a power on password and boot or enter Setup. In Se have Administrator rights. The password length must b in the following range: Minimum length Maximum length	must be entered to tup the User will e	
Administrator Password User Password		++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Reset
Version 2.1	4,1219. Copyright (C) 2011 Ame	rican Megatrends, Inc.

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2.2.8 Save & Exit Option



a. Save Changes and Exit

When you have completed system configuration, select this option to save your changes, exit BIOS setup and reboot the computer. So the new system configuration parameters can take effect.

 Select Exit Saving Changes from the Exit menu and press Enter. The following message appears: Save Configuration Changes and Exit Now? [Ok] [Cancel]
 Select Ok or cancel.

b. Discard Changes and Exit

Select this option to quit Setup without making any permanent changes to the system configuration.

Select Exit Discarding Changes from the Exit menu and press Enter. The following message appears: Discard Changes and Exit Setup Now? [Ok] [Cancel]
 Select Ok to discard changes and exit.

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2.3 Driver installation

NOTE:

Please Install Operating system first. All drivers of eBOX-3000-ETC are

under the Windows XP.

When first using the system, users need to set up corresponding drivers to make sure

all functions are normal. To install the drivers, please follow the steps below:

Step 1. Please download the drivers from http://en.nodka.com/service/Download/.

Step 2. Select the correct diver corresponding with the model of your product.

All the drivers are the same as eBOX-3000. So please search eBOX-3000.

•	Please input keywords 🔍 🖉 中文版 📲 ENGLISH
🕗 порна 🗃	HOME ABOUTUS NEWS PRODUCT SUPPORT SOLUTION CONTACT
SUPPORT	Your Location: HOME > SUPPORT > Driver Download
 Online after sales 	The driver software search
 Online Tech.support 	Embedded Industrial PC Fanless BOXPC FeBOX-3000 FebOX-3000FebOX-3000 FebOX-3000FebOX-3000 FebOX-3000FebOX-3000FebOX-3000FebOX-3000FebOX-3000FebOX-3000FebOX-3000FebOX-3000FebOX-3000FebOX-3000FebOX-3000FebOX-3000FebOX-3000FebOX-3000FebOX-3000FebOX-3000FebOX-3000Feb
Driver Download	

Step 3. Enter the download page of the corresponding diver and click Download

button.

A.				Please input	keywords Q	🥅 中文版	ENGLISH
// NOOHA 语达信	HOME	ABOUT US	NEWS	PRODUCT	SUPPORT	SOLUTION	CONTACT
SUPPORT				Your L	ocation: HOME	> SUPPORT > Dri	ver Download
Online after sales	eBOX-3000,eBOX	-3000H,eBOX-3	000-MVS,ICP	8XX-C-7200U,	ICP69XX-C-72	00U Intel ME Dr	iver
Online Tech.support	File size: 72.3MB						
Driver Download	Date: 2018-11-27 16	:45:55				Download	



NOTE:

You must first install the Intel chipset diver (INF) before proceeding with the installation of other drivers. It is best to restart the system according to the prompt after installing the driver every time.

2.3.1 Chipset driver

To install the chipset diver, please follow the steps below.

Step 1. Right select management into the computer management window. Then right

click to update SM bus controller as shown in the figure below.

~	4	DESKTOP-GK31NN3	Actions	
	>	Computer	Device Manager	
	>	Disk drives		
	>	🕎 Display adapters	More Actions	•
	>	🙀 Human Interface Devices		
	>	TDE ATA/ATAPI controllers		
	>	🔤 Keyboards		
	>	Mice and other pointing devices		
	>	Monitors		
	>	🖵 Network adapters		
- 2	~	Other devices		
		📓 Base System Device		
		🙀 PCI Data Acquisition and Signal Processing Controller		
		🙀 PCI Memory Controller		
		R PCI Simple Communications Controller		
		📓 SM Bus Controller		
	>	Ports (COM & LPT)		
	>	📇 Print queues		
	>	📇 Printers		
	>	Processors		
	>	Software devices		
	>	🐐 Sound, video and game controllers		
	>	Storage controllers		
	>	The System devices		
	>	Universal Serial Bus controllers		
	>	🚔 WSD Print Provider		

Step 2. Double-click Chipset.

Name	Date modified	Туре	Size
1.Chipset	6/4/2018 10:42 PM	File folder	
2.Audio	6/4/2018 10:42 PM	File folder	
3.LAN	6/4/2018 10:42 PM	File folder	
4.Graphics	6/4/2018 10:43 PM	File folder	
<mark></mark>	6/4/2018 10:44 PM	File folder	

Step 3. Click SetupChipset.

Name	Date modified	Туре	Size
📄 mup	12/29/2017 1:17 AM	XML Document	627 KB
闄 SetupChipset	12/29/2017 1:17 AM	Application	3,377 KB
WixLicenseNote	12/29/2017 1:16 AM	Text Document	4 KB

Step 4. Click Next.



Step 5. Read the license agreement. Click Accept.

Intel(R) Chipset Device Software	(intel)
License Agreement	
INTEL SOFTWARE LICENSE AGREEMENT (OEM / IHV / ISV Distribu User)	ition & Single
IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING. Do not use or load this software and any associated materials (col "Software") until you have carefully read the following terms and loading or using the Software, you agree to the terms of this Agree not wish to so agree, do not install or use the Software.	llectively, the conditions. By sement. If you do
Please Also Note: * If you are an Original Equipment Manufacturer (OEM), Independent Vendor (IHV), or Independent Software Vendor (ISV), this complet AGREEMENT applies; * If you are an End-User, then only Exhibit A, the INTEL SOFTWAR AGREEMENT applies	lent Hardware e LICENSE E LICENSE
Back Accept	Cancel



Step 6. Click Restart Now.



View Log Files

Restart Now

Restart Later

2.3.2 Graphics driver

To install graphics diver, please follow the steps below.

Steps 1. Select the application of graphics driver.

Name	Date modified	Туре	Size
DisplayAudio	6/4/2018 10:43 PM	File folder	
Graphics	6/4/2018 10:44 PM	File folder	
Lang	6/4/2018 10:44 PM	File folder	
🔜 хб4	6/4/2018 10:44 PM	File folder	
autorun 🛛	5/25/2017 11:25 PM	Setup Information	1 KB
DIFxAPI.dll	5/25/2017 11:25 PM	Application extens	312 KB
mup	5/25/2017 11:26 PM	XML Document	54 KB
ReadMe	5/30/2017 2:08 AM	Text Document	6 KB
😹 Setup	5/25/2017 11:26 PM	Application	989 KB
Setup.if2	5/25/2017 11:26 PM	IF2 File	16 KB

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Step 2. Click Automatically run WinSAT and enable the Windows Aero desktop theme (if supported). Click Next.



Step 3. Read license agreement. Click Yes.

Intel® Installation Framework	
Intel® Graphics Driver	(intel)
You must accept all of the terms of the license agreement in order to continue program. Do you accept the terms?	the setup
INTEL SOFTWARE LICENSE AGREEMENT (OEM / IHV / ISV Distribution & Single IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING. Do not use or load this software and any associated materials (collectively, th until you have carefully read the following terms and conditions. By loading or Software, you agree to the terms of this Agreement. If you do not wish to so install or use the Software. Please Also Note:	e User)
* If you are an Original Equipment Manufacturer (OEM), Independent Hardwa (IHV), or Independent Software Vendor (ISV), this complete LICENSE AGREED * If you are an End-User, then only Exhibit A, the INTEL SOFTWARE LICENSE < Back Yes	are Vendor MENT applies; AGREEMENT,
Intel®	Installation Framework

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Step 4. Click NEXT to continue.



Driver Version: 15.40.28.64.4501 Release Version: Production Version Platform / Operating System(s):		* E
6th Gen Intel(R) Core(TM) processor family (Microsoft Windows* 7-64 Microsoft Windows* 8.1-64 Microsoft Windows* 10-64 (Nov_U	(codename Skylake) Jpd_RTM_10586)	
5th Generation Intel(R) Core(TM) processor Microsoft Windows* 7-64 Microsoft Windows* 8-64	family (codename Broadwell)	Ŧ
-	< Back Next >	Cancel

Step 5. Click Next.

Intel® Installation Framework	
Intel® Graphics Driver	(intel)
Setup Progress	
Please wait while the following setup operations are performed:	
Deleting Registry Key: HKLM\SOFTWARE\Intel\IGDI Deleting File: C: \ProgramData\Microsoft\Windows\Start Menu\Programs\In Deleting File: C: \Users\Public\Desktop\Intel(R) HD Graphics Control Panel.Ir Deleting File: C: \Users\Public\Desktop\Intel(R) Iris(TM) Graphics Control Panel.In Deleting File: C: \Users\Public\Desktop\Intel(R) Iris(TM) Graphics Control Panel Deleting Registry Key: HKLM\SOFTWARE\Intel\GFX\Internal\AudioFix Deleting Registry Key: HKLM\SOFTWARE\Intel\GFX\Internal\AudioFix	tel\Intel(R) HD Grap tel(R) HD Graphics of tel(R) Graphics and tel\Intel(R) Graphic nk tel\Intel(R) Iris(TM) nel.lnk
Click Next to continue.	T
	Next >

– Intel® Installation Framework

– Intel® Installation Framework



Step 6. Select Yes, I want to restart this computer now.. Click Finish to complete the installation.



2.3.3 Audio driver

To install audio diver, please follow the steps below.

Step1. Double click the folder of audio driver.

me	Date modified	Туре	Size
1.Chipset	6/4/2018 10:42 PM	File folder	
2.Audio	6/4/2018 10:42 PM	File folder	
3.LAN	6/4/2018 10:42 PM	File folder	
4.Graphics	6/4/2018 10:43 PM	File folder	
5.ME	6/4/2018 10:44 PM	File folder	

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Step 2. Click Setup

Name	Date modified	Туре	Size
(注) UXU414	0/21/2010 11:39 PIVI	Contiguration sett	24 ND
0x0415	4/24/2013 7:55 PM	Configuration sett	24 KB
🗟 0x0416	9/17/2014 8:55 AM	Configuration sett	24 KB
🗟 0x0419	6/21/2010 11:43 PM	Configuration sett	23 KB
🐻 0x0421	6/21/2010 11:37 PM	Configuration sett	25 KB
6 0x0424	6/21/2010 11:45 PM	Configuration sett	24 KB
5 0x0804	6/21/2010 11:49 PM	Configuration sett	11 KB
🔄 0x0816	9/9/2014 8:34 AM	Configuration sett	25 KB
ChCfg	2/8/2011 11:56 PM	Application	75 KB
data1	5/29/2015 12:53 AM	Cabinet File	6,006 KB
data1.hdr	5/29/2015 12:53 AM	HDR File	45 KB
🔄 data2	5/29/2015 12:53 AM	Cabinet File	1 KB
SSetup.dll	5/29/2015 1:01 AM	Application extens	782 KB
layout.bin	5/29/2015 12:53 AM	BIN File	2 KB
Readme	6/24/2015 10:35 PM	Text Document	1,416 KB
RtlExUpd.dll	5/27/2015 2:38 AM	Application extens	2,760 KB
Setup	5/29/2015 1:01 AM	Application	1,166 KB
setup	6/24/2015 10:32 PM	Configuration sett	6 KB
setup.inx	5/29/2015 12:53 AM	INX File	518 KB
setup.isn	5/12/2014 8:07 PM	ISN File	254 KB
setup.iss	5/31/2005 12:01 AM	ISS File	1 KB
USetup.iss	11/13/2007 11:18	ISS File	1 KB





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Step 4. Click Finish



2.3.4 LAN driver

To install LAN driver, please follow the steps below.

Step 1. Right select management into the computer management window. Then right click to update Intel(R) I210 Gigabit Network Connection#2 as shown in the figure below.



Step 2. Choose Browse my computer for diver software.

← 📱 Update Drivers - Intel(R) I210 Gigabit Network Connection #2

How do you want to search for drivers?



Cancel

→ Browse my computer for driver software Locate and install driver software manually.



2.3.5	Me	diver

Installing drivers...

To install ME driver, please follow the steps below.

Step 1	Click	Setu	рME
--------	-------	------	-----

Name	Date modified	Туре	Size
IntelMEFWVer.dll	12/29/2017 1:16 AM	Application extens	21 KB
👜 mup	12/29/2017 1:17 AM	XML Document	28 KB
👑 SetupME	12/29/2017 1:18 AM	Application	74,595 KB

Step 2. Click Next

Setup	×
Intel® Management Engine Components Welcome	(intel)
You are about to install the following product:	

Intel® Management Engine Components 11.7.0.1054

It is strongly recommended that you exit all programs before continuing. Click Next to continue, or click Cancel to exit the setup program.

Intel Corporation	< Back	Next >	Cancel
Step 3. Click Next.			
Setup			
Intel® Management Engine Components Destination Folder		Ċ	itel)
Click Next to install to the default folder, or click Change	to choose an	other destin	ation folder.
C:\Program Files (x86)\Intel\Intel(R) Management Engir	ne Componen	ts	
			Change

Intel Corporation

< Back Next >

Cance

Step 4. Read license agreement. Choose I accept the terms in the License

Agreement., Click Next.





Intel Corporation

< Back Next >

Finish

Appendix A Safety Precautions



CAURION:

The precautions outlined in this chapter should be strictly followed. Failure to do so may cause permanent damage to the product.

A.1 General Safety Precautions

Please read the following safety precautions carefully. Make sure you always follow the precautions. Keep this User Manual for later reference.

1. Always follow the Anti-static precautions (A.2) when the product is opened.

2. Make sure the power is turned off and the power cord is disconnected when the PRODUCT is being installed, moved or modified.

3. When the PRODUCT is running, electric shocks may occur if the chassis of product is open.

4. If amounts of dust, water, or fluids enter the product, please immediately **turn off the power supply and pull out the plug**, then contact the vendor.

5. DO NOT APPLY A VOLTAGE WHICH EXCEEDS THE SPECIFIED VOLTAGE RANGE. OTHERWISE, THIS MAY RESULT IN FIRE OR ELECTRIC SHOCK.

6. DO NOT DROP OR INSERT ANY OBJECTS INTO THE VENTILATION OPENINGS OF THE PRODUCT.

- 7. DO NOT DROP THE PRODUCT AGAINST A HARD SURFACE.
- 8. DO NOT STRIKE OR EXERT EXCESSIVE FORCE ONTO THE LCD PANEL.
- 9. DO NOT TOUCH ANY OF THE LCD PANELS WITH A SHARP OBJECT.

10. DO NOT STORE THE PRODUCT IN OUT OF THE TEMPERATURE RANGE WHAT WE SUGGESTED, NOT LESS THEN -30°C OR HIGHER THAN 80°C, OR MAY DAMAGE THE DEVICE.

A.2 Anti-static Precautions



WARNING:

During the installation of the product, failure to take ESD precautions may result in permanent damage to the device and cause severe injury to the user.

Electrostatic discharge (ESD) may cause severe damage to electronic components of product, especially during dry weather. Therefore, please strictly observe the anti-static precautions when opens the product to handle any electrical components inside.

- 1. Wear an anti-static wristband to prevent ESD from damaging any electrical components.
- Before and during handling the electrical components, please frequently touch grounded conducting materials to ground yourself.
- When configuring or working with an electrical component, please put the component on an anti-static pad in order to reduce the possibility of ESD damage.
- 4. Only touch the edges of the electrical component, when handling it.

A.3 Disposing of the Equipment



CAURION:

If the battery is replaced with the wrong type, there might be a risk of a battery explosion. Only certified engineers can replace the on-board battery.



NOTE:

Disposal of used batteries must be in accordance with local environmental regulations.

Within the European Union:



EU-wide legislation, as implemented in each Member State, requires that waste electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste. This includes monitors and electrical accessories, such as signal cables or power cords. When you need to dispose of your

display products, please follow the guidance of your local authority, or ask the shop where you purchased the product. The mark on electrical and electronic products only applies to the current European Union Member States.

Please follow the national guidelines for electrical and electronic product disposal.

Outside the European Union:

If you want to dispose the used electrical and electronic products outside the European Union, please contact your local authority so as to comply with the correct disposal method.

A.4 Maintenance and Cleaning Precautions

When maintaining or cleaning the product, please follow the guidelines below.

A.4.1. Maintenance and Cleaning

Prior to cleaning any part or component of the product, please read the details below.

- Except for the LCD panel, never spray or squirt liquids directly onto any other components. To clean the LCD panel, gently wipe it with a piece of soft dry cloth or a slightly moistened cloth.
- 2. The interior does not require cleaning. Keep fluids away from the interior.
- 3. Be careful not to damage the small, removable components inside.
- 4. Turn off before cleaning.
- 5. Never drop any objects or liquids through the openings.
- Be cautious of any possible allergic reactions to solvents or chemicals used when cleaning.
- 7. Avoid eating, drinking and smoking nearby.

A.4.2. Cleaning Tools

Some components may only be cleaned using a product specifically designed for the purpose. In such case, the product will be explicitly mentioned in the cleaning tips. Below is a list of items to use for cleaning.

- Cloth Although paper towels or tissues can be used, a soft, clean piece of cloth is recommended.
- Water or rubbing alcohol A cloth moistened with water or rubbing alcohol should be used.
- Using solvents The use of solvents is not recommended as they may damage the plastic parts.
- Vacuum cleaner Using a vacuum specifically designed for computers is one of the best methods of cleaning. Dust and dirt can restrict the airflow and cause circuitry to corrode.

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- 5. **Cotton swabs** Cotton swaps moistened with rubbing alcohol or water are excellent tools for wiping hard to reach areas.
- 6. **Foam swabs** Whenever possible, it is best to use lint free swabs such as foam swabs for cleaning.

Appendix B

B.1 Hazardous Materials Disclosure Table for IPB Products Certified as RoHS Compliant Under 2002/95/EC without Mercury

The details provided in Appendix B are to ensure that the product is compliant with the Peoples Republic of China (China) RoHS standards. The table below acknowledges the presences of small quantities of certain materials in the product, and is applicable to China RoHS only.

A label will be placed on each product to indicate the estimated "Environmentally Friendly Use Period" (EFUP). This is an estimate of the number of years that these substances would "not leak out or undergo abrupt change." This product may contain replaceable sub-assemblies/components which have a shorter EFUP such as batteries and lamps. These components will be separately marked. Please refer to the table on the next page.

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	Toxic or Hazardous Substances and Elements						
Component	Lead (Pb) Mercur	Morecure (Lie)	Aercury (Hg) Cadmium(Cd)	Hexavalent Chromium	Polybrominated Biphenyls	Polybrominated Diphenyl Ethers	
		wercury (Hg)		(Cr(VI))	(PBB)	(PBDE)	
Housing	х	0	0	0	0	Х	
Printed Circuit Board	х	0	0	О	0	Х	
Metal Fasteners	х	0	0	0	0	0	
Cable Assembly	х	0	0	О	0	Х	
Fan Assembly	х	0	0	О	0	Х	
Battery	0	0	0	0	0	0	

B-1 Poisonous or hazardous substances or element in products

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.

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User Manual