FOX-121

Intel® AtomTM N270 Processor

Multipurpose & Waterproof

Panel PC

with 12.1" TFT LCD

Copyright Notice

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Packing List

Before you begin operating your PC, please make sure that the following materials are enclosed:

- 1 USB Cable with water proof Connector
- 2 COM Cables with water proof Connectors
- 1 waterproof Connecter for LAN
- 1 Easy stand
- 1 CD-ROM for manual (in PDF format)
- 1 FOX-121 Multi purpose & Waterproof Panel PC

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

Safety & Warranty

1. Read these safety instructions carefully.

2. Keep this user's manual for later reference.

3. Disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.

4. For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.

5. Keep this equipment away from humidity.

6. Put this equipment on a firm surface during installation. Dropping it or letting it fall could cause damage.

7. The openings on the enclosure are for air convection. Protect the equipment from overheating. DO NOT COVER THE OPENINGS.

8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.

9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.

10. All cautions and warnings on the equipment should be noted.

11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.

12. Never pour any liquid into an opening. This could cause fire or electrical shock.

13. Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.

14. If any of the following situations arises, get the equipment checked by service personnel:

    a. The power cord or plug is damaged.

    b. Liquid has penetrated into the equipment.

    c. The equipment has been exposed to moisture.

d. The equipment does not work well, or you cannot get it to work according to the user's manual.

e. The equipment has been dropped and damaged.

f. The equipment has obvious signs of breakage.

15. DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20°C (-4°F) OR ABOVE 70°C (158°F). IT MAY DAMAGE THE EQUIPMENT.

16. DO NOT OPEN the sealed Enclosure /case of equipment. Once enclosure is disassembled without approval, it will lead in abnormal operating of water proof gel. For Guarantee of water proof function, please make sure configuration/ peripheral (HDD,RAM, peripherals) has been confirmed to install before shipping.

FCC

Warning!

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.

Below Table for China RoHS Requirements
产品中有毒有害物质或元素名称及含量

AAEON Panel PC/ Workstation

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板 及其电子组件	×	○	○	○	○	○
外部信号 连接器及线材	×	○	○	○	○	○
外壳	×	○	○	○	○	○
中央处理器 与内存	×	○	○	○	○	○
硬盘	×	○	○	○	○	○
液晶模块	×	○	○	○	○	○
光驱	×	○	○	○	○	○
触控模块	×	○	○	○	○	○
电源	×	○	○	○	○	○

O：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。

Contents

Chapter

1

General Information

1.1 Introduction

FOX-121 Multipurpose & Waterproof panel PC is a high-performance computing and completely fanless solution for applications in outdoor, semi-outdoor, and harsh indoor environment ,that comes with Intel® Atom™ N270 1.6 GHz processor, 12.1" wide View-angle display (with sunlight readability), Sealing enclosure(6 sides of IP-67 certified) and Water proof I/O connectors for Ethernet , multi-COM port, audio and USB interfaces. In addition, with water resistant bottoms on front panel, FOX has user-friendly interface for brightness control and a variety of optional wireless for real time communication or navigation.

Besides, for system integrators, a simple, complete, compact and highly integrated system helps you smoothly build an industrial grade solution into your applications. By this concept, FOX is design with valuable features (listed in next section) to serve various field of markets such as Vehicle, food factory, slaughter house, Pharmacy Production, Production Plant Hospital Operation Room, and Outdoor KIOSK Public Information Terminal.

With FOX, we believe the end user can optimize the workflow of operations and management in daily business.

1.2 Features

- IP-67 Water-proof & IEC60945 Ed.4 Certification
- Onboard Intel® Atom™ N270 1.6GHz Processor
- 12.1" 500 Nits XGA LED Backlight (FOX-121HTT)
- 12.1" 1000 Nits XGA LED Backlight (FOX-121STT)
- Fanless Operation
- Water-proof Backlight On/Off & Brightness Adjustment
- Anti-vibration & Easy-to-swap HDD Protection: 3G
- Water-proof WiFi / GPRS / GPS Connector (Optional)

1.3 Specification

System

- CPU   Onboard Intel® Atom™ N270 1.6GHz Processor
- Memory   200-pin DDR2 SODIMM x 1, Max. 2GB
- LCD / CRT Controller   Intel® 945GSE integrated
- Ethernet   Intel® 82574L, 10/100/100Base-TX, RJ-45 x 1
- M12 water proof I/O Port (Rear)   RS-232 x 1,
  RS-232/422/485 x 1
  USB 2.0x 2,
  10/100/1000Base-TX RJ-45 x 1,
  Power input x 1,
  WiFi/ GPS/ GSM antenna x 2 (Optional)
- Storage Disk Drive   Type II Compact Flash™ socket x 1,
  SATA 2.5" Hard disk drive bay x 1
  (Anti-vibration 3G)
- Expansion   Mini-PCI x 1
- OS Support   Windows® CE 6.0,
  Windows® XP Pro,
  Windows® XP Embedded,
  Windows® 7,
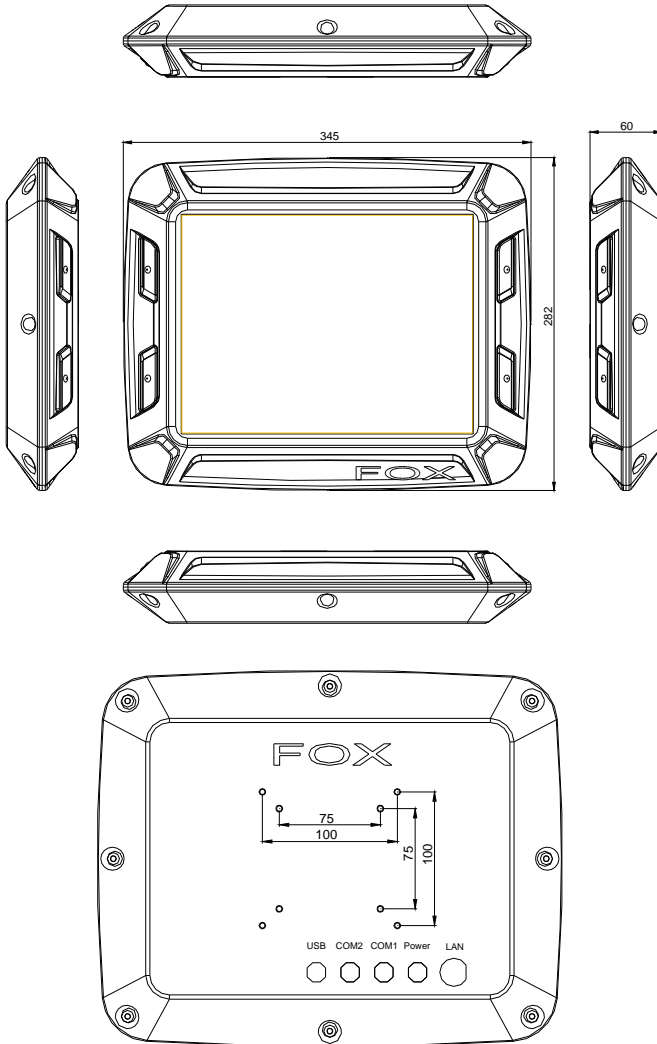 Windows® Embedded Standard 7,
  Fedora Linux

Mechanical

- Construction   Aluminum front bezel and back chassis

- Color   Silver Gray

- Mounting   VESA mount 75-100mm holes/

                        Wallmount/ Desktop

- Dimension   13.6" (W) x 11.1" (H) x 2.4" (D)

                        (345mm x 282mm x 60mm)

- Net Weight   9.9 lb (4.5 Kg)

- Gross Weight   12.1 lb (5.5 Kg)

Environmental

- Operating Temperature   32℉~131℉ (0℃~55℃) (HDD)

- Storage Temperature   -4℉~158℉(-20℃~70℃)

- Operating Humidity   5% to 90%@ 40℃, non-condensing

- Vibration   3G Random Operation, 5~500Hz (w/

                           HDD)

- Shock   30G peak acceleration (11 msec.

                           duration) (w/ HDD)

- EMC & International   CE/FCC Class A

  Standard   IP-67

                           IEC60945

- Power Supply   Input: DC 9~30V (M12) (ATX mode),

                           Optional PSE power adapter or general

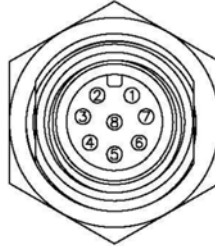   AC/DC power adapter
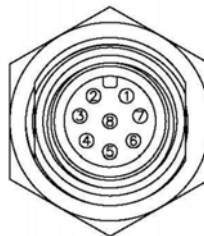
1.4 Dimension

345

60

282

75
100

75
100

USB   COM2   COM1   Power   LAN

Unit: mm

Brightness "+"

Backlight on/off

Brightness "- "

Power on/off

Chapter

2

Hardware Installation

2.1 USB 1/2 Connecter

Pin Assignments
Front View

Pin	Signal	Pin	Signal
1	USB1 V+	2	USB0 V+
3	USB D0+	4	USB D0-
5	USB0 GND	6	USB D1+
7	USB D1-	8	USB1 GND

2.2 COM1 Connector for RS-232

Pin Assignments
Front View

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

2.3 COM2 Connector for RS232/RS422/RS485
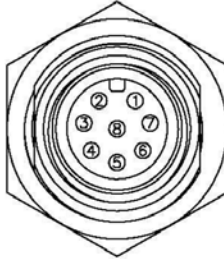
Pin Assignments
Front View

RS-232

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

RS-422

Pin	Signal	Pin	Signal
1	TXD-	2	RXD+
3	TXD+	4	RXD-

RS-485

Pin	Signal	Pin	Signal
1	TXD-	2	NC
3	TXD+	4	NC

2.4 DC-IN 9~30V Connecter
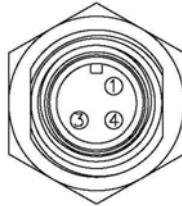
Pin Assignments
Front View

Pin	Signal	Pin	Signal
1	DC V+	2	N/A
3	GND	4	NC

2.5 Waterproof LAN Connector Installation

When you connect the LAN port with the Ethernet cable, please use the particular **Waterproof LAN connector** in the packing. If the Ethernet cable without the particular waterproof LAN connector, it may cause the issues of LAN connection-missing or invalid waterproof function. Please follow the steps to install the waterproof LAN connector.

Step 1: Peel off the release paper of gasket of RJ-45 plug cable set and stick it to its body
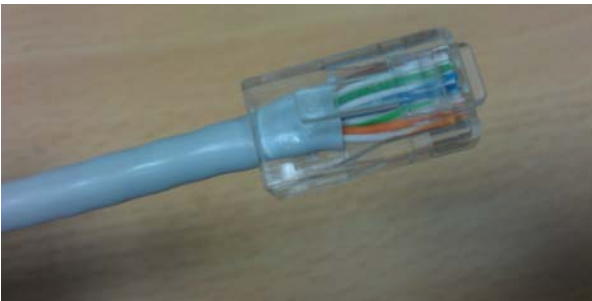
Step 2: Cut off the present RJ-45 plug cable

Step 3: Put all parts of RJ-45 plug cable set through cable in order
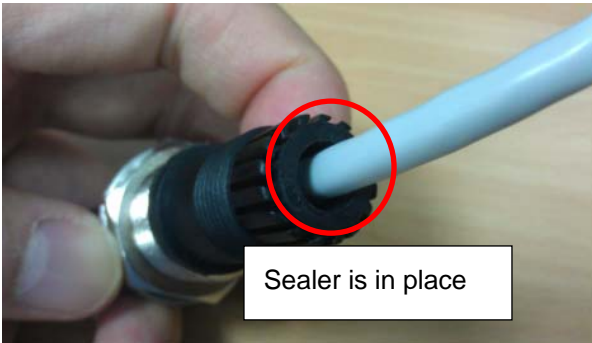

Step 4: Install and crimp a new RJ-45 plug

Step 5: Insert RJ-45 plug into the socket and mount to cable set's body. Make sure the latch of RJ-45 connector is in place

Latch is in place

Step 6: Lock and tighten the nut of RJ-45 plug

Step 7: Screw on the plastic rear nut a little bit for locking later. Make sure sealer is in place

Sealer is in place

Step 8: Before locking the plastic rear nut tightly, press the cable hardly and make sure all parts of the LAN connector has been connected tightly
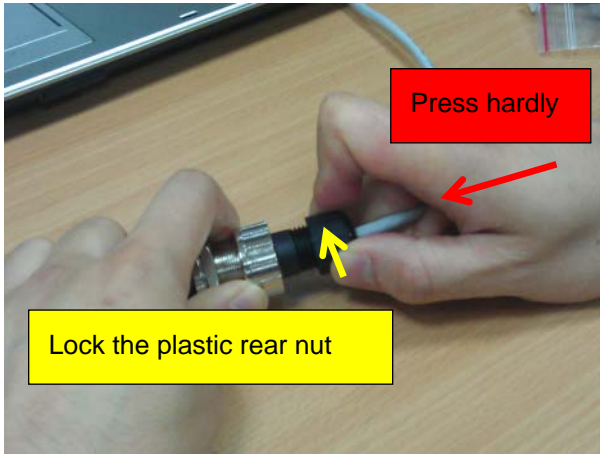
Step 9: Tighten the plastic rear nut again to make sure the cable is securely connected and would not fall off accidentally

Chapter

3

Award BIOS Setup

3.1 System Test and Initialization

These routines test and initialize board hardware. If the routines encounter an error during the tests, you will either hear a few short beeps or see an error message on the screen. There are two kinds of errors: fatal and non-fatal. The system can usually continue the boot up sequence with non-fatal errors. Non-fatal error messages usually appear on the screen along with the following instructions:

Press <F1> to RESUME

Write down the message and press the F1 key to continue the boot up sequence.

System configuration verification

These routines check the current system configuration against the values stored in the CMOS memory. If they do not match, the program outputs an error message. You will then 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:

1. You are starting your system for the first time

2. You have changed the hardware attached to your system

3. The CMOS memory has lost power and the configuration information has been erased.

TheFOX-121 CMOS memory has an integral lithium battery backup for data retention. However, you will need to replace the complete unit when it finally runs down.

3.2 Award BIOS Setup

Awards BIOS ROM has a built-in Setup program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM so that it retains the Setup information when the power is turned off.

Entering Setup

Power on the computer and press <Del> immediately. This will allow you to enter Setup.

Standard CMOS Features

Use this menu for basic system configuration. (Date, time, IDE, etc.)

Advanced BIOS Features

Use this menu to set the advanced features available on your system.

Advanced Chipset Features

Use this menu to change the values in the chipset registers and optimize your system performance.

Integrated Peripherals

Use this menu to specify your settings for integrated peripherals. (Primary slave, secondary slave, keyboard, mouse etc.)

Power Management Setup

Use this menu to specify your settings for power management. (HDD power down, power on by ring, KB wake up, etc.)

PnP/PCI Configurations

This entry appears if your system supports PnP/PCI.

PC Health Status

This menu allows you to set the shutdown temperature for your system.

Frequency/Voltage Control

Use this menu to specify your settings for auto detect DIMM/PCI clock and spread spectrum.

Load Fail-Safe Defaults

Use this menu to load the BIOS default values for the minimal/stable performance for your system to operate.

Load Optimized Defaults

Use this menu to load the BIOS default values that are factory settings for optimal performance system operations. While AWARD has designated the custom BIOS to maximize performance, the factory has the right to change these defaults to meet their needs.

Set Supervisor/User Password

Use this menu to set Supervisor/User Passwords.

Save and Exit Setup

Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

You can refer to the "AAEON BIOS Item Description.pdf" file in the CD for the meaning of each setting in this chapter.

Chapter

4

Driver Installation

There are several installation ways depending on the driver package under different Operating System application. The Auto-run program will run automatically. However, if the Auto-run program cannot be run smoothly, please follow the steps below to install the drivers:

Step 1-Install Chipset Driver
Step 2-Install VGA Driver
Step 3-Install LAN Driver
Step 4-Install Audio Driver
Step 5-Install GPS Driver

4.1 Installation

Insert the FOX-121 CD-ROM into the CD-ROM drive and install the drivers from Step 1 to Step 5 in order.

Step 1 – Install Chipset Driver

1. Click on the **STEP1-CHIPSET** folder and select the OS folder your system is
2. Double click on **infinst911_autol.exe** file located in each OS folder
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

Step 2 – Install VGA Driver

1. Click on the **STEP2-VGA** folder and select the OS folder your system is
2. Double click on **.exe** file located in each OS folder
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

Step 3 – Install LAN Driver

1. Click on the **STEP3-LAN** folder and select the OS folder your system is
2. Double click on **PROWin32.exe** file located in each OS folder
3. Follow the instructions that the window shows

4. The system will help you install the driver automatically

Step 4 – Install Audio Driver

1. Click on the *STEP4-AUDIO* folder and select the OS folder your system is

2. Double click on *setup.exe* file located in each OS folder

3. Follow the instructions that the window shows

4. The system will help you install the driver automatically

Step 5 – Install GPS Driver

1. Click on the *STEP5-GPS* folder and select the OS folder your system is

2. Double click on the folder of *PL2303_Prolific_GPS_AllInOne_1013.exe* file located in each OS folder

3. Follow the instructions that the window shows

4. The system will help you install the driver automatically

Appendix

A

FAQ

A.1 FAQ

Installing Windows 2000 from a USB CD-ROM Drive May Cause a "Stop 0x7B" Error

Answer:

Only if you install Windows 2000 SP3 version, the error will be automatically corrected.

Categorized List of Fixes in Windows 2000 Service Pack 3 (SP3)
http://support.microsoft.com/default.aspx?scid=%2fsupport%2fservicepacks%2fwindows%2f2000%2fsp3fixlist.asp

Q294820 - Installing Windows 2000 from a USB CD-ROM Drive May Cause a "Stop 0x7B" Error
http://support.microsoft.com/default.aspx?scid=kb;en-us;294820

PSS ID Number: 294820
Article Last Modified on 5/28/2003
The information in this article applies to:
Microsoft Windows 2000 Server SP1
Microsoft Windows 2000 Server SP2
Microsoft Windows 2000 Advanced Server SP1
Microsoft Windows 2000 Advanced Server SP2
Microsoft Windows 2000 Professional SP1
Microsoft Windows 2000 Professional SP2

This article was previously published under Q294820

SYMPTOMS

If you are using a Universal Serial Bus (USB) CD-ROM drive to install Windows 2000 on certain legacy-free computers, you may receive a "Stop 0x0000007B" Inaccessible_boot_device error message while booting from the installation CD. Because many legacy-free computers do not have a standard CD-ROM drive or floppy disk drive, the USB CD-ROM drive may be the only method for installing or recovering Windows.

CAUSE

Windows 2000 Setup does not support certain USB CD-ROM drives as bootable devices. This causes error message during the Text-mode portion of Setup.

RESOLUTION

Please contact your computer manufacturer for information about obtaining updated Windows 2000 Setup disks that you can use to boot your computer with a USB CD-ROM device.

STATUS

Microsoft has confirmed that this is a problem in the Microsoft products that are listed at the beginning of this article.

A.2 FAQ

Why USB Keyboard cannot be used in DOS OS?

Answer:

It is highly recomended to use the USB keyboard without pluging

USD Hub in between, which may have the issue of compatibility in

DOS OS .