

User Manual

ZKX-AI1000

~~AI~~ Intelligent Analysis Terminal

Date: February 2024

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English

Thank you for choosing our product. Please read the instructions carefully before operation. Follow these instructions to ensure that the product is functioning properly. The images shown in this manual are for illustrative purposes only.



For further details, please visit our Company's website
www.zkteco.com.

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If there is any issue related to the product, please contact us.

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About the Company

ZKTeco is one of the world's largest manufacturer of RFID and Biometric (Fingerprint, Facial, Finger-vein) readers. Product offerings include Access Control readers and panels, Near & Far-range Facial Recognition Cameras, Elevator/floor access controllers, Turnstiles, License Plate Recognition (LPR) gate controllers and Consumer products including battery-operated fingerprint and face-reader Door Locks. Our security solutions are multi-lingual and localized in over 18 different languages. At the ZKTeco state-of-the-art 700,000 square foot ISO9001-certified manufacturing facility, we control manufacturing, product design, component assembly, and logistics/shipping, all under one roof.

The founders of ZKTeco have been determined for independent research and development of biometric verification procedures and the productization of biometric verification SDK, which was initially widely applied in PC security and identity authentication fields. With the continuous enhancement of the development and plenty of market applications, the team has gradually constructed an identity authentication ecosystem and smart security ecosystem, which are based on biometric verification techniques. With years of experience in the industrialization of biometric verifications, ZKTeco was officially established in 2007 and now has been one of the globally leading enterprises in the biometric verification industry owning various patents and being selected as the National High-tech Enterprise for 6 consecutive years. Its products are protected by intellectual property rights.

About the Manual

This manual introduces the operations of the **ZKX-AI1000**.

All figures displayed are for illustration purposes only. Figures in this manual may not be exactly consistent with the actual products.

Features and parameters with ★ are not available in all devices.

Document Conventions

Conventions used in this manual are listed below:

GUI Conventions

For Software	
Convention	Description
Bold font	Used to identify software interface names e.g. OK , Confirm , Cancel .
>	Multi-level menus are separated by these brackets. For example, File > Create > Folder.
For Device	
Convention	Description
< >	Button or key names for devices. For example, press <OK>.
[]	Window names, menu items, data table, and field names are inside square brackets. For example, pop up the [New User] window.
/	Multi-level menus are separated by forwarding slashes. For example, [File/Create/Folder].

Symbols

Convention	Description
	This implies about the notice or pays attention to, in the manual.
	The general information which helps in performing the operations faster.
	The information which is significant.
	Care taken to avoid danger or mistakes.
	The statement or event that warns of something or that serves as a cautionary example.

Table of Contents

1	OVERVIEW.....	6
1.1	FEATURES.....	6
1.2	ADVANTAGES	7
1.3	PRODUCT DIMENSION AND APPEARANCE	7
1.3.1	DIMENSION.....	7
1.3.2	APPEARANCE	7
1.4	SPECIFICATIONS	8
1.5	SUPPORTING X-RAY MACHINE MODEL.....	9
1.6	ANALYSIS SUPPORTING	11
2	INSTALLATION.....	13
3	WEBSERVER	15
3.1	LOGIN.....	15
3.2	SETUP.....	16
3.3	RECORD	18
	ECO-FRIENDLY OPERATION.....	19

1 Overview

ZKX-AI1000 is a smart and adaptable algorithms terminal for the automatic detection of dangerous, prohibited and contraband goods and substances, helping to reduce the burden on image analysts and improve detection/screening outcomes. ZKTeco has a huge image database, through continuous training algorithm, to improve the accuracy and credibility of the algorithm and services to ZKTeco X-ray inspection system.

ZKX-AI1000 intelligent analysis server is a ZKTeco product with Independent Intellectual Property Rights. It is compatible with various X-ray security inspection equipment, provides accurate, reliable and powerful detection capabilities for the ZKTeco X-ray inspection system.



1.1 Features

- Increases Security and Efficiency
- Reduce Human Error Risk
- Real-time Detection without Conveyor Interruption
- Invaluable Support for Security Operators
- Requires Minimal Training

1.2 Advantages

● Intelligent

Automatic detection and analysis of hazardous, prohibited and contraband goods and substances. The continuous training algorithm can be customized according to customer requirements.

● Accurate

The intelligent analysis accuracy exceeds 90%, with an error rate of less than 10% and an omission report of less than 5%.

● Reliable

Intelligent analysis ensures impartiality and minimizes the risk of human error.

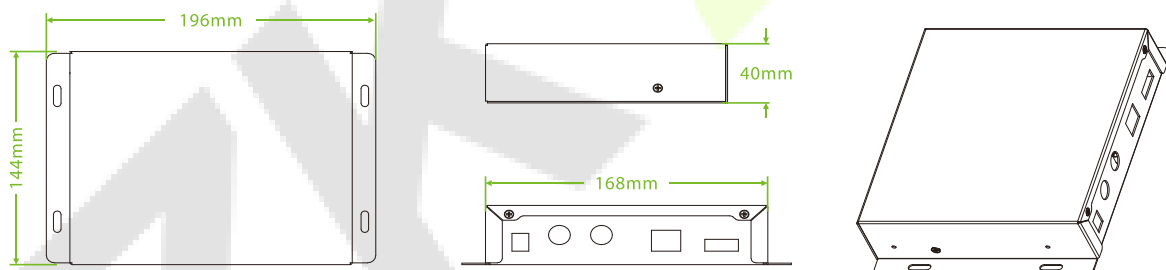
● Efficient

Minimal training is required for intelligent analysis, enabling round-the-clock operation with fast recognition; results can be displayed within a second.

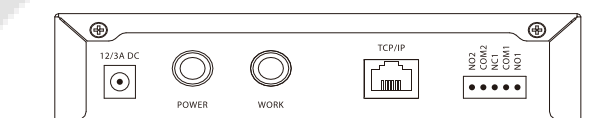
1.3 Product Dimension and Appearance

1.3.1 Dimension

The dimensions of the ZKX-AI1000 are shown in the figure below:



1.3.2 Appearance



NO.	Description
12/3A DC 	Power input interface
 POWER	Power indicator (Energized red light is always on)
 WORK	Operating indicator light (Normal operation: green light blinking)
TCP/IP 	Ethernet interface
NO2 COM2 NC1 COM1 NO1 	Relay output interface

1.4 Specifications

Function	Description
Recognizable items	26 categories
Input Voltage	DC12V
Operating Current	170mA
Operating Power	2W
Communication	TCP/IP and Relay output
Operating Temperature	-25°C to 65°C
Storage Temperature	-20°C to 55°C

Dimension (mm) (L*W*H)	196*144*40
Dimension with Packing(mm) (L*W*H)	300*183*93
Net Weight	0.7kg
Weight with Packing	1kg

1.5 Supporting X-ray Machine Model

NO.	Model	
1	ZKX5030C	
2	ZKX6040	

3	ZKX6550	
4	ZKX6550D	
5	ZKX10080	
6	ZKX10080D	

7	ZKX100100	
8	ZKX100100D	

1.6 Analysis Supporting

NO.	Goods	
1	Liquid	
2	Lighter	
3	Flammables	

4	Tools	
5	Firecracker	
6	Knives	
7	Firearm	
8	Battery	
9	Spoon	
10	Cell phone	
....	...	

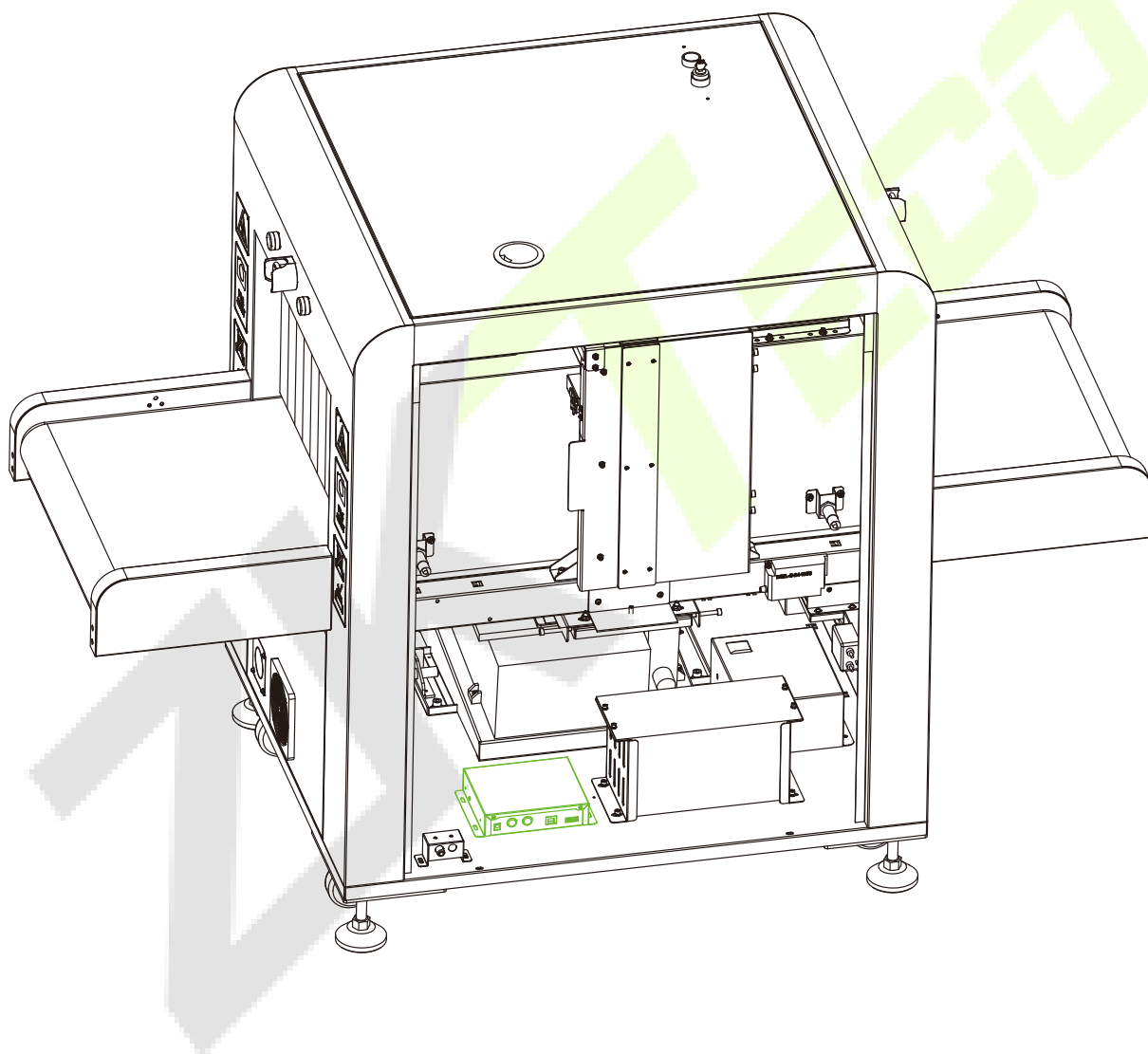
Note: This manual covers only 10 categories; however, the actual device supports a total of 26 detection item categories.

2 Installation

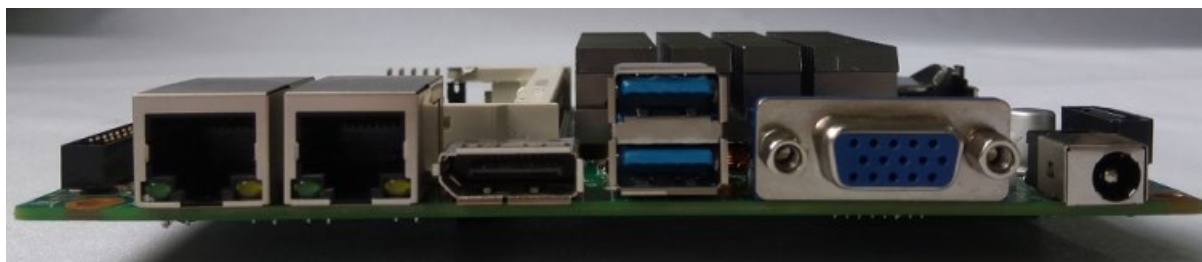
The ZKX-AI1000 is easy to install, and this manual uses the installation process for the X-ray ZKX5030C as an example.

Note: Before installation, the X-ray must be disconnected from the power supply, it is strictly prohibited to operate any device with electricity during this process.

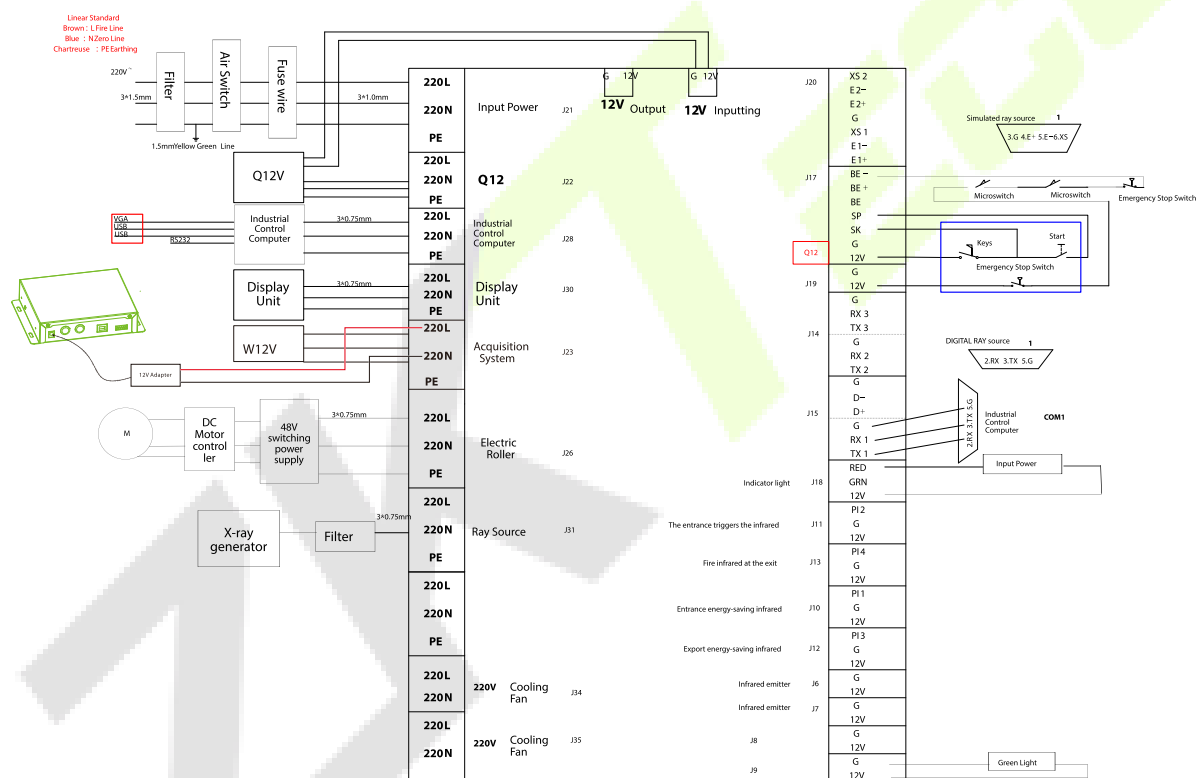
1. Open the side cover of the X-ray ZKX5030C and fix the ZKX-AI1000 with screws inside X-ray ZKX5030C unit.



- After installation, connect the network cable to the network port of the industrial control board/industrial control machine of the X-ray (If there are insufficient network ports, consider adding a switch).



- Connect the power supply, which takes 220V from the control board of the X-ray.

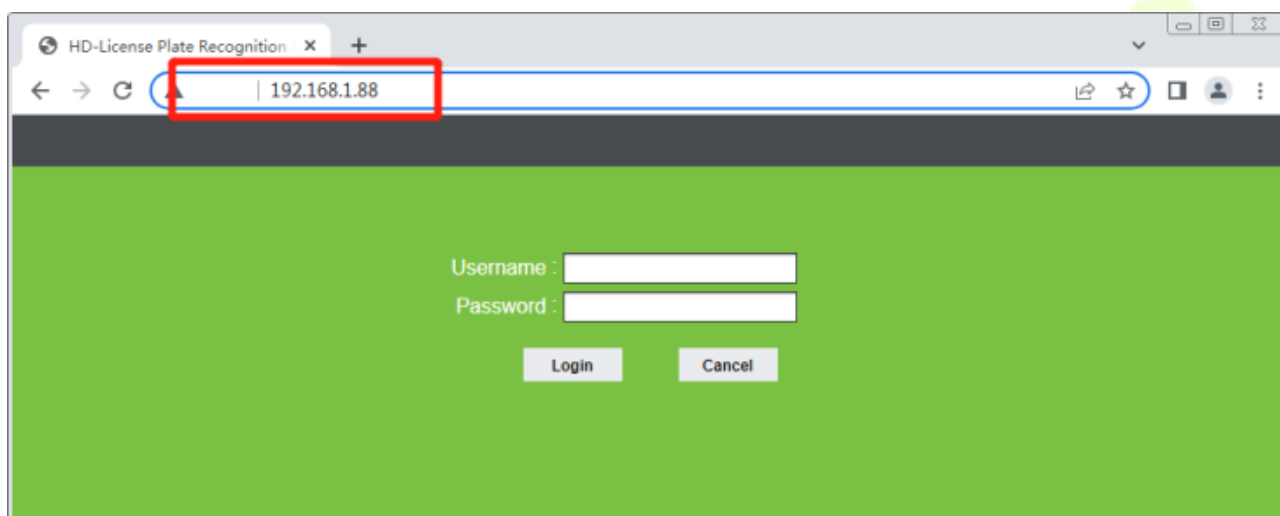


3 WebServer

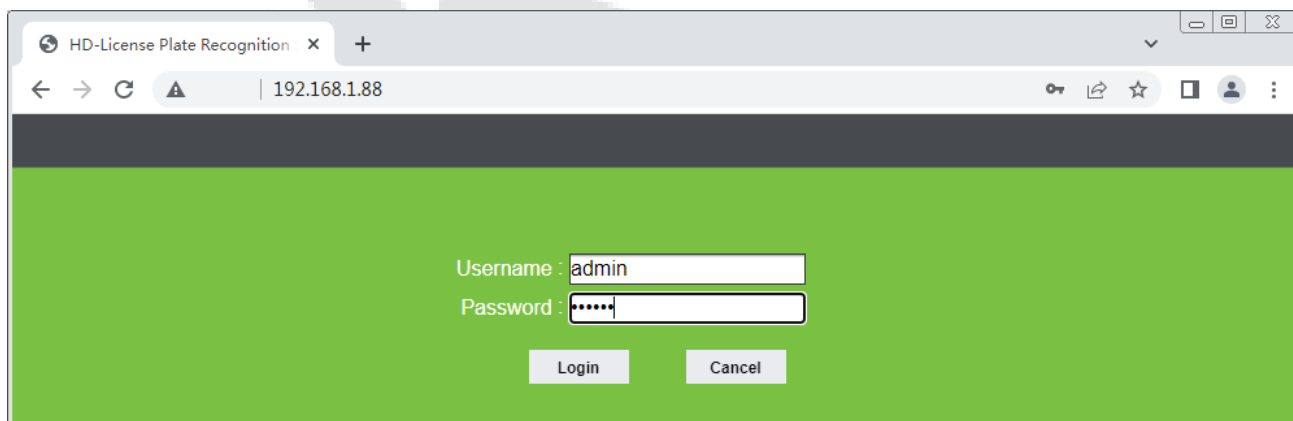
The ZKX-AI1000 has a built-in IP address (192.168.1.88) for device communication, connecting to WebServer and servers, etc.

3.1 Login

1. Power on the ZKX-AI1000, connect the network cable, then log in to the WebServer by entering the provided address in a browser.



2. Use the default account (admin) and password (123456) to log in to the WebServer.



- After a successful login, modify the ZKX-AI1000's IP address, gateway address, and other relevant information based on your requirements., Click [Save] to confirm the changes. Once the IP address is successfully updated, the ZKX-AI1000 will disconnect from the WebServer. To log in again, enter the new IP address.

XAI1000 Setup Log

admin | Logout

Device Information ○

Time Settings ○

Network Settings ○

User Management ○

Firmware Upgrade ○

License Management ○

Developer ○

Network Settings

IPv4

IP Address : 192.168.1.88

Subnet Mask: 255.255.255.0

Gateway: 192.168.1.1

DNS 1:

DNS 2:

MAC: 00:17:61:35:00:01

Save

3.2 Setup

● Device Information

Click [**Device Information**] to browse the hardware and software information of the ZKX-AI1000.

XAI1000 Setup Log

admin | Logout

Device Information ○

Time Settings ○

Network Settings ○

User Management ○

Firmware Upgrade ○

License Management ○

Developer ○

Device Information

Version Information

Serial Number: 8336233500001

Algorithm Ver: VT2.03_20230901

Firmware Ver: 1.2.5 Aug 31 2023

Ext MCU Ver: 212

Device Information

Device Name: ZKX-AI1000

Device Type: XRAY

System Version: v3.0.0.15.20221103

● Time Settings

Click **[Time Settings]** to set the time of the ZKX-AI1000.

XAI1000 Setup Log

admin | Logout

Device Information ○ **Time Settings**

Time and time zone settings

Device Time: 2023-12-05 10:03:37 Timing

Sync PC Time

TimeZone: GMT+08:00 Beijing ▼

GMT: 08:00

Save

● User Management

Click **[User Management]** to add and edit managers of the ZKX-AI1000.

XAI1000 Setup Log

admin | Logout

Device Information ○ **User Management**

Username	User Type	Operation
admin	Admin	Modify
guest	Guest	Modify Del Permission

Add User

● Firmware Upgrade

Click **[Firmware Upgrade]** to upgrade the firmware of the ZKX-AI1000.

XAI1000 Setup Log

admin | Logout

Device Information ○ **Firmware Upgrade**

File Path: 选择文件 未选择任何文件

Update

Note: For file upgrades, please contact our technical support. Firmware upgrades are not recommended under normal circumstances.

● Developer

Click [**Developer**] to enter the developer management mode.

XAI1000 Setup Log admin | Logout

Device Information ○ **Developer**

Time Settings ○

Network Settings ○

User Management ○

Firmware Upgrade ○

License Management ○

Developer ○

Enable Telnet: ☐

Port: 23

Password:

Save

3.3 Record

After clicking [**Log**], you can view the device's logs according to the time range.

XAI1000 Setup Log admin | Logout

Log Search

Main Type: All

Start Time: 2023-12-05

End Time: 2023-12-05

Page No.: 20

Search

Index	Log Time	Operator	Main Type	Log Theme	Ch	User Address
1	2023-12-05 10:03:36	admin	Operation	Successfully set time parameters	1	192.168.1.89
2	2023-12-05 10:03:34	admin	Operation	Sync time successful	1	192.168.1.89
3	2023-12-05 10:03:34	admin	Operation	Successfully set time parameters	1	192.168.1.89
4	2023-12-05 10:03:33	admin	Operation	Sync time successful	1	192.168.1.89
5	2023-12-05 10:03:33	admin	Operation	Successfully set time parameters	1	192.168.1.89
6	2023-12-05 10:03:32	admin	Operation	Sync time successful	1	192.168.1.89

Total 6 Records Current 1 Page Skip To 1 Page

Eco-friendly Operation



The product's "eco-friendly operational period" refers to the time during which this product will not discharge any toxic or hazardous substances when used in accordance with the prerequisites in this manual.

The eco-friendly operational period specified for this product does not include batteries or other components that are easily worn down and must be periodically replaced. The battery's eco-friendly operational period is 5 years.

Hazardous or Toxic substances and their quantities

Component Name	Hazardous/Toxic Substance/Element					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr6+)	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)
Chip Resistor	×	○	○	○	○	○
Chip Capacitor	×	○	○	○	○	○
Chip Inductor	×	○	○	○	○	○
Diode	×	○	○	○	○	○
ESD component	×	○	○	○	○	○
Buzzer	×	○	○	○	○	○
Adapter	×	○	○	○	○	○
Screws	○	○	○	×	○	○

○ indicates that the total amount of toxic content in all the homogeneous materials is below the limit as specified in SJ/T 11363—2006.

× indicates that the total amount of toxic content in all the homogeneous materials exceeds the limit as specified in SJ/T 11363—2006.

Note: 80% of this product's components are manufactured using non-toxic and eco-friendly materials. The components which contain toxins or harmful elements are included due to the

current economic or technical limitations which prevent their replacement with non-toxic materials or elements.



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