# 8K KVM Extender 100m with USB 2.0

8KEX100-KVM



## User Manual

AV Access

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# Introduction

## Overview

This product is an 8K transmitter and receiver kit with HDCP 2.3 compatibility. It supports resolutions up to 8K@60Hz 4:2:0, 8K@30Hz 4:4:4, and 4K@120Hz, allowing 8K video and USB 2.0 signals to be extended up to 328ft (100m) over a Cat 6/6A/7 cable.

## Features

- Supports HDMI 2.1 with resolutions up to 8K@60Hz 4:2:0, 8K@30Hz 4:4:4 and 4K@120Hz.
- HDCP 2.3 compliant.
- Supports HDR10.
- Supports USB 2.0 extension.
- Supports one-way PoC, allowing a single power adapter at the receiver to power both units.
- Transmits signals up to 328ft (100m) over a single Cat 6/6A/7 cable.
- Includes a DIP switch on each for RS-232 mode, HDCP and EDID configurations (HDCP & EDID apply to the transmitter only).
- Bi-directional RS-232 passthrough.

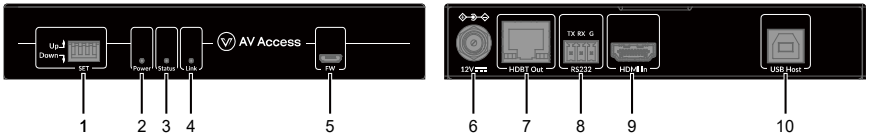
## Package Contents

Before you start the installation of the product, please check the package contents:

- Extender Set x 1
- Power Adapter (DC 12V 3A) x 1
- USB 2.0 Type-A to Type-B Cable x 1
- 3.5mm 3-pin Phoenix Male Connectors x 2
- 3.5mm 5-pin Phoenix Male Connector x 1
- Mounting Brackets (with Screws) x 8
- User Manual x 1

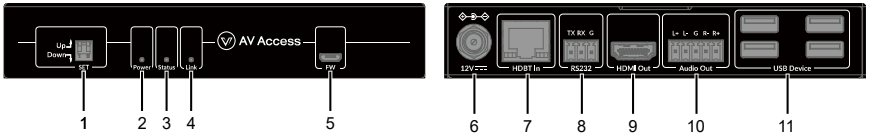
# Panel

## Transmitter



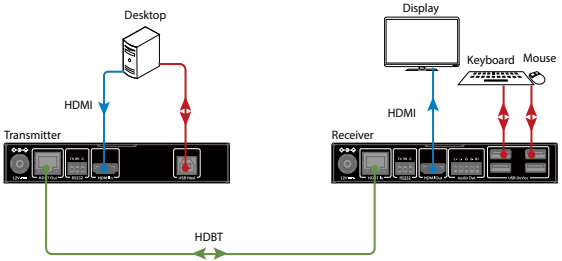

| # | Name | Description |
|---|---|---|
| 1 | SET | 4-pin switch for RS-232, HDCP and EDID configurations. For more information, refer to the "*DIP Switch Configurations*" chapter. |
| 2 | Power LED | **On/Off:** Indicates whether the device is powered on. |
| 3 | Status LED | • **Blinking**: The device is working properly.<br>• **Off:** The device is not working properly. |
| 4 | Link LED | • **On**: The link between the transmitter and receiver is normal.<br>• **Blinking/Off**: Link error or no link. |
| 5 | FW | Micro USB port. Connect to a PC for firmware updates. |
| 6 | 12V | Connect to the included DC 12V 3A power adapter.<br>**Note:** Connecting the power adapter to the receiver is recommended as it could power both units through one-way PoC. |
| 7 | HDBT Out | Connect to the HDBT In port of the receiver. |
| 8 | RS232 | Connect to an RS-232 device for RS-232 data passthrough or to a PC for HDBT firmware updates (available only when the first pin of the **SET** switch is set to the "down" position). |
| 9 | HDMI In | Connect to an HDMI source device. |
| 10 | USB Host | USB 2.0 Type-B port. Connect to a USB host (e.g. a PC). |

## Receiver



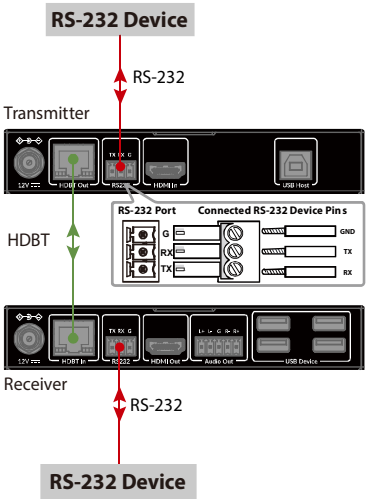

| # | Name | Description |
|---|---|---|
| 1 | SET | 2-pin switch for RS-232 configurations. For more information, refer to the "*DIP Switch Configurations*" chapter. |
| 2 | Power LED | **On/Off:** Indicates whether the device is powered on. |
| 3 | Status LED | • **Blinking**: The device is working properly.<br>• **Off**: The device is not working properly. |
| 4 | Link LED | • **On**: The link between the transmitter and receiver is normal.<br>• **Blinking/Off**: Link error or no link. |
| 5 | FW | Micro USB port. Connect to a PC for firmware update. |
| 6 | 12V | Connect to the included DC 12V 3A power adapter.<br>**Note:** Connecting the power adapter to the receiver is recommended as it could power both units through one-way PoC. |
| 7 | HDBT In | Connect to the HDBT Out port of the transmitter. |
| 8 | RS232 | Connect to an RS-232 device for RS-232 data passthrough or to a PC for HDBT firmware updates (available only when the first pin of the **SET** switch is set to the "down" position). |
| 9 | HDMI Out | Connect to an HDMI display device. |
| 10 | Audio Out | Connect to an audio receiver for de-embedded balanced analog audio output. |
| 11 | USB Device | 4 x USB 2.0 Type-A ports, each outputting a maximum current of 1.25A. Connect to USB peripherals. |

# Application




# RS-232 Operation

The RS232 ports support bidirectional passthrough, allowing RS-232 data to transfer between the transmitter and receiver. Before operation, ensure that pin 1 of the SET switches on both units is set to the “Up” position.



# DIP Switch Configurations

**Transmitter**

The 4-pin SET switch on the transmitter configures RS-232 mode, input HDCP, and input EDID. By default, pins 1 to 4 are set to the "Up" position.

| Function | DIP Switch Position | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| RS-232 passthrough **(Default)** | Up | — | — | — |
| RS-232 for HDBT firmware updates | Down | — | — | — |
| Input HDCP on **(Default)** | — | Up | — | — |
| Input HDCP off | — | Down | — | — |
| Copy EDID **(Default)** | — | — | Up | Up |
| Use fixed 4K@60 PCM 2CH as input EDID | — | — | Up | Down |
| Use fixed 4K@30 PCM 2CH as input EDID | — | — | Down | Up |
| Use fixed 1080P@60 PCM 2CH as input EDID | — | — | Down | Down |

## Receiver

The 2-pin SET switch on the receiver configures the RS-232 mode. By default, pin 1 is set to the "Up" position. pin 2 is reserved.

| Function | DIP Switch Position | |
|---|---|---|
| | 1 | 2 |
| RS-232 passthrough **(Default)** | Up | — |
| RS-232 for HDBT firmware updates | Down | — |

# Specifications

| Technical | |
|---|---|
| Input/Output Signal Type | HDMI 2.1, HDCP 2.3 |
| Input/Output Resolutions | **VESA:**<br>800 x 600[6], 1024 x 768[6], 1280 x 768[6], 1280 x 800[6], 1280 x 960[6], 1280 x 1024[6], 1360 x 768[6], 1366 x 768[6], 1440 x 900[6], 1600 x 900[6], 1600 x 1200[6], 1680 x 1050[6], 1920 x 1200[6], 2048 x 1152[6], 2560 x 1440[6]<br>**HDTV:**<br>1280 x 720P[5,6,7,8], 1920 x 1080P[5,6,7,8,9,10,11], 3840 x 2160P[1,2,3,4,5,6,7,8], 4096 x 2160P[1,2,3,4,5,6,7,8], 7680 x 4320P[1,2,3,4,5,6]<br>1 = at 24 (23.98) Hz, 2 = at 25 Hz, 3 = at 30 (29.97) Hz, 4 = at 48 Hz, 5 = at 50 Hz, 6 = 60 (59.94) Hz, 7 = at 100Hz, 8 = at 120Hz, 9 = at 144Hz, 10 = at 165Hz, 11 = at 240Hz<br>**Note:** 7680 x 4320P @48Hz/50Hz/60Hz supports only YCbCr 4:2:0. |
| Maximum Data Rate | HDMI: 40Gbps \| USB 2.0: 255Mbps |
| Audio Formats Supported | - **HDMI In/Out**: Supports multichannel audio up to PCM 7.1, including PCM 2.0/5.1/7.1ch, Dolby Digital, Dolby Digital Plus, Dolby TrueHD, Dolby Atmos, DTS 5.1, DTS-HD Master Audio and DTS:X<br>- **Audio Out**: PCM 2.0 |

| General | |
|---|---|
| Operating Temperature & RH | 0°C to 45°C (32°F to 113°F), 10% to 90%, non-condensing |
| Storage Temperature & RH | -20°C to 70°C (-4°F to 158°F), 10% to 90%, non-condensing |
| ESD Protection | Human-body Model:<br>±8kV (Air-gap discharge) / ±4kV (Contact discharge) |
| Power Supply | DC 12V 3A, PoC |
| Power Consumption | 25W (Max, per pair via PoC) |
| Device Dimensions (W x H x D) | 5.71" x 0.98" x 3.55" (145mm × 25mm × 90.2mm) per unit (TX/RX) |
| Product Weight | 0.39kg/0.86lb per unit (TX/RX) |

**Transmission Distance**

**Note:** A T568B straight-through Category cable is recommended.

| Cable Type | Range | Supported Video |
|---|---|---|
| Cat 6/6A/7 | 328ft (100m) | 8K@60Hz 4:2:0,<br>8K@30Hz 4:4:4 |
| Cat 5e | 295ft (90m) | 8K@60Hz 4:2:0,<br>8K@30Hz 4:4:4 |
| HDMI | Input/Output: 33ft (10m) | 4K@30Hz,<br>1080P@60Hz |
| | Input: 16ft (5m)<br>Output: 33ft (10m) | 4K@60Hz |
| | Input/Output: 10ft (3m) | 8K@60Hz 4:2:0 |

# Warranty

Products are backed by a limited 1-year parts and labor warranty. For the following cases AV Access shall charge for the service(s) claimed for the product if the product is still remediable and the warranty card becomes unenforceable or inapplicable.

1. The original serial number (specified by AV Access) labeled on the product has been removed, erased, replaced, defaced or is illegible.
2. The warranty has expired.
3. The defects are caused by the fact that the product is repaired, dismantled or altered by anyone that is not from an AV Access authorized service partner. The defects are caused by the fact that the product is used or handled improperly, roughly or not as instructed in the applicable User Guide.
4. The defects are caused by any force majeure including but not limited to accidents, fire, earthquake, lightning, tsunami and war.
5. The service, configuration and gifts promised by salesman only but not covered by normal contract.
6. AV Access preserves the right for interpretation of these cases above and to make changes to them at any time without notice.

Thank you for choosing products from AV Access.

If you have any question, please contact us via the following emails:
General Enquiry: sales@avaccess.com
Customer/Technical Support: support@avaccess.com

# 8K KVM 100 米延长器（支持 USB 2.0)

8KEX100-KVM



## 用户手册

视连捷
AV Access

# 目录

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# 简介

## 概述

本产品是一款兼容 HDCP 2.3 的 8K 发射器和接收器套件，支持最高分辨率 8K@60Hz 4:2:0、8K@30Hz 4:4:4 以及 4K@120Hz，可通过 Cat 6/6A/7 网线传输 8K 视频和 USB 2.0 信号至最远 100 米。

## 特性

- 支持 HDMI 2.1，最高分辨率可达 8K@60Hz 4:2:0、8K@30Hz 4:4:4 以及 4K@120Hz。
- 兼容 HDCP 2.3。
- 支持 HDR10。
- 支持 USB 2.0 延长。
- 支持单向 PoC，仅需在接收端连接电源适配器即可为两台设备同时供电。
- 通过 Cat 6/6A/7 网线可传输信号至最远 100 米。
- 提供拨码开关，用于 RS-232 模式、HDCP 和 EDID 配置 (HDCP & EDID 仅适用于发射端)。
- 支持双向 RS-232 数据透传。

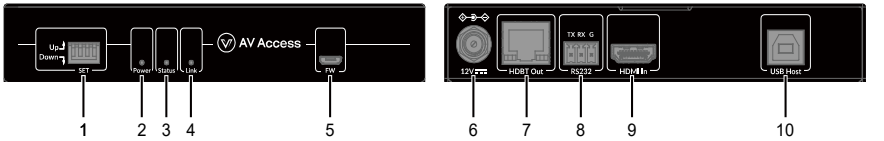
## 包装明细

在开始使用本产品前，请先根据以下明细检查包装配件：

- 延长器套装 x 1
- 电源适配器 (DC 12V 3A) x 1
- USB 2.0 Type-A 转 Type-B 线 x 1
- 3.5mm 3 针凤凰端子公座 x 2
- 3.5mm 5 针凤凰端子公座 x 1
- 墙装支架 (含螺丝) x 8
- 用户手册 x 1

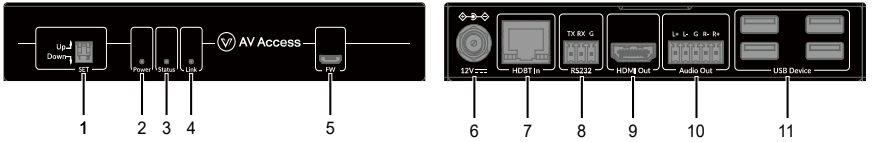
# 面板

## 发射端



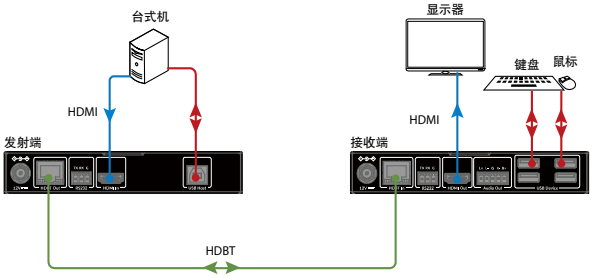

| # | 名称 | 描述 |
|---|---|---|
| 1 | SET | 4 针拨码开关，用于配置 RS-232、HDCP 和 EDID。详情请参考“*拨码开关配置*”章节。 |
| 2 | Power LED | 开/关状态：指示设备是否通电。 |
| 3 | Status LED | • **闪烁**：设备运行正常。<br>• **不亮**：设备运行异常。 |
| 4 | Link LED | • **常亮**：发射端与接收端之间正常连接。<br>• **闪烁/不亮**：连接异常或未建立连接。 |
| 5 | FW | Micro USB 端口，可连接电脑进行固件升级。 |
| 6 | 12V | 连接随附的 DC 12V 3A 电源适配器。<br>提示：建议将电源适配器连接至接收端，通过单向 PoC 可为两台设备供电。 |
| 7 | HDBT Out | 连接至接收端的 HDBT In 端口。 |
| 8 | RS232 | 连接 RS-232 设备以实现 RS-232 数据透传，或连接电脑进行 HDBT 固件升级（仅当 SET 开关第 1 针置于“下”位置时可用）。 |
| 9 | HDMI In | 连接 HDMI 信号源设备。 |
| 10 | USB Host | USB 2.0 Type-B 端口，连接 USB 主机设备（如电脑）。 |

# 接收端



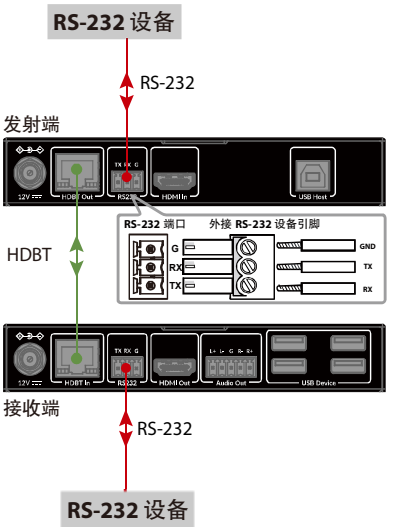

| # | 名称 | 描述 |
|---|---|---|
| 1 | SET | 2 针拨码开关，用于配置 RS-232。详情请参考“*拨码开关配置*”章节。 |
| 2 | Power LED | 开/关状态：指示设备是否通电。 |
| 3 | Status LED | • **闪烁**：设备运行正常。<br>• **不亮**：设备运行异常。 |
| 4 | Link LED | • **常亮**：发射端与接收端之间正常连接。<br>• **闪烁/不亮**：连接异常或未建立连接。 |
| 5 | FW | Micro USB 端口，可连接电脑进行固件升级。 |
| 6 | 12V | 连接随附的 DC 12V 3A 电源适配器。<br>提示：建议将电源适配器连接至接收端，通过单向 PoC 可为两台设备供电。 |
| 7 | HDBT In | 连接至发射端的 HDBT Out 端口。 |
| 8 | RS232 | 连接 RS-232 设备以实现 RS-232 数据透传，或连接电脑进行 HDBT 固件升级 (仅当 SET 开关第 1 针置于“下”位置时可用)。 |
| 9 | HDMI Out | 连接 HDMI 信号源设备。 |
| 10 | Audio Out | 连接至音频接收设备，用于输出解嵌的平衡模拟音频信号。 |
| 11 | USB Device | 4 x USB 2.0 Type-A 端口，每个端口可输出最大 1.25A 电流。用于连接 USB 外设。 |

# 应用




# RS-232 操作

设备 **RS232** 端口支持双向透传，可在发射端与接收端之间传输 RS-232 数据。使用此功能前，请确保两台设备的 **SET** 开关第 1 针均拨至“上”位置。



# 拨码开关配置

## 发射端

发射端的 4 针 SET 开关用于配置 RS-232 模式、输入 HDCP 以及输入 EDID。第 1~4 针的默认设置均设于“上”的位置。

| 功能 | 拨码开关位置 | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| RS-232 透传 **(默认)** | 上 | — | — | — |
| RS-232 用于 HDBT 固件升级 | 下 | — | — | — |
| 输入 HDCP 开启 **(默认)** | — | 上 | — | — |
| 输入 HDCP 关闭 | — | 下 | — | — |
| 复制 EDID **(默认)** | — | — | 上 | 上 |
| 使用固定 4K@60 PCM 2 声道作为输入 EDID | — | — | 上 | 下 |
| 使用固定 4K@30 PCM 2 声道作为输入 EDID | — | — | 下 | 上 |
| 使用固定 1080P@60 PCM 2 声道作为输入 EDID | — | — | 下 | 下 |

## 接收端

接收端的 2 针 SET 开关用于配置 RS-232 模式。第 1 针默认置于 **“上”** 的位置，第 2 针预留功能。

| 功能 | 拨码开关位置 | |
|---|---|---|
| | 1 | 2 |
| RS-232 透传 **(默认)** | 上 | — |
| RS-232 用于 HDBT 固件升级 | 下 | — |

# 规格

| 技术参数 | |
|---|---|
| 输入/输出信号类型 | HDMI 2.1, HDCP 2.3 |
| 输入/输出分辨率 | **VESA:**<br>800 x 600[6], 1024 x 768[6], 1280 x 768[6], 1280 x 800[6], 1280 x 960[6], 1280 x 1024[6], 1360 x 768[6], 1366 x 768[6], 1440 x 900[6], 1600 x 900[6], 1600 x 1200[6], 1680 x 1050[6], 1920 x 1200[6], 2048 x 1152[6], 2560 x 1440[6]<br>**HDTV:**<br>1280 x 720P[5,6,7,8], 1920 x 1080P[5,6,7,8,9,10,11], 3840 x 2160P[1,2,3,4,5,6,7,8], 4096 x 2160P[1,2,3,4,5,6,7,8], 7680 x 4320P[1,2,3,4,5,6]<br>1 = 24 (23.98) Hz, 2 = 25 Hz, 3 = 30 (29.97) Hz, 4 = 48 Hz, 5 = 50 Hz, 6 = 60 (59.94) Hz, 7 = 100Hz, 8 = 120Hz, 9 = 144Hz, 10 = 165Hz, 11 = 240Hz<br>**注:** 7680 x 4320P @48Hz/50Hz/60Hz 仅支持 YCbCr 4:2:0 |
| 最大像素时钟 | HDMI: 40Gbps \| USB 2.0: 255Mbps |
| 音频格式 | - **HDMI In/Out**: 支持高达 PCM 7.1 的多声道音频，兼容 PCM 2.0/5.1/7.1，Dolby Digital，Dolby Digital Plus，Dolby TrueHD，Dolby Atmos，DTS 5.1，DTS-HD Master Audio 及 DTS:X<br>- **Audio Out**: PCM 2.0 |

| 通用参数 | |
|---|---|
| 操作温度与相对湿度 | 0°C–45°C (32°F–113°F), 10%–90%, 无冷凝 |
| 存储温度与相对湿度 | -20°C–70°C (-4°F–158°F), 10%–90%, 无冷凝 |
| ESD 防护 | 人体放电模式:<br>±8kV (气隙放电)/±4kV (接触放电) |
| 电源 | DC 12V 3A, PoC |
| 最大功耗 | 25W (每对设备通过 PoC 供电时) |
| 设备尺寸<br>(宽 x 高 x 深) | 145mm × 25mm × 90.2mm (TX/RX) |
| 产品净重 | 0.39kg (TX/RX) |

**传输距离**

**注意：**推荐使用 T568B 标准的直通网线。

| 线缆类型 | 传输距离 | 支持视频分辨率 |
|---|---|---|
| Cat 6/6A/7 | 100m | 8K@60Hz 4:2:0,<br>8K@30Hz 4:4:4 |
| Cat 5e | 90m | 8K@60Hz 4:2:0,<br>8K@30Hz 4:4:4 |
| HDMI | 输入/输出: 10m | 4K@30Hz,<br>1080P@60Hz |
| | 输入: 5m，输出: 10m | 4K@60Hz |
| | 输入/输出: 3m | 8K@60Hz 4:2:0 |

# 产品质保

本产品提供一年的保修和人工保障服务。在下列情况中，如果设备仍可以维修但保修卡已不能使用或者不适用，我们将对维修行为进行收费。

1. 产品上标注的源序列号(由视连捷提供)被撕毁，抹除，替换，污损或难以辨认。
2. 超过保修期限。
3. 由非视连捷授权的服务合作商进行修理、拆卸或者更换配件造成的缺陷，或者未严格按照产品的用户指南使用或者操作不当造成的产品缺陷。
4. 由不可抗力造成的缺陷。包括但不限于事故、火灾、地震、雷电、海啸和战争。
5. 销售人员承诺的配置和礼品，但不包括在正常合同范围内。
6. 视连捷保留对上述条款的解释权，并随时更改，恕不另行通知。

感谢您选择视连捷的产品。

如有任何问题，请通过以下邮箱联系我们：
普通咨询：sales@avaccess.com
售后/技术支持：support@avaccess.com



## 注意事项

1. 不得打开、拆解或修理本产品。
2. 不要在炎热、寒冷、尘土飞扬或潮湿的环境下使用；请用干布擦拭该设备。
3. 尽可能地避免抛掷，严重的抛掷力可能会造成机械损坏、故障或划伤表面。

## 有害物质声明

根据中国《电子信息产品污染控制管理办法》

| 有害物质 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 部件名称 | 铅 (Pb) | 汞 (Hg) | 镉 (Cd) | 六价铬 (Cr +6) | 多溴联苯 (PBB) | 多溴二苯醚 (PBDE) | 邻苯二甲酸二异丁酯 (DIBP) | 邻苯二甲酸二(2-乙基己基)酯 (DEHP) | 邻苯二甲酸二丁基酯 (DBP) | 邻苯二甲酸甲苯基丁酯 (BBP) |
| 电缆 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 电路板组件 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 塑料部件 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 金属部件 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 橡胶部件 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

本表格根据SJ/T 11364的规定编制

○ = 表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下。

## 产品保修

| | |
|---|---|
| 保修期限 | |
| 购买日期 | |
| 购买地点 | |
| 产品序列号 | |
| 商品编号 | |
| 盖章 | |

| 日期 | 维修情况 |
|---|---|
| | |
| | |



AV Access