

HDL-MIR01R-RF.10 Wireless IR Emitter  
无线红外发射器

buspro  
WIRELESS

Datasheet

产品说明书

Issued: April 15, 2019

发布：2019年4月15日

Edition V1.0.0



Figure 1. Wireless IR Emitter  
图 1. 无线红外发射器

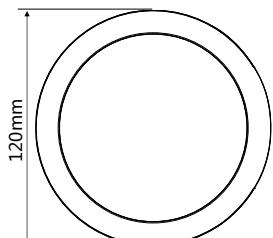


Figure 2. Dimensions - Front View  
图 2. 尺寸图 - 正面

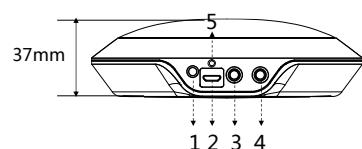


Figure 3. Dimensions - Side View  
图 3. 尺寸图 - 侧面

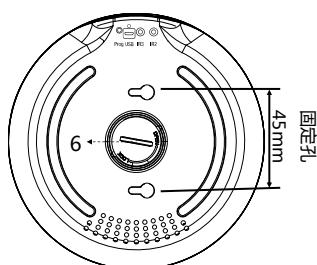


Figure 4. Dimensions - Bottom View  
图 4. 尺寸图 - 底部

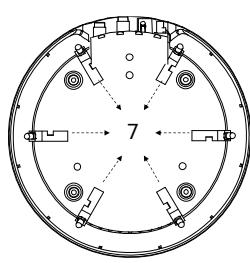


Figure 5. Interior View  
图 5. 内部图

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## Overview

Wireless IR Emitter (See Figure 1), which adopts HDL Buspro Wireless communication, enables IR control of devices such as air conditioners, TVs, fans, etc. by downloading various infrared codes stored in the database via HDL Buspro Setup Tool, or downloading infrared codes learned by infrared learner.

## Functions

- Directly drive LED emission tube.
- 3 IR emission channels.
- Supports 10 devices and 100 infrared learning codes.
- Supports a variety of remote control types, find the brand you need, determine the model number by trial code.
- When there is no infrared code required in the database, you can learn the code via the infrared learner and then download it to the device.
- Sequence function supports simultaneously emitting multiple infrared codes. The sequence can be called by the universal switch, with general switch number: 201-208.
- Built-in clock for timing, supports 16 alarm reminder control.
- Temperature detection and broadcast.
- Compliant with IEEE.802.15.4 standard.
- Supports online update.
- Supports easy programming via HDL ON APP.

## Important Notes

- Infrared emission tube - Infrared emission channel 2 and channel 3 are equipped with a 1.5-meter infrared transmitting tube, and the diameter of the connector is 3.5mm, which is fixed near the remote control device.
- Temperature probe -10 kΩ.
- This emitter needs to be used with a wireless gateway.
- The subnet segment and communication parameters of the emitter should be the same as that of the wireless gateway.
- Keep the emitter away from a large area of metal objects.

## Product Information

Dimensions - See Figure 2, 3 and 4

Interior View - See Figure 5

1. Programming button: When the emitter is working properly, the top green light flashes, click the button for 3 times continuously, the red light flashes rapidly, then the emitter enters the configuration mode. (After the wireless gateway enters the configuration mode at the same time, then the parameters can be set.)
2. Power input: USB provides voltage.
3. Infrared channel 3
4. Infrared channel 2
- Note: Channels 2 and 3 are equipped with a 1.5m extended cable, which can be extended to connect to devices that require control.
5. Temperature probe to detect the surrounding temperature for broadcast
6. Battery: LIR2032 3.6V rechargeable button battery provides power to the internal clock.
7. Infrared channel 1, equipped a total of 6 infrared emission tubes, supports 360 degree control with wide control range up to 5 meters.
- Fixing hole: used when hanging for installation, 45mm apart.

## Safety Precautions



- The installation and commissioning of the device must be carried out by HDL or the organization designated by HDL. For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.
- HDL does not take responsibility for all the consequences caused by installation and wire connection that are not in accordance with this document.
- Please do not privately disassemble the device or change components, otherwise it may cause mechanical failure, electric shock, fire or body injury.
- Please resort to our customer service department or designated agencies for maintenance service. The warranty is not applicable for the product fault caused by private disassembly.

## Package Contents

HDL-MIR01R-RF.10\*1 / Datasheet\*1 / Infrared emission tube\*2 / USB cable\*1 / Screw\*2

ZH

## 产品概述

无线红外发射器（见图1）采用HDL Buspro Wireless通讯方式，可通过HDL Buspro配置软件下载数据库中存储的多种红外码，或下载通过红外学习器学习过的红外码，对空调，电视，风扇等设备进行红外控制。

## 功能说明

- 直接驱动LED发射管；
- 3路红外发射通道；
- 共支持10个设备以及100个红外学习码；
- 支持多种遥控器类型，找到需要的品牌，通过试码确定型号；
- 当数据库中没有需要的红外码时，可以通过红外学习器学码，然后再下载到该设备；
- 序列功能，支持同时发射多个红外码。可通过通用开关调用序列，通用开关号为201 - 208；
- 内置时钟，有定时功能，支持16个闹钟，进行提醒控制
- 温度检测及广播功能；
- 无线部分支持标准协议 IEEE.802.15.4；
- 支持在线升级；
- 支持简易编程。

## 注意事项

- 红外发射管 - 红外发射通道2和通道3配置有1.5米线红外发射管，接头为3.5mm，固定在需遥控设备附近。
- 温度探头 - 10 kΩ。
- 该设备需与无线网关配合使用。
- 该设备子网段及通讯参数必须与无线网关的相同。
- 避免放置在大面积金属旁。

## 产品信息

产品尺寸 - 见图 2, 3和4

内部图 - 见图 5

1. 编程按钮：正常工作时，顶部绿灯闪烁，连续点击3次，红灯快速闪烁，进入跳频模式（无线网关同时进入跳频模式，然后进行参数配置）
2. 电源输入：USB提供
3. 红外通道3
4. 红外通道2
- 注：通道2和3，配带有1.5m延长线，连接后可以延长接至需要控制的设备附近
5. 温度探头，检测周围的温度进行广播
6. 电池：LIR2032 3.6V可充纽扣电池，给内部时钟供电
7. 红外通道1，共6个红外发射管，达到360度控制，控制范围较广，最远可以达到5米
- 固定孔：悬挂安装时使用，间距是45mm。

## 安全警告



- 本设备的安装及调试工作必须由我司或我司指派的机构进行。其电气安装的计划和施工，必须遵守当地相关的安全标准和法规。
- 未按照本说明书进行安装及接线方式的，所造成的一切后果皆与我司无关。
- 请不要私自拆装或更换零部件，否则可能会导致机械故障、电击、火灾或身体伤害。
- 请将一切维修工作交由我司售后部门或指定机构进行，本产品的保险范围不适用于因用户拆卸产品而导致的故障。

## 装箱清单

HDL-MIR01R-RF.10\*1 / 说明书\*1 / 红外发射管\*2 / USB电源适配器\*1 / 螺丝\*2

## Technical Data

## Basic Parameters

|  |                  |
|--|------------------|
| Working voltage                            | 5V DC (From USB) |
| Working current                            | 20mA / 5V DC     |
| IR emission carrier frequency              | 38kHz            |
| IR Control distance (Channel 1)            | 5m               |
| Communication                              | Buspro wireless  |
| Wireless transmission power                | +10dbm           |
| Wireless sensitivity                       | -90dbm           |
| Indoor communication distance              | ≤30m             |
| RSSI (Received Signal Strength Indication) | >-80dbm          |

## Frequency Allocation

|                     |                  |
|---------------------|------------------|
| WPAN (China)        | 780 to 786MHz    |
| SRD (Europe)        | 864 to 870MHz    |
| ISM (North America) | 904 to 928MHz    |
| Default PSK         | HDL-SecurityKey0 |

## External Environment

|                           |            |
|---------------------------|------------|
| Working temperature       | -5°C~45°C  |
| Working relative humidity | ≤90%       |
| Storage temperature       | -20°C~60°C |
| Storage relative humidity | ≤93%       |

## Specifications

|  |   |
|--|---|
| Dimensions                                     | Φ120x37 ( mm )                                      |
| Net weight                                     | 125g  |
| Housing material                               | PC  |
| Installation                                   | Free standing or wall hanging<br>(See Figure 5 - 7) |
| Protection rating<br>(Compliant with EN 60529) | IP20  |
| Battery  | LIR2032 3.6V  |

## Name and Content of Hazardous Substances in Products

| Components | Hazardous substances |              |              |                       |                                 |  |
|------------|----------------------|--------------|--------------|-----------------------|---------------------------------|--|
|            | Lead (Pb)            | Mercury (Hg) | Cadmium (Cd) | Chromium VI (Cr (VI)) | Poly-brominated biphenyls (PBB) | Poly-brominated diphenyl ethers (PBDE) |
| Plastic    | o                    | o            | o            | o                     | o                               | o                                      |
| Hardware   | o                    | o            | o            | o                     | -                               | -                                      |
| Screw      | o                    | o            | o            | x                     | -                               | -                                      |
| Solder     | x                    | o            | o            | o                     | -                               | -                                      |
| PCB        | x                    | o            | o            | o                     | o                               | o                                      |
| IC         | o                    | o            | o            | o                     | x                               | x                                      |

The symbol “-” indicates that the hazardous substance is not contained.

The symbol “o” indicates that the content of the hazardous substances in all the homogeneous materials of the component is below the limit requirement specified in the Standard IEC62321-2015.

The symbol “x” indicates that the content of the hazardous substance in at least one of the homogeneous materials of the part exceeds the limit requirement specified in the Standard IEC62321-2015.

## 技术参数

## 基本参数

|                 |                 |
|-----------------|-----------------|
| 工作电压            | 5V DC ( USB供电 ) |
| 工作电流            | 20mA / 5V DC    |
| 红外发射载波频率        | 38kHz           |
| 红外遥控距离(1通道)     | 5米              |
| 通信协议            | Buspro wireless |
| 无线发射功率          | +10dbm          |
| 无线接收灵敏度         | -90dbm          |
| 室内通讯距离          | ≤30m            |
| RSSI ( 接收信号强度 ) | >-80dbm         |

## 无线中心频率

|      |                    |
|------|--------------------|
| 中国   | WPAN 频段 780至786MHz |
| 欧洲   | SRD 频段 864至870MHz  |
| 北美   | ISM 频段904至928MHz   |
| 默认密码 | HDL-SecurityKey0   |

## 外部环境

|        |            |
|--------|------------|
| 工作温度   | -5°C~45°C  |
| 工作相对湿度 | ≤90%       |
| 储存温度   | -20°C~60°C |
| 储存相对湿度 | ≤93%       |

## 产品规格

|                       |                        |
|-----------------------|------------------------|
| 尺寸                    | Φ120x37 ( mm )         |
| 净重                    | 125g                   |
| 外壳材料                  | PC                     |
| 安装方式                  | 桌面放置或挂壁安装<br>( 见图5-7 ) |
| 防护级别<br>(符合 EN 60529) | IP20                   |
| 电池                    | LIR2032 3.6V可充纽扣电池     |

## 产品中有害物质的名称及含量

| 部件名称  | 有害物质     |          |          |                   |              |                |
|-------|----------|----------|----------|-------------------|--------------|----------------|
|       | 铅 ( Pb ) | 汞 ( Hg ) | 镉 ( Cd ) | 六价铬 ( Cr ( VI ) ) | 多溴联苯 ( PBB ) | 多溴二苯醚 ( PBDE ) |
| 塑胶组件  | o        | o        | o        | o                 | o            | o              |
| 五金铜件  | o        | o        | o        | o                 | -            | -              |
| 螺丝组件  | o        | o        | o        | x                 | -            | -              |
| 焊锡    | x        | o        | o        | o                 | -            | -              |
| PCB组件 | x        | o        | o        | o                 | o            | o              |
| IC    | o        | o        | o        | x                 | x            | x              |

- : 表示不含有该有害物质。

o : 表示该有害物质在该部件所有均质材料中的含量均在IEC62321-2015规定的限量要求以下。

x : 表示该有害物质至少在该部件的某一均质材料中的含量超出IEC62321-2015规定的限量要求。

## 技术支持

服务热线 : 020-85820195

(工作时间 : 9:00-12:00, 13:00-18:00, 星期一至星期五)

邮箱 : kfb@hdlchina.com.cn

网址 : <http://www.hdlchina.com>

Technical support

E-mail: [support@hdlautomation.com](mailto:support@hdlautomation.com)

Website: <https://www.hdlautomation.com>

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