



# LDSBus IR Blaster Datasheet



## 1 Introduction

The LDSBus IR Blaster replaces traditional single device IR remote controllers to function as a universal remote controller. The IR Blaster is equipped with 7 high power IR LEDs that provide 360° of coverage ranging up to 7 meters. The LDSBus IR Blaster is suitable for controlling Air-conditioners, TVs, Set-Top Boxes, curtains and blinds, fans and many more appliances.

### 1.1 Features

- LDSBus IR Blaster consists of on-board IR emitters in a compact device
- 360° of IR coverage
- Maximum emission range: 7 meters
- Bridgetek LDSBus protocol. Wired data and power transmission through LDSBus HVT-Junction.
- Low power consumption – 625mW (typical)
- Operating temperature range : 0°C to +70°C
- Swivel and flush mount options
- Supported platform applications:

Bridgetek PanL Smart Living product and LDSBus Python SDK

(Visit <http://bit.ly/ldsbus-resources>)



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## 2 Part Numbers

<b>Part#</b>	<b>Naming</b>
LC020101A-F	LDSBus IR Blaster (Flush Mount)
LC020101A-S	LDSBus IR Blaster (Swivel Mount)

## **Table of Contents**

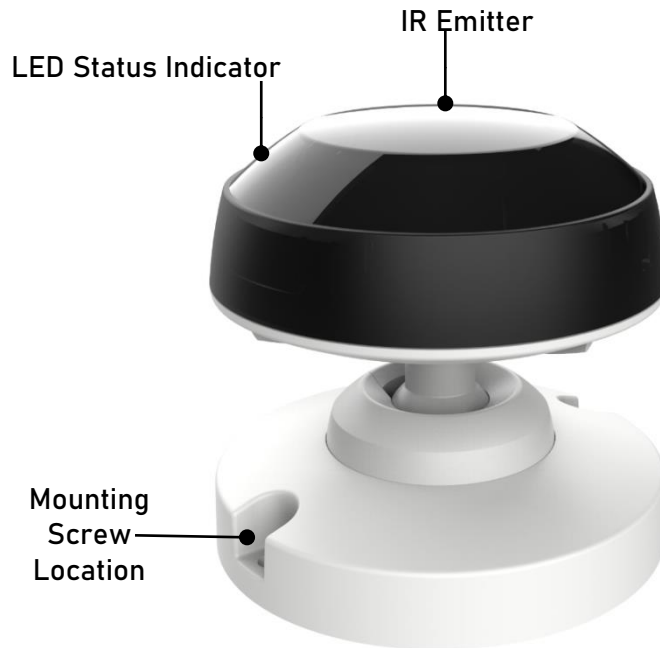
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### 3 Product Specifications

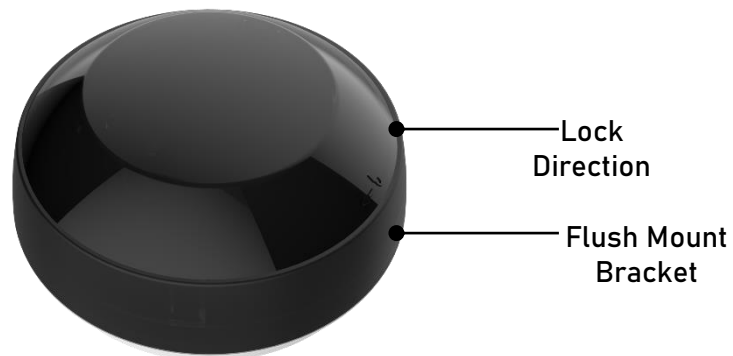
<b>Features</b>	Blaster	IR Emitter
	Interface	RS485
	Communication Method	LDSBus
	LED Indicator (RGB)	System Status Indicator (Please refer to <a href="#">LED</a> section)
	Mounting	Flush Mount - Fixed Angle Installation Swivel Mount - Adjustable Angle Installation
<b>Power</b>	Input Voltage	5V DC Bus Power
	Typical Power	620mW
	Max. Power	1150mW
<b>IR Emitter</b>	Range	7 Meters (Maximum)
	Angle	360 Degree
<b>Physical Characteristics</b>	Color	White
	Housing	Polycarbonate
	Dimensions	62mm x H25mm (Flush) or 62mm x H60mm (Swivel)
<b>Environmental Limits</b>	Operating Temperature	0 to 70°C
	Storage Temperature	-20 to 85°C
	Ambient Relative Humidity	5 to 95% (non-condensing)
<b>Package Contents</b>	Device	1x LDSBus IR Blaster with Flush Mount (or) 1x LDSBus IR Blaster with Swivel Mount
	Wire Assembly	1x 5m RJ11-JST Cable
	Self-Tapping Screws	2x M3.5*16mm(Thread)

**Table 1 - LDSBus IR Blaster Specifications**

## 4 Hardware Features



**Figure 1 - LDSBus IR Blaster – Swivel Mount**



**Figure 2 - LDSBus IR Blaster – Flush Mount**

## 5 Configuration, Installation and Application

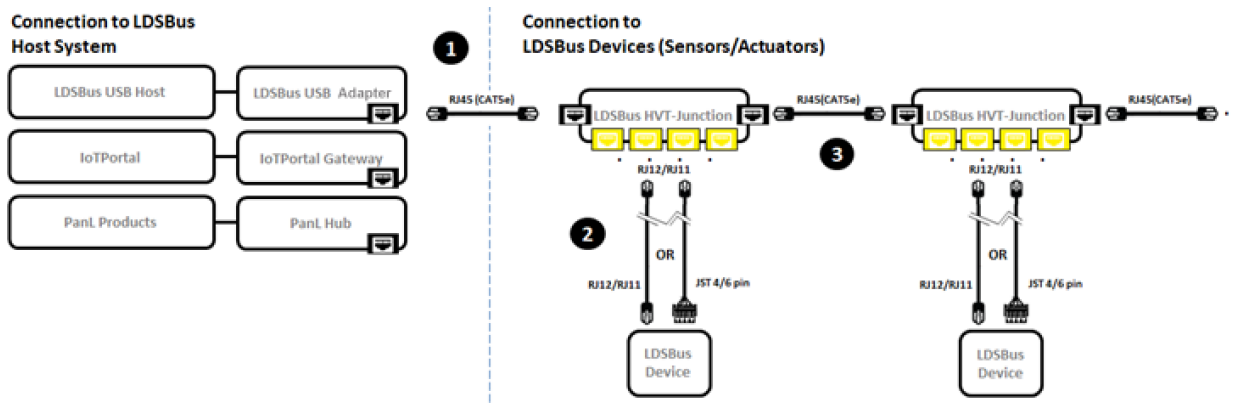
Please visit <http://bit.ly/ldsbus-resources> to access the LDSBus Configuration Utility guide on how to configure the device name, device address and termination settings before using it for your specific application.

### 5.1 Connection Diagram

Figure 3 illustrates the connection of the LDSBus IR Blaster (LDSBus Device) to the LDS Bus. Please visit <http://bit.ly/ldsbus-resources> to view the full device application, setup and installation guides.

#### Setup Instructions:

1. Connect the first LDSBus HVT-Junction to any of the LDSBus Host Systems using a RJ45 (CAT5e) cable.
2. Connect the configured LDSBus IR Blaster to the LDSBus HVT-Junction as shown in Figure 3.
3. If there is more than one LDSBus HVT-Junction, chain them together as shown in Figure 3.



**Figure 3 – LDSBus IR Blaster to LDS Bus – Connection Diagram**

## 6 Mounting Instructions

Before mounting, ensure that the device has been configured using the LDSBus Configuration Utility.

### 6.1 Flush Mount

When flush mounting, it is assumed that the device is being mounted on a flat hollow surface behind which the LDSBus RJ12 cable is hidden and made available through an opening. Figure 4 shows the front face of the LDSBus IR Blaster. Note the lock/unlock direction on the cover.



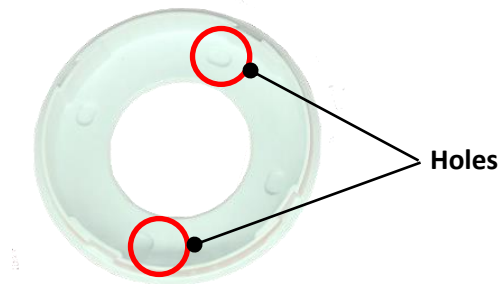
**Figure 4 - LDSBus IR Blaster – Flush Mount – Top View**

Follow these steps to fix the swivel mount –

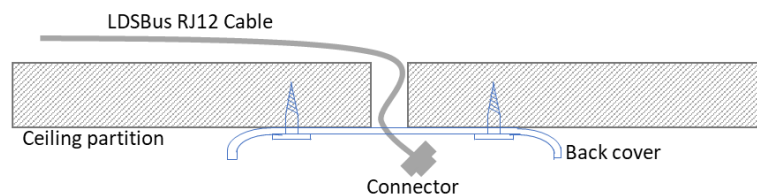
1. Unlock the back cover. Twist the top cover in the anti-clockwise direction to unlock.



2. Make two holes in the back cover using the indentations as guides.

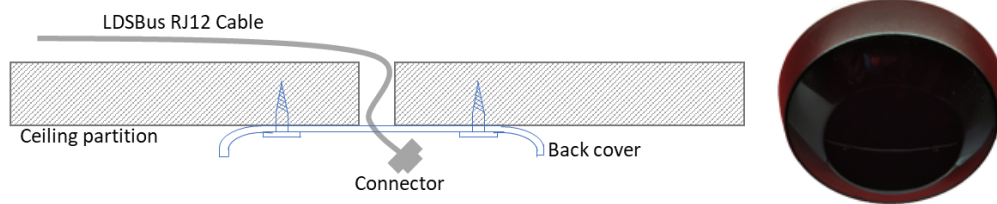


3. Prepare the ceiling and route the RJ12-JST cable through the ceiling opening. Run the LDSBus RJ12-JST cable through the centre (hole) of the back cover and fasten the back cover to the ceiling with self-tapping screws as shown in the picture below –



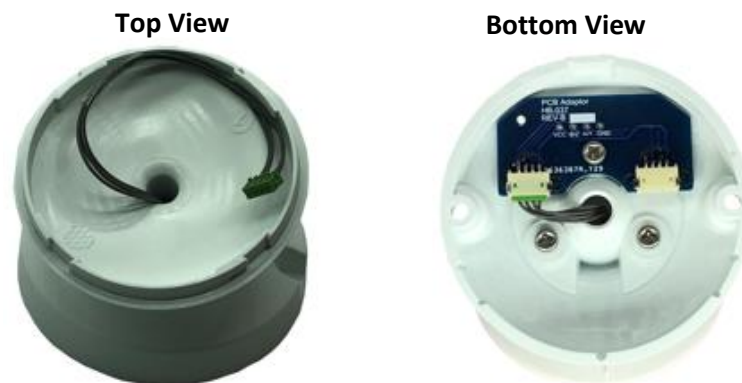
4. Attach the cable to the JST connector of the sensor.

- Twist lock the front face, in a clockwise direction, to attach it to the back cover.



## 6.2 Swivel Mount

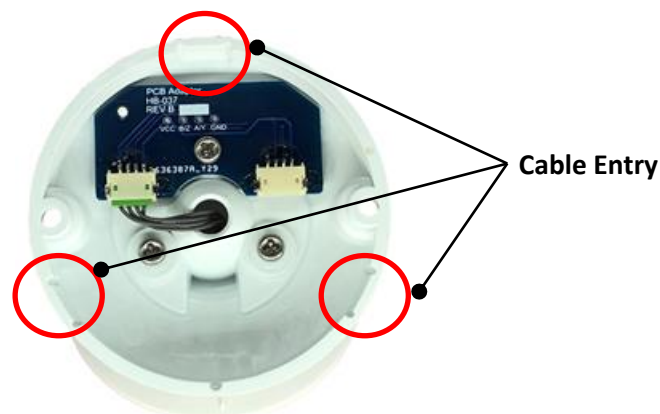
The swivel mount is shown in Figure 5.



**Figure 5 - LDSBus IR Blaster – Swivel Mount – Top & Bottom View**

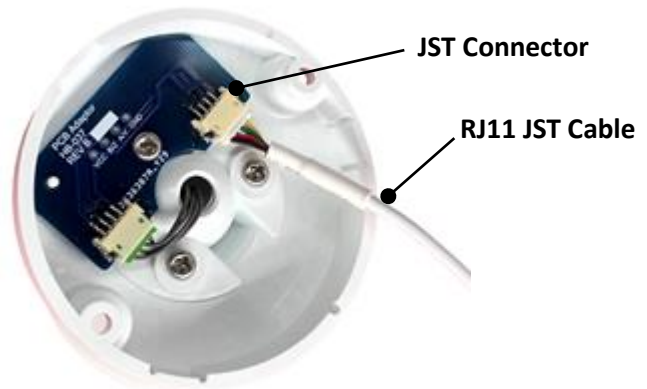
Follow these steps to fix the swivel mount –

- Choose the position for the wall mount and drill holes for mounting the swivel mount on the wall.
- Route and affix the LDSBus RJ11 cable on the wall through a buried or wall mounted conduit to butt against the base of the swivel mount.
- Break off one of the three cable entry locations on the base plate for cable routing.





4. Connect the RJ11 JST cable to the JST connector (Swivel Mount bottom section) as shown in the Figure.



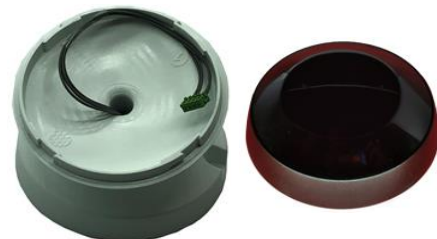
5. Fasten the swivel mount to the wall using the mounting screws. Ensure that the cable is sitting in the cable entry slot.
6. Remove the sensor from the flush mount back cover by turning it in an anti-clockwise direction.



7. Connect the JST cable from the top section of the swivel mount to the JST connector located on the back of the device.



8. Attach the device to the top section of the swivel mount.






9. Turn the device clockwise to secure it to the swivel mount.



## 7 System Status LED Indicator

LED status are illustrated in Table 2.

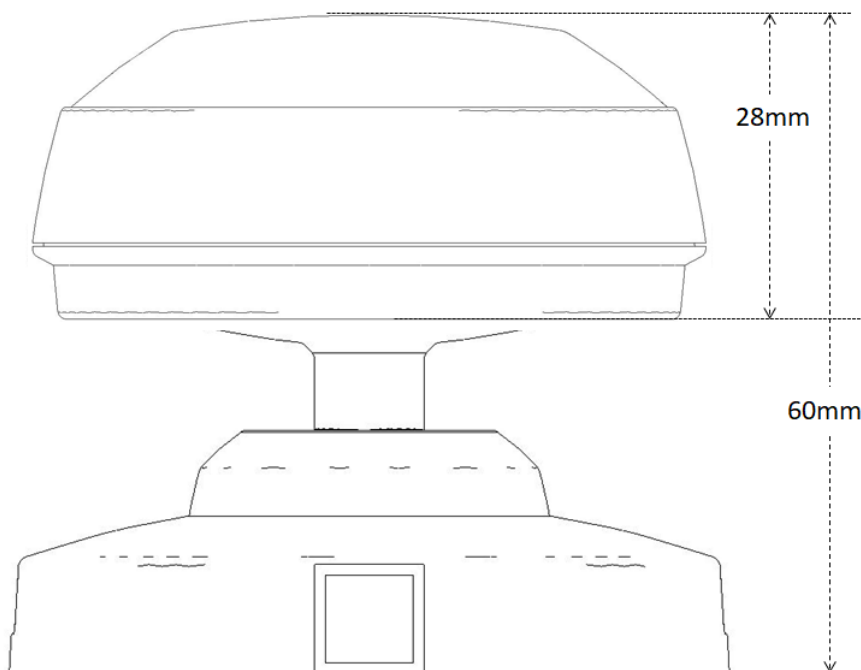
Device Status	LED Color		Flashing Frequency	Description
Idle	OFF		LED Off	Unconfigured device with factory default address (126)
Transmitting	RED		LED flashing @ 5Hz	Device transmitting IR signals.
Firmware update	YELLOW		Steady – Non-flashing	Device firmware update.

**Table 2 – LDSBus IR Blaster – System Status LED Indicator**

## 8 Mechanical Dimension



**Figure 6 - LDSBus IR Blaster Dimension – Top View**



**Figure 7 – LDSBus IR Blaster Dimension - Side View**

**Note:** All dimensions are in millimetres.

## 9 Contact Information

### Head Quarters – Singapore

Bridgetek Pte Ltd  
178 Paya Lebar Road, #07-03  
Singapore 409030  
Tel: +65 6547 4827  
Fax: +65 6841 6071

E-mail (Sales) [sales.apac@brtchip.com](mailto:sales.apac@brtchip.com)  
E-mail (Support) [support.apac@brtchip.com](mailto:support.apac@brtchip.com)

### Branch Office – Taipei, Taiwan

Bridgetek Pte Ltd, Taiwan Branch  
2 Floor, No. 516, Sec. 1, Nei Hu Road, Nei Hu  
District  
Taipei 114  
Taiwan, R.O.C.  
Tel: +886 (2) 8797 5691  
Fax: +886 (2) 8751 9737

E-mail (Sales) [sales.apac@brtchip.com](mailto:sales.apac@brtchip.com)  
E-mail (Support) [support.apac@brtchip.com](mailto:support.apac@brtchip.com)

### Branch Office – Glasgow, United Kingdom

Bridgetek Pte. Ltd.  
Unit 1, 2 Seaward Place, Centurion Business Park  
Glasgow G41 1HH  
United Kingdom  
Tel: +44 (0) 141 429 2777  
Fax: +44 (0) 141 429 2758

E-mail (Sales) [sales.emea@brtchip.com](mailto:sales.emea@brtchip.com)  
E-mail (Support) [support.emea@brtchip.com](mailto:support.emea@brtchip.com)

### Branch Office – Vietnam

Bridgetek VietNam Company Limited  
Lutaco Tower Building, 5<sup>th</sup> Floor, 173A Nguyen Van  
Troï,  
Ward 11, Phu Nhuan District,  
Ho Chi Minh City, Vietnam  
Tel : 08 38453222  
Fax : 08 38455222

E-mail (Sales) [sales.apac@brtchip.com](mailto:sales.apac@brtchip.com)  
E-mail (Support) [support.apac@brtchip.com](mailto:support.apac@brtchip.com)

### Web Site

<http://brtchip.com/>

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## Appendix A – References

### Document References

[BRT\\_AN\\_075 LDSBus Configuration Utility User Guide](#)

[BRT\\_AN\\_078 LDSU IR Blaster Application](#)

### Acronyms and Abbreviations

Terms	Description
DC	Direct Current
LED	Light Emitting Diode
IR	Infrared

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## Appendix C – Revision History

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Version 1.0	Initial Release	16-11-2021

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