



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
- BRTSys’s LDSBus protocol. Wired data and power transmission through LDSBus Quad T-Junction.
- Low power consumption – 625mW (typical)
- Operating temperature range : 0°C to +70°C
- Swivel and flush mount options
- Supported platform applications:

BRTSys’s PanL Smart Living product and LDSBus Python SDK

(Visit <https://brtsys.com/resources>)



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2 Part Numbers/Ordering Information

Part#	Description
LC020101A	LDSBus IR Blaster (Flush Mount)
LC021101A	LDSBus IR Blaster (Swivel Mount)

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3 Specifications

Features	Blaster	IR Emitter
	Interface	RS485
	Communication Method	LDSBus
	LED Indicator (RGB)	System Status Indicator (Please refer to LED section)
Mounting	Flush Mount - Fixed Angle Installation	
	Swivel Mount - Adjustable Angle Installation	
Power	Input Voltage	5V DC Bus Power
	Typical Power	620mW
	Max. Power	1150mW
IR Emitter	Range	7 Meters (Maximum)
	Angle	360 Degree
Physical Characteristics	Color	White
	Housing	Polycarbonate
	Dimensions	62mm x H25mm (Flush) or 62mm x H60mm (Swivel)
Environmental Limits	Operating Temperature	0 to 70°C
	Storage Temperature	-20 to 85°C
	Ambient Relative Humidity	5 to 95% (non-condensing)
Package Contents	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

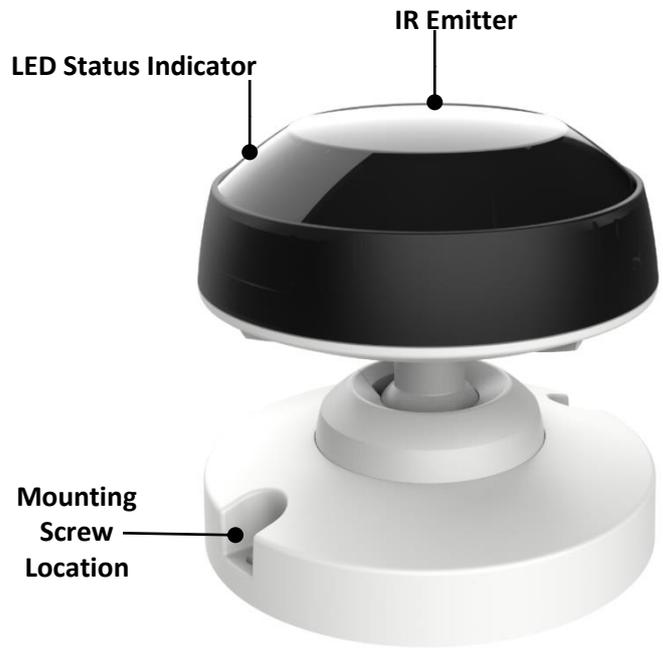


Figure 1 - LDSBus IR Blaster – Swivel Mount

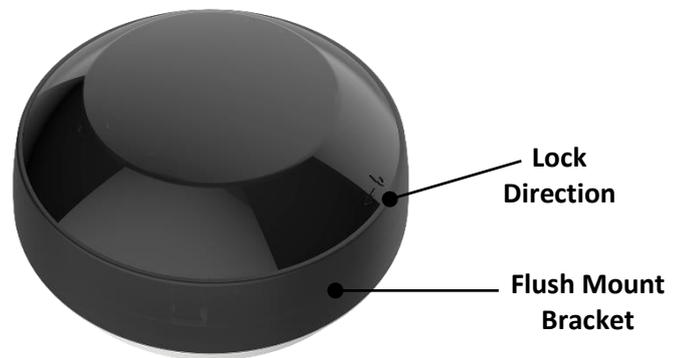


Figure 2 - LDSBus IR Blaster – Flush Mount

5 Configuration, Installation and Application

Please visit <https://brtsys.com/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 <https://brtsys.com/resources> to view the full device application, setup and installation guides.

Setup Instructions:

1. Connect the first LDSBus Quad T-Junction to any of the LDSBus Host Systems using a RJ45 (CAT5e) cable.

Connect the configured LDSBus IR Blaster to the LDSBus Quad T-Junction as shown in

2. Figure 3.

If there is more than one LDSBus Quad T-Junction, chain them together as shown in

3. Figure 3.

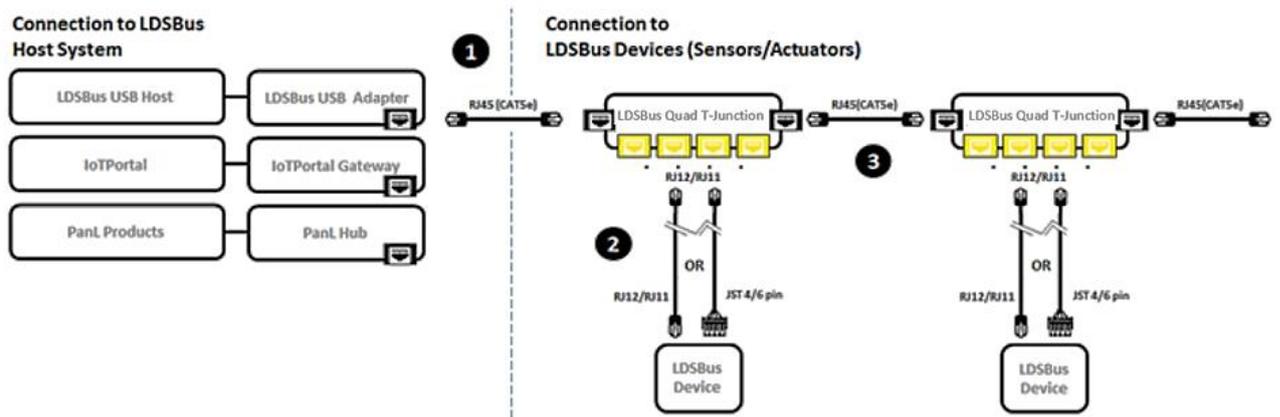


Figure 3 - LDSBus IR Blaster to LDS Bus – Connection Diagram

6 Mounting Instructions

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

6.1 Flush Mount

The flush mounting procedure assumes that the device is being mounted on a flat hollow surface behind which the LDSBus RJ11-JST cable is concealed and made accessible through an opening. Figure 4 shows the front face of the LDSBus IR Blaster. Note the lock/unlock direction on the cover.

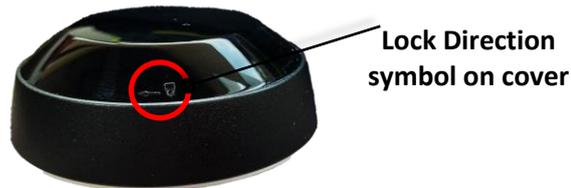


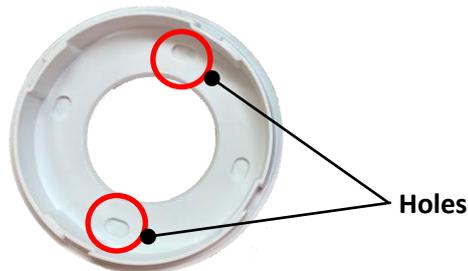
Figure 4 - LDSBus IR Blaster – Flush Mount – Top View

Follow these steps to fix the swivel mount –

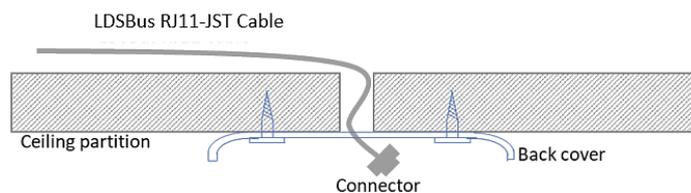
1. Unlock the back cover. Twist the top cover in the anti-clockwise direction to unlock.



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

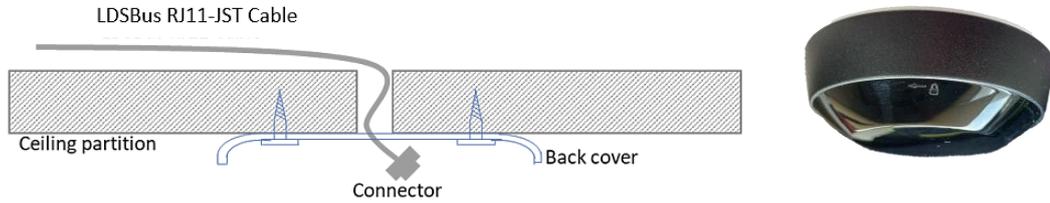


3. Prepare the ceiling and route the RJ12-JST cable through the ceiling opening. Run the LDSBus RJ11-JST cable through the centre (hole) of the back cover and fasten the back cover to the ceiling with self-tapping screws as shown in the picture below -



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.

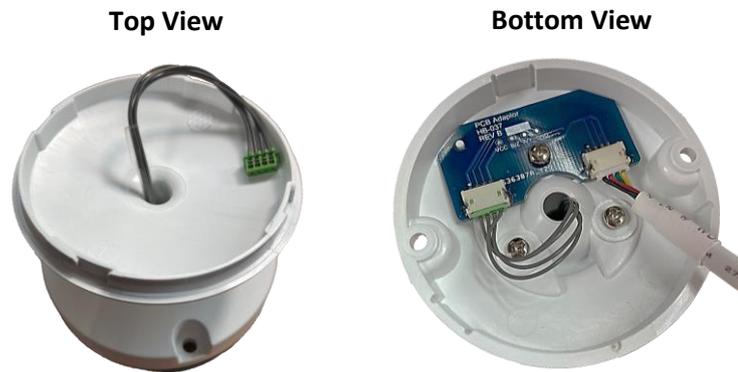
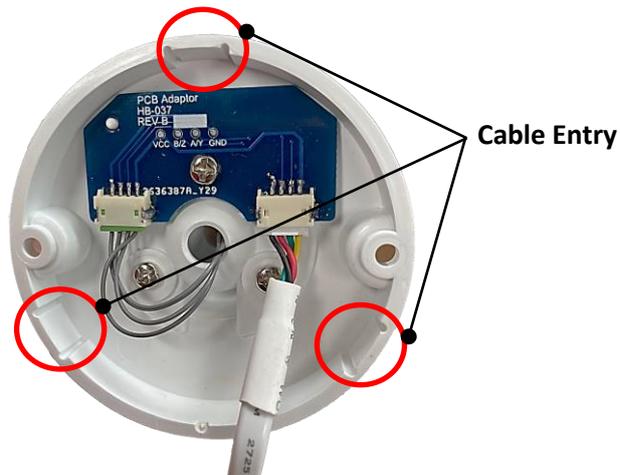


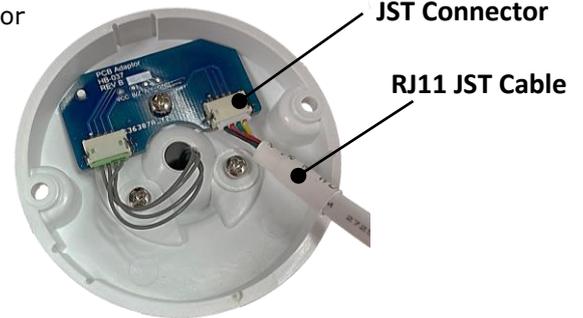
Figure 5 - LDSBus IR Blaster – Swivel Mount – Top & Bottom Views

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-JST 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 statuses 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 Dimensions

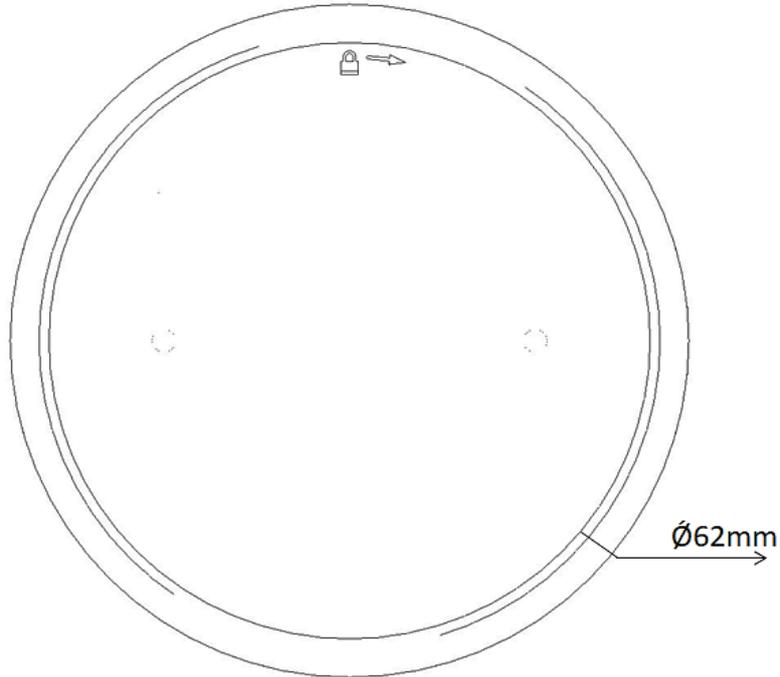


Figure 6 - LDSBus IR Blaster Dimension – Top View

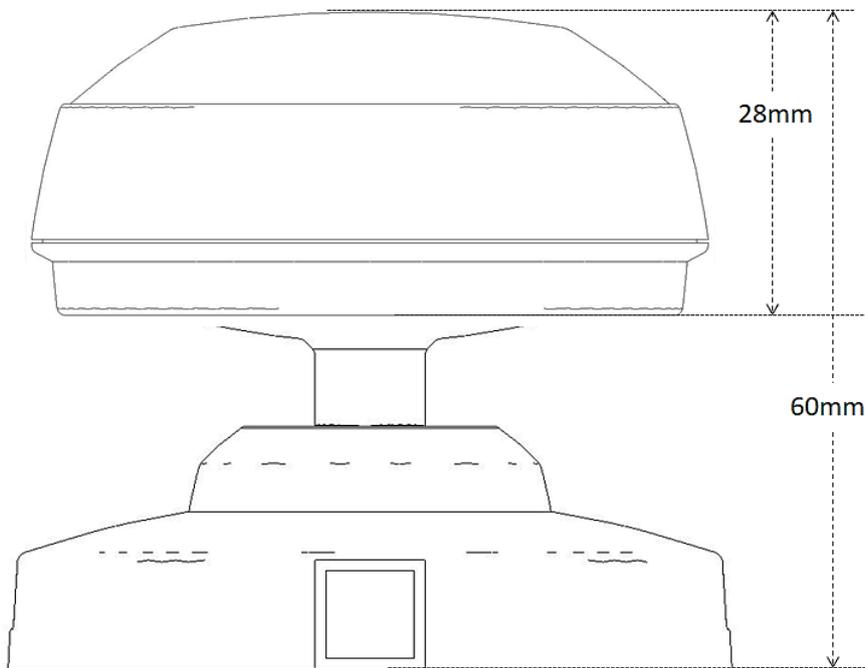


Figure 7 - LDSBus IR Blaster Dimension - Side View

Note: All dimensions are in millimetres.

9 Contact Information

Refer to <https://brtsys.com/contact-us/> for contact information.

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Appendix A – References

Document References

[BRTSYS AN 001 LDSBus Configuration Utility Guide](#)

[BRTSYS AN 002 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

Document Title: LDSBus IR Blaster Datasheet

Document Reference No.: BRTSYS_000003

Clearance No.: BRTSYS#004

Product Page: <https://brtsys.com/ldsbus/>

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Revision	Changes	Date
Version 1.0	Initial Release	16-11-2021
Version 1.1	Updated release under BRT Systems	14-09-2022
Version 1.2	Corrected RJ12 to RJ11-JST Cable	24-03-2023
Version 1.3	Updated HVT references to Quad T-Junction; Company Address	04-10-2023