Keilton
+autani

BG01 Series
Bluetooth to 485 Bridge
User Guide
2026

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BG01 Overview

Bluetooth to RS485 Bridge

BG01

The Keilton+autani BG01 is an RS485 bridge for connecting third-party control systems to the Keilton+autani lighting network. The third-party RS485 device sends a command through the RS485 bridge to control Bluetooth-enabled luminaires or other devices in the Keilton+autani system.

Features

- Bluetooth to RS485
- Two-way communication interface
- Long distance transmission

BG01 General Description

Third-Party System Integration

Smart lighting systems often integrate into building management or home automation systems to provide synchronized control across all building systems.
The BG01 bridge enables Keilton smart lighting systems to interconnect with third-party systems that have RS485 ports. Third-party systems can send commands to the BG01 bridge through the RS485 port and control lights.

For example, a Crestron controller connects to the BG01 bridge via RS485 cable. Using Crestron's hardware and interface editors, integrators can create commands and scripts that bind lighting control to panel actions, providing synchronized operation with other building systems. Panel actions can then control the lighting system in coordination with other building systems.

BG01 General Description Cont.

485

e.g., Crestron

485 bridge

Crestron UI editor.

Crestron Hardware editor
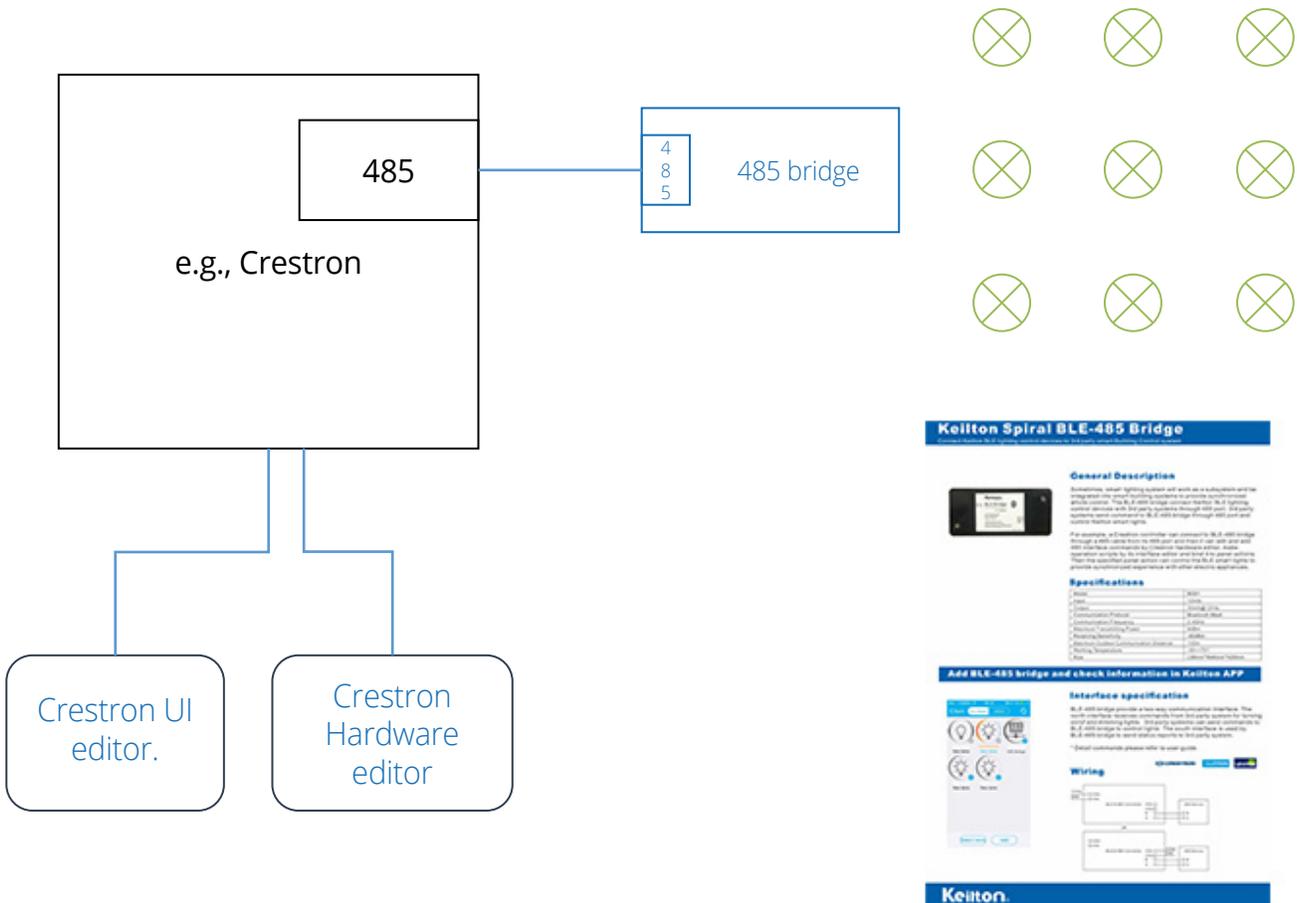
Procedure

This document does not include descriptions for light commissioning, grouping, scenes, and switches. Refer to the Keilton+autani App user guide.
This document does not include third-party system configuration. Refer to your control system's documentation.

| Commission lights | → | Add BG01 bridge | → | Connect bridge to third-party system | → | Configure third-party system |
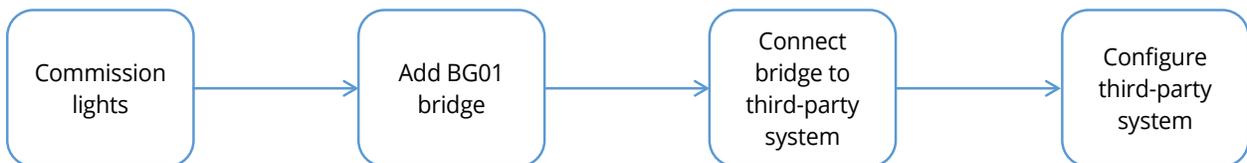
Wiring Diagram

The **BG01** requires external 12VDC power. Connect the BG01's RS485 port to the third-party system's RS485 port. Connect A to A and B to B directly-do not cross the wires.

Note: The BG01 communicates at 115200 bps. Verify that your third-party system is configured for this baud rate and can reliably communicate at this speed. Systems with maximum speeds at or below 115200 bps may experience unstable communication.
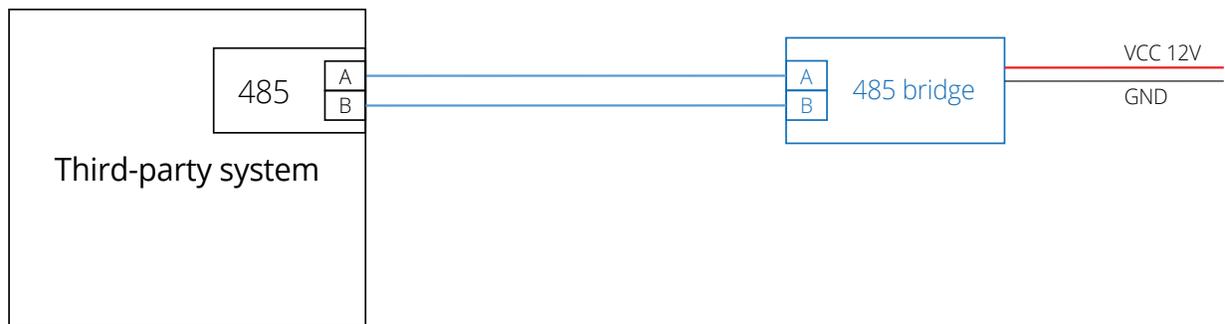
Interface Specification

Third-party system

South interface

North interface

BG01 bridge
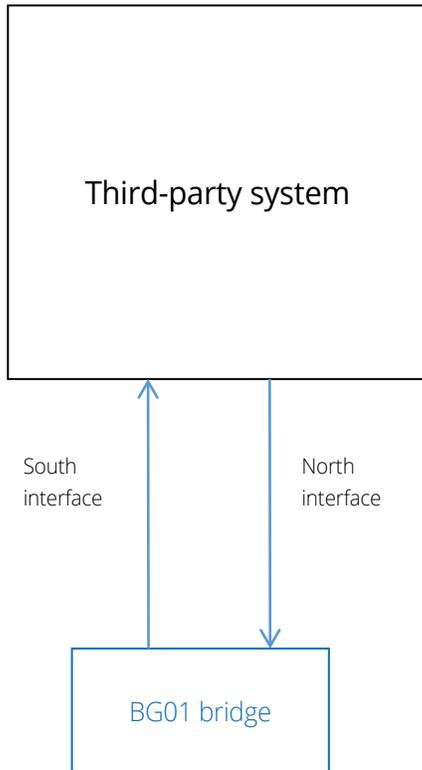
The **BG01** provides bidirectional communication.

The north interface receives commands from third-party systems for turning lights ON/OFF and dimming. Third-party systems send commands to the BG01 to control luminaires.

The south interface sends status reports from the BG01 to third-party systems.

RS485 port configuration: *115200/8/N/1 (***baud rate 115200 bps, 8 data bits, no parity check, 1 stop bit)**

All commands use ASCII text string format. Each field in the command string is separated by a comma (,) and ended by a semicolon (;). Commands are case-sensitive and should use UPPERCASE characters. Send a carriage return (0x0D) after each command.

Maintain a minimum **200ms** interval between commands.

Dim Parameter

Light type	Dim parameter 1	Dim parameter 2	Dim parameter 3	
Mono dimmable light	Light level, 0-255	NA	NA	Set to 0 for all parameters of NA
Color temperature dimmable light	Light level, 0-255	Color temperature, 0-255 (255 = lowest CCT, 0 = highest CCT)	NA	
Color dimmable light	R: 0-255	G: 0-255	B: 0-255	
Relay controller (mono switchable light):	0 = OFF, Non-0 = ON	NA	NA	

- Light ID, group ID, scene ID: Check these IDs in the Keilton+autani App
- Fade time: Range 0-65535 in 100ms units (example: 10 = 1 second)

PIR Status

Current Status

- 1: occupied
- 0: not occupied
- 2: not defined, there is no PIR sensor

Status History

- 1: been triggered at least once
- 0: not been triggered
- 2: not defined, there is no PIR sensor

Notice:

PIR status shows the instantaneous occupancy state at the time of query.
PIR status history indicates if the sensor has been triggered since the last status report.

North Interface Command

Control command
- Dimming command: SLT, <light/group id>,<dim parameter1>,<dim parameter 2>,<dim parameter 3>,<fade time>;

- Call scene: SCN,<scene id>,<fade time>;

- Turn ON all lights: AON,<fade time>;

- Turn OFF all lights: AOFF,<fade time>;

Parameters:
- Words in UPPERCASE are command identifiers and must remain unchanged. Lowercase text indicates parameters to be replaced with actual values.

- Light ID, group ID, scene ID, dim parameter 1-3, and fade time are all integers.

- Check light ID, group ID, and scene ID in the Keilton+autani App.

- Refer to the Dim Parameter table for parameter values.

- Fade time range: 0-65535 in 100ms units (example: 10 = 1 second).

- Lights will resume auto mode or return to the last dim level when turned ON.

Other commands:
- RTC check: RTC,CHECK; If RTC operates correctly, the bridge returns 'RTC OK'; otherwise, it returns 'RTC ERROR'.

- Status query: REQ,STATUS;

The BG01 returns the status report 5 seconds after receiving the query command. Refer to the South Interface Command section for status format. Maintain a minimum 20-second interval between consecutive status query commands.

South Interface Command

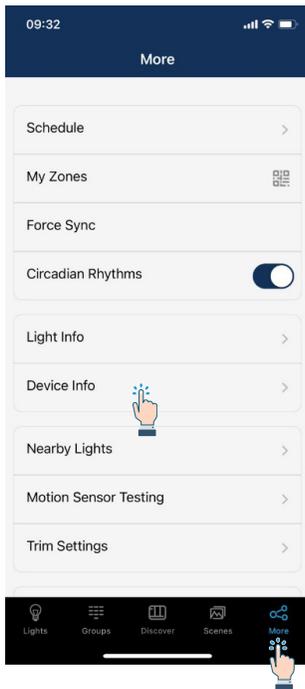- Status report: SST,<ssid>,<light id>,<PIR status>,<PIR history status>,<dim parameter 1>,<dim parameter 2>,<dim parameter 3>;

Parameters:
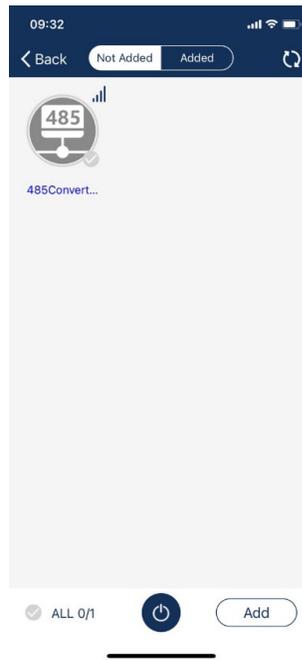- ssid is the mesh network id of the lights.
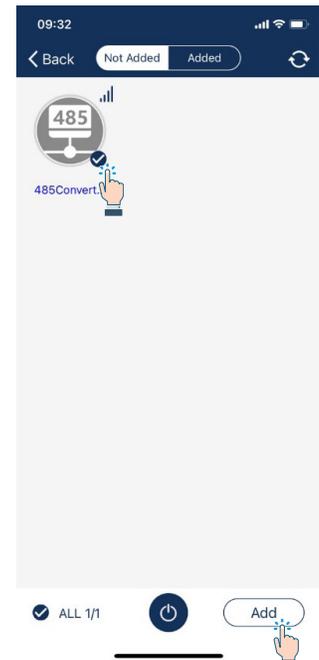- Refer to the Keilton+autani App for light ID.

Add 485 Bridge to Keilton App

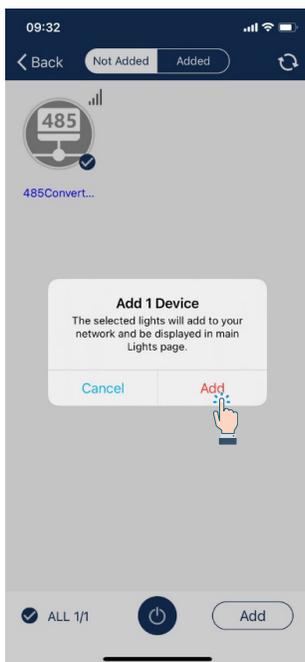**1.** Navigate to the '**More**' page, then select '**Device Info**'

2. Select '**Click to Add**' to search for the BG01. Verify the bridge is powered ON

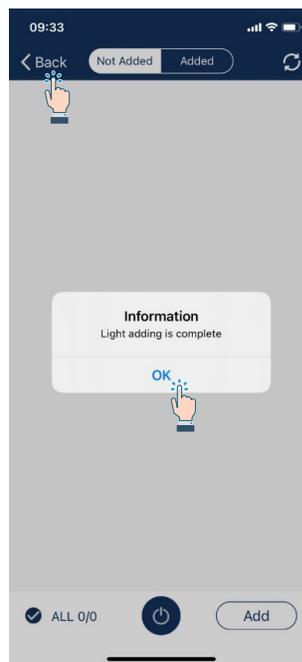**3.** The app will search for nearby wireless devices

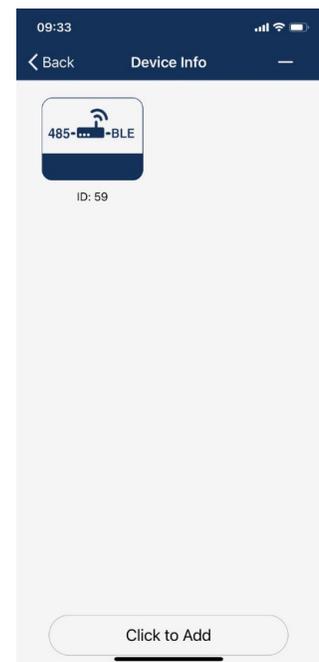**4.** Select the BG01 from the list, then select '**Add**'

5. Select '**Add**' to confirm

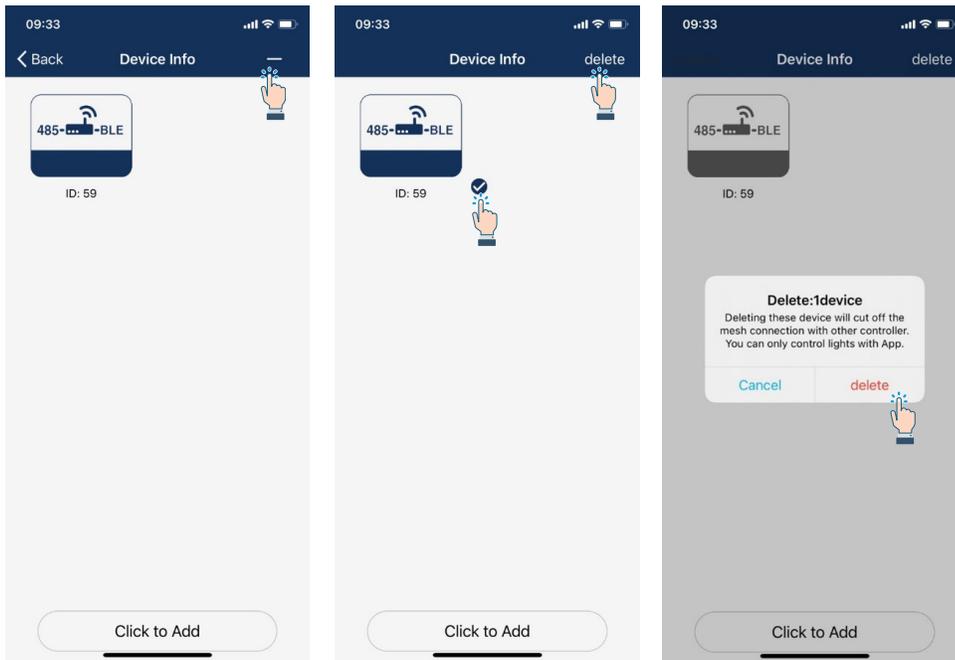**6.** The app will add the BG01 to your zone

7. Select '**OK**', then select '**Back**' to return to the previous page

8. Verify the BG01 appears in the 'Device Info' page. If not added successfully, retry or reset the bridge
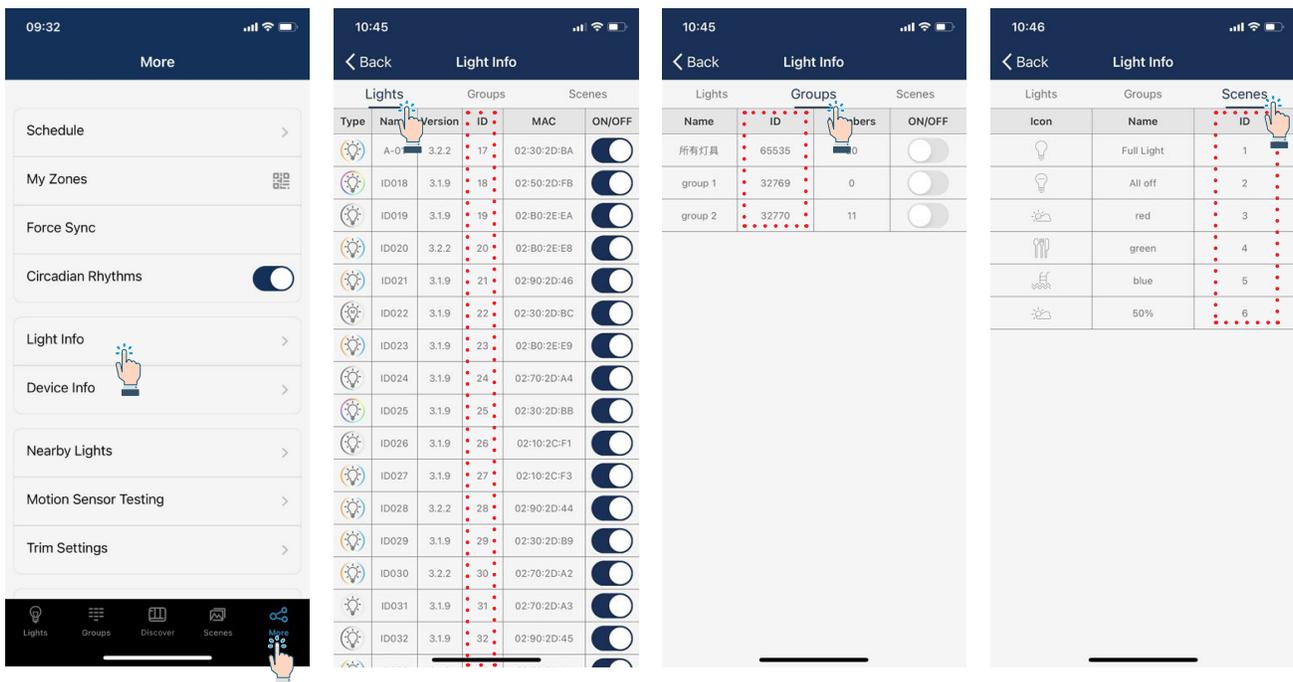
Delete/Reset BG01 485 Bridge

Alternatively, reset using the power cycle method: 3 short power cycles, 2 long power cycles (same as drivers).

1. Select the '**-**' button in the top-right corner of the '**Device Info**' page

2. Select the bridge to delete, then select '**Delete**'

3. Select '**Delete**' to confirm. The bridge will reset to factory settings

Check Light, Group, and Scene IDs

1. Select '**Light Info**' from the '**More**' page

2. Check light IDs in the '**Lights**' tab

3. Check group IDs in the '**Groups**' tab

4. Check scene IDs in the '**Scenes**' tab

Application Examples

Example: Home Theater

In a home theater, connect the BG01 to the control system to integrate lighting with audio/video controls for a unified user experience.

When playback starts, fade lights OFF over 10-30 seconds for movie mode. When playback ends, fade lights ON over 10-30 seconds.

In the control system, associate the 'start play' action with this command:
> **AOFF,100;**

to the RS485 port to turn OFF all lights with a 10-second fade time.

Associate the 'end play' action with this command:
> **AON,100;**

to the RS485 port to turn ON all lights with a 10-second fade time.

Example: Meeting Room

In a meeting room, connect the BG01 to the control system to integrate lighting with presentation and conferencing systems for a unified user experience.

Create 'PPT', 'Lecture', and 'Meeting' scenes in the Keilton+autani App (example scene IDs: 2, 3, 4):

For PPT mode, when the control system lowers the screen, powers ON the projector, and closes the shades, it also sends this command to the lighting:
> **SCN,2,10;**

to activate PPT scene mode

For Lecture mode, the system sends this command to the lighting:
> **SCN,3,10;**

to activate Lecture scene mode

For Meeting mode, the system sends this command to the lighting:
> **SCN,4,10;**

to activate Meeting scene mode

Setup Prerequisites

Most PCs do not have RS485 ports. Install a USB-to-RS485 adapter to communicate with the BG01. Connect the adapter to a USB port on your PC to install a serial port. Send data through this serial port to the RS485 cable.

The BG01 communicates at 115,200 bps. For stable communication, use an adapter with maximum speeds exceeding 115,200 bps.

Identify the COM Port

Connect the USB-to-RS485 adapter and install the driver. Right-click '**My Computer**' (or 'This PC') and select '**Device Manager**'.

Expand '**Ports (COM & LPT)**' in Device Manager to find the newly installed serial port. Example serial port name: COM5.

Note the COM port number for use in your control system configuration.

Need Help?

Technical Support For installation, configuration, and troubleshooting assistance
Support Center: https://autani.zendesk.com/hc/en-us | Email: support@autani.com
Phone: +1 (443) 320-2233 | Hours: Monday-Friday, 9 AM - 5 PM EST

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