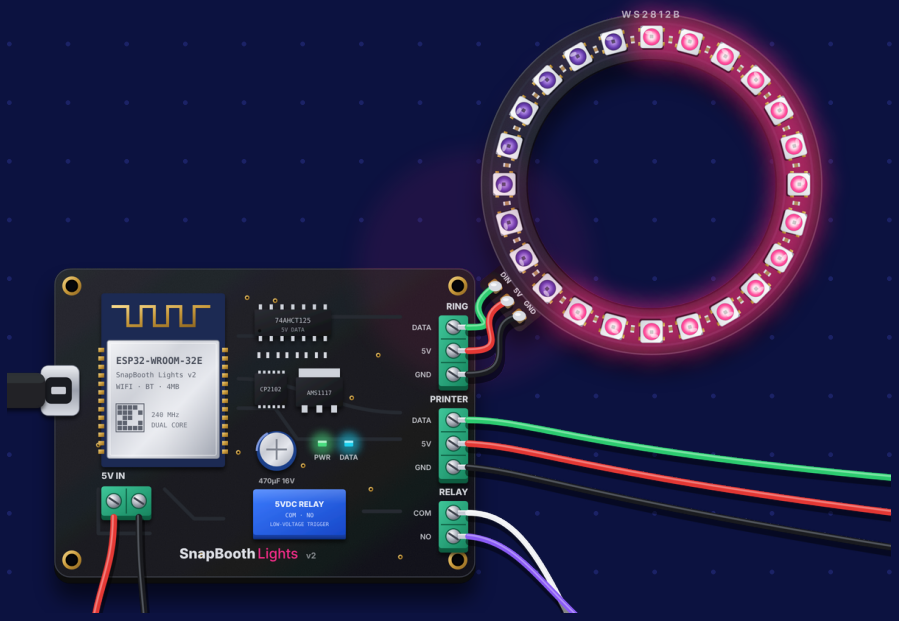
Virtual Pix Booth

SnapBooth Lights controller

Installation guide



Your LED ring follows the photo booth: it glows on the welcome screen, fills with the countdown as the seconds go, flashes for the photo, spins while the photos are made and pulses while the print comes out. The controller comes programmed — wire the lights, plug it in, press Connect.

In the box

ESP32 controller	Programmed with SnapBooth Lights. Status light, 5 V level shifter on the LED data lines.
Screw terminals	LED ring, printer strip, 5 V power in.
Relay output	A dry contact to trigger a flash or a fog machine.
USB cable	Connects the controller to the booth computer.

1. What you need

LEDs. Addressable 5 V LEDs: a WS2812B, SK6812 or “NeoPixel” ring or strip (3 wires: 5 V, GND, DATA). Rings of 12–60 LEDs are typical; the controller drives up to 1,500 on the ring output and 300 on the printer output.

A 5 V power supply big enough for your LEDs. Each LED can draw up to 60 mA at full white; the booth starts at 70% brightness. Power the LEDs from this supply, not from the USB cable.

LEDs (ring + strip)	Power supply	Notes
up to 30	5 V 2 A	A plug-in adapter is fine.
31–60	5 V 4 A	
61–150	5 V 10 A	Feed 5 V into both ends of long strips.
151–300	5 V 20 A	Feed 5 V every 100 LEDs (power injection).

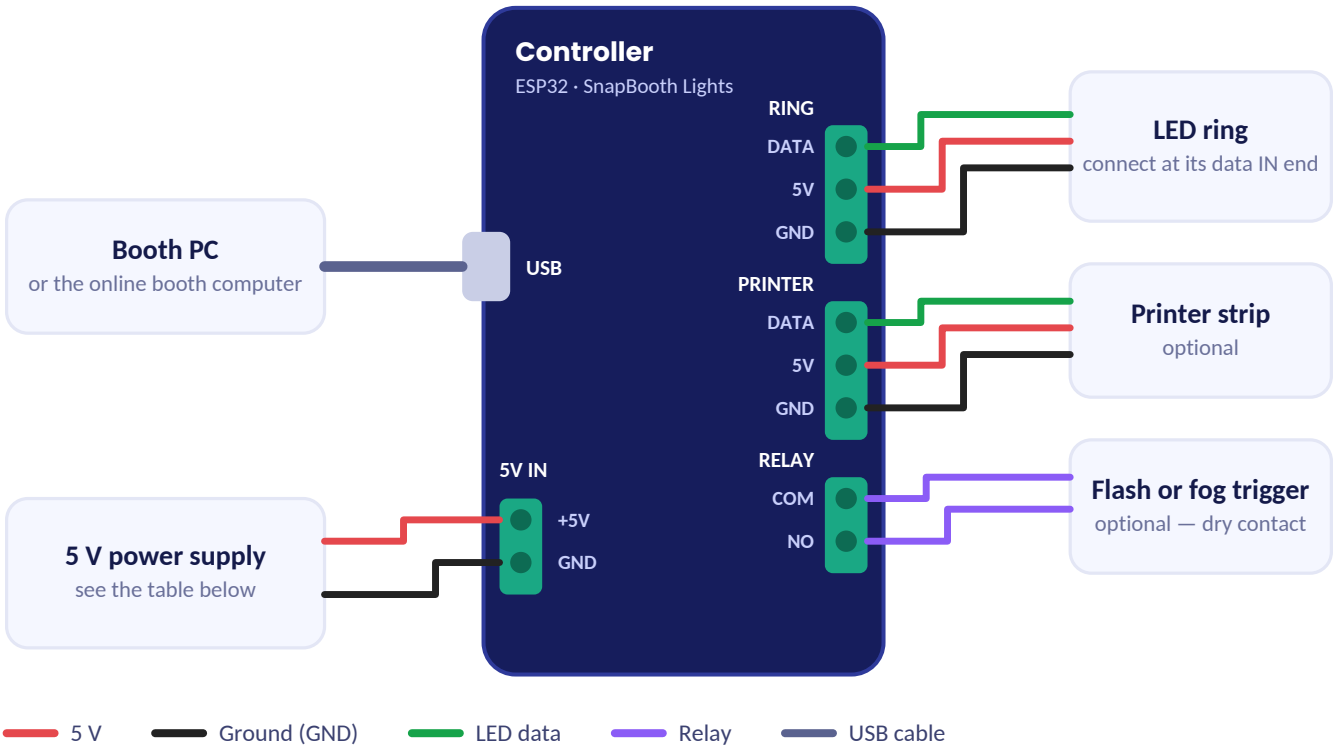
Wire. 20–22 AWG for the data wire; 18 AWG (or thicker for long runs) for 5 V and GND. Keep the data wire under 3 m (10 ft).

Optional: a second strip for the printer, and a flash or fog machine with a remote/trigger input for the relay.

Safety

Unplug the power supply while you wire. Double-check 5 V and GND before switching on — swapping them can destroy LEDs. The relay is for low-voltage trigger inputs (like a flash's remote socket); don't switch mains (wall power) with it unless you use a relay and wiring rated for it and you know how to do it safely.

2. Wire it up



1 **Find the data IN end of your LEDs**

LED strips and rings have arrows or a “DIN” / “DI” label. Connect to that end — the other end (DOUT) won't work.

2 **Ring to RING**

Data (often green) to DATA, 5 V (red) to 5V, GND (white or black) to GND. Check the labels on your LEDs — wire colours vary.

3 **Printer strip to PRINTER (optional)**

Same three wires. Leave the terminals empty if you don't use a printer strip.

4 **Power supply to 5V IN**

+5 V to +5V, ground to GND. The controller passes power to the RING and PRINTER terminals and shares one ground for everything.

5 **Relay to your flash or fog trigger (optional)**

COM and NO close together while the relay is on — like pressing the trigger button.

6 **USB to the booth computer**

Plug the USB cable into the PC running the booth app, or the computer running the online booth in Chrome or Edge. Then switch the power supply on.

3. Connect it to the booth

PC app

1. **Open Studio › Setup › LED Lights**
   Switch LED lights ON and choose the controller **SnapBooth Lights (recommended)**.
2. **Pick the USB port and press Connect**
   The port shows as a USB serial device (e.g. COM5). The status turns green: *Connected on COM5 · SnapBooth Lights v2*.
3. **Enter your LED counts**
   How many LEDs are in the ring and on the printer strip. Set the brightness and the fade between scenes.

Online booth (iPad, laptop, any computer)

1. **Use Chrome or Edge on a computer**
   Web pages can only reach USB devices in Chrome and Edge on Windows, Mac or ChromeOS (not on iPhone or iPad).
2. **Booth setup › LED Lights › Connect USB device**
   Chrome lists the controller — pick it. Next time the booth reconnects by itself.
3. **Same settings as the PC**
   Your effects and colours are saved with the event, so the PC and the online booth play the same lights.

Pick the scenes

Each scene has an effect, two colours, a speed, a printer strip effect and the relay. The live preview shows exactly what the ring will do. **Test on the lights** plays one scene; **Play a whole session** runs them all in order. To fire a flash or fog *before* the photo, set the Countdown scene's relay to “Switch on at the countdown’s 90 %” (any fill from 1 to 100 %).

Scene	When it plays	Good start
Welcome screen	While the booth waits	Rainbow or Breathe
Session starts	A guest taps start	Colour wipe
Countdown	3, 2, 1 — fills with the real seconds	Countdown fill
Taking the photo	Each photo (relay on: flash)	Photo flash
Processing	While the print / GIF / AI is made	Spin or Comet
Sharing screen	QR code, email and text	Breathe
Printing	While the print comes out	Chase
Session done	Back to the welcome screen	Fade out

4. If something's not right

What you see	What to do
No USB port in the list	Try another USB cable (some only charge) and another port. Windows installs the USB driver by itself; if it doesn't, install the CP210x or CH340 driver for your Windows version. Press Refresh.
“Can't open COM5”	Another program has the port (an old LED program, Arduino IDE). Close it and press Connect.
Connected, but the LEDs stay dark	Check the power supply is on and the data wire is on the data IN end. Check the LED count isn't 0.
Only the first LED works, or random colours	Ground: the LEDs and the controller must share GND (use the GND terminals). Keep the data wire short.
Wrong colours (red shows green)	Your LEDs use a different colour order (RGB instead of GRB). Reply to your order e-mail with your LED model and we'll send the right setup.
The far end looks dim or orange	Not enough power reaches it: feed 5 V into the other end too (power injection) or use thicker wires.
The relay doesn't click	Choose Relay › Switch on for the scene (e.g. Taking the photo) and set a delay of 0 ms. Press Test.
The booth says “Connected” without “SnapBooth Lights v2”	The controller didn't answer. Unplug it for 5 seconds, plug it back in and press Connect.

Specifications

Board	ESP32, programmed with SnapBooth Lights v2
Power in	5 V DC (screw terminal); USB for data
LED outputs	Ring: GPIO 16, up to 1,500 LEDs · Printer: GPIO 17, up to 300 LEDs · 5 V data level
Relay	GPIO 25, dry contact (COM / NO)
Works with	Virtual Pix Booth PC app and online booth (Chrome / Edge)
Animation	Smooth fades between scenes, countdown fill in real time, 60 frames a second

Questions? Reply to your order e-mail — we're happy to help you wire your booth.