OpenGizmo

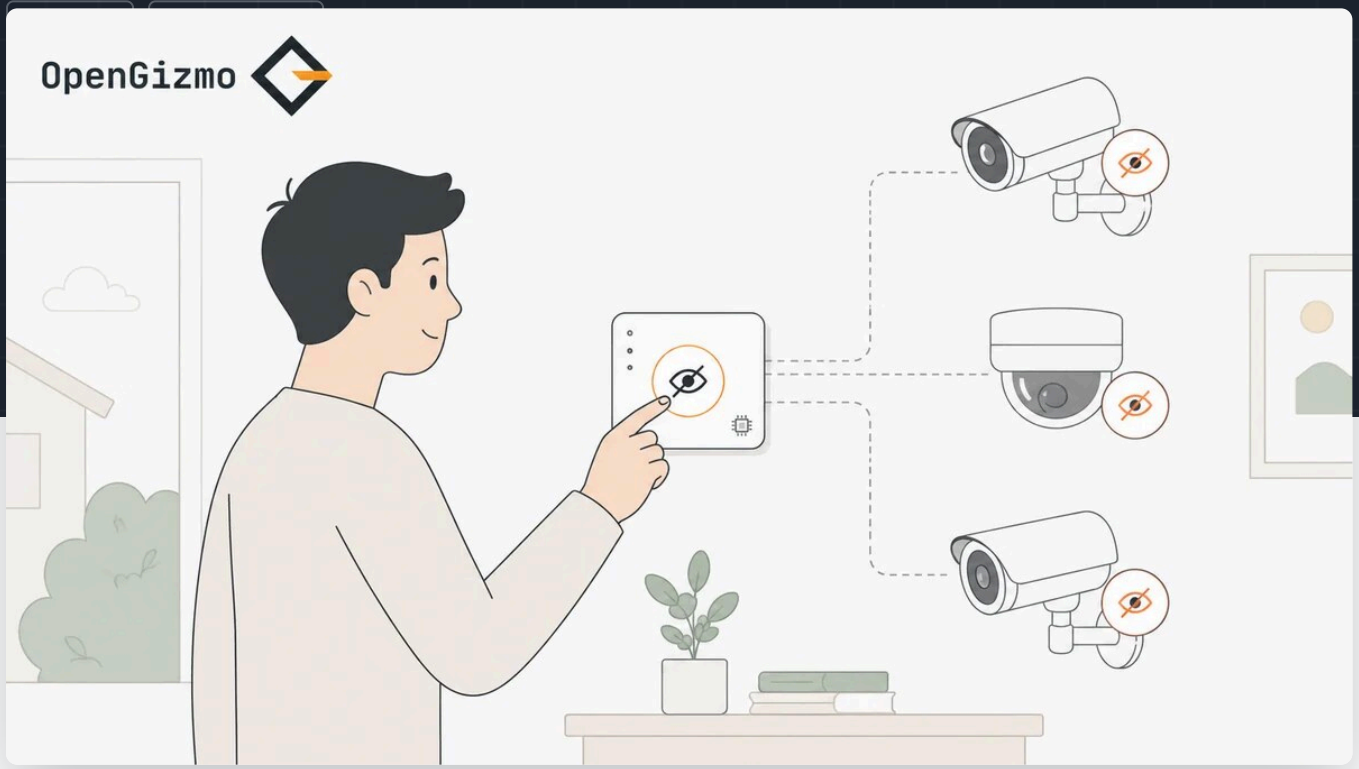
DATASHEET

XIAO ESP32-S3 · REOLINK NVR QUIET EXIT

Gizmo Reolink Switch

A one-button switch that mutes the notifications and recording of a Reolink NVR for a while, so you can leave home without triggering your own cameras.

XIAO ESP32-S3 | 16x2 I2C LCD | Reolink NVR | Wi-Fi setup hotspot



BOARD
XIAO ESP32-S3
PlatformIO board seeed_xiao_esp32s3

DISPLAY
16x2 LCD
I2C backpack at 0x27

QUIET MODE
One button
Started and stopped at the switch only

SETUP
Browser
Hotspot, then gizmo-reolink-switch.local

01 Overview

Gizmo Reolink Switch lets you leave home without triggering your own Reolink cameras. Press the button to choose a duration and hold it to start: the switch turns the NVR's notifications and recording off, then back on when the time is up.

The quiet mode is controlled from the button only, so nobody can mute your cameras without being at the switch. The web app sets it up and shows the countdown.

- One button: a short press picks the duration, a long press starts or cancels it
- Cameras turned back on automatically, with retries if the NVR is offline
- Muted channels kept in flash, so a reboot never leaves them muted
- Clear 16x2 LCD screens and buzzer cues
- Wi-Fi and NVR login set from the phone, no credentials in the firmware
- Prebuilt firmware, flashed from the browser on opengizmo.dev

02 Specifications

CONTROLLER

Board	**Seeed Studio XIAO ESP32-S3 (seeed_xiao_esp32s3)**
Settings	**Kept in flash (Preferences)**

INTERFACE

Display	**16x2 I2C LCD at 0x27**
Button	**Short press: duration, long press: start or cancel**
Buzzer	**Cues for every step**
Factory reset	**Hold the BOOT button**

REOLINK NVR

Control	**Reolink API over HTTPS**
Muted	**Notifications and recording**
Restore	**Automatic when the time is up, with retries**

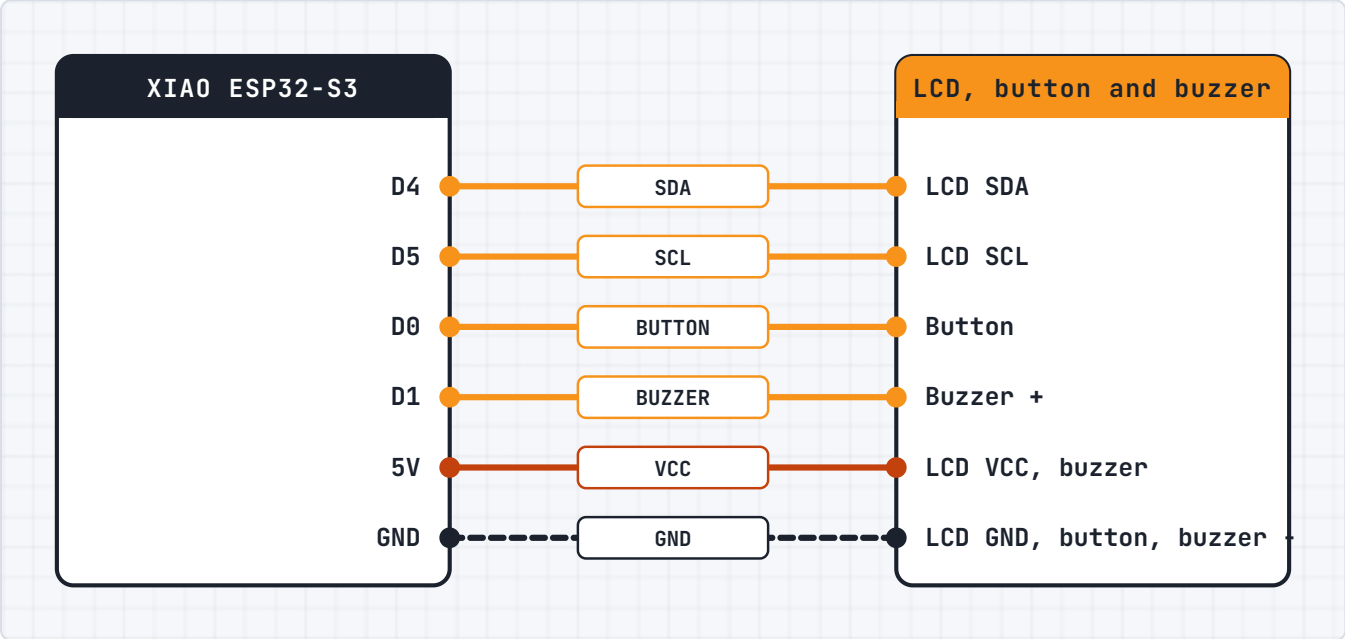
CONNECTIVITY AND SETUP

Wi-Fi	**2.4 GHz (ESP32-S3), with its FPC antenna**
Setup hotspot	**Gizmo-Reolink**
Web app	**http://gizmo-reolink-switch.local**

03 Pinout and wiring

The LCD takes the I2C pads D4 and D5, the button goes from D0 to GND, and the buzzer is driven from D1. The LCD and the buzzer run on 5 V, with a common ground.

Pins checked against the firmware v1.3.0 (commit e8a7bda) when this datasheet was generated.



SIGNAL	BOARD PIN	MODULE PIN	NOTES
SDA	D4	LCD SDA	I2C data of the LCD, GPIO5
SCL	D5	LCD SCL	I2C clock of the LCD, GPIO6
BUTTON	D0	Button	To GND when pressed, GPIO1
BUZZER	D1	Buzzer +	Buzzer drive, GPIO2
VCC	5V	LCD VCC, buzzer	The LCD and the buzzer run on 5 V
GND	GND	LCD GND, button, buzzer -	Common ground

04 Parts list

QTY	PART	NOTES
1	**Seeed Studio XIAO ESP32-S3**	With its FPC antenna (it has none on the board)
1	**16x2 I2C LCD with backpack**	Detected at 0x27
1	**Push button**	Between D0 and GND

1	**Buzzer**	Driven from D1
1	**Reolink NVR**	On the same network as the switch
1	**USB cable and 5 V USB power supply**	Powers the board, the LCD and the buzzer

05 Setup

01 Flash the firmware

Connect the XIAO over USB, open the project page on opengizmo.dev in Chrome or Edge, and press Flash firmware.

02 Join the setup hotspot

Without a saved network, the switch opens the Gizmo-Reolink Wi-Fi. Join it from your phone: the setup page opens by itself.

03 Pick your Wi-Fi

Choose your network and type its password. The switch connects and closes the hotspot.

04 Set up the NVR

The LCD then shows the address of the switch. Open http://gizmo-reolink-switch.local, go to the NVR page and enter the address and login of your NVR: the switch checks it and counts the online cameras.

05 Leave home quietly

Press the button to choose the time and hold it to start. The Switch page of the web app shows the countdown.

06 Troubleshooting

The LCD powers on but shows no text	Check the SDA and SCL wiring (D4, D5), and that the backpack answers at 0x27.
A button press is ignored	While the switch talks to the NVR it ignores presses on purpose. Press again once the idle or countdown screen is back.
The quiet mode does not start	Open the NVR page of the web app and check the connection: it says whether the NVR can't be found or refused the login.
The LCD says the alerts are still off	The NVR could not be reached to turn the cameras back on. The switch keeps retrying; hold the button to retry right away.

The LCD says the login is paused	The NVR refused a login, so the switch waits before trying again, to keep the NVR account from locking. Fixing the login on the NVR page ends the pause.

Gizmo Reolink Switch is an open-source OpenGizmo project

Project page: https://opengizmo.dev/projects/gizmo-reolink-switch

Source code: https://github.com/open-gizmo/gizmo-reolink-switch · MIT license