# OpenSesame Business-Focused Installation & Setup Guide

## Overview

OpenSesame is a customizable, open-source smart doorbell platform built for both residential and small-scale commercial use. This document provides step-by-step setup instructions and highlights the business benefits of modular, self-hosted security.

## Value of Open Source and Modularity

- No subscription fees or vendor lock-in

- System can be self-hosted on low-cost hardware (e.g., Raspberry Pi)

- Full transparency and data privacy with locally stored video and face recognition logs

- Highly adaptable for small offices, retail shops, rental properties, and homes

## Installation Checklist

- Flash Raspberry Pi OS to microSD and install required software (FastAPI, Docker, PostgreSQL)

- Setup web server with systemd service for reliability

- Flash and configure PYNQ-Z2 with pretrained PyTorch model

- Assemble hardware using 3D-printed casing

- Confirm camera and audio components are connected and functional

## Integration With Hardware

From early sprints, our team carefully selected the PYNQ-Z2 board for edge AI inference and the Raspberry Pi for server management. Through artifacts #13, #35, and #38, we ensured solid interoperability between components. Configuring the GPIO-based camera and power optimization (artifact #41) ensures reliable operation even in off-grid settings.