

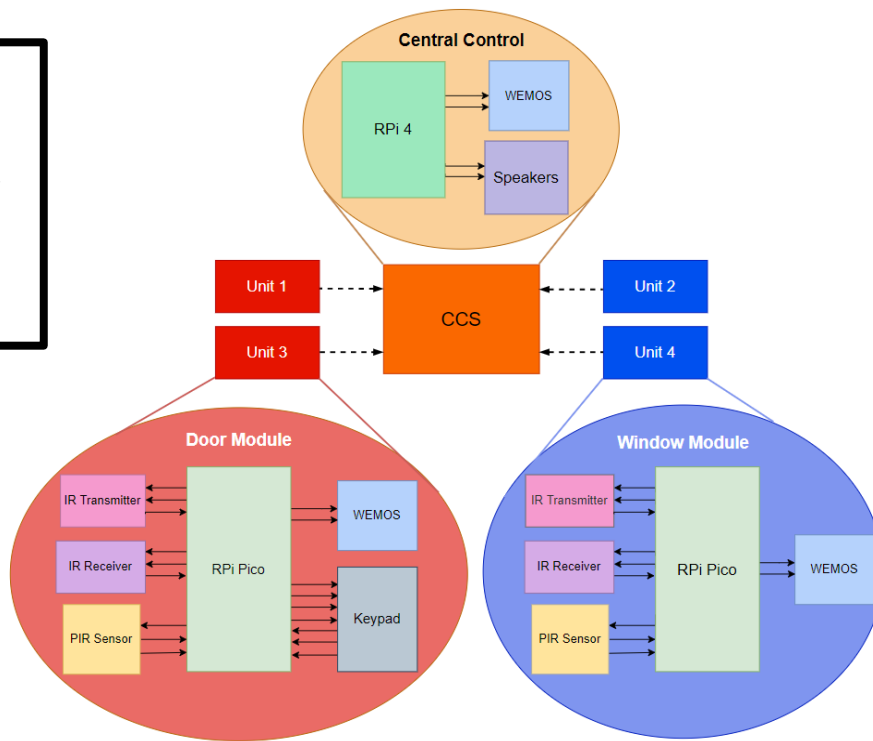


H.I. P.U.P.

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Introduction

As a home security system, this design is intended to detect when intruders enter the customer's home. The design is user-friendly from installation to regular use. It is designed to be as close to autonomous as possible.



Conclusion

The final product of this design detects when someone enters a home, whether an intruder or the homeowner. The system has various features for controlling its modes and alerting the user of a break-in or maintenance. It is scalable for more or fewer modules, secured on its own network, and upgradable for additional features or changes.

Features and Results

- Window and door modules to be placed at the user's discretion and are battery operated
- Any module can temporarily disable the system with a sensor so the user can leave/open a window easily
- Wireless communication between modules and CCS
- CCS operates on in-house power with an emergency battery backup
- User will receive an email when an intruder is detected, or batteries need replacing in remote modules
- Self-contained wireless communication network

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Hardware	Software
WEMOS	<u>Languages:</u>
Raspberry Pi 4 B	Python
Raspberry Pi Pico	C/C++
9V battery Supply	Linux
Keypad	<u>Editors/IDEs:</u>
PIR Sensors	Thonny
IR Sensors	Arduino
	VI
	Nano