

SafeHome Python API (Summary)

Requirments

python 3.14 (includes tkinter as part of its standard library)

Pillow>=10.0.0 (Python Imaging Library)

Control Panel button callbacks

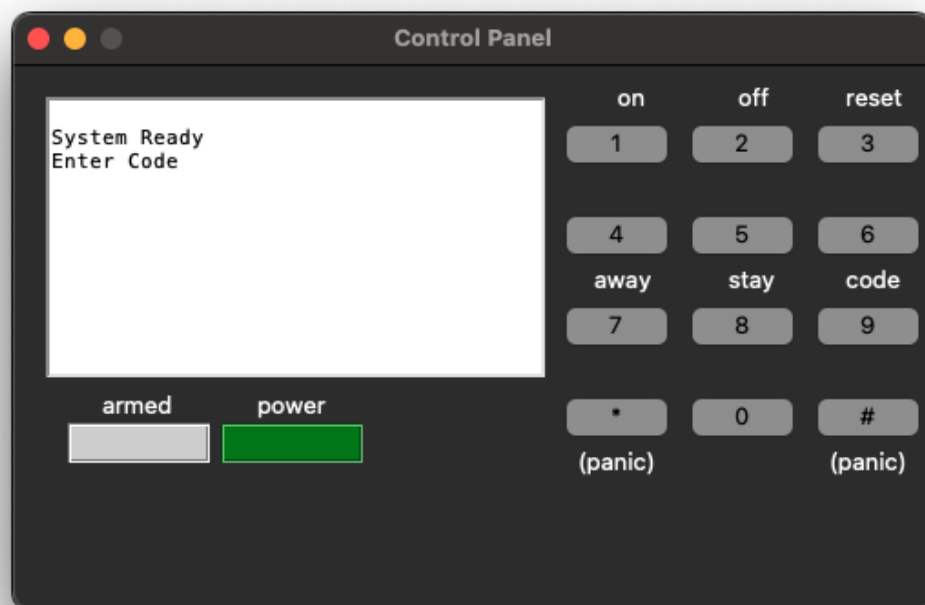
The control panel abstract class ([DeviceControlPanelAbstract](#)) defines callback methods to be implemented by a subclass. In Python they are instance methods. Example names (implement these in your subclass):

```
def button0(self): ...
def button1(self): ...
def button2(self): ...
def button3(self): ...
def button4(self): ...
def button5(self): ...
def button6(self): ...
def button7(self): ...
def button8(self): ...
def button9(self): ...
def button_star(self): ...
def button_sharp(self): ...
```

Control Panel display API

APIs to control visual state of the SafeHome control panel.

```
set_security_zone_number(zone: int)
set_display_away(on: bool)
set_display_stay(on: bool)
set_display_not_ready(on: bool)
set_display_short_message1(message: str)
set_display_short_message2(message: str)
set_armed_led(on: bool)
set_powered_led(on: bool)
```

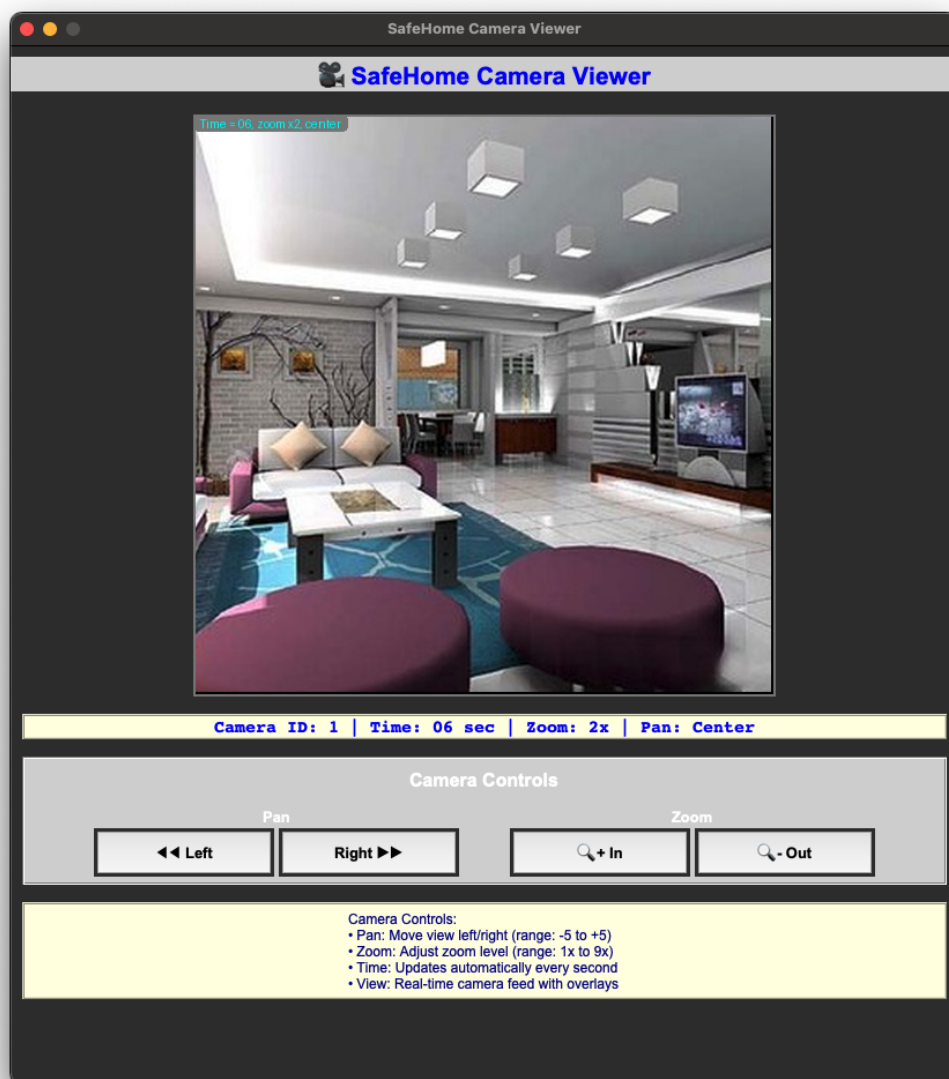


Camera interface (python)

The camera interface ([DeviceCamera](#)) provides a simple abstraction for a camera view and movement. Methods are implemented according to the Python port in `interface_camera.py`.

```
DeviceCamera()
def set_id(self, id: int) # Set the camera ID and load "camera{id}.jpg"
def get_id(self) -> int
def get_view(self): # returns an image object
def pan_right(self) -> bool
def pan_left(self) -> bool
def zoom_in(self) -> bool
def zoom_out(self) -> bool
```

- `get_view()` provide image object
- boolean returns indicate success/failure (e.g. limits reached).



Sensor interface (python)

Sensors implement the interface defined in `interface_sensor.py`. Sensor ID sequences are maintained per sensor type and start at 1. Typical methods:

```
def get_id(self) -> int
def read(self) -> bool # return True when opened (window/door) or motion
detected
def arm(self) -> None
def disarm(self) -> None
def test_armed_state(self) -> bool # returns sensor state
```

Behavior notes:

- Sensor `read()` returns True only when the sensor is enabled and in detected/opened state.
- Simulated state methods used by device implementations:

- DeviceWinDoorSensor: def intrude(self): # set opened True (simulate open) def release(self): # set opened False (simulate close)
- DeviceMotionDetector: def intrude(self): # set detected True (simulate detect) def release(self): # set detected False (simulate clear)



Examples

Example scripts are provided under `py_safehome/example/`:

- `example_all_sensors.py`
- `example_camera.py`
- `example_control_panel.py`