Adaptive Lighting, Shade & Climate Automation for Control4

Installation Guide

English Official Version

1. Purpose

This installation guide explains how to install and prepare Adaptive Lighting, Shade & Climate Automation for Control4 in a Control4 residential project.

The driver is designed to help Control4 dealers and programmers create more natural lighting, shade, and comfort climate automation with less repeated room-by-room programming work.

This guide focuses on installation preparation, driver import, project naming requirements, initial configuration, and first-stage validation.

2. Important Safety and Scope Notice

This driver is a comfort automation driver.

It is not a security system, life-safety system, emergency response system, or complete HVAC management system.

Do not use this driver as the only basis for any safety-critical action.

The first commercial version focuses on:

- Adaptive lighting automation
- Adaptive shade, blind, and shading automation
- Comfort climate assistance for supported air-conditioning and floor-heating devices

The first commercial version does not provide formal automation support for:

- Fresh air systems
- Security alarms
- Intrusion detection
- Door locks
- Garage doors
- Fire, smoke, or carbon monoxide alarms
- Water leak protection
- Gas valves
- Medical care
- Elderly care
- Emergency response automation
- Any life-safety or safety-critical system

The installing dealer is responsible for confirming that each room, device, and automation behavior is appropriate for the project.

3. Before You Begin

Before installing the driver, confirm that the Control4 project is stable and that all target devices have already been added to Composer and tested.

Recommended prerequisites:

- Control4 controller is online and running Control4 OS version 3.3.0 or later
- Lighting devices are added and controllable
- Shade, blind, or shading devices are added and controllable
- Motion sensors or occupancy sensors are added and reporting correctly
- Supported air-conditioning and floor-heating devices are added and controllable, if comfort climate assistance will be used
- Room names, device names, and device placement are clean and consistent
- Internet access is available if authorization, weather, or sunrise/sunset services are used
- Dealer has access to Composer Pro and can modify project programming and driver settings

4. Recommended Project Naming Rules

The driver relies on room and device names to understand room type, lighting purpose, shade type, and shade orientation. Accurate naming is important.

4.1 Room Names

- Room names should include clear room-type meaning. Examples: Master Bedroom, Guest Bedroom, Living Room, Kitchen, Dining Room, Hallway, Bathroom, Study, Balcony.
- Bedroom-related rooms should include bedroom-related wording when bedroom behavior is expected.

4.2 Light Names

- Light names should include the lighting purpose where possible. Examples: Main Light, Downlight, Walkway Light, Cove Light, Reading Light, Night Light, Mirror Light, Ambient Light.
- Clear naming helps the driver apply more appropriate lighting behavior.

4.3 Shade / Blind / Shading Names

- Shade names should include both shade type and orientation where possible. Examples: Southeast Roller Shade, West Curtain, South Blind, East Sheer Shade, Bedroom Blackout Curtain.
- Orientation information is important for sunlight-related shade behavior.

4.4 Motion / Occupancy Sensor Mapping

- Motion sensors and occupancy sensors must be placed in the correct rooms.
- Use the correct sensor type: normal for motion sensors inside rooms with natural daylight; force for motion sensors inside rooms without natural daylight or where lighting should be more actively triggered.
- Incorrect sensor mapping may cause unexpected lighting or climate behavior.

5. Driver Installation Steps

Step 1 - Add the Driver to the Project

- Open the Control4 project in Composer Pro.
- Add the driver file to the project.
- Place the driver in an appropriate project location.
- Confirm that the driver appears correctly in Composer.

Step 2 - Complete Driver Authorization

- If the driver requires authorization or a trial license:
- Open the driver properties.
- Enter the authorization code provided by LivingMind Home. Trial use does not require entering an authorization code.
- Confirm the authorization status.
- If authorization fails, confirm: Internet access is available; authorization code is correct; system time is correct; dealer has received the correct authorization information.

Step 3 - Enter Project Location Information

- The driver requires the accurate project location to be entered.
- Location information may be used for sunrise and sunset calculation, daytime / evening / night boundary behavior, weather-aware automation, and hemisphere-aware seasonal behavior.
- Incorrect project location may cause incorrect sunrise/sunset or seasonal behavior.

Step 4 - Configure Automation Style

- Select the automation style that best matches the homeowner's preference: Eco for more conservative and energy-saving behavior; Balanced for standard comfort behavior and the recommended starting point; Proactive for more active comfort behavior.
- Automation Style affects lighting behavior, shade behavior, and comfort climate behavior where supported.

Step 5 - Configure Motion Sensors

- Configure motion sensors according to the room type and expected behavior.
- Recommended approach: use normal motion behavior for rooms with natural daylight; use force motion behavior for rooms without natural daylight or rooms requiring more active automatic lighting.

Step 6 - Configure Motion Release / Light-Off Timing

- Set the delay after motion release before automatic light-off behavior.
- Recommended approach: start with conservative values and adjust based on homeowner feedback.
- For sensors with short release times, using a longer delay can help avoid accidental light-off behavior.

Step 7 - Configure Keypad / Button Integration

- Associate keypad buttons with the driver's lighting scene or shade control commands where needed.
- This allows the homeowner to use familiar keypad controls while still benefiting from automation and preference learning.
- After configuration, verify that keypad lighting scenes work correctly, keypad shade commands work correctly, manual operation protection behaves as expected, and scene results can be adjusted by the homeowner through the app where supported.

6. Lighting Automation Validation

Start with one low-risk room before enabling lighting automation across the whole project.

Recommended validation steps:

- Select one typical room.
- Confirm that the room has correct motion sensor mapping.
- Trigger motion during daytime.
- Confirm that unnecessary daytime lighting is reduced when appropriate.
- Trigger motion during evening or night.

- Confirm that lighting turns on at an appropriate brightness.
- Test manual light-on behavior.
- Test manual light-off behavior.
- Test keypad scene behavior.
- Confirm that automation does not immediately override intentional manual operation.

7. Shade / Blind / Shading Automation Validation

Validate shade automation carefully, especially where direct sunlight or special shade types are involved.

Recommended validation steps:

- Confirm shade devices are in the correct rooms.
- Confirm shade names include shade type and orientation.
- Test manual open, close, stop, and position commands.
- Confirm daytime opening behavior.
- Confirm orientation and sunlight-related partial closing behavior.
- Confirm night closing behavior.
- Confirm bedroom night behavior if applicable.
- Confirm wake-related shade recheck behavior if applicable.
- Confirm that manual shade operation is protected.

If a shade should not be controlled automatically, remove the orientation from the shade name.

8. Comfort Climate Assistance Validation

Supported comfort climate behavior may include:

- Air-conditioning comfort cooling under high-temperature conditions
- Air-conditioning heating when the room is cold and the current room has no floor heating
- Conservative cooling fallback when weather trend data is missing but indoor temperature is high
- Staged air-conditioning setpoint rollback after a room becomes unoccupied
- Comfort restoration when a room becomes occupied again
- Floor-heating target temperature selection based on Automation Style
- Residence Mode Away energy-saving adjustment
- Residence Mode Home comfort recheck

Recommended validation steps:

- Confirm that HVAC Control is enabled when comfort climate assistance should be active.
- Confirm that air-conditioning devices are in the correct rooms.
- Confirm that floor-heating devices are in the correct rooms.
- Test one room first.
- Confirm high-temperature cooling behavior.
- Confirm low-temperature heating behavior only in rooms without floor heating.
- Confirm that rooms with floor heating do not trigger unnecessary AC heating fallback.
- Confirm unoccupied AC setpoint rollback behavior.
- Confirm occupied comfort restoration behavior.
- Confirm floor-heating recheck behavior.
- Confirm Residence Mode Away and Home behavior.
- Confirm that manual hold / manual operation protection is respected.

9. Residence Mode Validation

The driver supports Residence Mode behavior for comfort automation.

Away Mode

- Away Mode is a user-triggered whole-home energy-saving mode.
- Away Mode turns off whole-home lighting and, depending on season and Automation Style, may apply energy-saving adjustment to supported AC or floor-heating devices.

Home Mode

- Home Mode restores HVAC Control, triggers a conservative comfort recheck, and turns on the lighting at the residence entry area when the environment is dark.

Recommended validation:

- Switch Residence Mode to Away.
- Confirm expected lighting and HVAC energy-saving behavior.
- Switch Residence Mode to Home.
- Confirm HVAC Control is restored.
- Confirm comfort recheck behavior.

10. Manual Operation Protection

Manual operation protection is a core design principle.

The driver should avoid fighting the homeowner's intentional actions whenever possible.

Validate manual operation protection for:

- Manual light on
- Manual light off
- Keypad lighting scene activation
- Manual shade open / close / stop / position change
- AC mode / setpoint / fan changes
- Floor-heating setpoint changes

Keypad buttons should call the lighting scenes provided by this driver and should not use Control4 Advanced Lighting scenes directly. For manual control on a touchscreen, an empty Advanced Lighting scene can be created, and when the scene is invoked, it should call the driver's lighting scene. Any lighting scene not handled by the driver is treated as a manual change to the lighting effect.

11. Diagnostics and Logs

The driver includes diagnostic logs for installation and support.

Useful log prefixes may include:

- TRACE_HVAC_AC_DECISION
- TRACE_HVAC_AC_VALIDATE
- TRACE_HVAC_RESIDENCE
- TRACE_HVAC_AC_SETBACK
- TRACE_HVAC_FLOOR_HEAT

When requesting support, include relevant log excerpts together with project and device information.

Do not send private authorization codes, tokens, or unrelated sensitive project data unless specifically requested by support.

12. Recommended Installation Sequence

Recommended dealer workflow:

- Add all devices into Composer and confirm they work normally.
- Correctly name rooms, lights, shades, and climate devices.
- Install the driver.
- Complete authorization.
- Enter accurate project location information.
- Select Automation Style.
- Configure motion sensors.
- Configure motion release / light-off timing.
- Configure keypad buttons if needed.
- Validate one lighting room.
- Validate one shade room.
- Validate comfort climate assistance room by room.
- Review Residence Mode behavior.
- Review manual operation protection.
- Review logs and homeowner feedback.
- Adjust Automation Style if needed.

13. Trial Recommendation

Recommended trial period: 30 days.

During the trial, validate:

- Daytime lighting behavior
- Evening and night lighting behavior
- Shade behavior under different sunlight conditions
- Manual operation protection
- Comfort climate assistance
- Residence Mode behavior
- Homeowner acceptance
- Support log usefulness

Do not enable automation in every room before validating behavior step by step.

14. Support Contact

For trial availability, onboarding, installation support, or issue review, contact: support@livingmindhome.com

When submitting a support request, include:

- Driver version
- Control4 OS version
- Controller model
- Project type
- Room name
- Device name
- Event time

- Relevant driver log excerpt
- Expected behavior
- Actual behavior

15. Third-Party Notice

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