INSTALLER SHEET

Pro Installer Checklist

Wiring, rack, network, PoE, UPS, handoff

Safety and use

This checklist is for trained installers. It is not a substitute for local electrical or fire code. Turn the breaker off and verify the circuit is dead before opening a wall box. The hub is low-voltage; PoE cameras and tablets are low-voltage, but line-voltage relays, heaters, pumps and irrigation valves are not. Never forward ports 8080, 8090 or SSH. Do not enter passwords, PINs or camera stream URLs on this sheet.

Beta – steps may change The launch hub is a Raspberry Pi 5. Hub install steps are still being verified on a production image. Items marked **Beta – confirm with Helix support** are not confirmed yet.

Power options

The Raspberry Pi 5 needs 5 V at up to 5 A (25.5 W). Offer one of these, not both at once:

- **Standard plug-in:** official Raspberry Pi 27W USB-C supply (5.1 V, 5 A, US plug) into a UPS battery outlet. Ethernet is data only.
- **PoE+ for rack installs:** one Ethernet cable for power and data. Requires an **IEEE 802.3at PoE+ switch port (25.5 W)**. Use a Pi 5-compatible PoE+ HAT that can supply 5 V / 5 A, or a 5 V / 5 A 802.3at USB-C splitter. Do not use the official PoE+ HAT made for Pi 4 / 3B+, and do not use a 5 V / 2 A splitter or an 802.3af-only port. Put the PoE+ switch on the UPS. Confirm 1U tray clearance if a HAT is used; use the splitter if the HAT does not clear.

Full steps are in the Hub Setup guide, Power options.

A. Before you leave the shop

- [ ] Hub serial and client name written on the job sheet.
- [ ] Hub, Cat6 patch cable, quick-start card, and the ordered power option in the box: official Raspberry Pi 27W USB-C supply (standard), or a Pi 5-compatible 5 V / 5 A PoE+ HAT or 5 V / 5 A 802.3at USB-C splitter (rack). **Beta – steps may change**
- [ ] If the hub must be imaged: setup stick labeled `HELIX`, with `MOCK_MODE` set to `0` for a live house (full steps in the Hub Setup guide, section 6). **Beta – steps may change**
- [ ] Panels, PoE switch, UPS and devices on the job list. **Beta – confirm with Helix support** Helix has not published approved panel, camera or switch models. Ask Helix support before ordering.

B. Network

- [ ] DHCP reservation planned for the hub (and for cameras, any HDMI matrix, WiiM/Sonos players).

- [ ] A 2.4 GHz network is available (Tuya, Shelly and most IR blasters are 2.4 GHz only).
- [ ] No port forwards on 8080, 8090 or SSH.
- [ ] If an IoT VLAN is used: the hub can reach those devices and tablets can reach the hub on port 8080. Shelly discovery uses mDNS, so keep Shelly devices on the hub's segment or enter their addresses by hand.
- [ ] Each wall tablet has a strong Wi-Fi signal (better than about -65 dBm) if it is on Wi-Fi.

C. Rack and wiring

- [ ] UPS plugged into a grounded outlet (line-interactive or online, pure sine wave preferred).
- [ ] Router/firewall, PoE switch, Wi-Fi access points (or injectors) on the UPS battery outlets, not a surge-only strip. For a standard plug-in hub, the official 27W supply is on the UPS too. For a PoE+ hub, the switch carries the hub, so the switch must be on the UPS.
- [ ] Hub Ethernet to a switch port. Hub wired, never on Wi-Fi.
- [ ] Hub power option matches the job: official Raspberry Pi 27W USB-C plug-in (5.1 V / 5 A), or PoE+ for a rack install. Do not use a Pi 4 15 W supply or a phone charger.
- [ ] If PoE+: the hub is on an IEEE 802.3at PoE+ port (25.5 W), not an 802.3af-only or data-only port. Use a Pi 5-compatible 5 V / 5 A HAT or a 5 V / 5 A 802.3at USB-C splitter. Do not use the official Pi 4 / 3B+ PoE+ HAT. Do not also plug in the USB-C supply.
- [ ] If a 1U rack tray is used with a HAT: confirm vertical clearance so the HAT cannot short on the unit above. Use the USB-C splitter if it does not clear.
- [ ] About 2 inches (5 cm) of clearance around the hub.
- [ ] Wall tablets and PoE cameras on PoE ports on the same LAN or a VLAN that can reach the hub. Each tablet on its own drop. **Beta – confirm with Helix support** Sharing a drop with a camera is not confirmed.

D. UPS sizing

Size the battery in watt-hours, not VA. Estimated hours = battery Wh × 0.85 ÷ load watts. These are estimates; check nameplates and do a pull-the-plug test.

What is on the UPS	Estimated load
PoE switch + 1 wall tablet	25 W
plus router and 1 access point	52 W
plus the Helix hub	64 W
plus 4 PoE cameras	88 W
typical house (8 cameras, 3 tablets, 2 access points)	144 W

Target: 30 minutes minimum, 2–4 hours is better. See the Hub Setup guide for the full runtime table.

- [ ] UPS sized to the load.
- [ ] Pull-the-plug test: unplug the UPS input for two minutes. The hub still answers on `:8080`, the wall tablet stays on, and the router and access point stay up.

E. Power on and check

- [ ] Ethernet in, then power. The dashboard loads; if the hub has a status light it settles to a slow heartbeat (double blink). **Beta – steps may change**
- [ ] `http://helix-ch01.local:8080` and `:8090` both load (or use the reserved address).
- [ ] Composer unlocked with the PIN. PIN recorded on the job sheet only.
- [ ] `MOCK_MODE` is `0`.
- [ ] No license banner, or a license request is in with Helix. **Beta – steps may change**
- [ ] Update check run (do not install unless Helix says so). **Beta – steps may change**
- [ ] Legal sign screen completed by the homeowner at handoff. **Beta – steps may change**

F. Tablets

- [ ] Panel mounted level in the vendor's kit, vents clear, at a height the household can reach.
- [ ] Screen stays on; boots straight to Helix after a PoE unplug and replug.
- [ ] Registered in Composer, opens on the correct room.
- [ ] iPad: Auto-Lock off, Guided Access running, on power. **Beta – confirm with Helix support** Confirm Guided Access behavior after a reboot on the actual iPad.

G. Devices and programming

- [ ] Every device has a room and a clear name; the test button works in the room.
- [ ] Cameras show on the right rooms.
- [ ] Scenes and Goodnight tested in person.
- [ ] Send to tablets completed; `.helix.json` backup exported to the job folder.
- [ ] Alarm remains in test mode. **Beta – steps may change**
- [ ] No stream URLs, passwords or PINs in notes.

H. Handoff

- [ ] Remote access paired and tested away from home.
- [ ] Homeowner holds the PIN and the app; installer tools, the `HELIX` stick and any signed-in laptop removed.
- [ ] Short tour done. Homeowner told that the alarm is not a monitored system unless Helix has put it in writing.
- [ ] Homeowner given Helix support contact details (Warranty & Support).