

Oak Series
Indoor Climate Intelligence

Model: OakPTAC
Wired Unit Controller



Product highlights

- 7 control channels
- Extended voltage range (277V)
- Optional Daikin 2-wire protocol support



The OakPTAC wired Unit Controller automates indoor climate, delivering superior guest comfort, while minimizing operational costs.

Designed for operational simplicity and behind-the-scenes automation, the **Climate Intelligence** platform senses room occupancy, temperature, humidity and openings. It adjusts climate settings to maximize comfort by syncing the operation of all HVAC units in the building.

Integrating with building management systems, looking into outside weather and utility tariffs, this plug & play platform dramatically drops energy and maintenance costs.

Room Thermal Profiling- 24/7 sensing and analyzing enables differentiation of controlled zones for true energy optimization.

Indoor Climate Connectivity- quickly deployed climate node network of meshed wireless sensors, allow comprehensive sensing of temp, humidity, occupancy, and openings.

Dynamic Temperature Setback- allows adaptable guest vacant room setback, based on room thermal profiling and guest preferences.

Peak Shaving- weather and utility tariff based machine learning cuts off peak charges.

Predictive Maintenance- constant performance analysis enables to identify abnormalities and address them, preceding customer complaints.

Personalized Climate- capable of integrating with hotel PMS and personalize climate settings upon check-in.

Dashboard Agility- enabling hotel staff to easily adjust every programmed feature per room / floor / site.

	Thermostat	Controller
Case Dimensions (Imperial)	4.72' x 4.72' x 0.79'	4.33' x 3.35' x 1.18'
Case Dimensions (Metric)	120mm x 120mm x 20mm	110mm x 85mm x 30mm
Screen Dimensions (Imperial)	1.93' x 1.42'	NA
Screen Dimensions (Metric)	49mm x 36mm	NA
Wireless Range	Through walls - 15m. In open spaces: 100m	Through walls: up to 100ft (30M) In open spaces: up to 0.3 Miles (500M)
Operating Voltage	3V DC - 2 or 4 "AAA" cells	24V AC/DC or 85-277VAC +/- 10%, 50/60Hz
Operating Time (lab tested)	3 years (standard usage)	NA
Operating Temperature	Commercial: 32-113°F Extended ranges available upon request	Commercial: 32-113°F, 0-45°C Extended ranges available upon request
Control Outputs		Fan High (BI) Fn Mid (P) Fan Low (G) Compressor (Y) Heat (W) RV (O) Aux control (Aux)
Switching Circuit Parameters		5A per channel
Wired sensor terminal		Temperature sensor Current sensor IR RX/TX accessory GPIO/ADC (2) Daikin Homebus 2-wire (optional)
Temperature sensor	Temperature range: beyond operation range Accuracy: 1°F 0.5°C	Wired temperature sensor: 14 - 185°F / -10 - 85°C
Humidity sensors	Humidity range: 0-100% Accuracy: 2%	Accuracy: 1°F 0.5°C
Occupancy sensor	Detection distance: up to 23 f Beam width: 94° (H) x 82° (V)	Wireless OakRemote/OakSense series
Additional integral sensors	Light sensor	Wireless occupancy series Door/Window/Temperature/IAQ
Additional available wireless sensors	Occupancy sensor Magnetic door/window sensor Temp/humidity sensor	Daikin Homebus 2-wire (optional)
RF frequency	2.4GHz	2.4GHz
RF transmission power	7dBm/19dBm (high power version)	19dBm
Other means of communication	IR	IR
OakSeries compatibility	OakPTAC, OakSense, Online Dashboard	OakRemote, OakSense, Online Dashboard
Certification	FCC ID: 2ALPH-E18	FCC ID: 2ALPH-E18

Typical HVAC applications

- Conventional/Heat pump PTAC units
- PTAC units with 2 stage heating (emergency heating)
- FCUs, 1-3 fan speed, 1-2 stage cooling/heating
- AHUs/RTUs 1-2 stage cooling/ 1-3 stage heating