



CO₂ sensing for US HVAC applications

Designed for products that meet the
“Californian Building Energy Efficiency Standards”

SENSIRION

CO₂, Humidity and Temperature Sensor SCD42

The SCD42 is Sensirion's newest addition to the SCD4x product line. Specifically designed for products that fall under the 'Californian Building Energy Efficiency Standards – Title 24', the SCD42 offers an unmatched price-to-performance ratio for the US HVAC market. This disruptive innovation is based on the photoacoustic sensing principle and combines minimal size with maximum performance to open up numerous new integration and application possibilities. Learn more about the SCD4x product line at www.sensirion.com/scd4x.

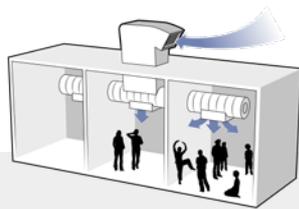
- Smallest form factor: < 10.1mm × 10.1mm × 6.5 mm
- Mounting type: SMD
- Interface: I²C
- Supply voltage range: 2.4 to 5.5 V
- Accuracy: ± 75 ppm @ 400 ppm – 1000 ppm
- On-chip RH and T compensation: yes
- Output range: 0 to 40,000 ppm



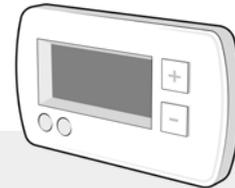
Applications

The SCD4x is perfectly suited for a wide range of commercial and residential HVAC applications:

Demand-controlled ventilation



Indoor Air Quality monitoring



CO₂ ventilation alarm



IoT / Smart home



NDIR vs. photoacoustic sensing technology

Features	Typical NDIR CO ₂ Sensor	SCD42 CO ₂ Sensor
High selectivity	✓	✓
Small size	✗	✓
Additional sensor outputs	✗	✓
Cost-effective assembly	✗	✓
Mechanical robustness	✗	✓
Cost-effective BOM	✗	✓