

## CP Series Product Brief

### **Pressure Sensor Subsystem for Sleep Apnea Applications**

Superior's CP Series sensor module family builds upon the industry's performance leading SP Series NimbleSense™ architecture. For reference, the SP Series integrates an advanced piezoresistive sensing element, ADC, DSP and processor intelligence. The CP Series is a true sub-system that integrates two types of pressure sensors (Differential & Gage). With the industry's best performance, highest integration, and lower system BOM, the CP Series is the ideal solution for Sleep Apnea applications.



**Industry leading performance** – The CP Series measures dry air and non-aggressive gas pressure with very high accuracy and a stable zero point. Nonlinearity is also industry leading and typically better than 0.1% of selected range.

**Optional advanced filtering** –With advanced filtering to remove unnecessary noise from the fan output, the loop delay is reduced, greatly improving response times up to 100x relative to non-integrated system solutions.

### **Key Features**

- Dual-sensor air flow controller sub-system designed for BiPAP, APAP and CPAP machines
- Highly Integrated, combining two pressure sensors: differential and gage
- Multi-Range™ – 4 calibrated ranges per sensor
- CP Series Subsystem Enables Selectable:
  - o Differential Range (125 Pa to 1K Pa)
  - o Gage Range (4K Pa to 8k Pa)
  - o Bandwidth (20Hz to 250Hz)
- Fast Response times down to 2 ms
- Accuracy Better Than 0.20% Selected Range
- I2C Digital interface
- Temperature Compensated 0°C to 50°C
- Advanced multi-order filter to characterize & eliminate critical fan output noise (OPTIONAL)

Datasheets and additional information can be found on [www.superiorsensors.com](http://www.superiorsensors.com)