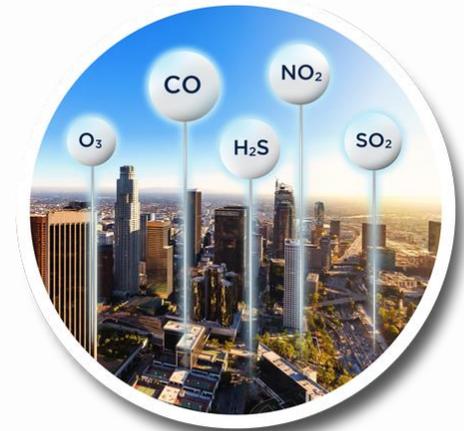


High Performance Gas Sensors and Systems

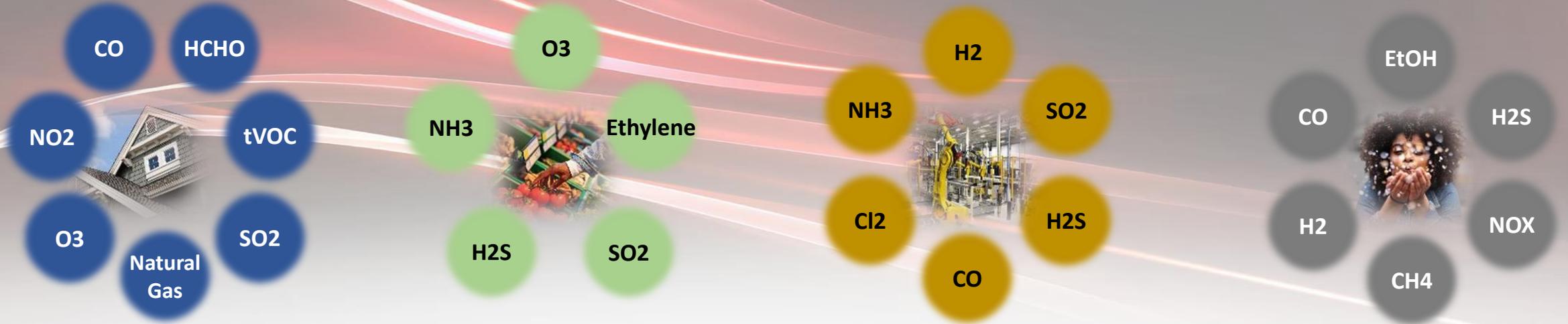
Health & Wellness Applications



INTERLINK
ELECTRONICS®



Gas Sensors Applications



Air Quality Monitoring

- Commercial buildings: *offices, hospitals, schools, warehouses, theatres*
- Residential: *living spaces, kitchens, yards (fixed or portable equipment)*
- HVAC control feedback
- Outdoor air quality: *smart cities, wildfire early warning & impact*

Sensor: HCHO = Formaldehyde

Food Supply Chain

- Food transportation asset tracking
- Freshness monitoring, ripening control
- Agricultural land and cultivation applications
- Livestock farms monitoring

Industrial and Automotive

- Automotive in-cabin AQM
- Industrial: *oil & gas, mining, warehouses*
- Hydrogen fuel cell monitoring
- First responder safety

Health and Wellness

- Condition warnings (non-clinical) *Diabetes, Asthma, SIBO, IBS-C*
- Breath analysis
- Sports training applications
- Alcohol monitoring
- Smoking cessation

Health and Wellness Applications

1. **Touch-Based Alcohol Detection**
2. **Smoking Cessation & COPD**
3. **Human Breath as Health Indicator**
4. **Pathogen & Odor Remediation in Protective Gear & Sports Equipment**
5. **Pathogen & Odor Remediation in Commercial Buildings and Shared Spaces**

1. Touch-Based Alcohol Detection



Problem

- Annual cost of alcohol abuse in the U.S. is **\$249 billion**
- Scope: industrial workers, commercial drivers, teens, patients

Solution – Scanning Station or Bracelet with Interlink SPEC™

- Touch-based: Employees scan with results delivered to administrators
- Wrist bracelet: Rechargeable, discreet, compliance
- Occupational Health & Safety products



Advantage – SPEC™ EtOH Sensor



- Sensitivity, accuracy, fast response for scanning station
- Always on, long life, small size fits wrist bracelet

2. Smoking Cessation & COPD

SPEC Sensors™

Carbon Monoxide (CO), Hydrogen (H₂)
Electrochemical Gas Sensors & Custom Engineering Services



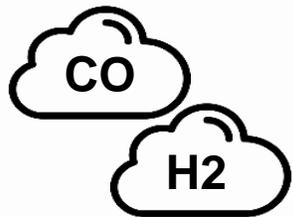
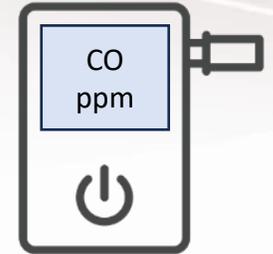
Problem

- For a billion smokers, quitting smoking can add 10 years to life expectancy (CDC)
- Smoking is leading cause of preventable disease & death in US, costing \$300 billion a year
- Tobacco use is linked to over 80% of all chronic obstructive pulmonary disease (COPD)



Solution – Breath analyzer with Interlink's SPEC Sensors™

- Motivates people in own care by showing immediate results to quit attempts
- Smoking cessation program provides evidence-based progress report



Advantage – SPEC CO & H₂ Electrochemical Sensor Array

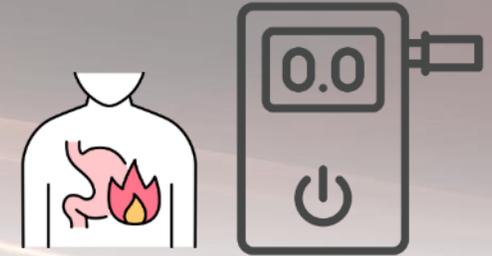
- Accurate CO ppb resolution readings from human breath even in presence of interferent, H₂, a byproduct gas from human gut
- Custom engineering services for gas sensors, modules and instruments

3. Human Breath as Health Indicator

SPEC Sensors™ -
EtOH, CH₄, H₂, H₂S, CO, NO, NO₂
Electrochemical Gas Sensors & Custom Engineering Services

Problem

- Measure gas biomarkers as part of health diagnosis
- Gastrointestinal conditions normally require lab tests



Application Note – Monitoring with Interlink gas sensors

- Breath biomarkers for alcohol, COPD (lung disease), smoking cessation, asthma, sleep disorder
- Digestive diseases detected by breath test: SIBO (gut), IBS-C (bowel), lactose intolerance
- Over-the-counter products with data analysis, counselling empowers personal health care monitoring

Advantage – EtOH, Methane (CH₄), H₂, H₂S, CO, NO, NO₂

- Fast and accurate ppb resolution readings from human breath with sensor(s) or sensor array
- Custom engineering services for development of gas sensor elements, modules and instruments



Pathogen & Odor Remediation in Protective Gear & Sports Equipment

SPEC Sensors™ - Ozone (O3) Electrochemical Gas Sensors
Eco Sensors™ - Ozone (O3) Detector & Control Board
Custom Engineering Services

Problem – Disinfect Pathogens

- Harmful pathogens can spread in shared equipment, gear
- Disinfect & deodorize sports equipment, first responder protective gear, locker room



Application Note – Monitor/control with Interlink's gas sensors and products

- O3 gas sensor or OEM-3 as safety module/controller for ozone disinfection devices
- Enables remote safety alarms and data logging for further analysis

Advantage – O3 Electrochemical Gas Sensor / Controller

- Cost effective, small size, long life with accurate ppb resolution using very low power
- Custom engineering services for development of gas sensor elements, modules and instruments



Pathogen & Odor Remediation in Commercial Buildings and Shared Spaces

SPEC Sensors™
Hydrogen Sulfide (H₂S), Ozone (O₃)
Electrochemical Gas Sensors

Problem – Pathogens & H₂S in schools, hotels

- Efficiently disinfect viruses (flu, SARS, coronavirus), deodorize odors
- Oxidation to remove H₂S (foul smelling, harmful, with higher concentrations near industry, meat processing, wastewater treatment)



Application Note – Monitor/control with Interlink's gas sensors

- H₂S sensor with O₃ sensor to optimize control in oxidation applications
- Enables remote safety alarms and data logging for further analysis



Oxidants: O₃ or H₂O₂

Advantage – H₂S, O₃ Electrochemical Gas Sensors

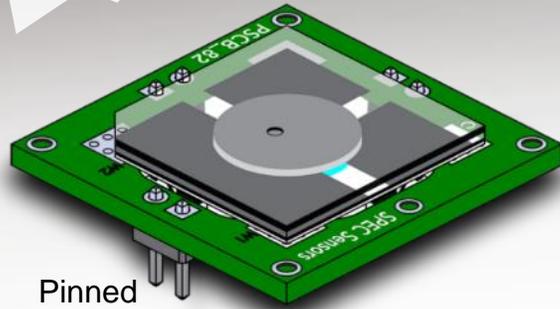
- Cost effective, small size, long life with accurate ppb resolution using very low power
- Custom engineering services for development of gas sensor elements, modules and instruments

Product Catalog

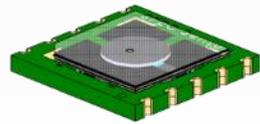


Gas Sensors & Modules

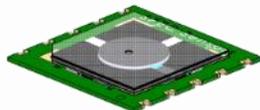
Available at
www.spec-sensors.com



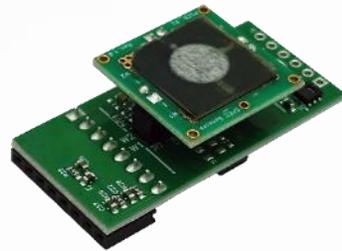
Pinned



Thick Castellation



Thin Castellation



Digital Gas Sensor Module &
Developer Kit

APPLICATIONS

- Indoor & Outdoor Air Quality
- Health & Wellness
- Agriculture & Food Processing
- Industrial Safety
- And more!

FEATURES

- Ultra-Low Power < 50 uW max
- Small Size & Low Profile (20 x 20 x 4 mm)
- Long Life (10+ years)
- Fast Response
- Accurate & Linear Response
- 100% Factory Tested
- RoHS Compliant
- UL & ETL Recognized CO Sensor

Product Catalog



Gas Sensors & Modules

AVAILABLE SENSORS

Gas Type		Part Number Family	Range (ppm)	Lower Detection Limit (ppm)	Sensitivity (nA/ppm)
Carbon Monoxide	CO	110-1xx	0 - 1000	1	4.75 ± 2.75
	CO	110-11x	0 - 100	0.1	35 ± 15
Ethanol	EtOH	110-20x	0 - 1000	1	20 ± 10
Hydrogen Sulfide	H2S	110-30x	0 - 50	0.1	200 ± 75
Ozone	O3	110-40x	0 - 10	0.02	-50 ± 25
Nitrogen Dioxide	NO2	110-50x	0 - 5	0.03	-30 ± 15
Sulfur Dioxide	SO2	110-61x	0 - 20	0.02	40 ± 15
Indoor Air Quality	IAQ	110-80x	0 - 100	0.2	20 ± 10
Respiratory Irritants	RESP	110-90x	0 - 20	0.02	-50 ± 25
Hydrogen	H2	110-00x	0 - 250	1	4 ± 2
Chlorine	Cl2	110-45x	0 - 20	0.02	-35 ± 15
Nitric Oxide	NO	110-70x	0 - 20	0.02	90 ± 50
Ethylene	C2H4	110-65x	0 - 100	0.02	50 ± 15
Formaldehyde	HCHO	110-85x	0 - 20	0.05	30 ± 15

Custom Engineering Services

CONSUMER DEVICES & INDUSTRIAL INSTRUMENTS

INDUSTRIAL DESIGN

MECHANICAL DESIGN

ELECTRONICS & FW

IOT & WIRELESS

UI & UX DESIGN

NOVEL MATERIALS

CUSTOM SENSORS

ALGORITHMS & AI

PRODUCT DESIGN

- Leverage our decades of experience implementing gas sensors and devices

PRODUCT TESTING

- Advanced capabilities for test and evaluation of gas detection devices
- High accuracy test chambers and reference monitors

CUSTOM GAS SENSOR DEVELOPMENT

- We customize gas sensors for specific gases and applications
- We support you through engineering, design, and manufacturing

If our spec sheets do not meet your needs, contact us to discuss how we can help!

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INTERLINK
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PRODUCT CATALOG