



# IoT Day Latin America 2017

#iotdayla

**smarthuman<sup>®</sup>** (project)

sense.analyze.improve.share.



An aerial photograph of a river delta, showing a complex network of water channels and sediment bars. The water is a deep blue, while the sediment appears as lighter, yellowish-brown patches. A large, solid white circle is centered over the image, serving as a background for the text.

**smarthuman**® (project)

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Queremos ciudades libres de polución  
Monitoreá la calidad del aire que te rodea.

Trabajemos juntos por un futuro sin  
contaminación.

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# Burn Calories, Not Electricity



## Take the Stairs!

Walking up the stairs just 2 minutes a day helps prevent weight gain. It also helps the environment.

Learn more at [www.nyc.gov](http://www.nyc.gov) or call 311.

Bill de Blasio  
Mayor

NYC  
Health



La contaminación  
es una de las  
principales causas  
de mortalidad en  
**América Latina.**

Según la Organización Mundial de la Salud la mortalidad ha aumentado a causa de la contaminación ambiental. **La polución es uno de los principales riesgos para la salud.**

# Es tiempo de hacer algo por nuestro planeta.

Participá activamente midiendo la contaminación en tu zona y compartí los resultados en la red global de SmartHuman Project. Toda la información es procesada en la nube para que puedas compararla con otros puntos de tu ciudad.

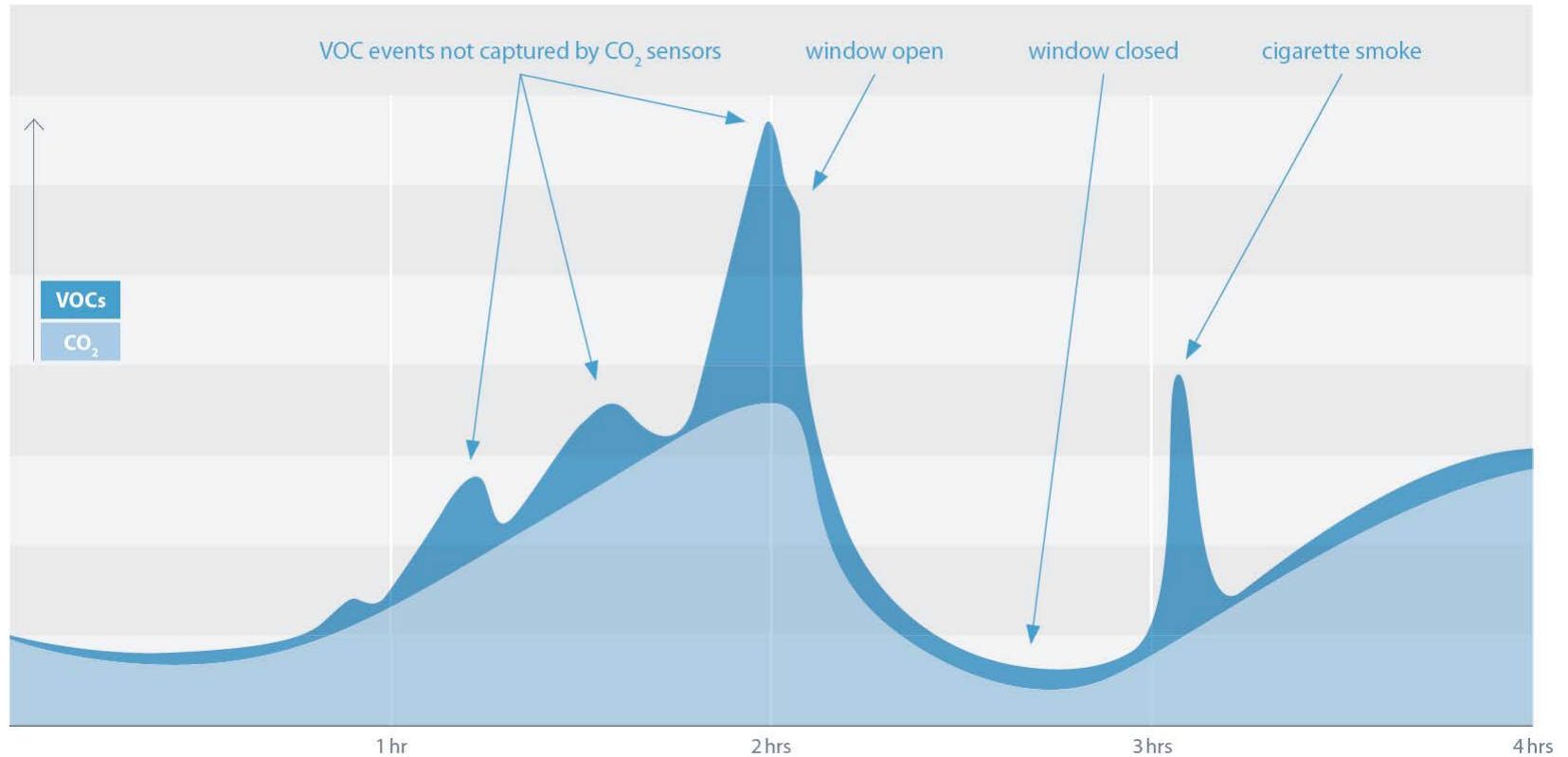


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# SmartHuman Project Intelligent Air Quality beyond CO2



## CO<sub>2</sub> and VOCs from business meeting session



Typical indoor air contaminants

Indoor Air		Typical Substance		Cure
Contamination Source	Emission Source	VOCs	Others	
Human Being	Breath	Acetone, Ethanol, Isoprene		demand controlled ventilation
		CO <sub>2</sub>		
		Humidity		
	Skin respiration and transpiration	Nonanal, Decanal, α-Pinene		
		Humidity		
	Flatus	Methane, Hydrogen		
	Cosmetics	Limonene, Eucalyptol		
	Household Supplies	Alcohol Esters, Limonene		
	Combustion (Engines, Appliances, Tobacco Smoke)	CO		
		CO <sub>2</sub>		
		Humidity		
Building Material, Furniture, Office Equipment, Consumer Products	Paints, Adhesives, Solvents, Carpets	Formaldehyde, Alkanes, Alcohols, Carbonyls, Ketones, Sloxanes		permanent, 5-10% ventilation
	PVC	Toulene, Xylene, Decane		
	Printers/Copiers, Computers	Benzene, Styrene, Phenole		

Table 1

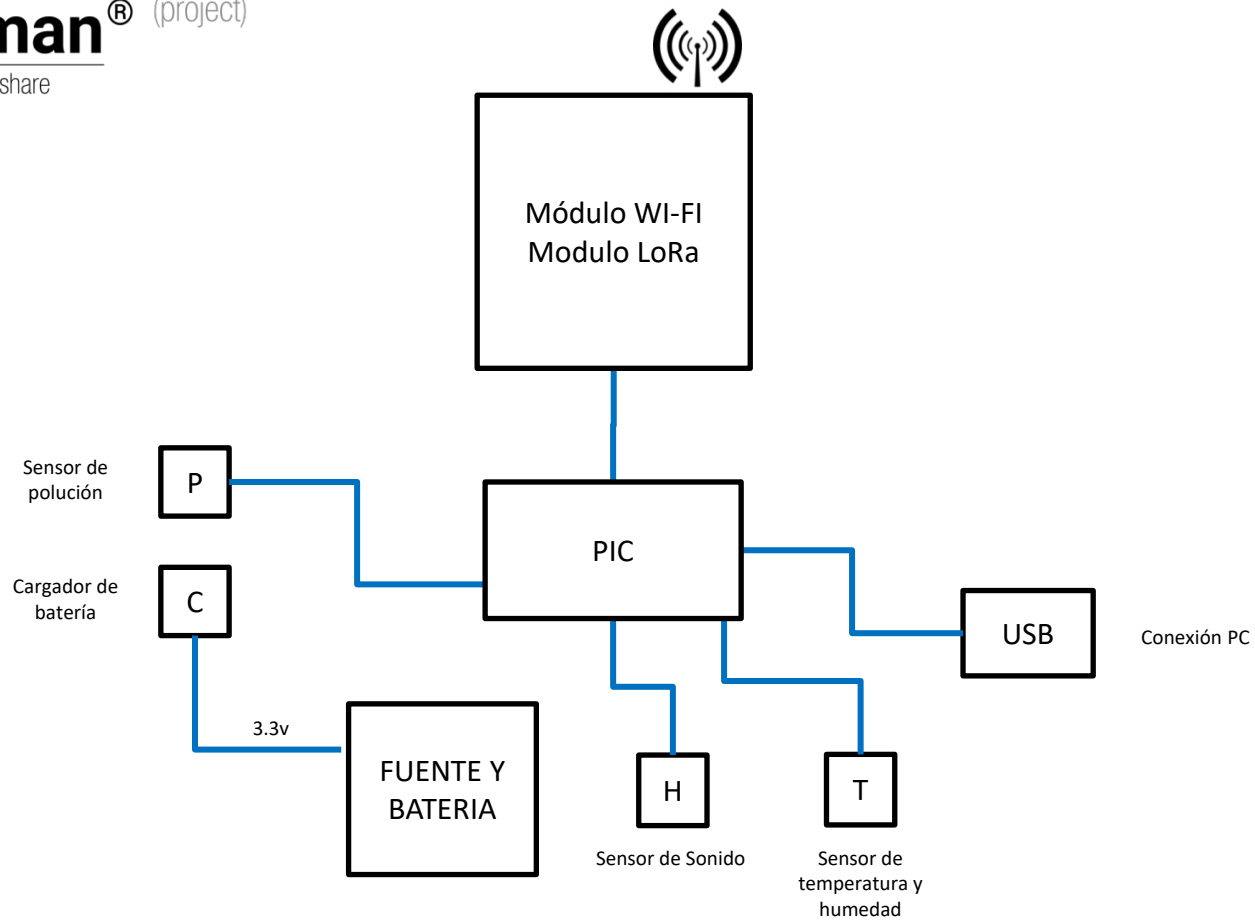


Application	Commercial				Restroom Toilet	Residential			
	Office	Conference Room	Restaurant	Gym		Kitchen	Livingroom	Bedroom	Bathroom
Predominant Events	breath, odors	breath, odors	breath, odors, humidity	odors, breath	odors	odors, humidity	breath, odors	breath, odors	humidity
Humidity Sensor	poor	poor	fair	poor	poor	fair	poor	fair	excellent
CO <sub>2</sub> Sensor	good	good	good	fair	poor	poor	good	good	poor
iAQ Sensor	excellent	excellent	excellent	excellent	excellent	excellent	excellent	excellent	fair

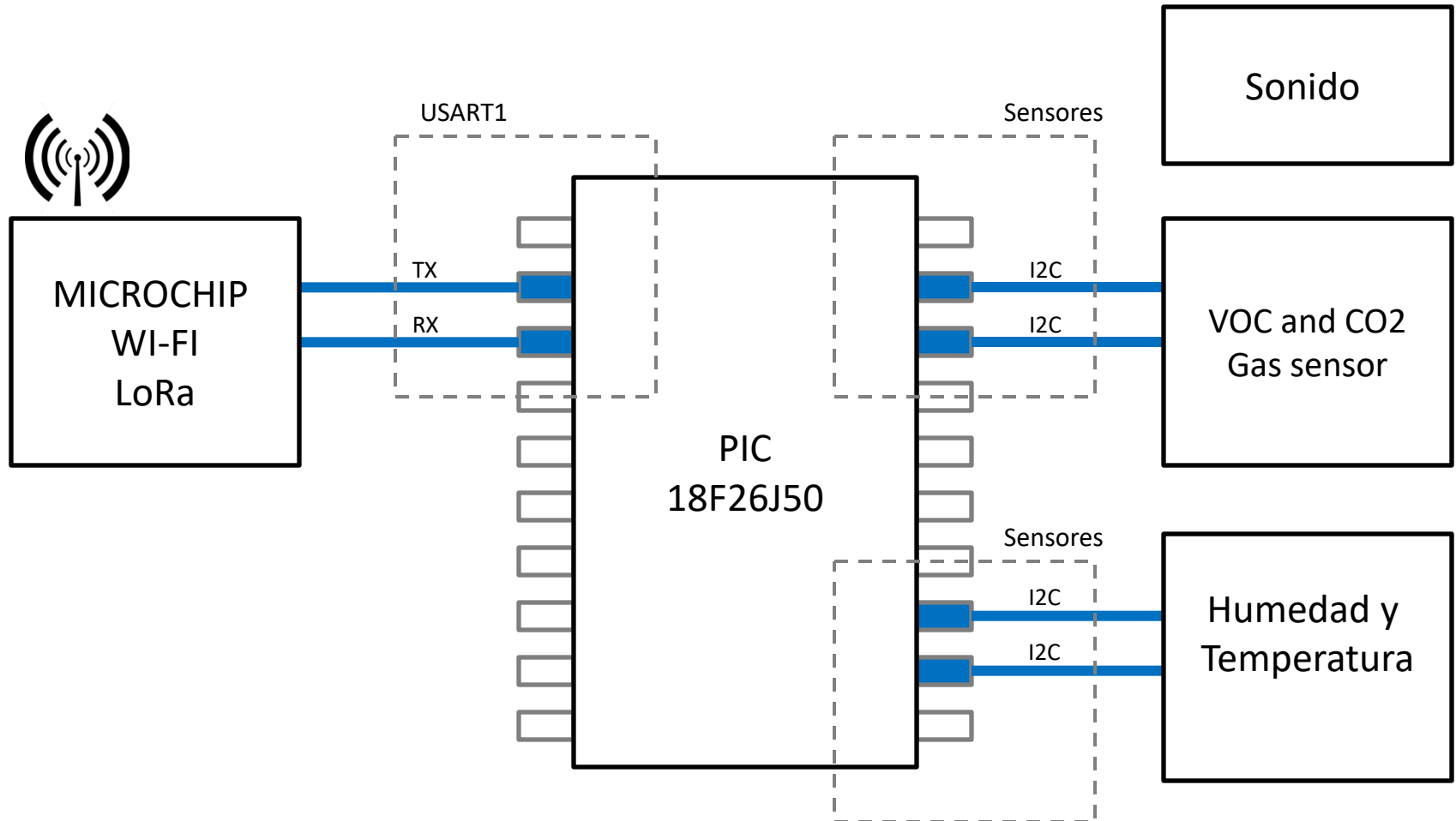
Table 3

# DIAGRAMA EN BLOQUES

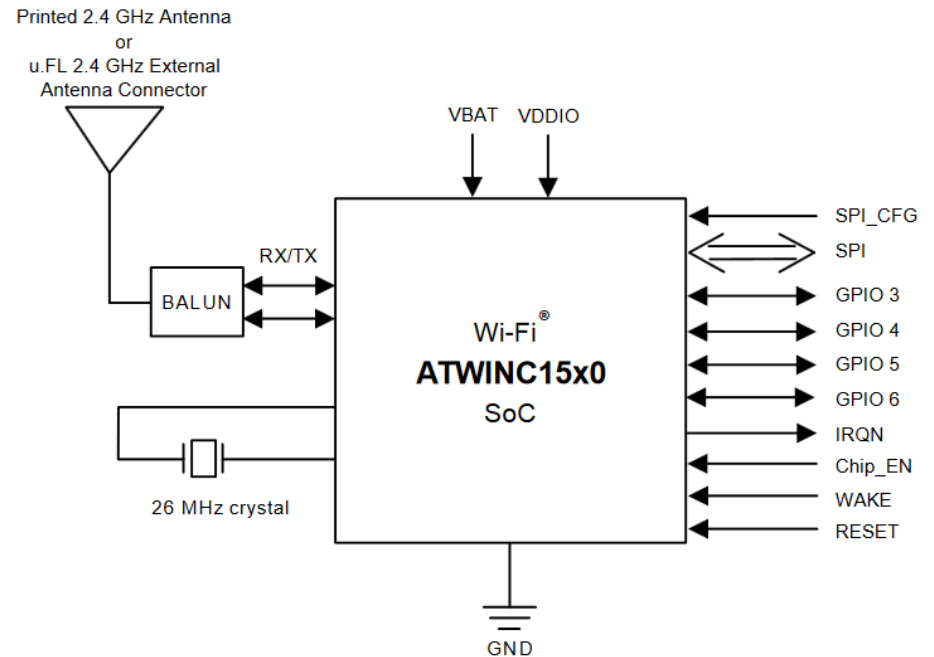
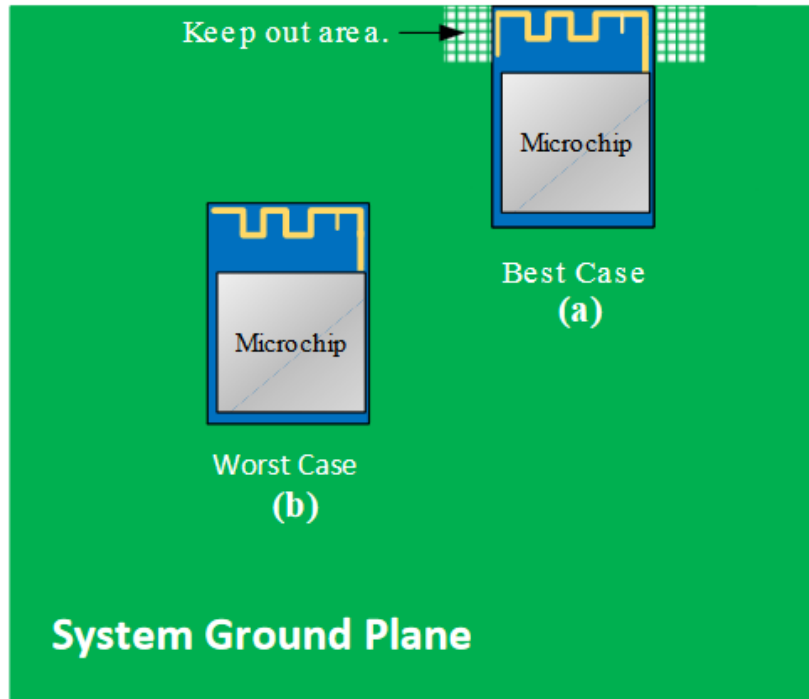
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# DIAGRAMA EN BLOQUES



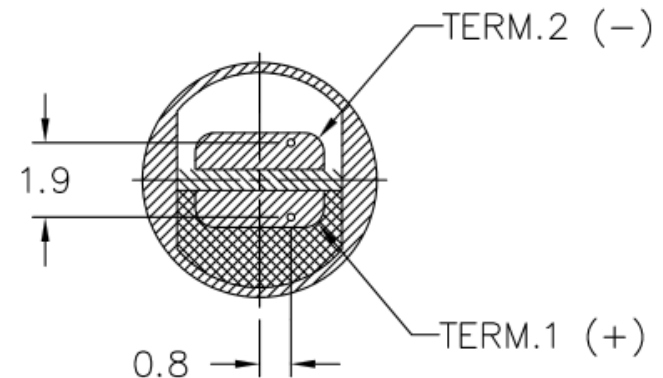
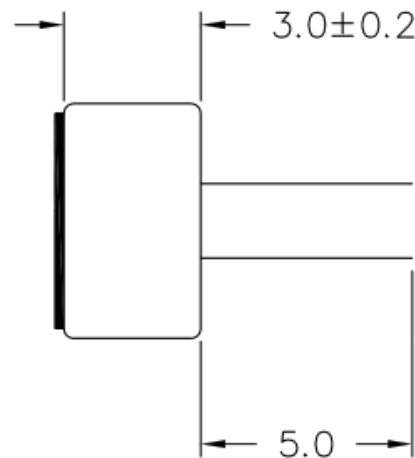
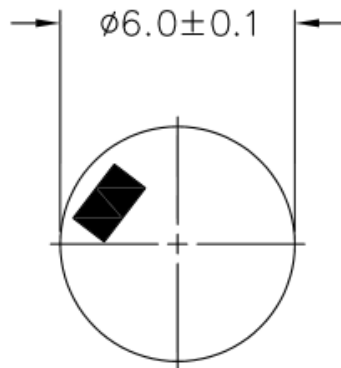
# WI-FI MODULE





# Sonido POM-3044P-R

STANDARD OPERATING VOLTAGE	2	Vdc
MAX OPERATING VOLTAGE	10	Vdc
CURRENT CONSUMPTION (MAX)	0.5	mA
IMPEDANCE	2.2	kOhm
SIGNAL TO NOISE RATIO (MIN.)	60	dB
TERMINAL	PIN	—
INTERNAL CAPACITOR	N/A	pF



<http://www.mouser.com/ProductDetail/PUI-Audio/POM-3044P-R/?qs=%252bDOaWfEBs1OcfgPOxzyppg%3D%3D>

## NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. SPECIFICATION SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE.
3. THIS PART IS RoHS 2002/95/EC COMPLIANT.

FILE NAME  
POM-3044P-R.DWG

UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN  
MILLIMETERS, TOLERANCES ARE  $\pm 0.5$  AND  
ANGLES ARE  $\pm 3^\circ$ .

APPROVALS	DATE
DRAWN <i>J.A.F.</i>	01/06
CHECKED <i>E.P.</i>	01/06
APPROVED <i>B.R.</i>	01/06

DO NOT SCALE DRAWING



projects®  
unlimited

Dayton, Ohio

MICROPHONE

SIZE  
A

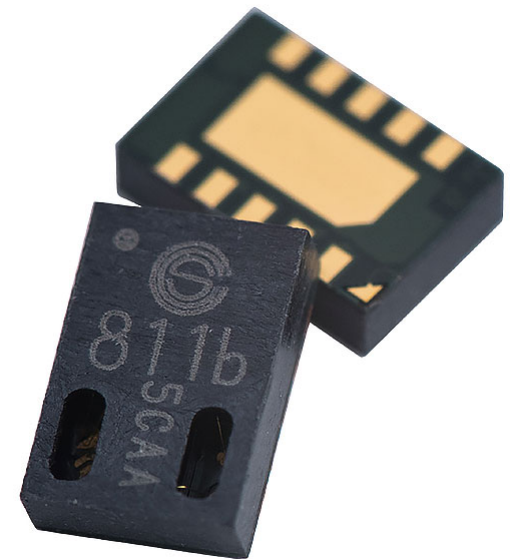
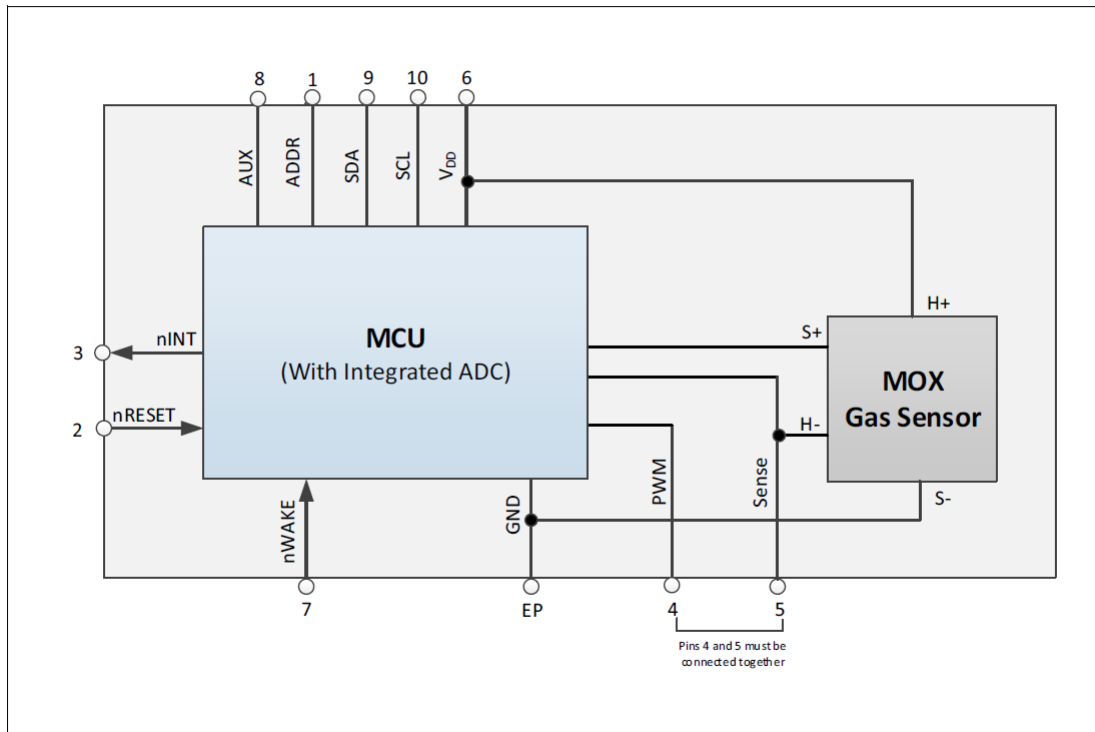
DRAWING NO.  
POM-3044P-R

SCALE: N.T.S.

SHEET 1 OF 1

# VOC and CO2 Gas sensor CCS811

### Figure 2: CCS811 Block Diagram

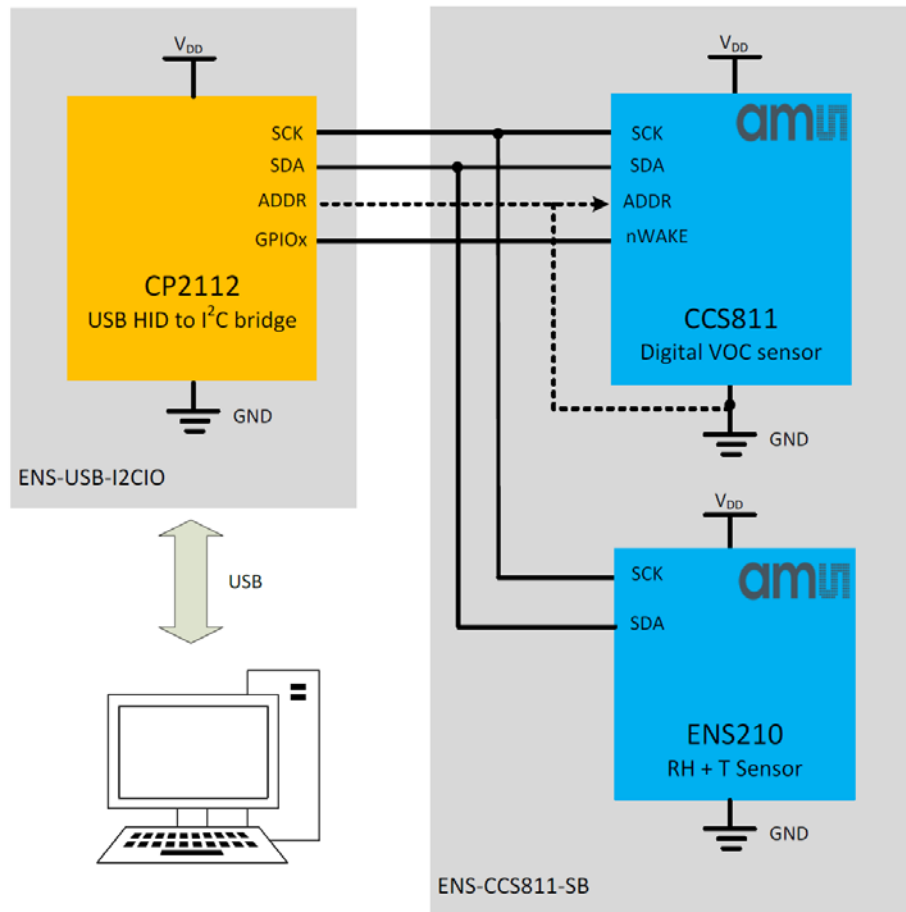


# Humedad y Temperatura ENS210

Benefits	Features
<ul style="list-style-type: none"><li>• Ultra-accurate</li></ul>	<ul style="list-style-type: none"><li>• Temperature sensor (<math>\pm 0.2^{\circ}\text{C}</math>)</li><li>• Relative humidity sensor (<math>\pm 3.5\%\text{RH}</math>)</li></ul>
<ul style="list-style-type: none"><li>• Wide sensing range</li></ul>	<ul style="list-style-type: none"><li>• Temperature operating range (<math>-40^{\circ}\text{C}</math> to <math>100^{\circ}\text{C}</math>)</li><li>• Relative humidity operating range (0% to 100%)</li></ul>
<ul style="list-style-type: none"><li>• Wide operating voltage</li></ul>	<ul style="list-style-type: none"><li>• 1.71V to 3.60V</li></ul>
<ul style="list-style-type: none"><li>• Small foot-print</li></ul>	<ul style="list-style-type: none"><li>• 2.0mm x 2.0mm x 0.75mm</li></ul>
<ul style="list-style-type: none"><li>• Industry standard two-wire interface</li></ul>	<ul style="list-style-type: none"><li>• Standard (100kbit/s) and fast (400kbit/s) I<sup>2</sup>C</li></ul>
<ul style="list-style-type: none"><li>• Low power</li></ul>	<ul style="list-style-type: none"><li>• Automatic low-power standby when not measuring<ul style="list-style-type: none"><li>• Active current: <math>7.1\mu\text{A}</math> @ 1Hz (1.8V)</li><li>• Standby current: 40nA</li></ul></li></ul>
<ul style="list-style-type: none"><li>• Cost effective</li></ul>	<ul style="list-style-type: none"><li>• Digital pre-calibrated relative humidity and temperature sensor</li><li>• Output directly in %RH and Kelvin</li><li>• Wide supply voltage range</li></ul>
<ul style="list-style-type: none"><li>• High reliability</li></ul>	<ul style="list-style-type: none"><li>• Long-term stability</li></ul>



# Sistema completo





ams  
www.ams.com

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by life.

ams' sensors are the heart of today's  
and tomorrow's technology



ams  
www.ams.com

AS7000  
optical biosensor

0 bpm





# AWAIR Glow







### Fingerprint Scanner - TTL (GT-511C3)

SEN-11792

\$49.95

★★★★☆ 10



### MyoWare Muscle Sensor Development Kit

KIT-13772

\$79.95



### SparkFun Soil Moisture Sensor

SEN-13322

\$4.95

★★★★☆ 5



### MyoWare Muscle Sensor

SEN-13723

\$37.95

★★★★☆ 4



### SparkFun Single Lead Heart Rate Monitor - AD8232

SEN-12650

\$19.95

★★★★☆ 12



### Pulse Sensor

SEN-11574

\$24.95

★★★★☆ 10



### Fingerprint Scanner - TTL (GT-511C1R)

SEN-13007

\$31.95

★★★★☆ 8



### Dissolved Oxygen Kit

SEN-11194

\$249.95



### pH Sensor Kit

SEN-10972

\$149.95

★★★★☆ 4



### SparkFun Particle Sensor Breakout - MAX30105

SEN-14045

\$12.95



### Biomedical Sensor Pad (10 pack)

SEN-12969

\$7.95

★★★★☆ 1



### BITalino (r)evolution Board Kit

DEV-14022

\$209.95





ADD TO CART

### Electrical Conductivity Kit

SEN-12908

\$199.95

★★★★☆ 1



### Alcohol Gas Sensor - MQ-3

SEN-08880

\$4.95

★★★★★ 2



### Hydrogen Gas Sensor - MQ-8

SEN-10916

\$7.95



### Methane CNG Gas Sensor - MQ-4

SEN-09404

\$4.95



### Optical Dust Sensor - GP2Y1010AU0F

COM-09689

\$11.95

★★★★☆ 3



### MyoWare LED Shield

DEV-13688

\$24.95



### LPG Gas Sensor - MQ-6

SEN-09405

\$4.95



### MyoWare Cable Shield

DEV-13687

\$3.95



### Gas Sensor Breakout

BOB-08891

\$0.95

★★★★☆ 2



### MyoWare Power Shield

DEV-13684

\$3.95



### Vernier Sensor - pH Sensor

SEN-12872

\$78.95

★★★★☆ 1

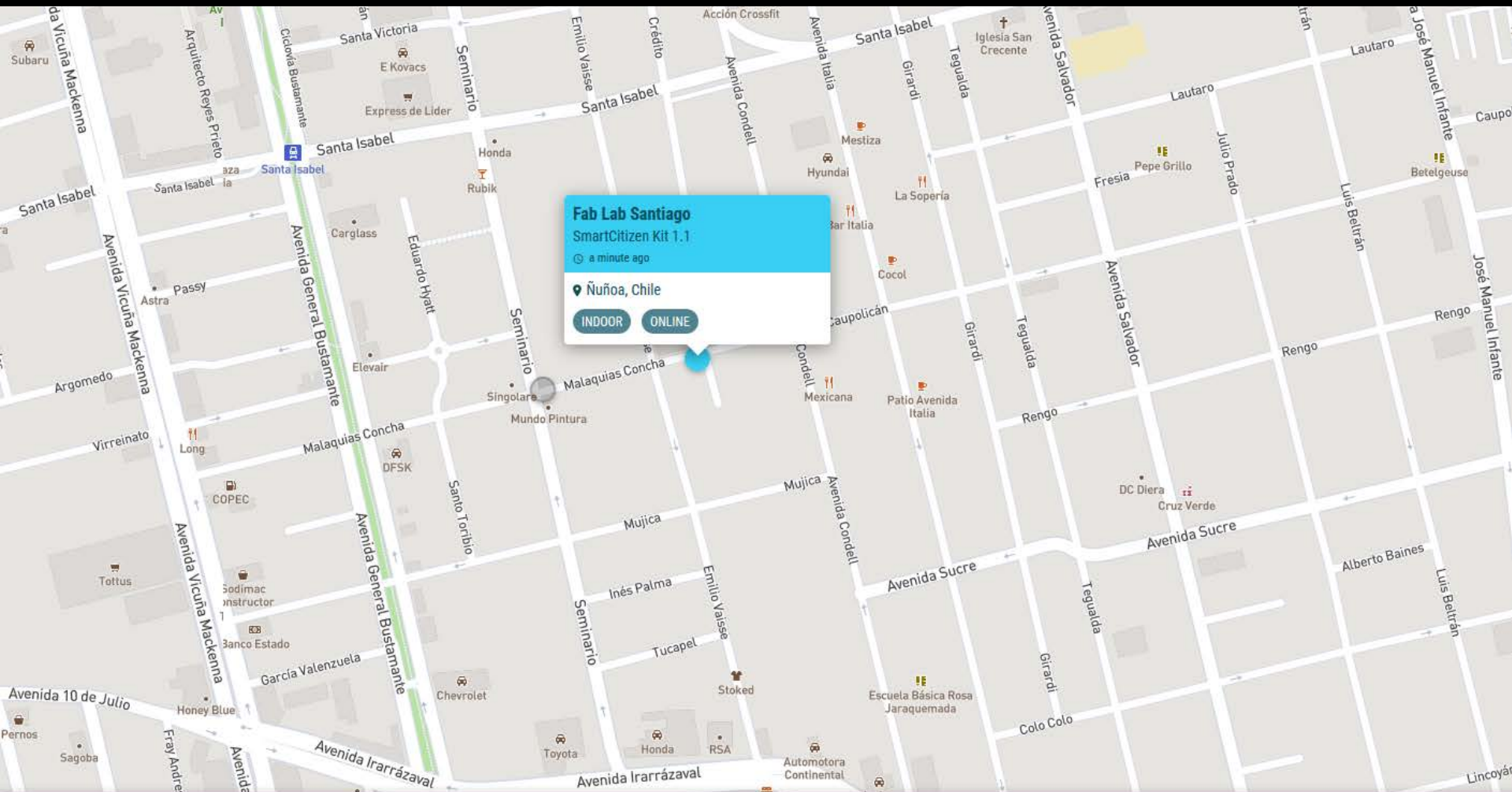


### ORP Kit

SEN-14090

\$174.95

# Mapa



LAST DATA RECEIVED: APRIL 20, 2017 - 09:56

50 dB 4 # networks 186.98 kOhm/ppm 144.85 kOhm/ppm 16.06 °C 58.97 % 100 % 13 Lux




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# Comunicaciones de datos

Enviar datos a Ubidots

AT+CHTTPACT="things.ubidots.com",80


POST

/api/v1.6/variables//values?token=  
 HTTP/1.1

Host: things.ubidots.com

Content-Type: application/json

Content-Length: 58

{"value":, "context": {"lat": -34.558520, "lng": -58.705222}}

A row of blue children's watches with white circular overlays in the background.

**GRACIAS!**