<table>
<thead>
<tr>
<th><strong>Docket Number:</strong></th>
<th>20-RENEW-01</th>
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<tbody>
<tr>
<td><strong>Project Title:</strong></td>
<td>School Energy Efficiency Stimulus Program</td>
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<tr>
<td><strong>TN #:</strong></td>
<td>236943</td>
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<tr>
<td><strong>Document Title:</strong></td>
<td>CO2 monitor and Indoor Air Quality monitoring stations</td>
</tr>
<tr>
<td><strong>Description:</strong></td>
<td>N/A</td>
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<tr>
<td><strong>Filer:</strong></td>
<td>System</td>
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<tr>
<td><strong>Organization:</strong></td>
<td>eLichens</td>
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<tr>
<td><strong>Submitter Role:</strong></td>
<td>Applicant</td>
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<td><strong>Docketed Date:</strong></td>
<td>3/1/2021</td>
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Comment Received From: eLichens  
Submitted On: 3/1/2021  
Docket Number: 20-RENEW-01  

CO2 monitor and Indoor Air Quality monitoring stations

eLichens’ mission is to pioneer the smart sensor networks through innovative air quality sensing solutions and services for citizens, communities and organizations. eLichens relies on a wide portfolio of patents, know-how and skills to offer a complete range of air quality and multi-gas detections solution, addressing indoor air quality application for schools, offices, at home, ....

Additional submitted attachment is included below.
MARKETS
- Smart Home / Building
- HVAC
- Smart City

APPLICATIONS
- Indoor air quality monitoring
- Schools, offices, homes, …
- Building Management System

MAIN FEATURES
- Real-time Air Quality monitoring
- Embedded Air Quality analytics
- eLichens’ unique ultra low power NDIR CO₂ sensor
- 3.5” touchscreen and LED status indicator
- Online data storage and building management dashboard
- API and iOS/Android application
- Proprietary outdoor air quality data
- Auto-calibration with automatic report generation

EMBEDDED SENSORS
- Carbon Dioxide (CO₂)
- Temperature
- PM 1.0/2.5/10
- Humidity
- Total VOC
- Pressure
- Ambient noise
- Ambient light

DIFFERENTIATORS
- ALL-IN-1 SOLUTION
- DATA FUSION EXPERTISE
- HIGH DATA ACCURACY
- LOW POWER

www.elichens.com/store/elsi
info@elichens.com
The station gathers all the measurement data in real-time and arranges them according to the output data rate (ODR). The data are then encrypted using RSA, communicated via WiFi to a standard access point and stored in eLichens’ Cloud. The user can then access the data through a dedicated online dashboard, accessible using a secured HTTPS connection and credentials. A mobile application will be available too, to access data from anywhere.
MARKETS
- Smart Home / Building
- HVAC
- Smart City

APPLICATIONS
- Indoor air quality monitoring
- HVAC control
- Building Management System

MAIN FEATURES
- Real-time Air Quality monitoring
- eLichens’ unique ultra low power NDIR CO₂ sensor
- Online data storage and visualization dashboard
- API for integration into Building Management
- Proprietary outdoor air quality data
- Auto-calibration
- Encrypted wireless connectivity

EMBEDDED SENSORS

<table>
<thead>
<tr>
<th>Gas</th>
<th>Environmental</th>
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<tbody>
<tr>
<td>Carbon Dioxide (CO₂)</td>
<td>Noise level</td>
</tr>
<tr>
<td>PM 1.0/2.5/10</td>
<td>Humidity</td>
</tr>
<tr>
<td>Total VOC</td>
<td>Pressure</td>
</tr>
<tr>
<td></td>
<td>Temperature</td>
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</tbody>
</table>

DIFFERENTIATORS
- ALL-IN-1 SOLUTION
- DATA FUSION EXPERTISE
- HIGH DATA ACCURACY
- LOW POWER

L 110 x W 85 x H 55 mm
The station gathers all the measurement data in real-time and arranges them according to the output data rate (ODR). The data are then encrypted using RSA, communicated via WiFi to a standard access point and stored in eLichens’ Cloud. The user can then access the data through a dedicated online dashboard, accessible using a secured HTTPS connection and credentials. A mobile application will be available too, to access data from anywhere.
Founded at the end of 2014, eLichens is pioneering IoT Solutions for gas sensing through a complete offering in which Data Fusion, Models & Analytics are powered by our patented NDIR Smart Gas Sensors.

Born in France, our 30 persons team is spread over our headquarter in Grenoble (France), and our sales team in Paris and San Francisco.

**Patented Technology**

eLichens holds a wide portfolio of 50 families of patents and relies on a proven expertise in photonics, artificial intelligence and gas sensing to address both consumer electronics and industrial markets.

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**Our gas sensors**

**Cranberry, Foxberry & Mulberry**

Based on our patented optical NDIR Technology, we provide 3 unique designs so as to comply with our clients’ requirements and be embedded into any device. We’re able to satisfy both consumer electronics and industrial markets.

**KEY FEATURES**

- Several gas : CO2, CH4, R32
- Several form factor including 4R standard
- Power consumption : <1.5 mW @ 2 measures/s
- Lifetime : more than 10 years
- Response time : T90 < 30 seconds
- High Accuracy

- No drift : temperature and ageing compensated
- Autocalibration : double beam with reference channel
- Compact design from 400 mm³
- Simple UART interface
- ATEX & IECEx certified

**DIFFERENTIATORS**

- INCREASED RELIABILITY / NO DRIFT
- ULTRA LOW POWER
- COMPACT
- AUTO-CALIBRATED