Smart Air Purification System
Powered by NCCO technology
HOW THE SYSTEM WORKS?

1. Detect & Monitor
   - Real time IAQ status in 6 Parameters:
     - Temperature
     - Humidity
     - PM 2.5
     - PM 10
     - TVOCs
     - CO₂
   - User-friendly smart application for instant remote checking.

2. Storage & Notify
   - Data Storage & Display
   - IBM Cloud Data Analytics
   - Alarm Messaging

3. Improve
   - Intelligently purifies the air with our patented "NCCO" technology.

Air
Mentor 2
IoTelligent
Data Box
NCCO
Air Purification
System
"Now you can see the Indoor Air Pollution with our smart Air Purification System"

Attaining the IAQ standards of:

- Environmental Protection Department
  - Tackle indoor air problem indicated by Hong Kong EPD IAQ Requirements

- U.S. Green Building Council
  - Effectively treat the required pollutants in LEED accreditation

- BEAM Plus
  - Add credits for BEAM Plus accreditation

- International WELL Building Institute
  - Effectively treat the required pollutants in WELL accreditation
AIR MENTOR 2
INDOOR AIR QUALITY DETECTOR

Detects and displays real-time air quality with the Air Mentor Link App.

Measures Indoor Air Quality with 6 parameters: temperature, humidity, PM 2.5, PM 10, TVOC, CO2.

Air Mentor 2 can also be connected with the IoTelligent Data Box for further solution integration, such as data analysis, alarming function, direct control with multiple electrical appliances with digital I/O modules.
Features

Wireless Connection
Through smart phone App, user can easily setup Air Mentor 2 Wi-Fi connection, to know your air quality anytime, anywhere.

Standard Air Quality Light Index
Air quality index color is designed to match international air quality display standard, to show IAQ (Indoor Air Quality) status in a simplicity design.

Warning
Air Mentor 2 will alert user with air quality pollution status, the app will also receive alert notification.

Wall Mount Holder
Our wall hanger naturally mingles into interior design, to help air quality detection, to make your air quality visible to your family.

Complete Indoor Air Quality Monitoring
To detect majority indoor air quality pollutant sources. After power on, it remains continuous monitoring mode.

Remote Checking
Air quality checking at different locations becomes possible as smartphone can connect with multiple Air Mentor 2.

Air Quality History Data Analysis
Air quality measurement will automatically upload to Air Cloud, through App, you may check history data, analysis and improvement suggestion.

System Integration
Wired or wireless integration with HVAC system is achievable with our design assistant.

Specifications

Model 8099-AP
Input DC 5V/1A Micro USB
Dimension 106 x 115 x 44.5mm
Communication Wireless LAN 802.11 b / g / n 2.4GHz Bluetooth 4.X LE
Weight 205g
Apps Compatibility iOS 9, Android 5.0 or above
Operating Temp 5~40
IAQ Breathing LED Green, Yellow, Orange, Red, Purple
PM2.5 Range: 0~1000μg/m³
CO2 (NDIR) Range: 400~10,000 ppm
PM10 Range: 0~1000μg/m³
Temperature Range: -20°C ~80°C
TVOC 8099-AP
Humidity Range: 0~100%

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### Real Time Measurements

<table>
<thead>
<tr>
<th>Type</th>
<th>Benchmark</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO2</td>
<td>&lt; 1000 PPM</td>
<td>664 PPM</td>
</tr>
<tr>
<td>PM2.5</td>
<td>&lt; 30 μg/m³</td>
<td>26 μg/m³</td>
</tr>
<tr>
<td>PM10</td>
<td>&lt; 180 μg/m³</td>
<td>34 μg/m³</td>
</tr>
<tr>
<td>Temp</td>
<td>20 - 25.5°C</td>
<td>24.79°C</td>
</tr>
<tr>
<td>RH%</td>
<td>40 - 70 %</td>
<td>57 %</td>
</tr>
<tr>
<td>TVOCs</td>
<td>&lt; 261 PPB</td>
<td>393 ppb</td>
</tr>
<tr>
<td>IAQ Index</td>
<td>&lt; 50</td>
<td>71</td>
</tr>
</tbody>
</table>

Redirect Air Mentor’s air quality data to IBM Cloud Analytics

Direct control with multiple electrical appliances with digital I/O modules

Integrated SMS/email gateway for sending alarm messages
Graphs of Six Parameters under different period of time

Personalised Alarming Message Box under unhealthy conditions
NCCO AIR PURIFIERS
(powered by NCCO technology)
Ceiling-Type/ Duct-Type/ Customised Systems

"By linking with the IoTelligent Data Box, the purifier will automatically remove the detected pollutants in the air"

NCCO 3-Stage Air Cleansing

Hospital Grade Filter
A combination of filters to physically clean the air, trapping solid pollutants from larger hair and dust to smaller particulates and bacteria.

Active Oxygen Generator
Activates oxygen in the air into more reactive species, thereby increasing efficiency of air cleansing in the next stages.

Nano-Technology Reactor
Serves as a medium for chemical reactions to occur at maximum rate, decomposing the gaseous pollutants back into harmless air.

ELIMINATE
PM2.5
Dust
MicroBugs
Bacteria
Pollens
Mold

DECOMPOSE
Formaldehyde
VOCs
Odour
Viruses
NOx
Ozone

Nano-Confined Catalytic Oxidation
Patented technology invented by HKUST*

Achievement:
Clean Air

<table>
<thead>
<tr>
<th>Pollutants</th>
<th>% Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia</td>
<td>98.9%</td>
</tr>
<tr>
<td>TVOC</td>
<td>99.9%</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>98.8%</td>
</tr>
<tr>
<td>Airborne bacteria count</td>
<td>95.8%</td>
</tr>
<tr>
<td>Respirable suspended particulates</td>
<td>97.6%</td>
</tr>
</tbody>
</table>

Data collected from a room of about 100 sq ft (approx 18 cub md) and having operated NCCO model EC400 for 60 minutes [Tested by independent certified testing laboratory]
ADVANTAGES

No Secondary Pollution

Other absorption based purifiers such as activated carbon releases pollutants back into the air after saturated.

But NCCO works different. Gaseous pollutants are decomposed effectively in NCCO operation, broken down into harmless molecules.

True Protection

Other emission-based purifiers such as ion and ozone could threaten your health with release of high level of oxidant.

In contrast, NCCO decomposes the excess active oxygen after oxidation, not letting it threaten your health.
CUSTOMISED SOLUTION

To integrate into your existing system

NCCO AHU Systems

Case Study: HSBC Asia-Pacific Data Centre

Issue: The centre is located near Tseung Kwan O Landfills, fresh air driven into the centre is full of foul smell.

How we tackle:
To be more effective in odour elimination, the NCCO system was installed in fresh air inlet instead of employing close circulation purifications.

Remove a section of the air duct

Replace by NCCO Cabinet Unit

New air duct with NCCO air purification system
Case Study: Dah Chong Hong Building (in Kowloon Bay)

Issue: Suffered large amount of TVOC from vehicles painting released into fresh air inlet duct.

How we tackle: The NCCO system is integrated into client’s existing air inlet duct system.

1. Remove a section of the air duct
2. Replace by NCCO Cabinet Unit
3. New air duct with NCCO air purification system