



# Catalogue



# A Range for Air Quality

Ethera has a full range of air quality measuring devices (diagnostic & monitoring). The NEMo DIAG versions allow diagnostics for one day to one week. The NEMo XT versions are designed for long-term monitoring. Thanks to the different configurations and their modularity the NEMo DIAG and NEMo XT are adaptable to all types of buildings: schools, public areas, industrial laboratories, swimming pools ... Connected, these devices can communicate directly with a smartphone or tablet via bluetooth or with our cloud solution via IoT or local networks.

NE-KIT440

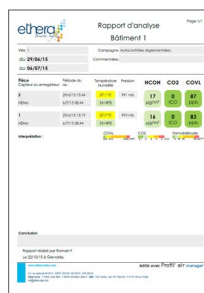
# NEMo Diagnostic

Formaldehyde - CO<sub>2</sub> - LVOC - Temperature - Humidity - Pressure



NEMo is the first **Indoor air quality monitor** to continuously measure **containment and formaldehyde** with required **IAQ performance levels** (ppb).

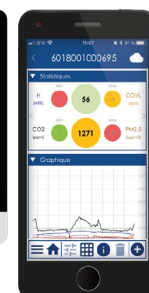
**Battery powered**, with memory embeded and **IoT network** compatibility, it's easy to install at any places



Automated report



Cloud solution



Mobile App

## Continuous formaldehyde measurement at ppb levels

### Applications

- ◆ Monitoring Indoor Air Quality in Public Area
- ◆ Work environments Diagnostic (Odors, ENT problem...)
- ◆ Offices Inspection (new buildings at reception and/or operation)
- ◆ Efficiency verification of filtration systems
- ◆ Evaluation of ventilation systems



NEMo IAQ Monitor  
NE-KIT440

### Advantages

- ◆ **Patented Ethera technology** for selective and continuous measurement of **formaldehyde**.
- ◆ Measure of **real exposure** to pollutants and identification of pollution peaks.
- ◆ **Modular and evolutive**, possibility of adding additional sensors (PM2.5 / PM10, VOC, Radon ...).
- ◆ **Connected device** for real-time access to measurements (Sigfox, LoRa, Bluetooth, Wifi, RJ45, GSM).
- ◆ **Simple and ergonomic** data management software, **cloud** interface and **mobile** application.
- ◆ Complies with the French requirements of Decree 2015-1000 on monitoring of IAQ in Public Areas.
- ◆ **Automated reports** directly exploitable with comparison to the advised values.

### Schools, Nurseries...



### Industries



### Green Buildings



ethera

IAQ Monitor suite

## FORMALDEHYDE

Detection method	Optical reading with nanoporous material (patented technology)
Measuring range	IAQ : 0 - 200 ppb (0-246 µg/m <sup>3</sup> ) ; H&S : 200 - 2800 ppb (246-3444 µg/m <sup>3</sup> )
Sensitivity	Down to 1 ppb
Sampling method	Diffusive
Comparison with DNPH* reference method	< 13%
Storage conditions for the consumable	Storage before use: 12 months from the manufacturing date. Store between 2 and 8°C
Interfering molecule	None

## CO<sub>2</sub>/CONFINEMENT

Detection method	Non Dispersive Infrared spectrometry (NDIR)
Measuring range	0 à 5000 ppm
Accuracy	1 ppm
Sensitivity	+/- 50 ppm +/- 3% reading value
Response time 90%	< 30 seconds

## LVOC (Light Volatile Organic Compounds)

Detection method	Electrochemical
Measuring range	30 ppb to 5 ppm
Resolution	1 ppb
Accuracy	+/- 40ppb
Response time (90%)	< 30 seconds
Detected VOC	Up to 4C gazes (Aldehydes, Alcools...).

## TEMPERATURE

Sensor type	CMOS
Measuring range	-55°C to +125°C
Resolution	0,08°C
Accuracy	+/- 2°C from -25°C to 100°C (+/- 0,5°C after offset calibration)

## HUMIDITY

Sensor type	Capacitive
Measuring range	0 to 95%
Resolution	0,08%
Accuracy	+/- 3% from 11°C to 89°C (+/- 7% from 0 to 11°C and from 89 to 95°C)

## PRESSURE

Sensor type	CMOS
Measuring range	260 to 1260 hPa
Resolution	+/- 0,02 hPa
Accuracy	+/- 2 hPa

## GENERAL CHARACTERISTICS

Sampling pitch	10 minutes customizable (CO <sub>2</sub> , T, P, RH, LVOC) ; 2 hours (formaldehyde)
Conditions of use	Temperature between 0°C to +30°C.- Humidity between 30 et 70% (RH)
Embedded memory	> 50 000 points
Dimensions (LxIxh) approx. / Total weight	175x95x75 mm / 450 grams
Power supply/Battery life	Battery 5000 mA (up to 15 jours lifetime, with measurements every 10 minutes) A/C 220/110V and charge with microUSB port Start/Stop with magnet
Display	3-color LED indicator, customizable with user mode
Interface/Communication	MicroUSB Sigfox or Radio Frequency - Multi-logger communication with NEMo connect concentrator
System requirements	Operating system : Windows 7 ou higher, Mac OS 10.9 or higher
Guarantee	2-year guarantee for labor and parts, excluding consumables
Conformity	FR D2015-1000 for confinement (CO <sub>2</sub> ) and formaldehyde FR D2012-14 for confinement (CO <sub>2</sub> )
Contents	1 logger 1 USB adapter charger 1 USB-MicroUSB cable 1 cap and 1 membrane for the formaldehyde diffuser (to change every 6 months) 1 calibration sensor set Ref. 094 for NEMO User Manual USB flashkey with Profil'air Manager 2 software and manual

## RELATED PRODUCTS

	REFERENCE	QUANTITY
Formaldehyde Sensors (x5 box) for NEMo or NEMo XT	NE-FOR011	1
Formaldehyde Sensors (x25 box) for NEMo or NEMo XT	NE-FOR012	1
Additional card for PM2.5/PM10 measurement for NEMo or NEMo XT	NE-COP020	1
Radon module for NEMo	NE-COP030	1
PID additional card for VOC measurement for NEMo or NEMo XT	NE-COP040	1
NEMo Cloud annual subscription	NE-CLO030 and NE-CLO040	1
Sigfox additional annual subscription	NE-CLO050	1
NEMo connect	NE-COM010	1
GSM additional annual subscription for NEMo connect	NE-CLO060	1
NEMo - Annual preventive maintenance	NE-MAI010	1
Additional battery for NEMo logger	NE-ALI020	1
NEMo diffuser maintenance pack	NE-ENT011	1
NEMo tube adapter for CO <sub>2</sub> sensor's calibration	NE-ETA010	1
NEMo ceiling suspension kit	NE-SUS010	1

NE-KIT430

# NEMo XT - Monitoring

**Formaldehyde - CO<sub>2</sub> - LVOC - Temperature - Humidity - Pressure**

NEMo XT is the first **indoor air quality (IAQ) measuring station** to continuously measure **containment and formaldehyde** with the required IAQ performance levels.

Since it is intended to be **installed in a fixed position**, it is mostly **powered electrically**. In standard configuration, it can **however run on battery** for 1 year. **Compatible with IoT or local networks**, it is easy to install in any type of building.



Wall-mounted digital tablet for displaying live data



Cloud solution with alert management

## Applications

- ◆ Monitoring of work environments
- ◆ Monitoring in operation of energy-efficient buildings, WELL labeling
- ◆ Ventilation systems control
- ◆ Monitoring of Indoor Air Quality in Public areas
- ◆ Control filtration systems efficiency

## Advantages

- ◆ Measure of real exposure to pollutants and identification of pollution peaks.
- ◆ Possibility of adding a VOC sensor by **PID technology for industrial monitoring**.
- ◆ Proprietary and patented technology for **continuous measurement of formaldehyde for formol users**.



- ◆ Modular and evolutive, possibility of adding additional sensors (PM2.5 / PM10, VOC, Radon ...).
- ◆ **Connected device** for real-time access to measures (Sigfox, LoRa, Bluetooth, Wifi, RJ45, GSM).
- ◆ Simple and ergonomic data management software, cloud interface and mobile application.
- ◆ Meets the requirements of 18th item of the **WELL Building Standard label**

**Schools, Nurseries...**

**Industries**

**Green Buildings**

ethera

IAQ Monitor suite

# NEMo XT - Monitoring

FORMALDEHYDE	
Detection method	Optical reading with nanoporous material (patented technology)
Measuring range	IAQ : 0 - 200 ppb (0-246 µg/m³) ; H&S : 200 - 2800 ppb (246-3444 µg/m³)
Sensitivity	Down to 1 ppb
Sampling method	Diffusive
Comparison with DNPH* reference method	< 13%
Storage conditions for the consumable	Storage before use: 12 months from the manufacturing date. Store between 2 and 8°C
Interfering molecule	None
CO2/CONFINEMENT	
Detection method	Non Dispersive Infrared spectrometry (NDIR)
Measuring range	0 à 5000 ppm
Accuracy	1 ppm
Sensitivity	+/- 50 ppm +/- 3% reading value
Response time 90%	< 30 seconds
LVOC (Light Volatile Organic Compounds)	
Detection method	Electrochemical
Measuring range	30 ppb to 5 ppm
Resolution	1 ppb
Accuracy	+/- 40ppb
Response time (90%)	< 30 seconds
Detected VOC	Up to 4C gazes (Aldehydes, Alcools...).
TEMPERATURE	
Sensor type	CMOS
Measuring range	-55°C to +125°C
Resolution	0,08°C
Accuracy	+/- 2°C from -25°C to 100°C (+/- 0,5°C after offset calibration)
HUMIDITY	
Sensor type	Capacitive
Measuring range	0 to 95%
Resolution	0,08%
Accuracy	+/- 3% from 11°C to 89°C (+/- 7% from 0 to 11°C and from 89 to 95°C)
PRESSURE	
Sensor type	CMOS
Measuring range	260 to 1260 hPa
Resolution	+/- 0,02 hPa
Accuracy	+/- 2 hPa
GENERAL CHARACTERISTICS	
Sampling pitch	10 minutes customizable (CO2, T, P, RH, LVOC) ; 2 hours (formaldehyde)
Conditions of use	Temperature between 0°C to +30°C.- Humidity between 30 et 70% (RH)
Dimensions (LxIxh) approx. / Total weight	190x135x70 mm / 520 grams
Power supply/Battery life	<ul style="list-style-type: none"> <li>Lithium battery 3.6V - 17Ah (D type with connector), lifetime up to 1 year with measurements every 10 minutes and standard configuration.</li> <li>Power supply (DC 5V - 1A) (mandatory if optionnal daughter cards or new parameters are added).</li> </ul>
Display	LED operating indicator and NEMo cloud web interface
Interface/Communication	Sigfox, LoRa or Radio Frequency - Multi-logger communication with NEMo connect concentrator
System requirements	Operating system : Windows 7 ou higher, Mac OS 10.9 or higher
Guarantee	2-year guarantee for labor and parts, excluding consumables
Conformity	FR D2015-1000 for confinement (CO2) and formaldehyde FR D2012-14 for confinement (CO2) Element 18 of WELL Building Standard
Contents	<ul style="list-style-type: none"> <li>- 1 NEMo XT station</li> <li>- 1 5V power supply</li> <li>- Quick start manual</li> <li>- 1 calibration sensor set Ref. 094 for NEMo</li> </ul>

RELATED PRODUCTS	REFERENCE	QUANTITY
Formaldehyde Sensors (x5 box) for NEMo or NEMo XT	NE-FOR011	1
Formaldehyde Sensors (x25 box) for NEMo or NEMo XT	NE-FOR012	1
Additional card for PM2.5/PM10 measurement for NEMo or NEMo XT	NE-COP020	1
PID additional card for VOC measurement for NEMo or NEMo XT	NE-COP040	1
NEMo Cloud annual subscription	NE-CLO030 and NE-CLO040	1
Sigfox additional annual subscription	NE-CLO050	1
NEMo connect	NE-COM010	1
GSM additional annual subscription for NEMo connect	NE-CLO060	1
NEMo XT - Annual preventive maintenance	NE-MAI090	1
NEMo diffuser maintenance pack	NE-ENT011	1



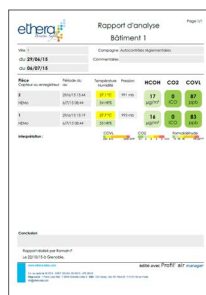
NE-KIT540

# NEMo TC - Trichloramine

Trichloramine - CO<sub>2</sub> - LVOC - Temperature - Humidity - Pressure

NEMo TC is the world's first **portable pool air quality recorder** continuously measuring **Trichloramine** with the **performance levels** required for swimming pool air control.

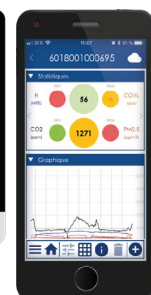
Running on **battery**, having **internal memory** as well as **compatibility with IoT networks**, it is easy to install in any type of swimming pool



Automated report



Cloud solution with alert management



Mobile App

## ppb and continuous measurement of trichloramine

### Applications

- ◆ Monitoring the air quality of public pools, water parks, spas, hotels, spas and thalassotherapy ...
- ◆ Air quality control in the agri-food industries using Clean Up In Place (CIP), also known as Clean-In-Place (CIP), using chlorinated products
- ◆ Fight against occupational diseases as required by the labor code
- ◆ Evaluation of ventilation systems



### Advantages

- ◆ Proprietary and patented Ethera technology for continuous measurement of **Trichloramine**.
- ◆ Measure of **real exposure** to pollutants and identification of pollution peaks.
- ◆ **Modular** and evolutive, possibility of adding additional sensors (PM2.5 / PM10, VOC, Radon ...).
- ◆ **Connected** device for real-time access to measurements (Sigfox, LoRa, Bluetooth, Wifi, RJ45, GSM).
- ◆ **Simple and ergonomic** data management software, cloud interface and mobile application.
- ◆ **Automated reports** directly exploitable with comparison to the guide values

### What is Trichloramine ?

Trichloramine is the source of the characteristic «chlorine» smell of swimming pools. This molecule is created by reaction between the chlorine used for the disinfection of water and organic matter brought by swimmers (sweat, cosmetics, saliva, urine, dead skin ...). It is a very volatile gas that can cause eye, skin and respiratory irritation, or even asthma and rhinitis in case of prolonged exposure. Pool employees (especially lifeguards) are particularly exposed. Asthma and rhinitis are also recognized as occupational diseases by decree 2003-110 of 11/02/2003.

## TRICHLORAMINE

Detection method	Optical reading with nanoporous material (patented technology)
Measuring range	16 - 185 ppb (79 - 911 µg/m³)
Sampling duration	From 1 hour to 24 hours
Sampling method	Diffusive
Accuracy	±15 ppb ±5% (Daily average), validation in progress
Storage conditions for the consumable	Storage before use: 6 months from the manufacturing date. Store at ambient temperature between 15 and 25°C

## CO2/CONFINEMENT

Detection method	Non Dispersive Infrared spectrometry (NDIR)
Measuring range	0 à 5000 ppm
Accuracy	1 ppm
Sensitivity	+/- 50 ppm +/- 3% reading value
Response time 90%	< 30 seconds

## LVOC (Light Volatile Organic Compounds)

Detection method	Electrochemical
Measuring range	30 ppb to 5 ppm
Resolution	1 ppb
Accuracy	+/- 40ppb
Response time (90%)	< 30 seconds
Detected VOC	Up to 4C gazes (Aldehydes, Alcools...).

## TEMPERATURE

Sensor type	CMOS
Measuring range	-55°C to +125°C
Resolution	0,08°C
Accuracy	+/- 2°C from -25°C to 100°C (+/- 0,5°C after offset calibration)

## HUMIDITY

Sensor type	Capacitive
Measuring range	0 to 95%
Resolution	0,08%
Accuracy	+/- 3% from 11°C to 89°C (+/- 7% from 0 to 11°C and from 89 to 95°C)

## PRESSURE

Sensor type	CMOS
Measuring range	260 to 1260 hPa
Resolution	+/- 0,02 hPa
Accuracy	+/- 2 hPa

## GENERAL CHARACTERISTICS

Sampling pitch	10 minutes customizable (CO2, T, P, RH, LVOC) ; 1 hour (trichloramine)
Conditions of use	Temperature between 22°C to +30°C.- Humidity between 40 et 70% (RH). Additional studies in progress.
Embedded memory	> 50 000 points
Dimensions (LxIxh) approx. / Total weight	175x95x75 mm / 450 grams
Power supply/Battery life	Battery 5000 mA (up to 15 jours lifetime, with measurements every 10 minutes) A/C 220/110V and charge with microUSB port Start/Stop with magnet
Display	3-color LED indicator, customizable with user mode
Interface/Communication	MicroUSB Sigfox or Radio Frequency - Multi-logger communication with NEMo connect concentrator
System requirements	Operating system : Windows 7 ou higher, Mac OS 10.9 or higher
Guarantee	2-year guarantee for labor and parts, excluding consumables
Contents	1 logger 1 USB adapter charger 1 USB-MicroUSB cable 1 cap and 1 membrane for the formaldehyde diffuser (to change every 6 months) 1 calibration sensor set Ref. 094 for NEMo User Manual USB flashkey with Profil'air Manager 2 software and manual

## RELATED PRODUCTS

	REFERENCE	QUANTITY
Formaldehyde Sensors (x5 box) for NEMo or NEMo XT	NE-TRI011	1
Formaldehyde Sensors (x25 box) for NEMo or NEMo XT	NE-TRI012	1
Annual subscription 200 Trichloramine sensors by NEMo TC recorder or NEMo station (XT) and cloud solution	NE-TRI015	1
Additional card for PM2.5/PM10 measurement for NEMo or NEMo XT	NE-COP020	1
Radon module for NEMo	NE-COP030	1
PID additional card for VOC measurement for NEMo or NEMo XT	NE-COP040	1
NEMo Cloud annual subscription	NE-CLO030 and NE-CLO040	1
Sigfox additional annual subscription	NE-CLO050	1
NEMo connect	NE-COM010	1
GSM additional annual subscription for NEMo connect	NE-CLO060	1
NEMo - Annual preventive maintenance	NE-MAI010	1
Additional battery for NEMo logger	NE-ALI020	1
NEMo diffuser maintenance pack	NE-ENT011	1
NEMo tube adapter for CO2 sensor's calibration	NE-ETA010	1
NEMo ceiling suspension kit	NE-SUS010	1



NE-KIT530

# NEMo XT TC - Trichloramine

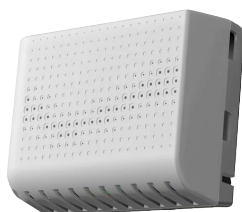
**Trichloramine - CO<sub>2</sub> - LVOC - Temperature - Humidite - Pressure**

NEMo TC XT is the first **station to continuously measure Trichloramine** with the levels of performance required for swimming pool air control.

Since it is intended to be **installed in a fixed position**, it is mostly **powered electrically**. In standard configuration, it **can however run on battery** for 1 year. **Compatible with IoT or local networks**, it is easy to install in any type of building.



Wall-mounted digital tablet for displaying live data



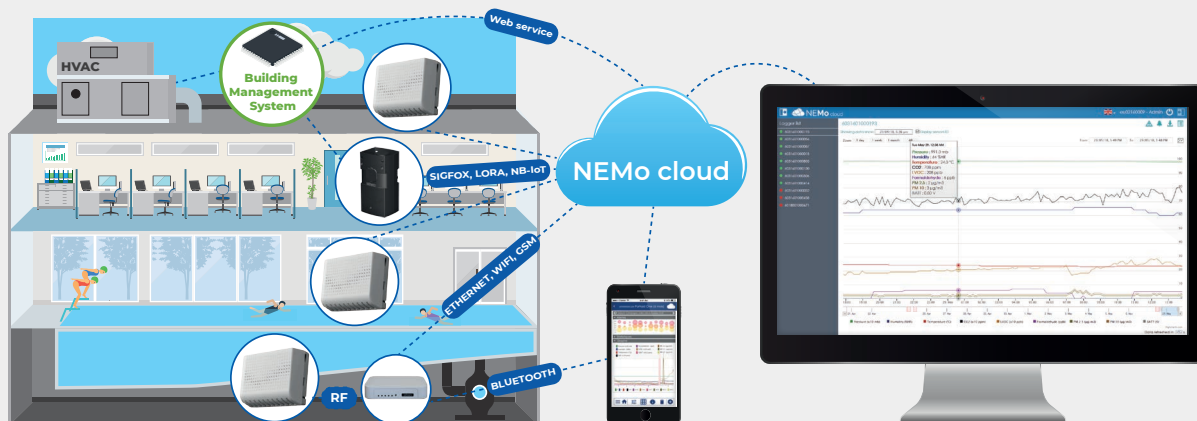
Cloud solution with alert management

## Applications

- ◆ Air quality monitoring of public pools, water parks, hotels, spas and thalassotherapy centers...
- ◆ Work environments monitoring of the agrifood industries using Clean Up In Place (CIP) using chlorinated products
- ◆ Optimization of energy savings by piloting swimming pool ventilation systems
- ◆ Checking the efficiency of dechloramination systems

## Advantages

- ◆ Proprietary and **patented Ethern technology** for continuous measurement of **Trichloramine**.
- ◆ Measure of real exposure to pollutants and identification of pollution peaks.
- ◆ **Modular** and evolutive, possibility of adding additional sensors (PM2.5 / PM10, VOC, Radon ...).
- ◆ **Connected device** for real-time access to measurements (Sigfox, LoRa, Bluetooth, Wifi, RJ45, GSM).
- ◆ **Simple and ergonomic** data management software, cloud interface and mobile application.



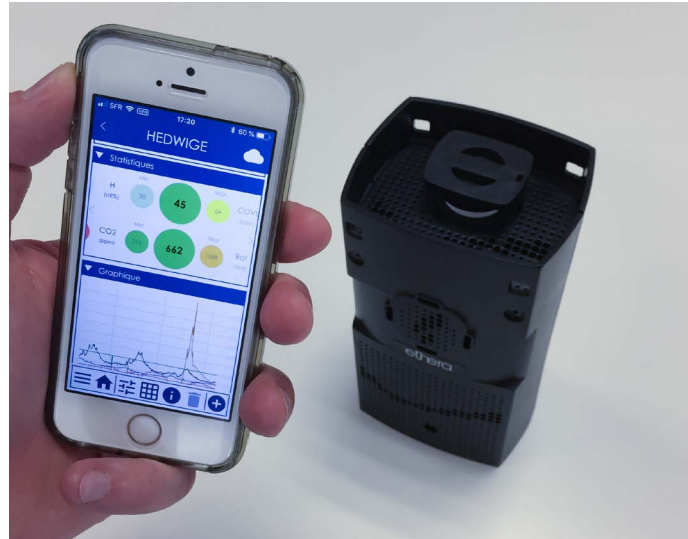
TRICHLORAMINE	
Detection method	Optical reading with nanoporous material (patented technology)
Measuring range	16 - 185 ppb (79 - 911 µg/m³)
Sampling duration	From 1 hour to 24 hours
Sampling method	Diffusive
Accuracy	±15 ppb ±5% (Daily average), validation in progress
Storage conditions for the consumable	Storage before use: 6 months from the manufacturing date. Store at ambient temperature between 15 and 25°C
CO2/CONFINEMENT	
Detection method	Non Dispersive Infrared spectrometry (NDIR)
Measuring range	0 à 5000 ppm
Accuracy	1 ppm
Sensitivity	+/- 50 ppm +/- 3% reading value
Response time 90%	< 30 seconds
LVOC (Light Volatile Organic Compounds)	
Detection method	Electrochemical
Measuring range	30 ppb to 5 ppm
Resolution	1 ppb
Accuracy	+/- 40ppb
Response time (90%)	< 30 seconds
Detected VOC	Up to 4C gazes (Aldehydes, Alcools...).
TEMPERATURE	
Sensor type	CMOS
Measuring range	-55°C to +125°C
Resolution	0,08°C
Accuracy	+/- 2°C from -25°C to 100°C (+/- 0,5°C after offset calibration)
HUMIDITY	
Sensor type	Capacitive
Measuring range	0 to 95%
Resolution	0,08%
Accuracy	+/- 3% from 11°C to 89°C (+/- 7% from 0 to 11°C and from 89 to 95°C)
PRESSURE	
Sensor type	CMOS
Measuring range	260 to 1260 hPa
Resolution	+/- 0,02 hPa
Accuracy	+/- 2 hPa
GENERAL CHARACTERISTICS	
Sampling pitch	10 minutes customizable (CO2, T, P, RH, LVOC) ; 1 hour (trichloramine)
Conditions of use	Temperature between 22°C to +30°C.- Humidity between 40 et 70% (RH). Additional studies in progress.
Dimensions (LxI xh) approx. / Total weight	190 x135 x70 mm / 520 grams
Power supply/Battery life	<ul style="list-style-type: none"> <li>Lithium battery 3.6V - 17Ah (D type with connector), lifetime up to 1 year with measurements every 10 minutes and standard configuration.</li> <li>Power supply (DC 5V - 1A) (mandatory if optionnal daughter cards or new parameters are added).</li> </ul>
Display	LED operating indicator and NEMo cloud web interface
Interface/Communication	Sigfox, LoRa or Radio Frequency - Multi-logger communication with NEMo connect concentrator
System requirements	Operating system : Windows 7 ou higher, Mac OS 10.9 or higher
Guarantee	2-year guarantee for labor and parts, excluding consumables
Contents	<ul style="list-style-type: none"> <li>- 1 NEMo XT station</li> <li>- 1 5V power supply</li> <li>- Quick start manual</li> <li>- 1 calibration sensor set Ref. 094 for NEMo</li> </ul>

RELATED PRODUCTS	REFERENCE	QUANTITY
Formaldehyde Sensors (x5 box) for NEMo or NEMo XT	NE-TRI011	1
Formaldehyde Sensors (x25 box) for NEMo or NEMo XT	NE-TRI012	1
Annual subscription 200 Trichloramine sensors by NEMo TC recorder or NEMo station (XT) and cloud solution	NE-TRI015	1
Additional card for PM2.5/PM10 measurement for NEMo or NEMo XT	NE-COP020	1
Radon module for NEMo	NE-COP030	1
PID additional card for VOC measurement for NEMo or NEMo XT	NE-COP040	1
NEMo Cloud annual subscription	NE-CLO030 and NE-CLO040	1
Sigfox additional annual subscription	NE-CLO050	1
NEMo connect	NE-COM010	1
GSM additional annual subscription for NEMo connect	NE-CLO060	1
NEMo - Annual preventive maintenance	NE-MAI010	1
Additional battery for NEMo logger	NE-ALI020	1
NEMo diffuser maintenance pack	NE-ENT011	1
NEMo tube adapter for CO2 sensor's calibration	NE-ETA010	1
NEMo ceiling suspension kit	NE-SUS010	1

## Mobile App for NEMo Range management

### Advantages

- ◆ See your NEMo internal data or cloud easily and in real time wherever you are.
- ◆ Use your smartphone as a screen for NEMo or NEMo XT.
- ◆ Check the installation of your NEMo and NEMo XT before leaving the site.
- ◆ Download the data contained in the internal memory of your NEMo (bluetooth) or in your formaldehyde (RFID) consumables directly on your phone.



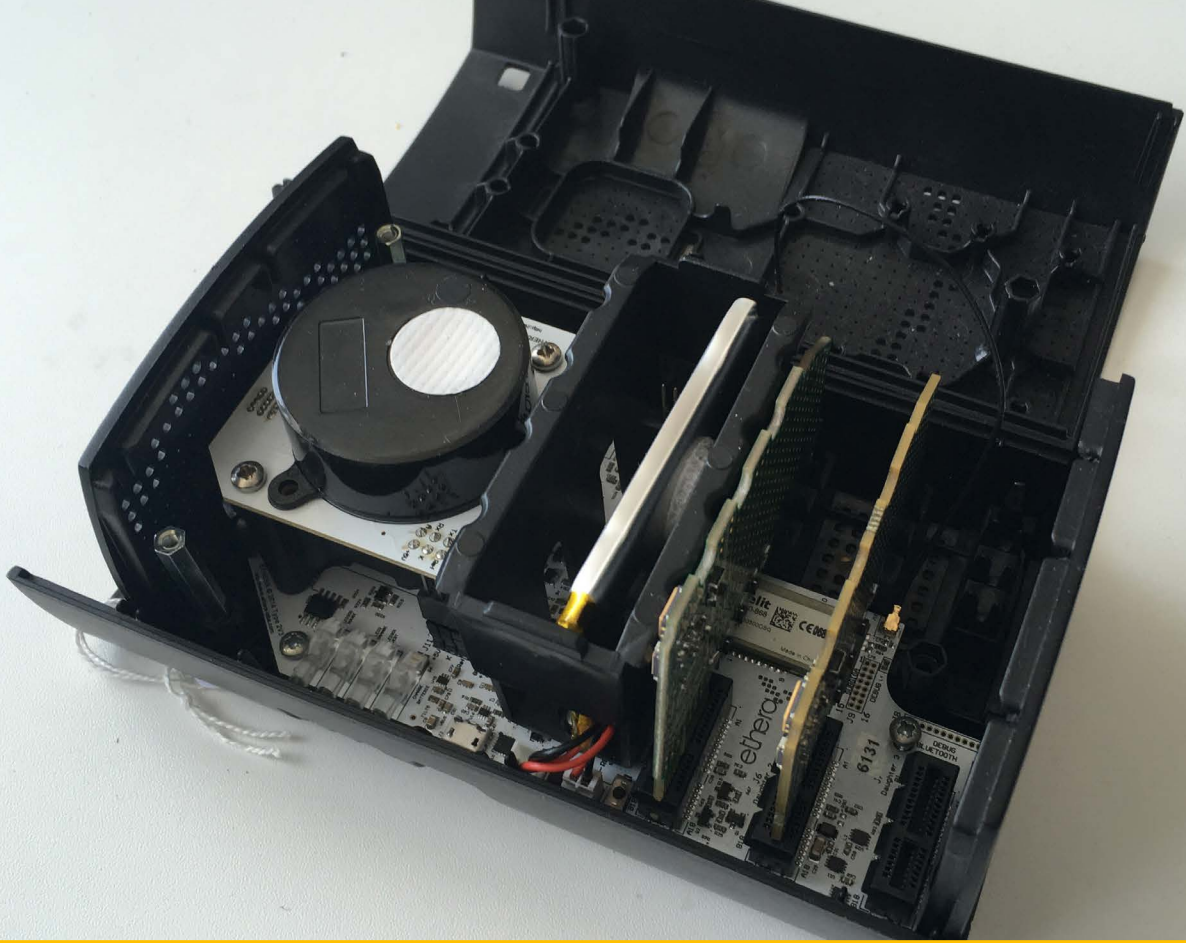
# NEMo Cloud

## Cloud solution for data management

### Advantages

- ◆ Intuitive and user-friendly interface for AQ data management.
- ◆ Setting custom alerts.
- ◆ Access to archived data.
- ◆ External output via webservice for controlling ventilation systems.





# Optional cards

Ethera has thought its NEMo range as a scalable range that can adapt to regulatory changes or new markets. For this purpose, the NEMo range of devices can be equipped with additional daughterboards to measure new parameters (pollutants, noise, etc.) or to have new functions (display, means of communication, etc...).

# Particulate matter (PM2.5/10)

Fine particulate matter (PM2.5 / 10) for NEMo or NEMo XT is an additional card to be installed at the factory allowing the measurement of fine particles. PM 2.5 is measured by diffraction of a laser. An algorithm then makes it possible to make an indicative evaluation of PM10 on the basis of PM2.5 measurements.

## Applications

- ◆ Diagnosis / monitoring of fine particle pollution
- ◆ Evaluation of the impact of outdoor air quality on the indoor air quality
- ◆ Evaluation of the impact of combustion sources (candles, heaters ...) Control of the efficiency of filtration systems

## Advantages

- ◆ Accurate and reliable sensor. Our sensor has been selected after Ethera global study on most sensors available on the market
- ◆ Ease to use, the measurement is automatically added to the parameters already measured
- ◆ No additional space required
- ◆ Robust - Long service life

### PARTICULATE MATTER PM 2.5

Detection method	Laser-based light scattering
Sampling method	Active
Measuring range	0 - 1000 µg/m <sup>3</sup>
Resolution	1 µg/m <sup>3</sup>
Accuracy	15µg/m <sup>3</sup> (<100µg/m <sup>3</sup> ) or +/- 15% de la reading value (>100µg/m <sup>3</sup> )
Warm up time	35 secondes
Response time	<10 secondes

### PARTICULATE MATTER PM 10

Detection method	Indicative value calculated from PM 2.5 readings
Measuring range	0 - 1000 µg/m <sup>3</sup>
Resolution	1 µg/m <sup>3</sup>
Accuracy	Indicative value only

### GENERAL CHARACTERISTICS

Dimensions / Weight / Position	80mm x 50mm x 30mm / 100 grams / internal installation in NEMo
Power supply Impact on NEMo autonomy	Internal, uses the batteries / power supply of the host device (changes the autonomy) For a device equipped with this optional card only. NEMo in campaign mode with a measurement interval of 10 minutes. - NEMo Diagnostic (with two rechargeable batteries): 10 days - NEMo XT (with a non-rechargeable battery): with power supply only - With power supply (any type of NEMo): unlimited.
Sampling pitch	2,5 minutes to 100 minutes customizable by steps of 2,5 minutes (10 minutes y default)
Conditions of use	Humidity : 20% to 80% (non condensing) - Temperature : 0°C to 40°C
Required or complementary material	Required : NEMo Diagnostic or NEMo XT Required for NEMo Diagnostic : Additional battery for NEMo logger
Guarantee	2-year guarantee for labor and parts, excluding consumables

### RELATED PRODUCTS

	REFERENCE	QUANTITY
NEMo Diagnostic : Connected Indoor Air Quality Logger	NE-KIT440	1
NEMo XT - Indoor Air Quality Monitoring Station	NE-KIT430	1
Additional battery for NEMo logger	NE-ALI020	1
Optionnal NEMo PM2,5/10 card - Preventive aintenance	NE-MAI040	1



NE-COP040

# VOC by PID technology

The PID (VOC) daughter card for NEMo or NEMo XT is an additional factory-installed card for the measurement of Volatile Organic Compounds with an ionization potential of less than 10.6eV. VOC measurement is carried out by photoionization

## Applications

- ◆ Diagnosis / Monitoring of pollution by VOCs (Aldehydes, BTEX including Benzene, NH<sub>3</sub>, H<sub>2</sub>S, hydrocarbons ...)
- ◆ Measurement of global indoor air pollution
- ◆ Monitoring of work environments
- ◆ Filtration systems efficiency Control

## Advantages

- ◆ Ppb measurement for easy comparison to guideline values and occupational exposure limit values
- ◆ Validate the absence of pollution for controlled environments
- ◆ Built-in gas library to adapt the measurement to the desired gas
- ◆ Ease of use, the measurement is automatically added to the parameters already measured
- ◆ No additional space required
- ◆ Each card is calibrated at the factory before sending (on isobutylene)

### VOLATILE ORGANIC COMPOUNDS WITH IONIZATION POTENTIAL OF LESS THAN 10,6EV

Detection method	Photo-ionisation (PID) with 10,6eV lamp
Sampling method	Passive
Measuring range	1 ppb - 50 ppm
Resolution	1 ppb
Accuracy	+/- 3% of reading value
Warm up time	5 secondes
Response time	< 3 secondes

### GENERAL CHARACTERISTICS

Dimensions / Weight / Position	80mm x 50mm x 22mm / 30 grams / internal installation in NEMo
Power supply Impact on NEMo autonomy	Internal, uses the batteries / power supply of the host device (changes the autonomy) For a device equipped with this optional card only. NEMo in campaign mode with a measurement interval of 10 minutes. - NEMo Diagnostic (with two rechargeable batteries): 8 days - NEMo XT (with a non-rechargeable battery): with power supply only - With power supply (any type of NEMo): unlimited.
Sampling pitch	2,5 minutes to 100 minutes customizable by steps of 2,5 minutes (10 minutes y default)
Conditions of use	Humidity : 20% to 80% (non condensing) - Temperature : 0°C to 40°C
Required or complementary material	Required : NEMo Diagnostic or NEMo XT Required for NEMo Diagnostic : Additional battery for NEMo logger
Guarantee	2-year guarantee for labor and parts, excluding consumables

### RELATED PRODUCTS

	REFERENCE	QUANTITY
NEMo Diagnostic : Connected Indoor Air Quality Logger	NE-KIT440	1
NEMo XT - Indoor Air Quality Monitoring Station	NE-KIT430	1
Additional battery for NEMo logger	NE-ALI020	1
NEMo PID optional card - Preventive maintenance	NE-MAI050	1
NEMo PID optional card - Curative maintenance level 1	NE-MAI060	1
NEMo PID optional card - Curative maintenance level 2	NE-MAI070	1

NE-COP030

# Radon

Radon module for NEMo is an additional module to be installed at the factory for the measurement of Radon. The measurement is made thanks to a pulsed ionization chamber.

## Applications

- ◆ Radon monitoring in Public areas
- ◆ Radon workplace risk assessment
- ◆ Radon home monitoring
- ◆ Ventilation system control



## Advantages

- ◆ Radon continuous measurement, a measuring point every 10 minutes allowing the identification of exposure peaks unlike sensors by measuring daytime
- ◆ Radon Module validated by the German Accreditation Body DAkkS (No. D-K-15063-01-00)
- ◆ Pulsed ionisation chamber technology usually reserved for analyzers now in a portable device
- ◆ Ease of use, the measurement is automatically added to the parameters already measured

### RADON

Detection method	Pulsed ionization chamber
Sampling method	Passive
Measuring range	4 Bq/m <sup>3</sup> - 3700 Bq/m <sup>3</sup>
Resolution	2 Bq/m <sup>3</sup>
Accuracy	+/- 10% 370 Bq/m <sup>3</sup>
Response time 90%	1 hour

Validated by:



### GENERAL CHARACTERISTICS

Dimensions / Weight / Position	100 mm x 80 mm x 110 mm / 250 grams / internal installation in NEMo.
Power supply Impact on NEMo autonomy	Internal, uses the batteries / power supply of the host device (changes the autonomy) For a device equipped with this optional card only. NEMo in campaign mode with a measurement interval of 10 minutes. - NEMo Diagnostic: with power supply only - With power supply (any type of NEMo): unlimited.
Sampling pitch	2,5 minutes to 100 minutes customizable by steps of 2,5 minutes (10 minutes y default)
Conditions of use	Humidity : 20% to 80% (non condensing) - Temperature : 0°C to 40°C
Required or complementary material	Required : NEMo Diagnostic or NEMo XT Required for NEMo Diagnostic : Additional battery for NEMo logger
Guarantee	2-year guarantee for labor and parts, excluding consumables

### RELATED PRODUCTS

	REFERENCE	QUANTITY
NEMo Diagnostic : Connected Indoor Air Quality Logger	NE-KIT440	1
NEMo XT - Indoor Air Quality Monitoring Station	NE-KIT430	1
Additional battery for NEMo logger	NE-ALI020	1

NE-COP060

# Nitrogen dioxide (NO<sub>2</sub>)

The Nitrogen dioxide (NO<sub>2</sub>) daughter card for NEMo or NEMo XT is an additional factory-installed card for the measurement of NO<sub>2</sub> by electrochemical sensor.

## Applications

- ◆ Diagnosis / Monitoring of pollution by Nitrogen dioxide (NO<sub>2</sub>)
- ◆ Measurement of impact of outdoor pollution and car traffic on indoor air

## Advantages

- ◆ Accurate and reliable sensor. Our sensor has been selected after Ethera global study on most sensors available on the market
- ◆ Ease to use, the measurement is automatically added to the parameters already measured
- ◆ No additional space required
- ◆ Robust - Long service life

### NITROGEN DIOXIDE (NO<sub>2</sub>)

Detection method	Electrochemistry
Sampling method	Passive
Measuring range	1 ppb - 17 ppm
Accuracy	+/- 15 ppb
Warm up time	1 hour (approximately)
Response time	< 15 secondes

### GENERAL CHARACTERISTICS

Dimensions / Weight / Position	80mm x 50mm x 30mm / 50 grams / internal installation in NEMo
Power supply Impact on NEMo autonomy	Internal, uses the batteries / power supply of the host device (changes the autonomy) For a device equipped with this optional card only. NEMo in campaign mode with a measurement interval of 10 minutes. - NEMo Diagnostic (with two rechargeable batteries): 25 days - NEMo XT (with a non-rechargeable battery): with power supply only - With power supply (any type of NEMo): unlimited.
Sampling pitch	2,5 minutes to 100 minutes customizable by steps of 2,5 minutes (10 minutes y default)
Conditions of use	Humidity : 30% to 70% (non condensing) - Temperature : 10°C to 40°C (to be validated)
Required or complementary material	Required : NEMo Diagnostic or NEMo XT Required for NEMo Diagnostic : Additional battery for NEMo logger
Guarantee	2-year guarantee for labor and parts, excluding consumables

### RELATED PRODUCTS

	REFERENCE	QUANTITY
NEMo Diagnostic : Connected Indoor Air Quality Logger	NE-KIT440	1
NEMo XT - Indoor Air Quality Monitoring Station	NE-KIT430	1
Additional battery for NEMo logger	NE-ALI020	1





NE-COP070

# Ozone (O<sub>3</sub>)

The Ozone (O<sub>3</sub>) daughter card for NEMo or NEMo XT is an additional factory-installed card for the measurement of ozone by electrochemical sensor.

## Applications

- ◆ Diagnosis / Monitoring of pollution by Ozone (O<sub>3</sub>)
- ◆ Measurement of impact of outdoor pollution on indoor air
- ◆ Measurement of impact of indoor ozone pollution sources (photocopiers...)

## Advantages

- ◆ Accurate and reliable sensor. Our sensor has been selected after Ethera global study on most sensors available on the market
- ◆ Ease to use, the measurement is automatically added to the parameters already measured
- ◆ No additional space required
- ◆ Robust - Long service life

### NITROGEN DIOXIDE (NO<sub>2</sub>)

Detection method	Electrochemistry
Sampling method	Passive
Measuring range	1 ppb - 7 600 ppb
Accuracy	+/- 15 ppb
Warm up time	1 hour (approximately)
Response time	< 15 secondes

### GENERAL CHARACTERISTICS

Dimensions / Weight / Position	80mm x 50mm x 30mm / 50 grams / internal installation in NEMo
Power supply Impact on NEMo autonomy	Internal, uses the batteries / power supply of the host device (changes the autonomy) For a device equipped with this optional card only. NEMo in campaign mode with a measurement interval of 10 minutes. - NEMo Diagnostic (with two rechargeable batteries): 25 days - NEMo XT (with a non-rechargeable battery): with power supply only - With power supply (any type of NEMo): unlimited.
Sampling pitch	2,5 minutes to 100 minutes customizable by steps of 2,5 minutes (10 minutes y default)
Conditions of use	Humidity : 30% to 70% (non condensing) - Temperature : 10°C to 40°C (to be validated)
Required or complementary material	Required : NEMo Diagnostic or NEMo XT Required for NEMo Diagnostic : Additional battery for NEMo logger
Guarantee	2-year guarantee for labor and parts, excluding consumables

### RELATED PRODUCTS

	REFERENCE	QUANTITY
NEMo Diagnostic : Connected Indoor Air Quality Logger	NE-KIT440	1
NEMo XT - Indoor Air Quality Monitoring Station	NE-KIT430	1
Additional battery for NEMo logger	NE-ALI020	1



NE-COP090

# Hydrogen sulfide (H<sub>2</sub>S)

The Hydrogen sulfide (H<sub>2</sub>S) daughter card for NEMo or NEMo XT is an additional factory-installed card for the measurement of H<sub>2</sub>S by electrochemical sensor.

## Applications

- ◆ Diagnosis / Monitoring of pollution by Hydrogen sulfide (H<sub>2</sub>S)
- ◆ Odor levels Measurement
- ◆ Management of impact of some industries (refineries, wastewater treatment plant...) on neighborhood.

## Advantages

- ◆ Accurate and reliable sensor. Our sensor has been selected after Ethera global study on most sensors available on the market
- ◆ Ease to use, the measurement is automatically added to the parameters already measured
- ◆ No additional space required
- ◆ Robust - Long service life

### NITROGEN DIOXIDE (NO<sub>2</sub>)

Detection method	Electrochemistry
Sampling method	Passive
Measuring range	1 ppb - 2 200 ppb
Accuracy	+/- 1 ppb (to be validated)
Warm up time	1 hour (approximately)
Response time	< 15 secondes

### GENERAL CHARACTERISTICS

Dimensions / Weight / Position	80mm x 50mm x 30mm / 50 grams / internal installation in NEMo
Power supply Impact on NEMo autonomy	Internal, uses the batteries / power supply of the host device (changes the autonomy) For a device equipped with this optional card only. NEMo in campaign mode with a measurement interval of 10 minutes. - NEMo Diagnostic (with two rechargeable batteries): 25 days - NEMo XT (with a non-rechargeable battery): with power supply only - With power supply (any type of NEMo): unlimited.
Sampling pitch	2,5 minutes to 100 minutes customizable by steps of 2,5 minutes (10 minutes y default)
Conditions of use	Humidity : 30% to 70% (non condensing) - Temperature : 10°C to 40°C (to be validated)
Required or complementary material	Required : NEMo Diagnostic or NEMo XT Required for NEMo Diagnostic : Additional battery for NEMo logger
Guarantee	2-year guarantee for labor and parts, excluding consumables

### RELATED PRODUCTS

	REFERENCE	QUANTITY
NEMo Diagnostic : Connected Indoor Air Quality Logger	NE-KIT440	1
NEMo XT - Indoor Air Quality Monitoring Station	NE-KIT430	1
Additional battery for NEMo logger	NE-ALI020	1



NE-CO100

# Carbon monoxide (CO)

The Carbon monoxide (CO) daughter card for NEMo or NEMo XT is an additional factory-installed card for the measurement of carbon monoxide by electrochemical sensor.

## Applications

- ◆ Diagnosis / Monitoring of pollution by Carbon monoxide (CO)
- ◆ Measurement of impact of outdoor pollution on indoor air
- ◆ Detection of problematic combustion sources (Heating systems, pollution from contiguous car park...)

## Advantages

- ◆ Accurate and reliable sensor. Our sensor has been selected after Ethera global study on most sensors available on the market
- ◆ Ease to use, the measurement is automatically added to the parameters already measured
- ◆ No additional space required
- ◆ Robust - Long service life

### NITROGEN DIOXIDE (NO<sub>2</sub>)

Detection method	Electrochemistry
Sampling method	Passive
Measuring range	1 ppb - 6 800 ppb
Accuracy	+/- 5 ppb (to be validated)
Warm up time	1 hour (approximately)
Response time	< 15 secondes

### GENERAL CHARACTERISTICS

Dimensions / Weight / Position	80mm x 50mm x 30mm / 50 grams / internal installation in NEMo
Power supply Impact on NEMo autonomy	Internal, uses the batteries / power supply of the host device (changes the autonomy) For a device equipped with this optional card only. NEMo in campaign mode with a measurement interval of 10 minutes. - NEMo Diagnostic (with two rechargeable batteries): 25 days - NEMo XT (with a non-rechargeable battery): with power supply only - With power supply (any type of NEMo): unlimited.
Sampling pitch	2,5 minutes to 100 minutes customizable by steps of 2,5 minutes (10 minutes y default)
Conditions of use	Humidity : 30% to 70% (non condensing) - Temperature : 10°C to 40°C (to be validated)
Required or complementary material	Required : NEMo Diagnostic or NEMo XT Required for NEMo Diagnostic : Additional battery for NEMo logger
Guarantee	2-year guarantee for labor and parts, excluding consumables

### RELATED PRODUCTS

	REFERENCE	QUANTITY
NEMo Diagnostic : Connected Indoor Air Quality Logger	NE-KIT440	1
NEMo XT - Indoor Air Quality Monitoring Station	NE-KIT430	1
Additional battery for NEMo logger	NE-ALI020	1



NE-COP110

# Nitrogen monoxide (NO)

The Nitrogen monoxide (NO) daughter card for NEMo or NEMo XT is an additional factory-installed card for the measurement of NO by electrochemical sensor.

## Applications

- ◆ Diagnosis / Monitoring of pollution by Nitrogen monoxide (NO)
- ◆ Measurement of impact of outdoor pollution and car traffic on indoor air

## Advantages

- ◆ Accurate and reliable sensor. Our sensor has been selected after Ethera global study on most sensors available on the market
- ◆ Ease to use, the measurement is automatically added to the parameters already measured
- ◆ No additional space required
- ◆ Robust - Long service life

### NITROGEN DIOXIDE (NO<sub>2</sub>)

Detection method	Electrochemistry
Sampling method	Passive
Measuring range	1 ppb - 10 ppm
Accuracy	+/- 15 ppb
Warm up time	1 hour (approximately)
Response time	< 15 secondes

### GENERAL CHARACTERISTICS

Dimensions / Weight / Position	80mm x 50mm x 30mm / 50 grams / internal installation in NEMo
Power supply Impact on NEMo autonomy	Internal, uses the batteries / power supply of the host device (changes the autonomy) For a device equipped with this optional card only. NEMo in campaign mode with a measurement interval of 10 minutes. - NEMo Diagnostic (with two rechargeable batteries): 25 days - NEMo XT (with a non-rechargeable battery): with power supply only - With power supply (any type of NEMo): unlimited.
Sampling pitch	2,5 minutes to 100 minutes customizable by steps of 2,5 minutes (10 minutes y default)
Conditions of use	Humidity : 30% to 70% (non condensing) - Temperature : 10°C to 40°C (to be validated)
Required or complementary material	Required : NEMo Diagnostic or NEMo XT Required for NEMo Diagnostic : Additional battery for NEMo logger
Guarantee	2-year guarantee for labor and parts, excluding consumables

### RELATED PRODUCTS

	REFERENCE	QUANTITY
NEMo Diagnostic : Connected Indoor Air Quality Logger	NE-KIT440	1
NEMo XT - Indoor Air Quality Monitoring Station	NE-KIT430	1
Additional battery for NEMo logger	NE-ALI020	1



NE-COPI20

# Ammonia (NH<sub>3</sub>)

The Ammonia (NH<sub>3</sub>) daughter card for NEMo or NEMo XT is an additional factory-installed card for the measurement of NH<sub>3</sub> by electrochemical sensor.

## Applications

- ◆ Diagnosis / Monitoring of pollution by Ammonia (NH<sub>3</sub>)
- ◆ Measurement of impact of outdoor pollution on indoor air
- ◆ Evaluation of impact of agriculture and household products pollution on indoor air.

## Advantages

- ◆ Accurate and reliable sensor. Our sensor has been selected after Ethera global study on most sensors available on the market
- ◆ Ease to use, the measurement is automatically added to the parameters already measured
- ◆ No additional space required
- ◆ Robust - Long service life

### NITROGEN DIOXIDE (NO<sub>2</sub>)

Detection method	Electrochemistry
Sampling method	Passive
Measuring range	1 ppm - 87 ppm
Accuracy	+/- 300 ppb
Warm up time	1 hour (approximately)
Response time	< 15 secondes

### GENERAL CHARACTERISTICS

Dimensions / Weight / Position	80mm x 50mm x 30mm / 50 grams / internal installation in NEMo
Power supply Impact on NEMo autonomy	Internal, uses the batteries / power supply of the host device (changes the autonomy) For a device equipped with this optional card only. NEMo in campaign mode with a measurement interval of 10 minutes. - NEMo Diagnostic (with two rechargeable batteries): 25 days - NEMo XT (with a non-rechargeable battery): with power supply only - With power supply (any type of NEMo): unlimited.
Sampling pitch	2,5 minutes to 100 minutes customizable by steps of 2,5 minutes (10 minutes y default)
Conditions of use	Humidity : 30% to 70% (non condensing) - Temperature : 10°C to 40°C (to be validated)
Required or complementary material	Required : NEMo Diagnostic or NEMo XT Required for NEMo Diagnostic : Additional battery for NEMo logger
Guarantee	2-year guarantee for labor and parts, excluding consumables

### RELATED PRODUCTS

	REFERENCE	QUANTITY
NEMo Diagnostic : Connected Indoor Air Quality Logger	NE-KIT440	1
NEMo XT - Indoor Air Quality Monitoring Station	NE-KIT430	1
Additional battery for NEMo logger	NE-ALI020	1



ethera

Innovation in the air



ETHERA

628 rue Charles de Gaulle  
38920, Crolles, FRANCE

Tel : +33 (0)4 38 12 29 90  
Email : [sales@ethera-labs.com](mailto:sales@ethera-labs.com)