

## Environmental and Air Quality Application

### Building X



**The Building X Environmental and Air Quality Application seamlessly connects to both existing infrastructure and new IoT devices. It integrates effortlessly into the Building X ecosystem, enabling the generation of valuable insights into the environmental and air quality of buildings.**

- Provide insights on environmental and air quality data.
- Clear overview of the rooms with the best and worst performance.
- Overview of the environmental and air quality of rooms over time and in specifically selected time periods.
- Supporting the visualization of the following sensor attributes IAQ, temperature, humidity, CO<sub>2</sub>, TVOC, PM, light, noise, PC, NO<sub>2</sub>, CO, O<sub>3</sub> and SO<sub>2</sub>
- Leverages existing or new vendor-agnostic sensor infrastructure
- Understanding and comparing of sensor data from different rooms/areas to identify patterns: Identify the worst performing rooms where action can be taken for the maximum impact.
- Analyze correlations of different metrics from the same room.
- Mark selections as favorites for easy retrieval of data.
- Export relevant datasets for further investigation.
- Displaying of IAQ information on a graphical floor plan.

[buildingx.siemens.com](https://buildingx.siemens.com)

# Functions

## Dashboards for environmental data analysis

By data aggregation of existing environmental data sensors, the application provides different dashboards with filter options to allow analysis for relevant time and date intervals.

Floor Plan ViewDetails View

ExcellentGoodFairBadSevereDetails

AQITemperatureHumidityCO<sub>2</sub>TVOCPM<sub>2.5</sub>7+

|                          | Floor   | Floor Area / Ro... | AQI  | Temperature(°C) | Humidity(%) | CO <sub>2</sub> (ppm) | TVOC(ppb) | PM <sub>2.5</sub> (µg/m³) | PCO <sub>2</sub> (%) | PCO <sub>2</sub> (%) | PC1.0(%) | Light(lx) |
|--------------------------|---------|--------------------|------|-----------------|-------------|-----------------------|-----------|---------------------------|----------------------|----------------------|----------|-----------|
| <input type="checkbox"/> | Floor 1 | 0 Outdoor          | 58.9 | 24.0            | 50.6        | 1270.5                | 452.6     | 64.6                      | N/A                  | N/A                  | N/A      | 129.6     |
| <input type="checkbox"/> | Floor 1 | 100 Meeting ro...  | 62.5 | 24.0            | 50.6        | 1172.1                | 347.0     | 72.2                      | N/A                  | N/A                  | N/A      | 107.5     |
| <input type="checkbox"/> | Floor 1 | 101 Meeting ro...  | 59.5 | 24.0            | 50.6        | 1088.4                | 429.6     | 64.7                      | N/A                  | N/A                  | N/A      | 105.6     |
| <input type="checkbox"/> | Floor 1 | 102 Meeting ro...  | 60.0 | 24.0            | 50.6        | 1137.8                | 380.9     | 66.1                      | N/A                  | N/A                  | N/A      | 107.0     |
| <input type="checkbox"/> | Floor 1 | 103 Meeting ro...  | 66.5 | 24.0            | 50.6        | 1143.3                | 436.0     | 71.9                      | N/A                  | N/A                  | N/A      | 102.0     |
| <input type="checkbox"/> | Floor 1 | 104 Meeting ro...  | 59.7 | 24.0            | 50.6        | 1258.5                | 389.0     | 57.7                      | N/A                  | N/A                  | N/A      | 108.0     |
| <input type="checkbox"/> | Floor 1 | 105 ThinkTank      | 57.7 | 24.0            | 50.6        | 1306.9                | 354.4     | 63.0                      | N/A                  | N/A                  | N/A      | 129.2     |
| <input type="checkbox"/> | Floor 1 | 106 ThinkTank      | 58.8 | 24.0            | 50.6        | 1138.4                | 340.4     | 58.4                      | N/A                  | N/A                  | N/A      | 115.6     |
| <input type="checkbox"/> | Floor 1 | 107 ThinkTank      | 57.3 | 24.0            | 50.6        | 1247.8                | 434.8     | 73.3                      | N/A                  | N/A                  | N/A      | 108.9     |
| <input type="checkbox"/> | Floor 1 | 108 ThinkTank      | 61.7 | 24.0            | 50.6        | 1215.6                | 411.5     | 62.1                      | N/A                  | N/A                  | N/A      | 105.5     |
| <input type="checkbox"/> | Floor 1 | 110 Open office    | 57.1 | 24.0            | 50.6        | 1226.2                | 388.9     | 65.4                      | N/A                  | N/A                  | N/A      | 106.0     |
| <input type="checkbox"/> | Floor 1 | 111 Open office    | 56.3 | 24.0            | 50.6        | 1156.8                | 353.1     | 63.1                      | N/A                  | N/A                  | N/A      | 127.5     |
| <input type="checkbox"/> | Floor 1 | 125 Lab            | N/A  | N/A             | N/A         | N/A                   | N/A       | N/A                       | N/A                  | N/A                  | N/A      | N/A       |
| <input type="checkbox"/> | Floor 1 | 130 Cantine        | 59.7 | 24.0            | 50.6        | 1278.3                | 396.7     | 59.9                      | N/A                  | N/A                  | N/A      | 109.0     |

## Building X Platform

### Accounts Application

Ability to manage users with a role-based access control. New users can be invited to access the Cloud Service and given appropriate access rights via user groups. Users can log in with two-factor authentication and manage their user account themselves. Data can be logically grouped into partitions and given access via user groups.

### Devices Application

Ability to manage Connected Devices compatible with the Cloud Service.

### Data Setup Application

Ability to onboard data by adding meaning and structure to it. The data can be onboarded from multiple sources, such as Connected Devices, 3<sup>rd</sup> party cloud systems and files.

### Data Hosting and Data Usage

Hosts and processes personal and non-personal data in data centers located in Europe. For information regarding processing of personal data and locations Customer may refer to the Data Privacy Terms: <https://siemens.com/dpt>

### Ask Building X

Ability to ask questions in different languages about Building X technical information, utilizing GenAI.

# Subscription

The subscription plan depends on the agreement between Customer and Siemens.

## 1) Default Subscription Plan if the customer purchases the subscription via the Siemens online store

| Environmental and Air Quality Application  |   |
|--------------------------------------------|---|
| <b>Functions</b>                           |   |
| Building X Platform                        | ✓ |
| Dashboards for environmental data analysis | ✓ |
| <b>Terms</b>                               |   |

|                               |                                          |
|-------------------------------|------------------------------------------|
| <b>Subscription metric</b>    | per data point per year                  |
| <b>Subscription term</b>      | Annually, auto-renewal                   |
| <b>Billing term</b>           | Annually, payment in advance             |
| <b>Upscale</b>                | Effective immediately, pro-rated billing |
| <b>Downscale/Cancellation</b> | Effective with end of subscription term  |
| <b>Connected Devices</b>      | To be purchased separately               |
| <b>Permitted Users</b>        | Unlimited, Extended Use                  |

The Environmental and Air Quality Application subscription plan is the regular, scalable Offering for this Cloud Service. The subscription term is twelve (12) months with automatic renewal; the Cloud Service fee is paid in advance. The subscription plan can be upscaled at any time and Cloud Service fees for upscales are calculated on a pro-rated basis. The Customer can also scale down the Cloud Service effective with the end of the current subscription term. The subscription fee will be adjusted for the upcoming billing term. The Cloud Service can be cancelled any time, effective with the end of the current subscription term.

A data point is a discrete unit of information, e.g. a temperature sensor value. A combination sensor for room temperature and relative humidity counts as 2 data points.

Customer may purchase required Connected Devices separately.

Extended Use entitles Customer to authorize its Affiliates and third parties to access and use the Cloud Services in accordance with the rights set out in the Terms and Conditions.

## 2) Custom Subscription Plan

Any subscriptions that are not purchased via a Siemens online store are Custom Subscription Plans. Under a Custom Subscription Plan the details regarding functions, subscription metric, term, billing, up- and downscaling, Connected Devices as well as Permitted Users are set out in the agreement between the Customer and Siemens.

# Prerequisites

## Supported Connected Devices

The Cloud Service is currently compatible with commercially available Connected Devices. Connected Devices enable the Cloud Service to exchange data with the technical building infrastructure. A description of the available Connected Devices is provided below.

|                                    | List of Supported Connected Devices                                                                                                                                                                                                                                                              |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SIEMENS: Connect X200</b>       | The Connect X200 edge gateway is powered with DC 24V or AC 24V and may require an enclosure.<br>The Connect X200 includes embedded software (for example, firmware and factory installed applications collectively referenced herein as Software) to supply building data to this Cloud Service. |
| <b>SIEMENS: Connect X500</b>       | The Connect X500 edge gateway is powered with DC 24V and may require an enclosure.<br>The Connect X500 includes embedded software (for example, firmware and factory installed applications collectively referenced herein as Software) to supply building data to this Cloud Service.           |
| <b>SIEMENS: Connect Software</b>   | Connect Software edge gateway is running on Windows 10 or Windows 11 Hyper-V and requires computer hardware.<br>Connect Software includes multiple software applications collectively referenced herein as Software to supply building equipment data to this Cloud Service.                     |
| <b>SIEMENS: Designo CC</b>         | Designo CC software product is running on Windows computer hardware. The supported software version is Designo CC V7 or higher.<br>Designo CC includes multiple software extensions collectively referenced herein as Software to supply building data to this Cloud Service.                    |
| <b>SIEMENS: Designo PXC 4/5/7</b>  | Designo PXC4/5/7 hardware is powered with AC 24V. The supported hardware devices for this Cloud Service are PXC4-2.E16S, PXC4-2.E16, PXC5.E24, PXC7.E400S/M/L and PXC5.E003 with firmware version V02.21.194.25 or higher.                                                                       |
| <b>SIEMENS: Designo Optic F200</b> | Designo Optic hosted on CFG3.F200 hardware is powered with AC 24V. The supported software version is V5.1.7.x or higher to connect to this Cloud Service.                                                                                                                                        |
| <b>SIEMENS: Connect Box</b>        | Connect Box hardware is powered with DC 24 V.<br>Connect Box includes Software and BSP version V5.x.x or higher to connect to this Cloud Service.<br>The building management data hosted on the hardware can currently only be accessed in read-only mode.                                       |

To use the Cloud Service, a Connected Device must be installed on site, fully operational and connected to the Internet. The Customer is responsible for the provision of the Connected Device on site and all associated costs for the provision of the Cloud Service in accordance with the associated documentation for the Connected Device.

## Web browser and Viewing Devices

Chrome is recommended to use the Cloud Service, but other standard browsers might also serve this function. Screen resolution of 1920x1080 pixels or higher is recommended for best user experience.

## Internet Connection

The bandwidth of Customer's internet connection determines the performance of the Cloud Service.

# Ordering

To order a subscription plan and connected devices, Customer must request a quote from its Siemens sales representative.

## Product Documentation

### 1) Product Documentation under a Standard Subscription Plan

| General Contractual Documents                                     | Links                                                                                                                                                      |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Building X - Environmental and Air Quality Application Data Sheet | <a href="http://www.siemens.com/buildingx/data-sheet/environmental-and-air-quality">www.siemens.com/buildingx/data-sheet/environmental-and-air-quality</a> |
| Supplemental Terms for Buildings                                  | <a href="http://www.siemens.com/buildingx/data-sheet/supplemental-terms">www.siemens.com/buildingx/data-sheet/supplemental-terms</a>                       |
| General Software Terms and Cloud Supplemental Terms               | <a href="https://www.siemens.com/si/cloud/terms">https://www.siemens.com/si/cloud/terms</a>                                                                |
| Base Terms International                                          | <a href="https://www.siemens.com/si/cloud/terms">https://www.siemens.com/si/cloud/terms</a>                                                                |
| Siemens Acceptable Use Policy                                     | <a href="https://www.siemens.com/si/cloud/terms">https://www.siemens.com/si/cloud/terms</a>                                                                |
| Minimum Terms                                                     | <a href="http://www.siemens.com/buildingx/data-sheet/minimum-terms">www.siemens.com/buildingx/data-sheet/minimum-terms</a>                                 |
| Data Privacy Terms                                                | <a href="https://www.siemens.com/dpt/si">https://www.siemens.com/dpt/si</a>                                                                                |
| Data Privacy Terms Annexes Building X                             | <a href="https://www.siemens.com/dpt/si">https://www.siemens.com/dpt/si</a>                                                                                |
| EU Data Act                                                       | <a href="https://www.siemens.com/buildingx/terms">https://www.siemens.com/buildingx/terms</a>                                                              |

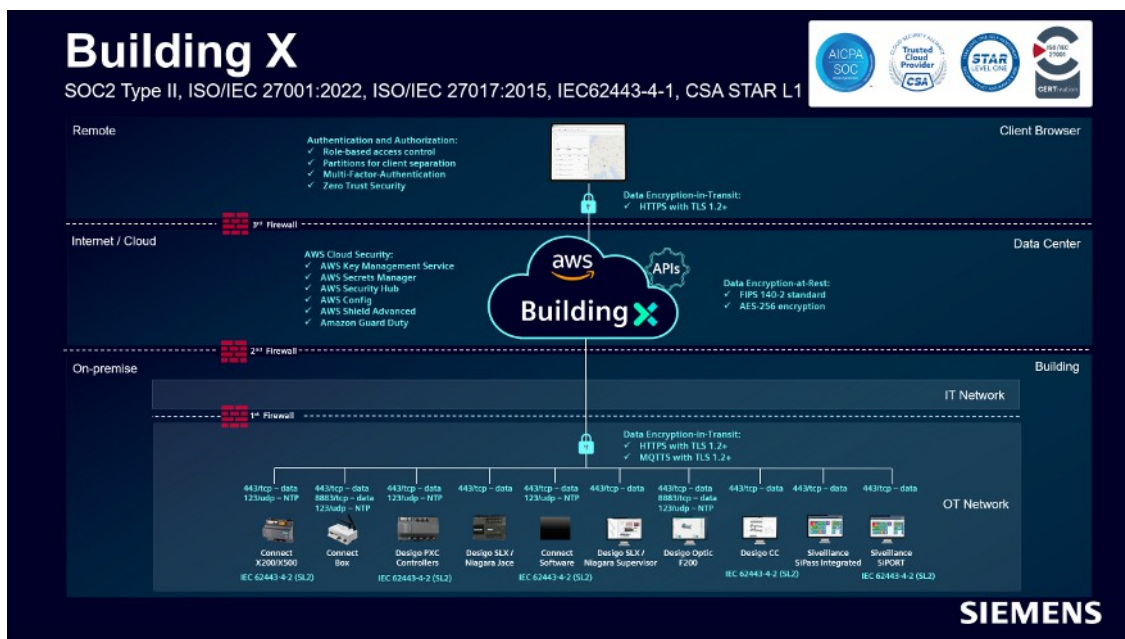
### 2) Product Documentation under a Custom Subscription Plan

The contractual documents and the Product Documentation are set out in Siemens' offer to the Customer.

### 3) Technical Documents

| Technical Documentation  | Link                                                                             |
|--------------------------|----------------------------------------------------------------------------------|
| Building X - Online help | <a href="http://www.siemens.com/buildingx/sid">www.siemens.com/buildingx/sid</a> |

## Topology



The topology shows the superset of possibilities for connecting data to Building X. The options available for this Digital Service can be found in the list of supported connected devices and third-party software connectivity.

Data communication between the Connected Devices on-premises and the Cloud Service requires internet connectivity (to be provided by the Customer).

# Specific Terms

## High-Risk Use

Customer acknowledges and agrees that:

- a) the Offerings are not designed to be used for the operation of or within a High-Risk System if the functioning of the High-Risk System is dependent on the proper functioning of the Offerings; and
- b) the outcome from any processing of data through the use of the Offerings is beyond Siemens' control.

## Service Level Agreement

Siemens shall use commercially reasonable efforts to make the Cloud Services available for a yearly uptime percentage of ninety-eight percent (98%).

Except for:

- a) Planned downtime, agreed downtime, routine and emergency maintenance,
- b) Cyberattacks,
- c) the public, third party and/or customer's internet and communications networks,
- d) data, software, hardware, telecommunications, infrastructure, power, build-packs or net-working equipment not provided by Siemens,
- e) Customers and Users negligence or failure in using the Cloud Service and/or in not following the instructions of published documentation,
- f) system configurations and platforms not supported by Siemens,
- g) system administrations, action, commands and file transfers of Customer or User,
- h) modifications or alterations not made by Siemens,
- i) unauthorized access via Customer's credentials and/or
- j) any other failure outside of Siemens reasonable control.

## Customer Support

Siemens offers helpdesk support. Customer may contact its local Siemens representative for support requests. Customers can also submit a support request online: <https://www.siemens.com/support-request>.