SIEMENS

Data Sheet

Building Automation APIs

Building X



Openness allows customer access to smart building and equipment data through application programming interfaces (APIs and connectors), enabling application development and data integration. Building Automation APIs provide developers with access to building, equipment, device and energy data. These APIs are fine-tuned for self-service integration, allowing developers to seamlessly automate processes and extend their applications using Building X resources, or conversely, enrich Building X with data from their services.

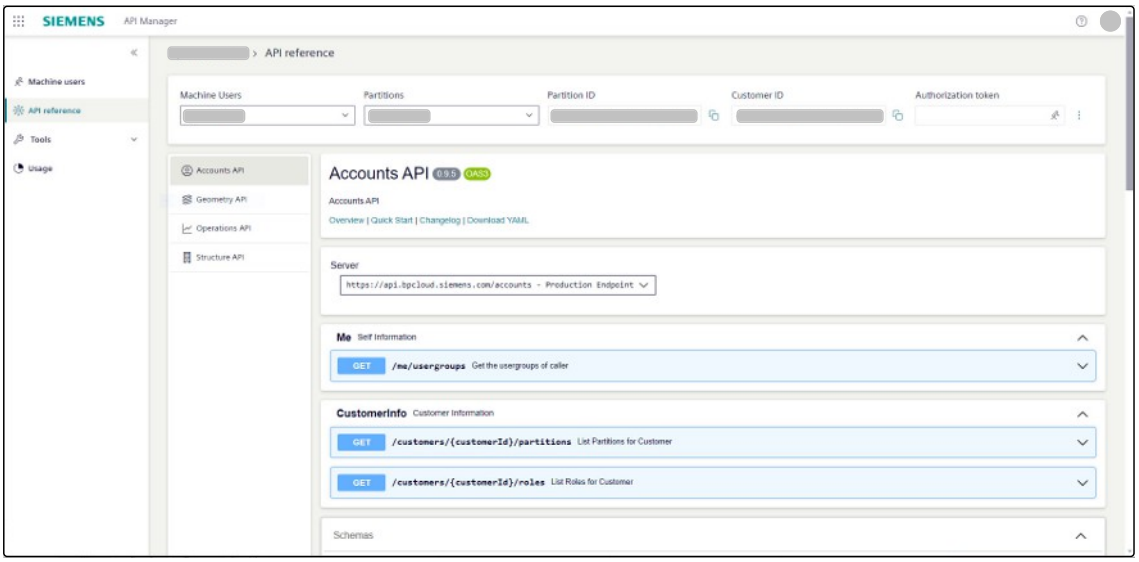
- Accounts API
- Structure API
- Point Value Ingest API
- Geometry API
- Streaming API
- Developer portal
- API Manager application
- Mendix connector
- Microsoft Power BI operations dataset template

buildingx.siemens.com

Functions

Accounts API

- Read access to company, user groups and partitions for the current machine user.



Structure API

- Read access to locations, devices, and data points per data point group.
- Read access to campus and building topologies, like buildings, floors, rooms.
- Explore linked equipment to the building topology.
- Create, update and delete equipment.

Point Value Ingest API

- Ingest from 1 to 100 values into the data points associated with virtual devices for integration into Building.

Geometry API

The Geometry API allows you to interact with the 2D geometry of building floor plans. This API is structured around the Floor plan and Geometry resources, providing a comprehensive framework for working with spatial data. A floor plan serves as the container for geometry, which is represented in the GeoJSON format, providing clarity and ease of use in managing building layouts and spatial information.

- Get floor plans
- Get floor plan geometry
- Get floor plan geometry palettes
- Get floor plan geometry symbols

Streaming API

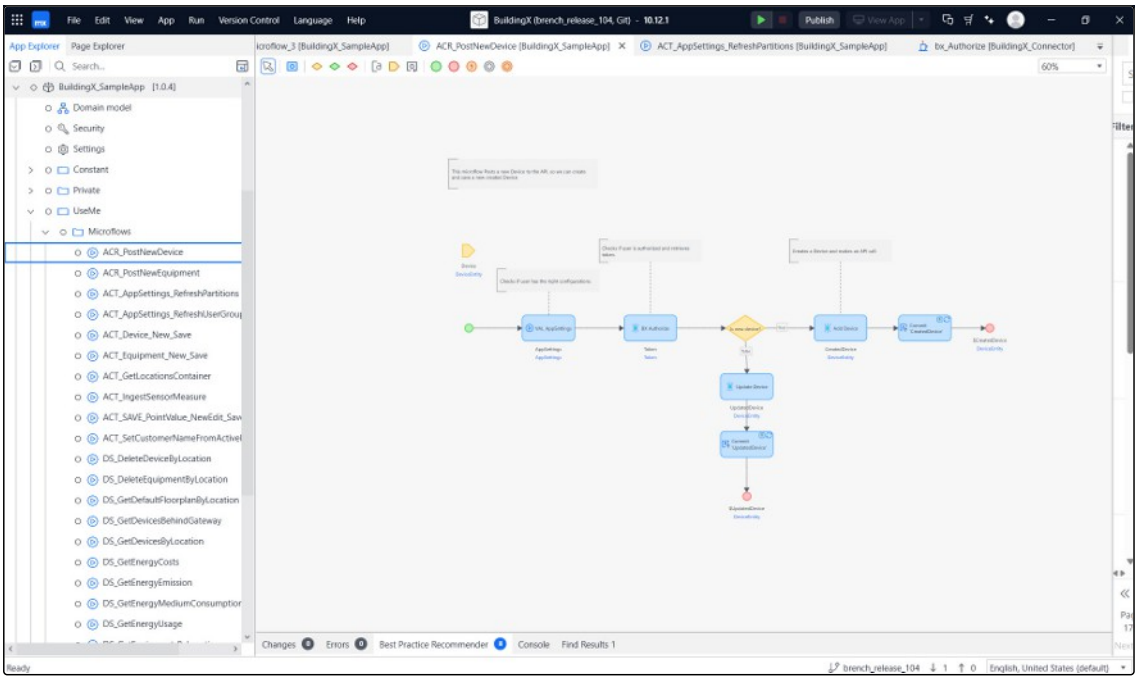
- Read access to configured streams for data points.
- Create and delete streams per partition.
- Read and manage stream entities (data points) linked to a stream.

Power BI template with Operations and Energy Dataset

The Operations dataset serves as the foundation for the design of the Energy and Building Performance Dashboard within Power BI, leveraging the capabilities of both Power BI and the Building X platform. Its primary goal is to provide a holistic view of multiple facets associated with building portfolios, including information related to locations, equipment, devices, points, and point values. A detailed description of the tables and columns provided can be found in the Developer Portal. Link: developer.siemens.com/building-x-openness/resources/power-bi-templates/power-bi-operations-dataset-overview.html

Mendix Connector

The Building X Connector for Mendix streamlines the creation of new business value using LowCode powered by Mendix and the Building X platform. This Siemens supported connector at no cost , provides a domain model encompassing all core entities exposed by Building X. It also offers actions for retrieving, creating, updating, and deleting these entities, which become available in the Mendix toolbox upon installing the Connector. The connector structure enables Mendix developers to build innovative applications. Link: marketplace.mendix.com/link/component/240566



The following Building X APIs are supported and can be used with the subscription listed below:

- Building Structure API (Read and Write)
- Building Geometry API (Read)
- Point Value Ingest API (Write)

The connector also supports the following APIs, but to use them effectively, separate add-on licenses from the related product line are required to use these APIs:

- Building Energy API (Read) - Requires Energy Manager API add-on subscription
- Security Identities and Privileges API (Read) Activities API(Read) - Requires Security APIs add-on subscription
- Building Operations API (Read and Write) - Requires Building Operations API add-on subscription

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, 3rd 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.

Developer Portal

The Xcelerator Developer Portal provides an overview over all available APIs, tutorials and the related OpenAPI v3 specification. Customers with the required subscriptions can use the APIs. Link: https://developer.siemens.com/

API Manager Application

The API Manager app provides (i) the ability to manage machine user credentials for enabling access to the user licensed APIs, (ii) an overview about API usage and (iii) the ability to try out the API.

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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

	Building Point Value Ingest APIs
Functions	
Write Point Value Ingest API	✓
Terms	
Subscription metric	per 1,000,000 API calls per year
Subscription term	Annually, auto-renewal
Billing term	Annually, payment in advance
Upscale	Effective immediately, pro-rated billing
Downscale/Cancellation	Effective with end of subscription term
Connected Devices	To be purchased separately
Permitted Users	Unlimited, Extended Use

	Building Structural and Geometrical Information APIs
Functions	
Read Geometry API	✓
Read and write Structure API	✓
Terms	
Subscription metric	per 500,000 API calls per year each
Subscription term	Annually, auto-renewal
Billing term	Annually, payment in advance
Upscale	Effective immediately, pro-rated billing
Downscale/Cancellation	Effective with end of subscription term
Connected Devices	To be purchased separately
Permitted Users	Unlimited, Extended Use

	Streaming APIs
Functions	
Read and write Streaming API	✓
Terms	
Subscription metric	per 1,000,000 API calls per year
Subscription term	Annually, auto-renewal
Billing term	Annually, payment in advance
Upscale	Effective immediately, pro-rated billing
Downscale/Cancellation	Effective with end of subscription term
Connected Devices	To be purchased separately
Permitted Users	Unlimited, Extended Use

The 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.

An API call is a dedicated access to a resource endpoint of the API resulting in a server request.

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.

Power BI Operations and Energy Dataset template

The Operations API subscription and/or Energy API subscription come with the Power BI Operations and Energy Dataset template. You can download the Power BI template from API Manager after you have activated your API subscription. You need an active Operations API or Energy API subscription to fill the Operations related tables. You also need an active Energy API subscription to fill the Energy related tables. Further information, including limitations of this offering, can be found on the Developer Portal.

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



This table only applies for packages with Structure API.

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
SIEMENS: Connect X200	The Connect X200 edge gateway is powered with DC 24V or AC 24V and may require an enclosure. 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.
SIEMENS: Connect X500	The Connect X500 edge gateway is powered with DC 24V and may require an enclosure. 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.
SIEMENS: Connect Software	Connect Software edge gateway is running on Windows 10 or Windows 11 Hyper-V and requires computer hardware. Connect Software includes multiple software applications collectively referenced herein as Software to supply building equipment data to this Cloud Service.
SIEMENS: Desigo CC	Desigo CC software product is running on Windows computer hardware. The supported software version is Desigo CC V7 or higher. Desigo CC includes multiple software extensions collectively referenced herein as Software to supply building data to this Cloud Service.
SIEMENS: Desigo PXC 4/5/7	Desigo 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.

	List of Supported Connected Devices
SIEMENS: Desigo Optic F200	Desigo 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.
SIEMENS: Desigo SLX (Niagara Framework)	Desigo SLX / Niagara Framework® running as Supervisor on a PC or JACE® is supported for this Cloud Service. The supported Niagara versions are 4.14 and 4.15. The Building X Connector for Niagara™ must be deployed on the Niagara Framework® to supply building data to this Cloud Service. The Tridium EULA is applicable, see https://www.tridium.com/us/en/eula. Niagara FIPS mode and web proxy configuration are not supported.

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.

Microsoft Power BI

To use the Power BI Operations Dataset template, you need either Power BI Desktop for dashboard creation and customization or Power BI Services for online collaboration and analysis. These tools are essential for working with the provided template. Contact your Microsoft agent for the necessary licenses.

Building X Connector for Mendix

To use the Building X Connector for Mendix Customer must register for a Mendix account and download Mendix Studio Pro app. Additionally, an existing Mendix app is required.

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 - Building Automation APIs Data Sheet	www.siemens.com/buildingx/data-sheet/building-automation-apis
Supplemental Terms for Buildings	www.siemens.com/buildingx/data-sheet/supplemental-terms
General Software Terms and Cloud Supplemental Terms	https://www.siemens.com/si/cloud/terms
Base Terms International	https://www.siemens.com/si/cloud/terms
Siemens Acceptable Use Policy	https://www.siemens.com/si/cloud/terms
Minimum Terms	www.siemens.com/buildingx/data-sheet/minimum-terms
Data Privacy Terms	https://www.siemens.com/dpt/si
Data Privacy Terms Annexes Building X	https://www.siemens.com/dpt/si
EU Data Act	https://www.siemens.com/buildingx/terms

2) Product Documentation under a Custom Subscription Plan

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

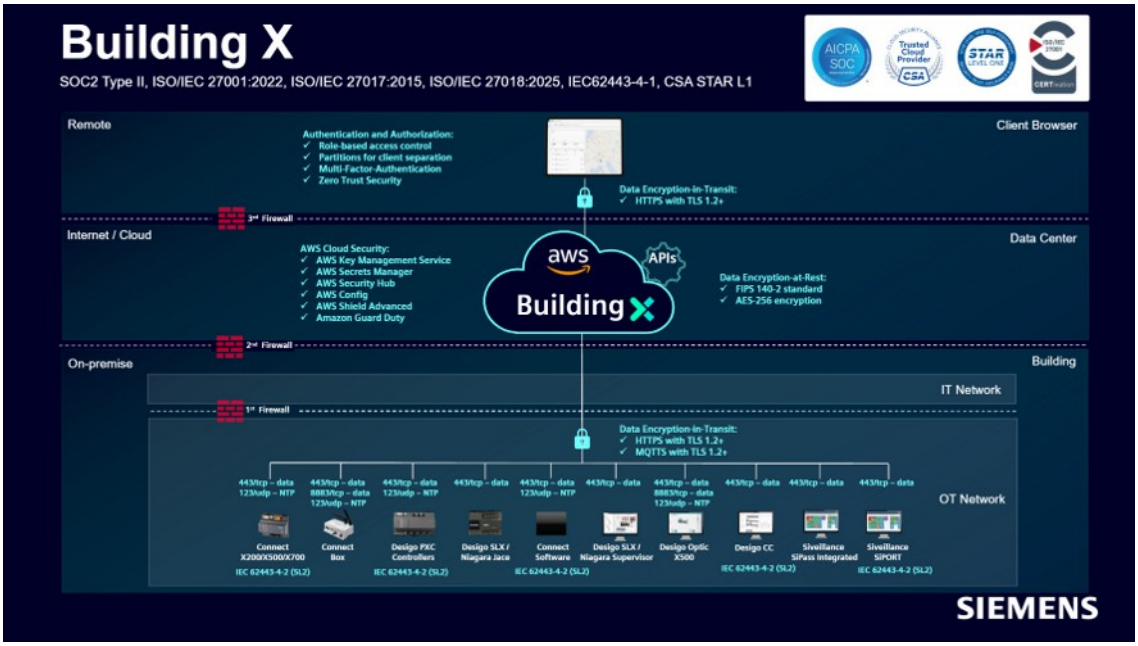
3) Technical Documents

Technical Documentation	Link
Building X - Online help	www.siemens.com/buildingx/sid

4) Compliance

Cybersecurity	Link
Cyber Security Alliance - STAR Level 1	https://cloudsecurityalliance.org/star/registry/siemens-ag/services/building-x
IEC 62443-4-1	https://www.siemens.com/en-us/system-certificates/si-b/
ISO/IEC 27001:2022	https://www.siemens.com/en-us/system-certificates/si-b/
ISO/IEC 27017:2015	https://www.siemens.com/en-us/system-certificates/si-b/
ISO/IEC 27018:2025	https://www.siemens.com/en-us/system-certificates/si-b/
SOC 2 Type II Report	Report available on request
SOC 3 Report	https://www.siemens.com/en-us/system-certificates/si-b/

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 networking 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.

Issued by
Siemens Switzerland Ltd
Smart Infrastructure
Global Headquarters
Theilerstrasse 1a
CH-6300 Zug
+41 58 724 2424
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