# SIEMENS

# Thread border router

## OCT110.BR

**Thread border router**

- Enables IoT connectivity & communication via Thread and Ethernet
- Extends the wireless range by bridging wireless Thread to wired Ethernet communication
- Compatible with all Siemens KNX IoT / Thread devices
- Reliable network operation with mesh network capabilities
- Wall or ceiling mount
- Mains powered by external power supply adapter (AC 100...240 V)
- Clear status indication with integrated LEDs

CE UKCA FC

## Use

The Thread border router OCT110.BR provides seamless integration of Siemens IoT devices to the cloud, edge controllers and traditional automation systems.

Typical applications:

- Office buildings
- Educational buildings
- Public buildings

OCT110.BR exchanges data with controllers, room devices, and software tools via wireless (KNX IoT over Thread) and wired (KNX IoT over Ethernet) communication.
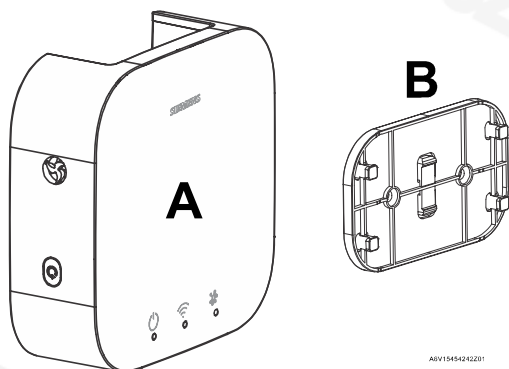
## Functions

- Extend wireless range by bridging wireless Thread to wired Ethernet communication
- 2 push buttons: Join Thread network, WLAN on/off, factory reset
- LED status indication:
    - Power status, WLAN connection, Thread connection
    - Device restart
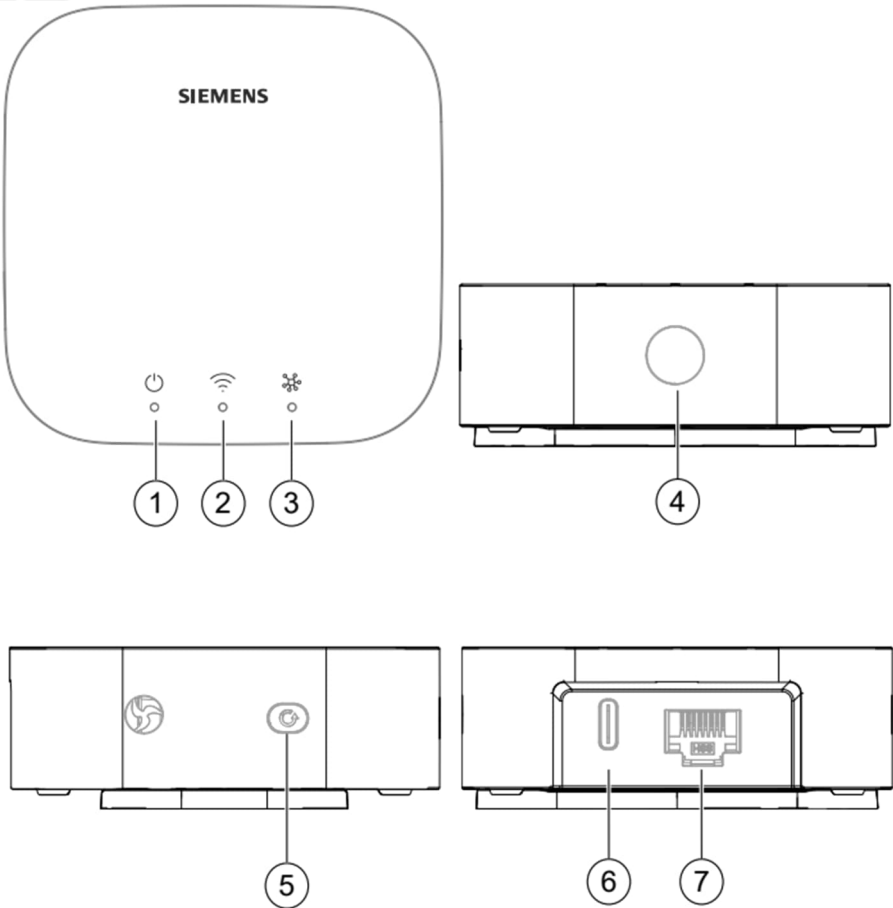    - Factory reset
    - Operation state

## Mechanical design

Thread border router is designed for wall and ceiling mount.

The device has 2 parts:

- Plastic housing with electronic components (A)
- Mounting bracket (B)



A6V15454242Z01

| No. | Product description | No. | Product description |
|---|---|---|---|
| ① | ⏻ LED A: Device | ⑤ | ↻ Button B for gateway to join Thread network |
| ② | 📶 LED B: WLAN | ⑥ | USB-C connector for power supply adapter |
| ③ | ❄ LED C: Thread | ⑦ | Ethernet connector |
| ④ | ○ Button A for factory reset and WLAN on/off | | |

## Type summary

| Product number | SSN NO. | Operating voltage | Description |
|---|---|---|---|
| OCT110.BR | S55812-Y103 | DC 5 V | Thread border router |

**Delivery**

When ordering, specify name and product number, e.g.: Thread border router OCT110.BR.

**Inbox items**

| Name | Quantity |
|------|----------|
| OCT110.BR | 1 |
| International power adapter | 1 |
| Mounting bracket | 1 |
| Mounting instructions | 1 |
| Set of screws and dowels | 1 |

**Equipment combinations**

| Type of units | Product number | SSN NO. |
|---------------|----------------|---------|
| Edge device | CXE200 | S55842-Z135-A100 |
| Thread mesh extender | OCT100.R | S55812-Y101 |
| Wireless room sensors | QAA2890/WI<br>QFA2890/WI<br>QPA2892/WI | S55720-S550<br>S55720-S551<br>S55720-S552 |
| Wireless room unit | QMA230KT | S55720-S626 |
| Wireless radiator actuator | SSA911.02TH | S55181-A102 |

All documents can be downloaded at http://siemens.com/bt/download.

**Product documentation**

| Title | Document ID |
|-------|-------------|
| Mounting instruction | A6V15299327 |
| CE declarations | A5W02628233A |
| UKCA | A5W02628234A |
| Environmental product declaration | A5W01923527A |

Related documents such as the environmental declarations, declarations of conformity, etc., can be downloaded from the following Internet address:
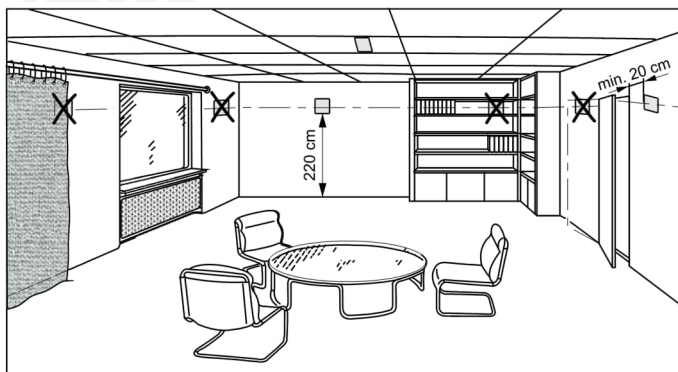
www.siemens.com/bt/download

**Safety**

| | ⚠ **CAUTION** |
|---|---|
| ⚠ | **National safety regulations**<br>Failure to comply with national safety regulations may result in personal injury and property damage.<br>● Observe national provisions and comply with the appropriate safety regulations. |

| | *NOTICE* |
|---|---|
| ! | **Radio frequency energy**<br>Interference to radio communications<br>● Install and use equipment in accordance with installation guide.<br>● Read all regulatory compliance information. |

**Mounting**

Location



- The device is designed for wall and ceiling mount.
- Do not install the device on a horizontal surface.
- Install indoors (device is not suitable for outdoor use); do not install in recesses, behind curtains, above or close to heat sources or shelves, and not on walls where a chimney is located. Do not expose the unit to spot lights or direct sunlight.
- Install the gateway about 2.2 m above the floor and at least 20 cm from the next wall or the door.

Mounting instructions

Mounting instructions are enclosed in the package.

**LED colors and patterns**

In the following table:
- Short press (<2 s)
- Medium press (5...20 s)
- Long press (≥20 s)

## LED A ⏻

| LED color | Device status | LED pattern | Push button operation |
|---|---|---|---|
| Off | Unpowered device or device is switched off. | Off | N/A |
| Green | Start up (e.g. device is powered on) | Fast flashing (100 ms on / 100 ms off) | N/A |
| | Normal (connected) | On | |
| | Firmware downloading | | |
| | Firmware installation | Fast flashing (100 ms on / 100 ms off) | |
| Orange | Factory reset | Fast flashing (100 ms on / 100 ms off) | Long press button A ⏻ to start factory reset |
| Red | Hardware error | Fast flashing (100 ms on / 100 ms off) | N/A |
| Green | Confirm key press | Flashing ($^1/_4$ s on / $^7/_4$ s off) until button pressing stops | Medium press button A ⏻ |

## LED B 📶

| LED color | Device status | LED pattern | Push button operation |
|---|---|---|---|
| Off | LAN/WLAN is not connected or switched off. | Off | N/A |
| Green | WLAN access is switched on. | On for 3 s | Medium press button A ⏻ |
| | Device joins WLAN network. | Fast flashing (100 ms on / 100 ms off) | N/A |
| Orange | WLAN access is switched off. | On for 3 s | Medium press button A ⏻ |

## LED C ❇

| LED color | Device status | LED pattern | Push button operation |
|---|---|---|---|
| Orange | Thread initial status (Device is not defined or joined a network.) | On | N/A |
| Green | Commissioning mode | Fast flashing (100 ms on / 100 ms off) | N/A |
| | In operation | On | |
| | Joining | Flashing ($^1/_4$ s on / $^7/_4$ s off) | Short press button B ❇ |
| Red | Connection lost | Flashing ($^1/_4$ s on / $^7/_4$ s off) | N/A |

## Maintenance

The device is designed for maintenance-free operation.

## Disposal

|  | This symbol or any other national label indicate that the product, its packaging, and, where applicable, any batteries may not be disposed of as domestic waste. Delete all personal data and dispose of the item(s) at separate collection and recycling facilities in accordance with local and national legislation.<br>For additional details, refer to Siemens information on disposal. |
|---|---|

## Regulatory compliance information

### FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation

**FCC Caution:** Changes or modifications not expressly approved by Siemens Switzerland Ltd. could void user authority to operate the equipment. United States representative https://new.siemens.com/us/en/products/buildingtechnologies/home.html

### IC Statement

This device complies with Industry Canada license-exempt RSS standard(s).

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le present appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.

L'exploitation est autorisee aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioelectrique subi, meme si le brouillage est susceptible d'en compromettre le fonctionnement.

### Radiofrequency radiation exposure statement

This equipment complies with FCC and IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

### Déclaration d'exposition aux rayonnements de radiofréquence

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

Ce transmetteur ne doit pas être placé au même endroit ou utilisé simultanément avec un autre transmetteur ou antenne.

### United Kingdom conformity assessed

Contact for regulatory topics: (GB) Siemens plc, Sir William Siemens House, Princess Road, Manchester, M20 2UR

### Radio equipment directive

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**Simplified EU Declaration of Conformity**

Hereby, Siemens Switzerland Ltd declares that the radio equipment type OCT110.BR is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: https://siemens.com/bt/download.

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## Warranty

Technical data on specific applications are valid only together with Siemens products listed under "Equipment combinations". Siemens rejects any and all warranties in the event that third-party products are used.

## Technical data

Power adapter

| Input characteristics | |
|---|---|
| Input voltage | AC 100...240 V |
| Input frequency | 50…60 Hz |
| Input current | Max. 0.8 A at AC 100/240 V input & load 1 A |
| Standby power consumption | ≤ 0.1 W at AC 240 V input & no load |

| Output characteristics | |
|---|---|
| Output voltage | DC 5 V |
| Representative current | 1 A |
| Turn on delay time | Max. 3 seconds at AC 100 V & max. load |

| Cable length | |
|---|---|
| Cable length | 1.5 m |

OCT110.BR

| Power supply | |
|---|---|
| Operating voltage | DC 5 V |
| Power consumption | Max. 5 W |

| Radio communication | |
|---|---|
| Frequency range | 2.4…2.485 GHz |
| Maximum transmission power | 12 dBm (Thread)<br>20 dBm (WLAN) |
| Thread range | ≤ 100 m, depending on application and building |
| WLAN range | ≤ 100 m, depending on application, mobile device, and building |
| Thread protocol standard | IEEE 802.15.4 |
| WLAN protocol standard | IEEE 802.11.b/g/n |

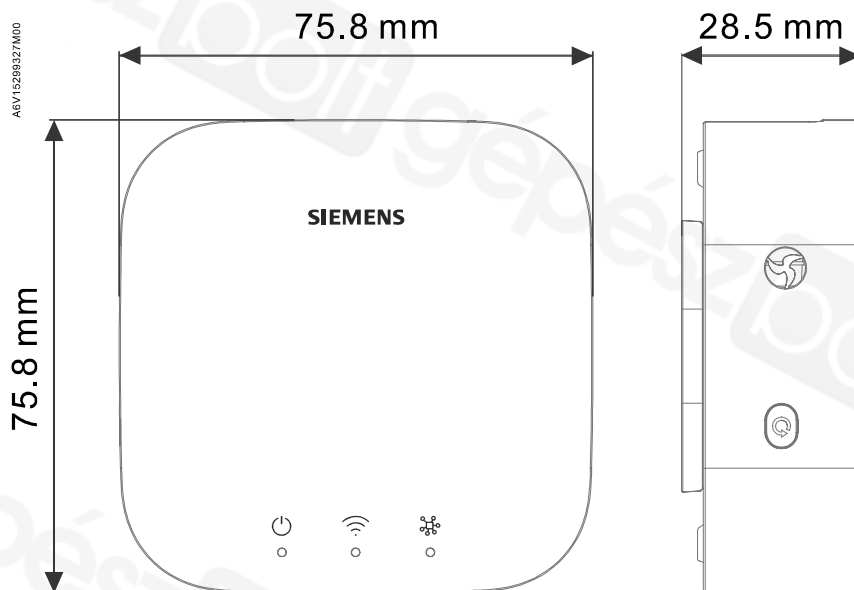| Interface | |
|---|---|
| Ethernet<br>Type<br>Cable<br>Interface type<br>Bit rates | <br>RJ45<br>CAT 5 or CAT 5e, non-shielding<br>100BASE-TX, IEEE 802.3 compatible<br>10/100 Mbps, auto-sensing |

| Ambient conditions and protection classification | |
|---|---|
| Protection degree of housing | IP30 according to EN60529 |
| Protection class<br>Power adapter<br>OCT110.BR | <br>II<br>III |
| **Environmental conditions**<br>  Storage<br>   Climatic conditions<br>    Temperature<br>    Humidity<br>  Transport<br>   Climatic conditions<br>    Temperature<br>    Humidity<br>  Operation<br>   Climatic conditions<br>    Temperature (housing with electronics)<br>    Humidity | <br><br><br>-25...+70 °C<br>5…95 % r. h. (non-condensing)<br><br><br>-25...+70 °C<br>5…95 % r. h. (non-condensing)<br><br><br>0...50 °C<br>5…95 % r. h. (non-condensing) |

| Standards, directives and approvals | |
|---|---|
| Electromagnetic compatibility (Applications) | For use in residential, commerce, light-industrial and industrial environments |
| EU conformity (CE) | A5W02628233A *) |
| UKCA conformity | A5W02628234A *) |
| RoHS | Directive 2011/65/EU restriction of the use of certain hazardous substances in electronic equipment |
| Environmental compatibility | The product environmental declaration (A5W01923527A *) contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal). |

| General | |
|---|---|
| Materials and colors | ABS, white (RAL9003) |
| Packaging | Corrugated cardboard |
| Weight including package | Approx. 293 g |

*) The documents can be downloaded from http://siemens.com/bt/download.

## Dimensions

A6V15293327M00

75.8 mm

75.8 mm

28.5 mm