

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

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

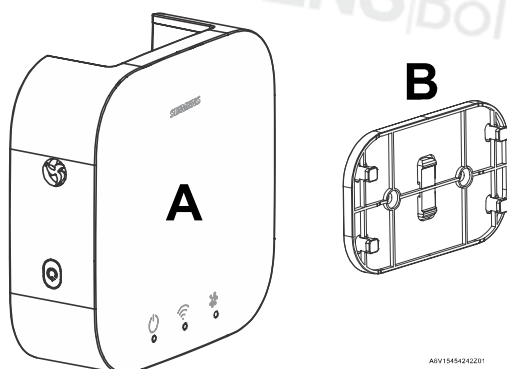
- Extend wireless range by bridging wireless Thread to wired Ethernet communication
- 2 push buttons: Join Thread network, WLAN on/off, factory reset
- LED status indication:
 - Power status, WLAN connection, Thread connection
 - Device restart
 - Factory reset
 - Operation state

Mechanical design

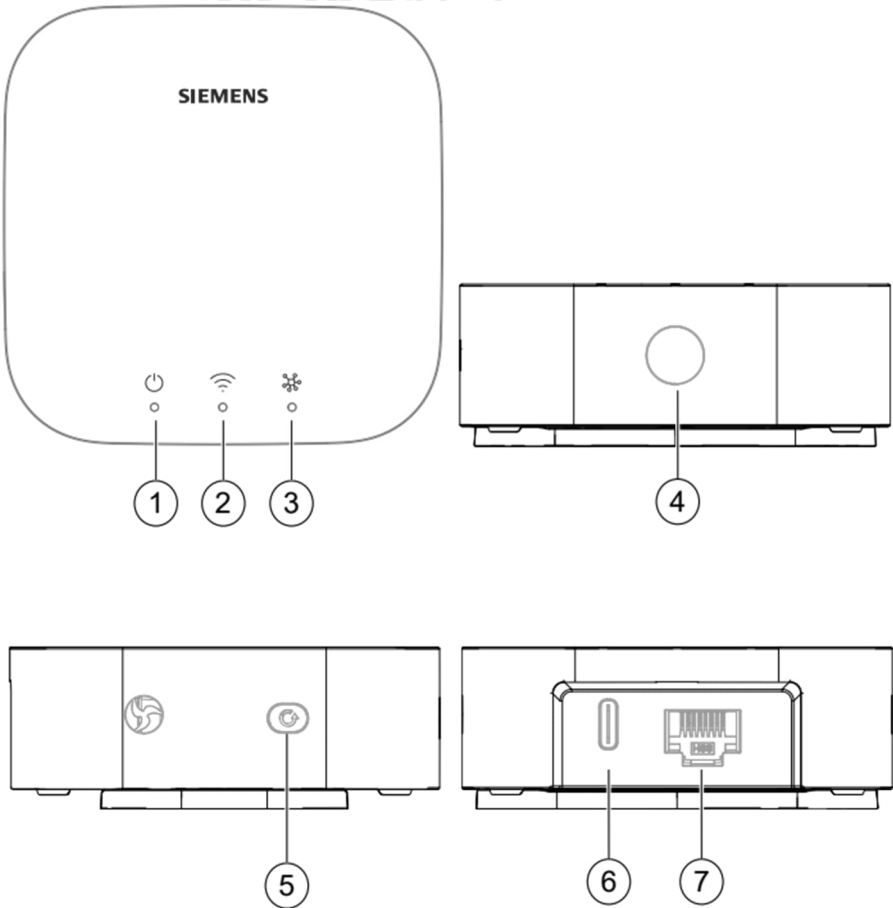
Thread border router is designed for wall and ceiling mount.

The device has 2 parts:

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



A6V1545424201



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 QFA2890/WI QPA2892/WI	S55720-S550 S55720-S551 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

Notes

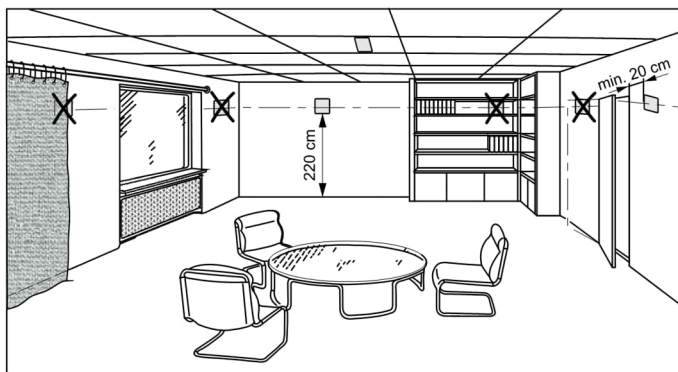
Safety

⚠ CAUTION	
	National safety regulations Failure to comply with national safety regulations may result in personal injury and property damage. Observe national provisions and comply with the appropriate safety regulations.

NOTICE	
	Radio frequency energy Interference to radio communications - Install and use equipment in accordance with installation guide. - 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 ($\frac{1}{4}$ s on / $\frac{7}{4}$ 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 ($\frac{1}{4}$ s on / $\frac{7}{4}$ s off)	Short press button B 
Red	Connection lost	Flashing ($\frac{1}{4}$ s on / $\frac{7}{4}$ 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.
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 autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même 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

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>.

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

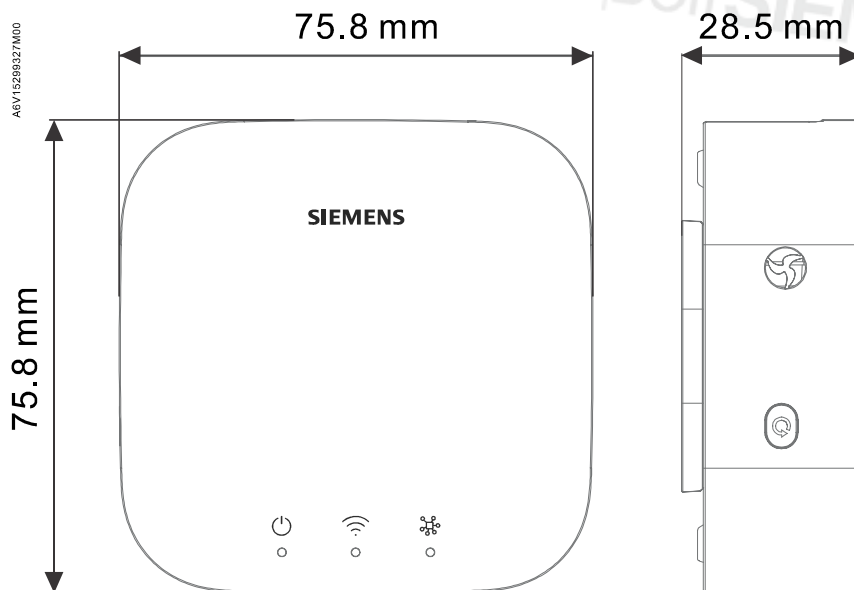
Ambient conditions and protection classification	
Protection degree of housing	IP30 according to EN60529
Protection class Power adapter OCT110.BR	II III
Environmental conditions Storage Climatic conditions Temperature Humidity Transport Climatic conditions Temperature Humidity Operation Climatic conditions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



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