Cube Lite60

The Cube Lite60 is an outdoor wireless router with a built-in directional antenna that works in the 60 GHz spectrum.
This device needs to be upgraded to RouterOS v6.46 or the latest version to ensure compliance with local
authority regulations.

> ⓘ It is the customer's responsibility to follow local country regulations, including operation within legal frequency channels, output power, cabling requirements, and Dynamic Frequency Selection (DFS) requirements. All Mikrotik radio devices must be professionally installed.
> *Note. The information contained here is subject to change. Please visit the product page on* www.mikrotik.com *for the most up to date version of this document.*

Safety Warnings

Before you work on any equipment, be aware of the hazards involved with electrical circuitry, and be familiar with standard practices for preventing accidents.
Ultimate disposal of this product should be handled according to all national laws and regulations.
All installation methods for mounting an access point on any wall surface is subject to the acceptance of local jurisdiction.
The Installation of the equipment must comply with local and national electrical codes.
This product is intended to be mounted outdoors on a pole. Please read the mounting instructions carefully before beginning installation. Failure to use the correct hardware and configuration or to follow the correct procedures could result in a hazardous situation for people and damage to the system.
Use only the power supply and accessories approved by the manufacturer, and which can be found in the original packaging of this product.
Read the installation instructions before connecting the system to the power source.
We cannot guarantee that no accidents or damage will occur due to the improper use of the device. Please use this product with care and operate at your own risk!
In the case of device failure, please disconnect it from power. The fastest way to do so is by unplugging the power plug from the power outlet.
It is the customer's responsibility to follow local country regulations, including operation within legal frequency channels, output power, cabling requirements, and Dynamic Frequency Selection (DFS) requirements. All Mikrotik radio devices must be professionally installed.
This is a class A device. In a domestic environment, this product might cause radio interference in which case the user might be required to take adequate measures.

Quickstart

- Open the Ethernet door to connect an Ethernet cable to the Ethernet port, connect the other end of the Ethernet cable to the included PoE injector;
- Plug the PoE injector into your network switch or computer;
- Plug the included power supply into the PoE injector to start up the device;
- Set LAN computer IP configuration to automatic (DHCP);
- The default IP address of the unit is 192.168.88.1, open this address in your web browser to start the configuration;
- User name: a*dmin* and there is no password by default you will be logged in automatically to the Quick Set screen;
- We recommend clicking the "Check for updates" button on the right side and updating your RouterOS software to the latest version to ensure the best performance and stability;
- To personalize your wireless network, SSID can be changed in the fields "Network Name";
- Choose your country on the left side of the screen in the field "Country", to apply country regulation settings;
- Set up your wireless network password in the field "WiFi Password" the password must be at least eight symbols;
- Set up your router password in the bottom field "Password" to the right and repeat it in the field "Confirm Password", it will be used to login next time;
- Click on the "Apply Configuration" to save changes.

If device RX blocking condition has happened device will restore its signal after a few seconds.

MikroTik mobile app

Use the MikroTik smartphone app to configure your router in the field, or to apply the most basic initial settings for your MikroTik home access point.

1. Scan QR code and choose your preferred OS.
2. Install and open application.
3. By default, the IP address and user name will be already entered.
4. Click Connect to establish a connection to your device through a wireless network.
5. Choose Quick setup and application will guide you through all basic configuration settings in a couple of easy steps.
6. An advanced menu is available to fully configure all necessary settings.

Configuration

Once logged in, we recommend clicking the "Check for updates" button in the QuickSet menu, as updating your RouterOS software to the latest version ensures the best performance and stability. For wireless models, please make sure you have selected the country where the device will be used, to conform with local regulations.

RouterOS includes many configuration options in addition to what is described in this document. We suggest starting here to get yourself accustomed to the possibilities: https://mt.lv/help. In case IP connection is not available, the Winbox tool (https://mt.lv/winbox) can be used to connect to the MAC address of the device from the LAN side (all access is blocked from the Internet port by default).

For recovery purposes, it is possible to boot the device from the network (see Reset button).

If the device loses connection, wait for few seconds and then the device will recover connection automatically.
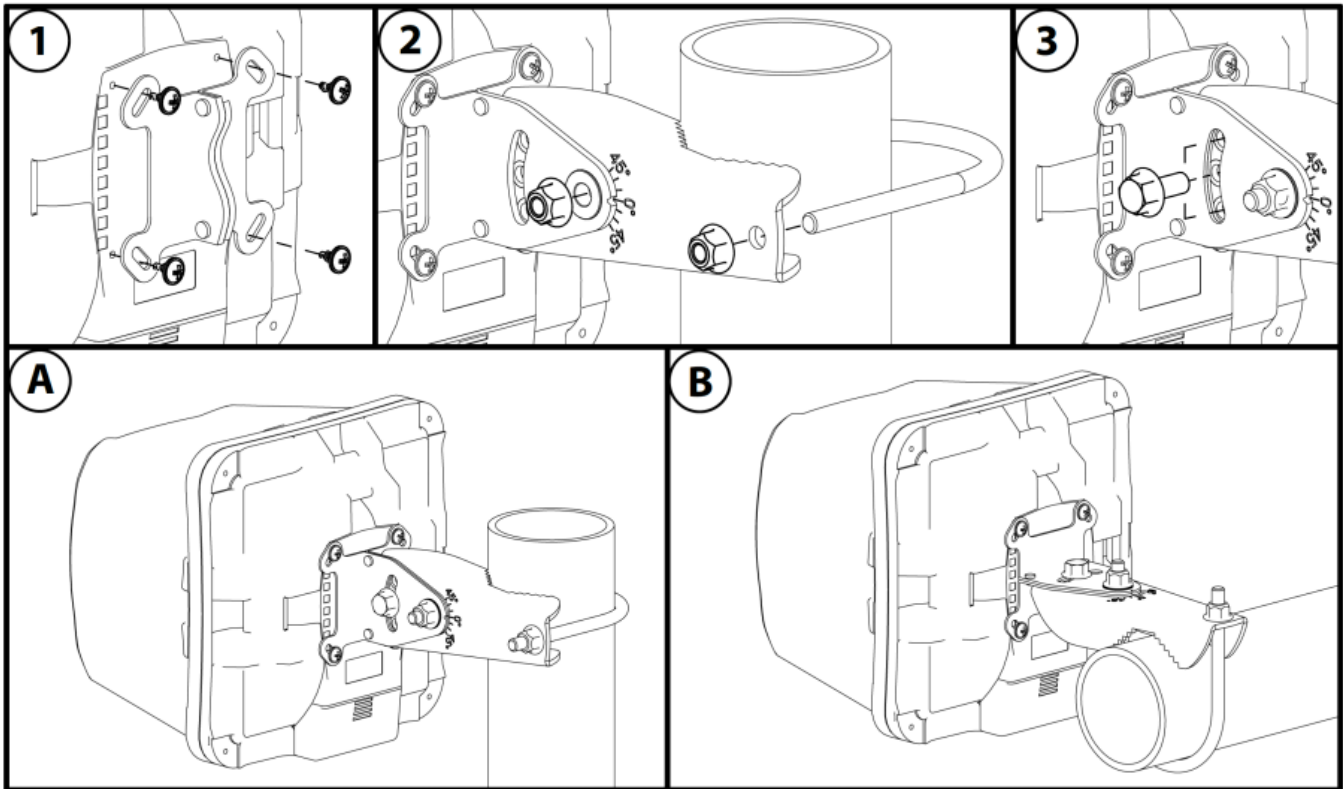
Assembly and mounting

The device can be mounted on the vertical or horizontal pole as shown in picture A and B. Please note that a device needs to be mounted with bottom latch facing down. The maximum pole diameter is 51 mm.

> ⓘ Mounting and configuration of this device should be done by a certified person.
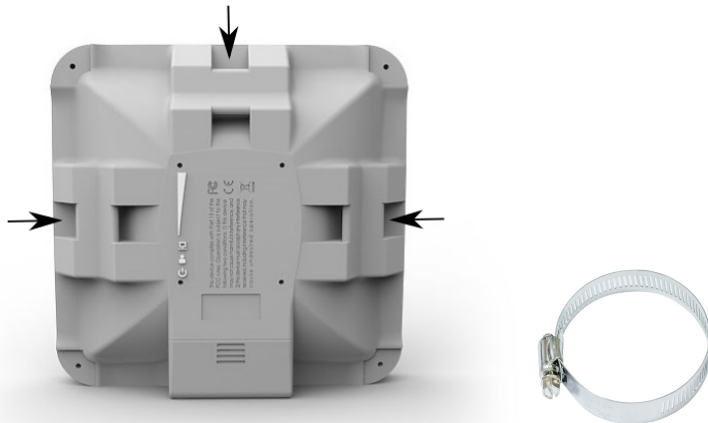
Choose your desired position, the device will require precise adjustment for best performance.

1. Attach provided mount to the back of the device with provided screws using a ph0 screwdriver.
2. Mount on pole with U bolt bracket using 8 mm ratchet.
3. Place a bolt in one of the three positions, they will allow for fine adjustment, when placed in the middle you can adjust in 23-degree range if an adjustment needs to go further replace the screw in a different position.

The IP rating scale for this device is IP54. When mounting outdoors, please ensure that any cable openings are directed downwards. We recommend using the POE injector and proper grounding with Cat6 shielded cable. When using and installing this device please pay attention to Maximum Permissible Exposure (MPE) safety distance with a minimum of 20 cm between the radiator and your body.

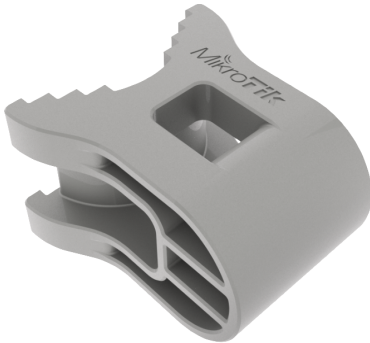Alternatively, the device can be mounted on one of the three mounting slots on the backside of the device.

- You can use a metal ring for example.
- Use a Phillips screwdriver to loosen the metal ring.
- Slide one end of it through the most convenient of the three mounting slots.
- Position the device on the pole where it will be mounted.
- Slide the loose end of the mounting ring back to its closing latch and use the screwdriver to tighten it.

> ⓘ It's recommended to secure Ethernet cable to the pole using zip ties. With the distance from the device approximately 30 cm.

As an additional option, you can use "quickMOUNT-X" – mounting bracket for an easy adjustment that can be obtained separately. Product web page: https://mikrotik.com/product/qm_x

Specially designed enables vertical and horizontal adjustment on the pole.

Grounding

The device includes a grounding connection (marked) which you should connect to the grounding installation of the tower or building where the device will be used. This is to substantially reduce the risk of ESD and lightning damage.

Powering

The Cube Lite60 accepts DC power from Passive PoE injectors (one power supply and PoE injector are included) accepts 12-28 V DC consuming at maximum load 4 W.
Connecting to a PoE Adapter:

1. Connect the Ethernet cable from the device to the PoE+DATA port of the PoE adapter.
2. Connect an Ethernet cable from your local network (LAN) to the PoE adapter.
3. Connect the power cord to the adapter, and then plug the power cord into a power outlet.

Extension Slots and Ports

- 10/100 Ethernet port.
- Integrated w60g interface with built-in antenna.

Reset button

The routerBOOT reset button has the following functions. Press the button and apply the power, then:

- Release the button when green LED starts flashing, to reset RouterOS configuration to defaults.
- Release the button when the LED turns solid green to clear all configuration and defaults.
- Release the button after LED is no longer lit (~20 seconds) to cause the device to look for Netinstall servers (required for reinstalling RouterOS over the network).

Regardless of the above option used, the system will load the backup RouterBOOT loader if the button is pressed before power is applied to the device. Useful for RouterBOOT debugging and recovery.

Accessories

Package includes the following accessories that come with the device:

- EU/US Switching Power Supply 24V DC , 0.38 A, 9 W, Level VI, cable:1.5 m.
- POE Injector with shielded ethernet cable/connector (RBPOE).
- SXT_SQ_Mountv1.
- K-70 Fastening set.

Specifications

For more information about SQ series products, specifications, pictures, downloads, and test results please visit our web pages: https://mikrotik.com /product/cube_lite60

Operating system support

The device supports RouterOS software version 6.46. The specific factory-installed version number is indicated in the RouterOS menu /system resource. Other operating systems have not been tested.

> ⚠ This device meets the Maximum TX power limit per ETSI regulations. The frequency and the maximum transmitted power in EU are listed below: 57-66GHz: 34.92 dBm. An Operational mode in the 60 GHz band: 58.32 GHz, 60.48 GHz, 62.64 GHz, 64.80 GHz. This device is certified for outdoor use in Point to Multipoint applications. In the following countries this device cannot be used in Fixed Point-to-Point applications:

	AT	BE	BG	CH	CY	CZ	DE
	DK	EE	EL	ES	FI	FR	HR
	HU	IE	IS	IT	LI	LT	LU
	LV	MT	NL	NO	PL	PT	RO
	SE	SI	SK	TR	UK(NI)		

Federal Communication Commission Interference Statement

Model	FCCID
RBCube-60ad	TV7CUBE60

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
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.This device and its antenna must not be co-located or operation in conjunction with any other antenna or transmitter.

This device is not to be operated on aircraft except for the conditions listed on FCC CFR §15.255 (b)

IMPORTANT: Exposure to Radio Frequency Radiation.
This equipment complies with the FCC RF 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 any part of your body.

Innovation, Science and Economic Development Canada

Model	IC
RBCube-60ad	7442A-CUBE60

This device complies with Industry Canada licence-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 présent 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.

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe [A] est conforme à la norme NMB-003 du Canada.

CAN ICES-003 (A) / NMB-003 (A)

IMPORTANT: Exposure to Radio Frequency Radiation.
This equipment complies with the 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 any partof your body.
Cet équipement est conforme aux limites d'exposition au rayonnement IC définies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et toute partie de votre corps.

This device is not to be operated on aircraft except for the conditions listed on ISED RSS-210 Annex J.1.
Cet appareil ne doit pas être utilisé sur un avion, sauf dans les conditions énumérées ISED RSS-210 Annex J.1.

UKCA marking

UK
CA

Eurasian Conformity Mark

Информация о дате изготовления устройства указана в конце серийного номера на его наклейке через дробь. Первая цифра означает номер года (последняя цифра года), две последующие означают номер недели.

Изготовитель: Mikrotikls SIA, Aizkraukles iela 23, Riga, LV-1006, Латвия, support@mikrotik.com. Сделано в Китае, Латвии или Литве. См. на упаковке.

Для получения подробных сведений о гарантийном обслуживании обратитесь к продавцу. Информация об импортерах продукции MikroTik в Российскую Федерацию: https://mikrotik.com/buy/europe/russia

Продукты MikroTik, которые поставляются в Евразийский таможенный союз, оцениваются с учетом соответствующих требований и помечены знаком EAC, как показано ниже:

EAC

Norma Oficial Mexicana

EFICIENCIA ENERGETICA CUMPLE CON LA NOM-029-ENER-2017.

La operacion de este equipo esta sujeta a las siguientes dos condiciones:

- Es posible que este equipo o dispositivo no cause interferencia perjudicial y.
- Este equipo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operacion no deseada.

Fabricante: Mikrotikls SIA, Brivibas gatve 214i, Riga, LV-1039, Latvia.

País De Origen: Letonia; Lituania; China (Republica Popular); Estados Unidos De America; Mexico.

Por favor contacte a su distribuidor local para preguntas regionales específicas. La lista de importadores se puede encontrar en nuestra página de inicio – https://mikrotik.com/buy/latinamerica/mexico.

The National Commission for the State Regulation of Communications and Informatization by Ukraine

Виробник: Mikrotikls SIA, Brivibas gatve 214i Рига, Латвія, LV1039.

⚠ Справжнім Mikrotikls SIA заявляє, що маршрутизатор відповідає основним вимогам та іншим відповідним положенням директиви 2014 /53/EC, а також суттєвим вимогам Технічного регламенту радіообладнання, затвердженого постановою Кабінету Міністрів України від 24 травня 2017 року № 355.

Для експлуатації в Україні необхідно отримати дозвіл на експлуатацію у порядку, затвердженому рішенням НКРЗІ від 01.11.2012 № 559, зареєстрованому в Міністерстві юстиції України 03.01.2013 за № 57/22589.

CE Declaration of Conformity

Manufacturer: Mikrotikls SIA, Brivibas gatve 214i Riga, Latvia, LV1039.

Hereby, Mikrotīkls SIA declares that the radio equipment type RBCube-60ad 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://mikrotik.com/products

WiGig

Operational channels / Maximum output power	58.32 GHz / <40 dBm
Betriebskanäle / maximale Ausgangsleistung	60.48 GHz / <40 dBm
Canaux opérationnels / puissance de sortie maximale	62.64 GHz / <40 dBm
Canali operativi / massima potenza di uscita	64.80 GHz / <40 dBm
Canales operacionales / potencia de salida máxima	
Операционные каналы / максимальная выходная мощность	

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