

LHG 60 series

The LHG 60 is an outdoor wireless router with a built in directional antenna which works in the 60GHz spectrum. It can be used as a CPE to connect to MikroTik devices that work in 60GHz access point mode.

Assembly

Attach the two legs to the LHG case, then snap the assembled LHG unit to the grid in the appropriate locations. Fix the legs in place with two self thread screws (Included, use Phillips screw driver PH2). The package also contains a grounding cable connector and a precision alignment mount. Alignment instructions available on the product page on <https://mikrotik.com/products/>.

Connecting

1. 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 (LHG Lite60), or a 802.3af/at power source (supported only by the LHG 60G model).
2. Plug the PoE injector into your network switch or ISP internet outlet.
3. Plug the included power supply into the PoE injector to start up the device.
4. For configuration purposes, set your computer IP configuration to static in the range of 192.168.88.0-254 (/24 or 255.255.255.0)
5. Default IP address of the unit is 192.168.88.3/24, open this address in your web browser to start configuration. The username is admin and there is no password.

The device is preconfigured as a w60g station, and all you need to do is select the AP to connect to and set a device password. You can do this in the quickSET tab that is loaded by default. In case IP connection is not available, Winbox can be used to connect to the MAC address of the device. We recommend clicking the "Check for updates" button and updating your RouterOS software to the latest version to ensure the best performance and stability.

In case you wish to boot the device from network, for example to use MikroTik Netinstall, hold the RESET button of the device when starting it, until the LED light turns off, then the device will start to look for Netinstall servers.

More information about using RouterOS and connecting to this device in our documentation: <http://mt.lv/help>

Powering

The LHG Lite60 only accepts 12-30 V power from Passive PoE injectors (one power supply and PoE injector are included). The LHG 60G accepts 12-57 V 802.3af/at powering and also Passive PoE. Both models can consume up to 5 W at maximum load.

Extension Slots and Ports

- One ethernet (10/100 Mbit or Gigabit, depends on model), supporting automatic cross/straight cable correction (Auto MDI/X), so you can use either straight or cross-over cables for connecting to other network devices.
- One Integrated w60g interface with built in antenna.

Buttons and Jumpers

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 device to look for Netinstall servers (required for reinstalling RouterOS over 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.

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

Operating System Support

The device only supports RouterOS software with the version number at or above what is indicated in the RouterOS menu `/system resource`. Other operating systems have not been tested.

Federal Communication Commission Interference 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 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.

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.

IMPORTANT: IMPORTANT: Exposure to Radio Frequency Radiation. 51 cm minimum distance has to be maintained between the antenna and user. Under such configuration, the FCC radiation exposure limits set forth for a population/uncontrolled environment can be satisfied.

FCC identifiers: TV7LHGG60AD, TV7LHGG-60AD, TV7LHG60AD

Industry Canada

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.

Radio Cert. No.: 7442A-LHGG60AD, 7442A-LHGG-60AD, 7442A-LHG60AD

CE declaration of conformity

The frequency and the maximum transmitted power in EU are 60 GHz, 50.35 dBm. Operational mode in the 60 GHz band: 58.32 GHz, 60.48 GHz, 62.64 GHz. Manufacturer: Mikrotiks SIA, Brīvības gatve 214i, Rīga, Latvia, LV1039. Full Declaration of Conformity (DoC) may be obtained by visiting our product page on <https://mikrotik.com>

In the following countries, fixed service is allowed only in part of the band:

	AT	BE	BG	HR	CY	CZ	DK
	EE	FI	FR	DE	EL	HU	IE
	IT	LV	LT	LU	MT	NL	PL
	PT	RO	SK	SI	ES	SE	UK

EN	Hereby, MIKROTĪKLS SIA declares that the radio equipment LHG60 is in compliance with Directive 2014/53/EU
BG	С настоящето, MIKROTĪKLS SIA декларира, че LHG60 е в съответствие със съществените изисквания и другите приложими разпоредби на Директива 2014/53/ЕС.
CZ	MIKROTĪKLS SIA tímto prohlašuje, že LHG60 splňuje základní požadavky a všechna příslušná ustanovení Směrnice 2014/53/ES.
DK	Undertegnede MIKROTĪKLS SIA erklærer herved, at følgende udstyr LHG60 overholder de væsentlige krav og øvrige relevante krav i direktiv 2014/53/EF.
DE	Hiermit erkläre MIKROTĪKLS SIA dass sich das Gerät LHG60 in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 2014/53/EG befindet.
EE	Käesolevaga kinnitab MIKROTĪKLS SIA seadme LHG60 vastavust direktiivi 2014/53/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
GR	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Ο ΚΑΤΑΣΚΕΥΑΣΤΗΣ MIKROTĪKLS SIA ΔΗΛΩΝΕΙ ΟΤΙ LHG60 ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 2014/53/ΕΚ
ES	Por la presente, MIKROTĪKLS SIA declara que este LHG60 cumple con los requisitos esenciales y otras exigencias relevantes de la Directiva 2014/53/EC.
IT	Con la presente MIKROTĪKLS SIA dichiara che questo LHG60 è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 2014/53/CE.
LV	Ar šo MIKROTĪKLS SIA izjāvija, ka LHG60 atbilst Direktīvas 2014/53/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
LT	Šiuo MIKROTĪKLS SIA deklaruoją, kad šis LHG60 atitinka esminių reikalavimus ir kitas 2014/53/EB Direktyvos nuostatas
HU	A MIKROTĪKLS SIA ezzenel kijelenti, hogy a LHG60 típusú beren-dezés teljesíti az alapvető követelményeket és más 2014/53/EK irányelvben meghatározott vonatkozó rendelkezéseket.
NL	Hierbij verklaart MIKROTĪKLS SIA dat het toestel I LHG60 in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 2014/53/EG.
PL	Niniejszym MIKROTĪKLS SIA deklaruje że LHG60 jest zgodny z zasadniczymi wymaganiami i innymi właściwymi postanowieniami Dyrektywy 2014/53/EC.
PT	Eu, MIKROTĪKLS SIA declaro que o LHG60 cumpre os requisitos essenciais e outras provisões relevantes da Directiva 2014/53/EC.
RO	Prin prezenta, MIKROTĪKLS SIA declară că aparatul LHG60 este în conformitate cu cerințele esențiale și cu alte prevederi pertinente ale Directivei 2014/53/CE.
SL	MIKROTĪKLS SIA tímto vyhlasuje, že LHG60 splňa základné požiadavky a všetky príslušné ustanovenia Smernice 2014/53/ES.
SI	MIKROTĪKLS SIA izjavlja, da je ta LHG60 v skladu z bistvenimi zahtevami in drugimi relevantnimi določili direktive 2014/53/ES.
FI	MIKROTĪKLS SIA vakuuttaa täten että LHG60 tyyppinen laite on direktiivin 2014/53/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
SE	Härmed intygar MIKROTĪKLS SIA att denna LHG60 är i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 2014/53/EG.
NO	MIKROTĪKLS SIA Erklærer herved at LHG60 er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 2014/53/EF.

EN. Instruction manual: Connect the power adapter to turn on the device. Open 192.168.88.2/192.168.88.3 in your web browser, to configure it. More information on <http://mt.lv/help> **BG. Инструкции:** Свържете адаптера на захранване, за да включите устройството. Отворете 192.168.88.2/192.168.88.3 в уеб браузър, за да настроите продукта. Повече информация в <http://mt.lv/help> **CZ. Návod k použití:** Připojte napájecí adaptér k zapnutí přístroje. Otevřete 192.168.88.2/192.168.88.3 ve webovém prohlížeči pro konfiguraci produktu. Více informací najdete v <http://mt.lv/help> **DK. Instruktionsbog:** Tilslut strømadapteren for at tænde for enheden. Åbn 192.168.88.2/192.168.88.3 i en webbrowser til at konfigurere produktet. Mere information i <http://mt.lv/help> **FR. Mode d'emploi:** Connectez l'adaptateur d'alimentation pour allumer l'appareil. Ouvrez 192.168.88.2/192.168.88.3 dans un navigateur Web pour configurer le produit. Plus d'informations dans <http://mt.lv/help> **DE. Bedienungsanleitung:** Verbinden Sie das Netzteil, um das Gerät einzuschalten. Öffnen Sie 192.168.88.2/192.168.88.3 in einem Web-Browser, um das Produkt zu konfigurieren. Weitere Informationen im <http://mt.lv/help> **EE. Kasutusjuhend:** Ühendage toiteadapter seadme sisselülitamiseks. Avatud 192.168.88.2/192.168.88.3 in veebilehitseja seadistada toodet. Rohkem teavet <http://mt.lv/help> **ES. Manual de instrucciones:** Conecte el adaptador de alimentación para encender la unidad. Abra 192.168.88.2/192.168.88.3 en un navegador web para configurar el producto. Más información en <http://mt.lv/help> **IT. Manuale di istruzioni:** Collegare l'adattatore di alimentazione per accendere l'unità. Aprire 192.168.88.2/192.168.88.3 in un browser Web per configurare il prodotto. Maggiori informazioni in <http://mt.lv/help> **LV. Lietošanas instrukcija:** Pievienojiet Strāvas adapteri, lai ieslēgtu ierīci. Atvērt 192.168.88.2/192.168.88.3 ar interneta pārlūku, lai konfigurētu produktu. Plašāka informācija <http://mt.lv/help> **LT. Naudojimosi instrukcija:** Prijunkite maitinimo adapterį įjunkite įrenginį. Į interneto naršyklę 192.168.88.2/192.168.88.3 Atidarykite galite konfigūruoti gaminį. Daugiau informacijos rasite <http://mt.lv/help> **HU. Használati utasítás:** Csatlakoztassa a hálózati adaptert a készülék bekapcsolásához. Megnyitása 192.168.88.2/192.168.88.3 egy webböngészőben beállítani a terméket. Több információ <http://mt.lv/help> **NL. Handleiding:** Sluit voedingadapter aan op het apparaat in te schakelen. Open 192.168.88.2/192.168.88.3 in een webbrowser om het product te configureren. Meer informatie in <http://mt.lv/help> **PL. Instrukcja obsługi:** Podłącz adapter zasilania, aby włączyć urządzenie. Otwórz 192.168.88.2/192.168.88.3 w przeglądarce internetowej, aby skonfigurować urządzenie. Więcej informacji w <http://mt.lv/help> **PT. Manual de instruções:** Conecte o adaptador de alimentação para ligar o aparelho. Abra 192.168.88.2/192.168.88.3 em um navegador da web para configurar o produto. Mais informações em <http://mt.lv/help> **RO. Instrucțiuni de utilizare:** Conectați adaptorul de alimentare pentru a porni aparatul. Deschide 192.168.88.2/192.168.88.3 într-un browser web pentru a configura produsul. Mai multe informații în <http://mt.lv/help> **SK. Návod na použitie:** Pripojte napájací adaptér k zapnutiu prístroja. Otvorte 192.168.88.2/192.168.88.3 vo webovom prehliadači pre konfiguráciu produktu. Viac informácií nájdete v <http://mt.lv/help> **SI. Navodila:** Priključite napajalnik za vklop naprave. Odprite 192.168.88.2/192.168.88.3 v spletnem brskalniku nastaviti izdelek. Več informacij v <http://mt.lv/help> **FI. Käyttöohje:** Kytke virtalähde päälle laitteeseen. Avaa 192.168.88.2/192.168.88.3 in selaimen määritystä tuoteen. Lisää tietoa <http://mt.lv/help> **SE. Instruktionsmanual:** Anslut nätadaptern för att slå på enheten. Öppna 192.168.88.2/192.168.88.3 i en webbläsare för att konfigurera produkten. Mer information på <http://mt.lv/help> **NO. Bruksanvisningen:** Koble strømadapteren for å slå på enheten. Åpne 192.168.88.2/192.168.88.3 i en nettleser for å konfigurere produktet. Mer informasjon på <http://mt.lv/help> **GR. εγχειρίδιο οδηγιών:** Συνδέστε τον προσαρμογέα τροφοδοσίας για να ενεργοποιήσετε τη μονάδα. Ανοίξτε 192.168.88.2/192.168.88.3 σε ένα πρόγραμμα περιήγησης στο Web για να διαμορφώσετε το προϊόν. Περισσότερες πληροφορίες στο <http://mt.lv/help> **RU. Руководство по эксплуатации:** подключите адаптер питания чтобы включить устройство. Откройте 192.168.88.2/192.168.88.3 в своем веб-браузере для конфигурации. Дополнительная информация: <http://mt.lv/help>

MPE Statement – Mobile device

This equipment complies with EU radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 95 cm between the radiator and your body.

