Wireless Wire dish

The Wireless Wire dish is a set of two LHG 60G devices that work in the 60 GHz wireless spectrum, the operating temperature of these devices is from -40°C up to +70°C. Each device has one gigabit ethernet port, and can be powered via PoE. Devices can be securely mounted on on a pole/mast.

Powering

The devices accept powering from the ethernet port. The Ethernet port accepts PoE input 12-57 V DC (passive and 802.3af/at). A power adapter and a passive PoE injector are included in the box. When using the PoE injector, make sure to use the "Power + Data" connector to connect to the device device, and the "Data" connector to your PC, router or switch.

Configuration

Full RouterOS documentation is located here: http://mt.lv/help.

Devices included in the Wireless Wire dish kit have been preconfigured with 60GHz and ethernet interfaces in bridge mode. Other configuration has to be applied according to the documentation manual linked above.

Connect each of Wireless Wire dish devices to your network using an ethernet cable. To be able to communicate between these networks, devices have to be pointed at each other and be in direct line of sight. Once connected the devices will automatically bridge both networks.

Access devices by ethernet cable, using the MikroTik Winbox utility. Winbox should be used to connect to the default IP address of 192.168.88.2 for the master device and 192.168.88.3 for the slave device. Username for login is admin and password is printed on the label that can be found inside the device cover.

For recovery purposes, it is possible boot the device from network, see section Buttons and jumpers.

In case IP connection is not available, the Winbox utility can also be used to connect to the MAC address of the device.

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.

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

FCC ID: TV7LHGG60AD

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 environment.

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. 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.

IMPORTANT: Exposure to Radio Frequency Radiation.

51 cm minimum distance has to be maintained between the antenna and the occupational user and 51 cm to general public. Under such configuration, the FCC radiation exposure limits set forth for an population/uncontrolled environment can be satisfied.

Antenna Installation. WARNING: It is the installer's responsibility to ensure that when using the authorized antennas in the United States (or where FCC rules apply); only those antennas certified with the product are used. The use of any antenna other than those certified with the product is expressly forbidden in accordance to FCC rules CFR47 part 15.204. The installer should configure the output power level of antennas, according to country regulations and per antenna type. Professional installation is required of equipment with connectors to ensure compliance with health and safety issues.

Industry Canada IC: 7442A-LHGG60AD

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.

MPORTANT NOTE: IC Radiation Exposure Statement:

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 51cm between the radiator & your body.

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôle. Cet equipement doit etre installe et utilise avec un minimum de 51 cm de distance entre la source de rayonnement et votre corps.

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: Mikrotikls SIA, Brīvības gatve 214i, Riga, 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 RBwAPG-60ad is in compliance with Directive 2014/53/EU
BG	С настоящето, MIKROTĪKLS SIA декларира, че RBwAPG-60ad е в съответствие със съществените изисквания и другитеприложими разпоредби на Директива 2014/53/ЕC.
CZ	MIKROTĪKLS SIA tímto prohlašuje, že RBwAPG-60ad splňuje základní požadavky a všechna příslušná ustanoveni Směrnice 2014/53/ES.
DK	Undertegnede MIKROTĪKLS SIA erklærer herved, at følgende udstyr RBwAPG-60ad overholder de væsentlige krav og øvrige relevante krav i direktiv 2014/53/EF.
DE	Hiermit erklärt MIKROTĪKLS SIA dass sich das Gerät RBwAPG-60ad in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 2014/53/EG befindet.
EE	Käesolevaga kinnitab MIKROTĪKLS SIA seadme RBwAPG-60ad vastavust direktiivi 2014/53/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
GR	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Ο ΚΑΤΑΣΚΕΥΑΣΤΗΣ MIKROTĪKLS SIA ΔΗΛΩΝΕΙ ΟΤΙ RBwAPG-60ad ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 2014/53/ΕΚ
ES	Por la presente, MIKROTĪKLS SIA declara que este RBwAPG-60ad cumple con los requisitos esenciales y otras exigencias relevantes de la Directiva 2014/53/EC.
IT	Con la presente MIKROTĪKLS SIA dichiara che questo RBwAPG-60ad è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 2014/53/CE.
LV	Ar šo MIKROTĪKLS SIA deklarē, ka RBwAPG-60ad atbilst Direktīvas 2014/53/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
LT	Šiuo MIKROTĪKLS SIA deklaruoja, kad šis RBwAPG-60ad atitinka esminius reikalavimus ir kitas 2014/53/EB Direktyvos nuostatas
HU	A MIKROTĪKLS SIA ezzennel kijelenti, hogy a RBwAPG-60ad 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 RBwAPG-60ad in overeenstemming is met de essentiële eisen en de andere relevante bepalin-gen van richtlijn 2014/53/EG.
PL	Niniejszym MIKROTĪKLS SIA deklaruje że RBwAPG-60ad jest zgodny z zasadniczymi wymaganiami i innymi właściwymi postanowieniami Dyrektywy 2014/53/EC.
PT	Eu, MIKROTĪKLS SIA declaro que o RBwAPG-60ad cumpre os requisitos essenciais e outras provisões relevantes da Directiva 2014/53/EC.
RO	Prin prezenta, MIKROTĪKLS SIA declară că aparatul RBwAPG-60ad este în conformitate cu cerinţele esenţiale şi cu alte prevederi pertinente ale Directivei 2014/53/CE.
SL	MIKROTĪKLS SIA týmto vyhlasuje, že RBwAPG-60ad spĺňa základné požadavky a všetky príslušné ustanovenia Smernice 2014/53/ES.
SI	MIKROTĪKLS SIA izjavlja, da je ta RBwAPG-60ad v skladu z bistvenimi zahtevami in drugimi relevantnimi določili direktive 2014/53/ES.
FI	MIKROTĪKLS SIA vakuuttaa täten että RBwAPG-60ad tyyppinen laite on direktiivin 2014/53/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
SE	Härmed intygar MIKROTĪKLS SIA att denna RBwAPG-60ad är i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 2014/53/EG.
NO	MIKROTĪKLS SIA Erklærer herved at RBwAPG-60ad 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. Инструкция**: 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 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 adapterj jjunkite jrenginj. 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 voedingsadapter 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. Instrucţiuni de utilizare**: Conectaţi 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 informaţii 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 laitteen. Avaa 192.168.88.2/192.168.88.3 in selaimen määrittää tuotteen. 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

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.