



MUM Perú

Febrero 2019



What do we do?

We create networks



- Established 1996
- RouterOS created in 1997
- RouterBOARD created in 2002
- First MUM event in Prague 2006
- MUM Indonesia 2018 had over 3700 people
- 31 events in 2018



LETONIA

Iceland

Finland

Sweden

Russia

Norway

Estonia

Denmark

Lithuania

Ireland

United Kingdom

Kazakhstan

Netherlands

Belarus

Belgium

Germany

Poland

Luxembourg

Czech Republic

Ukraine

France

Switzerland

Liecht.

Austria

Hungary

Moldova

Romania

Georgia

Azerbaijan

Monaco

Slovenia

Croatia

Armenia

Andorra

San Marino

Bosnia and Herzegovina

Serbia

Bulgaria

Portugal

Spain

Italy

Montenegro

Albania

Macedonia

Turkey

Iran

Vatican City

Greece

Syria

Iraq

TECHNOLOGIES

- Wired routers, Ethernet, SFP
- Switches
- Wi-Fi 802.11ac, 2GHz, 5GHz
- Mobile networks, 4G, LTE
- 60GHz connectivity.

PRODUCT FAMILIES

RouterOS

built and advanced for more than 20 years

RouterBOARD

Wireless outdoor, indoor, Ethernet routers

CRS

Switches with RouterOS

CSS

Switches with SwOS

More than 190 MUM events around the world





STAFF

Look for MikroTik staff in the red t-shirts:

- Karlis Oga (sales)
- Sergejs Boginskis (technical support)
- Kaspars Krampis (training)

Agenda

Presentaciones

10:00

Almuerzo (con vouchers)

13:15

Presentaciones

14:45

Sorteo

17:00

mt.lv/agenda

WiFi

SSID: MUM

Password: MikroTik

MUM Live

www.youtube.com/mikrotik

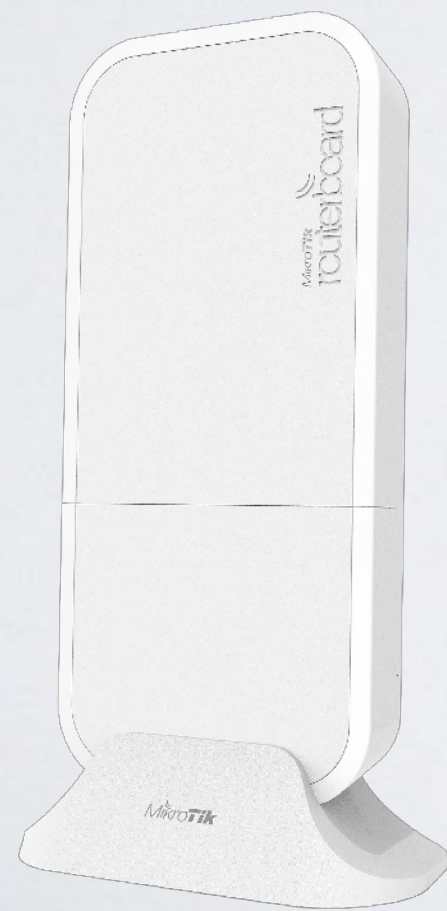
Special Thanks



Some of our latest products

60GHz device family

wAP60



LHG60



SXTsq Lite60



LHG Lite60



MikroTik 60GHz Products

PtP Link Distances at Full Speed

LHG 60G	1500+ meters	LHG 60G
LHG 60G	800+ meters	wAP 60G
LHG Lite60	800+ meters	wAP 60G
SXTsq Lite60	200+ meters	wAP 60G
wAP 60G	200+ meters	wAP 60G

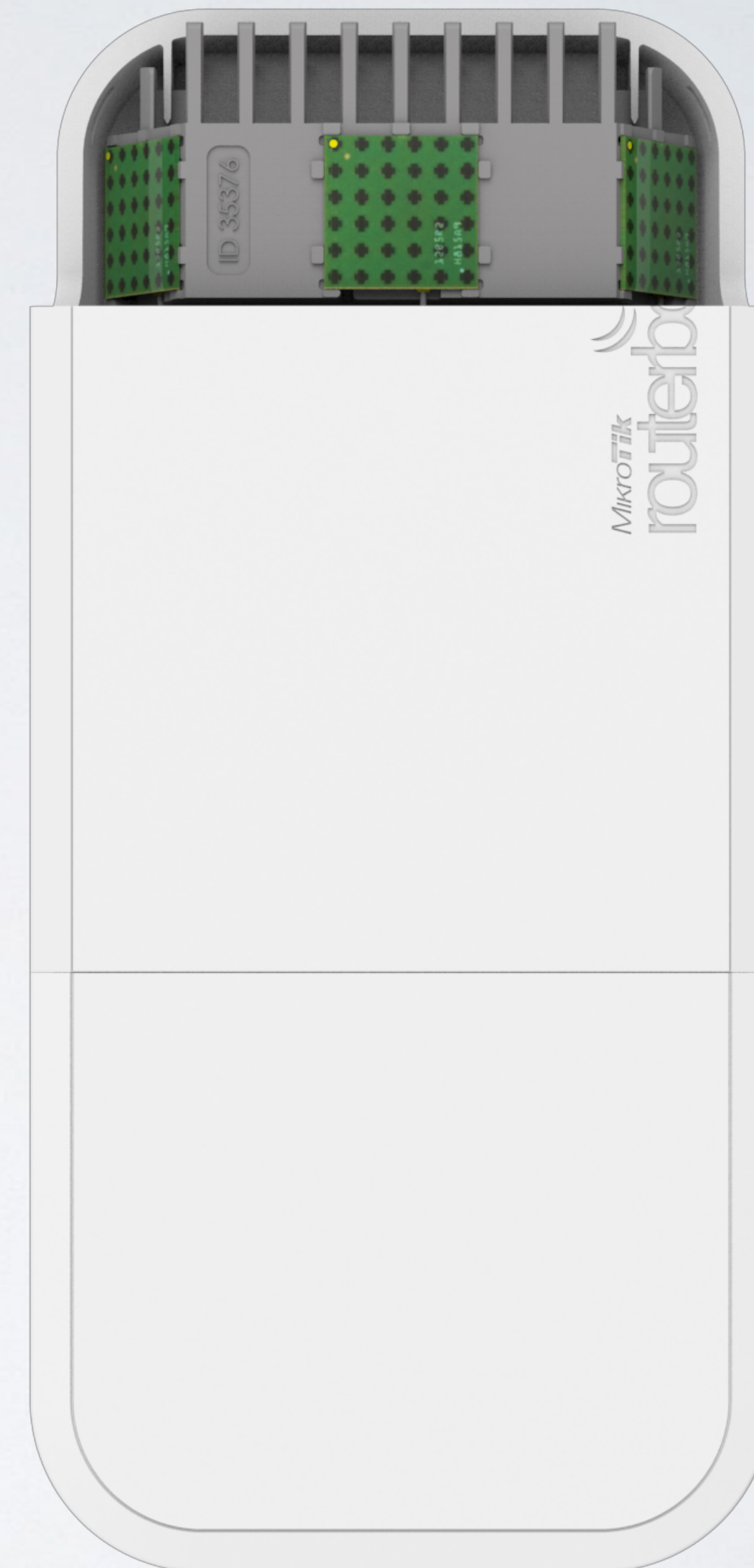
LHG Lite60

- 60 GHz CPE
- LHG design
- 100 Mbps Ethernet
- For distance 800 meters +
- Price \$99

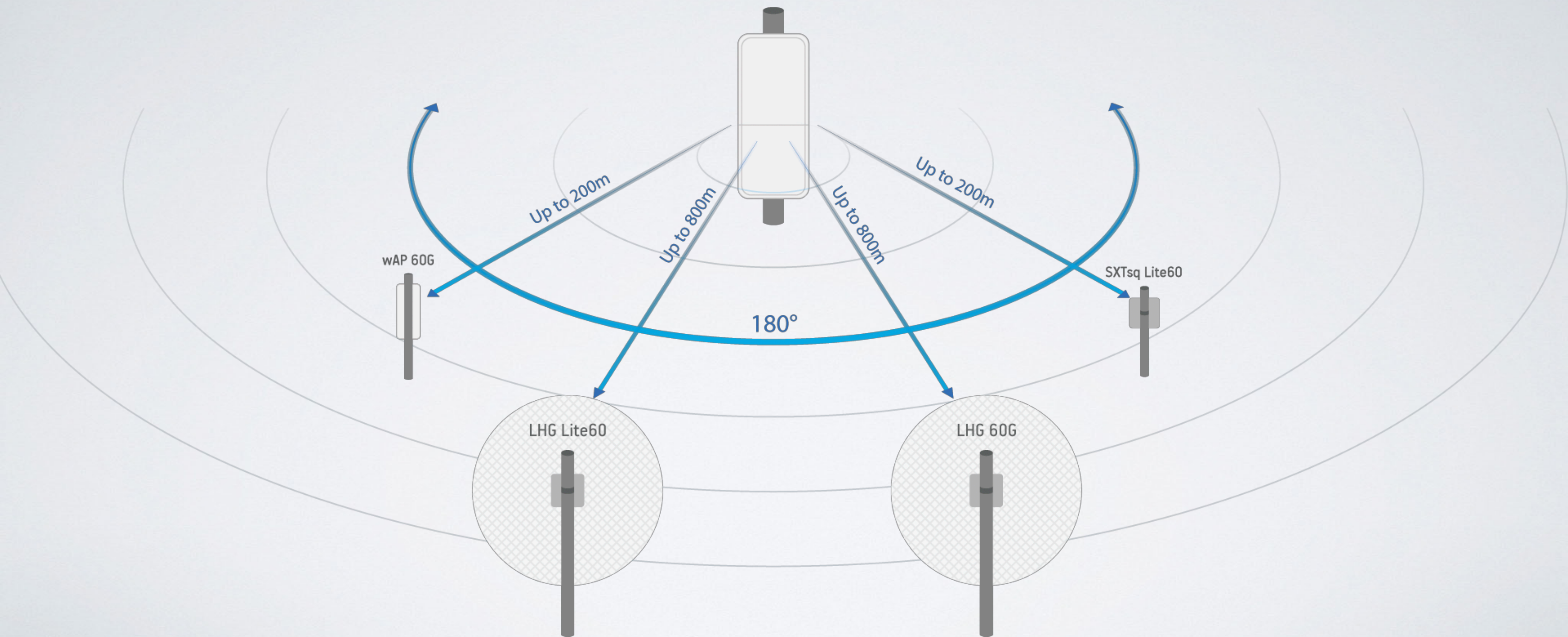


wAP 60Gx3 AP

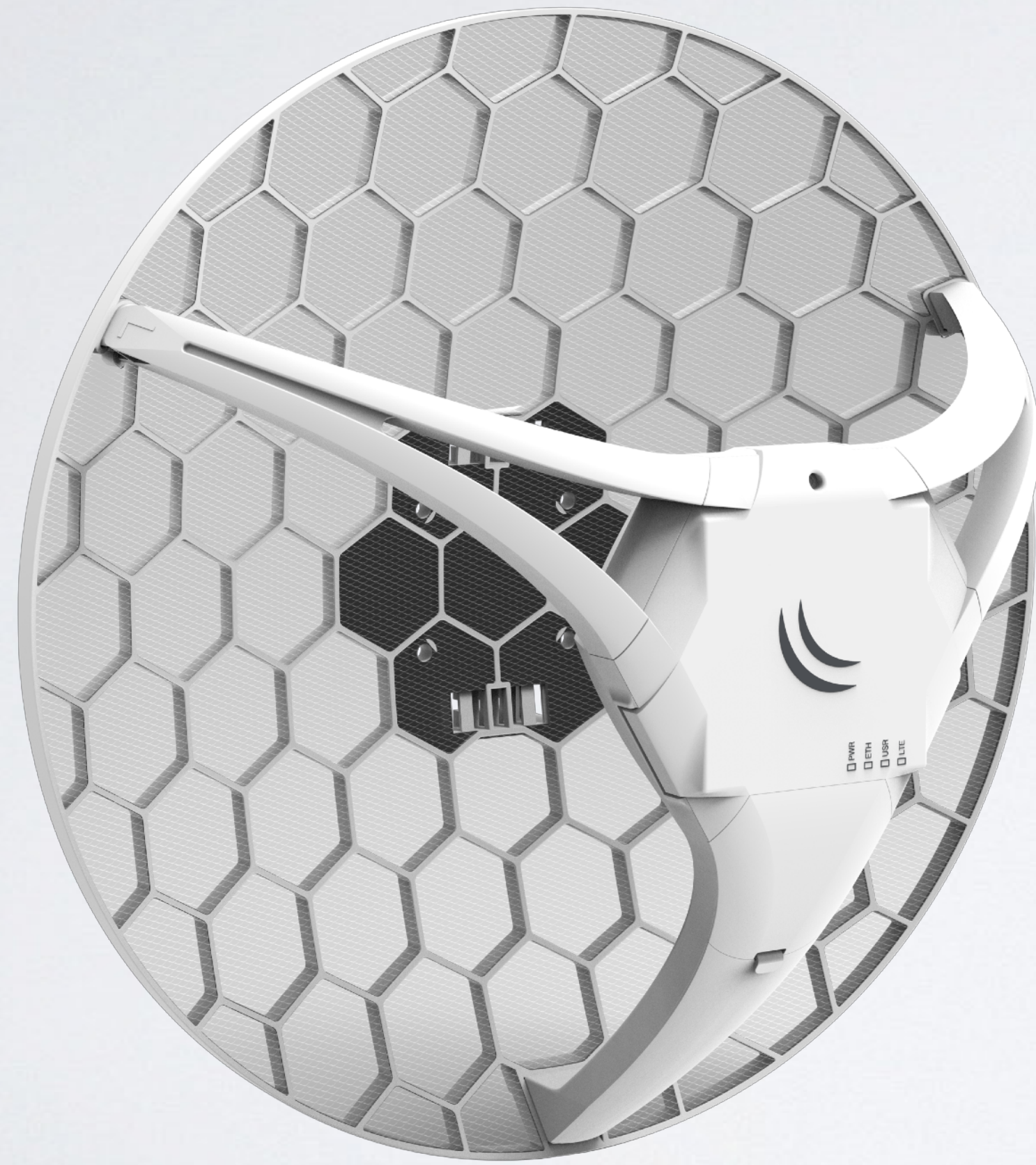
- 60 GHz AP
- Now with 180° beam width
(3x times wider!)
- Supports up to 8 clients
- 1 Gbps Ethernet
- Price \$199



wAP 60Gx3 AP

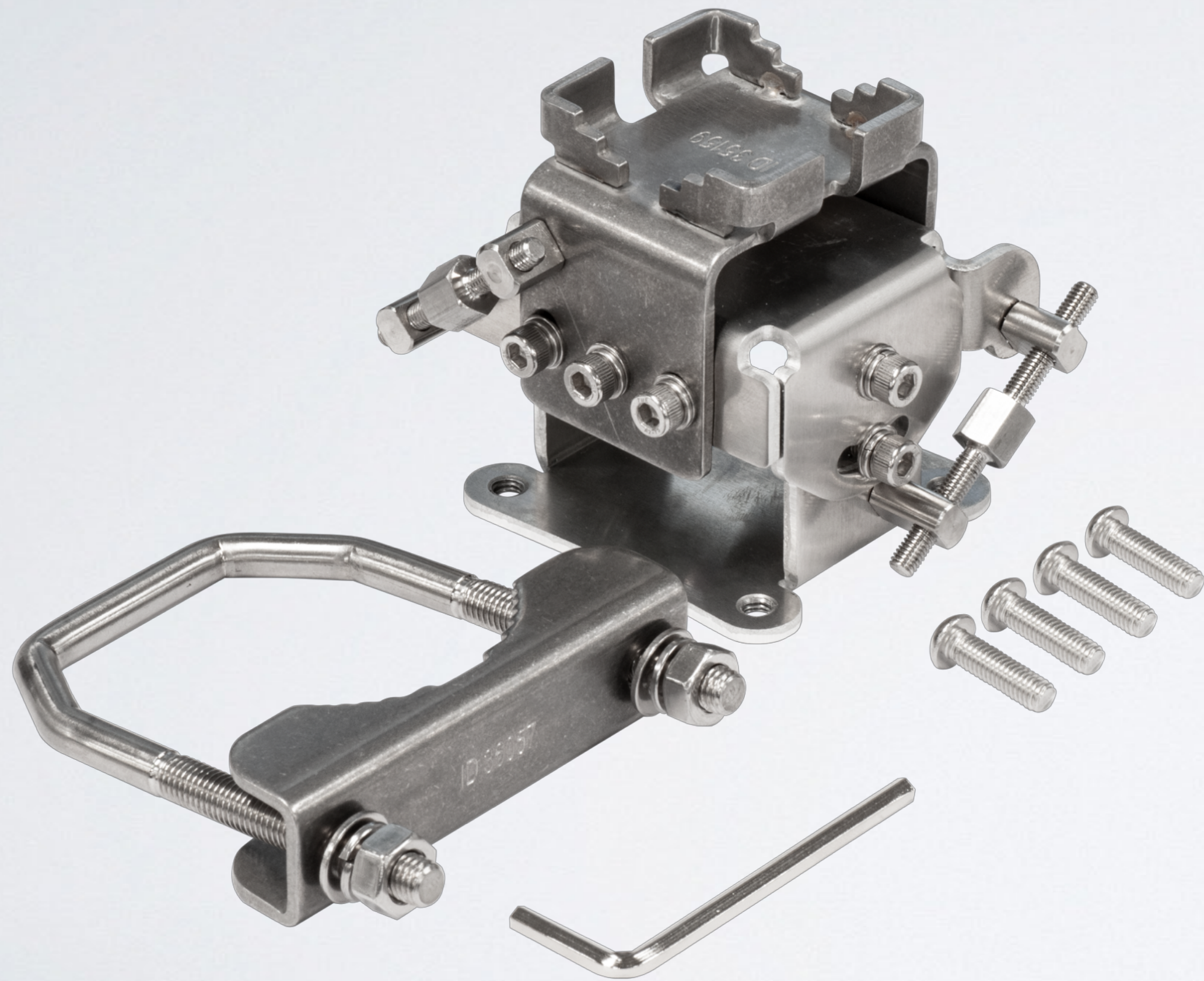


LHG LTE kit



- LTE built-in modem
- 17 dBi, 25 angle
- 4 category (150 Mbps/50 Mbps) LTE
- 3G - R7/R8
- For long distances
- Kit price \$159

solidMOUNT



- Allows vertical and horizontal adjustments
- Supports all LHG series (including LHG XL)
- Made from metal
- Includes U-bolt and mounting kit
- \$29

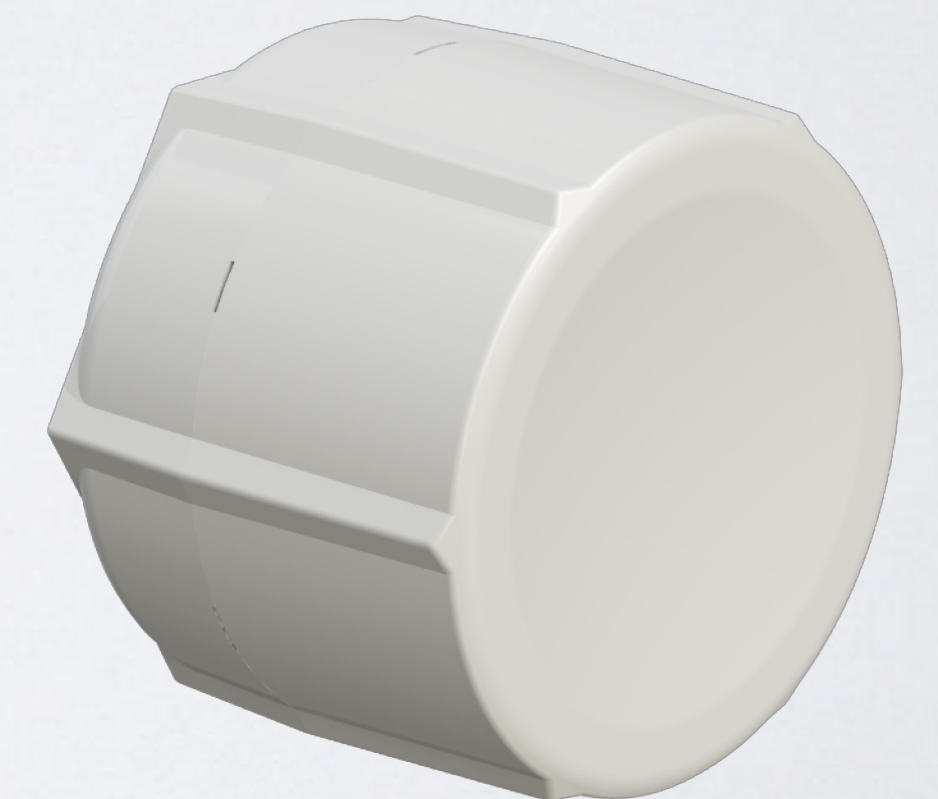
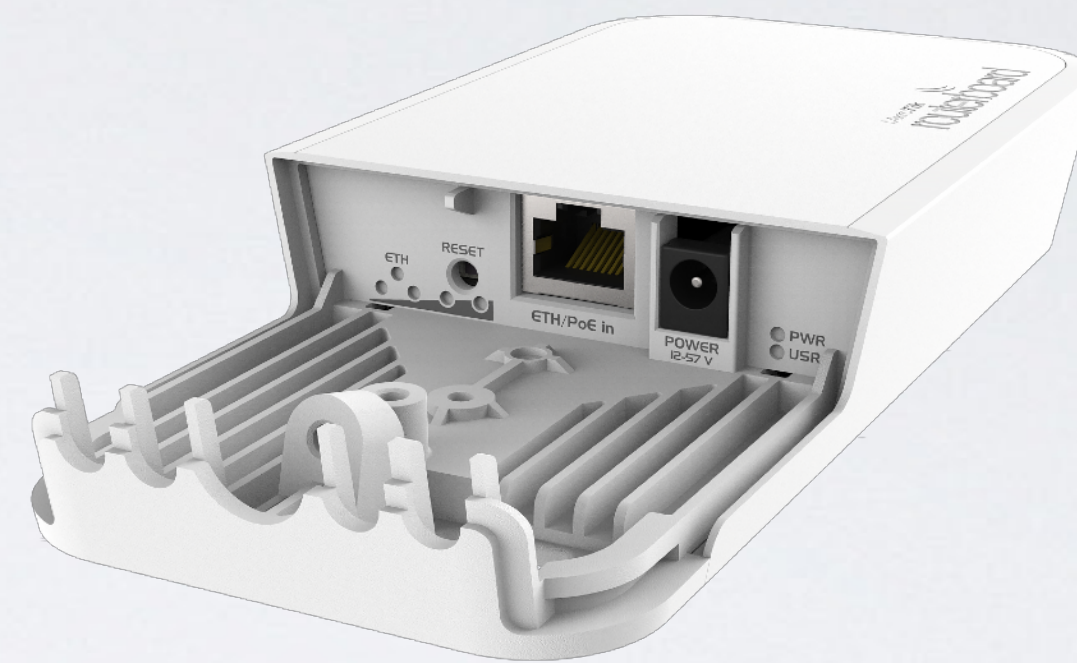
R11e-4G

- 4G Modem (no 2G/3G)
- 4 Category (150Mbps/50Mbps)
- 3,7,20,31 FDD bands
- 41n,42,43 TDD bands
- \$79



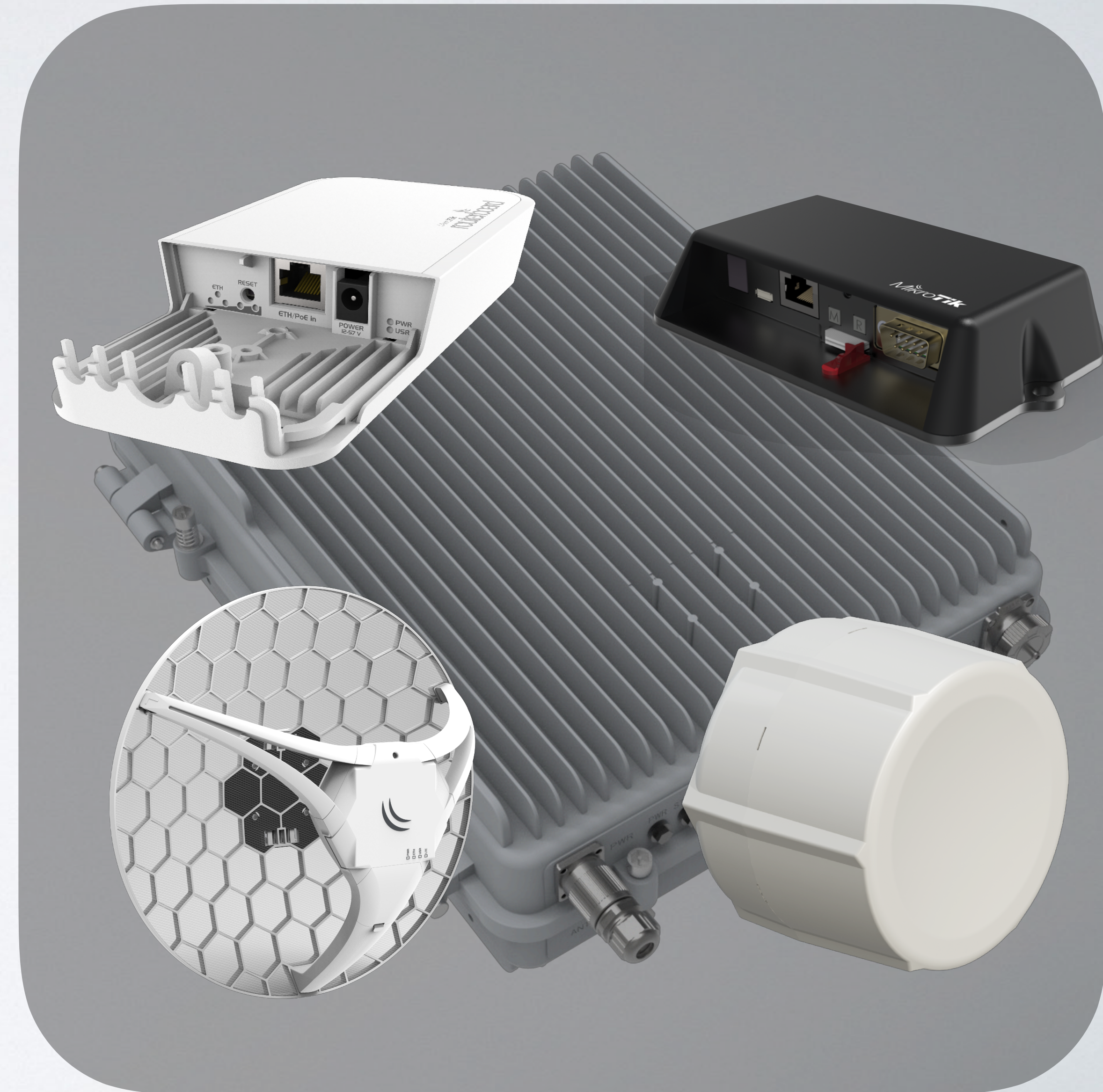
4G kits

- wAP 4G kit \$129
- LtAP mini 4G kit \$139
- SXT 4G kit \$139
- LHG 4G kit \$169



InterCell - LTE base station

- LTE base station for WISPs or mobile operators
- LTE bands 38 and 39 (4 models)
- Up to 192 clients
- Can use together with MikroTik LTE CPE's
- Price \$2200 - \$3500



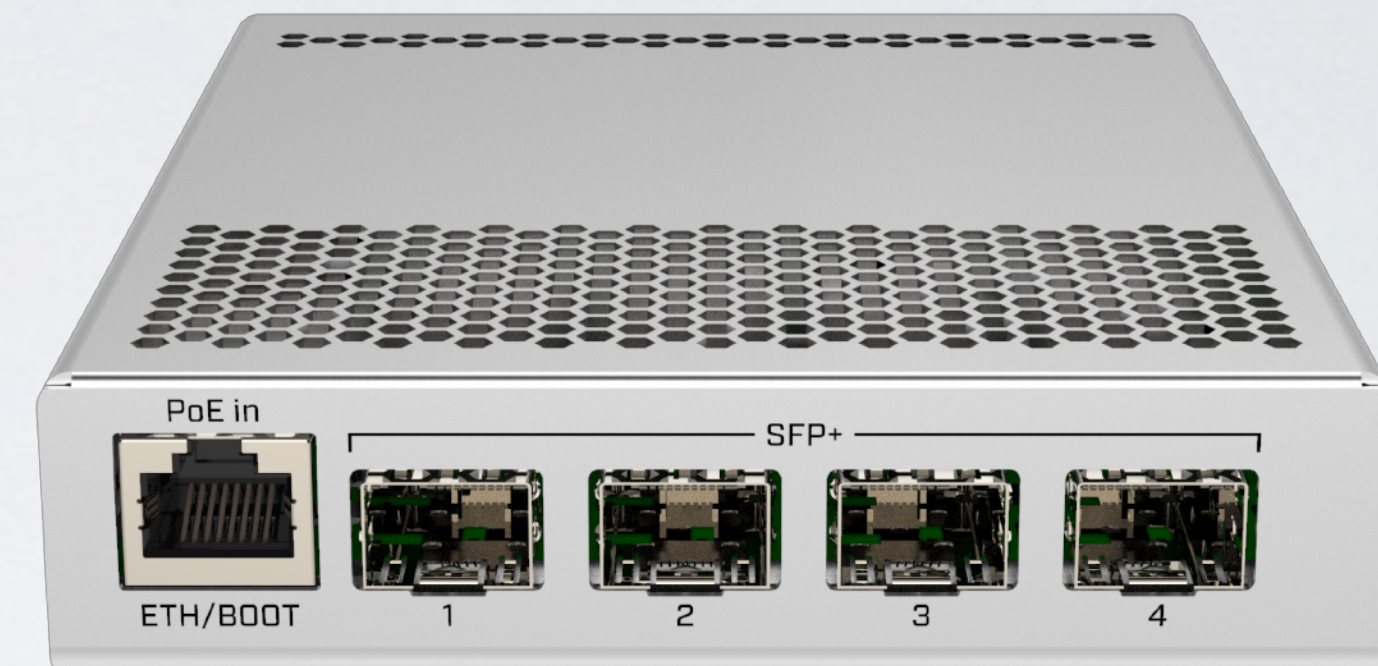
mANTBox2 12s

- 2 GHz sector antenna
- 12 dBi
- RouterBOARD built-in
- Price \$99



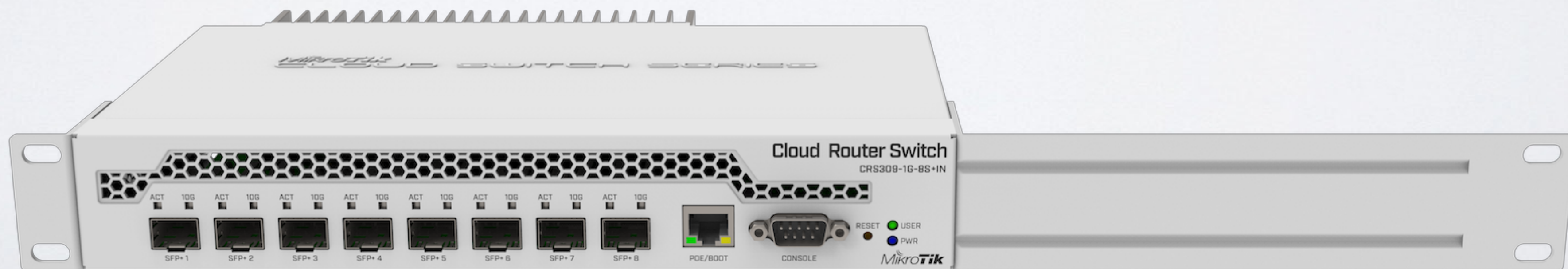
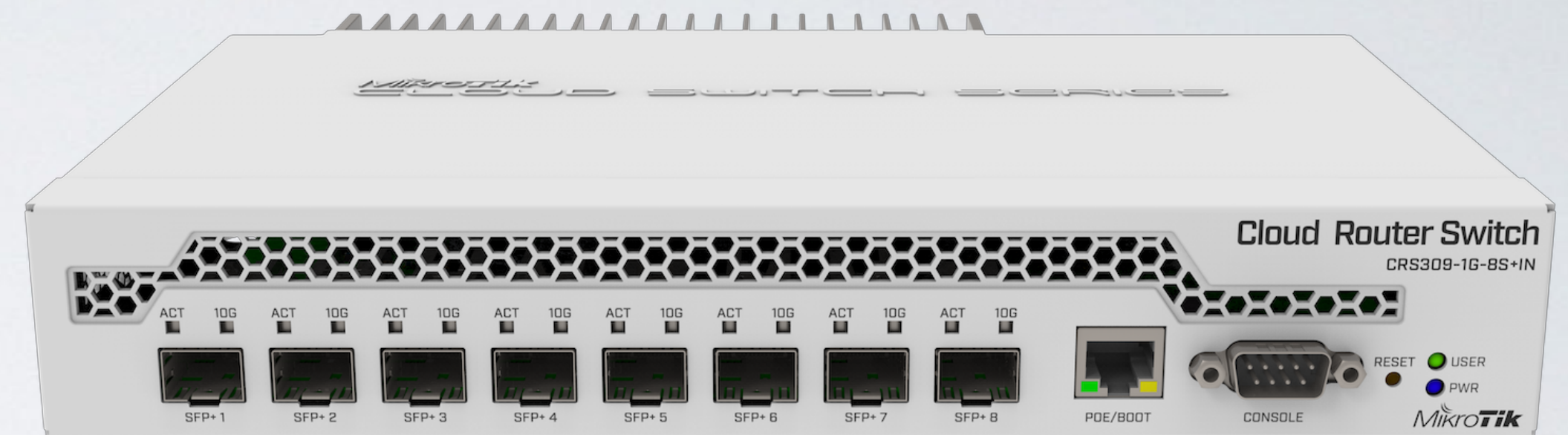
CRS305-1G-4S+IN

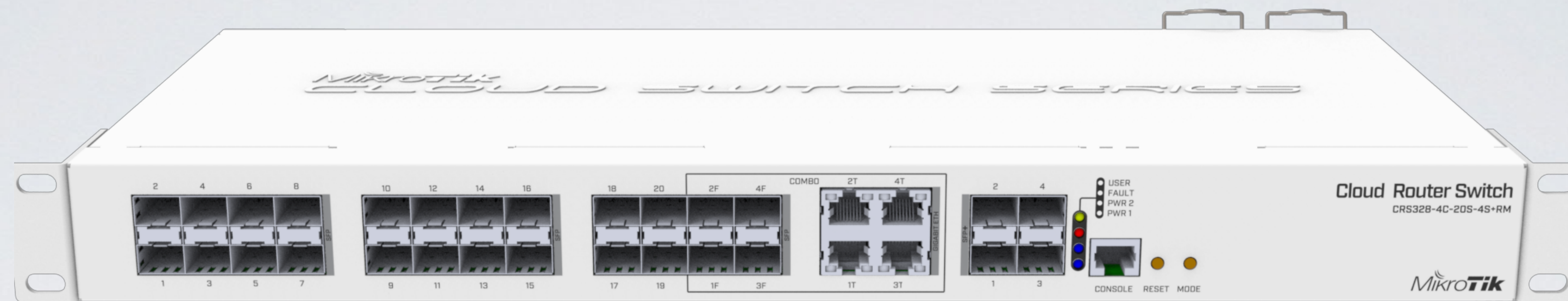
- 4x SFP+ ports
- 1x Gigabit Ethernet
- Dual boot: RouterOS / SwOS
- Metallic enclosure, silent
- Dual DC jacks
- Kit price \$149



CRS309-1G-8S+PC

- 8x SFP+ ports
- 1x Gigabit Ethernet
- Dual boot: RouterOS / SwOS
- Passive cooling case, silent
- Redundant power using PoE
- Kit price \$269



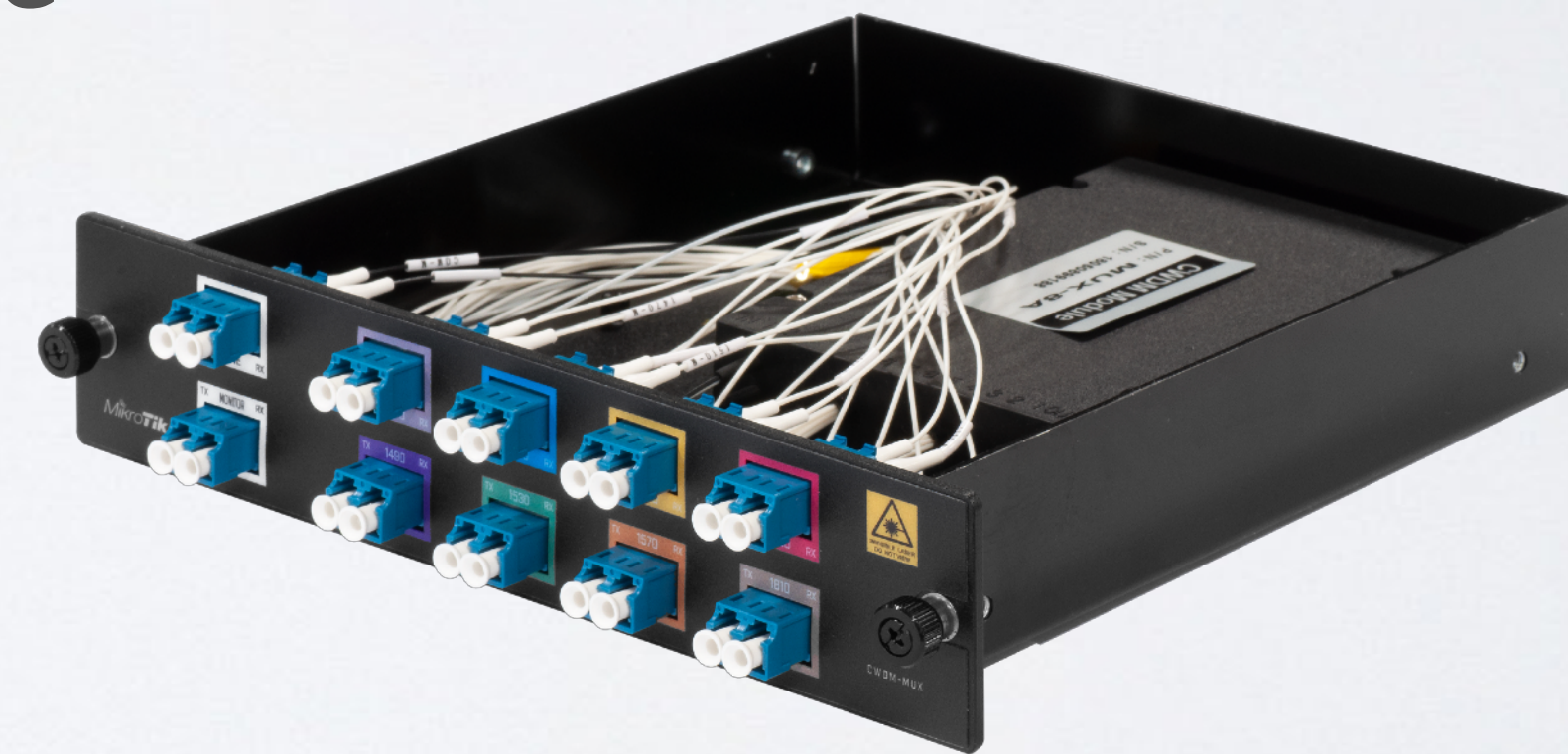


CRS328-4C-20S-4S+RM

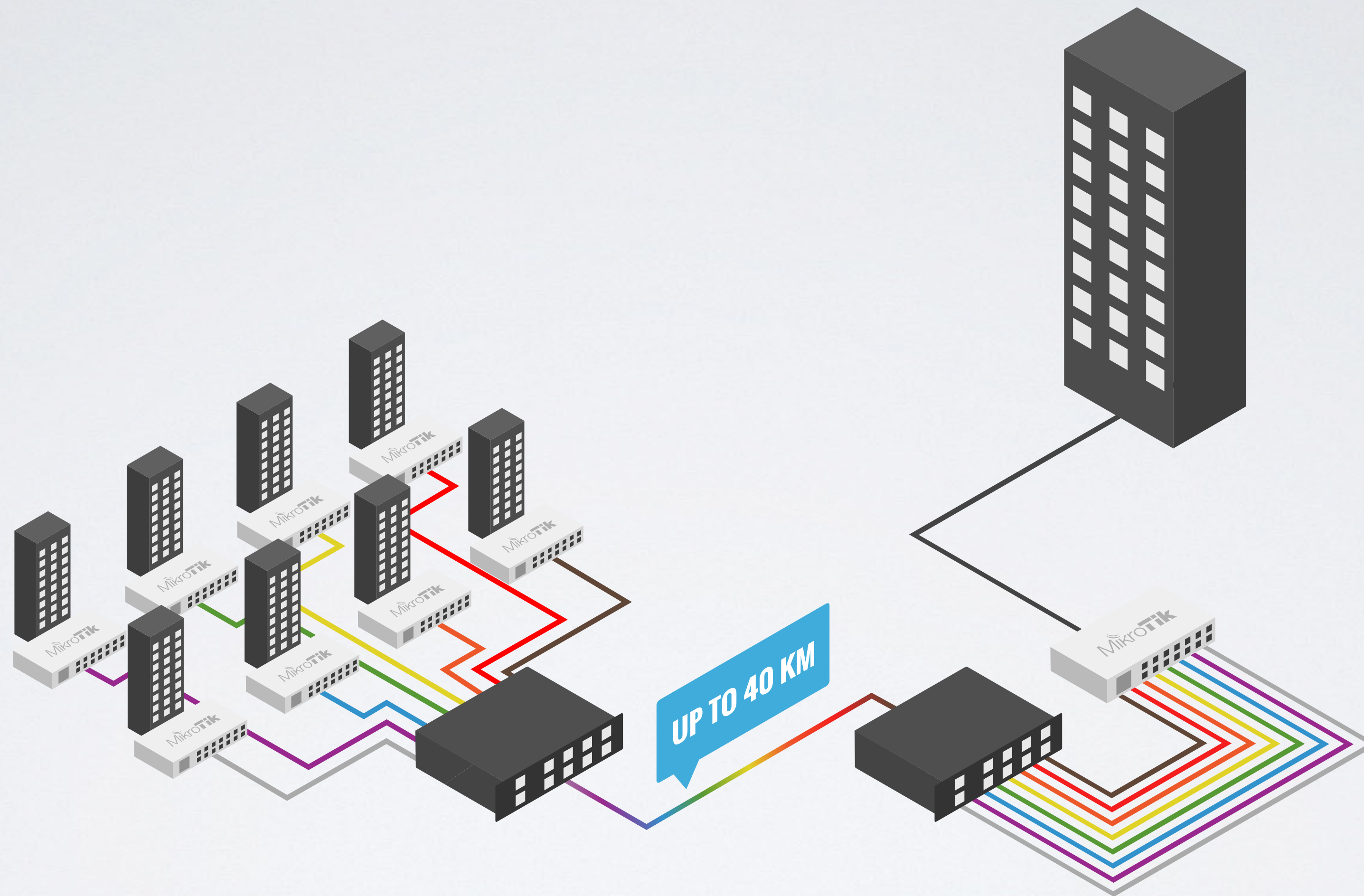
- 20x SFP ports
- 4x SFP+ ports
- 4x ETH/SFP combo ports
- Dual PSU
- Kit price \$369

CWDM

- Passive MUX/DEMUX unit
- Combine up to eight Fiber links into one
- Supports both SFP and SFP+
- Price \$359



CWDM



RouterBOARD 4011



RouterBOARD 4011

- 4 Core Cortex A15 CPU
- 10 Gigabit SFP+
- IPsec hardware encryption
- 1 GB RAM
- PoE out
- Price \$199



RouterBOARD 4011



RouterBOARD 4011

- 2 chains for 2 GHz, 802.11 b/g/n
- 4 chains for 5 GHz, 802.11 a/n/ac
- 160 MHz channel width
- 1733 Mbps + 300 Mbps data rates
- Price \$249



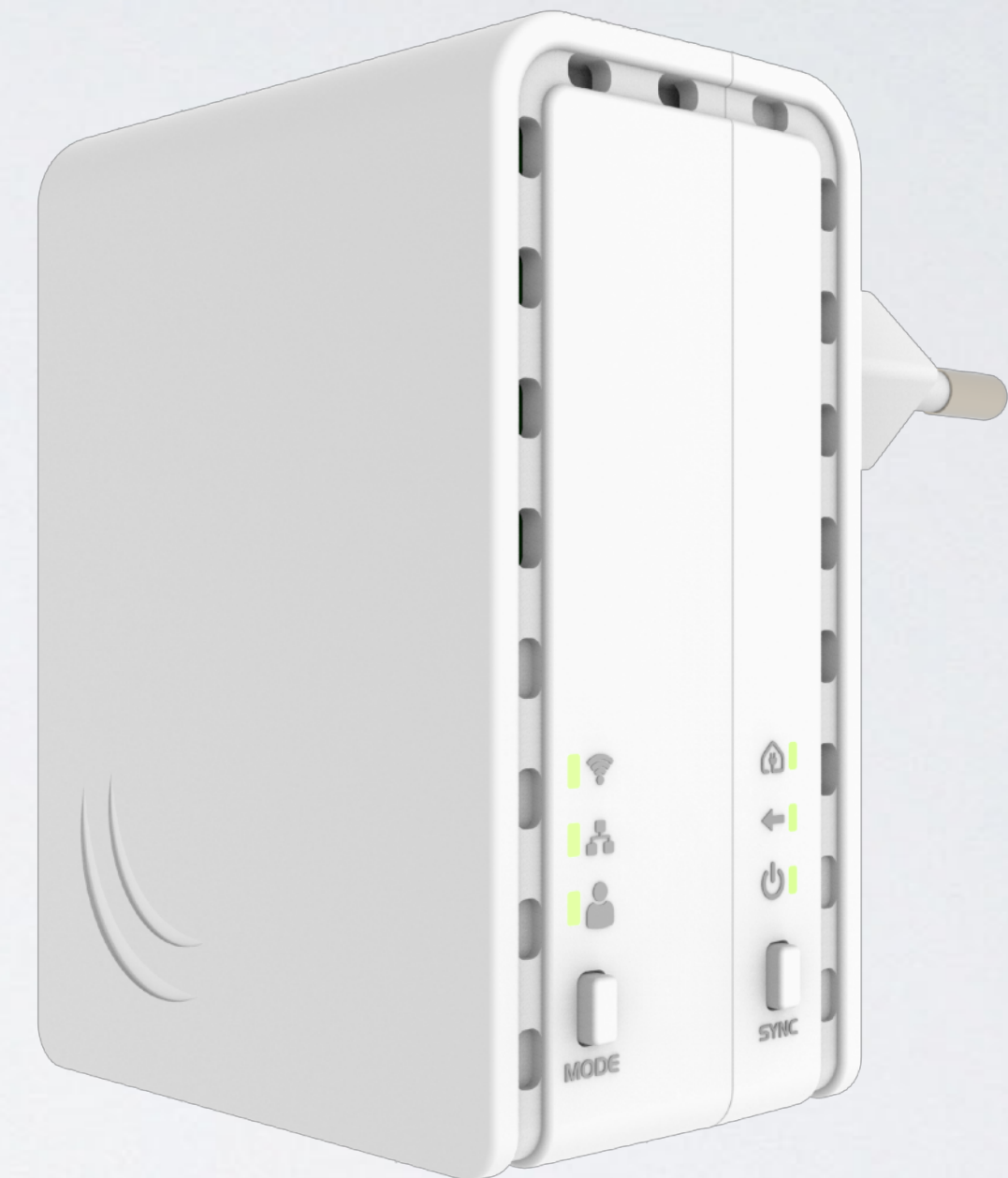
RouterBOARD 4011

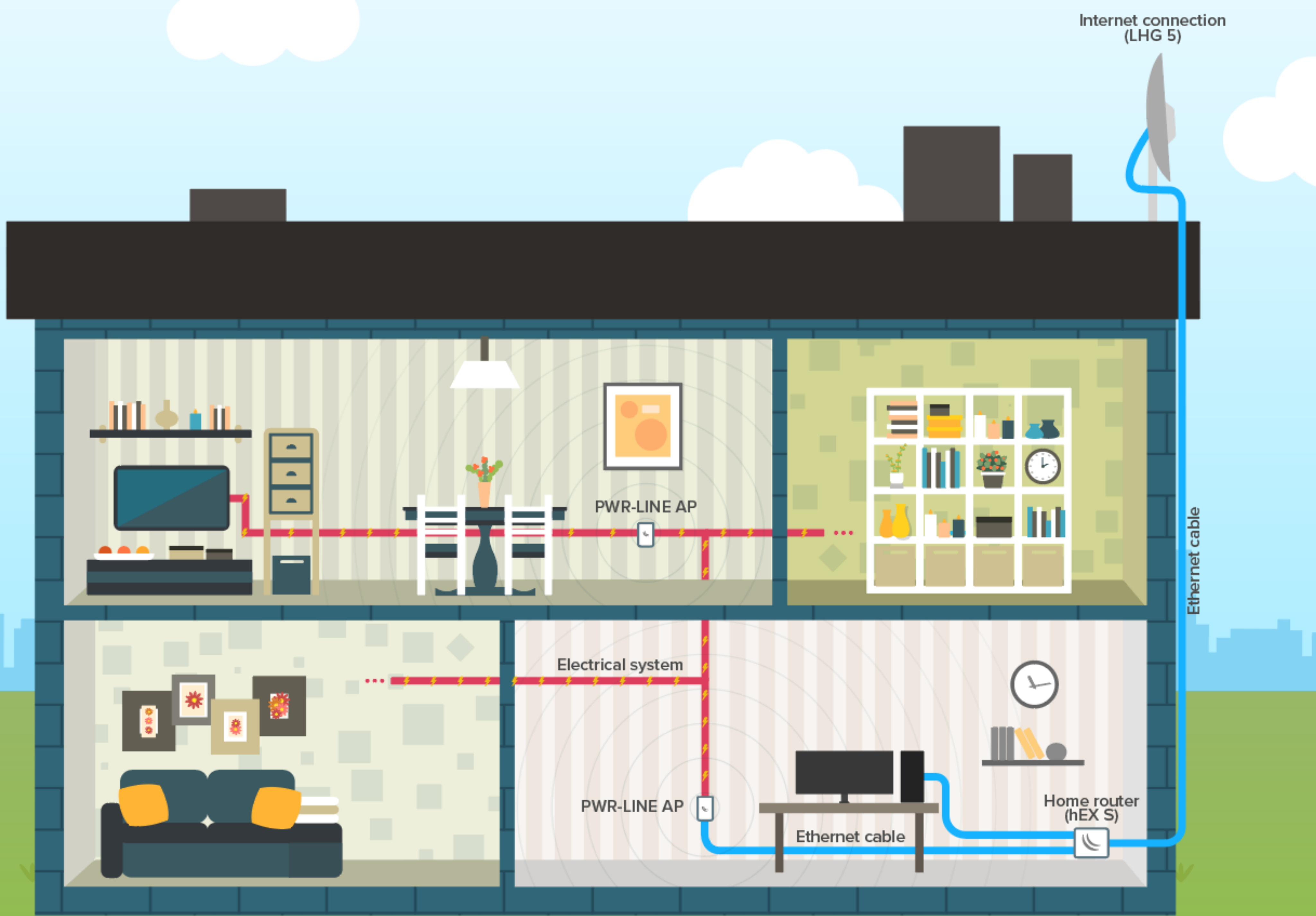


RB4011 wall mount kit - 12\$

PWR-Line AP

- Small AP that directly plugs into socket
- Makes 100 Mbps links with others like it
- Build WiFi network without special cabling
- Automatically pairs with new devices
- Uses HomePlug AV standard



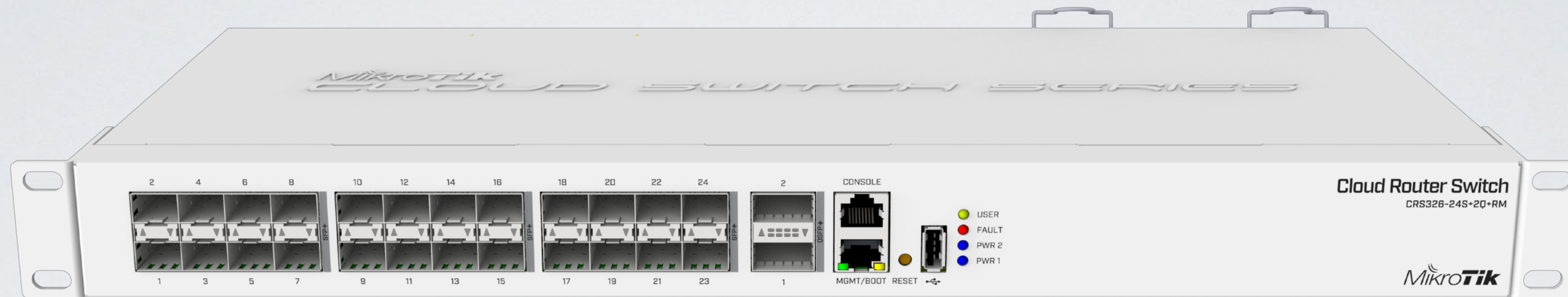


Some of our upcoming products

LtAP

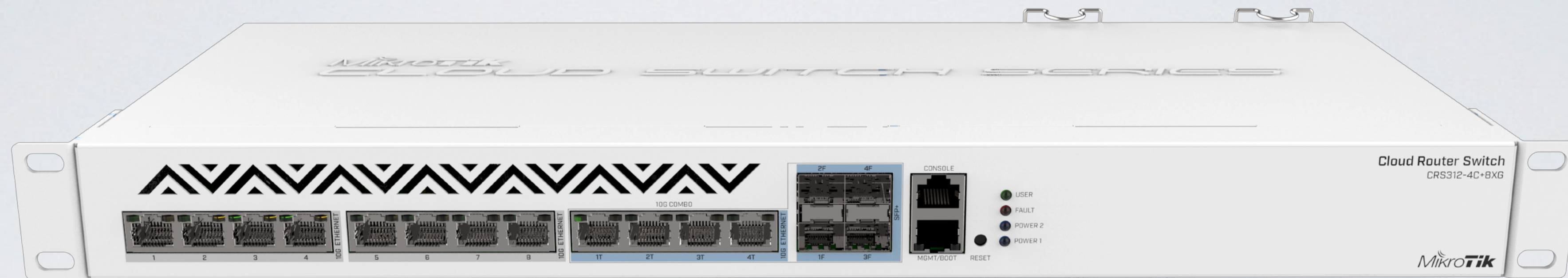
- 2.4 GHz AP in a rugged case
- 2x miniPCle for LTE
- Built-in GPS
- Optional external antenna for GPS and LTE
- 1 Gbps Ethernet interface
- Perfect for outdoor and mobile applications





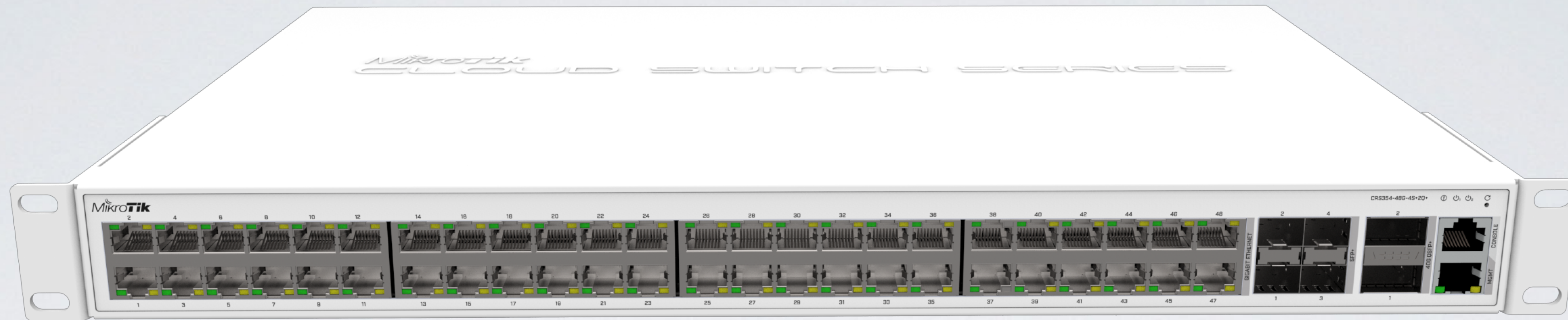
CRS326-24S+2Q+RM

- 24x SFP+ for 10 Gbit connections
- 2x QSFP+ ports for 40 Gbit connections
- RJ45 console and Ethernet ports for management
- USB port, Dual PSU



CRS312-4C+8XG

- 8x 10G Ethernet ports
- 4x 10G Ethernet / 10G SFP+ combo ports
- Console and management ports
- Dual PSU



CRS354-48G-4S+2Q+

- 48x Gigabit ports
- 4x SFP+ for 10 Gbit connections
- 2x QSFP+ ports for 40 Gbit connections
- Dual PSU



CRS354-48P-4S+2Q+

- 48x Gigabit ports with PoE out
- 4x SFP+ for 10 Gbit connections
- 2x QSFP+ ports for 40 Gbit connections

Software related news

60 GHz Improvements

- Major received signal sensitivity improvements
- Maximum reachable distance improvements (up to 4 KM at full speed)
- Decreased re-connection time on lost connection
- PtMP performance improvements
- Added hardware stats [`/interface w60g print stats`]
- Other improvements

Security updates



<https://blog.mikrotik.com>

- Fixed within 24 hours (in April, 2018)
- Affects only devices with no firewall for Winbox services
- MikroTik routers **have** default firewall
- Versions that include fix - v6.40.8 (long-term), v6.42.1 (stable)

MikroTik App iOS / Android

- Auto-Configuration
- Simplified interface
- Questions and suggestions:
support@mikrotik.com

Tele2 15:21 74%

MikroTik
Tik-App iOS 0.16

LOG IN SAVED DISCOVERED

192.168.88.1

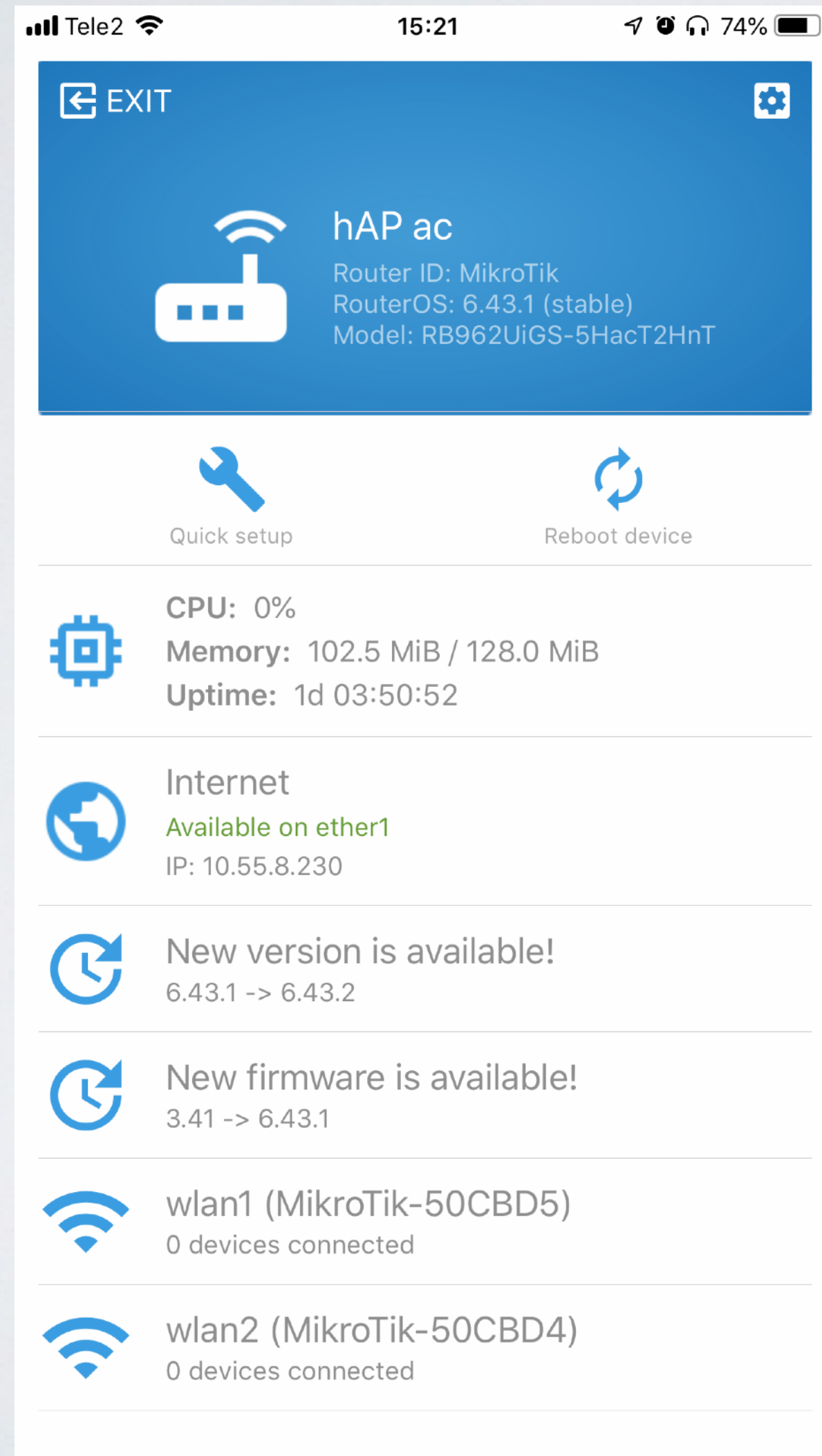
admin

Password

Keep password

SAVE CONNECT

MikroTik App iOS / Android



Tele2 15:21 74%

EXIT

hAP ac
Router ID: MikroTik
RouterOS: 6.43.1 (stable)
Model: RB962UiGS-5HacT2HnT

Quick setup Reboot device

CPU: 0%
Memory: 102.5 MiB / 128.0 MiB
Uptime: 1d 03:50:52

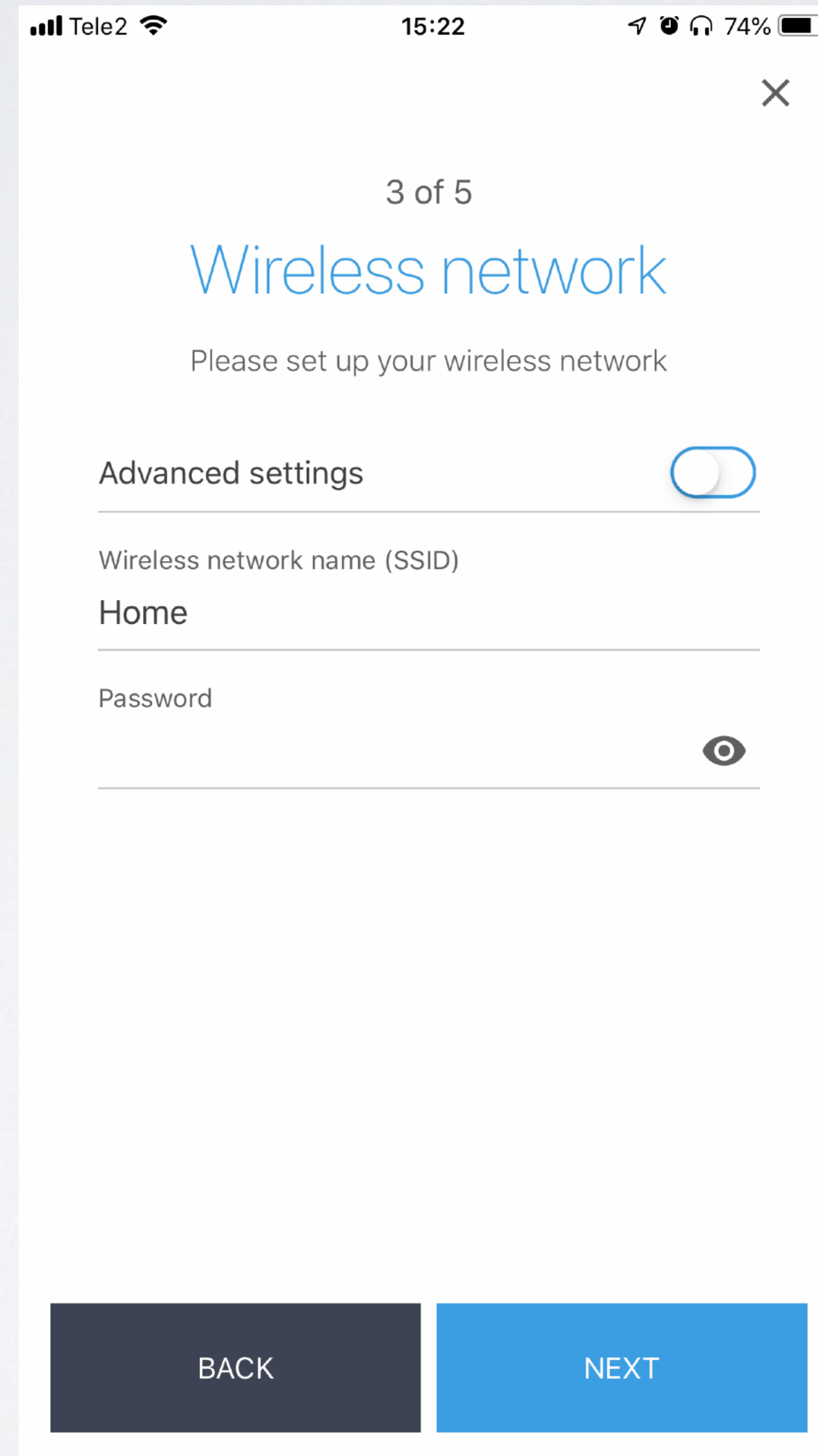
Internet
Available on ether1
IP: 10.55.8.230

New version is available!
6.43.1 -> 6.43.2

New firmware is available!
3.41 -> 6.43.1

wlan1 (MikroTik-50CBD5)
0 devices connected

wlan2 (MikroTik-50CBD4)
0 devices connected



Tele2 15:22 74%

3 of 5

Wireless network

Please set up your wireless network

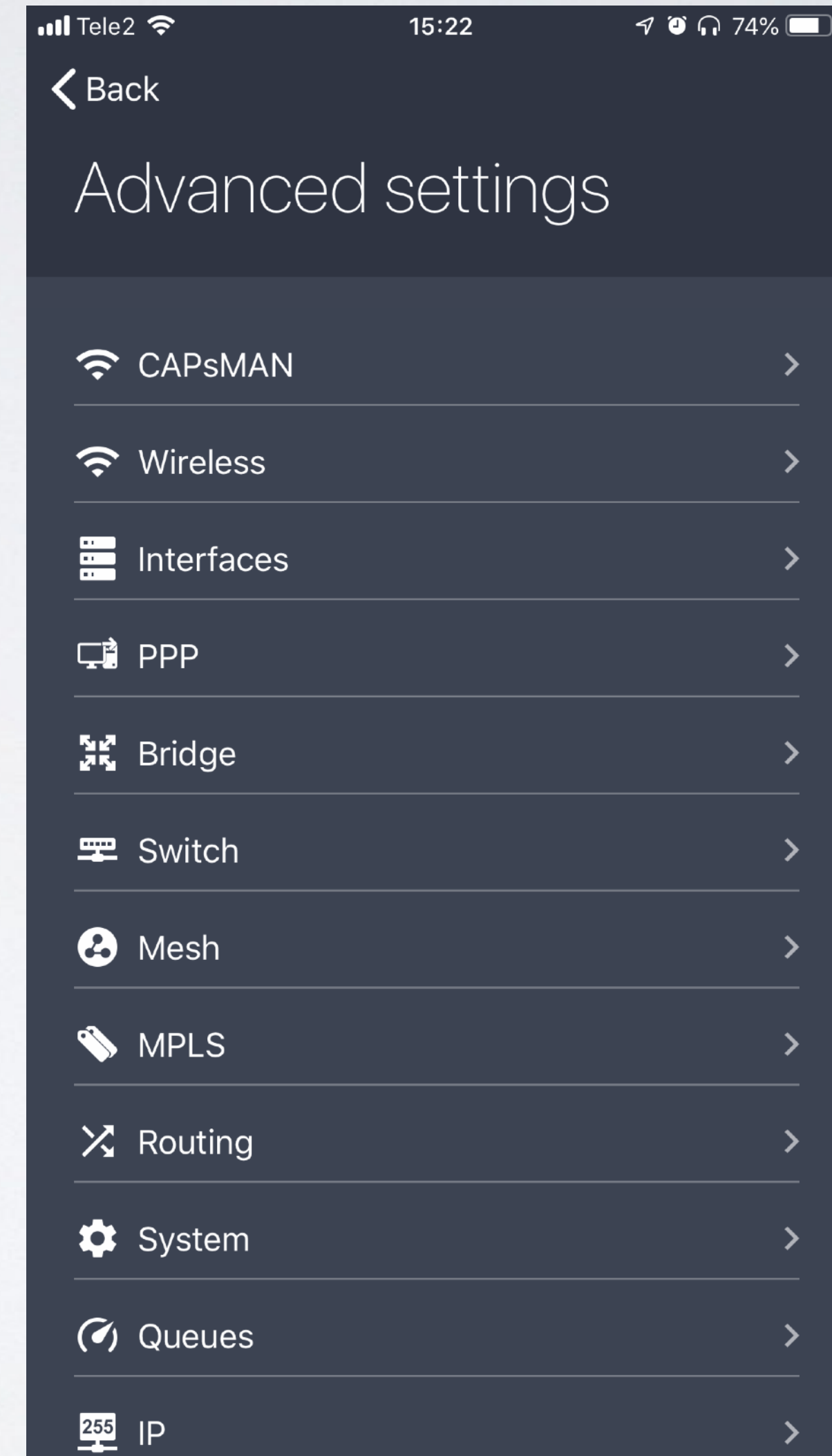
Advanced settings

Wireless network name (SSID)

Home

Password

BACK NEXT



Tele2 15:22 74%

Back

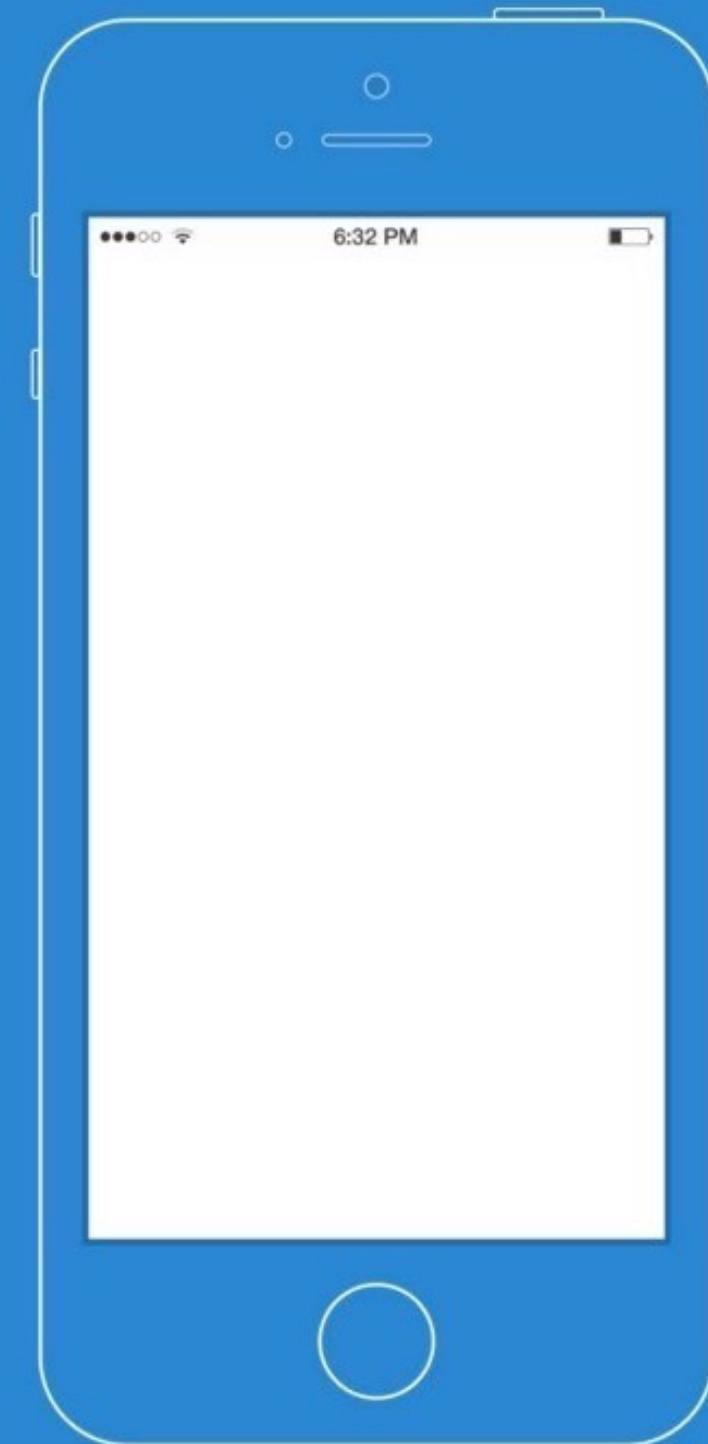
Advanced settings

- CAPsMAN
- Wireless
- Interfaces
- PPP
- Bridge
- Switch
- Mesh
- MPLS
- Routing
- System
- Queues
- IP

MikroTik Tik-App iOS beta invite



TestFlight



Need help?

- Ask a local distributor
- Hire MikroTik consultant
- Read the manual wiki.mikrotik.com
- Email support@mikrotik.com
- Attend a training class or join an Academy class in a University

After the MUM

- All presentations - mum.mikrotik.com
- Videos - youtube.com/mikrotik
- License for paid and voucher registrations will be sent by an e-mail

The logo for MikroTik, featuring the word "MikroTik" in a stylized font. The "i" in "Mikro" has a unique dot consisting of two curved lines. The "T" in "Tik" is bold and blocky. The entire logo is rendered in a dark gray color and is reflected on a light gray surface below it.

MikroTik