MUM UK

What do we do?

We create networks

MikroTik

- Established 1996
- RouterOS created in 1997
- RouterBOARD created in 2002
- First MUM event in Prague 2006
- MUM in Indonesia had over 3100 people
- 25 events in 2017

LATVIA
Iceland
Finland
Sweden
Norway
Russia
Estonia
Lithuania
Den-
mark
Ireland
United
Kingdom
Belarus
Kazakhstan
Nether-
lands
Poland
Belgium
Germany
Ukraine
Luxembourg
Czech Republic
Slovakia
Mol-
dova
France
Switzer-
land
Liecht.
Austria
Hungary
Romania
Slove-
nia
Croatia
Georgia
Azerbaijan
Armenia
Monaco
San
Marino
Bosnia and
Herzego-
vina
Serbia
Andorra
Monte-
negro
Bulgaria
Portugal
Italy
Mace-
donia
Iran
Spain
Vatican City
Al-
ba-
nia
Turkey
Greece
Syria
Iraq

Our products include

RouterOS
built and advanced for more than 20 years

RouterBOARD
Wireless outdoor, indoor, Ethernet routers

CRS
Switches with RouterOS

CSS
Switches with SwOS

no matter where you are

More than 180 MUM events around the world

STAFF

Look for MikroTik staff in the red t-shirts

Karlis (sales)
Viesturs (support)
Kaspars (training)

10:00	Presentations
13:00	Lunch (with vouchers)
14:30	Presentations
16:45	Lottery
17:15	Drinks and socializing

WiFi

SSID: **MUM**

Password: **mikrotik**

MUM Live

www.youtube.com/mikrotik

Special thanks

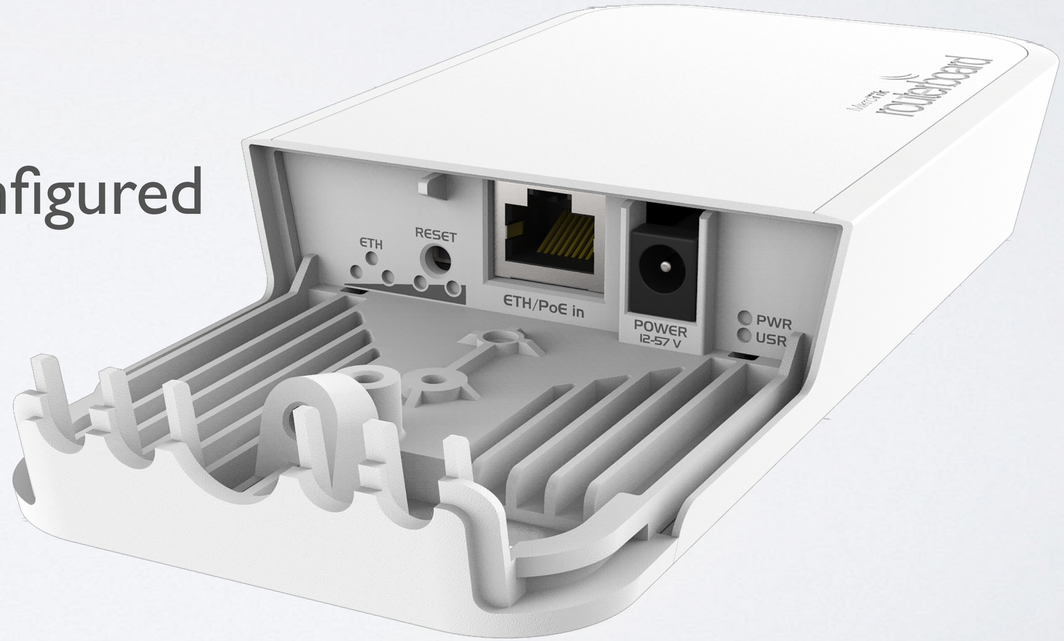
Some of our latest products

1Gbit
over wireless
100m+
range
60GHz
radio
Gigabit
Ethernet
Paired
Secure Link
preconfigured
Powered by
AF/AT/Passive
PoE, DC jack
MikroTik
routerboard
Wireless Wire

Wireless Wire

NOW

- 1 Gbps full duplex without wires
- For distance 200 meters +
- 60 GHz beam-forming
- Paired secure link preconfigured
- IPsec encryption
- $198 kit



Wireless Wire Dish

Two LHG60G devices for long range 1 Gbit

LHG 60G

NOW

- 1 Gbit full duplex (wire speed)
- Works in 60 GHz spectrum
- Familiar LHG design
- Quad-core ARM CPU
- Targeted for 1.5 km and more!
- IPsec encryption
- Kit price $298

SXTsq Lite60

NOW

- 100 Mbps
- SXTsq design
- For distance 200 meters +
- Low cost and low weight
- Unit price $69

MikroTik 60GHz Products

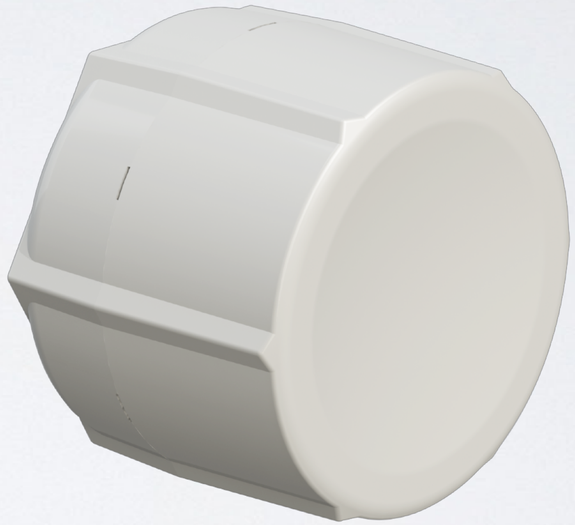
Max distance at full speed

LHG 60G	**1500+ meters**	**LHG 60G**
wAP 60G	**200+ meters**	**wAP 60G (AP)**
LHG 60G	**800+ meters**	**wAP 60G AP**
LHG Lite60	**800+ meters**	**wAP 60G AP**
SXTsq Lite60	**200+ meters**	**wAP 60G AP**

SXT LTE kit

NOW

- Dual SIM
- LTE card built in
- 2x Ethernet
- PoE output on ether2
- International LTE bands 1,2,3,7,8,20,38 and 40
- US bands 2,4,5 and 12
- Kit price $129



LtAP mini

NOW

- 2.4 GHz AP in a rugged case
- miniPCIe for LTE
- Built-in GPS
- Optional external antennas for GPS and LTE
- Serial port
- Perfect for outdoor and mobile applications

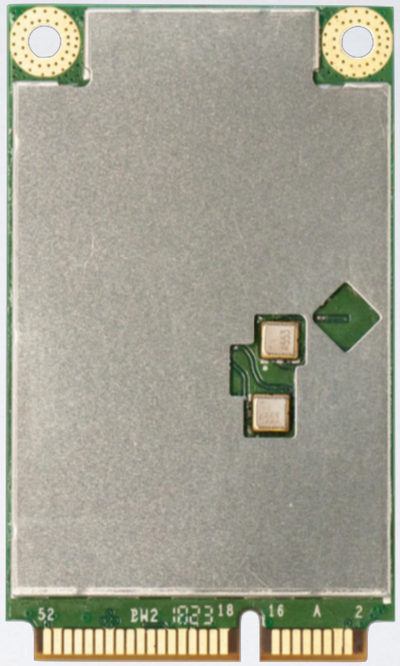
Available now

- 89$ without the LTE module
- 129$ with the LTE (US version available) module

R11e-4G

NOW

- 4G modem
- Category 4 (150Mbps/ 50Mbps)
- 3,7,20,31 FDD bands
- 41n,42,43 TDD bands



hAP ac²

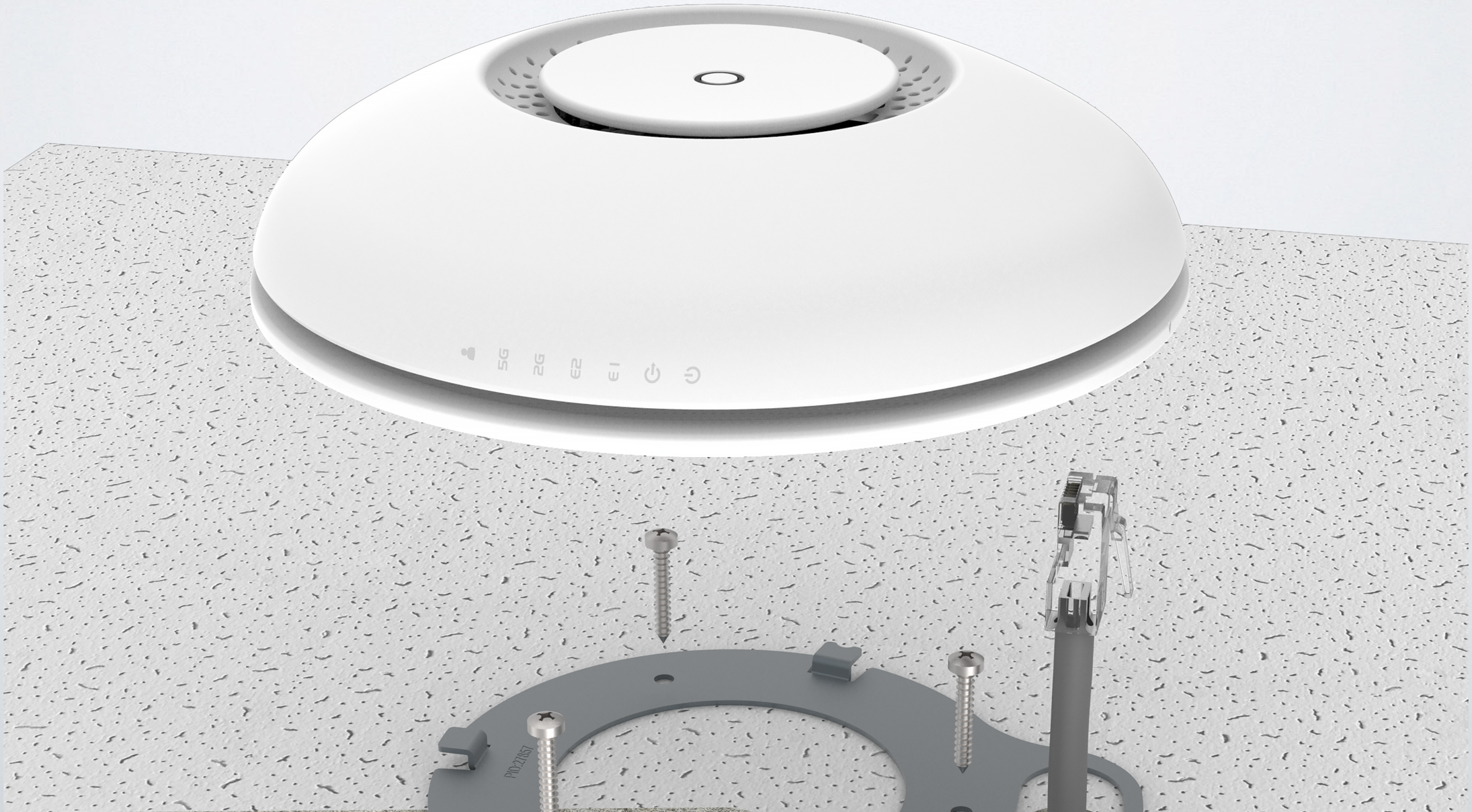
NOW

- Gigabit ports
- Dual chain, dual band
- Wall mount or stand
- Same small size as "lite" model
- Kit price $69

cAP ac

NOW

- Dual band, dual chain
- Gigabit port for 802.11ac speeds
- Two Ethernet ports
- PoE out
- Two cases included
- IPsec encryption
- Kit price $69


5G
2G
E2
E1

RouterBOARD 4011

NOW

RouterBOARD 4011

NOW

- 4 core Cortex A15 CPU
- 10x Gigabit ethernet ports and 1x SFP+ (10 Gpbs)
- IPsec hardware encryption
- 1GB RAM
- PoE out
- Price $199

RouterBOARD 4011

NOW

RouterBOARD 4011

NOW

- 2GHz 2 chains, 802.11 b/g/n
- 5GHz 4 chains, 802.11 ac
- 1733 Mbps + 300 Mbps
- 160 MHz channel width
- 360 omni directional antennas
- Price $249

hEX S

NOW

- Dual-core 880 MHz
- 256 MB of RAM
- Full size USB
- 1.25 Gbps SFP
- 10V - 57V input and PoE
- IPsec encryption
- Kit price $69

hEX S

NOW

SFP 1 2 3 4 5
MikroTik RouterBOARD
hEXs
Passive/af/at
2
3
4
5
Power
12-57 V DC
SFP
PoE in
PoE out
INTERNET
LAN

SXTsq Lite 2

NOW

- 2 GHz CPE
- Slim design
- Low price
- Kit price $39

LDF 2

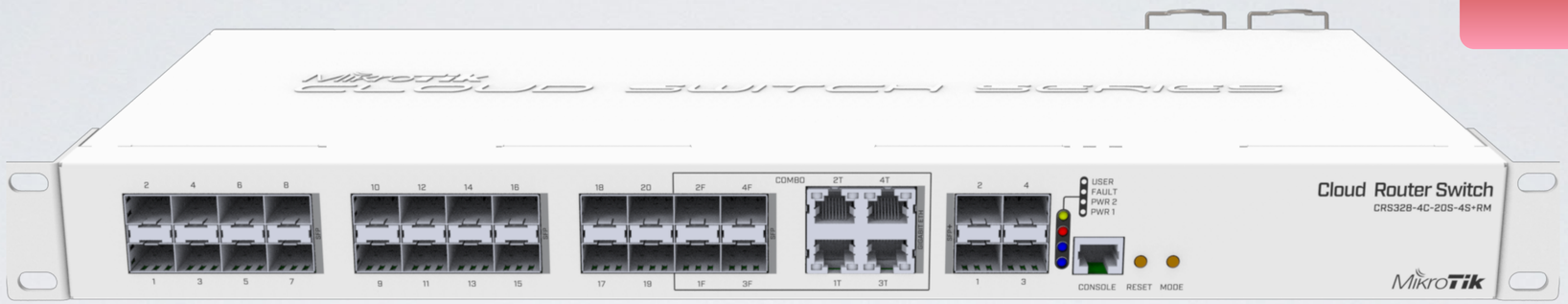
NOW

- 2 GHz CPE
- Mounts in regular satellite dish
- Ultra long range
- Kit price $39

mANTBox2 12s

- 2 GHz sector antenna
- 12 dBi
- RouterBOARD built-in

NOW



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

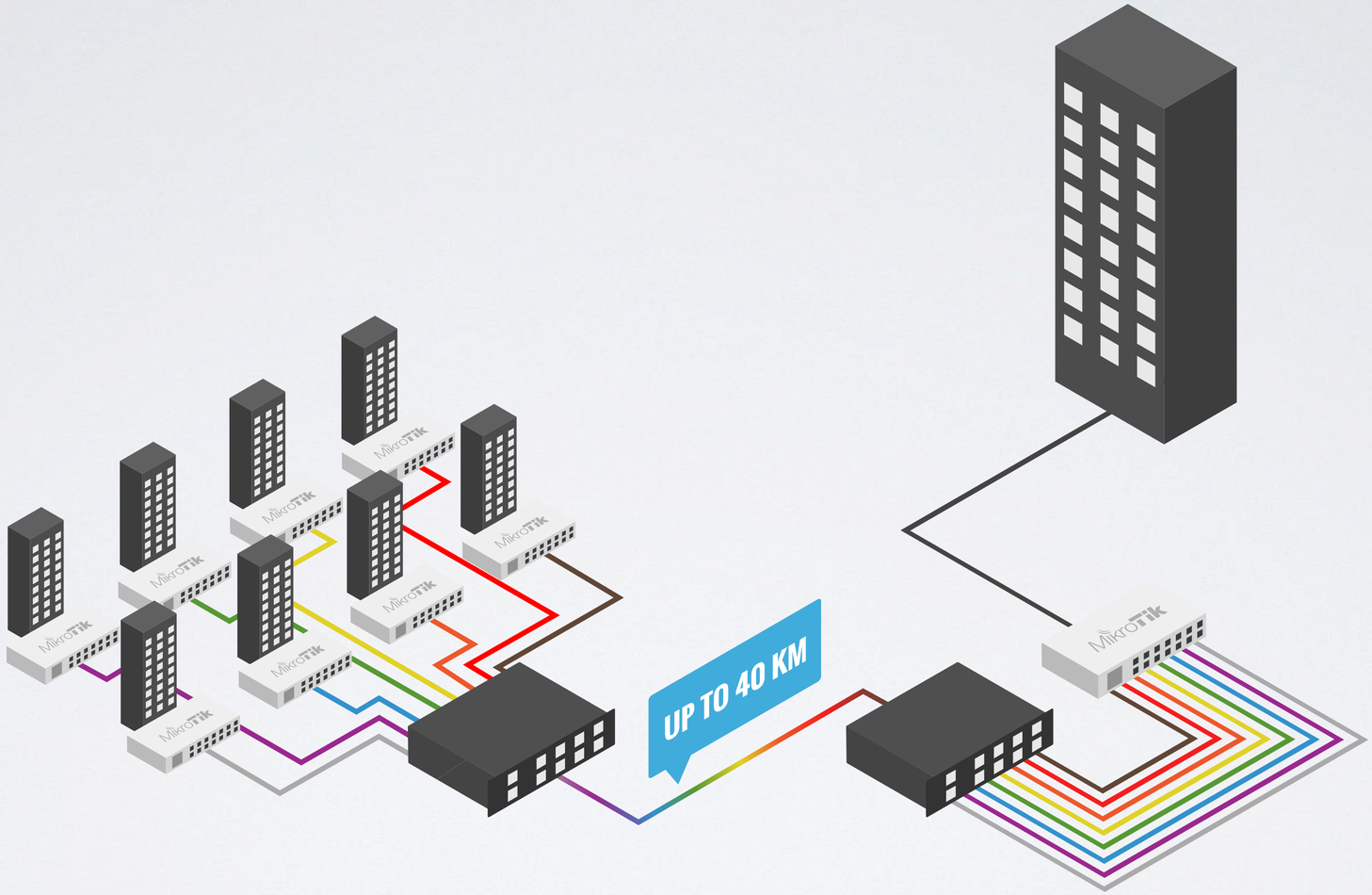
- 20x SFP ports
- 4x ETH/SFP combo ports
- 4x SFP+ ports
- Dual PSU
- Price $369

CWDM

NOW

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

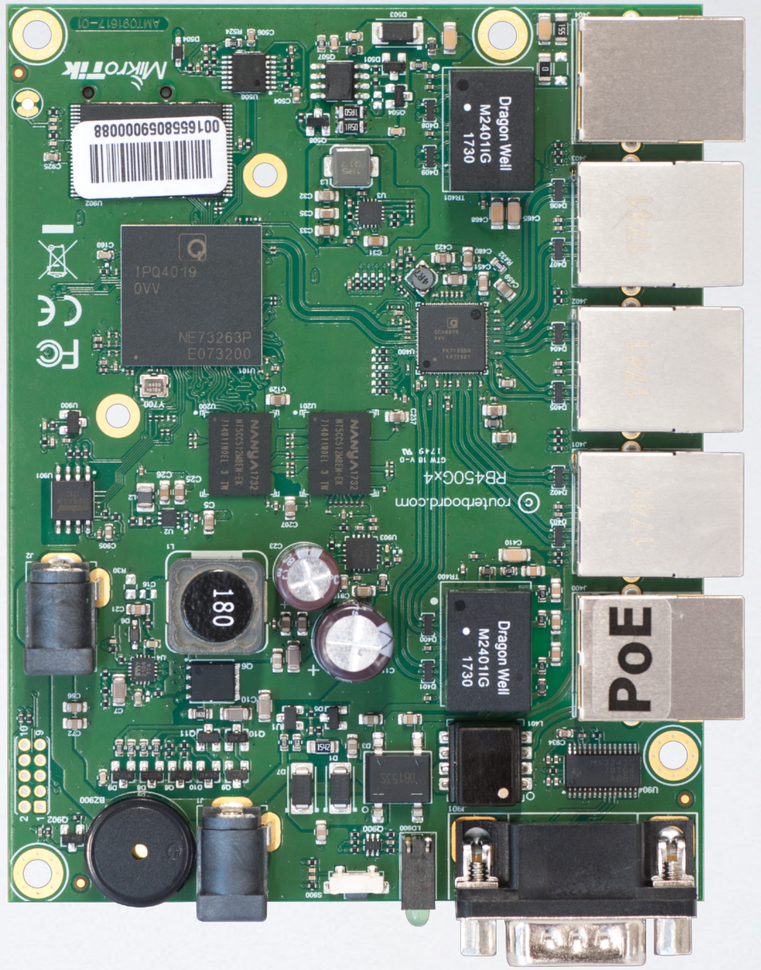
CWDM



450Gx4

NOW

- Quad core 716 MHz
- 1 GB of RAM
- IPsec encryption
- PoE out on ether5
- microSD
- 10V - 57V input by two power jacks
- Price $99



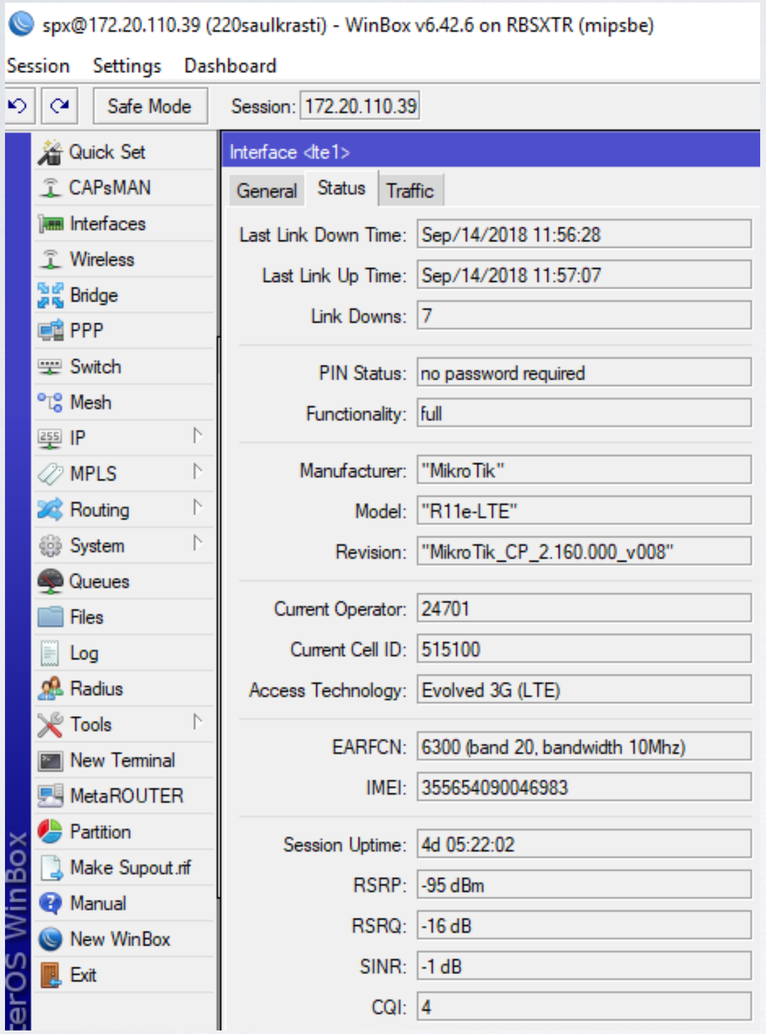
Some of our upcoming products

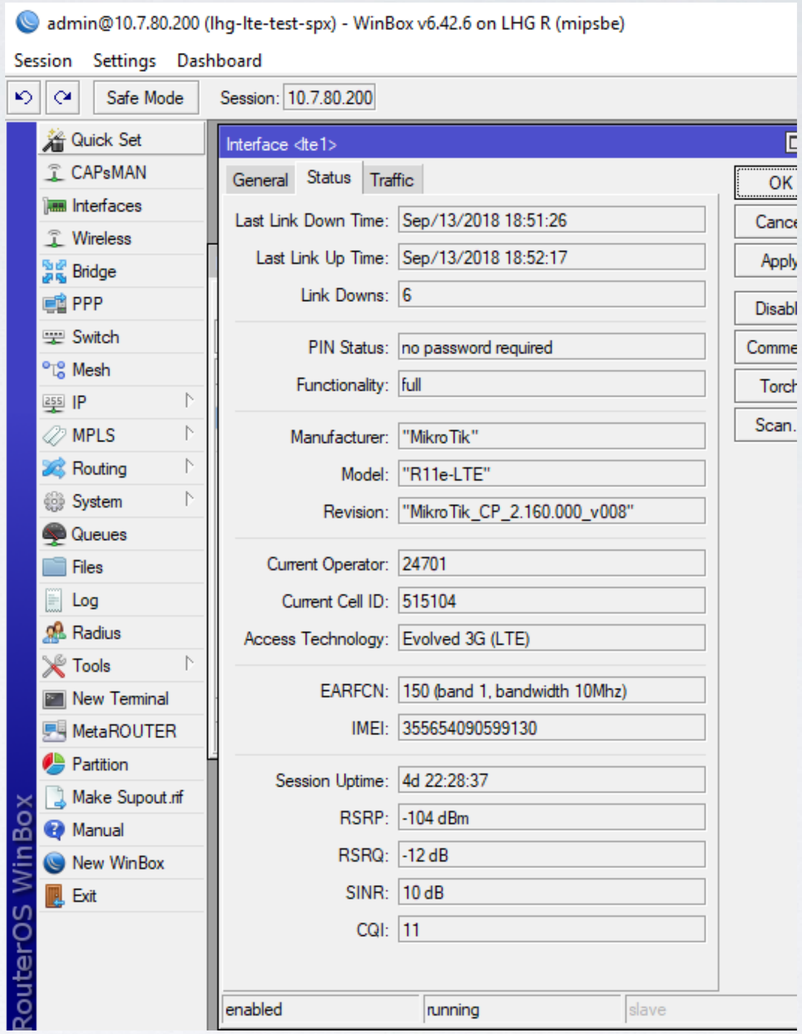
LHG LTE kit

- LTE card built in
- 17 dBi, 25° beam width
- Category 4 LTE modem (150Mbps/50Mbps)
- 3G - R7/R8
- For extremely remote locations

LHG LTE kit

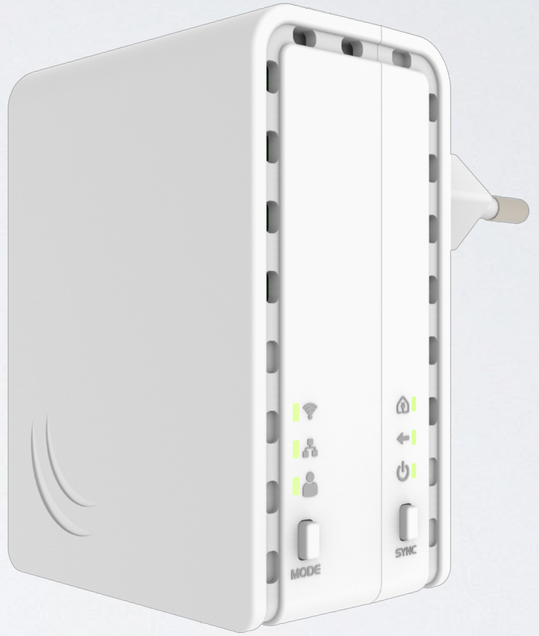
LHG LTE kit


spx@172.20.110.39 (220saulkrasti) - WinBox v6.42.6 on RBSXTR (mipsbe)
Session Settings Dashboard
Safe Mode
Session: 172.20.110.39
Quick Set
CAPsMAN
Interfaces
Wireless
Bridge
PPP
Switch
Mesh
IP
MPLS
Routing
System
Queues
Files
Log
Radius
Tools
New Terminal
MetaROUTER
Partition
Make Supout.rif
Manual
New WinBox
Exit
RouterOS WinBox
Interface <lte1>
General Status Traffic
Last Link Down Time: Sep/14/2018 11:56:28
Last Link Up Time: Sep/14/2018 11:57:07
Link Downs: 7
PIN Status: no password required
Functionality: full
Manufacturer: "MikroTik"
Model: "R11e-LTE"
Revision: "MikroTik_CP_2.160.000_v008"
Current Operator: 24701
Current Cell ID: 515100
Access Technology: Evolved 3G (LTE)
EARFCN: 6300 (band 20, bandwidth 10Mhz)
IMEI: 355654090046983
Session Uptime: 4d 05:22:02
RSRP: -95 dBm
RSRQ: -16 dB
SINR: -1 dB
CQI: 4


admin@10.7.80.200 (lhg-lte-test-spx) - WinBox v6.42.6 on LHG R (mipsbe)
Session Settings Dashboard
Safe Mode
Session: 10.7.80.200
Quick Set
CAPsMAN
Interfaces
Wireless
Bridge
PPP
Switch
Mesh
IP
MPLS
Routing
System
Queues
Files
Log
Radius
Tools
New Terminal
MetaROUTER
Partition
Make Supout.rif
Manual
New WinBox
Exit
RouterOS WinBox
Interface <lte1>
General Status Traffic
OK
Last Link Down Time: Sep/13/2018 18:51:26
Last Link Up Time: Sep/13/2018 18:52:17
Link Downs: 6
PIN Status: no password required
Functionality: full
Manufacturer: "MikroTik"
Model: "R11e-LTE"
Revision: "MikroTik_CP_2.160.000_v008"
Current Operator: 24701
Current Cell ID: 515104
Access Technology: Evolved 3G (LTE)
EARFCN: 150 (band 1, bandwidth 10Mhz)
IMEI: 355654090599130
Session Uptime: 4d 22:28:37
RSRP: -104 dBm
RSRQ: -12 dB
SINR: 10 dB
CQI: 11
enabled
running
slave

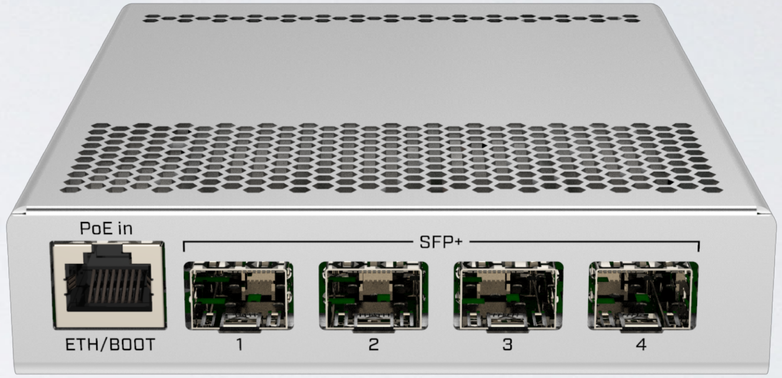
PWR-Line AP

- 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



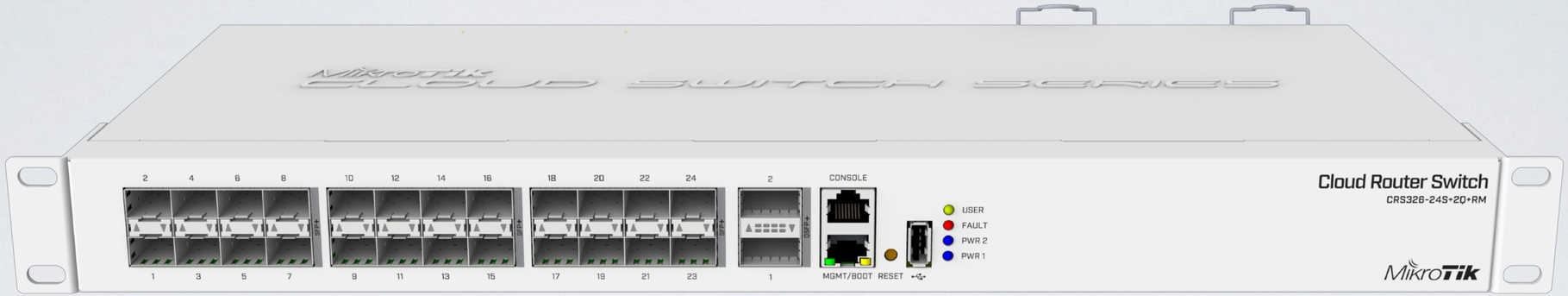
CRS305-1G-4S+IN

- 4x SFP+ ports
- 1x Gigabit Ethernet
- Metallic enclosure
- Dual DC jacks



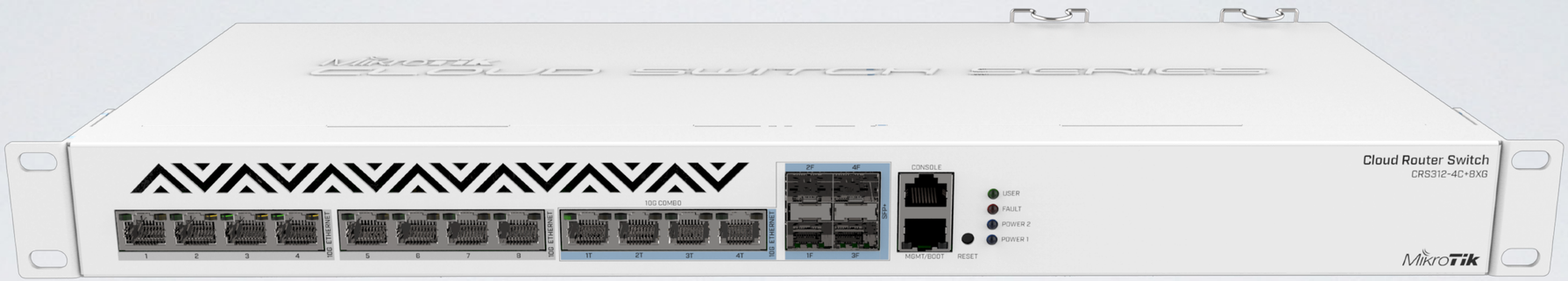
CRS309-1G-8S+PC

- 8x SFP+ ports
- 1x Gigabit Ethernet
- Passive cooling (and silent) case



CRS326-24S+2Q+RM

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

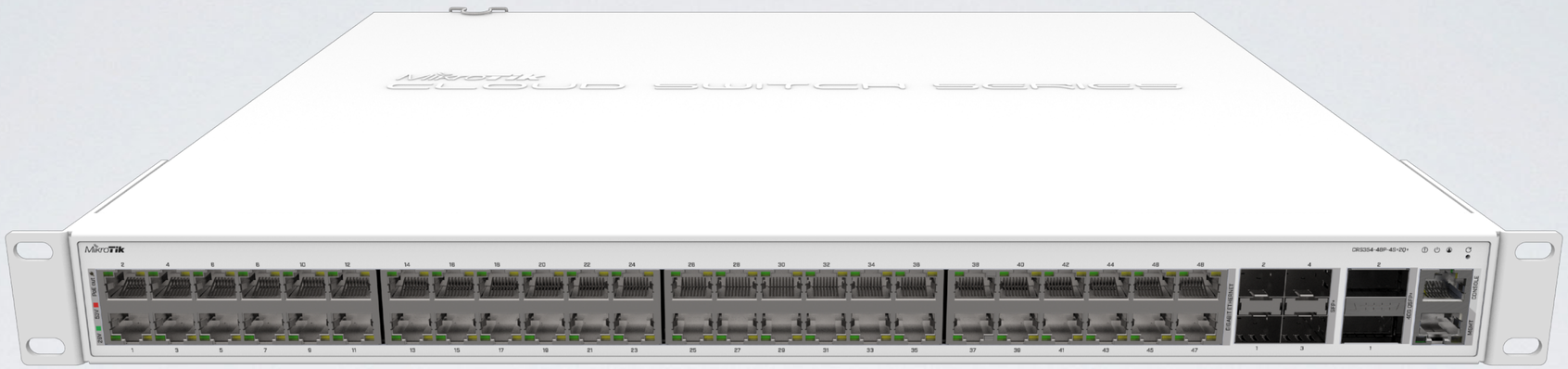


CRS312-4C+8XG

- 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

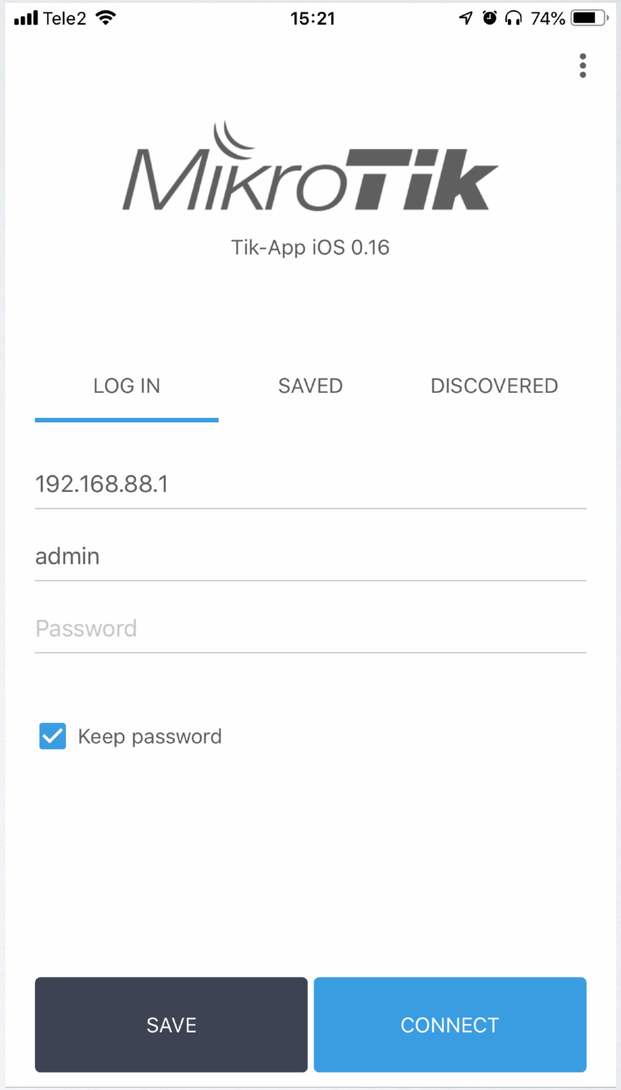


CRS354-48P-4S+2Q+

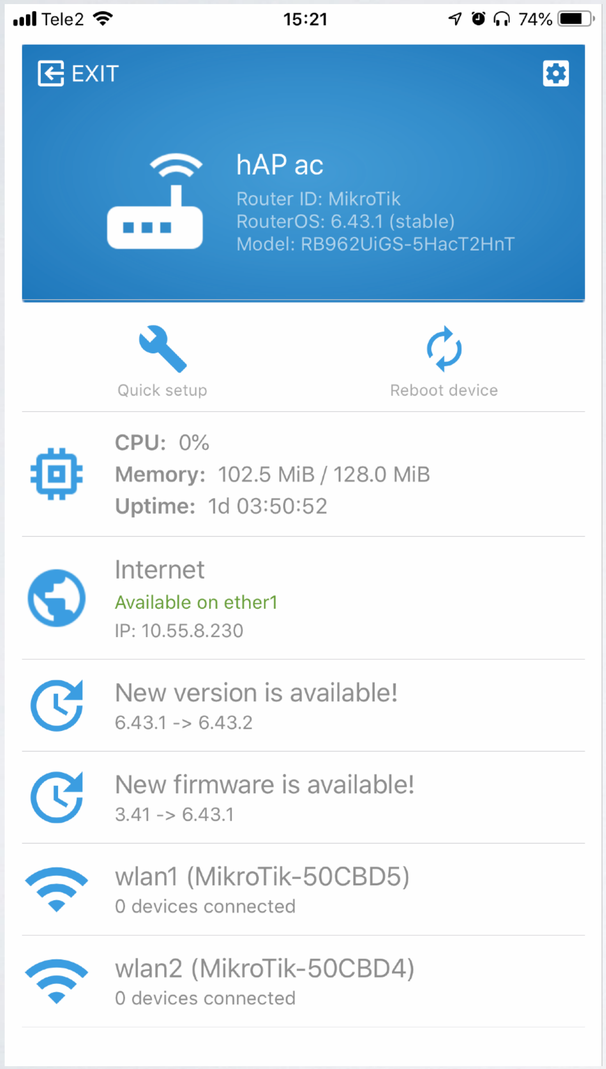
- 48x Gigabit ports with PoE out
- 4x SFP+ for 10 Gbit connections
- 2x QSFP+ ports for 40 Gbit connections

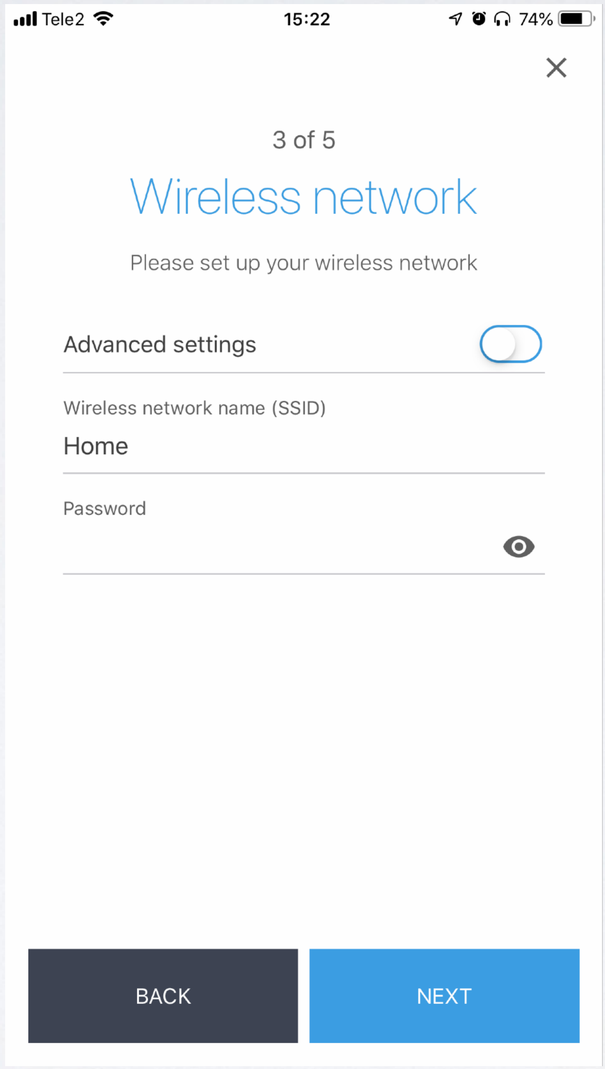
MikroTik App iOS

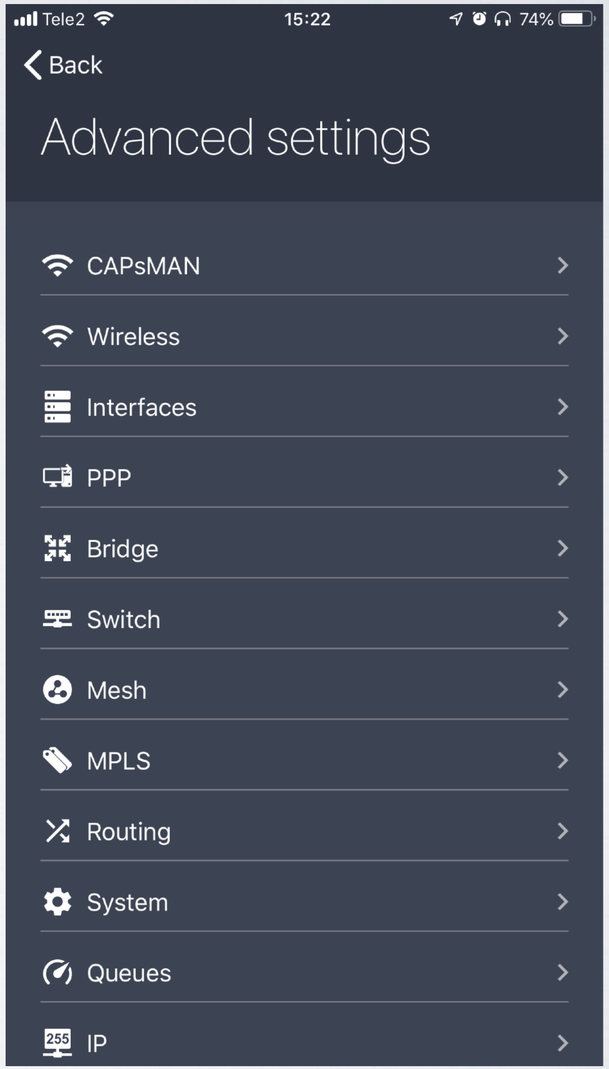
- Public beta version coming soon
- Auto-configuration
- Simplified initial setup of the router
- Feedback: support@mikrotik.com



MikroTik App iOS







60GHz Improvements

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

60GHz Improvements

== August 10 v6.42.7 ==

- Stability and rate search improvements
- PtMP improvements

== June 27 v6.42.5 ==

- Stability improvements
- w60g SNMP improvements

60GHz Improvements

== September 20 v6.43.2 ==

- Major received signal sensitivity improvements
- LHG60G can reach up to 4000 m distances (depending on used frequency)
- PtMP improvements

== September 10 v6.43 ==

- Added beam forming stats counters

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 and 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

MikroTik