

We will be back at 14:15

MUM Netherlands

November 2016



MUM Netherlands

November 2016

MikroTik

- Established 1996
- RouterOS created in 1997
- RouterBOARD created in 2002
- First MUM event in Prague 2006
- Biggest MUM in 2015, Indonesia - 2500+ people
- More than 180 employees


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

More than 130 MUMs all Around the World



MikroTik at the MUM

- Karlis Oga (sales)
- Normunds Rustanovics (support)
- Sergejs Boginskis (support, training)



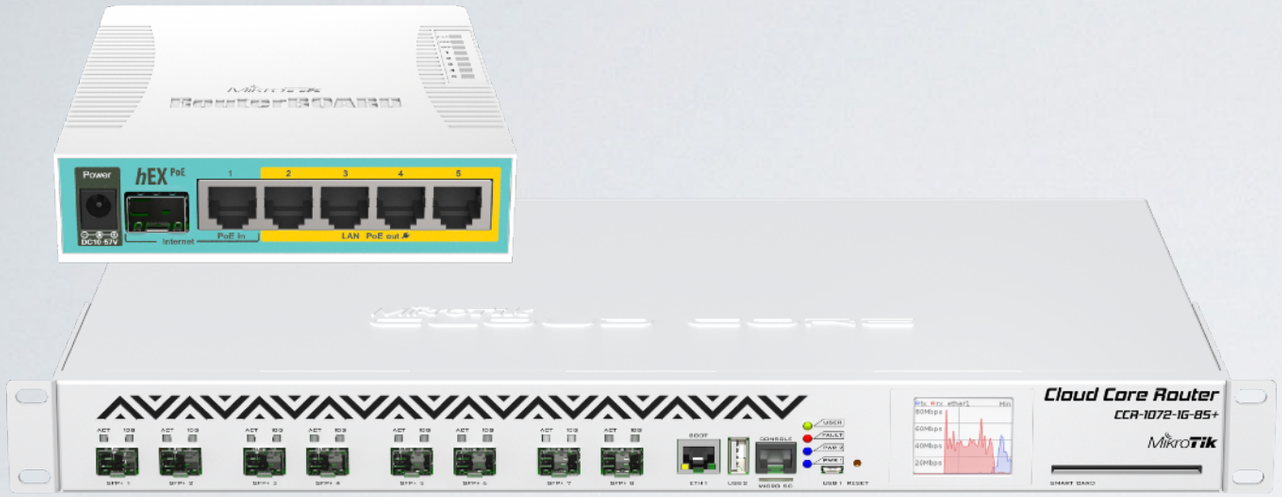
Schedule

09:00 - 12:15	Presentations
12:45	Lunch at 1st floor (with vouchers)
14:15 - 17:15	Presentations
17:15	Raffle (lottery)

mt.lv/agenda

MUM live

www.youtube.com/mikrotik



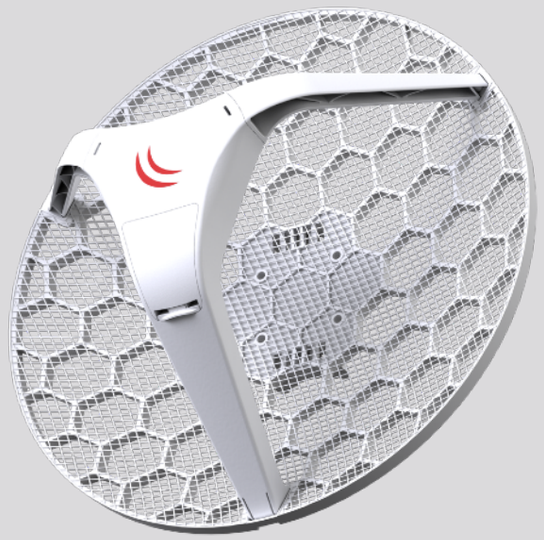
Ethernet



Wireless for home and office





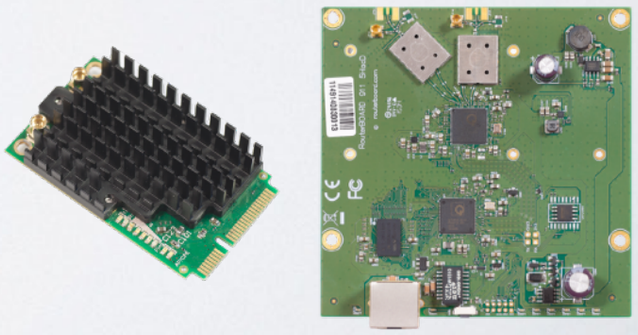


Wireless





Switches



RouterBOARDs

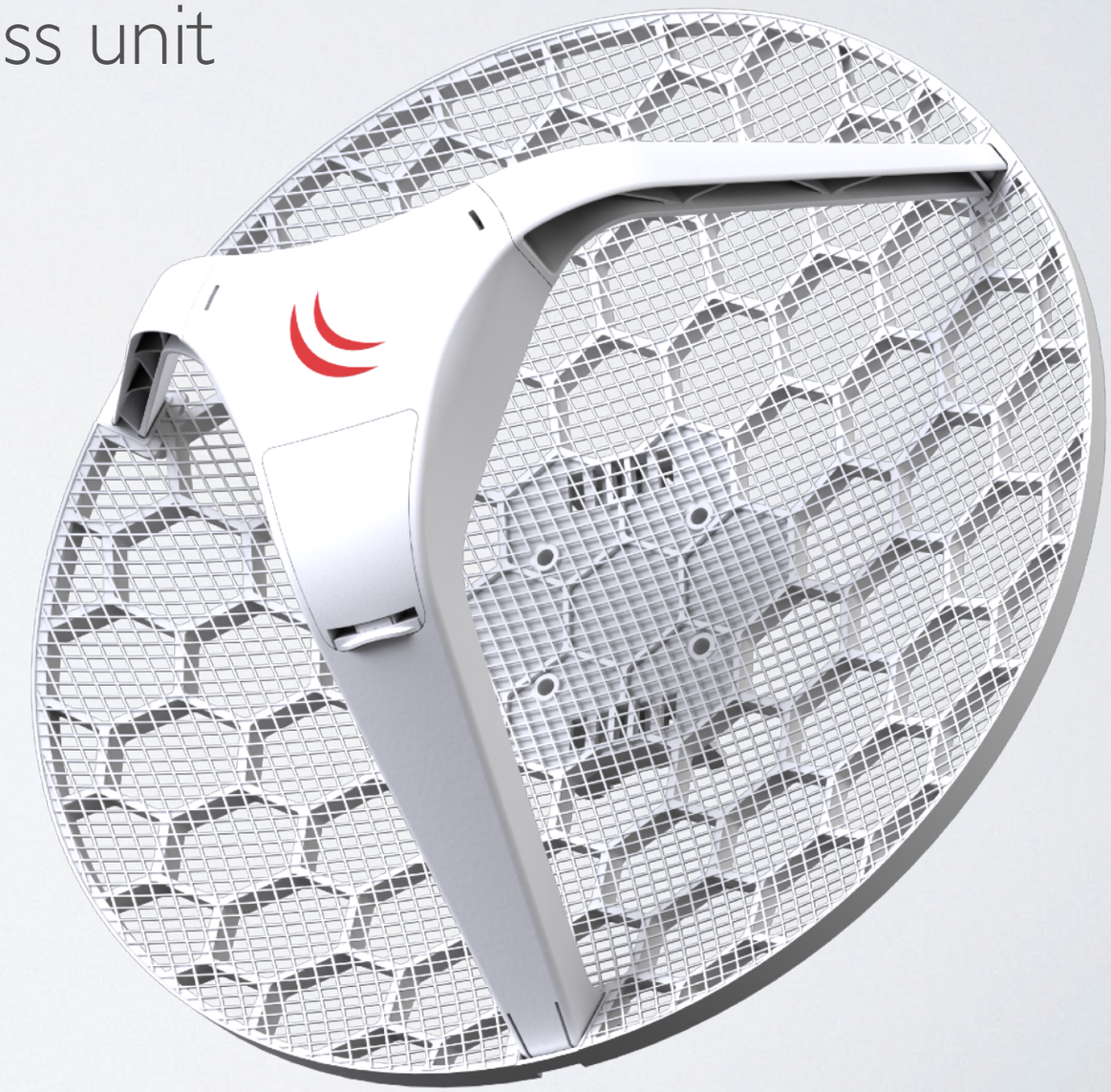
NEW PRODUCTS

now

LHG 5

Light Head Grid

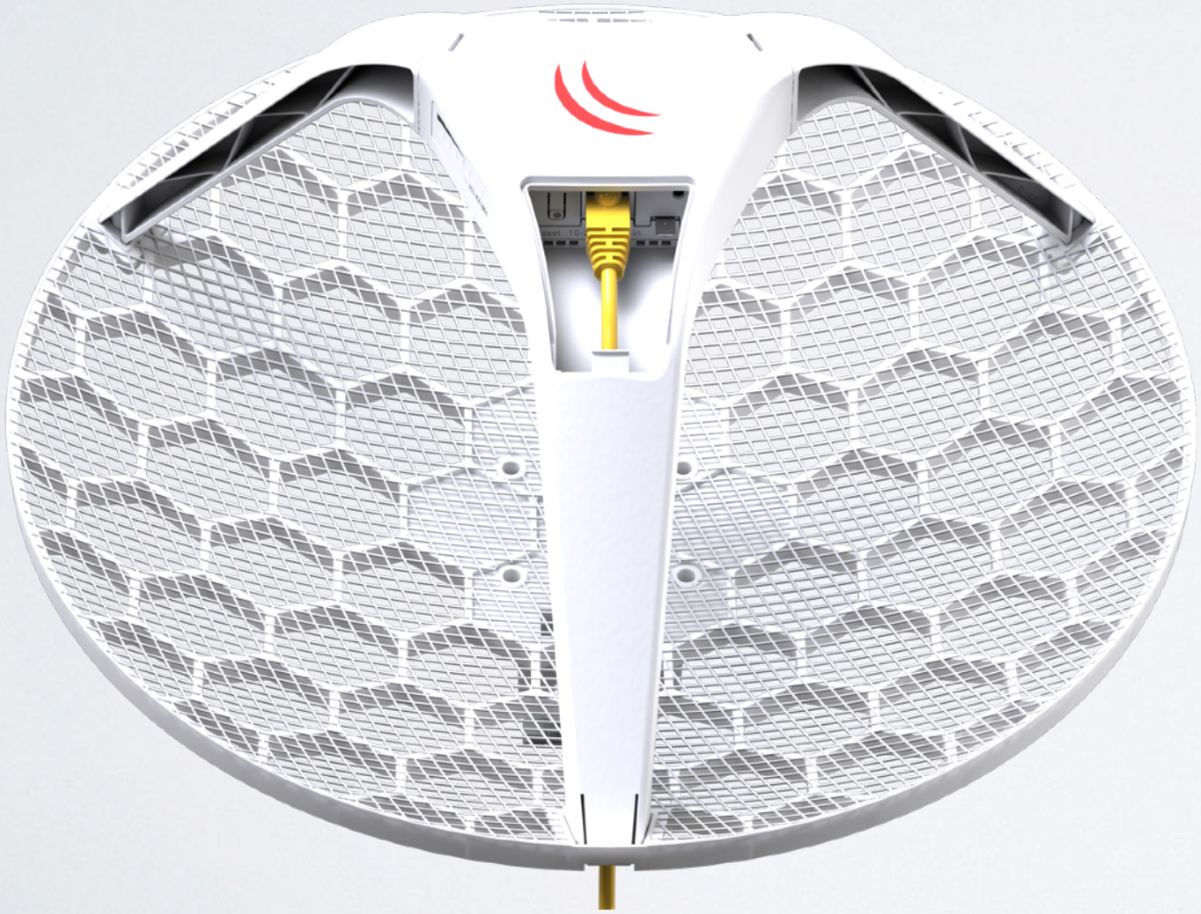
- 24.5 dBi antenna
- Antenna is built into wireless unit
- 802.11a/n dual chain
- Very affordable



now

LHG 5

Light Head Grid





now

quickMOUNT pro LHG

- Wall or pole mount adapter
- ±70° horizontal adjustment
- ±30° vertical adjustment
- Special plastic composite material - anvilNITE (TM)



now

SXT LTE

- LTE 3 category modem
- 100Mbps download and 50 Mbps upload
- LTE FDD bands 3 (1800MHz)
- miniSIM slot



2017

wAP LTE kit

- 2GHz wireless
- LTE antennas
- LTE modem within minipci-e
- weatherproof case
- indoor, outdoor, mobile operation



now

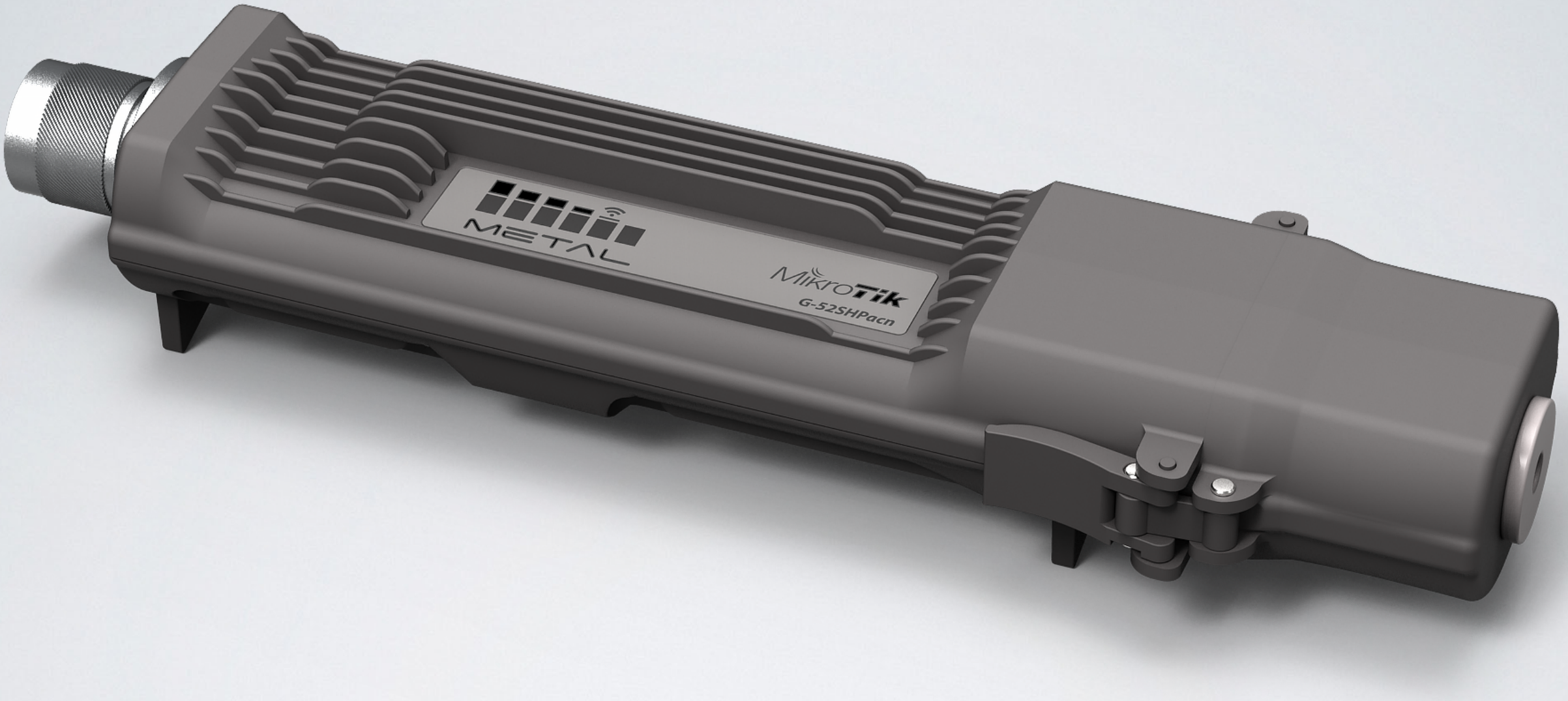
Groove 52 ac



- ac update for the popular Groove model

now

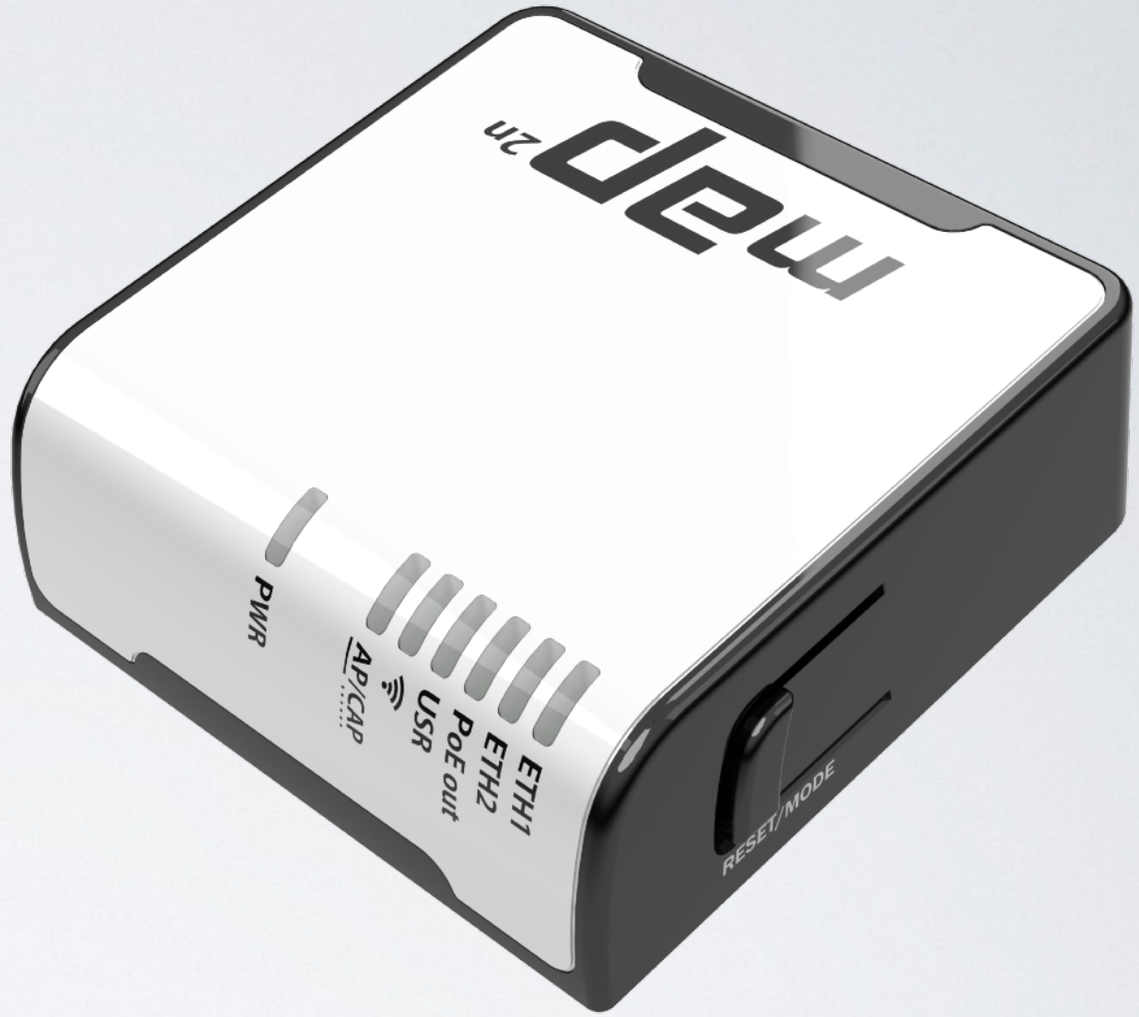
Metal 52 ac



- Waterproof, rugged with a super high output power
- 802.11 b/g/n and 802.11 a/n/ac, 1xGigabit Ethernet

now

mAP

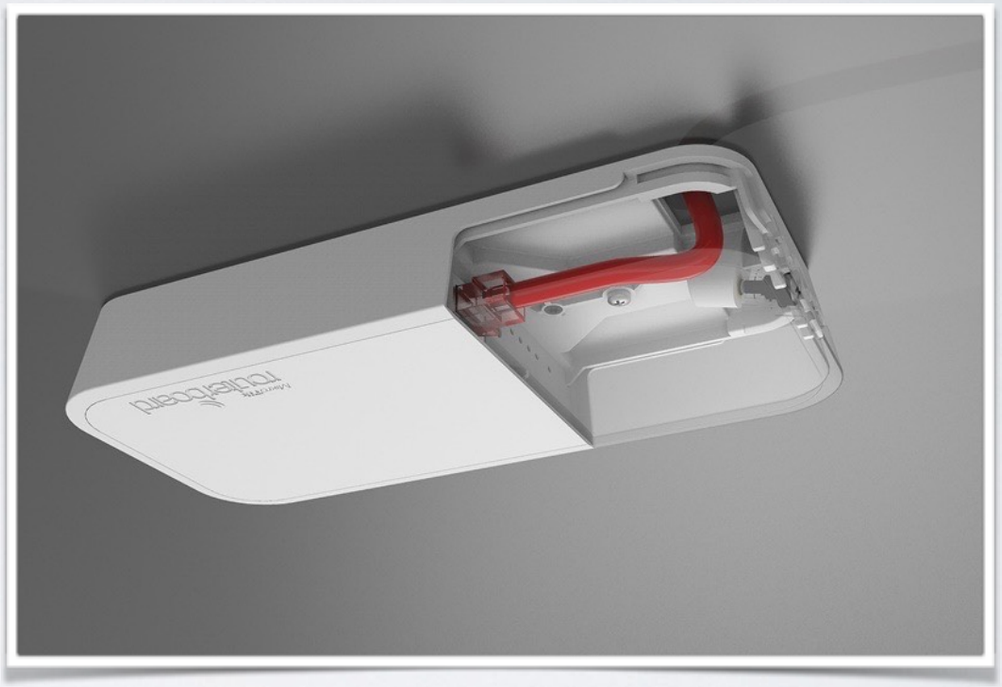


- update for small AP, dual chain 2.4GHz wireless
- 802.3 af/at support, PoE out!

now

wAP ac





- Wall or ceiling mountable
- Use for hotel, office, etc.
- Gigabit and 802.11ac
- Dual band (simultaneous 2.4GHz and 5GHz)

now

cAP

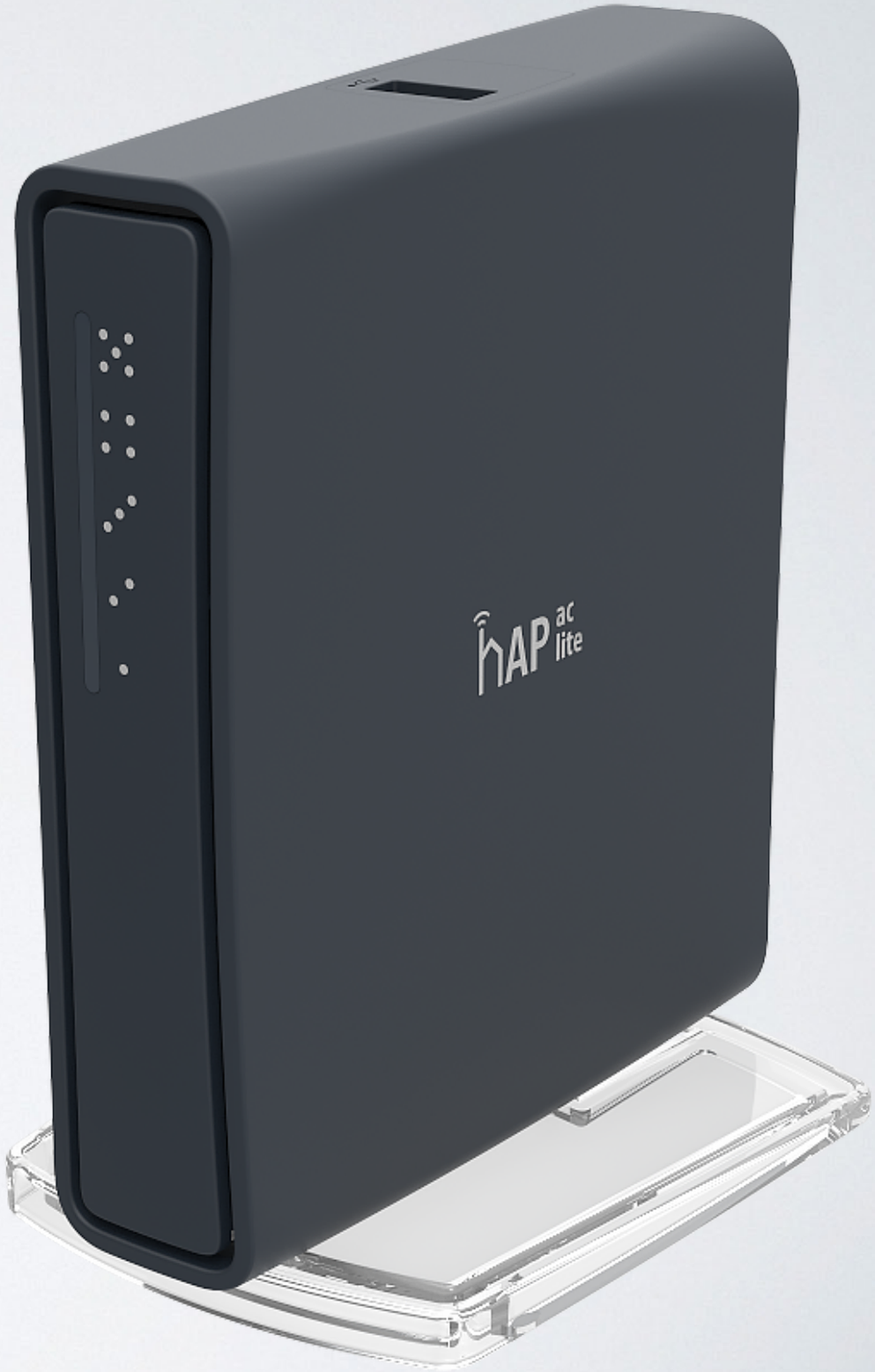


- ceiling AP, dual chain 2.4GHz wireless
- 802.3 af/at support

now

hAP ac lite





now

hAP ac lite

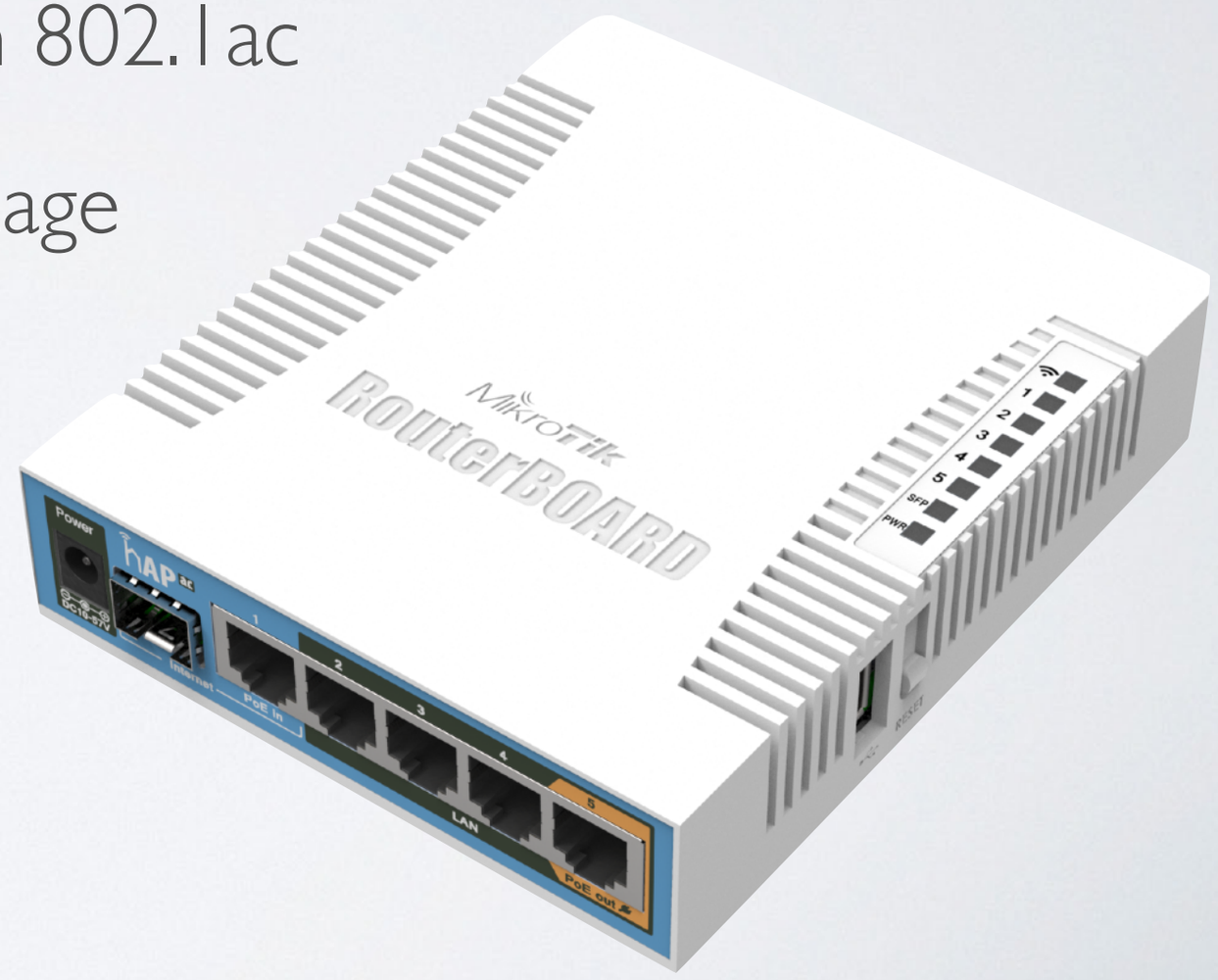
- Dual concurrent home AP
- 2.4GHz high power 2 chain 802.11n
- 5GHz high power 1 chain 802.1ac
- 5x 100Mbps ports
- 650MHz CPU
- USB port for 3G/4G



now

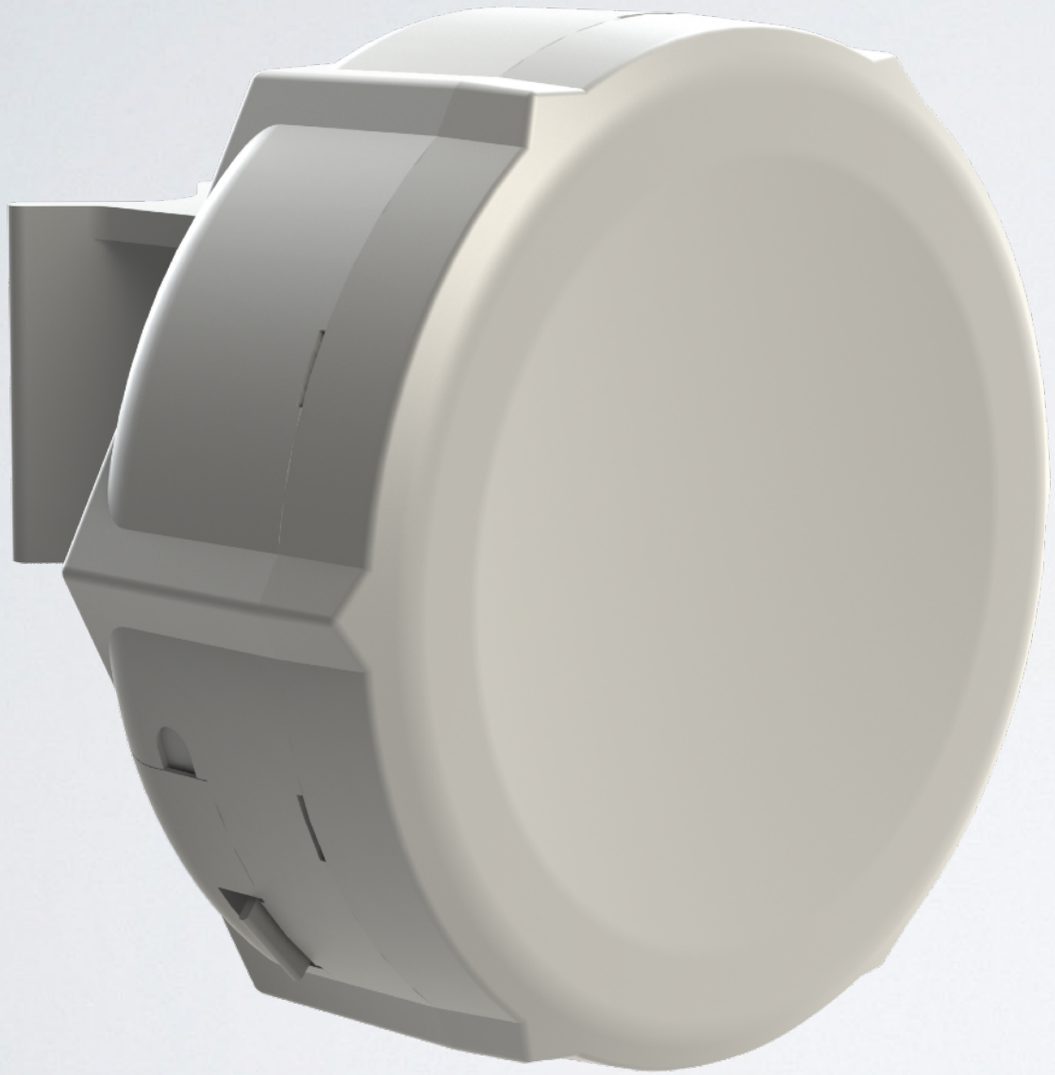
hAP ac

- Gigabit dual concurrent home AP
- 2.4GHz high power 3 chain 802.11n
- 5GHz high power 3 chain 802.1ac
- 5x1Gbps ports & 1 SFP cage
- 720MHz CPU
- PoE-out on port 5



now

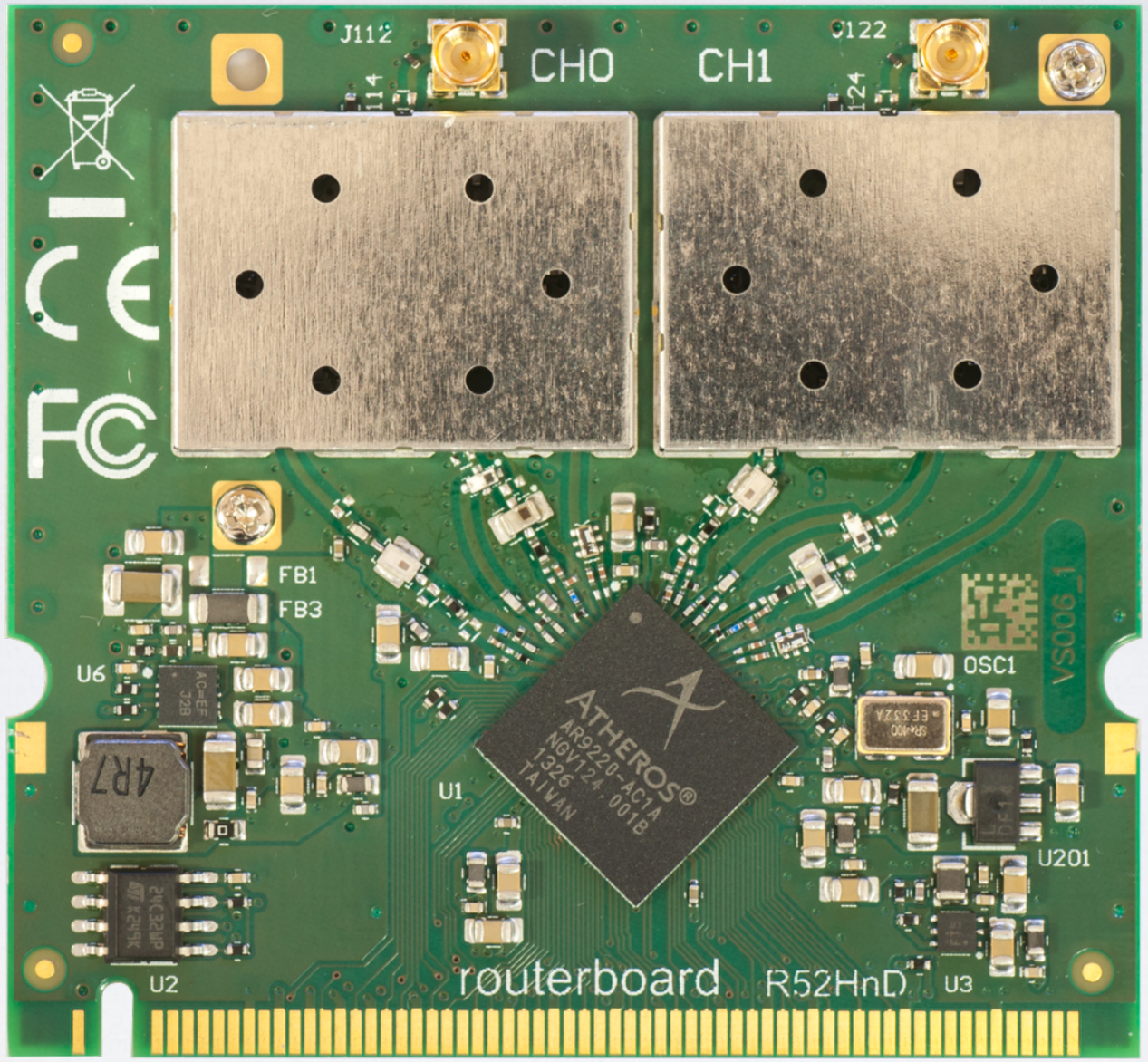
SXT 6GHz



- 5940-6500 MHz range
- 802.11 a/n
- Antenna gain 16dBi
- Antena beam width 28

now

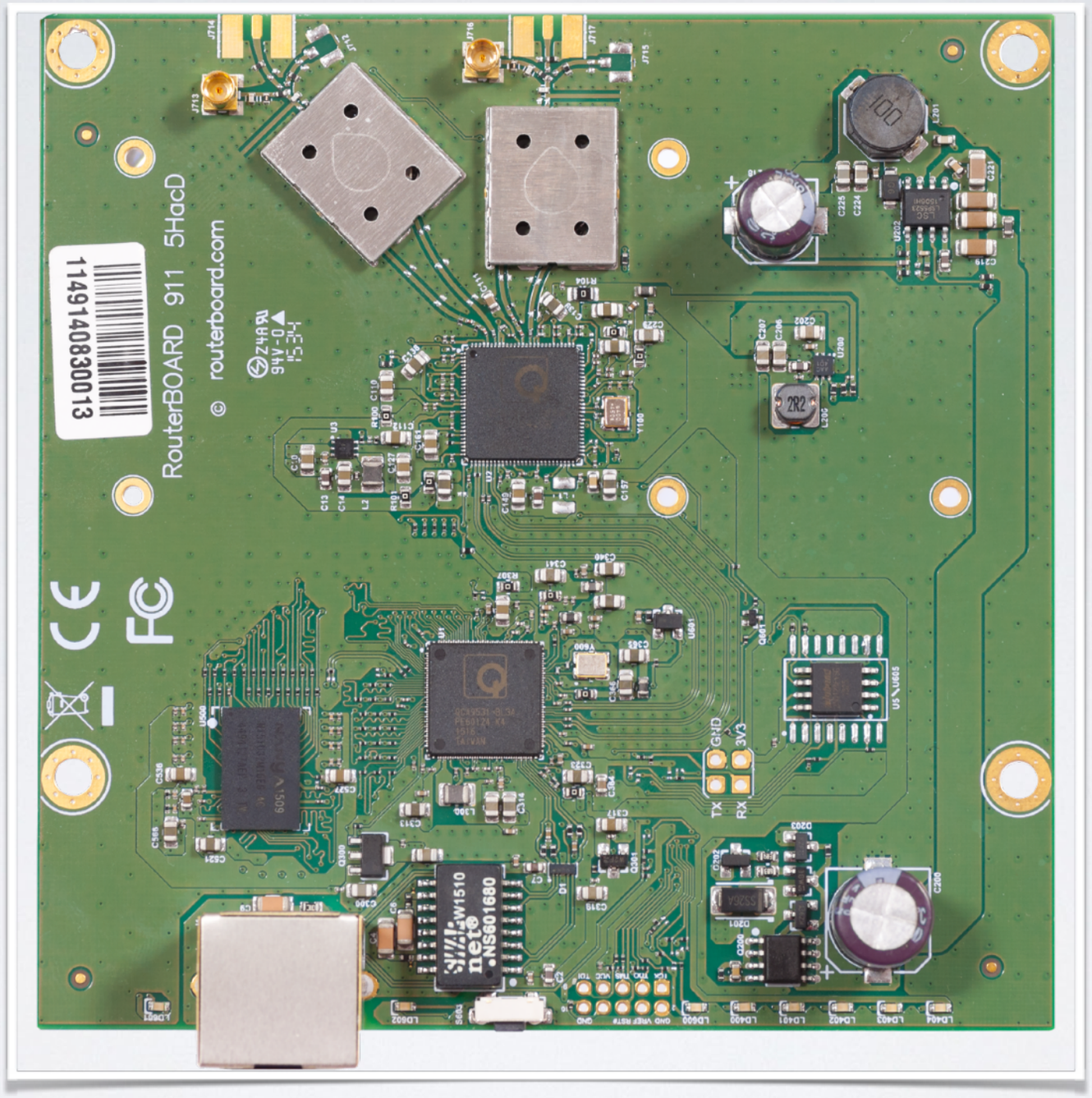
R52HnD



tx-power 26 dbm, R52H replacement

now

911 Lite 5ac

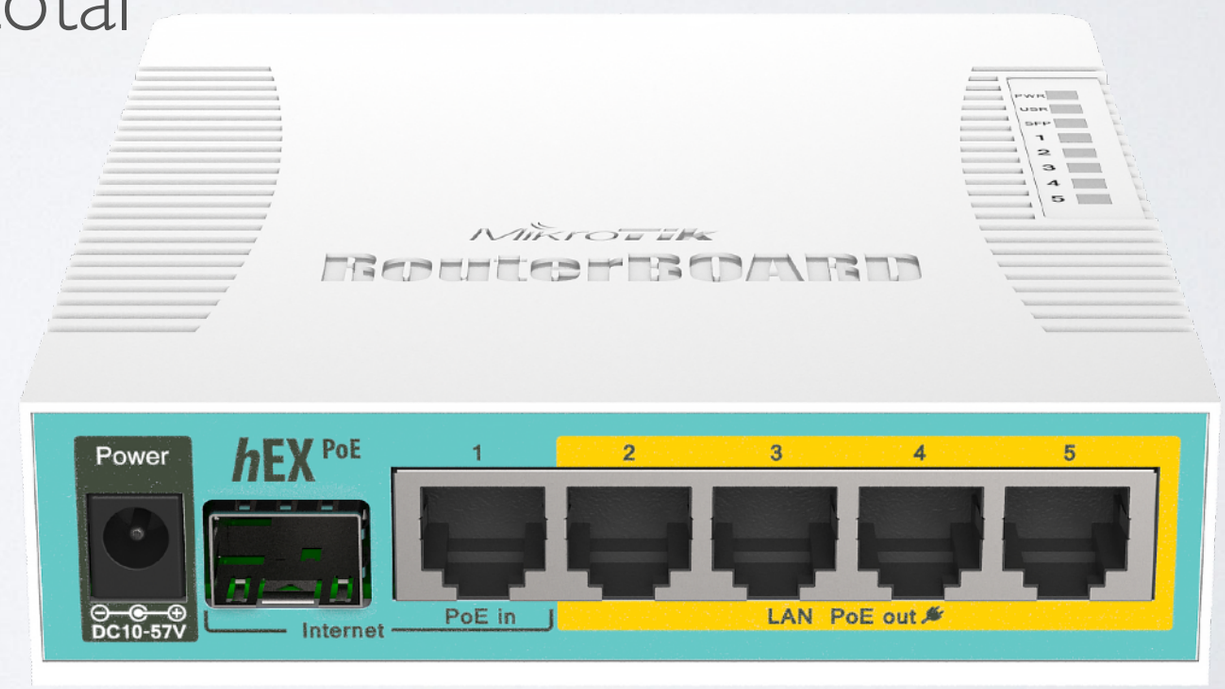


ac update for extremely affordable board

now

hEX PoE

- Small Ethernet device
- Five Gbps ports
- Power over Ethernet out on ports 2-5
- Max 1A per port, 2A total



Q4

OmniTIK 5 ac

- 802.11ac, 2 chains
- 5x1Gbit Ethernet ports
- 7.5 dBi
- PoE in





Q4

OmniTIK 5 PoE ac

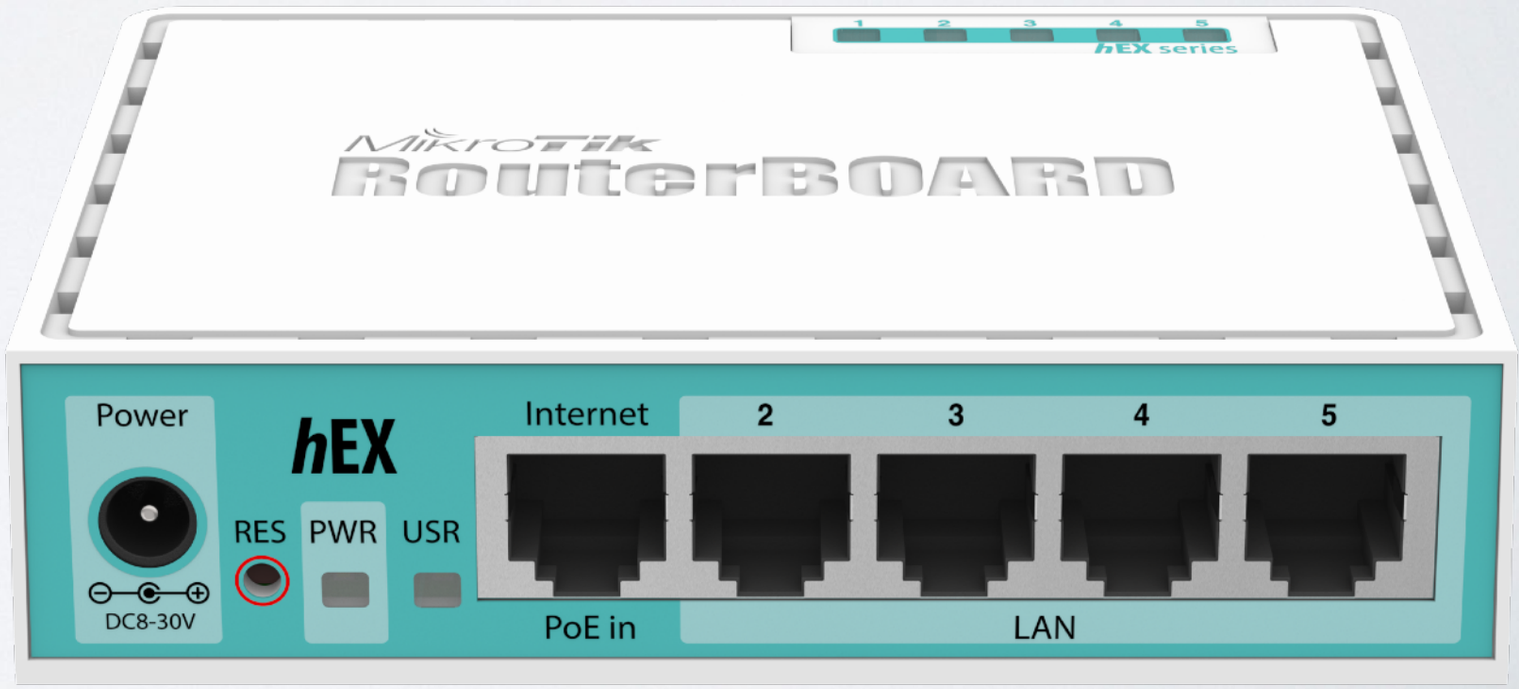
- 802.11ac, 2 chains
- 5x1Gbit Ethernet ports
- 7.5 dBi
- PoE in
- PoE out (ports 2-5)



now

hEX

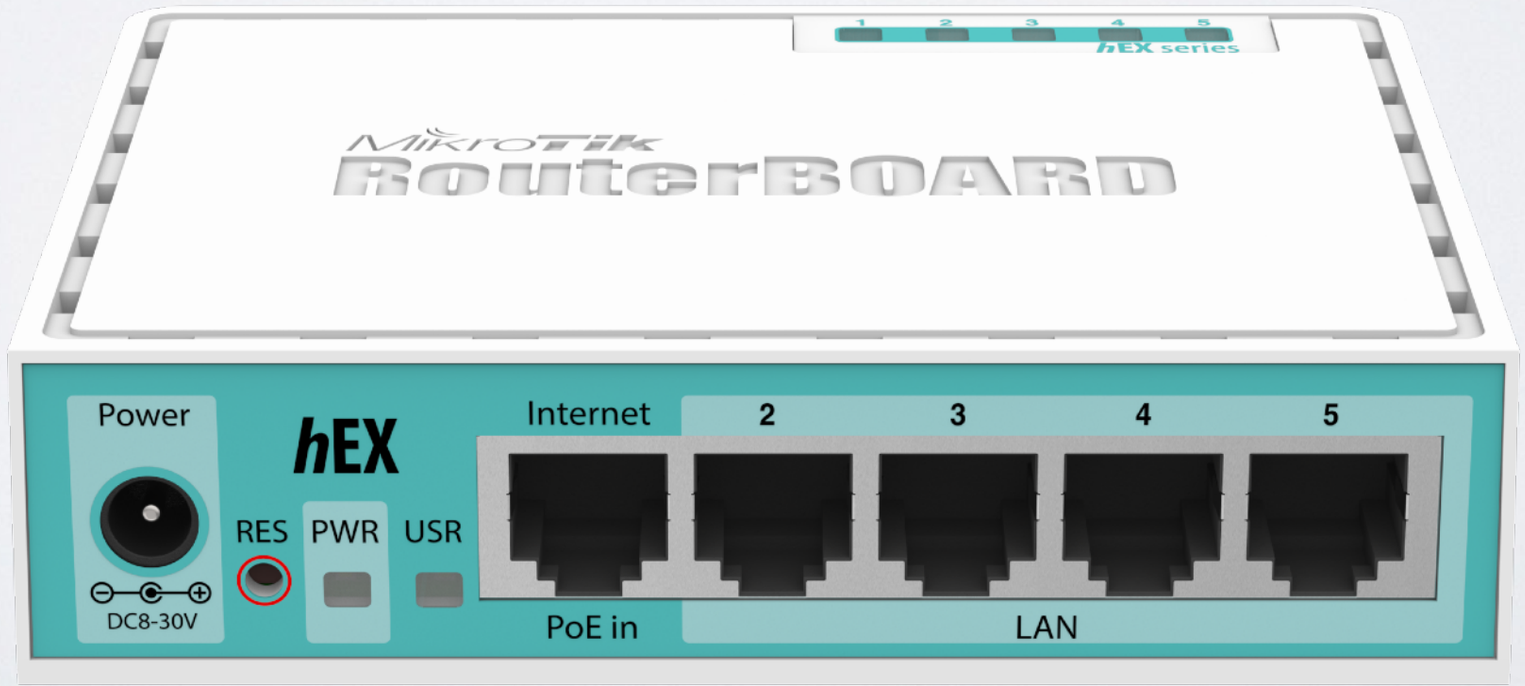
- new hEXr3
- very affordable!
- 880 MHz, 2 cores and 4 threads
- hardware acceleration ~470mbps
- same form factor
- same price



now

hEX

previous r2	new r3
396 Mbps, bridging 64 bytes	**590 Mbps**
986 Mbps, bridging 1518 bytes	**1955 Mbps**
373 Mbps, routing 64 bytes	**520 Mbps**
396 Mbps, routing 1518 bytes	**1961 Mbps**
40 Mbps, AES-128 1400 bytes	**472 Mbps**



now

CCR1009 update

- new CCR1009 available!
- no switch chip!
- 100Mbps support over SFP!
- combo port
- more throughput



now

CCR1009 update

CCR1009-8G-1S+PC - 6Gbps (old)

CCR1009-7G-1C-PC - 8Gbps (new)

CCR1009-8G-1S-1S+PC - 16Gbps (old)

CCR1009-7G-1C-1S+PC - 18Gbps (new)



All Products

- Include free software upgrades for life
- Run the same RouterOS software*
- For more info see **routerboard.com**

*Except RB260GS (SwOS)

ROUTEROS FEATURES

CHR

Cloud Hosted Router

- RouterOS version tailored for running in virtual environments
- Runs on VMware Workstation and ESXi, VirtualBox, HyperV, KVM, XenServer, etc.
- Cloud services - Amazon, Azure and others

CHR

AWS Marketplace

1. Choose AMI | 2. Choose Instance Type | 3. Configure Instance | 4. Add Storage | 5. Tag Instance | 6. Configure Security

Step 1: Choose an Amazon Machine Image (AMI)

An AMI is a template that contains the software configuration (operating system, application server, and applications) requ
community, or the AWS Marketplace; or you can select one of your own AMIs.

Quick Start

My AMIs

AWS Marketplace

Community AMIs

Categories

All Categories

Software Infrastructure (1)

Mikrotik

MikroTik

Free tier eligible

Cloud Hosted Router

★★★★★ (0) | 6.34.1 | Sold by MikroTik

Bring Your Own License + AWS usage fees

Linux/Unix, Other 6.34.1 | 64-bit Amazon Machine Image (AMI) | Updated: 4/7/16

Use the CHR for protecting your cloud servers using RouterOS firewall
for running your own VPN service or ...

More info

CHR

Use cases

- Firewall for your cloud services
- VPN server in the cloud
- The Dude monitoring server
- Simulate networks for learning or training
- And much more

CHR

Licensing

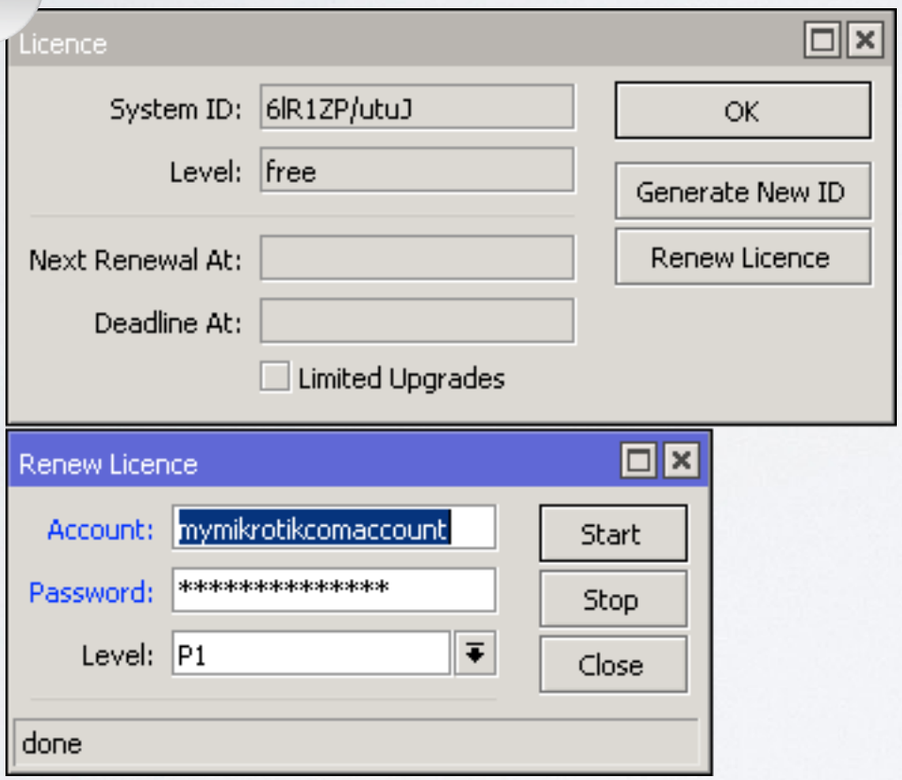
License	Speed limit	Price
Free	1Mbit	FREE
P1	1Gbit	$45
P10	10Gbit	$95
P-Unlimited	Unlimited	$250

- 60 day trial available
- Purchased license can be transferred

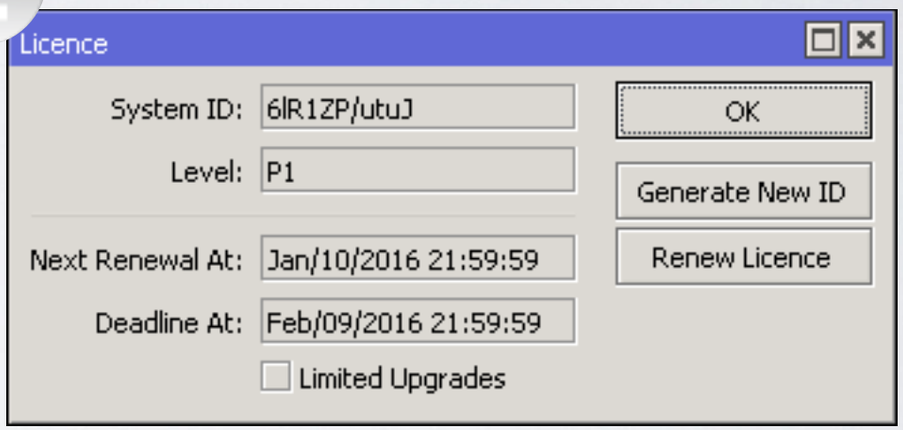
CHR

Licensing

1



2

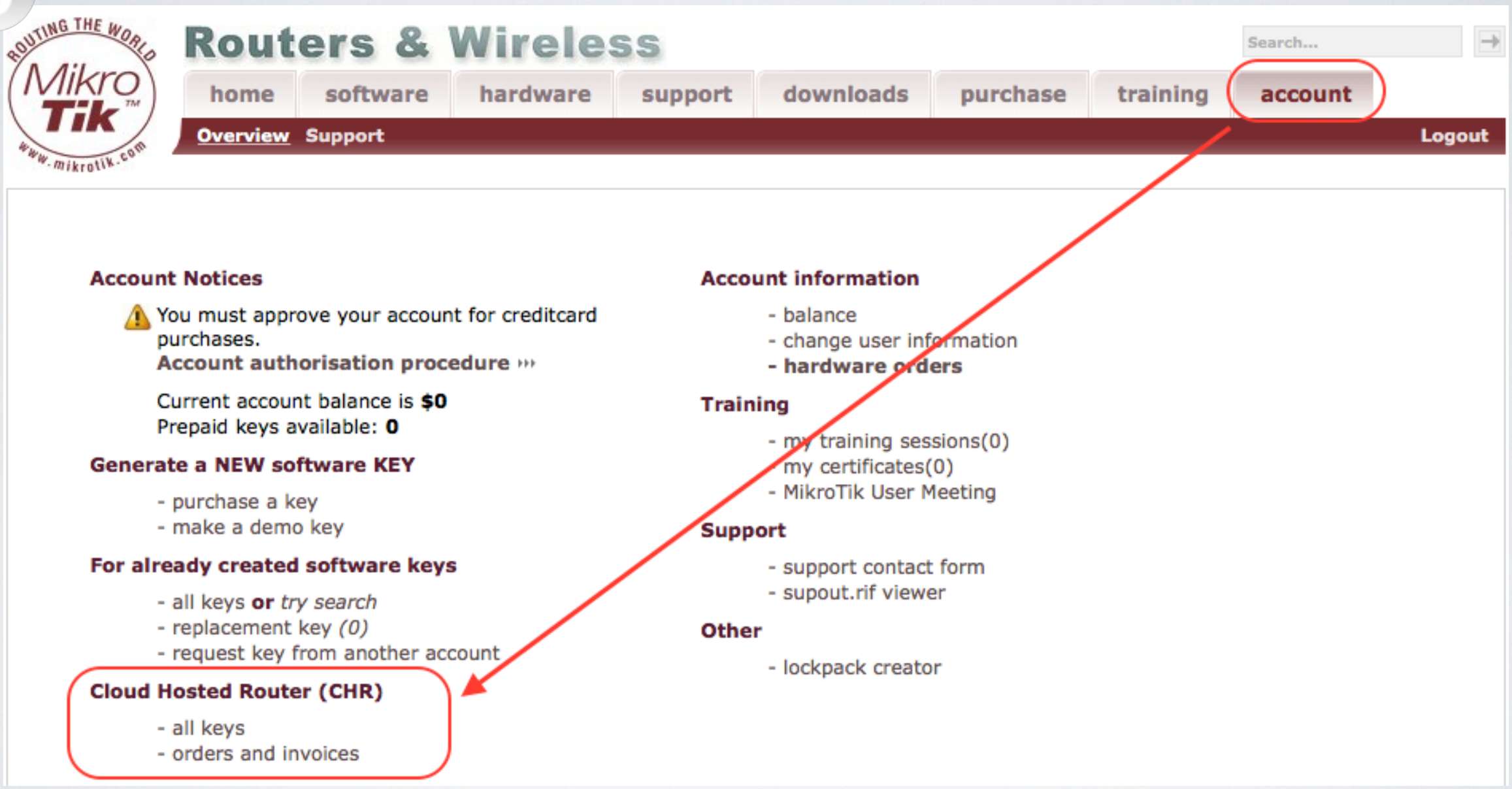


WinBox → System → License

CHR

Licensing

3



www.mikrotik.com

CHR

Licensing

4

[Back To Main Menu]

User Keys

Show 10 entries Search:

System ID	Key	Issued	Expires	Level	Transfer	Action	Note
6lR1ZP/utuJ	-----BEGIN MIKROTIK SOFTWARE KEY----- ... -----END MIKROTIK SOFTWARE KEY-----	2015-12-09	2016-02-09	P1-Perpetual (Trial version)		Upgrade	

Previous 1 Next

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CHR

Licensing

5

Upgrade system license

System ID **Level**

6lR1ZP/utuJ

- ✓ **Select level**
- **P1-Perpetual ($ 45.00)**
- **P10-Perpetual ($ 95.00)**
- **P-Unlimited ($ 250.00)**

System 6lR1ZP/ut
Perpetual Trial version

You have following prepaid balance keys available to purchase a CHR license:

P1-Perpetual - 4 keys

Back

6

Payment

You have selected: **P1-Perpetual**
System ID **6lR1ZP/utuJ**
Total price: **$ 54.45**

Pay using deposit (left: $ 73.51)

Pay using CC

Pay using PayPal

Pay using Balance key (4)

Note: *Price includes VAT 21% because you have specified EU country as your residence.To avoid this you have to enter your VAT registration number in your account settings.*

Back

www.mikrotik.com

CHR

Cloud Hosted Router

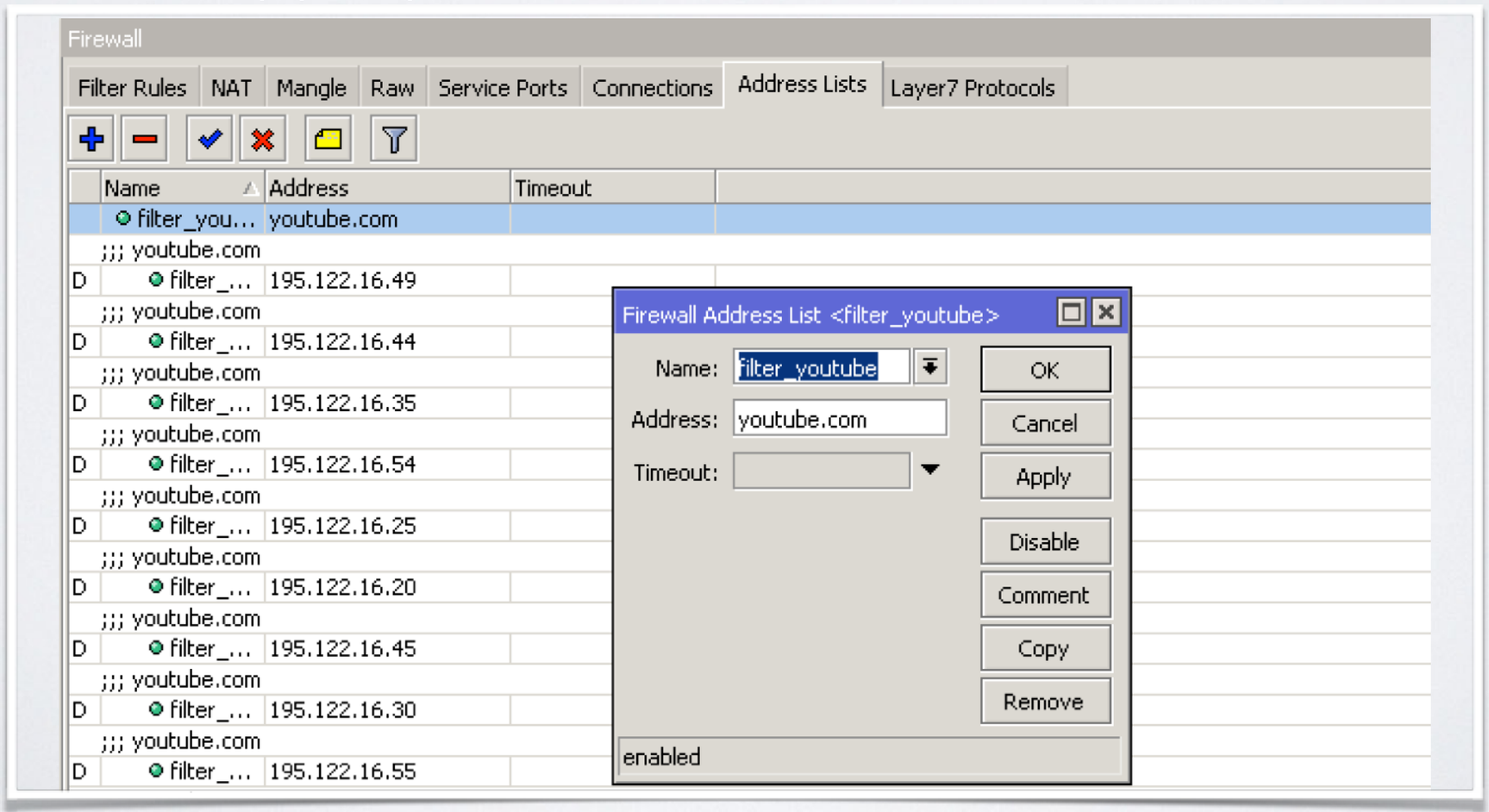
- For more info, see the CHR page on our wiki: http://wiki.mikrotik.com/wiki/Manual:CHR
- Available on the download page: http://mikrotik.com/download#chr

RouterOS v6.37 changelog

120 entries!

DNS at address-list

- add DNS name to address-list, router will find addresses automatically
- set appropriate rules at firewall



Distance in Km

0.5 1 1.5 2 3 5 8 10 11 12 13 14 15 16 17 20 25 30 35 40 45 50 60



LHG $59

24.5 dBi



SXT Lite5 $59

16 dBi



SXT Lite5 ac $65

16 dBi



SXT 5 ac $109

16 dBi



SEXTANT G $110

18 dBi



SXT HG ac $119

17 dBi



QRT 5 $169

24 dBi



QRT 5 ac $199

24 dBi



Dynadish $179

25 dBi

0.5 1 1.5 2 3 5 8 10 11 12 13 14 15 16 17 20 25 30 35 40 45 50 60

Distance in Km

Distance at max supported 802.11ac data rate (eg. 866Mbit)

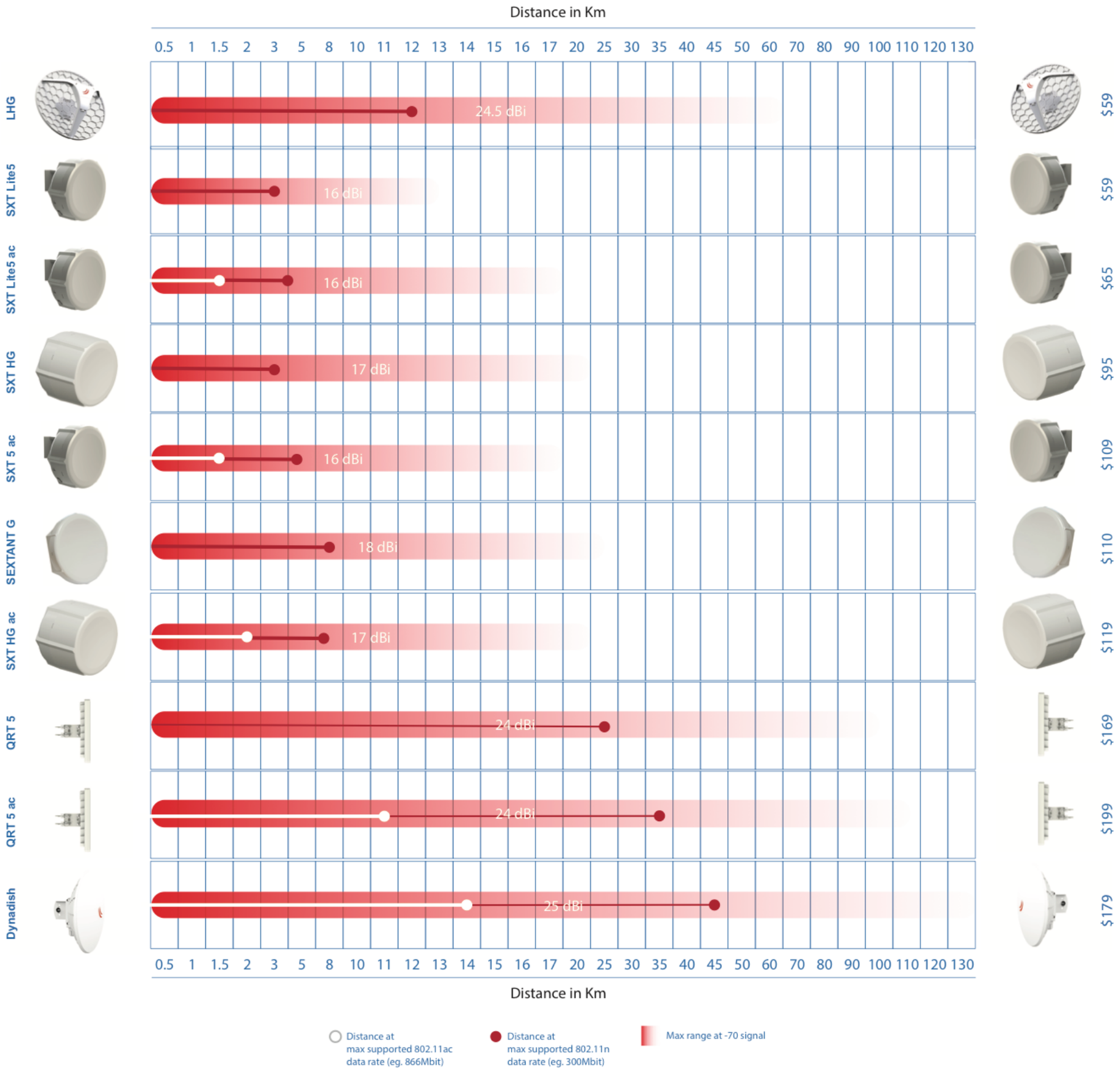
Distance at max supported 802.11n data rate (eg. 300Mbit)

Max range at -70 signal

Note: line of sight, interference, alignment, weather and other outside factors will affect the wireless link performance and possible distance



mANTbox 19S



Note: line of sight, interference, alignment, weather and other outside factors will affect the wireless link performance and possible distance

Need Help?

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

After the MUM

- All presentations - mum.mikrotik.com
- Video - youtube.com/mikrotik
- License will be e-mailed

Enjoy the MUM!

MikroTik