



User Meeting

Karachi, Pakistan

June 2016



- Established 1996
- RouterOS created in 1997
- RouterBOARD created in 2002
- First MUM event in Prague 2006
- Biggest MUM in 2015, Indonesia - 2600+ people
- More than 170 employees



A map of Europe with Latvia highlighted in green. The Mikrotik logo is overlaid in the center. The logo consists of the word "Mikrotik" in a stylized font, with a small arc above the "i".

Mikrotik

Latvia

More than 120 MUM events all Around the World



What we do

- MikroTik provides networking equipment for all possible uses - wireless, ethernet and switching
- RouterOS software supports most common and also many custom made features

MikroTik at the MUM

- Edmunds Aperāns (Sales, Training + Academy)
- Mārtiņš Strods (Support)
- Pauls Jukonis (Support)



Schedule

12:45-14:30	Namaz Break
17:00	Raffle

<http://mum.mikrotik.com/2016/PK/agenda>

MUM Live stream

www.youtube.com/mikrotik

Special
Thank you!

**Dreams Network
And Technology
(PVT.) Ltd**

RouterOS

- MikroTik RouterOS is the operating system of RouterBOARD hardware
- Stand-alone operating system based on the Linux Kernel
- Routing, Firewall, QoS, Wireless, Hotspot, VPN and more...

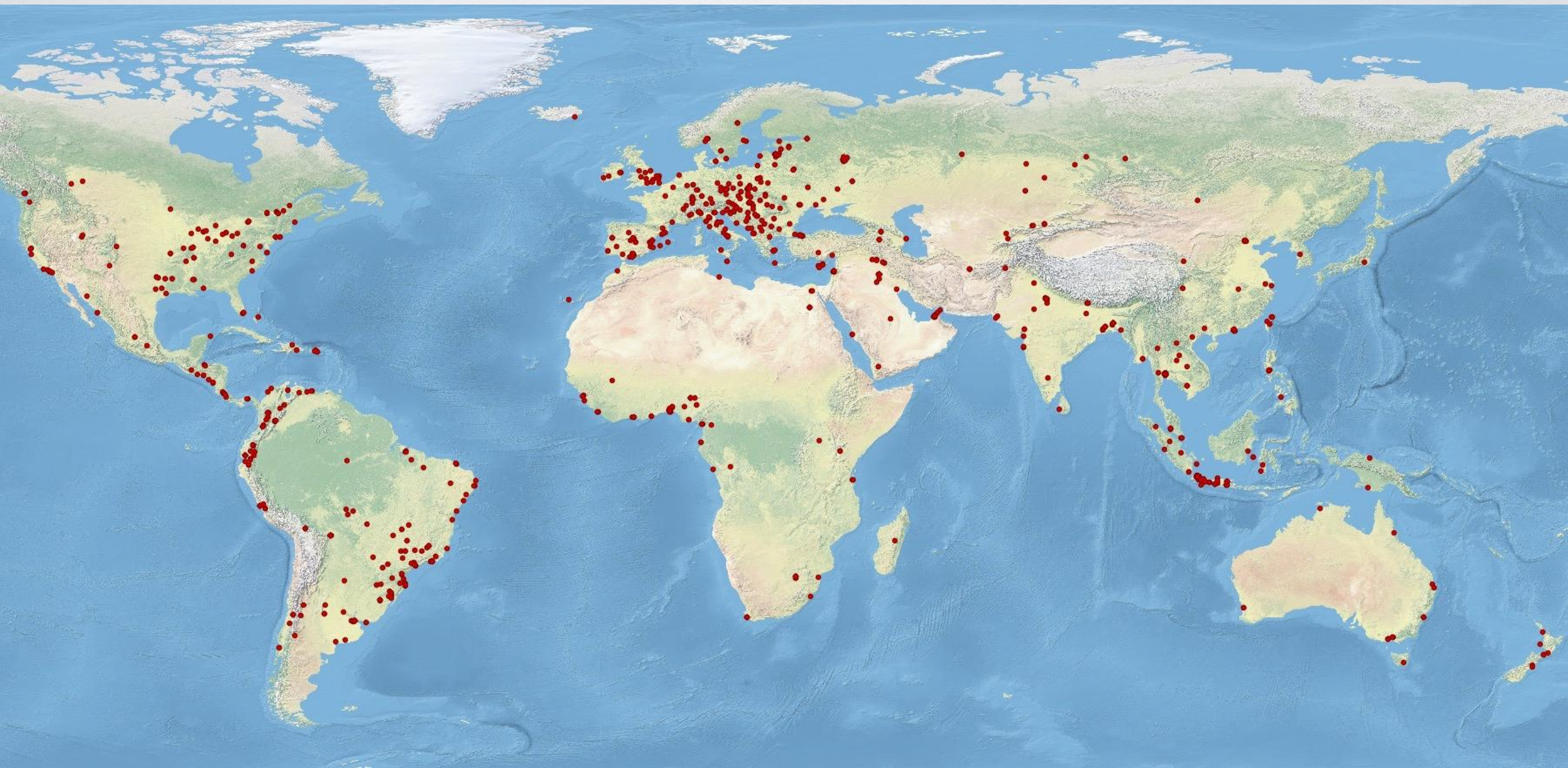
Why us

- Millions of RouterOS powered devices currently routing the world
- 20 years of experience in developing networking software and hardware
- Over 40'000 RouterOS trained and certified network engineers

Why us

- More than 3000 training classes in 2015
- World wide network of certified consultants
- Offering products for both simple home usage and complex enterprise networks
- Thousands of pages of documentation, examples, application notes and guides

MikroTik Certified Trainers

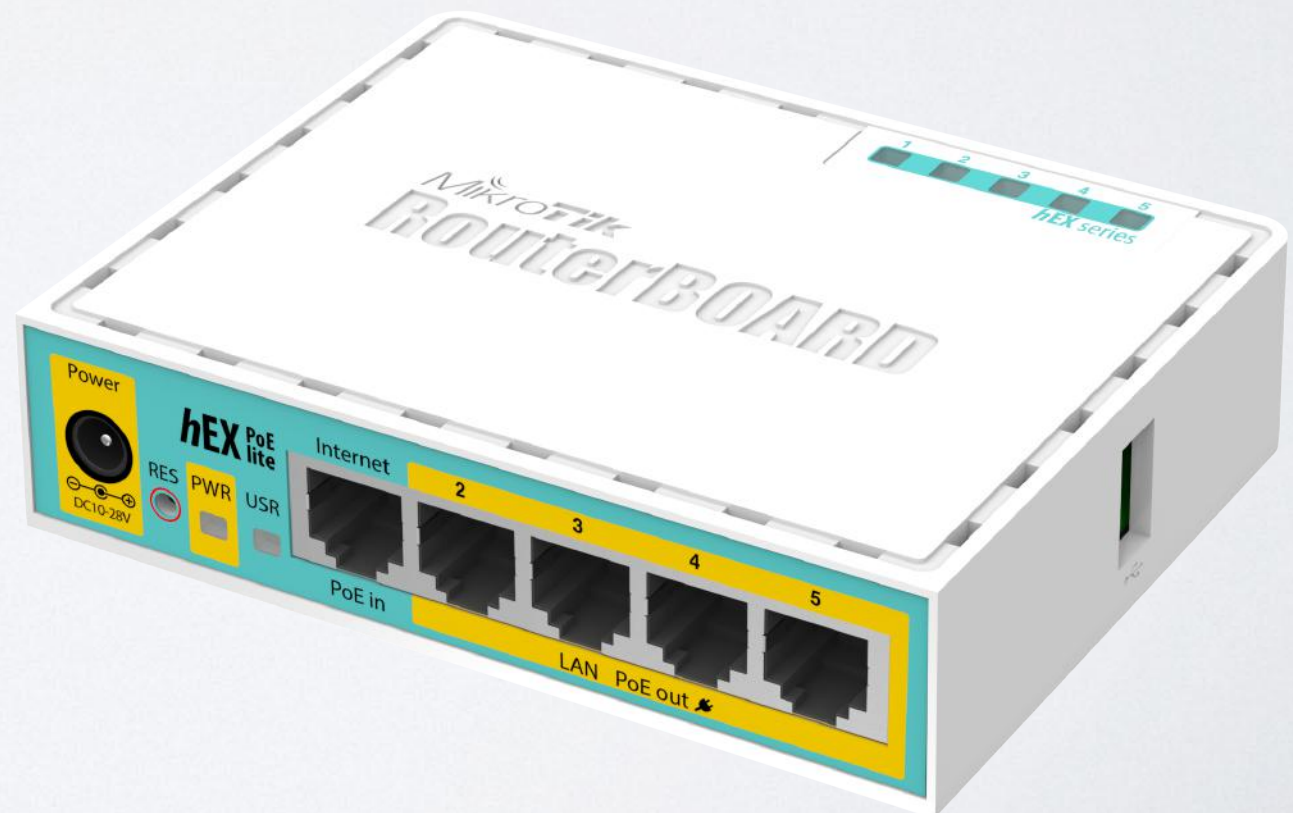


PRODUCT SERIES

ETHERNET ROUTERS

hEX lite

- Small Ethernet device
- Five Fast Ethernet ports
- Power output version (hEX PoE lite)



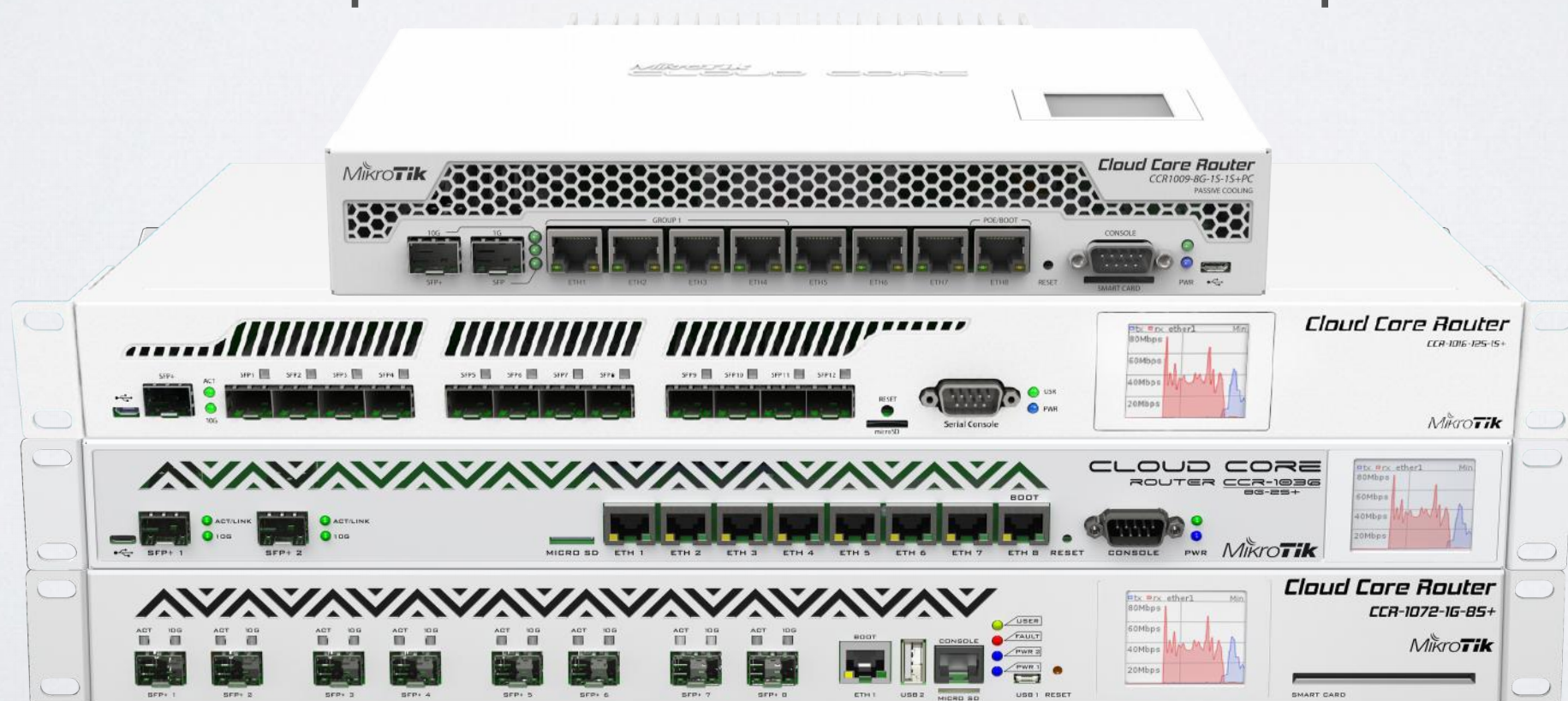
RB2011 and RB3011

- Rackmount and desktop case
- 10 Ethernet ports
- 1 SFP (fiber optic)
- RB3011 - dual core ARM CPU



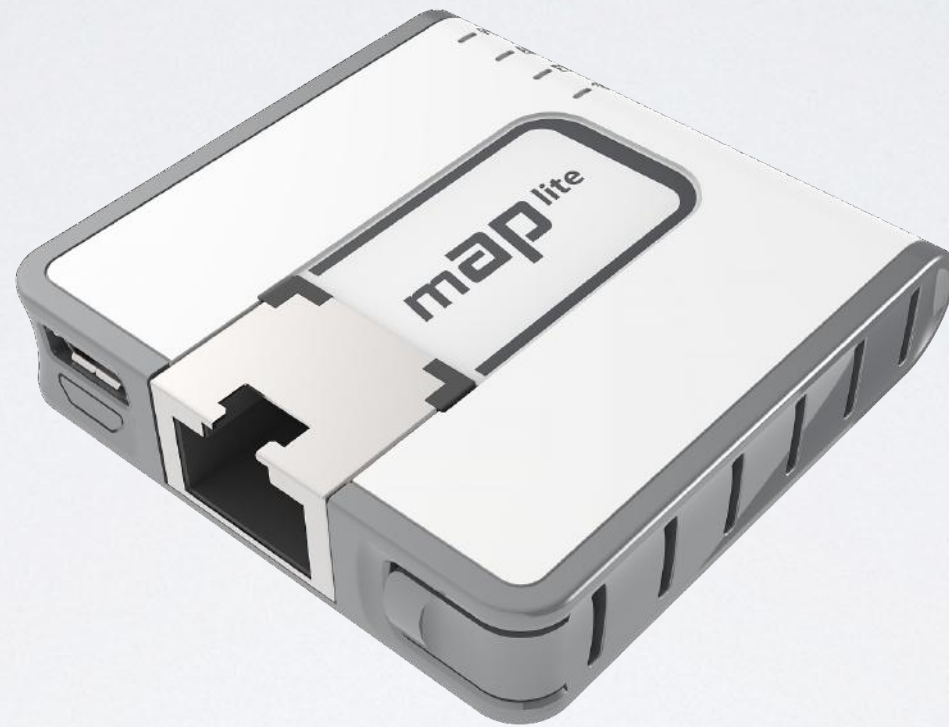
CCR series

- 9, 16, 36 and 72 cores
- Extreme performance
- Hardware accelerated encryption
- 1Gbps Ethernet, SFP and SFP+ ports



WIRELESS FOR HOME & OFFICE

mAP lite



Tiny size 2.4GHz dual chain access point
with a 650MHz CPU, 64MB RAM and one Fast Ethernet

hAP lite



Small, nice design and low cost device for home or office usage

hAP ac



Dual band 2.4/5GHz AP, 802.11ac/a/b/g/n,
5x1Gbps Ethernet, PoE-out on port 5, SFP and USB

WIRELESS SYSTEMS

NetMetal

- Waterproof metal enclosure
- Gigabit Ethernet, SFP
- 3 chains (antennas)
- 802.11ac technology
- 4 different models



SXT

- Compact AP/CPE
- 24-90 degree antenna
- Different models available (2GHz, 5GHz, 802.11ac)
- Low cost
- Mid-range wireless links



DynaDish

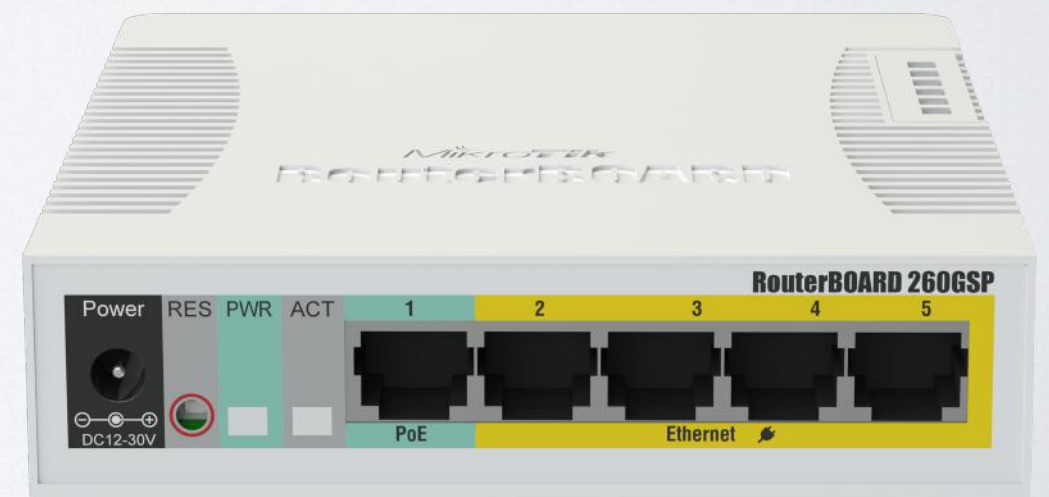
- Dual-chain 802.11ac
- 8 degree, 25dBi antenna
- Gigabit Ethernet
- Long range point-to-point links



SWITCHES

RB260GSP

- Small switch
- Runs SwOS software
- Powers other devices over PoE



CRS Series

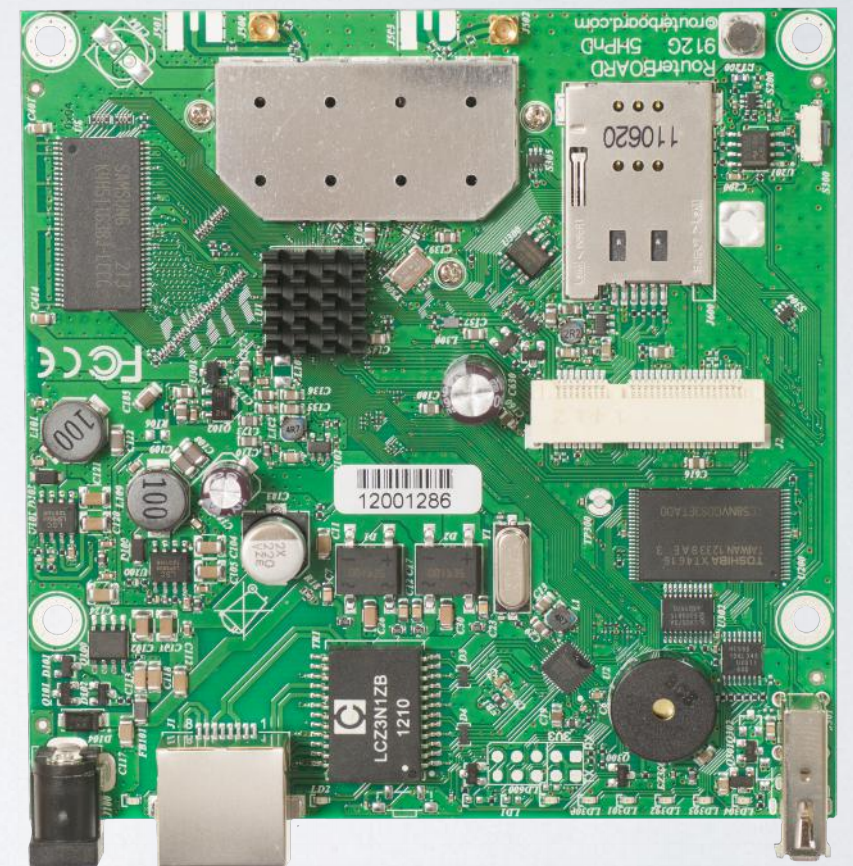
- Layer 3 switches
- Runs Mikrotik RouterOS
- From 8 to 24 ethernet ports
- Gigabit Ethernet
- SFP/SFP+
- Wireless



ROUTERBOARD

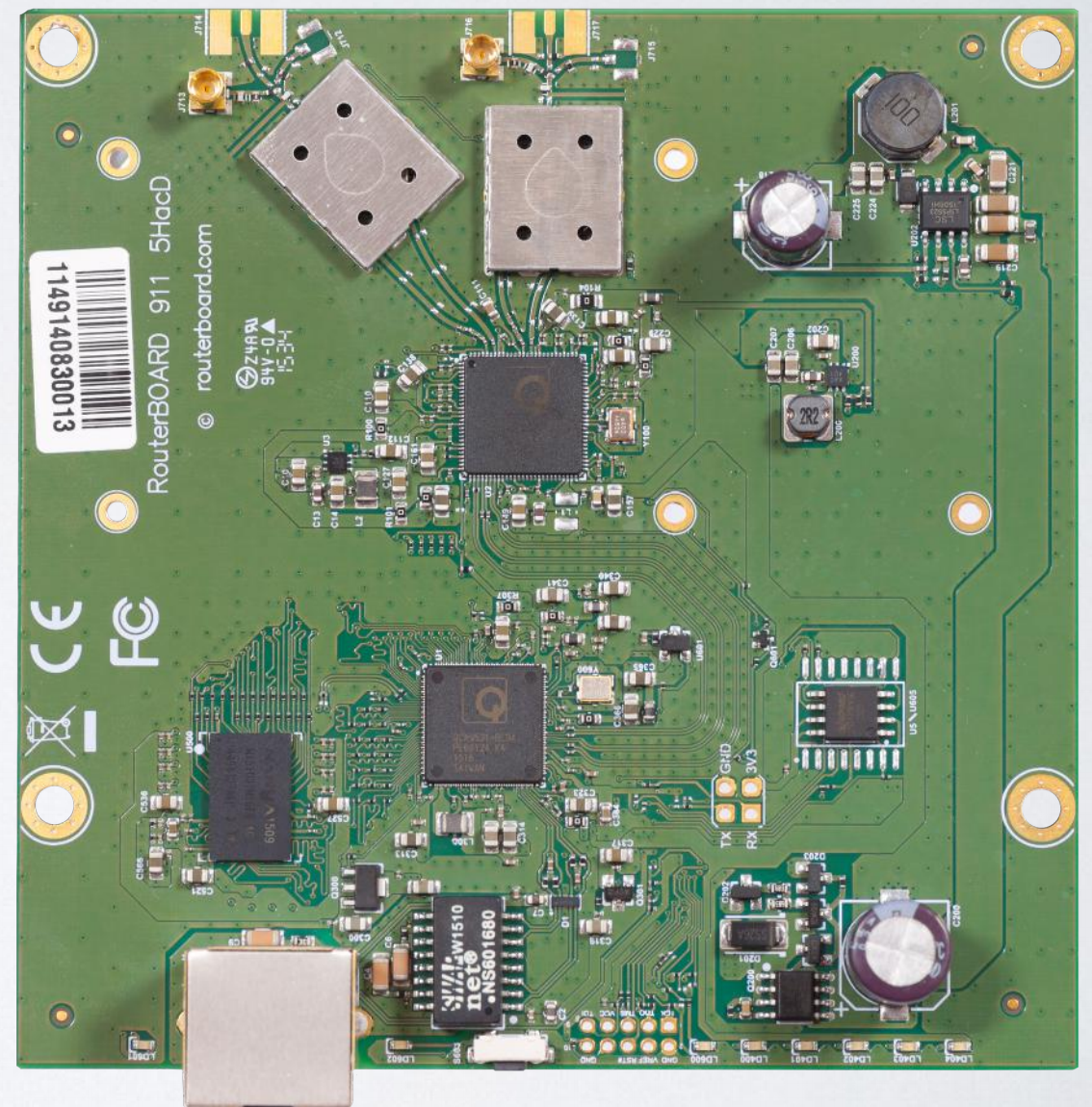
RouterBOARD

- Use custom case
- Upgrade or expand with ease
- Choose model based on ports, features and speed



RB911 ac

- 802.11ac support
- 10/100 Mbit port
- Affordable cost



INTERFACES AND MORE

SFP modules

- 1.25Gbps and 10Gbps
- Single, Multi modes
- Different distances
- GPON



Wireless Cards

- 802.11 a/b/g/n/ac
- 2GHz, 5GHz
- miniPCI-e, miniPCI



Antennas

- mANT30
- Parabolic dish
- Regular or precise alignment



All Products

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

*Except RB260 series (SwOS)

NEW PRODUCTS

LHG 5

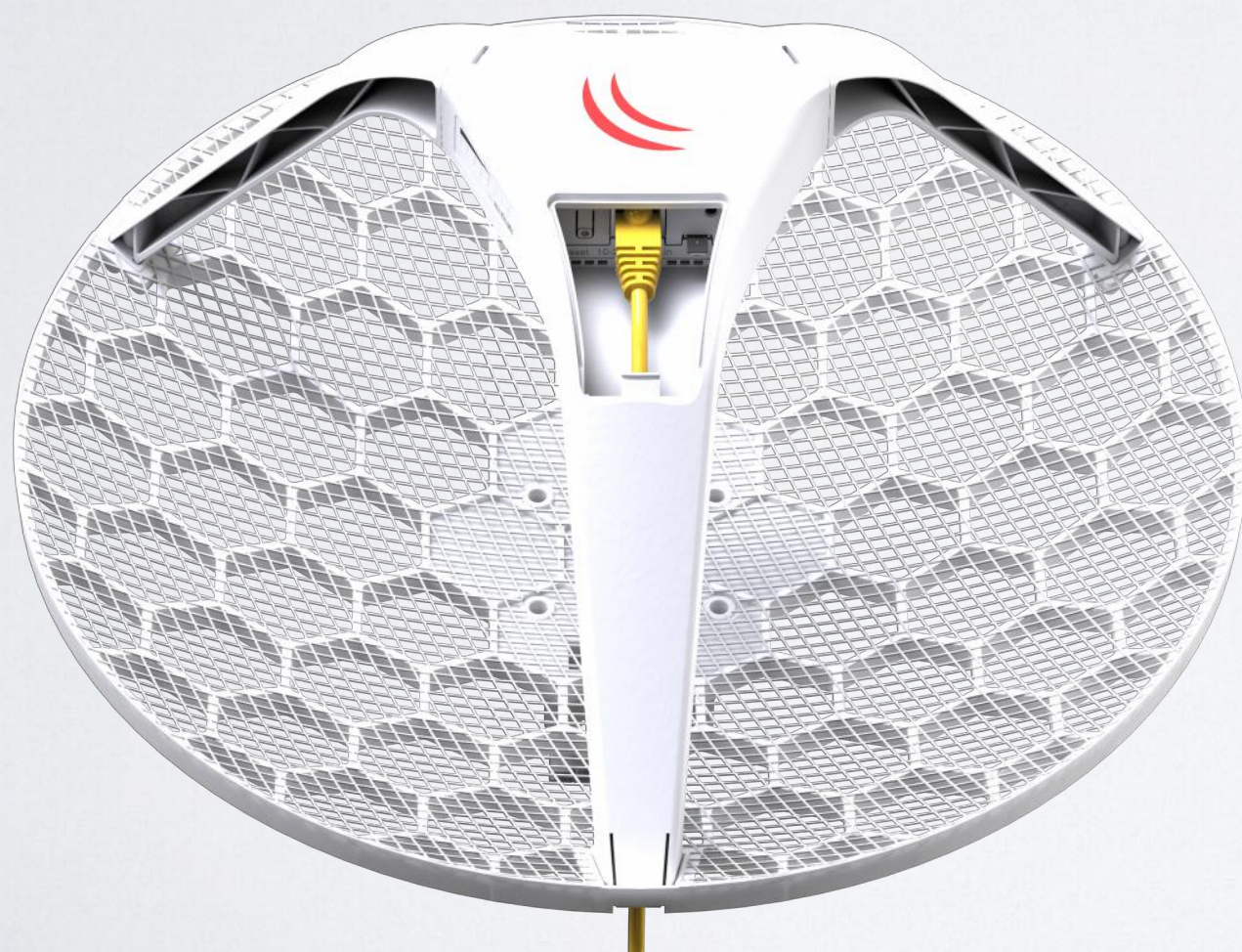
- 24.5 dBi antenna
- Antenna is built into wireless unit
- 802.11a/n dual chain
- Very affordable



59\$

NOW

LHG 5



QuickMOUNT pro LHG

- Wall or pole mount adapter
- $\pm 70^\circ$ horizontal adjustment
- $\pm 30^\circ$ vertical adjustment
- Special plastic composite material - anvilNITE (TM)



9.5\$

Groove 52 ac



- 802.11ac update for the popular Groove model
- Waterproof, rugged and ready to use.
- 802.11 b/g/n and 802.11 a/n/ac, Gigabit Ethernet

CPE 79\$ / AP 99\$

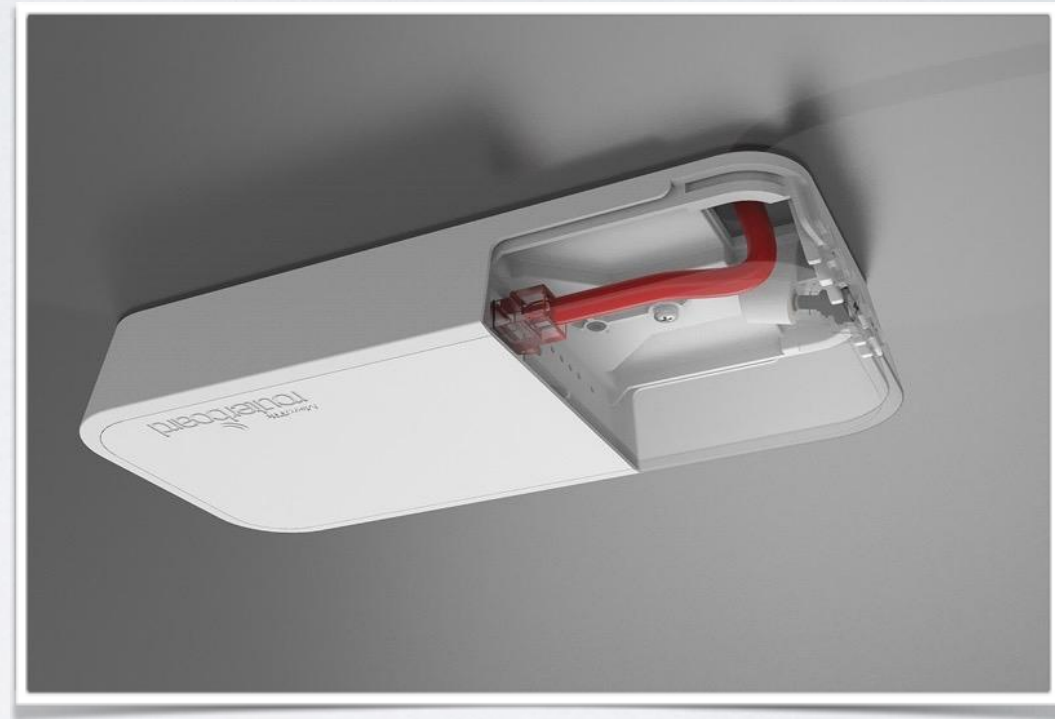
Metal 52 ac



- 802.11ac update for the popular Metal model
- Higher output power
- Metallic case that works as a heatsink

119\$

wAP ac



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

89\$

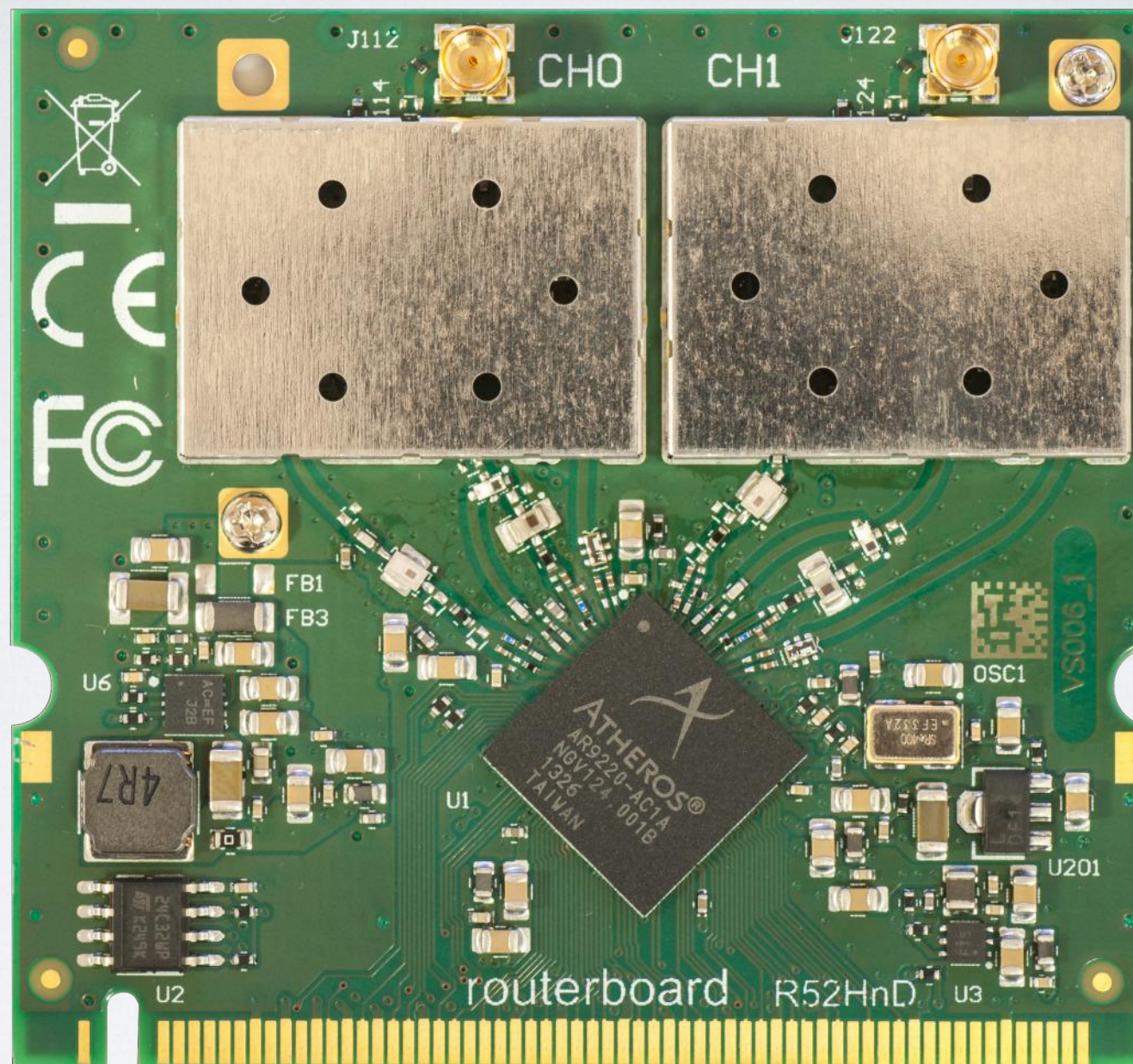
hAP ac

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



129\$

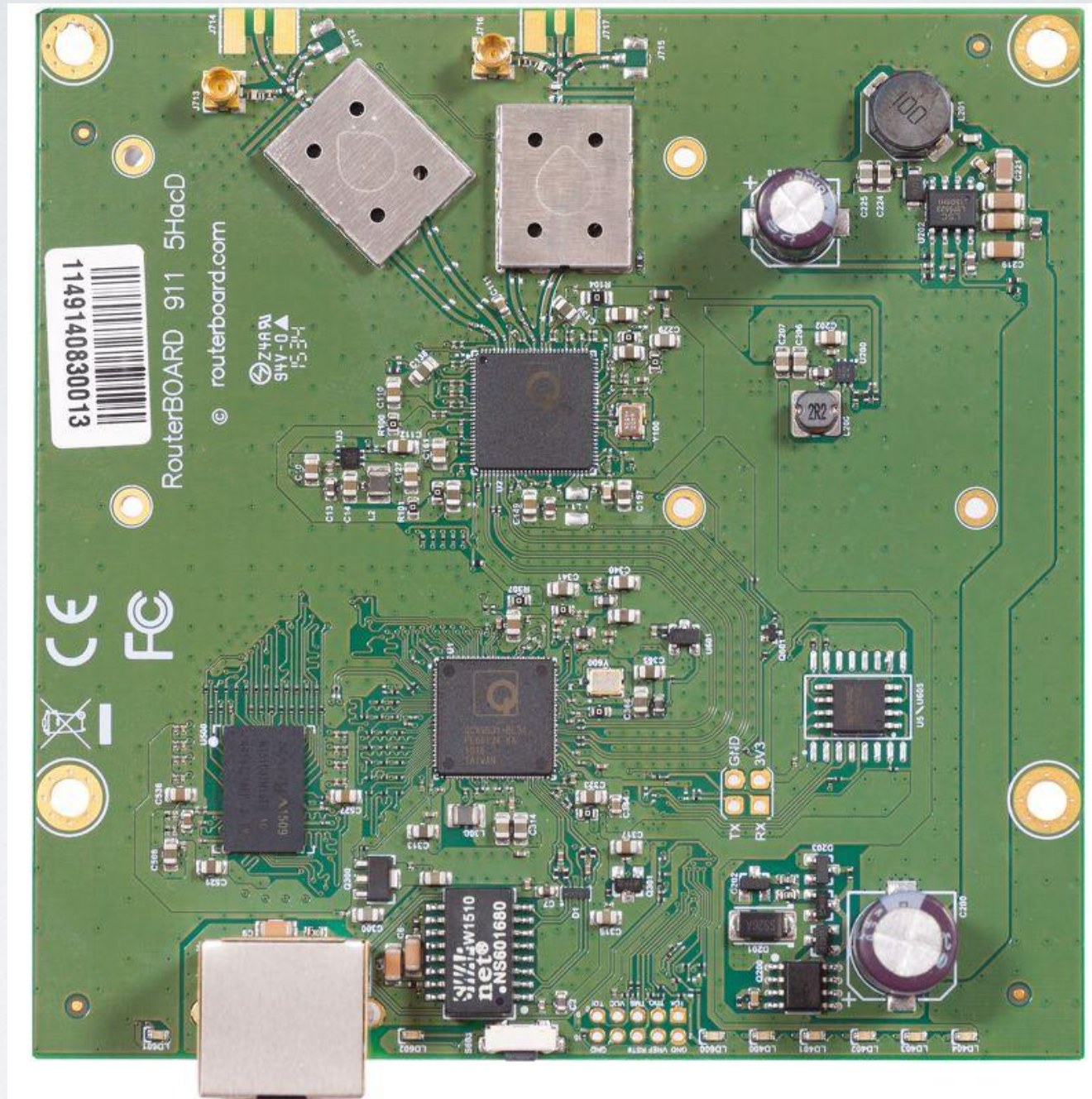
R52HnD



59\$

Tx-power 26 dBm, R52H replacement

911 Lite5 ac

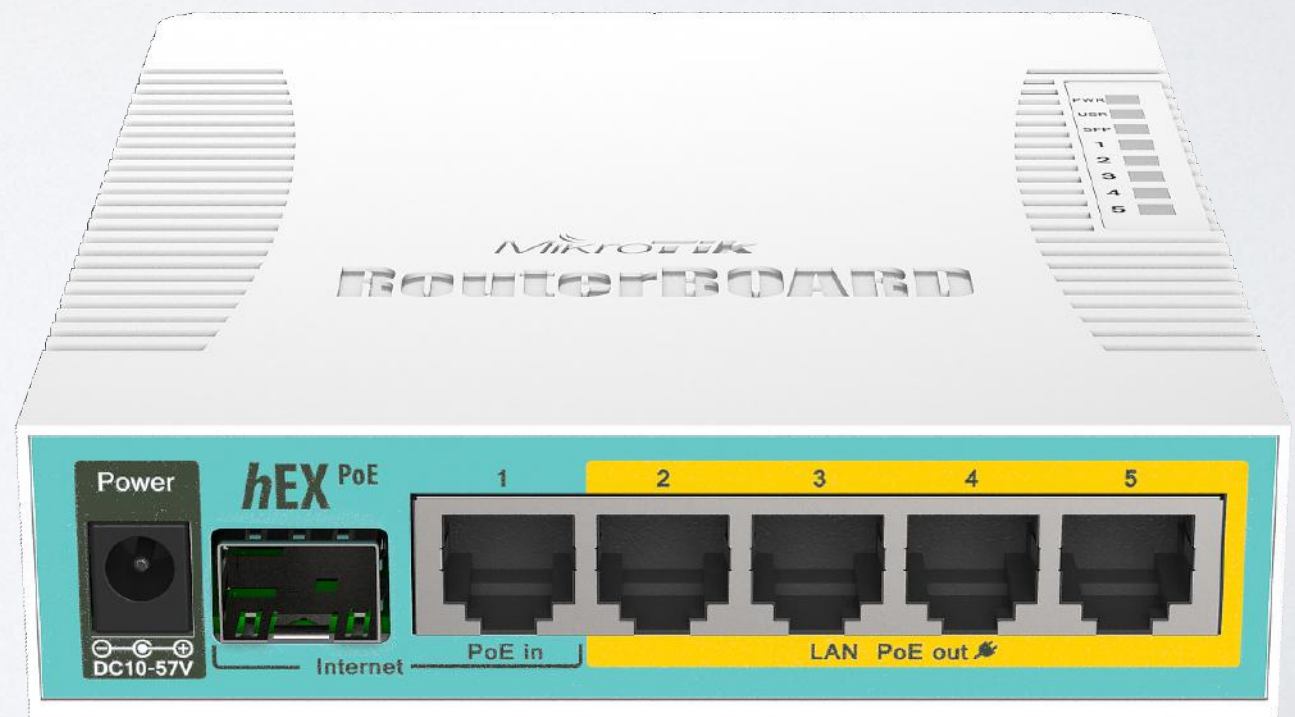


49\$

802.11ac update for extremely affordable board

hEX PoE

- Small Ethernet device
- Five 1Gbps ports
- Power over Ethernet out on ports 2-5



OmniTIK 5 ac /PoE ac

- 802.11ac, 2 chains
- 5x1Gbit Ethernet ports
- 7.5 dBi
- PoE in
- *PoE out (ether2-5)



CHR

- 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

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

CHR

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

- 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>

RouterOS v6.35 changelog **181** line

Wireless in v6.35

- New wireless package '**wireless-rep**'
- Multiple simultaneous wireless modes on the same wireless interface
 - Client and AP
 - Repeater
 - Scan without disconnects
- Improved driver

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



Possibilities and Benefits of Partnership Programs

Knowledge

Consultant

→ Configures and helps

Training
center

→ Certifies and advances

Products

Distributor

→ Offers products and services

Reseller

→ Buys from Distributor and resells

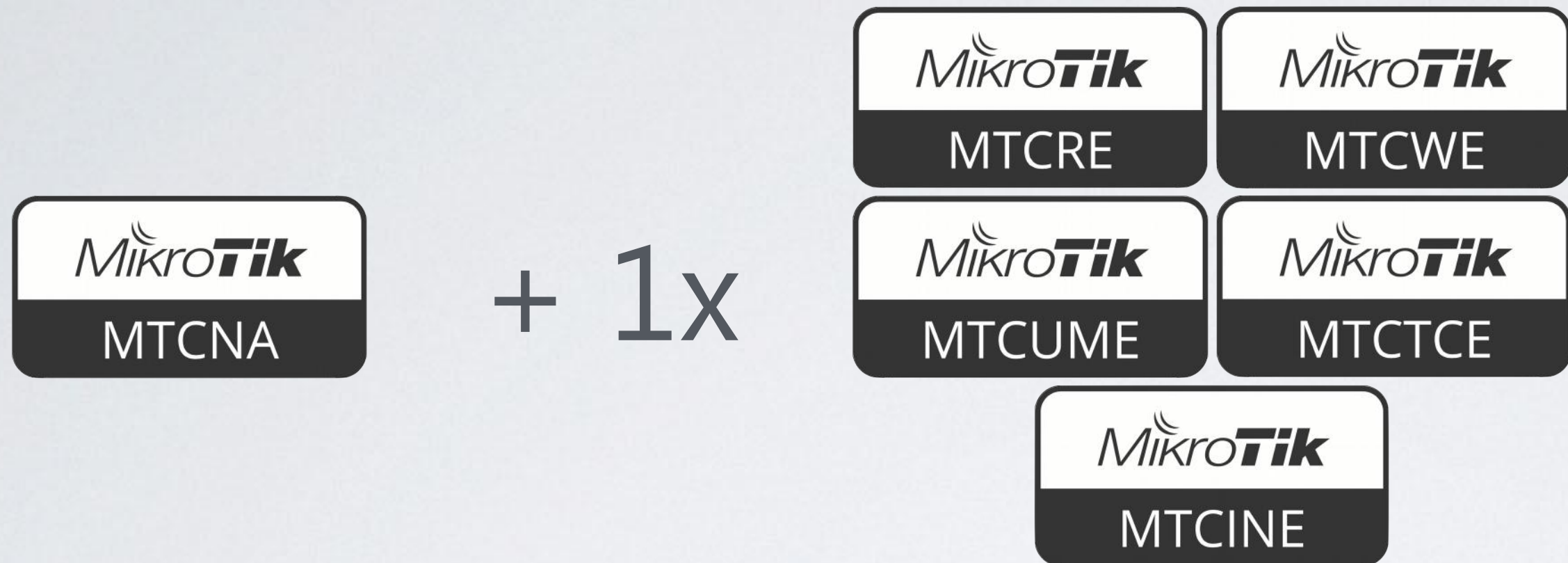


→ Accessories, integrators, software

Who?

- Experienced network engineers
- Profound RouterOS and RouterBOARD knowledge

How?



Result: 75%+
sales@mikrotik.com

Where?



mikrotik.com/consultants

Consultant

+

MikroTik
Train the Trainer

=

MikroTik
TRAINING CENTER

How?

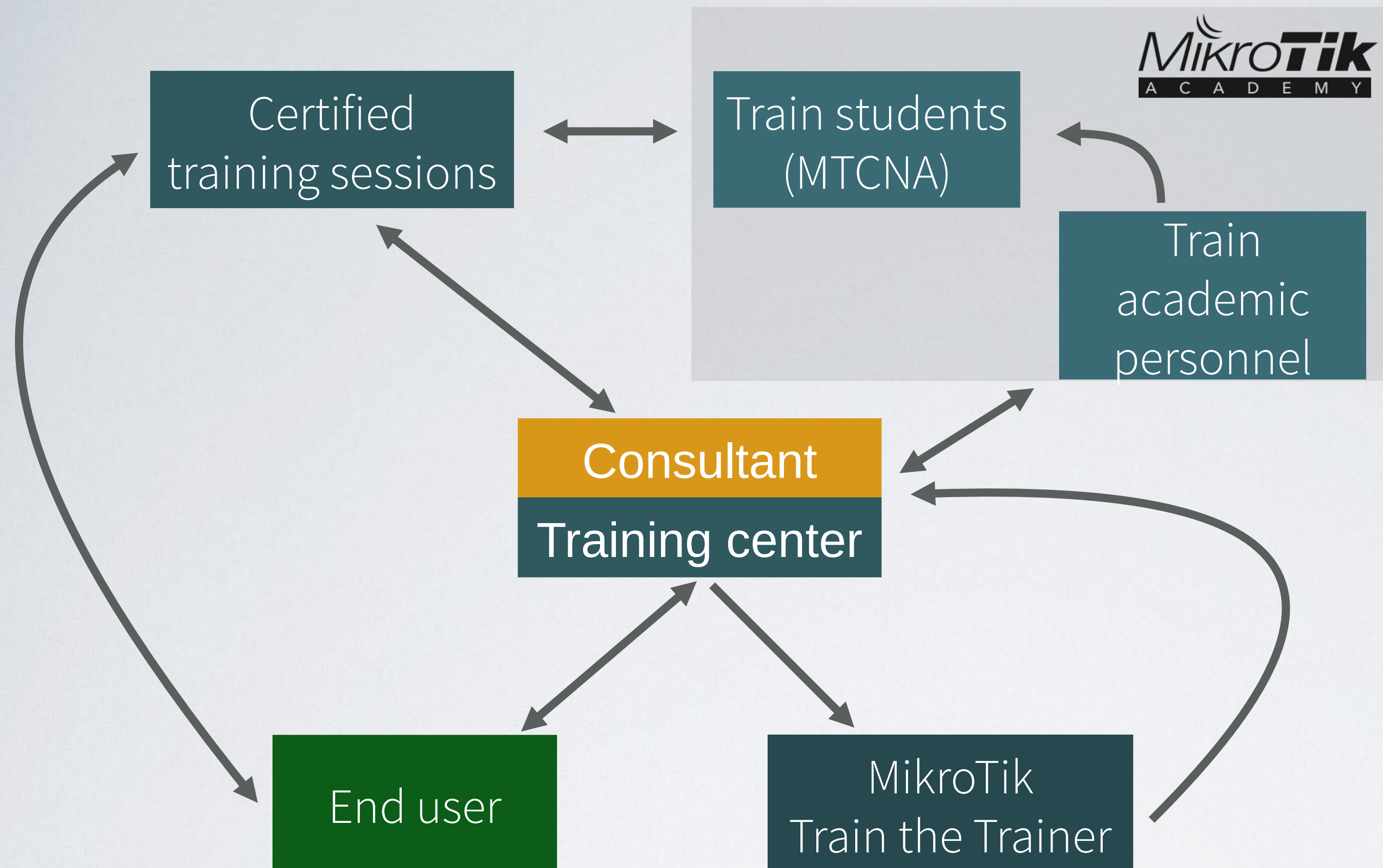
- Get MTCNA + 1x certificate (75%)
- Pass **Train The Trainer** course
- Give 1 hour lecture
- Next Train The Trainer course in Dubai, UAE October 18-20

- Courses developed according official MikroTik training outline
- We offer certification tests
- Publish training schedule on our website

MikroTik Courses

MTCNA	Network Associate
MTCRE	Routing Engineer
MTCWE	Wireless Engineer
MTCTCE	Traffic Control Engineer
MTCUME	User Management Engineer
MTCINE	Inter-networking Engineer

mikrotik.com/training



Knowledge

Consultant

→ Configures and helps

Training
center

→ Certifies and advances

Products

Distributor

→ Offers products and services

Reseller

→ Buys from Distributor and resells



→ Accessories, integrators, software

1



At least 1 certificate

2



Web page

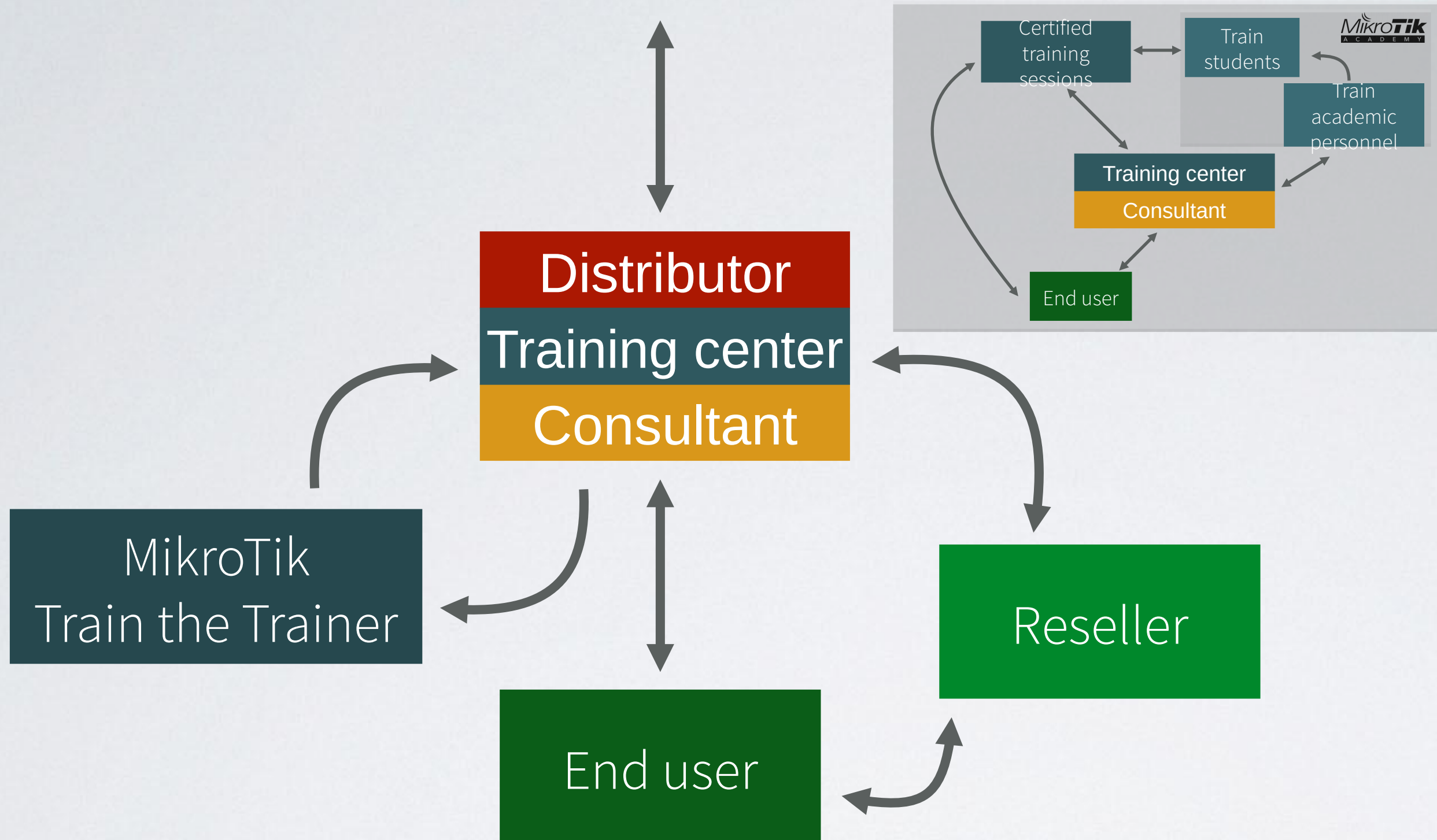
3



Purchase volumes

sales@mikrotik.com

MikroTik



Benefits

- The more you learn, the better you can help your customers
- Happier customers > better sales

Knowledge

Consultant

→ Configures and helps

Training
center

→ Certifies and advances

Products

Distributor

→ Offers products and services

Reseller

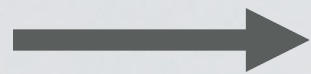
→ Buys from Distributor and resells



→ Accessories, integrators, software

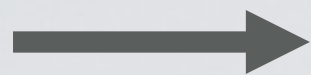


Accessories



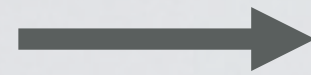
Accessories for MikroTik products

Integrators



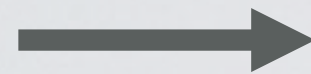
Integrated solutions

Software



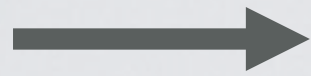
Software that works with RouterOS

CPE



More affordable integrated solutions

Books



Books about RouterOS

mikrotik.com/mfm



Routers & Wireless

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Made for Mikrotik

The Made for Mikrotik program consists of two parts: "Mikrotik certified Integrators" and "Mikrotik certified Accessories".

MikroTik Certified Accessories are made by Mikrotik approved companies, who make accessories specifically for MikroTik products. This includes RouterBOARD compatible cases, outdoor antennas and other products

MikroTik Certified Integrators are companies who make turnkey solutions based on Mikrotik RouterBOARD and RouterOS, their products include assembled CPE/AP devices, preinstalled Integrated antennas and Rackmount solutions assembled for and with RouterOS

[Click here to apply to the "MFM" program](#)

Below is a list of our 173 Certified Mikrotik Integrators and Accessory makers in Random order:

[Accessories](#)[Integrators](#)[Software](#)[CPE](#)[Textbooks](#)

[Click here](#) for design files

Netkrom solution

<http://netkromsolution.com>

NetMedic is one product design to the hospital. Powered by MikroTik RouterOS NetMedic bundle with Monitor temperature, date and uptime of MikroTik. New Design Casing spesific for Hospital.

Choice NetMedic for improving performance Your Network Hospital



Pro-Cell Co., Ltd.

<http://www.antenna.com.tw/>

PRO-CELL is a professional antenna manufacturer in Taiwan. PRO-CELL product range includes an outdoor APA enclosure which can be combined with RouterBoards inside and antennas both inside or outside.



mikrotik.com/mfm

How To Apply?

- Description
- Picture
- Homepage

sales@mikrotik.com



MikroTik
ACADEMY

The logo for Mikrotik Academy. The word "MikroTik" is written in a stylized, italicized font. Above the "i" in "Mikro" are two curved lines. The "T" in "Tik" is composed of three horizontal bars. Below "MikroTik" is a solid black horizontal bar containing the word "ACADEMY" in white, uppercase, sans-serif letters.



MikroTik Academies - educational institutions such as universities, technical schools, colleges, vocational schools, and other educational institutions offering **semester time based Internet networking courses** for their academic students using MikroTik RouterOS as a learning tool



- Certification program for educational institutions
- Course is based on MTCNA
- Taught by Academy trainers
- Includes free MTCNA exam

MTCNA Covers...

- **RouterOS introduction** (setup, upgrade, managing, TCP/IP basics)
- **Firewall** (principles, filters, connection tracking, NAT)
- **QoS** (simple queue, traffic prioritisation, PCQ, monitoring)
- **Network management** (ARP, DHCP, HotSpot, Proxy)
- **Wireless** (802a/b/g/n concepts, security, protocols)
- **Bridging** (concepts, WDS)
- **Routing** (overview, static routing, OSPF)
- **Tunnels** (PPPoE, PPP, PPTP (L2TP))

MikroTik Offers

- Training outline
- MTCNA course materials
- 20x RouterBOARDs
- MTCNA certificates & RouterOS level4 licenses to students
- Academy trainer shirts

HowTo Become Academy?

1. Fill out application - mikrotikacademy.com
2. Sign MikroTik Academy agreement
3. Attend preparatory training
4. Pass MTCNA + 1x engineer level certificate test (result 75% +)

MikroTik Offers

- 75% compensation to Training Centers for training Academy staff

[Schedule](#)[Training centers & Trainers](#)[Academies](#)[Past trainings](#)[MikroTik Academy Application Form \(Web\) \(PDF\)](#)

MikroTik Academy

Contents:

Latin America

Argentina
Bolivia
Brazil
Ecuador
Peru

Africa

Benin
Nigeria

Europe

Armenia
Belarus
Bosnia and
Herzegovina
Bulgaria
Croatia
Czech Republic
Estonia
Georgia
Hungary
Italy
Latvia
Lithuania
Malta
Moldova

Latin America

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training@mikrotik.com



- 200+ MikroTik Academies around the world
- 350+ Academy trainers



mikrotikacademy.com

After the MUM

- Presentation slides - mum.mikrotik.com
- Videos – youtube.com/mikrotik
- License will be emailed



MikroTik