



Mikrotik

A large audience of young men is seated in a lecture hall, facing forward. The room has a high ceiling with a grid of lights and a large projector screen on the left. A crane-mounted camera is visible in the upper left. The audience is diverse in age and appearance, with many wearing green shirts. The word 'Mikrotik' is overlaid in large, white, stylized text across the center of the image.





# MUM #32

# March 15

08:00	Check-in and Exhibitor hall opens. Bring your printed tickets!
10:00	Opening and Introduction, Quickset and New Products by Normunds Rustanovics (MikroTik, Latvia)
10:30	RouterOS Quickset, and Tips and Tricks Workshop by Sergejs Boginskis (MikroTik, Latvia)
12:00	Lunch time
13:30	MikroTik RouterOS as a PIM router by Piotr Cogiel (Inter Projekt, Poland)
14:15	Switch Chip, Bypass and Co. - Using advanced RouterBOARD Hardware Features by Patrik Schaub (FMS InternetService, Germany)
15:00	OSPF on Wireless - with a twist by Ron Touw (Nest Wireless, UK) and Leo De Geer (Satellithuset, Sweden)
15:45	IPV6 Security - Threats and countermeasures by Wardner Maia (MD Brasil, Brazil)

# March 16

08:00	Check-in and Exhibitor hall opens. Bring your printed tickets!
09:00	Wireless/ Nv2 workshop by Uldis Cernevskis (MikroTik, Latvia)
10:30	Coffee break
11:00	Load Balancing workshop by Janis Megis (MikroTik, Latvia)
12:30	Lunch time
14:00	Why our link performance is not Good ? by Ahmad Mortazavi (Deltalink Electronics Ltd., Turkey)
14:30	High availability network services using MikroTik RouterOS by Martin Pina (hanacke.net, Czech Republic)
15:15	Web skins, What are they and how the use them? by Paweł Ciepliński (Poland)
15:45	Access Point Redundancy, Part 2 by Lorenzo Busatti (Grifonline S.r.l., Italy)
16:15	RADIUS - make life easier by Daniel Starnowski (dasiu.pl, Poland)
17:00	Raffle and closing of MUM

Times are approximate, watch presentation progress to make sure you don't miss the next one.



Wi4net (Italy)



Meconet (Germany)



Anteny24 (Poland)



4wifi (Poland)



FMS (Germany)



Interprojekt (Poland)



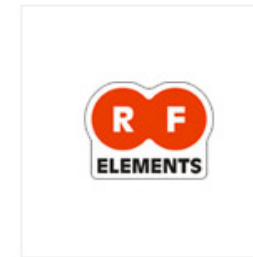
Konsorcjum ATS (Poland)



Cyberbajt (Poland)



i4wifi (Czech Republic)



RF elements (Slovakia)



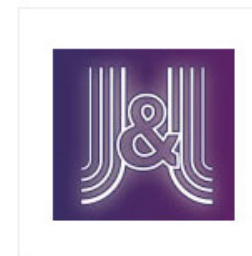
Deltalink Electronic (Turkey)



EDC WiFi (China)



Net Service (Czech Republic)



Jirous (Czech Republic)



Technologic (Poland)



Itelite (Poland)



MTI (Israel)



Cyberteam (Poland)



Townet (Italy)



Arts-net (Poland)



Citynetz24 (Germany)



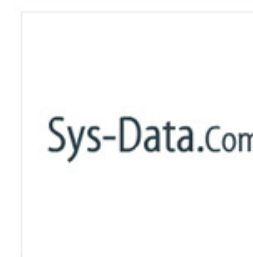
ISP-Soft (Argentina)



AluPro (Poland)



Baltic Networks (USA)



Sys-DataCom (Czech Republic)



Nim Wave (Italy)



Aerial.net (Greece)



Falesia Systemy (Poland)



Hot Lava Systems (USA)





- 80 employees
- Established in 1996
- 16th anniversary this year
- RouterOS in 1997
- RouterBOARD in 2002
- First MUM Prague in 2006
- Biggest MUM in Indonesia 2011

# Where?

*MikroTik*



# Staff

- John Tully CEO
- Arnis Riekstiņš CTO/COO
- Janis Jankovskis SALES
- Edmunds Aperāns SALES
- Normunds Rustanovičs SUPPORT
- Sergejs Boginskis SUPPORT
- Uldis Čerņevskis SUPPORT / WIRELESS
- Jānis Meģis TRAINING / SUPPORT
- Māris Bulāns SUPPORT

# Groove 2Hn

- 2GHz Groove in familiar design
- 500mW 802.11b/g/n wireless
- Both CPE and AP models
- 2Hn available now
- A-2Hn available end of march





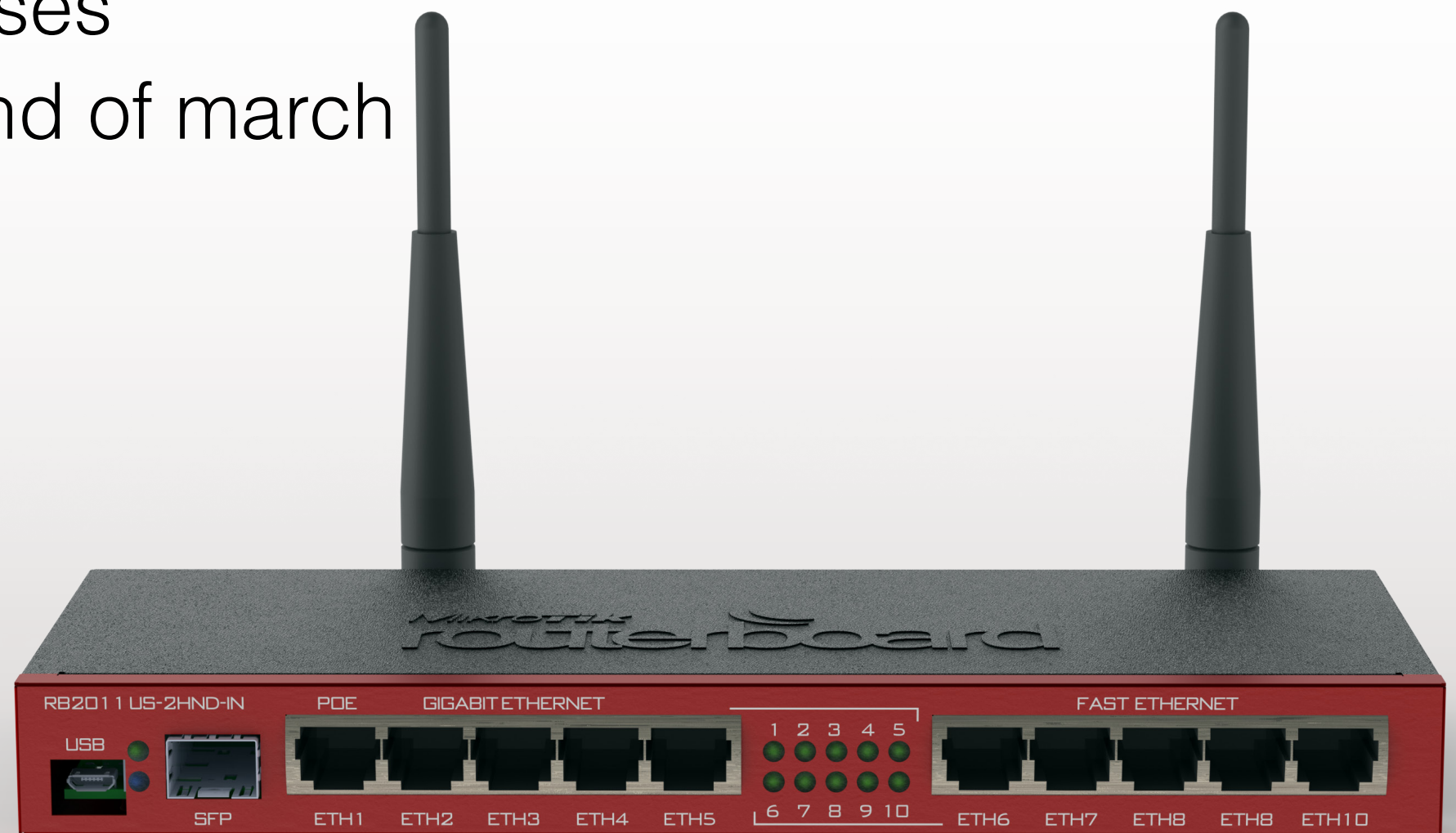
# RB2011L

- Low cost SOHO Ethernet device
- Different case options
- 10 ports total, SFP model
- L models available now



# RB2011US

- Low cost SOHO device
- Wireless and SFP options
- Different cases
- Available end of march





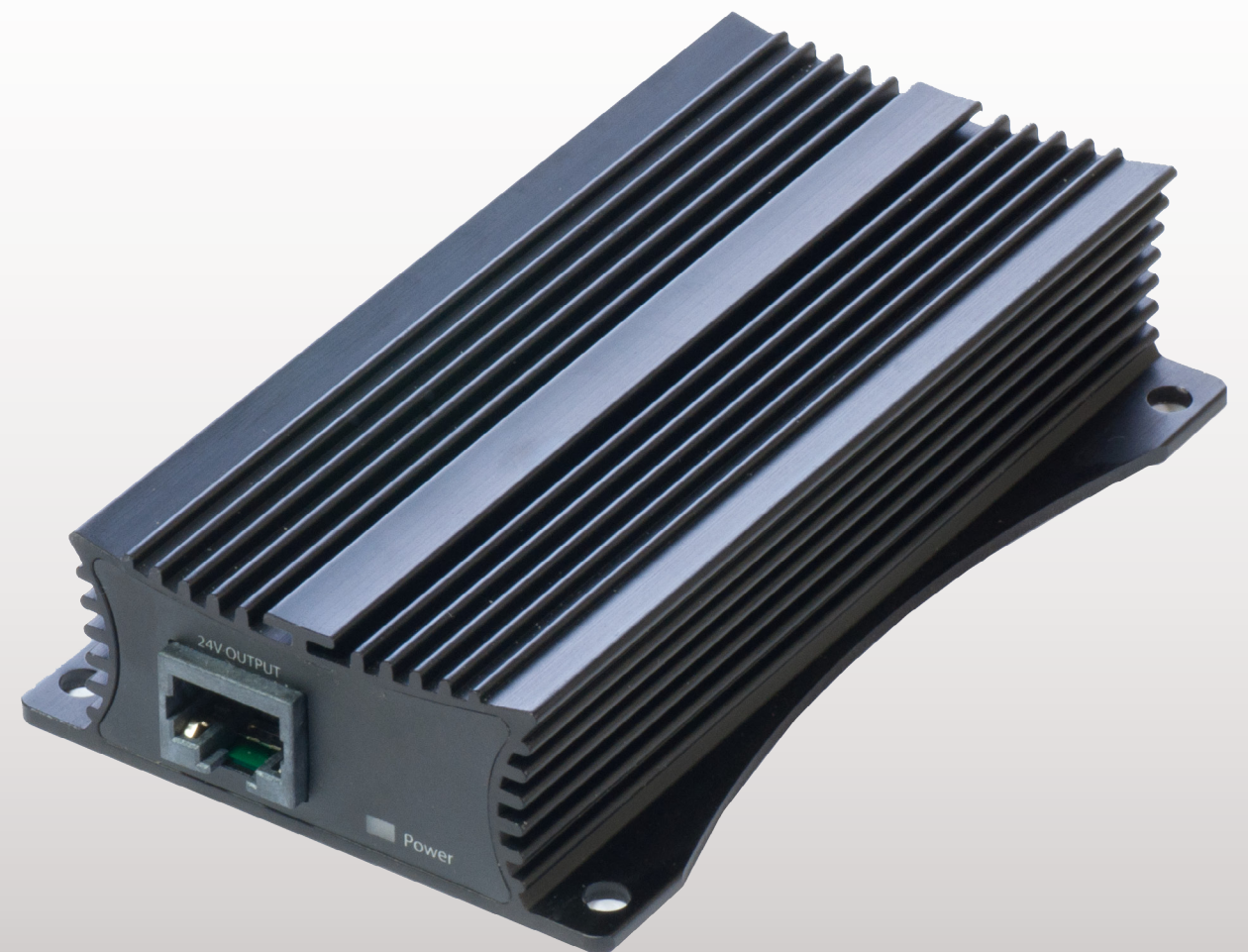
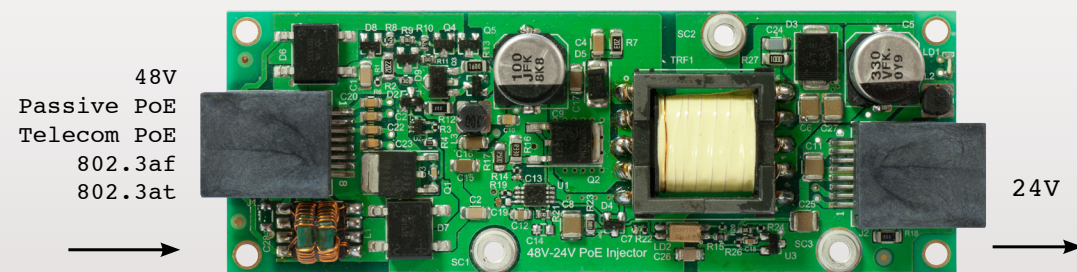
# RB2011 models

Feature / Model	2011L	2011L-IN	2011L-RM	2011LS	2011LS-IN
Enclosure	-	Desktop	Rackmount	-	Desktop
SFP port	-	-	-	Yes	Yes
Serial port	-	-	-	-	-
USB	-	-	-	-	-
Wireless	-	-	-	-	-

Feature / Model	2011US-IN	2011US-2HnD-IN	2011US-2HnD
Enclosure	Desktop	Desktop	-
SFP port	Yes	Yes	Yes
Serial port	Yes	Yes	Yes
USB	Yes	Yes	Yes
Wireless	-	Yes	Yes

# 48V to 24V PoE converter

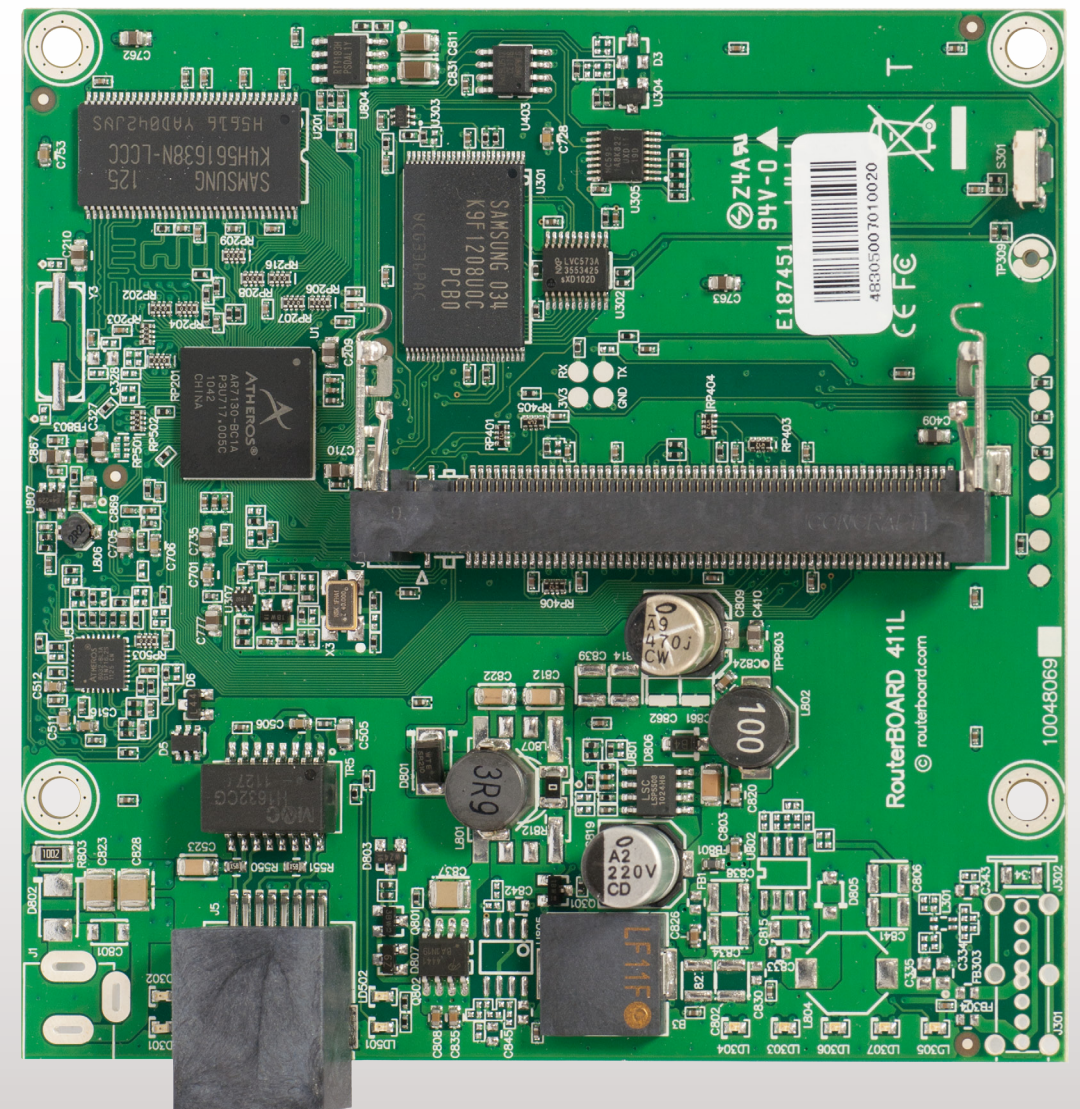
- Convert all kinds of power inputs
- 802.3af, 802.3at, Telecom, etc.
- Industrial design
- Durable metal case
- Available now





# RB400 L series

- Simple and affordable
- miniPCI slot
- No serial
- Doesn't replace RB400
- Complements the series
- New Gigabit models
- Available now



# Metal

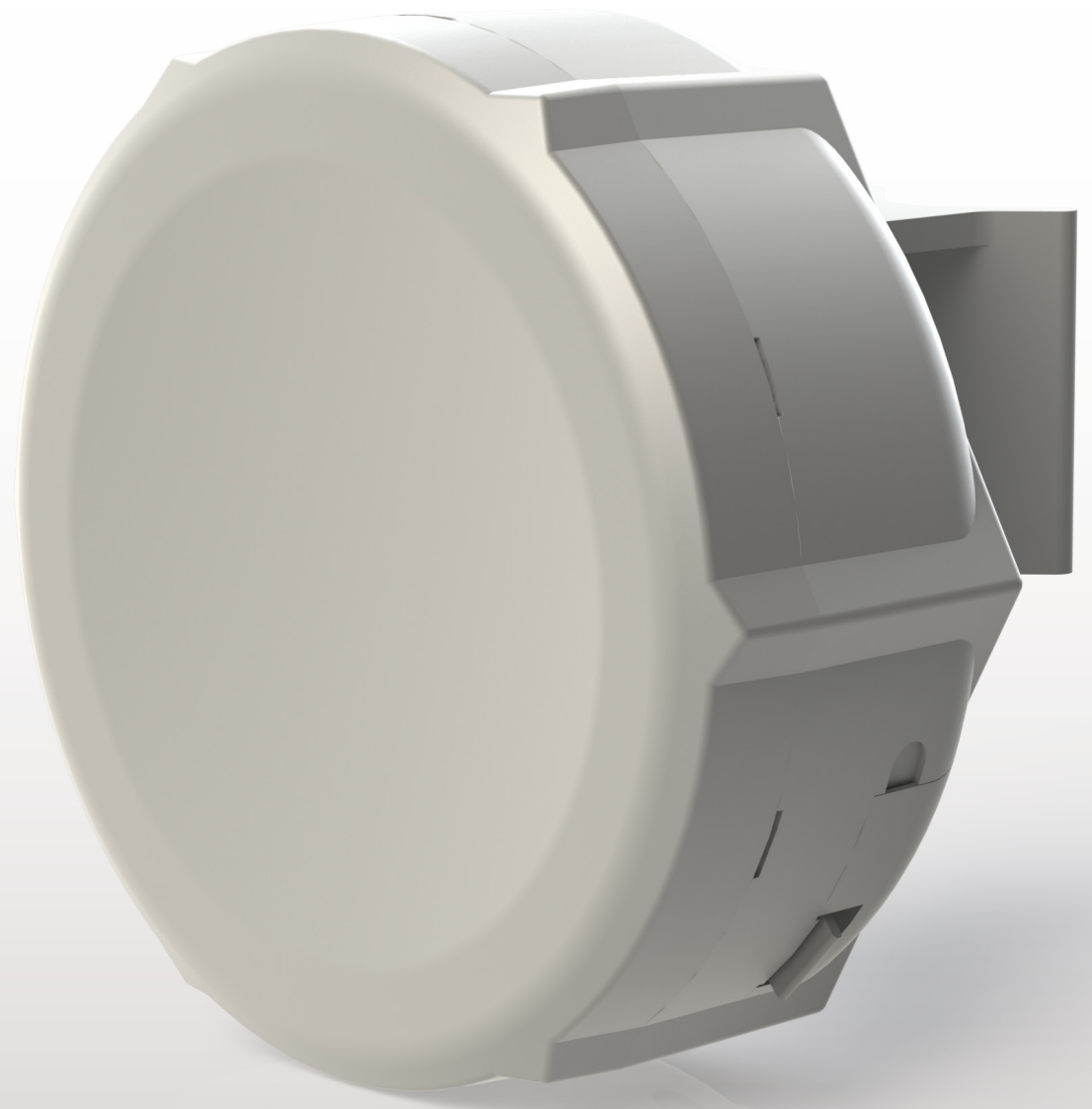
- 1.3 Watt output power
- Weatherproof
- Industrial design
- Durable metal case
- 5GHz 802.11a/n
- Completely sealed
- L4 AP license
- Available in April





# SXT G

- Looks the same as SXT
- Gigabit port
- Improved port angle
- Full 802.11n speeds
- Available now



# CLOUD CORE

## ROUTER



MikroTik  
CLOUD CORE



CLOUD CORE  
ROUTER CCR-1036



USB SFP 1 SFP 2 SFP 3 SFP 4 ETH 1 ETH 2 ETH 3 ETH 4 ETH 5 ETH 6 ETH 7 ETH 8 ETH 9 ETH 10 ETH 11 ETH 12

PoE / BOOT



RESET

CONSOLE

MikroTik

# CCR 1036

- **36 core** networking CPU
- 1.2GHz clock **per core**
- Greater than 8 mpps standard forwarding
- Greater than 15 mpps fastpath forwarding
- Up to 16Gbit/s throughput
- Ports directly connected to CPU
- 12x Gigabit ports
- 4x SFP ports
- Color touchscreen LCD display



Industrial grade super fast router with brand new cutting edge CPU technology.

36 cores! Unprecedented power and unbeatable performance - this is our new flagship device, the Cloud Core Router.

If you need many millions of packets per second- Cloud Core Router with 36 cores is your best choice!

MikroTik  
CLOUD CORE



CLOUD CORE  
ROUTER CCR-1036



USB SFP 1 SFP 2 SFP 3 SFP 4 ETH 1 ETH 2 ETH 3 ETH 4 ETH 5 ETH 6 ETH 7 ETH 8 ETH 9 ETH 10 ETH 11 ETH 12

PoE / BOOT



RESET

CONSOLE

MikroTik



## Bandwidth Management

- MikroTik RouterOS adalah salah satu OS/aplikasi terancang (dan mudah dikonfigurasi) untuk melakukan bandwidth management.
- Bandwidth management dilakukan dengan menggunakan shaper dan scheduler
  - Shaper: Token Bucket dan PCQ
  - Scheduler: FIFO, RED, SFQ

MikroTik

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MikroTik User Meeting  
JAKARTA, INDONESIA, APRIL 9-10, 2011

[www.mikrotik.com](http://www.mikrotik.com)