**MikroTik Newsletter, issue #58 - May 2014**
- CCR performance upgrade
- mANT30
- CAPsMAN
- Power-cycle
- Auto frequency
- New MUM events and webpage
- CRS features

Cloud Core Router performance upgrade

The Cloud Core Router series are our most powerful routers, they are built using the specialized Tilera networking CPUs that allow us to give you never before seen speeds at very competitive prices. We have eight CCR models available, with three different CPU types: 9 core, 16 core and 36 core.

With every RouterOS upgrade, we add new optimisations for the CCR product family, and speed is increased. It's almost like getting a free hardware upgrade with a simple click. For example in RouterOS v6.8 we improved the PPP performance for CCR products. The Cloud Core Routers also have hardware IPsec encryption.

Tunnel type	Performance increase after v6.8 upgrade
PPTP	up to **16x** faster single tunnel throughout
L2TP	up to **31x** faster single tunnel throughput
PPPoE	up to **19x** faster single tunnel throuhgput
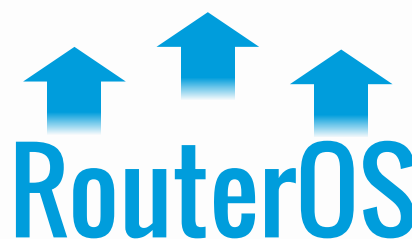
The CCR1036 with latest RouterOS releases can handle huge network load without even breaking a sweat - it can handle:

- up to 30 000 unencrypted or 7 200 encrypted L2TP tunnel requests per minute
- up to 16 000 unencrypted or 4 500 encrypted PPPoE tunnel requests per minute
- up to 3 000 unencrypted or 1 000 encrypted PPTP tunnel requests per minute
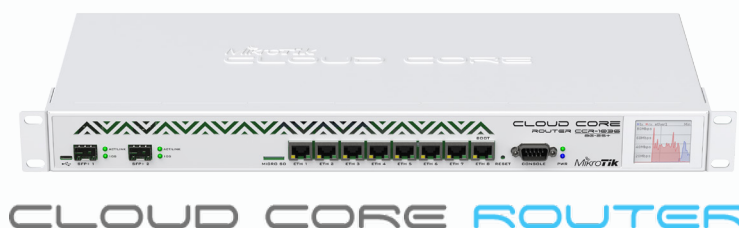
Cloud Core Router comparison

Model	CCR1009-8G-1S	CCR1009-8G-1S-1S+	CCR1016-12G	CCR1016-12S-1S+	CCR1036-12G-4S	CCR1036-8G-2S+	CCR1072
CPU Cores	9	9	16	16	36	36	72
RAM	1GB	2GB	2GB	2GB	4GB/16GB	4GB/16GB	16GB
Gigabit ports	8	8	12	0	12	8	1
SFP	1	1	0	12	4	0	0
SFP/SFP+	0	1	0	1	0	2	8
USB	1	1	1	1	1	1	1
Price	425$	495$	645$	745$	995$/1195$	1095$/1295$	Available Q3

Tilera recently released a Press release about our new Cloud Core Routers:

View press release!

mANT30

mANT30 is a professional class 5 GHz 30dBi dish antenna, built to the highest industry standards. Built to seamlessly accomodate our Basebox series products, but can be used for any pole mounted wireless device due to the adequate length of the included FlexGuide cable.

Two antennas are available, with **a standard type mount (MTAD-5G-30D3)**, and with **a precision alignment mount (MTAD-5G-30D3-PA)** that allows for more precise vertical, and also horizontal alignment, without rotating the mount on the pole. The antennas come packaged with all necessary accessories and cables.

$119*

$129

FlexGuide included

MTAD-5G-30D3-PA
(With precision alignment mount)
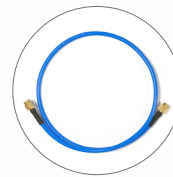
Electrical Specifications

Frequency Range	4.7-5.875 GHz
Gain	30 dBi typically
Dual Polarization	Vertical and Horizontal
3dB Beamwidth	+/-2.5 deg
Standards	Complies with EN 302 326 DN1, DN2, DN3, DN5
VSWR	≤ 1.4 typ, ≤ 1.8 max
Port to Port Isolation	>40dB min
Front-to-Back Ratio	>30 dB
Cross Polarization	>40 dB
Power Rating	100 watts
Impedance	50 ohms
Elevation adjustment range	+/- 20 deg (MTAD-5G-30D3), +/- 15 deg (MTAD-5G-30D-PA)

View PDF

Product comparison

The below table shows comparison with similar 30dBi dish antennas from other manufacturers. As you can see, the mANT is lower cost, lower weight, and has better characteristics and by being the lightest weight antenna, it also has the lightest shipping weight, and easiest installation.

Product	MikroTik mANT30*	Product U	Product A	Product L
Gain	**30 dBi typ**	28 - 30,25 dBi	30 dBi typ	29 dBi
Port to Port Isolation	**>40 dB min**	35 dB min	35 dB min	>30 dB min
Cross Polarization	**> 40dB**	not specified	>30 dB	>30 dB
VSWR	**1.4:1**	1.4:1	1.5:1	1.5:1
Weight	**4.8kg**	9.8 kg	7.2 kg	8 kg
Price [US MSRP]	**119$**	159$	129$	189$

* Standart version - without precision alignment mount
**Note:** Basebox radio not included, available separately.

Product code: **MTAD-5G-30D3-PA / MTAD-5G-30D3**

CAPsMAN

MikroTik is introducing CAPsMAN, **the Controlled Accesspoint System Manager.** This is a new feature in RouterOS, which allows to remotely manage your Access Point devices, without need to connect to each of them. Set a device to CAPs mode and it will be automatically discovered and provisioned. Simply change one setting, and all your CAPs (controlled APs) will instantly have the new setting.

The CAPsMAN runs on any RouterBOARD, so no additional hardware is needed, including legacy devices with a simple upgrade.

The CAPsMAN system allows quick deployment of large networks, new RouterBOARD devices will come CAPsMAN ready from the factory, you will be able to add them to the CAPsMAN network with a simple push of a button.
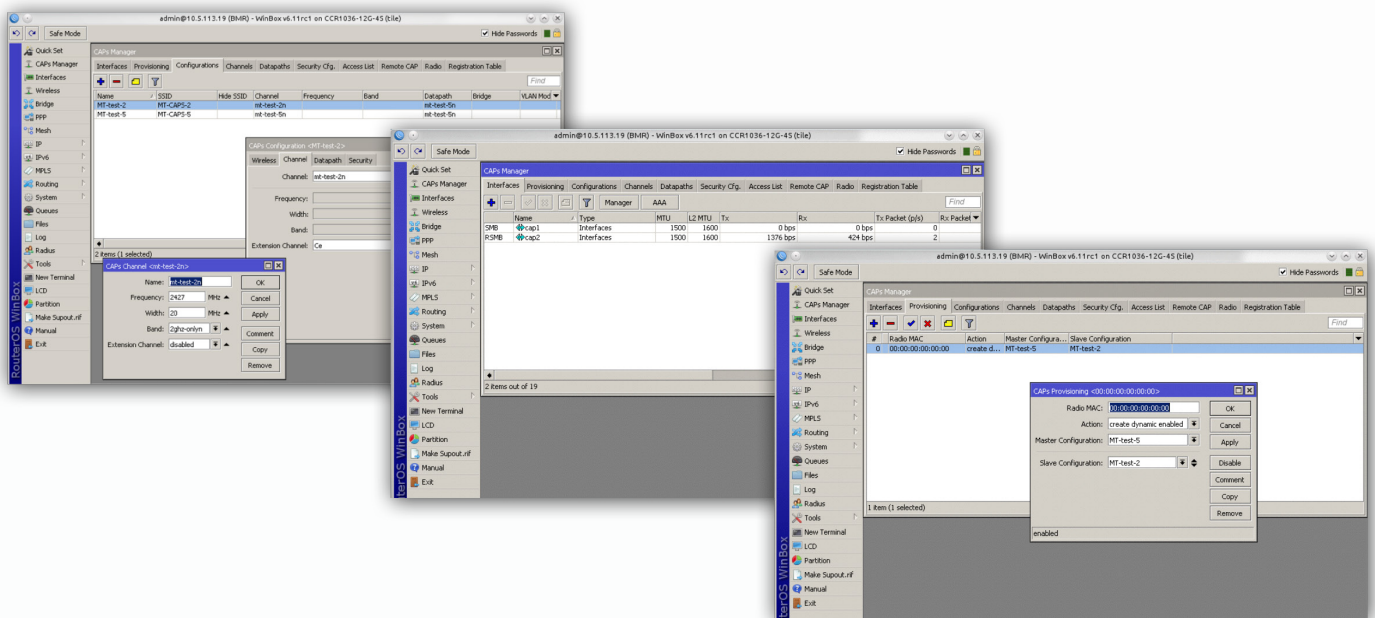
The CAPsMAN works both with Layer 2 and Layer 3 connection between CAPs manager and your APs, and what's more, not only can it manage the configuration of your APs, optionally it can also manage all their traffic. More information in our manual.

View our manual

The CAPsMAN feature is available separately in the "wireless-FP" package for RouterOS v6.13, and starting with RouterOS v6.14 it will be included in the standard upgrade package as a one click option to enable.

PoE power-cycle

In RouterOS v6.12 we have added a new feature, that allows your RouterBOARD PoE-out ports to reset the power for specified duration, for power cycling a connected device. This is useful if you want to powercycle a device that you are connecting from. This feature is supported in the following devices: RB2011Ui, RB951Ui, RB750UP, OmniTIK UPA, mAP, RB2011iL.

Command line example: /interface ethernet poe power-cycle ether10 duration=3s

Auto frequency

From RouterOS v6.12 you can now set your AP frequency to "auto". This is a useful feature to avoid interference and increase your performance. Simply set "auto" as your frequency value, and RouterOS will check for other networks in the area, and choose a frequency as far from any other networks as possible.

New MUM events and webpage

We have added several new MikroTik User Meetings to our schedule this year. MikroTik is coming to:

- **USA in September (Pittsburgh, PA)**
- **Bolivia in November (Santa Cruz)**
- **Brazil in November (Fortalez)**
- **Indonesia in December (Yogyakarta)**

We have also launched a brand new MUM website where you can get the latest information about these events, and register to attend the conference.

Visit now!

CRS features added in RouterOS v6.12

We have added a plethora of new features for CRS series Switch devices in our RouterOS v6.12 release. As you can see in the following list, more than half of the options are new. Upgrade your Switch to professional level with simple software update. Even more features will be added in upcoming versions.

Key Features

- Fully manageable switch, full wire-speed switching
- Configurable ports for switching or routing
- Ethernet, Fiber or 4G (with optional USB modem) gateway connection to Internet
- LCD touchscreen
- RJ45 serial port
- Reset switch; beeper; voltage and temperature monitoring
- Passive cooling
- RouterOS, L5 license

Switch-chip Features

- All Forwarding Databases support IVL and SVL
- Configurable port based and VLAN based learning limit
- Up to 16K MAC entries in Unicast FDB for Layer 2 unicast forwarding
- Up to 1K MAC entries in Multicast FDB for multicast forwarding
- Up to 256 MAC entries in Reserved FDB for control and management purposes
- Local switching allows packets to be sent back to original port
- Jumbo frame support (CRS125: 4064 Bytes; CRS226: 9204 Bytes)

Quality of Service (QoS) New

- Flexible QoS classification and assignment
  - Port based
  - DSCP based
  - PCP/DEI based
  - Protocol based
  - VLAN based
  - ACL based
- QoS remarking and remapping for QoS domain translation between service provider and user networks
- Overriding of each QoS assignment according to the configured priority

VLAN

- Fully compliant with IEEE802.1Q and IEEE802.1ad VLAN
- 4K active VLANs
- Flexible VLAN assignment:
  - Port based VLAN
  - Protocol based VLAN
  - MAC based VLAN
- From any to any VLAN translation and swapping
- 1:1 VLAN switching – VLAN to port mapping
- VLAN filtering

Trunking New

- Supports IEEE802.3ad and IEEE802.1ax Link Aggregation Protocols
- Up to 8 Trunk groups
- Up to 8 trunk member ports per Trunk group
- Hardware automatic failover and load balancing

Port Isolation and Leakage New

- Applicable for Private VLAN implementation
- 3 port profile types: Promiscuous , Isolated and Community
- Up to 28 Community profiles
- Leakage profiles allow bypassing egress VLAN filtering

Mirroring New

- Various types of mirroring:
  - Port based VLAN
  - Protocol based VLAN
  - MAC based VLAN
- 2 independent mirroring analyzer ports

Access Control List (only on CRS226) New

- Ingress and Egress ACL tables
- Up to 512 ACL rules
- Classification based on ports, L2, L3, L4 protocol header fields.
- ACL actions include filtering, forwarding and modifying of the protocol header fields

Bandwidth Shaping and Packet Scheduler New

- Shaping per port, per queue, per queue group
- 8 queues on each physical port

IP Routing

- Wire-speed static IP routing (Coming soon)

CRS125-24G-1S-IN   CRS125-24G-1S-RM   CRS125-24G-1S-2HnD-IN   CRS226-24G-2S+IN