Cloud Core Router
CCR1009

The CCR1009 is a powerful Ethernet router based on the cutting edge TILERA 9 core CPU.

Two models are available:

- low-cost model CCR1009-8G-1S with with 1GB of RAM, eight Gigabit Ethernet ports, and one SFP cage (SFP module not included).

- full feature model CCR1009-8G-1S-1S+ with 2GB of RAM, eight Gigabit Ethernet ports, one SFP port and one SFP+ port with 10G support (SFP module not included). CCR1009-8G-1S-1S+ model also have dual power supplies built in for redundancy (if one power line fails, the other one will take over automatically). Also, CCR1009-8G-1S-1S+ supports a Smart card, to store your private key for use in all features that support Certificate based authentication.
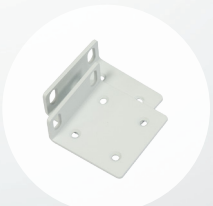
CCR-1009-8G-1S

CCR-1009-8G-1S-1S+

IEC Cord   USB cable   Rackmount ears

Model	CCR1009-8G-1S	CCR1009-8G-1S-1S+
CPU	Tilera TILE-Gx8009 CPU (9-cores, 1.2Ghz per core)	
Memory	RAM: 1GB DDR3 800 MHz	RAM: 2GB DDR3 800 MHz
Network interfaces	Eight 10/100/1000 Mbit/s Gigabit Ethernet with Auto-MDI/X (Ports 1-4 can be configured for Switch mode)	
SFP	1x SFP cage	1x SFP cage, 1x SFP+ cage
Expansion	microUSB port	microUSB port, SmartCard slot, MicroSD slot
Storage	128MB Onboard NAND	
Serial port	One DB9 RS232C asynchronous serial port	
Extras	Reset switch; beeper; voltage, current and temperature monitoring; speed controlled fan	Reset switch; beeper; voltage, current and temperature monitoring; speed controlled fan, LCD
Power options	1x IEC C14 power jack AC 110/220V, PoE in 12-58V	2x IEC C14 power jacks AC 110/220V, PoE in 12-58V
Max power consumption	34W (with loaded SFP)	35W (with loaded SFP)
Unit dimensions	444x175x47mm	
Temperature	-20C .. +60C	
OS	MikroTik RouterOS v6 (64bit), Level 6 license	
Included	router in a 1U case, IEC power cable, USB cable, rackmount ears	router in a 1U case with LCD, 2x IEC power cables, USB cable, rackmount ears

Cloud Core Router
CCR1016-12S-1S+

CCR1016 is an industrial grade router with a cutting edge 16 core Tilera CPU. If you need many millions of packets per second - Cloud Core Router is your best choice.

This model has twelve SFP ports and one SFP+ port for 10G connectivity. It is available in a 1U rackmount case and also has a serial console port, a touchscreen LCD and a USB port.

The CCR1016-12S-1S+ comes with redundant power supplies and one RJ45 SFP 10/100/1000M coper module.

- 12x SFP ports for 1 Gigabit connectivity
- 1x SFP+ port for 10 Gigabit connectivity
- 16 core Tilera CPU, 1.2GHz clock per core
- 12 Mbytes total on-chip cache
- State of the art TILE GX architecture
- Ports directly connected to CPU
- 1U rackmount case
- Color touchscreen LCD display
- two power supplies for redundancy

IEC Cord   RJ45 SFP coper module   Rackmount ears

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CPU	Tilera Tile-Gx16 CPU (16-cores, 1.2Ghz per core)
Memory	2GB built-in RAM
SFP	Twelve SFP ports and one SFP+ port
Expansion	microUSB port
Storage	128MB Onboard NAND
Serial port	One DB9 RS232C asynchronous serial port
Extras	Beeper; voltage, current and temperature monitoring, fan, SD Card slot
Power options	2x IEC C14 standard PSU units built in, 110/220V
Board dimensions	290x155mm
Temperature	Max ambient temperature 50° @ 1.2GHz; 70° @ 1GHz CPU core frequency
OS	MikroTik RouterOS v6, Level 6 license
Included	CCR1016-12S-1S+: router in a 1U case with LCD, 2x IEC power cables, RJ45 SFP coper module, rackmount ears

MikroTik

CCR1016-12S-1S+

Cloud Core Router

CCR1036-8G-2S+

Our fastest router has now become even better - the new CCR1036-8G-2S+ now has two SFP+ ports for 10G interface support (SFP+ module available separately). It uses the same 36 core Tilera CPU as our other CCR1036 model, and delivers the same performance, but now, ten gigabit links are possible.

The device comes in a 1U rackmount case, has two SFP+ ports, eight Gigabit ethernet ports, a serial console cable and a USB port.

The CCR1036-8G-2S+ has two SODIMM slots, by default it is shipped with 4GB of RAM, but has no memory limit in RouterOS (will accept and utilize 16GB or more). Also available now, the EM model with 16GB of RAM!
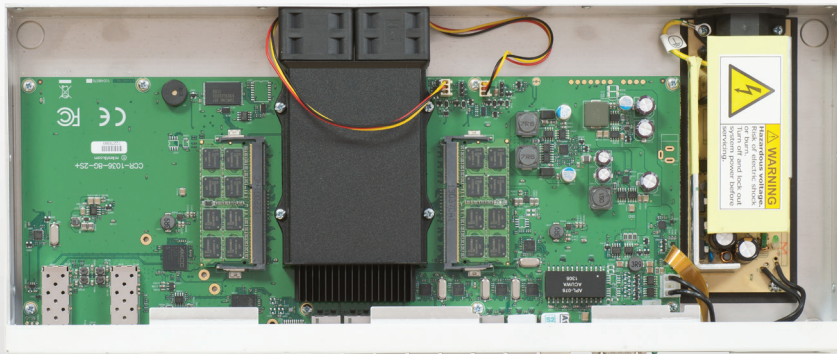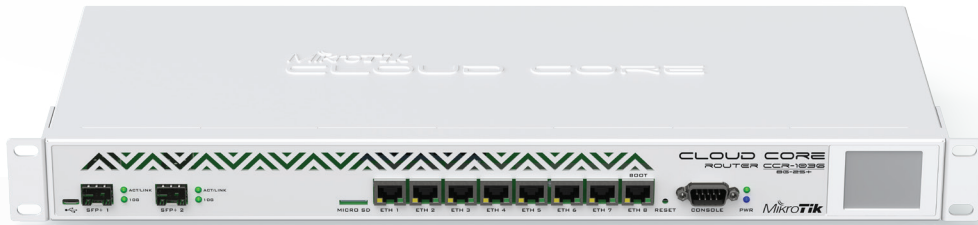
New generation CPU	**Highest performance**	**Full set of features**
36 core CPU 1.2GHz clock per core 12 Mbytes total on-chip cache State of the art TILE GX architecture	8 mpps standard forwarding 41.5 mpps fastpath forwarding (wire speed for all ports) Up to 28Gbit/s throughput	1U rackmount case 8x Gigabit ports 2x SFP+ ports Color touchscreen LCD Ports directly connected to CPU

CPU	Tilera Tile-Gx36 CPU (36-cores, 1.2Ghz per core)
Memory	Two SODIMM DDR3 slots, 4GB (2x2GB) installed (no hardware or software max limit) CCR1036-8G-2S+EM: 16GB (2x8GB) RAM installed
Ethernet	Eight 10/100/1000 Mbit/s Gigabit Ethernet with Auto-MDI/X
SFP	Two 10G Ethernet SFP+ cages (Mini-GBIC; SFP module not included), DDMI support
Expansion	microUSB port, host and device mode
Storage	1GB Onboard NAND
Serial port	One DB9 RS232C asynchronous serial port
Extras	Reset switch; speed controlled fan; beeper; voltage, current and temperature monitoring
Power options	IEC C14 standard connector 110/220V (PSU included), up to 60W power consumption
Board dimensions	355x145mm55mm
Temperature	Max ambient temperature 50° @ 1.2GHz; 70° @ 1GHz CPU core frequency
OS	MikroTik RouterOS v6 (64bit), Level 6 license
Included	Router in a 1U case with LCD, PSU, power cable, usb cable

MikroTik

CCR1072-1G-8S+

Our new flagship router, the CCR1072, is powered by a Tilera 72 core CPU, each core is clocked at 1GHz, and to fully utilise this power, the CCR1072 is equipped with eight independently connected 10G SFP+ ports.

Thanks to the unique 72 core processor and ports that are directly connected to the CPU, CCR1072 is capable of over 120 million packets per second throughput.

Full set of features

- 8x SFP+ ports
- 16GB ECC RAM
- Ports directly connected to CPU
- microSD and 2x M.2

Highest performance

- over 120 million pps packet throughput
- up to 80 Gbps throughput

New generation CPU

- 72 core CPU
- 1 GHz clock per core
- State of the art TILE GX architecture

The unit comes equipped with two removable (hot plug) power supplies for redundancy, smart card slot, eight SFP+ ports and 16GB of built in ECC RAM.

The CCR1072 also has two built-in M.2 slots, microSD and 2x USB for adding storage, to use for proxy cache, user manager and other features. The M.2 slots accept 800mm Key-M x4 PCIe 2.0 modules.

Specifications

Product code	CCR1072-1G-8S+
CPU nominal frequency	1 GHz
CPU core count	72
Size of RAM	16 GB
Storage	128 MB Onboard NAND, also see *expansion*
10/100/1000 Ethernet ports	1
Power supply	2x IEC C14 standard connectors 110/220V (Two redundant PSU)
Supported input voltage	12 V
CPU temperature monitor	Yes
PCB temperature monitor	Yes
Voltage Monitor	Yes
Current monitor	Yes
Dimensions	443x315x40mm, weight: 3.8 kg, weight with packaging: 5.125 kg
License level	6
Operating System	RouterOS
CPU	Tilera Tile-Gx72 CPU
Max Power consumption	100 W
Display	Color LCD, touchscreen
SFP	8x 10G Ethernet SFP+ cages (Mini-GBIC; SFP module not included), DDMI support
Expansion	1x microUSB 2.0, 1x regular USB 2.0, full size Smart Card slot, microSD slot, 2x M.2 slots with x4 PCIE 2.0, Key-M, module size support: 2242,2260,2280
Serial port	RJ45
Suggested price	$3,050

Included

2x IEC cords

Screw and feet kit

Rackmount ears

Performance test results

CCR1072-1G-8S+		Tile 72 Core (1200Mhz, DDR1333) Max possible throughput					
Mode	Configuration	1518 byte		512 byte		64 byte	
		Mbps	kpps	Mbps	kpps	Mbps	kpps
Bridging	none (fast path)	78,960.3	6,502.0	76,963.8	18,790.0	60,952.4	119,047.6
Bridging	25 bridge filter rules	74,448.8	6,130.5	33,557.3	8,192.7	5,293.8	10,339.5
Routing	none (fast path)	78,960.3	6,502.0	76,963.8	18,790.0	44,291.6	86,507.0
Routing	25 simple queues	78,960.3	6,502.0	50,669.2	12,370.4	6,898.8	13,474.2
Routing	25 ip filter rules	56,683.3	4,667.6	24,515.0	5,985.1	3,007.4	5,873.8

1. All tests are done with Xena Networks specialized test equipment (XenaBay),and done according to RFC2544 (Xena2544)
2. Max throughput is determined with 30+ second attempts with 0,1% packet loss tolerance in 64, 512, 1518 byte packet sizes
3. Values in Italic indicate that max throughput was reached without maxing out CPU, but because board interface configuration was maxed out
4. Test results show device maximum performance, and are reached using mentioned hardware and software configuration, different configurations most likely will result in lower results