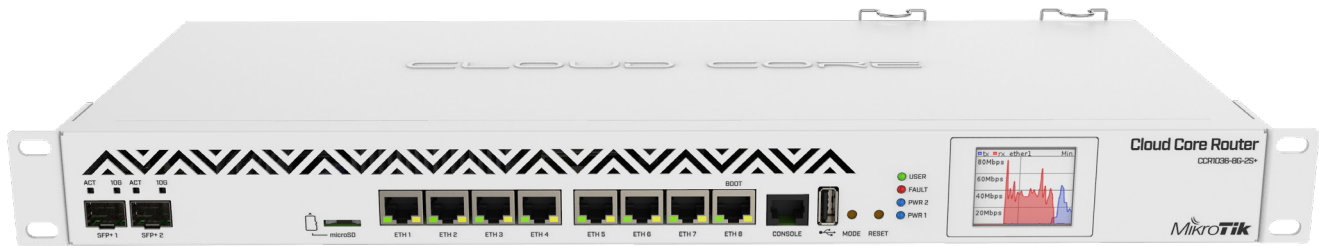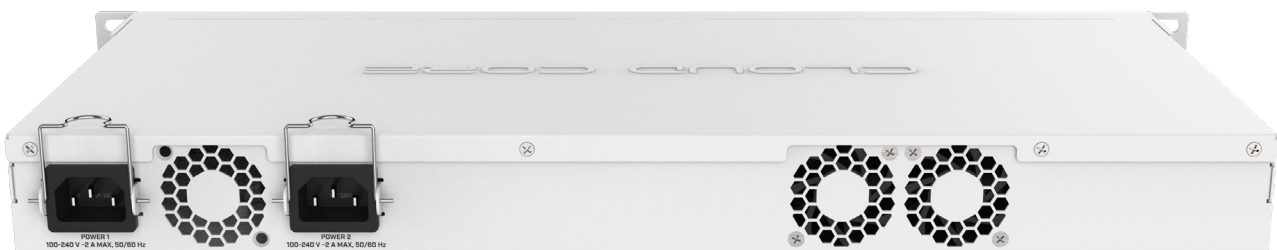# CCR1036-8G-2S+

The CCR1036-8G-2S+ is a high performance networking router with eight Gigabit ports, two SFP+ ports for 10G connectivity and dual power supplies for redundancy. Powered by a 36 core CPU, this router is able to perform the most complicated routing and management tasks, for managing large networks with high bandwidth requirements.

Each of it's ports is directly connected to the Tilera networking CPU, with no ports sharing any bandwidth, guaranteeing the best performance and highest reliability. The CPU supports IPsec hardware accelerated encryption, so you can use it also as a high performance VPN gateway to ensure the best encryption between important locations, without sacrificing connection speed.

The M.2 slot allows to install a high speed SSD disk, for using a local user database, proxy storage or for other features. Two versions are available, depending on the required RAM amount:
4 GB for CCR1036-8G-2S+ and 8 GB for CCR1036-8G-2S+EM.

Comparing to the previous model, the new CCR1036 series has a full size USB port, redundant power supplies with improved design, RJ45 serial port and general improvements in durability, efficiency and reliability.

Specifications

Product code	CCR1036-8G-2S+	CCR1036-8G-2S+EM
CPU	36 cores TLR4-03680 1.2 GHz	
RAM	4 GB	8 GB
Storage	NAND 1 GB	
Dimensions	355 x 145 x 55 mm	
Operating temperature	-20°C .. +60°C tested	
Operating system	RouterOS	
License level	6	

Interfaces

10/100/1000 Ethernet ports	8
1G/10G SFP+ ports	2
M.2 slots	1 PCIe x4
Memory card slots	1 microSD
USB ports	1 USB type A
Serial ports	1 RJ45

Powering

Supported input voltage	100 V - 240 V
Number of AC inputs	2
Max power consumption	73 W

Other

CPU temperature monitor	Yes
PCB temperature monitor	Yes

Performance test results

CCR1036-8G-2S+		Tile 36 core max possible throughput test					
Mode	Configuration	1518 byte		512 byte		64 byte	
		kpps	Mbps	kpps	Mbps	kpps	Mbps
Bridging	none (fast path)	2275.7	27636.1	6578.9	26947.2	41666.7	21333.4
Bridging	25 bridge filter rules	2275.7	27636.1	5179.7	21216.1	5163.5	2643.7
Routing	none (fast path)	2275.7	27636.1	6578.9	26947.2	41666.7	21333.4
Routing	25 simple queues	2275.7	27636.1	6553.3	26842.3	7643.1	3913.3
Routing	25 ip filter rules	1825.7	22171.3	3033.9	12426.9	3049.7	1561.4

CCR1036-8G-2S+		CCR1036 series IPsec throughput					
Mode	Configuration	1400 byte		512 byte		64 byte	
		kpps	Mbps	kpps	Mbps	kpps	Mbps
Single tunnel	AES-128-CBC + SHA1	130.5	1461.6	123.4	505.4	115.4	59.1
256 tunnels	AES-128-CBC + SHA1	912.9	10224.5	1037.4	4249.2	1053.1	539.2
256 tunnels	AES-128-CBC + SHA256	902.7	10110.2	1032.8	4230.3	1025.7	525.2
256 tunnels	AES-256-CBC + SHA1	901.0	10091.2	1028.3	4211.9	998.2	511.1
256 tunnels	AES-256-CBC + SHA256	892.5	9996.0	982.9	4026.0	970.7	497.0

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

Included parts

2 IEC cords

Rack ears

Screw kit