The MikroTik CCR2004-1G-12S+2XS Router Datasheet

Overview

The MikroTik CCR2004-1G-12S+2XS is a 1U rackmount Cloud Core Router for service providers, data centers, and large enterprise networks. A quad-core 64-bit ARM AL32400 processor at 1.7 GHz with 4 GB of RAM and 128 MB of NAND runs RouterOS v7 with a Level 6 license, and it forwards up to about 38 Gbps of 1518-byte traffic in MikroTik's best-case tests.

The front panel carries twelve 10G SFP+ ports, two 25G SFP28 ports, one Gigabit Ethernet management port, and an RJ45 serial console port. Two integrated AC power supplies provide redundancy, two fans cool the chassis, and the included rackmount bracket allows standard 19-inch rack mounting.

QUICK SPEC

Figure 1: APPEARANCE OF CCR2004-1G-12S+2XS (FRONT VIEW)



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TABLE 1: Quick Specs

Model	CCR2004-1G-12S+2XS
CPU	AL32400, ARM 64-bit, 4 cores, 1700 MHz
Memory	4 GB RAM, 128 MB NAND
Ports	1 x 10/100/1000 Ethernet, 12 x 10G SFP+, 2 x 25G SFP28, 1 x RJ45 serial console
RouterOS License	Level 6 (RouterOS v7)
Dimensions (L x W x H)	44.3 x 22.4 x 4.4 cm (1U rackmount)

Product Details

FIGURE 2: ANGLED VIEW OF CCR2004-1G-12S+2XS



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FIGURE 3: REAR SIDE OF CCR2004-1G-12S+2XS (FANS AND DUAL POWER SUPPLIES)



MikroTik CCR2004-1G-12S+2XS provides these features:

1. 12 x 10G SFP+ and 2 x 25G SFP28 Ports

Twelve SFP+ cages and two SFP28 cages let you mix 1G, 10G, and 25G optical or copper modules in one 1U device, so the router can serve as an aggregation point or high-speed edge for fiber networks.

2. Quad-Core 64-bit ARM Processing

The AL32400 quad-core CPU at 1.7 GHz with 4 GB of RAM is built for heavy routing work. In MikroTik's all-port tests the router forwards up to about 38 Gbps of 1518-byte traffic with fast path, and it is positioned by MikroTik as its most powerful single-core router to date.

3. Hardware IPsec Acceleration

Built-in IPsec hardware acceleration supports site-to-site VPNs. MikroTik rates single-tunnel IPsec at up to 3.4 Gbps; in its published tests (1400-byte packets, AES-128-CBC with SHA1) a single tunnel reaches 2.27 Gbps and 256 tunnels reach 2.60 Gbps.

4. RouterOS v7 with Level 6 License

RouterOS v7 comes preinstalled and licensed at Level 6. Software updates are free for the life of the product, or at least 5 years from purchase.

5. Redundant Power Supplies

Two AC inputs (100–240 V) with dual integrated power supplies keep the router running if one supply or power feed fails. Maximum consumption is 60 W with attachments, or 31 W without.

6. Console and Management Access

A dedicated Gigabit Ethernet port and an RJ45 serial console port provide out-of-band management, and the router can be configured through Winbox, WebFig, SSH, or the command line.

7. 1U Rackmount Design

The 1U chassis (443 × 224 × 44 mm) ships with a rackmount bracket, two IEC power cords, and a screw and feet kit for 19-inch racks or desktop placement. Two fans cool the unit, and it is tested for ambient temperatures from -20°C to 60°C, with CPU, PCB temperature and voltage monitoring.

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Specification

Parameter	Specification
Model	MikroTik CCR2004-1G-12S+2XS
Device Type	Cloud Core Router, 1U rackmount
Operating System	RouterOS v7
RouterOS License	Level 6
CPU	AL32400, 4 cores (4 threads), 1700 MHz
Architecture	ARM 64-bit
RAM	4 GB ECC (RouterOS v7)
Storage	128 MB NAND
Ethernet Ports	1 x 10/100/1000 (management)
SFP+ Ports	12 x 10G
SFP28 Ports	2 x 25G
Serial Port	1 x RJ45 console
IPsec Hardware Acceleration	Yes
Power Inputs	2 x AC, 100–240 V, dual redundant PSUs
Max. Power Consumption	60 W (31 W without attachments)
Routing, 1518 B (fast path)	Up to 38,116 Mbps
Bridging, 1518 B (fast path)	Up to 38,549.7 Mbps
Routing, 25 IP filter rules, 1518 B	14,303.7 Mbps
IPsec, 1400 B (single tunnel)	2,273.6 Mbps (AES-128-CBC + SHA1)
IPsec, 1400 B (256 tunnels)	2,602.9 Mbps (AES-128-CBC + SHA1)
Cooling	2 fans
Dimensions (L × W × H)	443 × 224 × 44 mm
Mounting	19-inch rack (1U) or desktop, indoor use only
IP Rating	IP20
Included Parts	2 x IEC power cords, screw and feet kit (K10), white rackmount bracket
Tested Ambient Temperature	-20°C to 60°C
MTBF	Approx. 200,000 hours at 25°C
Certifications	CE, EAC, RoHS

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CONTACT US

Insight Technology Pvt. Ltd.
Email: care@insightinfosys.com
Phone: +977 1 5268730, 9801148543
Address: Steel Tower, Jawalakhel, Lalitpur

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