The MikroTik hEX (RB750Gr3) Router Datasheet

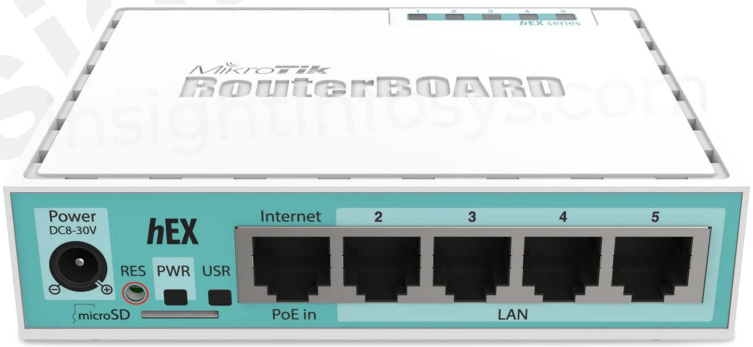
Overview

The MikroTik hEX (RB750Gr3) is a compact five-port Gigabit Ethernet router for homes, small offices, and branch sites. A dual-core 880 MHz MT7621A processor with 256 MB of RAM and RouterOS Level 4 gives it the performance to route and filter traffic well beyond what its size suggests, with up to about 1.8 Gbps of fast-path routing in best-case tests.

All five 10/100/1000 Ethernet ports are on one side of the device, with the first port accepting passive PoE input. A USB Type-A port and a microSD slot add storage and 3G/4G modem options, and hardware IPsec encryption supports secure site-to-site tunnels. The passively cooled, fanless design makes the hEX silent, and the included 24 V power adapter means it works out of the box.

QUICK SPEC

Figure 1: APPEARANCE OF RB750GR3



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TABLE 1: Quick Specs

SKU	RB750GR3
CPU	MT7621A, dual-core (4 threads), 880 MHz
Memory	256 MB RAM, 16 MB flash
Ports	5 x 10/100/1000 Ethernet, 1 x USB 2.0 Type-A, 1 x microSD
RouterOS License	Level 4
Dimensions (L x W x H)	11.3 x 8.9 x 2.8 cm

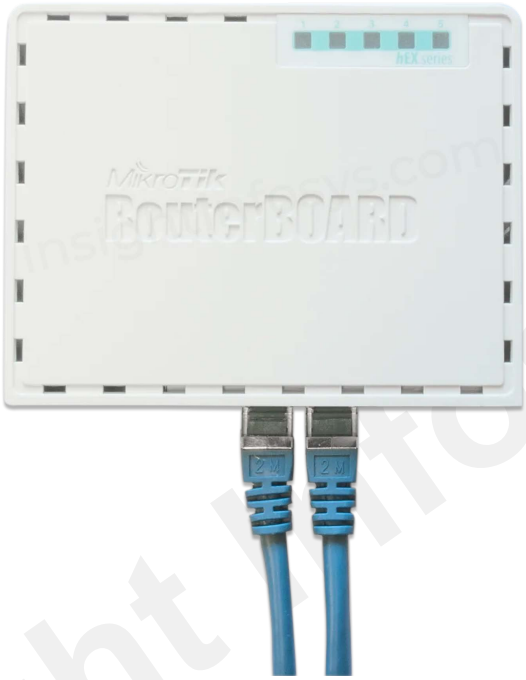
Product Details

FIGURE 2: ETHERNET PORT SIDE OF RB750GR3



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FIGURE 3: TOP VIEW OF RB750GR3



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MikroTik hEX (RB750Gr3) provides these features:

1. Five Gigabit Ethernet Ports

Five 10/100/1000 Ethernet ports with Auto MDI/X work with straight or crossover cables. Port 1 is typically used as the ISP connection and also accepts passive PoE input of 8–30 V, so the router can be powered over a single cable where a PoE injector is available.

2. Dual-Core 880 MHz Processing

The MT7621A dual-core (4-thread) CPU with 256 MB of RAM handles routing, firewalling, queues, and VPN workloads. In MikroTik's best-case tests the hEX forwards up to about 1.8 Gbps of 1518-byte routed traffic using fast path.

3. RouterOS Level 4

Ships with RouterOS and a Level 4 license, giving access to the full routing, firewall, bandwidth management, and VPN feature set. Software updates are free for the life of the product, or at least 5 years from purchase.

4. Hardware IPsec Encryption

Built-in IPsec hardware encryption offloads AES processing from the CPU. In MikroTik tests a single AES-128 SHA1 tunnel reaches about 232 Mbps with 1400-byte packets, which suits site-to-site VPNs.

5. USB and microSD Expansion

A full-size USB Type-A port (1 A max, with USB power reset) supports modems and storage, while a microSD slot gives faster file storage for logs and The Dude monitoring server data.

6. Flexible Power Options

Power the router through the DC jack (8–30 V) or through passive PoE on Ethernet port 1. A 24 V 0.38 A adapter is included, and maximum consumption is 10 W with attachments or 5 W without.

7. Silent, Compact Design

Passive cooling means no fans and no noise. At 113 x 89 x 28 mm the hEX sits on a desk or mounts on a wall for indoor use, and it is tested for ambient temperatures from -40°C to 60°C.

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Specification

Parameter	Specification
Model	MikroTik hEX
SKU	RB750GR3
Device Type	Wired Gigabit router
Operating System	RouterOS (v6 and v7 supported)
RouterOS License	Level 4
CPU	MT7621A, 2 cores (4 threads), 880 MHz
Architecture	MMIPS
RAM	256 MB
Storage	16 MB flash, microSD slot
Ethernet Ports	5 x 10/100/1000 (Auto MDI/X)
USB	1 x USB 2.0 Type-A, 1 A max
Power Inputs	DC jack (8–30 V) and passive PoE-in on port 1 (8–30 V)
Power Adapter	24 V 0.38 A included
Max. Power Consumption	10 W (5 W without attachments)
Routing, 1518 B (fast path)	Up to 1,802 Mbps
Bridging, 1518 B (fast path)	Up to 1,764 Mbps
IPsec, 1400 B (single tunnel)	231.8 Mbps (AES-128-CBC + SHA1)
Hardware Encryption	IPsec
Cooling	Passive
Dimensions (L × W × H)	113 × 89 × 28 mm
Mounting	Desk or wall, indoor use only
Tested Ambient Temperature	-40°C to 60°C
Certifications	CE, EAC, RoHS
MTBF	Approx. 100,000 hours at 25°C

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