



Mikrotik RB951Ui-2Nd DATASHEET



Overview

The MikroTik RB951Ui-2Nd is a compact router with a 650 MHz QCA9531 CPU. It supports all 5 ports at 100 Mbps speeds with various bridging and routing configurations. The device achieves up to around 493 Mbps throughput in bridging or routing modes without filter rules, but throughput drops when filter rules or queues are applied, illustrating effective packet processing under different operational loads.

QUICK SPEC

FIGURE 1: APPEARANCE OF RB951Ui-2Nd

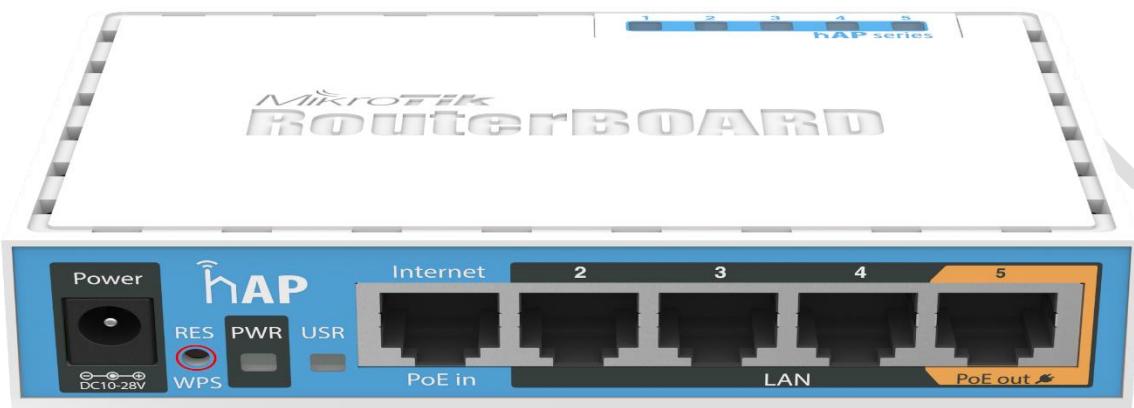


TABLE 1: Quick Specs

SKU	RB951Ui-2Nd
Throughput	Approximately 493 Mbps in bridging and routing fast path mode
Ports	5 x 10/100 Mbps Ethernet ports 1 x USB 2.0 port
Dimensions (W x H x D)	113x89x28mm

Product Details

FIGURE 2: FRONT PANEL OF RB951Ui-2nd



RB951Ui-2Nd Switch provides these features:

1. CPU and Performance

It is equipped with a QCA9531 CPU running at 650 MHz, the RB951Ui-2nD delivers reliable performance for typical home and small office routing tasks, supporting wire-speed forwarding on all five 10/100 Mbps Ethernet ports.

2. Five 10/100 Mbps Ethernet Ports

It includes five Ethernet ports supporting 100 Mbps speeds, allowing multiple wired devices to be connected simultaneously, suitable for small network setups without Gigabit requirements.

3. Routing and Bridging Modes

It supports both Layer 3 routing and Layer 2 bridging modes, enabling flexible network deployment options. Routing mode handles IP packet forwarding, while bridging mode allows transparent link-layer traffic forwarding across ports.

4. High Packet Throughput

It can handle nearly 493 Mbps of traffic in bridging or routing mode under fast path conditions, ensuring efficient data flow over multiple ports without bottlenecks.

5. Advanced Packet Filtering and Queues

It supports IP filter rules and simple queues for traffic management and security, though enabling these features can reduce throughput. Useful for bandwidth control, firewall rules, and prioritization of critical traffic.



6. Fast Path Acceleration

It has fast path technology optimizes packet processing at both routing and bridging layers, enhancing throughput and reducing CPU load, delivering near wire-speed packet handling.

7. Wireless Capability (2.4 GHz)

It is integrated 2.4 GHz wireless access point compliant with IEEE 802.11b/g/n standards, supporting typical wireless networking requirements in home or small office environments.

8. Compact and Energy Efficient Design

It is small form factor with low power consumption, ideal for space-constrained or energy-sensitive deployments.

9. RouterOS Operating System

It runs MikroTik's RouterOS with a rich feature set for routing, firewall, VPN, monitoring, and more, providing extensive configuration options and network services.

10. PoE Support

It supports power over Ethernet (PoE) for flexible deployment without the need for separate power adapters, simplifying installation and cabling.

SPECIFICATION

RB951Ui-2nD SPECIFICATION	
Model	RB951Ui-2nD
Architecture	MIPSBE
CPU	QCA9531
CPU core count	1
CPU nominal frequency	650 MHz
Switch chip model	QCA9531
Dimensions	113x89x28mm
RouterOS license	4
Operating System	RouterOS
Size of RAM	64 MB
Storage size	16 MB



Storage type	FLASH																					
MTBF	Approximately 100'000 hours at 25°C																					
Tested ambient temperature	-30°C to 70°C																					
Wireless 2.4 GHz Max data rate	300 Mbit/s																					
Wireless 2.4 GHz number of chains	2																					
Wireless 2.4 GHz standards	802.11b/g/n																					
Antenna gain dBi for 2.4 GHz	1.5																					
Wireless 2.4 GHz chip model	QCA9531																					
Wireless 2.4 GHz generation	Wi-Fi 4																					
10/100 Ethernet ports	5																					
Number of USB ports	1																					
USB Power Reset	Yes																					
USB slot type	USB type A																					
Max USB current (A)	1																					
Number of DC inputs	2 (DC jack, PoE-IN)																					
DC jack input Voltage	10-28 V																					
Max power consumption	5 W																					
PoE in	Passive PoE																					
Cooling type	Passive																					
PoE in input Voltage	10-28 V																					
PoE-out ports	Ether5																					
PoE out	Passive PoE																					
Low voltage PoE-Out current limit	500 mA																					
Max total out (A)	500 mA																					
Wireless specifications	<table><thead><tr><th>2.4 GHz</th><th>Transmit (dBm)</th><th>Receive Sensitivity</th></tr></thead><tbody><tr><td>• 1MBit/s</td><td>• 22</td><td>-96</td></tr><tr><td>• 11MBit/s</td><td>• 22</td><td>-89</td></tr><tr><td>• 6MBit/s</td><td>• 20</td><td>-93</td></tr><tr><td>• 54MBit/s</td><td>• 18</td><td>-74</td></tr><tr><td>• MCS0</td><td>• 20</td><td>-93</td></tr><tr><td>• MCS7</td><td>• 16</td><td>-71</td></tr></tbody></table>	2.4 GHz	Transmit (dBm)	Receive Sensitivity	• 1MBit/s	• 22	-96	• 11MBit/s	• 22	-89	• 6MBit/s	• 20	-93	• 54MBit/s	• 18	-74	• MCS0	• 20	-93	• MCS7	• 16	-71
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Included parts	• 24V 0.8A power adapter																					
Certification	CE, FCC, IC, EAC, ROHS																					



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