

CRS328-24P-4S+RM

CRS328-24P-4S+RM is a 28 independent port switch, it has 24 Gigabit Ethernet ports, which offer different power output options: Passive PoE, low voltage PoE, 802.3af/at (Type 1 “PoE” / Type 2 “PoE+”) with auto-sensing. The four SFP+ ports provide up to 10 Gbps connectivity options via either optical fiber or Ethernet modules (not included).

CRS328-24P-4S+RM comes in a 1U rackmount case with 100-240 V AC 500 W power supply built-in. The device consumes up to 44 W leaving guaranteed 450 W (3x150 W per every 8 Ethernet ports) to power your PoE devices. Each port can provide up to 30 W with high voltage, and 26 W with low voltage power output.

The device has a “Dual boot” feature that allows you to choose between two operating systems - RouterOS or SwOS. If you prefer to have a simplified operating system with only switch specific features, use SwOS. If you would like the ability to use routing and other Layer 3 features in your CRS, use RouterOS. You can select the desired operating system from RouterOS, from SwOS or from the RouterBOOT loader settings. All the feature set comes with our disruptive price, providing best price/performance on the market.

Switching features

- Non-blocking Layer 2 switching capacity
- 16K host table
- IEEE 802.1Q VLAN
- Supports up to 4K simultaneous VLANs
- Port isolation
- Port security
- Broadcast storm control
- Port mirroring of ingress/egress traffic
- STP / RSTP / MSTP
- Access Control List
- MikroTik neighbor discovery
- SNMP
- 10218-byte jumbo frames support
- IGMP snooping
- IEEE 802.3ad and static link aggregation

Quick specifications

- 24 Gigabit Ethernet ports
- 4 SFP+ ports
- RJ45 serial console port
- Non-Blocking throughput: 64 Gbps
- Switching capacity: 128 Gbps
- Forwarding rate: 95.2 Mpps
- Maximum power consumption: 44 W (without PoE devices connected)
- Supports PoE+ IEEE 802.3at/af and 26 V Passive PoE
- Temperature based fan control
- 1U rackmount
- Selectable power output per port (26 / 53 V)



Specifications

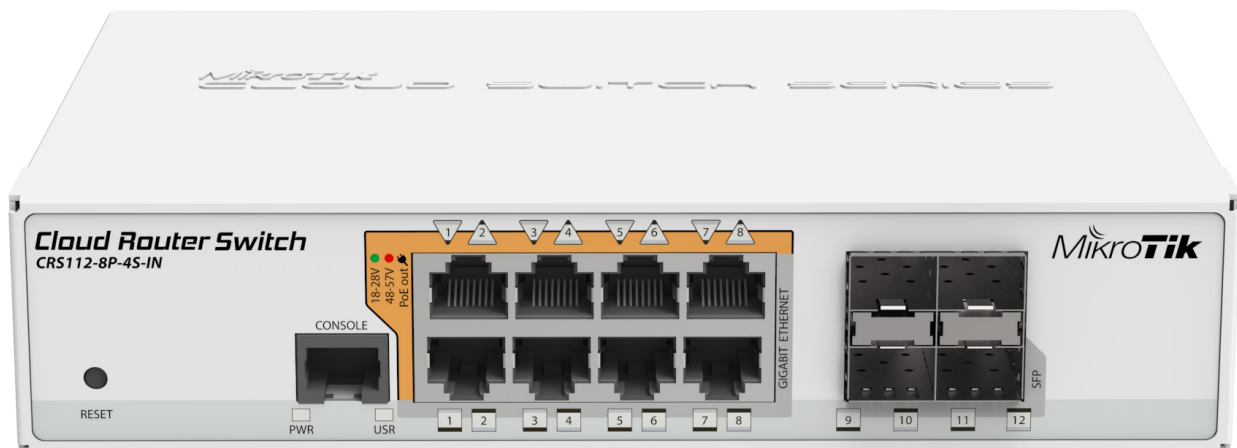
Product code	CRS328-24P-4S+RM
CPU	98DX3236A1 800 MHz
RAM	512 MB
Storage type	Flash
Storage size	16 MB
Switch chip model	98DX3236A1
10/100/1000 Ethernet ports	24
SFP+ cages	4
Operating system	SwOS / RouterOS (Dual boot)
Supported input voltage	100 - 240 V
Dimensions	443 x 300 x 44 mm
Operating temperature	-20°C .. +60°C tested
Max power consumption	44 W
Serial port	RJ45
License level	5



CRS112-8P-4S-IN

CRS112-8P-4S-IN is eight Gigabit RJ45 ports PoE switch, that offers different power output options: auto-sensing 802.3af/at PoE/PoE+ and Passive PoE, and four SFP ports provide optical fiber connectivity options to support uplinks of up to 1 Gbps.

CRS112-8P-4S-IN is equipped with 12 independent switching ports. 28 V 3.4 A power supply is already included in the box. There is secondary DC jack on the back of the enclosure that supports 48-57 V power supply (not included, can be purchased separately). CRS112-8P-4S-IN can power 802.3af/at devices if 48-57 V DC input is used (unit will automatically detect and provide correct power to devices). Max current is 1 A per port if input voltage is 18-28 V, 450 mA if 48-57 V. Total limit is 2.8A@24V and 1.4A@48-57V.



Our CRS series combines a fully functional router and a manageable switch with L3 features, it's powered by the familiar RouterOS. All the specific Switch configuration options are available in a special Switch menu, but if you want, ports can be removed from the switch configuration, and used for routing purposes. It gives you all the basic functionality for a managed switch, plus more: allows to manage port-to-port forwarding, apply MAC filter, configure VLANs, mirror traffic, apply bandwidth limitation and even adjust some MAC and IP header fields. IGMP snooping is also supported.

Switching features

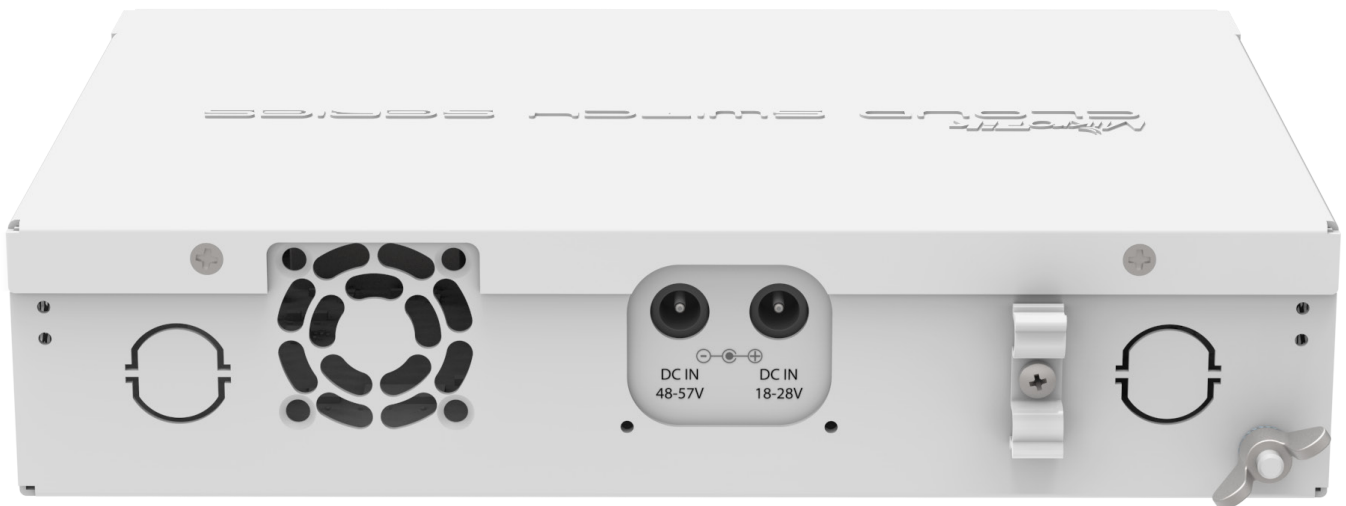
- Non-blocking Layer 2 switching capacity
- 16K host table
- IEEE 802.1Q VLAN
- Supports up to 4K simultaneous VLANs
- Port isolation
- Port security
- Broadcast storm control
- Port mirroring of ingress/egress traffic
- Rapid Spanning Tree Protocol
- Access Control List
- MikroTik neighbor discovery
- SNMP
- 9204-byte jumbo frames support
- IGMP snooping
- static link aggregation

Quick specifications

- 8 Gigabit RJ45 Ports
- 4 SFP Ports
- Non-Blocking Throughput: 12 Gbps
- Switching Capacity: 24 Gbps
- Forwarding Rate: 17.8 Mpps
- Maximum Power Consumption: 10 W (without PoE devices connected)
- Supports PoE+ IEEE 802.3at/af and 24 V Passive PoE
- Quiet, Fanless Operation
- Desktop-Rackmount

Specifications

Product code	CRS112-8P-4S-IN
CPU nominal frequency	QCA8511
Size of RAM	128 MB
Storage type	Flash
Storage size	16 MB
10/100/1000 Ethernet ports	8
SFP ports	4
Serial port	RJ45
PoE out	Yes, 802.3af/at
Supported input voltage	18 V - 57 V
Dimensions	200 x 142 x 44 mm
Operating system	RouterOS, level 5 license
Max power consumption	160 W
Max power consumption without attachments	10 W



Power adapter
28 V 3.4 A



Rackmount ears



Power cord



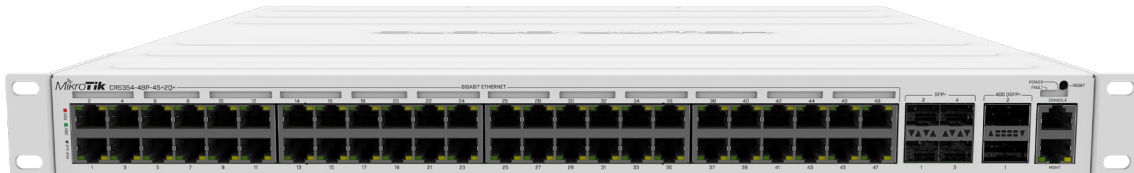
Screws



CRS354-48P-4S+2Q+RM

Power all your devices while having the strongest performance – this 48 port PoE+ switch will rock any setup, including 40 Gbps devices!

If you are looking for a single switch that will put your network setup ahead of the curve and power all the necessary devices – look no further! The new CRS354-48P-4S+2Q+RM is an effective and adaptable rackmount solution for managing networks in the most demanding environments. Unlike many other switches out there, our products are made with the system administrator in mind.



High-end performance with PoE-out for the masses:
more 10G ports and even 40G ports, because **speed matters**

This powerful switch has 48 x 1G RJ45 ports and 4 x 10G SFP+ ports. There are also 2 x 40G QSFP+ ports for extremely fast fiber connections or linking with other 40 Gbps devices. All 48 Ethernet ports offer different power output options: Passive PoE, low voltage PoE, 802.3af/at (Type 1 “PoE” / Type 2 “PoE+”) with auto-sensing, making this switch the easiest solution to power even the largest setups. We have included a mighty power supply that can provide 750 W of power – this switch can handle a lot. And there is a special bracket for easy cable management.



The 48 port champion you’ve been waiting for – this is the bargain of the decade! Now with PoE-out!

CRS354-48P-4S+2Q+RM is extremely functional, and it has the best price-point on the market – it will make the perfect addition to a professional setup.

The total non-blocking throughput is 168 Gbps, switching capacity is 336 Gbps and the forwarding rate reaches 235 Mpps.

Specifications

Product code	CRS354-48P-4S+2Q+RM
CPU	QCA9531, 650 MHz
Size of RAM	64 MB
Storage	16 MB flash
Number of 100 Mbps Ethernet ports	1
Number of 1 GbE Ethernet ports	48
10G SFP+ ports	4
40G QSFP+ ports	2
Operating system	RouterOS (License level 5)
Supported input voltage	AC power supply 100 - 240 V
Serial port	RJ45
Dimensions	443 x 382 x 44 mm
Operating temperature	-20°C to +60°C

Powering

PoE-out	IEEE 802.3at/af and 26 or 53 V Passive PoE
PoE-out ports	Ether1 - Ether48
PoE-out max per port (low voltage 26 V)	26 W
PoE-out max per port (high voltage 53 V)	30 W
Max total out (low voltage 26 V)	27 A
Max total out (high voltage 53 V)	13.2 A
Max power consumption	800 W
Max power consumption without attachments	85 W

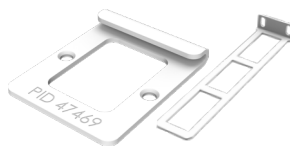
Included parts



1 IEC cord



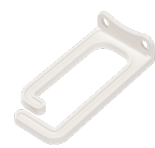
K-68 screw kit



Rackmount rear support ears



Rackmount ears



Cable management brackets

Switching test results

QCA9531 CRS354-48P-4S+2Q+RM		RouterOS v6.45.7					
Mode	Configuration	1518 byte		512 byte		64 byte	
		kpps	Gbps	kpps	Gbps	kpps	Gbps
Switching	Non blocking Layer 2 throughput	13329	161,867	38533,8	157,834	235114,7	120,379
Switching	Non blocking Layer 2 capacity	13329	323,735	38533,8	315,669	235114,7	240,758
Switching	Non blocking Layer 1 throughput	13329	168	38533,8	168	235114,7	120,379
Switching	Non blocking Layer 1 capacity	13329	336	38533,8	336	235114,7	240,758

Like other CRS products, **CRS354-48P-4S+2Q+RM** comes with a decent built-in CPU, that can utilize all RouterOS features, but with some performance restrictions (indicated in table below).

CPU Layer 3 performance results

QCA9531 CRS354-48P-4S+2Q+RM		RouterOS v6.45.7					
Mode	Configuration	1518 byte		512 byte		64 byte	
		kpps	Mbps	kpps	Mbps	kpps	Mbps
Bridging	none (fast path)	34,9	423,8	58,5	239,6	119,8	61,3
Bridging	25 bridge filter rules	26,5	321,8	42,9	175,7	44,9	23
Routing	none (fast path)	35,4	429,9	61,8	253,1	116,8	59,8
Routing	25 simple queues	33,7	409,3	46,8	191,7	57,5	29,4
Routing	25 ip filter rules	23,7	287,8	30,1	123,3	31,4	16,1