

In this newsletter
read about

- RB5009UPr+S+IN
- CSS610-8P-2S+IN
- CRS518-16XS-2XQ-RM
- Chateau LTE6-US
- SXT LTE6 kit-US
- XQ+85MP01D
- XQ+31LC02D
- XQ+BC0003-XS+
- XQ+DA0001
- XQ+DA0003
- Upgrading to v7
- MikroTik at the Glastonbury Festival
- New #MikroTips!

RB5009UPr+S+IN

Empowering the smaller ISPs!

\$ 299



7X GIGABIT ETHERNET PORTS



1X 2.5 GIGABIT ETHERNET PORT



10G SFP+



POWERFUL QUAD-CORE CPU



10 POWERING OPTIONS



1 GB DDR4 RAM



DURABLE METALLIC CASE

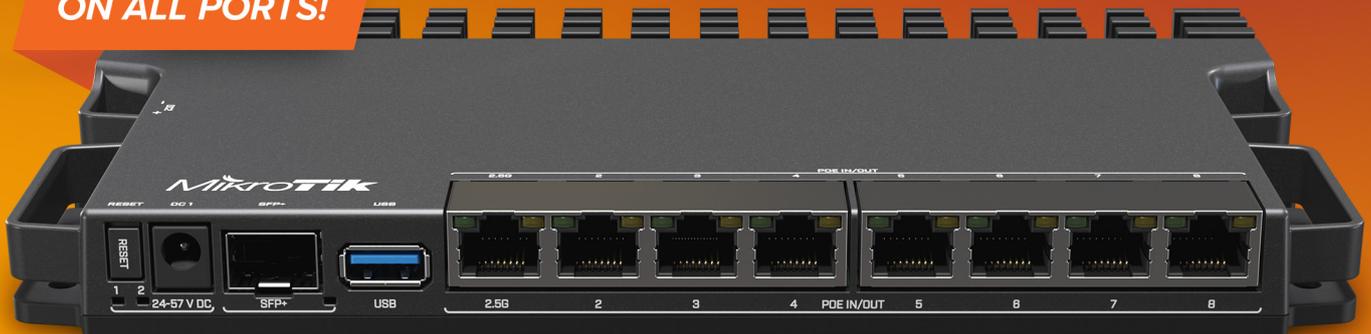


ROUTEROS V7 ONLY



1 GB NAND

**PoE-in & PoE-out
ON ALL PORTS!**



*You can mount FOUR of these routers
in a single 1U rackmount space!*

It's all about the power...

This version of the RB5009 has all the bells and whistles of the previous model: Gigabit Ethernet, 2.5 Gigabit Ethernet, and a 10 Gigabit SFP+ cage for fiber connectivity. It has the speed, the power, and the durability. But this time, we have added **PoE-in & PoE-out** on all eight Ethernet ports. Combined with the 2-pin connector and the DC jack, you're getting 10 separate ways of powering. Dual redundant power supplies would usually take your uninterrupted uptime to the next level.

RB5009UPr+S+IN takes it one step above that!



All power options support a **wide voltage range of 24 – 57 V**. However, you can not mix the voltages. If you're using PoE-out to power other devices, the board will choose the source with the highest voltage (DC jack or the 2-pin connector) to power those.

Each PoE-out port can supply **up to 25W of power**. All the ports combined are limited to 130W, which should be enough for most setups. You can specify maximum available power from your power sources manually, if necessary. When it comes to PoE-out features, the new RB5009 can trade blows with our legendary PoE switches: CRS354 & CRS328. In the smallest possible form-factor and for the best price on the market!

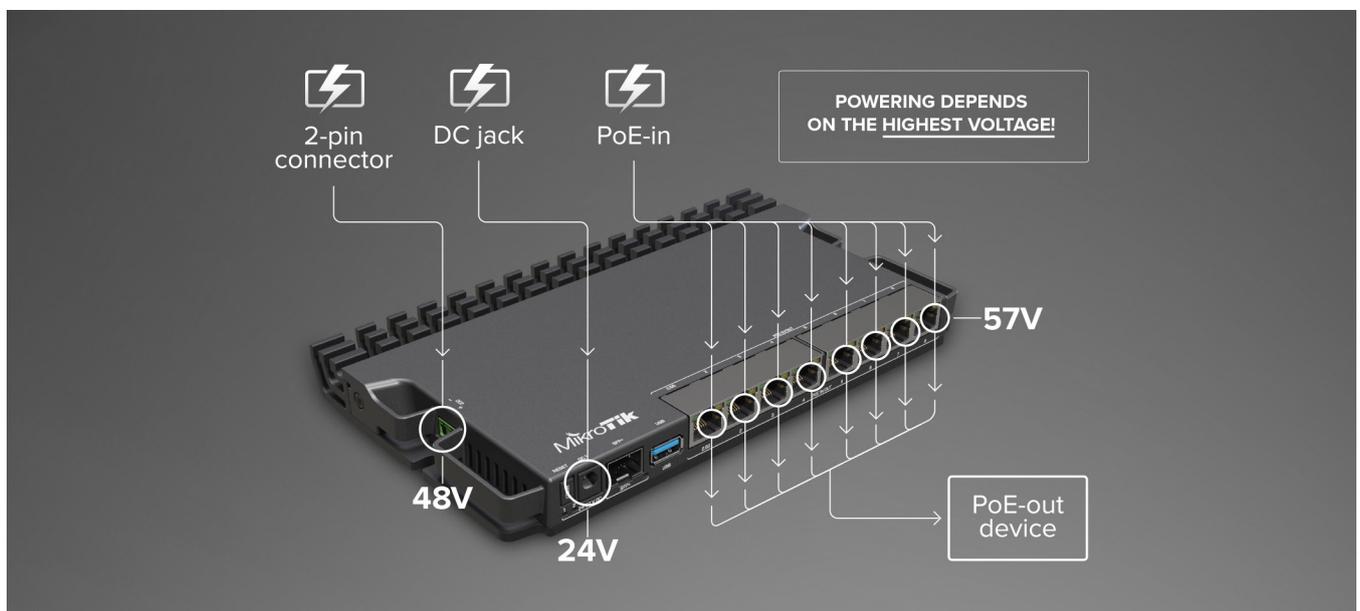
Take a look at all the PoE information the RB5009 can provide!

```
[admin@RB5009UPr+S+IN] > interface/ethernet/poe/monitor ether1
      name: ether1
      poe-out: auto-on
      poe-voltage: auto
      poe-out-status: powered-on
      poe-out-voltage: 23.3V
      poe-out-current: 915mA
      poe-out-power: 21.3W
-- [Q quit|D dump|C-z pause]
```

Protect your uptime, protect your tranquility!

So what exactly happens if there is a problem with one of your power sources? Here's a quick example: you have 24V on the DC jack, 48V on the 2-pin connector, and 57V on the PoE-in. The board itself gets powered by the highest voltage input – the PoE-in. If there's a problem, RB5009 will fall back to the second highest voltage - the 2-pin connector. And if that fails – there's the 24V option on the DC jack.

What about the PoE-out devices? Once again – the highest voltage wins. PoE-out devices will draw power from the 48V source on the 2-pin connector. If that fails – the 24V on the DC jack come into play. The board will always reserve 20 watts to power itself. If there is not enough power for all the PoE-out ports, it will start disabling the ones with the lowest priority. You can set the port priority manually.



This tiny form-factor shines anywhere: from confined research facilities and offices to huge corporate server rooms. And don't forget that you can mount FOUR of these routers in a single 1U rackmount space!

With the new RB5009, we want to empower all the small and medium ISPs that are always on the lookout for the most cost-effective and robust solutions. It is a perfect addition to our previous GPEN devices – a line of products designed to replace the expensive GPON solutions.

With so many powering options and a durable metallic case, the new RB5009 redefines affordable reliability.

CSS610-8P-2S+IN

\$ 229 

Your compact, affordable PoE powerhouse with 8x Gigabit PoE-out ports and 2x 10 Gigabit SFP+ ports.

 56 GIGABIT SWITCHING CAPACITY	 2X 10 GIGABIT SFP+ PORTS	 MAC FILTERING & VLANS	 TRAFFIC MIRRORING
 CAN BE CONFIGURED FROM YOUR WEB BROWSER	 8X GIGABIT POE-OUT ETHERNET PORTS	 PORT-TO-PORT FORWARDING	

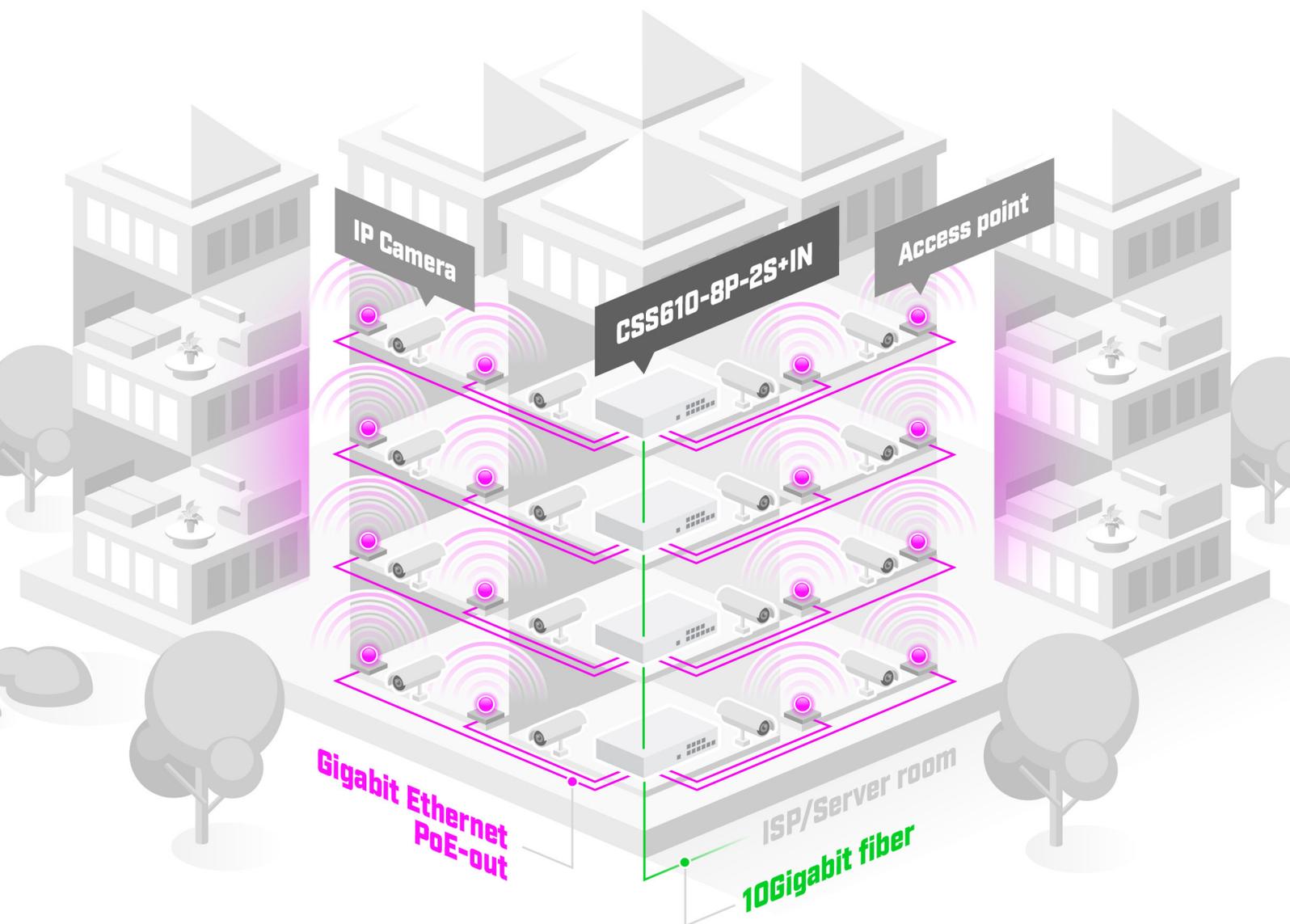
CSS610-8P-2S+IN is one of the most well-rounded switches on the market. It is a perfect fit for the most diverse setups: from home networks and small offices to hotels, call centers and so on. The unique combination of size, features, and price offers unbelievable scalability potential.



There are two SFP+ ports for 10 Gigabit fiber connectivity and eight Gigabit Ethernet ports with 802.3af/at PoE-out.

This switch is all about nice and easy setups. The compact form-factor means easier shipping and handling, while the lightweight SwOS means easier configuration. You can even configure this switch from your web browser! It gives you all the core functionality of a managed switch, and even more: you can manage **port-to-port forwarding**, **broadcast storm control**, apply **MAC filters**, configure **VLANS**, **mirror traffic**, **apply bandwidth limitations**, and even **adjust some MAC and IP header fields**.

But the real blessing is the combination of **SFP+** and **PoE-out Ethernet** ports. With this setup, you can do all kinds of things on a tight budget. CSS610 has an impressive total **PoE-out budget of 140 W**, so you can use even in the most intense scenarios – like hotels, conference halls, or call centers! Use the PoE-out ports to connect the IP-phones while the SFP+ ports connect your primary server to the ISP. Or power a bunch of network cameras and instantly upload the footage to the cloud. And manage a cluster of wireless access points at the same time. Also, scalability is no longer a problem. With our pricing, you can afford a switch on every floor!



Like every toolbox needs screwdrivers and pliers,
every network can use a solid PoE switch.

CSS610-8P-2S+IN – a solid choice!

CRS518-16XS-2XQ-RM

\$ 1,595 

A 100 Gigabit switch for enterprise networks and data centers. Hot-swappable parts and insane port density with 1.2 Tbps switching capacity!

-  **2X 100G QSFP28 PORTS**
-  **16X 25G SFP28 PORTS**
-  **HOT-SWAP POWER SUPPLIES**
-  **HOT-SWAP COOLING**
-  **ULTRA FAST MARVELL PRESTERA ALDRIN2 SWITCH CHIP**

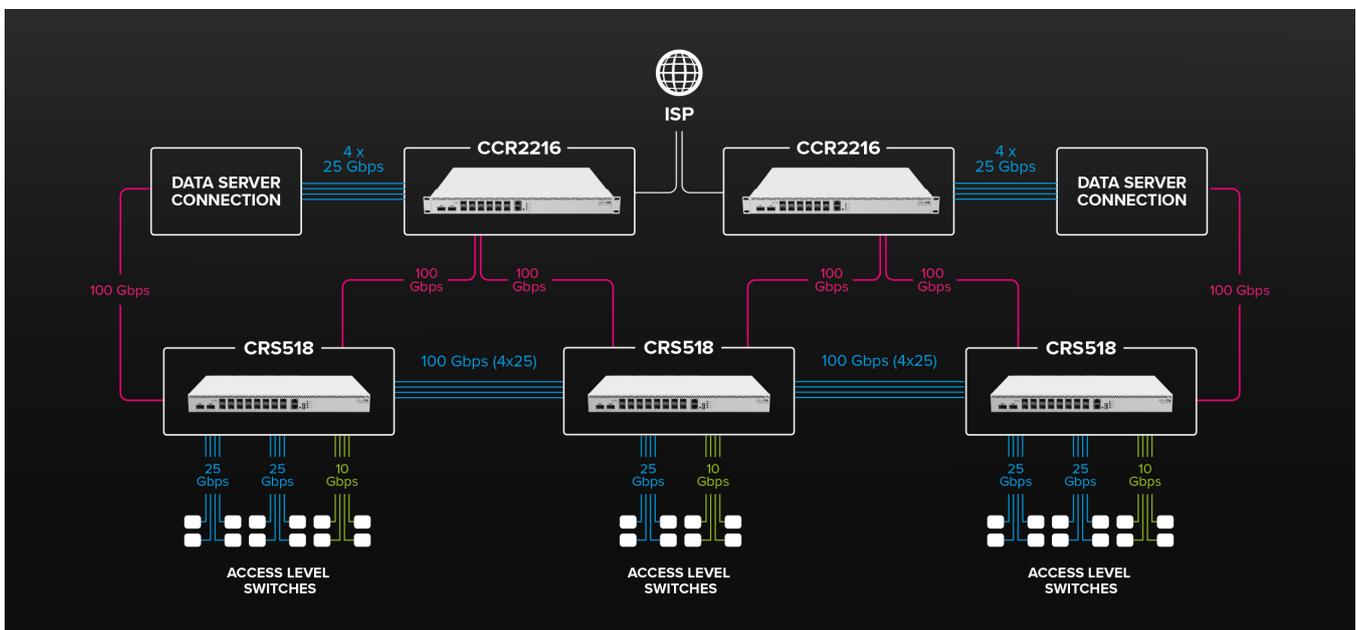
As our 100 Gigabit product family grows, the time has come to introduce a serious enterprise-level switch. A switch that is up for the challenge when the CRS504 port density is just not enough. Introducing the spectacular **CRS518-16XS-2XQ!**

With **2x 100 Gigabit QSFP28 ports** and **16x 25 Gigabit SFP28 ports**, this is the perfect cost-effective addition to any enterprise network or data center. And with dual-redundant hot-swappable power supplies and fans, you won't have to worry about unnecessary downtime.

Here's a real-life setup – similar to the one we're using in our office:

At the top, you could place two flagship CCR2216 routers to provide the main connectivity and routing. Then a blazing-fast 100 Gigabit connection leads to three CRS518 distribution level switches. This is where all the magic happens. The CRS518 switches connect every access level device to the main network, deal with traffic filtering, and network policy enforcement. And they handle all that with grace and dignity – thanks to the fantastic **Marvell Prestera Aldrin2 switch-chip**. The same chip you've seen in our flagship CCR2216 that did wonders with L3 Hardware Offloading.

In this setup, we also have a direct link aggregation connectivity between the CCR2216 routers and the data servers. For extra efficiency and traffic distribution.



600 Gbps

Throughput

1.2 Tbps

Switching capacity

Up to **600 Mpps**

Forwarding rate



The 25-gigabit ports are backward compatible with 10 Gigabit and 1 Gigabit SFP devices. Mix and match as you need!

The two hot-swap power supplies support a high input voltage range: 100-240V. The board itself uses up to 45W of power, while the total maximum power consumption goes up to 77W with all the attachments. It can be a bit more power-hungry than the CRS504, but you would be too if you had 16x 25-Gigabit ports, wouldn't you?

Our 100 Gigabit product family keeps growing: switches, routers, cables, and QSFP28 modules. If you want real speed and ultimate flexibility for the best price on the market – you want MikroTik!

*Nothing can stop this switch: it supports VLAN (802.1Q, 802.1ad), **L3 hardware offloaded routing**, ACL, LACP, MLAG, Jumbo frames, IGMP/MLD snooping, and so on. Keep your RouterOS up to date and enjoy the real power of CRS!*



Chateau LTE6-US

\$ 189 

US carrier-certified home access point with LTE6 support for speeds up to 300 Mbps. With 5x Gigabit Ethernet ports, a powerful quad-core CPU, and a refreshingly tasteful design, this device is the right choice for most homes.

-  5X GIGABIT ETHERNET PORTS
-  BRAND NEW LTE CATEGORY 6 MODEM
-  LTE CONNECTIONS UP TO 300 MBPS
-  STRONG DUAL-BAND, DUAL-CHAIN RADIO FOR MAXIMUM COVERAGE
-  POWERFUL QUAD-CORE ARM CPU

Let's face it – most of the standard mass-produced access points can't really satisfy the extremely diverse client base – they either lack features, users want more speed and higher gain, they look weird with all the spikes and antennas all over the place.. We decided to take all the aspects that truly matter to most home users and create a single device that will make them happy: the MikroTik Chateau.



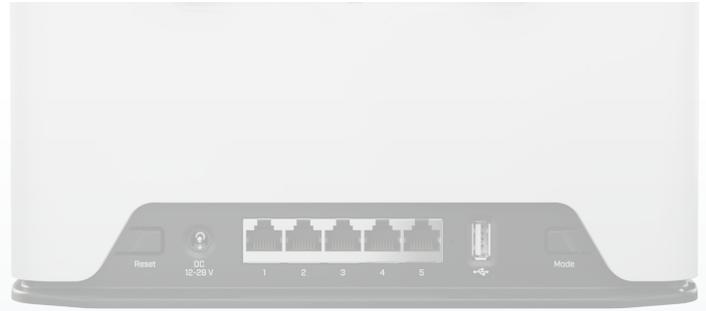
It is a high-speed, dual-band home access point with a powerful quad-core ARM CPU and our newest CAT6 LTE modem – for really fast Internet anywhere, anytime. But LTE is not the only option – Chateau also features 5 x Gigabit Ethernet ports and a full-sized USB port for extra storage.



Remove the bottleneck in your mobile setup

With new rural relocation programmes popping up everywhere, more people have started moving to the countryside – away from the stress and challenges of busy urban areas. Should they be limited by the slower connectivity without the city cable networks, potentially risking all kinds of opportunities in education, entrepreneurship, and even hobbies? Absolutely not!

For most rural households, the limiting factor is a cheap, mass-produced LTE router that can't handle even a fraction of what the local LTE tower could offer. Chateau is designed to solve these problems. Here's an example: the leading mobile operator in Latvia – LMT – started swapping out their previous client routers. Our Chateau replaced the usual brands. And customer satisfaction went through the roof – just like that! Same LTE towers, same data plans, and a brand new Chateau. **What is the point of having brand new phones, excellent LTE coverage, high-end laptops, and so on... if your old router is the bottleneck?**



Chateau has two powerful (2x2 MIMO compatible!) integrated antennas, but you can connect two external LTE antennas (not included) for an even stronger signal.

The freedom of LTE

Reach consistent speeds of up to 300 Mbps with carrier aggregation, as CAT6 allows devices to use multiple bands simultaneously. That is a huge advantage in areas with many LTE users. Chateau LTE6 provides better responsiveness in a crowded environment and higher efficiency for weaker signal situations in the countryside. Depending on the service provider, we have seen Internet speed doubling in rural areas after switching to carrier aggregation, so there is no need to wait for cable network expansions.

Perfect for all walks of life

Chateau comes with all the advanced RouterOS features, so you're getting enterprise-level solutions with consumer-grade pricing. Run a secure VPN from the office directly to your home, enable all kinds of parental control, dive deep into specific firewall rules and IPsec hardware acceleration, configure VLANs, set up e-mail or SMS notifications... You can even automate complex trigger notifications. For example: "WARNING, WARNING! Your bandwidth has reached X amount for Y duration!" **If you can imagine it – RouterOS can achieve it.**

However, if you don't need all the complex stuff – Chateau can still be your best friend. In fact, this is the best choice for mobile operators that don't want their clients to do any configuration. Chateau supports the TR-069 technology that allows creating custom remote client management options. You can have the most straightforward and basic router settings on the same web-page that you are using to pay the mobile bill. And we offer different label or printed branding options on volume orders.

SXT LTE6 kit-US

\$ 169



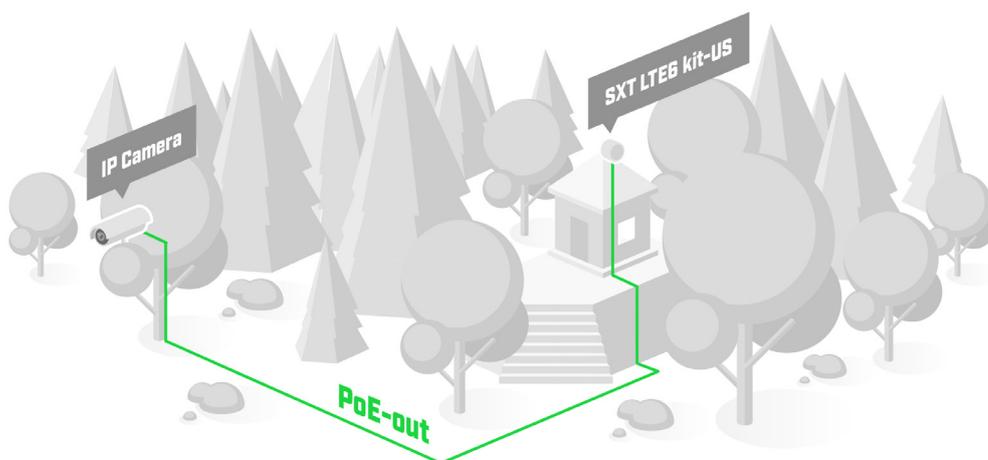
Affordable connectivity in remote areas. Even if your phone has no reception at all, SXT LTE6 kit can deliver due to its advanced LTE chip design and high-gain antenna. US carrier-certified!

 CATEGORY 6 LTE MODEM	 CONNECT EVEN WHERE YOUR PHONE FAILS!	 CARRIER AGGREGATION FOR A BETTER SIGNAL
 TWO ETHERNET PORTS	 POE-IN & POE-OUT	 TWO MICRO-SIM SLOTS

This device is an absolute staple of affordable connectivity in remote areas. Even if your phone has no reception at all, our SXT LTE6 kit can still deliver due to its advanced LTE chip design and high-gain antenna.



There are two Ethernet ports. Ethernet port #1 has PoE-in. And Ethernet #2 has PoE-out. You can use it to power another device. Fewer cables to worry about in your sweet cabin in the woods!



The classic SXT design has been proved to attract less unwanted attention!

We've included two Micro-SIM slots – for backup. It never hurts to have extra options when it comes to mobile network coverage. Also, the Category 6 LTE modem enables carrier aggregation, allowing SXT to use multiple LTE bands simultaneously. That's a huge advantage when there are a lot of mobile users in the area. It offers better responsiveness in a crowded environment. And higher efficiency for weaker signal situations in the countryside. Win-win! We have seen Internet speed doubling in rural areas after switching to CAT6, so there is no need to wait for cable network expansions.

When it comes to powering, SXT LTE6 kit supports a wide voltage range of 18-57V with full 802.3af/at compliance.

XQ+85MP01D

\$ 89



Add this QSFP module for distances up to 100 meters to your CCR2216, CRS504 or CRS518 setups and enjoy real speed and ultimate reliability.

This optical module offers four independent full-duplex channels with up to 25 Gbps per channel bandwidth and an aggregate bandwidth of 100 Gbps. The module has built-in digital diagnostic functions such as optical power monitoring.



XQ+31LC02D

\$ 229

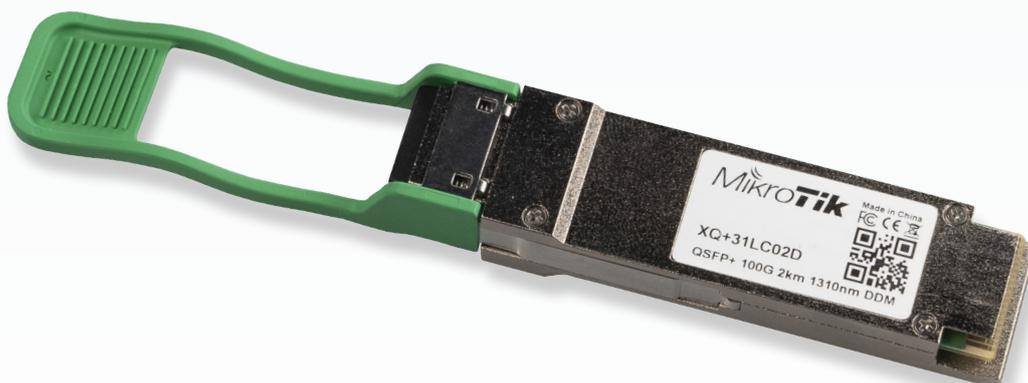


Add this QSFP module for distances up to 2km to your CCR2216 or CRS504 setups and enjoy real speed and ultimate reliability.

This optical module offers four independent full-duplex channels with up to 25 Gbps per channel bandwidth and an aggregate bandwidth of 100 Gbps.

The module has built-in digital diagnostic functions, including optical power monitoring, and will perform well in environments up to 70° C.

It has been designed to meet the harshest conditions, including temperature, humidity, and EMI interference, so we definitely recommend this as a reliable solution for all your 100 Gbps QSFP28 devices.



XQ+BC0003-XS+

\$ 79



XQ+BC0003-XS+ is a QSFP28 to 4x SFP28 break-out cable. This addition to the MikroTik 100 Gigabit product line allows you to connect multiple 25 Gigabit devices to your CRS504 or CCR2216. With the integrated SFP28 modules, connecting numerous devices becomes as simple as it gets. The cable is 3 meters long – the perfect length to reach all the necessary spots while keeping your server room neat and tidy.



XQ+DA0001

\$ 39



Connect any two MikroTik 100 Gigabit heroes (CCR2216 & CRS504) without a hassle - this cable has integrated QSFP28 modules. Just plug it in and enjoy the speed! The cable is one meter long, which should be enough for most setups, but there is also a 3-meter version available. It is fairly flexible – you can keep your devices apart or on top of each other.



XQ+DA0003

\$ 59



Connect any two MikroTik 100 Gigabit heroes (CCR2216 & CRS504) without a hassle - this cable has integrated QSFP28 modules. Just plug it in and enjoy the speed! The cable is 3 meters long – the perfect length to reach all the necessary spots while keeping your server room neat and tidy. It is fairly flexible – you can keep your devices apart or on top of each other.



Upgrading to v7

While our hardware experts continue working on various exciting RouterOS v7-powered products and the transfer from CCR to CCR2xxx series, our software team has released the new RouterOS v7.3 stable. If you want to take advantage of the latest RouterOS features, the following guide might be very helpful. Recommended steps for upgrading RouterOS to v7 major release and the possible caveats when doing so explained:

<https://help.mikrotik.com/docs/display/ROS/Upgrading+to+v7>

MikroTik at the **Glastonbury** Festival

We've spotted some CCR1036-8G-2S+ 36-core routers in the Glastonbury media van. Our friend - the CCR2216 - really enjoys a good rock concert as well, maybe it can also join the party?



(c) <https://twitter.com/thenupod>

New #MikroTips and tricks!

An investment in knowledge pays the best interest” so why not invest some time in #MikroTips today? Here are some of the latest episodes:



Wireguard setup with MikroTik and your smartphone



Your own VPN server in 2 seconds



Routing basics



Packet sniffer basics



How to upgrade CAPsMAN networks



Hacking TTL to use LTE Tethering



How to port forward on MikroTik

And there's way more where that came from, so don't forget to subscribe to our [YouTube channel!](#) 



Here you can download all the visuals used in this newsletter

