# MIKROTIK

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- CME Gateway
- R11eL-EC200A-EU / R11eL-FG621-EA
- Sama Networks
- From Orchard to Office
- New wifi packages
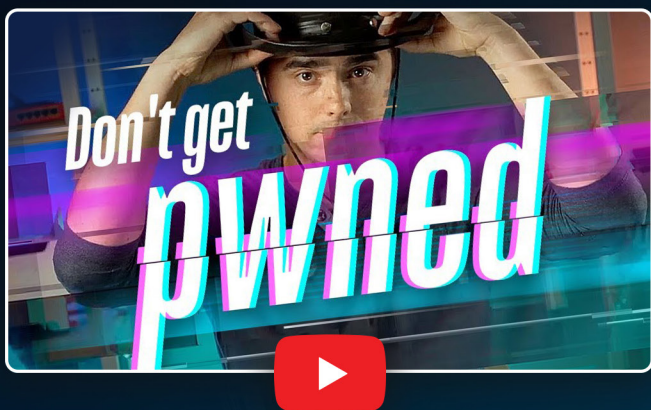- Software upgrade PSA
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# EVERYTHING YOU ALWAYS WANTED TO KNOW ABOUT Wi-Fi6!



How to choose the right device?



Wireless expert shares insight on the new wifi package



How WiFi6 can protect you from getting hacked



Fast transition (roaming) - a real gamechanger!

## ALL WiFi6 DEVICES NOW IN STOCK!

# LtAP LTE6 kit (2023)

**$ 199**

A compact heavy-duty LTE access point with a built-in GPS. Add extensive networking and tracking options to your vehiclewithout breaking the bank!

| | | |
|---|---|---|
| **ALL-IN-ONE: HIGH SPEED LTE, GPS, 2.4 GHZ WIRELESS** | **MANY POWERING OPTIONS, INCLUDING AUTOMOTIVE** | **EXTREME VERSATILITY WITH THE POWERFUL RouterOS v7** |
| **RUGGED HEAVY-DUTY WEATHERPROOF CASE** | **CONSOLE PORT FOR EASY CONFIGURATION** | **GIGABIT ETHERNET WITH PASSIVE POE-IN** |
| | | **3 MINISIM SLOTS – PERFECT FOR ROAMING** |



In a world where connectivity knows no boundaries, and the roughest terrain meets the need for reliable networks, affordable location tracking, and other extensive features, one device stands out: the LtAP LTE6 kit! It is a compact wireless access point with built-in GPS in our most durable weatherproof case ever.

## Perfect for logistics and tracking

There are **3 MiniSIM slots** – you can use them to set up automatic roaming, switching the mobile operators as you cross the border. The device features **two internal LTE antennas**, but you can use the U.FL connectors to add external antennas of your choice for even better coverage. The same principle goes for the GPS – you need an external antenna via SMA.

> *The power options are as flexible as it gets. You have the **classic DC jack, passive PoE-in**, and an **automotive connector**. We have even seen users powering the LtAP with a 20 000 mAh power bank throughout the day!*

## Customize – and achieve even more!

LtAP LTE6 kit comes with **two miniPCI-e slots**. One of these slots is reserved by the LTE modem, while the other one can be used as an expansion slot. You could add a 5 GHz interface, for example. Or a second LTE modem – for redundancy. It's your call, adapt the LtAP to your needs!

## Our latest Cat6 LTE modem – cut costs, not speed

This LtAP features a brand new Category 6 LTE modem – the same modem you've seen in our bestselling Chateau ax series. It supports a variety of popular LTE frequencies, like the B28 band. You can reach consistent speeds of up to 300 Mbps with carrier aggregation, as CAT6 allows devices to use two bands simultaneously. That is a huge advantage in areas with many LTE users. LtAP 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.
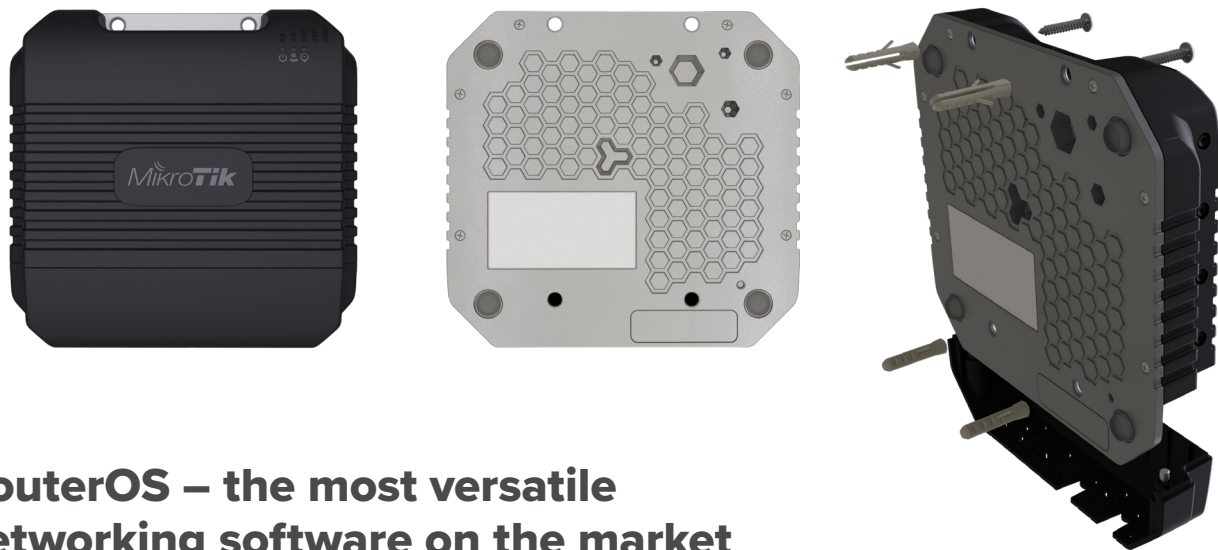
## RouterOS – the most versatile networking software on the market

Run a secure VPN from the office directly to your home, apply specific firewall rules, use IPsec hardware acceleration, VLAN, DHCP, e-mail or SMS notifications, and so on. With RouterOS scripting you can automate a lot:

- modify queues based on bandwidth usage;
- complex trigger notifications, such as "Your bandwidth has reached X for Y minutes!"
- backups and setup of additional devices, and so much more!

We have been making our own software since 1996. With each new version our priority remained the same: to provide users with the freedom to explore different setups and always have the right tools for the job. Without unnecessary paywalls.

# CME Gateway (CME22-2n-BG77)

$ 89

A rugged low-cost, low-bandwidth modem to connect Ethernet devices to mobile network... on the tightest budget ever!

| | | | |
|---|---|---|---|
| 2X ETHERNET PORTS | IP66 WATER RESISTANCE | RouterOs v7 | GNSS SUPPORTED |
| FLEXIBLE POWERING: POE-IN, POE-OUT, 2-PIN TERMINAL | CAT-M/NB MOBILE INTERNET MODEM | | 2.4 GHz WIRELESS |

Are you tired of wired sensor limitations? Wouldn't it be nice if legacy devices - like electricity meters - could send their data over the mobile network, like our phones do? With CME Gateway you can achieve just that — and more!

It has two Ethernet ports, an on-board CPU, some RAM, and the crown jewel: a powerful built-in CAT-M narrow-band LTE modem. For extremely efficient, low-cost, low-bandwidth mobile internet connectivity. Sure, the narrowband won't be able to stream YouTube videos, but it serves a different purpose: it offers better network coverage and transmits data via the most affordable data plans in the world.

CME Gateway, sends data to your server via mobile internet

Concentrator, collects and uploads data via Ethernet
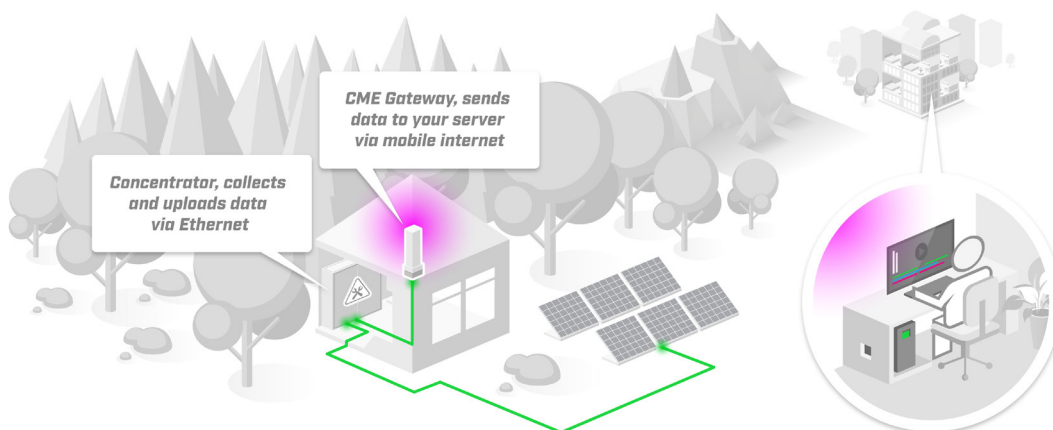
With the **IP66 water resistance** rating, the sturdy unit can survive a variety of harsh environments and setups: damp attics, rainy forests, farming equipment and so on. It has **PoE-in, PoE-out,** and a **2-pin DC terminal** for handy powering. And to make management even easier - we've added a simple single-chain 2.4 GHz wireless - so you can use the MikroTik smartphone app to configure everything. Also, a fun bonus: the board supports GPS, so if you know your way around RouterOS scripting, you can try collecting weekly, daily or even hourly location data as well!

# R11eL-EC200A-EU

An extra cost-effective upgrade of our previous R11 LTE4 modem. It offers the same speed (up to 150 Mbps) and features as the earlier version, but the price is even lower now!

This mini-PCIe modem is designed for the EMEA/APAC/Australia regions, and the supported frequencies include the popular B28 band.

Easy
mini-PCIe
upgrade!

# R11eL-FG621-EA

An extra cost-effective upgrade of our previous R11 LTE6 modem. It offers the same speed (**up to 300 Mbps**) and features as the earlier version, but the price is even lower!

This mini-PCIe modem is designed for the EMEA/APAC/Australia regions, and the supported frequencies include the popular B28 band.
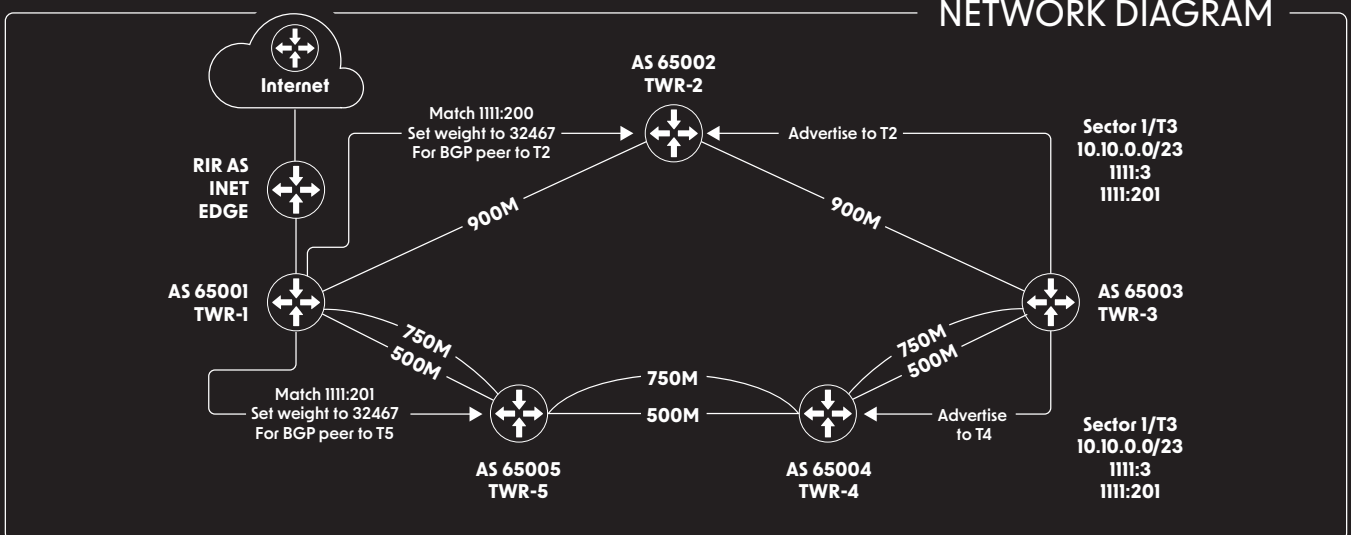
Carrier aggregation **allows the R11 to use multiple bands simultaneously. That is a huge advantage in areas with many LTE users. It provides better** responsiveness in a crowded environment and higher efficiency for weaker signal situations in the countryside. Depending on the service provider, we have seen Internet speed doubling in rural areas after switching to carrier aggregation!

# Sama Networks connecting main SkyWaves ISP towers, Lebanon

DynaDish 5 x4
LGH 5 x6
SXT SA5 x4



## NETWORK DIAGRAM



Internet

AS 65002
TWR-2

Match 1111:200
Set weight to 32467
For BGP peer to T2

Advertise to T2

Sector 1/T3
10.10.0.0/23
1111:3
1111:201

RIR AS
INET
EDGE

900M

900M

AS 65001
TWR-1

AS 65003
TWR-3

750M
500M

750M
500M

Match 1111:201
Set weight to 32467
For BGP peer to T5

750M

500M

Advertise
to T4

Sector 1/T3
10.10.0.0/23
1111:3
1111:201

AS 65005
TWR-5

AS 65004
TWR-4

# From Orchard to Office

Wyma Engineering's Journey to Fruitful Global Networking with MikroTik.

**Wyma Solutions is one of the world's leading manufacturers of post-harvest vegetable and fruit handling equipment.**

**Problem:**
Use of different equipment across all sites, non-standardised VPN solutions and poor network features due to mismatched brands.

**Solution:**
To create site-to-site VPN's and secure networking across all offices globally. To create fast efficient and reliable networking within all offices using standardized MikroTik gear.

**Requirements:**

| | |
|---|---|
| 1 x RB2011iL | 5 x CRS328-24P-4S+ |
| 3 x RouterBOARD 3011UiAS | 4 x SXTsq Lite2 |
| 6 x CRS354-48G-4S+2Q | |

## Reasons for the product/s deployment:

We previously used a single MikroTik router in our Czech office, a popular brand in the Czech Republic but not well known in New Zealand in the early 2010's. As our business grew it became evident that this device needed an upgrade. We had experienced excellent reliability and flexibility with this single piece of hardware, so we made the decision to expand the brand into all of our offices.

## What do you like about the product/service?

The MikroTik solution has enabled us to implement a much more simplified deployment model compared to our previous brand of hardware. This, in turn, has led to better reliability and faster implementation times.

Recently, we moved into a purpose-built factory and upgraded all our optical and wired networking hardware with MikroTik products, including switching, routing, and PoE switching. The vast array of products offering SFP+ and QSFP+ support was a key reason for our choice of MikroTik. It allowed us to fully utilize our optical investment throughout the entire premises.

### Key benefits of this transition include:

- A simplified licensing model
- Intuitive interfaces and configuration tools
- Rapid boot times
- Excellent value for money
- Enterprise/carrier-grade hardware
- Leading-edge technology at an affordable price

*"The MikroTik solution allowed us to have a much more simplified deployment model than previous brand hardware, with better reliability and faster implementation."*

Max Walford, IT Administrator for Wyma Engineering Canterbury.
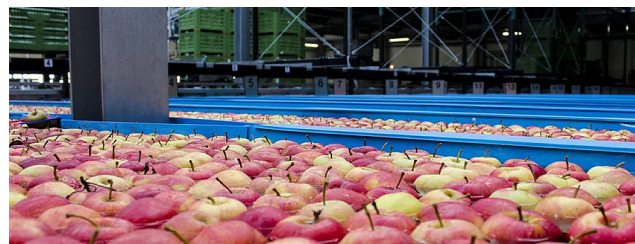
## What business problems are you solving with the product and what benefits have you realised?

The product has facilitated better inter-site communication by providing a consistent and streamlined core set of hardware. It also has ensured secure VPNs for all inter-office communications. Additionally it has improved the speed of internal networking while maintaining a focus on security and reliability.

## Recommendations for others considering the product:

Always check the licensing models of competitors. Frenquently, products that appear apparent good value come with built-in limitations or license requirements that can quickly erode any potential savings. MikroTik's straight forward licensing gives the end user the most features without limitations when compared to many other enterprise-grade brands.

# New wifi packages

From 7.13, we are separating the older wireless package from RouterOS bundle and renaming the WiFi package to wifi. The new wifi package is now part of the RouterOS bundle, beginning a new and exciting era for wifi features.



We are also separating core wifi features from the drivers, reducing the space used on the router. Note that the upgrade will take care of the new packages automatically, you do not need to worry about anything if you use the "check for updates" feature. Technically, the bundle only includes the core wifi package with CAPsMAN, so devices that don't have any wireless cards, but are only used for CAPsMAN, will not use space unnecessarily.

Due to this, you will now see the WiFi menu even on devices that don't have any wireless interfaces. The new wifi package is also now compatible with more devices than before - you can install the new wifi package even on 802.11AC devices with the ARM CPU type.* This opens up more compatibility options with the new 802.11AX devices and even allows devices to use both wireless packages (old/integrated + new wifi package) in the same device, which means you can now use a single router to run both old and new CAPsMAN.

\* - see **manual** for complete list of compatible devices and more technical info about the new changes

# Software upgrade PSA

Because of the introduction of a new wireless package, we would like to bring to your attention that RouterOS will now show upgrades only up to 7.12 if using an older version of the software. You will have to first upgrade to 7.12, and only then will newer RouterOS versions become available.

# Spotted In The Wild

We want to see YOUR setups! Send them over to marketing@mikrotik. com, get featured in our videos, and receive MikroTik Merch store coupons! **Every featured submission gets a coupon!** More information in the video below



## Even more #MikroTips and tricks



Here you can download all the visuals used in this newsletter