MIKROTIK

LtAP LR8 LTE6 kit

LtAP LR8 LTE6 kit - a compact all-in-one solution with LTE, GPS andwireless support for LoRa® in a rugged heavy-duty case.

CAT6

NOW WITH
A BRAND NEW CAT6 LTE MODEM FOR
HIGHER SPEEDS AND A **BETTER PRICE**

- ALL-IN-ONE: HIGH SPEED LTE, GPS, INTERNET-OF-THINGS
- MANY POWERING OPTIONS, INCLUDING AUTOMOTIVE
- EXTREME VERSATILITY WITH THE POWERFUL ROUTEROS V7
- 2.4 GHZ AP IN A RUGGED HEAVY-DUTY CASE
- READY FOR "THE THINGS NETWORK INTEGRATION"
- GIGABIT ETHERNET WITH POE-IN
- 3 MINISIM SLOTS – PERFECT FOR ROAMING

Inside the heavy-duty case, there is a powerful 2.4 GHz wireless access point with a Gigabit Ethernet port, built-in GPS and two internal LTE antennas. There are two miniPCIe slots – one is used for the LTE modem, the other one is populated with the concentrator gateway card for LoRa® technology.

This **upgraded edition** comes with a brand new CAT6 LTE modem that brings the mobile internet speed up while bringing the price of the LtAP down!
It also enables **carrier aggregation**, allowing the device to use multiple bands at the same time. That means - better responsiveness in a crowded environment and higher efficiency for weaker signal situations in the countryside. We have seen Internet speed doubling in rural areas after switching to CAT6!

There are three powering options: DC jack, PoE-in and automotive. We have even seen users powering the LtAP with a 20 000 mAh power bank throughout the day!

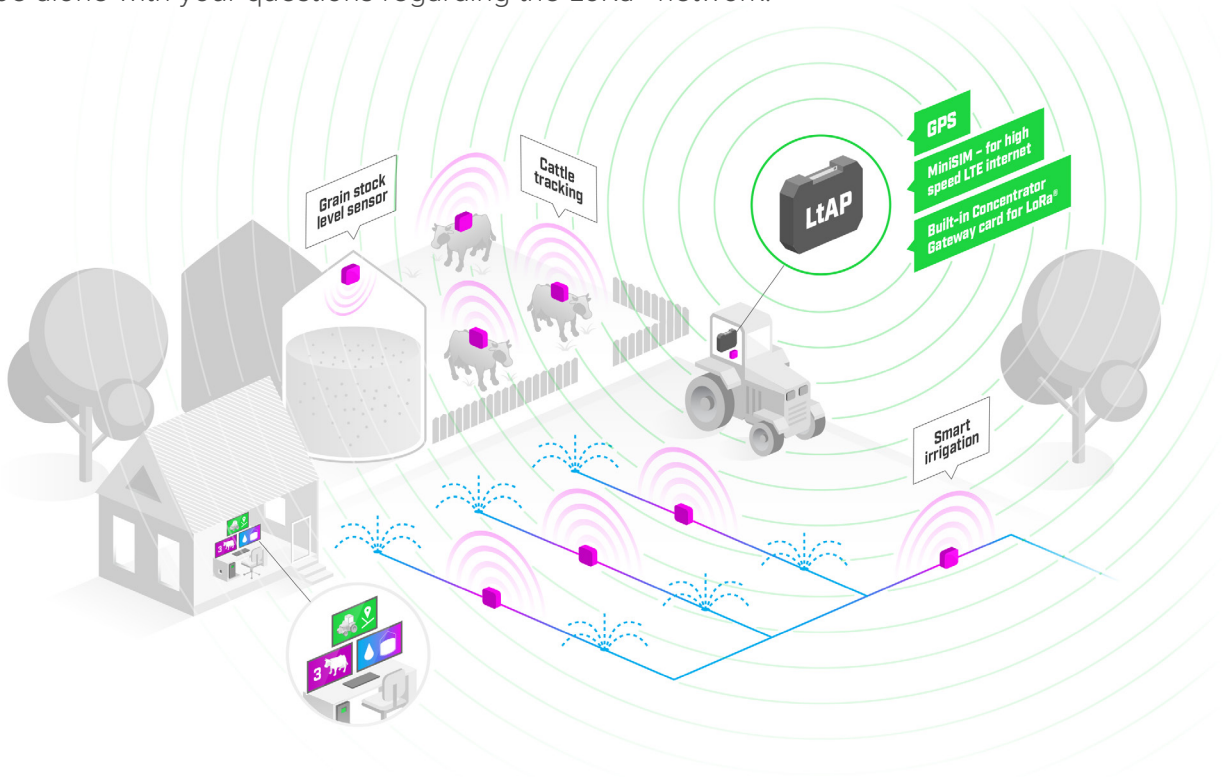
Internet-of-things has never been so affordable

To fully understand what this device can do, we need to talk about Internet-of-things. Let's start with an example. Imagine a farmer who has cattle, an irrigation system for the crops, and storage for the goods. On a day-to-day basis he needs to:

- track the animals;
- monitor the grain stock level;
- control the irrigation system.

For all these tasks the farmer can use low-cost wireless sensors. By connecting them to the LtAP - he can gather the real-time data, combine it with the location information of the vehicle, and send it to the cloud via high-speed LTE. Now all the information he needs to monitor and plan the growth of his farms is in one place. So simple and so handy.

The wireless technology behind this is called LoRa®, which stands for Long Range. It requires very low power. That's why LoRa® is the best way to build your Internet-of-things solutions.
LoRa® can be used for anything from smart homes to agriculture, supply chains, logistics and even smart cities. Monitor parking spaces, track utility services, measure environmental data and so on - the possibilities are endless.
There is even a free server infrastructure that you can use - The Things Network, fully supported by the LtAP LR8 LTE6 kit. With a large community of enthusiasts and developers around the world, you will never be alone with your questions regarding the LoRa® network.



Perfect for logistics and tracking

There are 3 MiniSIM slots you can use to set up automatic switching between mobile operators. Very convenient if you have to cross the border regularly.
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 goes for the GPS – you can attach an external antenna as well.
By the way, we have provided a simple application example on the RouterOS documentation website, so you can start real-time location tracking right away!

The Things Network

Our products for LoRa® are ready to work with "The Things Network" - the famous open source infrastructure that provides free LoRa® network coverage and has tons of apps for your needs. With the help of "The Things Network" you can get started with the Internet-of-things within a day. And it is easily upgradable to enterprise-grade network "The Things Industries".
The setup is so easy - anyone can learn it. No need to reinvent the wheel – join "The Things Network" to save time and energy with smart solutions!

RouterOS – extreme versatility

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 also include a free handy tool for centralized management of all your wireless MikroTik devices – the CAPsMAN. Unlike traditional controller software, CAPsMAN doesn’t require a separate device to run, it can use any existing RouterOS device in your network. 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.

USEFUL GUIDE

Specifications

Product code	LtAP-2HnD&FG621-EA&LR8
CPU	Dual-core MT7621AT 880 MHz
CPU architecture	MMIPS
Size of RAM	128 MB
RAM type	DDR3
Storage	16 MB, Flash
Number of 1G Ethernet ports	1
MiniPCIe slots	2
SIM slots	3
USB port	1 USB 2.0 port type A
Wireless interface model	AR9342
Wireless	2.4 GHz 802.11b/g/n dual-chain
Antenna gain	2.5 dBi
LoRa band	868MHz
LTE modem	R11eL-FG621-EA
TAC	86335904
LTE Category	6 (300Mbit/s Downlink, 50Mbit/s Uplink)
MIMO DL	2x2
MIMO UL	1x1
LTE FDD bands	1 (2100 MHz) / 3 (1800 MHz) / 5 (850 MHz) / 7 (2600 MHz) / 8 (900 MHz) / 20 (800 MHz) / 28 (700 MHz)
LTE TDD bands	38 (2600MHz) / 40 (2300MHz) / 41 (2500MHz)
3G Category	R8 (42.2Mbps Downlink, 11.2Mbps Uplink)
3G bands	1 (2100MHz) / 3 (1800MHz) / 5 (850MHz) / 8 (900MHz)
Dimensions	170 x 162 x 40 mm
Operating system	RouterOS v7 only, License level 4
Operating temperature	-40°C to +70°C

Certification & Approvals

Certification	CE, FCC, IC, E-MARK, EAC, ROHS
IP	IP54

Powering

Number of DC inputs	3 (PoE-In, Automotive, DC jack)
PoE-In input Voltage	12-30 V
PoE-In Max current at Min voltage	1.48 A
PoE-In Max current at Max voltage	0.59 A
Automotive input Voltage	12-27 V
Automotive Max current at Min voltage	1.31 A
Automotive Max current at Max voltage	0.59 A
DC jack input Voltage	12-30 V
DC jack Max current at Min voltage	1.31 A
DC jack Max current at Max voltage	0.59 A
Power adapter nominal voltage	24 V
Power adapter nominal current	1.2 A
PoE-In	Passive PoE
Max power consumption (without attachments)	12 W
Max power consumption	24 W

R11e-LR8 specifications

Product code	R11e-LR8
Interface	miniPCIe
Supported class	A and C
Frequency	863-870 MHz (EU863-870, RU864-870, IN865-867)
RF Output power	863-870 MHz 20 dBm
Receive max sensitivity	-137 dB @ SF12
Range	Up to 15 km in rural environment and up to 2 km in urban environment when using MikroTik LoRa® 6.5 dBi antenna kit
Operating ambient temperature	-40°C to +70°C
Max power consumption	2 W

Wireless specifications

Rate (2.4 GHz)	Tx (dBm)	Receive Sensitivity
1MBit/s	25	-100
11MBit/s	25	-94
6MBit/s	26	-96
54MBit/s	23	-78
MCS0	26	-96
MCS7	22	-73

Supported 2xCA LTE bands

1+1/3/5/7/8/20/28	3+3/5/7/8/20/28	5+5/7	7+7/8/20/28
40+40	8+8	38+38	41+41

Included parts

24 V 1.2 A
power adapter

Screw set

Automotive cable