

IPmotion interview

Full version

## **GENERAL**

Mr Kempff, how can I know that I have the right router on my coach/car/train/boat?

You will see it fully specified twice: on first installation and on upgrade. In other words, as soon as new wireless technology is introduced. So, for instance, just at the moment, when we're upgrading from UMTS to LTE.

Another clear way of confirming you have the right router is if all passengers are happily surfing away and no one complains about a slow Internet connection.

What can LTE do that UMTS cannot?

It's simply a lot, lot faster. Particularly when uploading files and in rural districts.

Is there some way of illustrating how much quicker passengers can surf using LTE routers from IPmotion?

Think of a UMTS modem as being like a garden hosepipe. The flow per second is 384 millilitres (0.384 Mbps) – so one glass a second. And now you, as an individual, want to take a shower with this flow of water. That should be OK. But if you want to let a coach full of passengers shower with that flow you are going to have an acute water shortage. Each person just gets a few drops – it can take some time! With our HSPA+ devices, you get as much as 42 litres a second, which is enough for every person to have a good wash.

And, to continue with this image, using the LTE technology of our routers, you can distribute up to 200 litres per second (200 Mbps), i.e. a hundred times as much as UMTS, across all users. That's really great. Now all of them can splash away (or surf) to their heart's content.

You mean all 70 passengers of a full double-decker?

Yes, as many as 80. But I would however point out a little problem, in that perhaps not all of them will be able to watch premier league football at the same time. Some degree of bandwidth management (so-called "fair use") is needed to make sure the service is attractive to all.

Have the UMTS routers from IPmotion come to the end of their useful life?

Not at all. In cities or city regions you will still achieve top speeds with them, as smartphones dominate the LTE networks in towns and, surprising though it may seem, UMTS is an alternative to LTE, but not vice versa.

In addition, you can easily and cheaply update your existing UMTS router to LTE. This is because our fixings and power cables have not changed since 2003. All you need to change are the antennas if you want to use the MIMO technology of LTE to the full.

What are the benefits for coach companies from IPmotion LTE devices?

Greater competitive edge and less damage. Passengers nowadays expect WLAN with a decent Internet connection. Any firm which doesn't offer a good solution in this respect soon loses popularity and bookings.

Another advantage is that young people are too preoccupied with their smartphones to think about damaging the upholstery. But, seriously, there is much less vandalism.

What else can the device do, apart from the "normal" Internet things?

Using our device you can monitor the main setting parameters for your onboard electronics (CAN), thereby proactively scheduling maintenance work (instead of having to respond to worn brakes only once they become apparent during normal operation, for instance). You will be able to identify well in advance if something will soon need replacing on the vehicle.

### What is the benefit for companies in equipping their business vehicles with the CAR-A-WAN?

When it comes to chauffeur-driven vehicles, it's obvious. Travel time becomes working time, thanks to a first-class Internet connection in the mobile office. But consider also the massive number of workshop vehicles which are on German roads at any given time. With a good Internet connection and solutions which meet users' needs, they become mobile workshop offices complete with order processing, electronic journey log, recording of working time in the car, etc. This makes a lot of processes and their associated documentation a good deal easier.

### What do public transportation services get out of it?

The example of PostAuto Schweiz AG has shown that customer loyalty increases and more passengers make reservations with this provider. The number of season tickets is growing. In addition, there is a reduction in the wireless technology in the bus itself, as the ticket machine and digital signage do not need dedicated antennas or additional mobile contracts.

### What do passengers get out of it?

The passenger isn't charged by their mobile provider for making Web enquiries while travelling, such as e.g. checking connections or buying tickets. The two SIM cards ensure better network coverage. And then there is also the issue of battery time: WLAN does not drain a smartphone battery as quickly as mobile wireless.

### In summary...

...the best and most stable WLAN for everyone and robust telemetry for fleet operators.

## **COMPETITORS AND QUALITY**

Why shouldn't I buy a cheaper product? After all, lots of routers are LTE-capable.

You generally get what you pay for. In terms of performance, you would have to pay for the device twice over if you wanted to use it professionally. In addition, a lot of home device solutions are simply not licensed for use in a coach or car. They therefore represent an operational risk. On top of that you would have to find suitable antennas, mounting bracket, access points, cables, power supply, etc. I doubt you would actually make any savings. So best do things properly, right from the start.

How do you define your quality standards?

80% of our customers are repeat customers – that's what motivates us. On top of that our business has a tradition of quality management. 15 years of development and professional product management have meant we adapt our devices and expertise to gradually evolving customer needs. We try to find faults in the product, not with our customers.

What is the particular benefit to customers compared to other products?

They get reliable, future-proof products and excellent service on an ongoing basis.

## **ACCESSORIES, SIM CARDS**

And what accessories do I need for the CAR-A-WAN router?

You need internal and external antennas, a wall bracket and a power supply cable, as well as a 1 A fuse. And the SIM card(s).

What is supplied as standard?

Everything except the SIM card. We don't make any specific requirements of you in this respect, just recommendations.

Why do two SIM cards fit your router?

Unfortunately in Germany no mobile provider offers 100% network coverage. Using two SIM cards from different providers, each can cover the gaps in service of the other. Or you can equip the device for use abroad with a foreign card.

Can I get the SIM cards from you as well? If so, which?

You can order German cards via us, and foreign cards via our distribution partners.

Do two SIM cards mean double the performance?

Yes and no. The overall bandwidth is enlarged, but not the bandwidth for the individual application, e.g. the stream.

Do you cooperate with mobile providers to get cheap rates?

Not yet, but we are currently engaged in talks on that point.

## **FITTING AND START-UP**

How do you go about fitting the router and setting it up?

First you need to identify the mounting location based on vehicle type – we will help you here. Then you drill holes for the external antennas and device bracket, screw in the bracket, clean the holes, glue and screw in the antennas, and position the internal antennas. After that you connect up the power supply cable to the fuse box, using the fuse. Insert all plug connectors (colour-coded) into the router and switch on using the vehicle ignition. That's it.

Where can I read all about that?

There is a user manual and a quick start guide in German and English.

What happens after placing an order? So, let's assume I buy a router for my coach, what happens then?

You get an order confirmation with delivery date and contact details in case you might have any outstanding queries, e.g. about mobile contracts or having us or a distribution partner fit the router for you.

How do I actually go about setting the router up – it must be a very complicated process?

Not at all, on the contrary, because the CAR-A-WAN is supplied pre-configured. And if you don't want to do the rest yourself, just e-mail or fax us your requirements and we'll do it all via remote maintenance.

And what if it still does not work? Who's going to help me then?

We provide guarantees not just warranties. We or the distribution partner responsible for you will help you.

Can I change my router settings while travelling?

Yes, via a browser. Or by phone via our hotline.

Do you offer remote maintenance in the event of a problem?

Yes. For the CAR-A-WAN.coach series this is already included for 24 months.

Is it standard procedure for you to monitor the routers while travelling? So, performance monitoring, speed monitoring, etc.

No, but we could if we were allowed to and had to.

## **PRODUCTION, HARDWARE, SECURITY**

Do you develop all components in-house?

All components have been developed by us or on our behalf, except for modems and WLAN cards.

Where do you produce your routers and the accessory parts?

In Heuchelheim near Gießen in Hessen, Germany.

How many routers do you sell a year?

At the moment, just under 1,000 units a year.

What certificates and awards have your devices received?

E1 and R&TTE for equipment and wireless security. These certify that our devices will not result in or sustain interference if operated on the road or on the railway. In other words, IPmotion routers are approved vehicle accessories which comply with legislation.

How many instances of breakdown, returns, complaints and replacement have you recorded?

DoA (device dead on arrival) has never occurred, as each router is tested a number of times before we dispatch it. Over the statutory warranty period for end customers we are below 1%.

## **A PERSONAL QUESTION**

What fascinates you personally about routers and the Internet? What drives you?

I bought my first modem at the age of 21 – that was in 1989. Ever since, I can't imagine life without electronic communication or e-mail, nor do I want to. For instance, I think video conferences over the Internet are simply fantastic. Everyone should be able to enjoy fast Internet. In my view, communication is a human right.