

# KPKM On-Bus Wi-Fi Internet, Poland

## Internet Connectivity | Transportation

The Municipal Enterprise of Public Transport, Ltd (KPKM), a privatized public bus company in Poland, had been looking for a way to differentiate itself and stand out from the competition. KPKM decided to do something that had never been attempted before: offering free Wi-Fi Internet to their passengers. With ACO Solutions' assistance, KPKM conducted lengthy trials and determined Peplink to be the best-performing solution. The ensuing installation for the entire fleet took just two weeks to complete, and KPKM gained more than just the ability to offer free Wi-Fi Internet.

*"...the MAX BRI is very robust and very stable. It enables us to implement an advertising system that can't be done on just any router."*

**Jaroslav Nowicki, CEO, ACO Solutions**

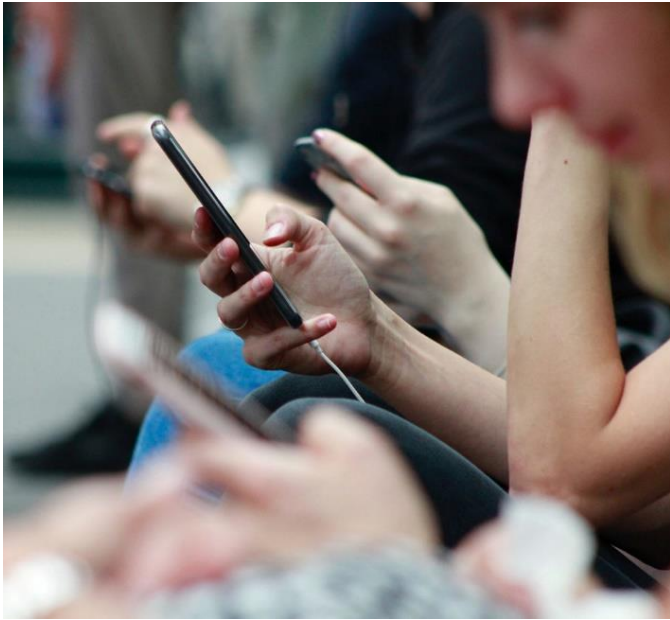
## Requirements

KPKM wanted to be more competitive and offer its passengers stable Wi-Fi Internet, something that's not been attempted before in the public transport sector in Poland. Company needed system that can simultaneously handle Internet access from all on-board passengers as well as Integrated fleet management system, with the ability to export the collected data. Not to mention the functionality of displaying advanced Captive Portals with information for passengers or advertising. KPKM sought out ACO Solutions, best known for their expertise in wireless cellular network infrastructure, Wi-Fi network monetization, surveillance, and secure data transmission.



*"It [MAX BRI] was chosen because of InControl 2's powerful API and because it was the only one with 100% up time!"*

**Jaroslav Nowicki, CEO, ACO Solutions**

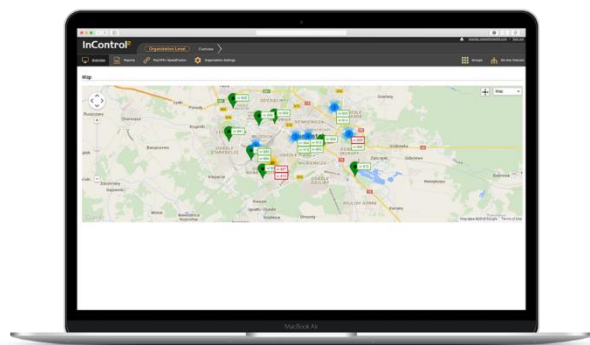


## Challenge

ACQ was tasked with finding a cost-effective solution with the best overall performance. The only way to achieve this was to test devices from various manufacturers and compare results. Devices were sourced from three different manufacturers, one being a MAX BRI from Peplink. The devices were then put through five months of torturous tests. Throughout the tests, the devices were evaluated on operational reliability, signal quality, remote operation, and reporting capability. The MAX BRI was found to be the only one with 100% uptime, and it was judged as having the best user interface. Backed up with such promising test data, KPKM consequently made the decision to go with the MAX BRI.

## Solution, results

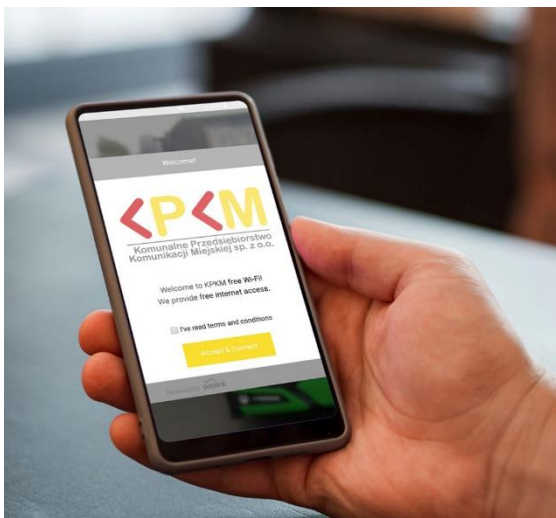
Installing the MAX BRI for KPKM's fleet took just two weeks to complete, something not possible with competing devices. They were then fitted with high-gain cellular (up to 11dB) and GPS antennas mounted on the roof of the buses for the best possible signal quality. A directional panel antenna was then used to broadcast the Wi-Fi signal to the passengers inside the bus. The MAX BRI is equipped with two SIM cards, each from a different carrier. This is absolutely necessary for bus routes that pass through areas of varying carrier signal availability. The use of two SIM cards helps to avoid subjecting passengers to connectivity outages, giving them uninterrupted Internet access.



KPKM makes heavy use of InControl 2 and to great effect. Fleet management is particularly useful in that there is a real-time geographic overview of the entire bus fleet. On a more granular scale, buses can be isolated and tracked separately for close monitoring and management.

Other data points collected by InControl 2, such as the number of Wi-Fi users across different time scales, are surprisingly useful because KPKM can now predict and optimize the number of buses dispatched at a given time. All this data can be extracted with InControl 2's API and be used externally.

The system handles simultaneous users without problems and the total number of users recorded increases month after month. In order to access the Internet, users connect to Wi-Fi and are taken to a captive portal. Once authenticated, users are then transferred to KPKM's website, which is configured as the landing page. KPKM's captive portal, as customized by ACO Solutions, can display online ads from an external server. KPKM takes advantage of this, using it to display other services KPKM can offer to their passengers. KPKM will also be selling their advertising space to third-party publishers as a means to maintain the free Internet they're currently offering.



## Deployment

**InControl<sup>2</sup>**  
Setup. Manage. Report.

Save configuration time, minimize truck rolls, stay on top of the status of your network, and proactively resolve any emerging problems with speed and precision.

## BR1 MK2

Automatic Failover 4G LTE Single Cellular Mobile Router



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