INDIO NETWORKS

# Transport Connectivity

## WiFi for Airports, Railway Stations and other transportation hubs.

# Introduction

Every year, the transportation industry moves billions of commuters from point A to point B. The industry is already big, and forecasts predict an increased commuter movement in the coming years, given the various factors contributing to it.

Aviation, railways and other modes of transportation which are responsible for large movement of people are now looking at avenues to improve commuter experience and help them ease the travel challenges. Providing fast, reliable and affordable connectivity to the travelers is the need of the hour.

People work on the go; they want to stay connected through transit. Although cellular networks are available choice for travelers, they lack the capacity to handle the deluge of data traffic that commuters consume while on the move. WIFI networks provide the much-needed bandwidth and speeds required by the commuters especially when commuters are waiting at airports, train stations, bus stands and other venues.

Today, many transportation hubs provide WiFi service to its commuters, however they face lot of hurdles like slower speeds, spotty coverage, unreliable connectivity and more. Additionally, they mostly offer the service for free so they face huge operational costs and are looking for avenues to monetize their existing networks. Many transport hubs cater to large number of commuters and hence these networks need to handle large number of client devices while giving good connectivity to the end users. With increasing online threats, hacking attacks, cyber-crime, it is imperative to maintain high-level security on these networks and ensure that user's data and privacy is not compromised.

Our transport solutions help you deployed secure and reliable wireless networks at your travel venues and vehicles so commuters and travelers can experience connectivity while on the move.

# Key Requirements for Transport Connectivity

- Fast and reliable Access Networks
- Seamless User Experience
- Security and compliance
- WiFi Analytics
- Ease of deployment and maintenance
- Central Management
- WiFi Monetization
- Bandwidth Control

# In Depth on WiFi services for Transporters

Let us take a detailed look at what transport hubs really require from WiFi.

### User Onboarding and User Experience

User onboarding in high density venues must not be a cumbersome task. People should get easy access to the network in the shortest time possible. User onboarding can be done through various authentication methods. Providing easy onboarding options, including social media, greatly reduces the hassle people face while logging into networks and increases the Internet usage.

## High Availability

People move around transport hubs 24 hours a day. These networks need to ensure that they're available around the clock to people. High availability can be achieved by good network design, ensuring complete coverage, designing redundancy and failover and deploying tools to constantly monitor the health of the network.

## Bandwidth Management

Public networks are shared resources. It is important to implement fair bandwidth sharing rules so Internet users get good Internet experience on these networks. Setting up bandwidth management policies to a network is important to ensure that few rogue users don't compromise the quality of browsing for other users. Not setting these policies can result in unequal distribution of bandwidth across users.

## Multiple WAN & Load Balancing

Another method to improve the reliability of these networks is to build redundancy in the network design. Networks deployments can include multiple ISP connections to support these requirements. If one ISP fails, the network would seamlessly transition to the standby ISP through a responsive failover mechanism. Bandwidth can be aggregated across all internet connections to ensure high throughput and better browsing experience to the users.

## Policy Enforcement

In public networks like an airport or a railway station, policy enforcement is important to ensure networks are not misused and end user experience is smooth. Policies can be related to compliance with the local rules and regulations, or related to business rules on access and network usage. These networks should not be compromised and the admin should have all the tools needed to satisfy the regulatory compliance.

### Network Monitoring System

The administrator must, at all times, know what is happening on the network. Real-time usage analytics, health and status of APs, user activity reports are all necessary to optimize the network performance and throughput. High network visibility is an important trait of a good network design. When it comes to wireless deployments on a larger scale, there might be hundreds of Access Points set up across various locations, it's important to get real-time analytics of each network element, outage alerts, deep insights into network usage and overall health of the network.

### WiFi monetisation

Industries providing WiFi to their customers often look at ways to monetize the service. Monetization of WiFi can result in considerable monetary gains and hence a reduction in operational expenses. There are multiple avenues to generate revenue from WiFi users such as freemium service, advertisements, targeted marketing, push message, customer surveys and more. In order to cover CapEx and OpEx, a solution that is integrated with multiple billing options, voucher-based billing support can greatly help establishment owners. WiFi marketing is another key driver of revenue, splash pages can be used to advertising, pushing notifications on to user devices about offers and other discounts available on premise increase the chances of spending and generating indirect revenue.

## Deployment Challenges

- Network design & planning
- Reducing RF Interference
- Ensuring robust security
- Protecting user data and privacy
- Monetizing WiFi infrastructure
- Reducing OpEx and CapEx cost

- Seamless user experience

## How we help the Retailers with our solutions

WiOS, our cloud-based hotspot manager is capable of controlling and managing the entire network consisting of UniMax Access Points from a single pane of glass. WiOS can manage and monitor an unlimited number of UniMax and MobiMax Access Points deployed in multiple remote networks. Indio APs come with cloud management functions, which gives the administrator real-time visibility and control of the entire network from the cloud. The administrator can configure policies based on bandwidth, policy and routing and setup access rules for each network individually. WiOS when working with UniMax & MobiMax APs works as a network monitoring system that can control and configure all APs in the network through the central dashboard. WiOS's deep network visibility and health monitoring systems ensure maximum uptime for the network. Using WiOS's inbuilt WiFi Monetization Platform, you can monetize your WiFi through advertisement, push messages and marketing activities. Integrated with a complete hotspot billing and WiFi marketing platform, you can bill users in a tiered manner through more than 12 payment gateways. You can use the marketing platform for sending push notifications on to devices, and run video ads or static imagery through the splash page.

Here are a few key highlights of what WiOS enables for transportation:

· Single Console Management

· High Availability

· Multiple Authentication Methods

· Plug and play deployment

· WiFi Monetization

· WiFi Marketing

· Deep Network Visibility

· Policy Enforcement

· Track user activity sessions

· Real-time network intelligence

· Zero Touch Provisioning

Although it is best practice to use original manufacturer deployments for optimum experience, Indio's solutions are vendor-agnostic and work with hardware from any vendor.

# Implementation

WiOS can be completely cloud-deployed, and can be set up on a public cloud or a private cloud. It is a multi-tenant software. The public cloud deployment gives each customer a separate instance, offered as a SaaS platform.

WiOS manager can manage and control an any number of remote networks and unlimited number of UniMax and MobiMax APs.

If you require an on-premise hotspot controller, then you can deploy UniBox edge controller. UniBox is our on-premise hotspot controller which comes with everything that WiOS offers for your WiFi management requirements.

UniBox is easy to set up and works seamlessly with any third-party access points. It can be best deployed with UniMax Access Points for single console network and user access management. UniBox comes in seven different models. For transportation deployments, where density of users is high and the environment is noisy, UniBox Campus Edition controller is an ideal choice which can manage thousands of users and provides full range of functions needed to manage complex wireless deployments.

All UniMax and MobiMax access points come with latest features like SD-WAN, software-defined radios, dynamic policies, SSID-based VLAN, dynamic channel assignment, presence, application filtering, guest access and more. They deliver high performance, better coverage and high throughput while saving time and money.

Indio's managed PoE Switches can be used for remotely powering access points, IP cameras in the premises. They provide wide range of network management options for administrators to design complex networks required for large venues.

Our solution offers a complete, single vendor deployment that takes supports all your enterprise WiFi requirements.

## Solution Benefits

We have worked with many leading airports and other transport hubs in the world including Honolulu International Airport, Hamburg airport, Cancun airport, Burlington Airport, Delhi Metro and many more. Our solutions have streamlined a lot of the core network elements that come with WiFi deployments and made it quite easy for the administrator to manage and monitor the network. Here are a few key highlights of how we have helped our customers:

- System designed handled millions login session daily
- Helped ease onboarding of users
- Over 5 million registered users used the services each year
- Operation was cash-flow positive within one year
- Network uptime increased after deployment of system
- Achieved full coverage of enterprise area
- Rest areas usage improved and project received great reviews online
- Seamless failover mechanism for smooth transition

*Connect with our sales team and fortify your enterprise network.*

sales@indionetworks.com

US: +1 (888) 280 4112

IN: +91 (20) 6715 7379