

Indio Networks

UniBox Controller

All your wireless management, in one place.



Introduction

Industry forecasts estimate that by 2023, approximately 628 Million wireless hotspots will be functional. This rapid proliferation of wireless hotspot technology poses several big challenges, primarily, the biggest one being that of centrally managing complex and large network infrastructure, and secondarily, keeping it comfortable & affordable to the provider as well as the consumer. Developing geographies are only just starting to experience the growth of wireless accessibility pervasively. Obstacles to this growth is simply the cost that vendors levy, we want to see an affordable wireless future that provides ease of connectivity to everyone. As businesses and establishments have continued to grow, so has their requirement of being able to seamlessly scale their networks to support the increase. It is difficult to scale networks and consolidate its management to a single console while having multi-vendor infrastructure. Moreover, scaling & centrally managing network infrastructure with multi-vendor hardware is nearly impossible because of almost zero compatibility with each other.

At Indio, we work to identify such gaps and create products that squeeze themselves between these gaps and solve those problems. Monolithic architectures are rigid and tough to scale when necessary. We replace these monolithic architectures by providing a solution that is elastic & non-rigid, in terms of its scalability and compatibility to work with multi vendor infrastructure. Often is the case that while businesses want to provide the best of WiFi services to their customers, the apprehension to provide these services stems from the monetary aspect of it.

Procurement of wireless hardware, setting it up, bearing its operational costs can prove to be a daunting task for businesses, especially those who work in industry verticals where time is an extremely limited and precious resource. We help you solve this problem by providing an easily deployable, highly scalable and centrally managed network systems solution which can help your community or business grow at the highest rate possible.

Our solution, for you.

UniBox is an integrated, all-in-one hotspot controller which takes care of all your core network elements and sub-services required for monitoring, maintaining and management your WiFi hotspot network through a *Single Console*.

UniBox controller sits between your Internet Service Provider and Switches / Access Points. It behaves like an intermediary between the Internet and the End-User. Routing all traffic through the UniBox helps in centrally managing the entire network and all of its connected users. It can integrate Access Points from any vendor working in bridge mode. Sitting on an elastic architecture built to facilitate stable and reliable internet services, the UniBox solves a multitude of problems, each pertaining to several end-user industries. Loaded with an array of features that serve different use-cases, it provides a well tailored experience to end users. Feature details are not meant to be arbitrarily applied to every establishment equally, different places have different requirements, none are identical, in function or purpose. Hence, there are different Implementation Models that can be configured to serve the purpose of the establishment exactly the way it is supposed to. While integration of multi-vendor hardware is a USP of the UniBox, deploying the system with UniMax Access Points has added advantages. You can leverage even more control over the network since deployment of the UniBox with UniMax allows the UniBox to function as an AP Controller that enables you to control and manage the entire network of connected users, including the Access Points itself. For optimum network stability and performance, it is best practice to use this system in your establishment to extract the most out of your investment and help you generate value.

Universal Controller

The core functionality of UniBox is its ability to behave as a Universal, Single Console, hotspot or AP controller across different network infrastructure. Multi-vendor hardware integration presents the challenge of centralising control of the network because there are compatibility issues that arise when using multi vendor hardware in your networks. Modern networks should be built on scalable and flexible architectures. When controllers are vendor dependent, they cannot scale across different requirements with ease. Major infrastructural changes are required to fit controllers into a network for them to work. UniBox Controller is vendor-agnostic, which means that it can be integrated within any network irrespective of the hardware used therein. UniBox can be deployed to manage WiFi Access Points as a Universal Controller in Hotels, Shopping Malls, Schools, Colleges, Airports, Retail Store and Public Utility venues. It can also be deployed in Offices and Enterprises. UniBox comes in seven different models, each that serves a specific purpose in a certain environment.

Authentication with UniBox

Authentication and verification of users is imperative, irrespective of the setting the wireless network is being used in. Authenticity of identity helps us secure the network and prevent unlawful usage. User authentication is an important characteristic to keep in mind while providing Public WiFi, any user who performs unlawful activities through your network can make you liable for prosecution under law. Open Public WiFi networks have been used for indulging in unlawful activity, this strengthens the necessity of having very strict authentication and verification methods across the board. UniBox comes with an inbuilt Authentication, Authorisation & Accounting (AAA) service and Two Factor Authentication that helps us to keep track of the identity of users who are connected to the network at all times. UniBox's authentication services also provide login through Social Media credentials.

Enforce Policies

Policy making is always looked at in a selective context. Policies that apply in one environment may not necessarily suffice or even be necessary in another environment. However, policies serve an important purpose across all verticals. Policies, for one, improve Quality of Service and create tight perimeters that prevent access beyond the defined limits. UniBox can enforce multiple policies, relating to bandwidth as well as compliance. When multiple users connect, it can create an imbalance between the available bandwidth and result in unequal distribution of bandwidth to users, UniBox's *Bandwidth Rate Limiting* service solves this problem by limiting the rate of bandwidth per user. Administrators can set up *Time and Date, Daily Quotas* to users as they see fit. As users scale in size, bandwidth limits need to be scaled to ensure a seamless experience, UniBox's *Dynamic Bandwidth Allocation* divides bandwidth as required depending on the number of concurrent users.

Managing Networks with UniBox

Networks are a complex web of multiple networks elements which need to be monitored regularly to ensure that Service-Level Agreements (SLAs) with users are met to the maximum. A good network ensures that users who are connected to the network have maximum uptime and are really meant to be in that network in the first place, meaning that they are authenticated users in a secure perimeter. To solve these problems, and satisfy the requirements of a good network, you need a capable hotspot controller that can work across multi-vendor hardware.

A DHCP server onboard the UniBox integrates your users into the network automatically without hassle. UniBox's vendor-agnostic nature gives it an edge over other controllers. UniBox can define & manage multiple LAN and VLAN subnets with Group Based Routing. Security of a network and its users is taken care of by UniBox's Two Factor Authentication and external LDAP integration services.

With Multiple WAN and Load Balancing capabilities, UniBox can aggregate bandwidth and seamlessly transition to secondary ISPs with a responsive failover mechanism incase the primary ISPs fail. UniBox also enables Branch Networking for remote workplaces through secure VPN tunnels ensuring top-notch security for Intellectual Property and sensitive data. You can view floor-wise heat maps that tell you exactly how much coverage each Access Point gives. UniBox also provides real-time traffic analysis.

WiFi Monetisation with UniBox

UniBox comes with a WiFi Monetisation Platform that allows businesses to monetise their WiFi at costs they desire and gauge to be the correct price. An inbuilt, fully customisable, Captive Portal Service gives you complete control over your landing page allowing you to monetise it as you see fit. It can be used for Advertising to sending Alerts. You can configure a tiered billing plan for revenue generation through your WiFi service. UniBox includes 10 integrated payment gateways which end-users can use for facilitating the transaction. Monetisation through UniBox can be done through a variety of different ways, using static imagery to intermittent video advertisement inserts, using direct billing services which can include free, time bound services, to premium, limitless services. Businesses can also use Access Codes or Vouchers to give their guests access to the network.

Simplified compliance.

Compliance is the bigger picture we cannot afford to overlook in any system, let alone wireless. Compliances, whether internal to an establishment or legally binding through State legislation, have to be enforced nonetheless. They are an important part of product and service management. UniBox can enforce multiple compliance related functions with ease.

UniBox comes with features which include Web Filtering, Web Logging, URL filtering and Call Detail Records (CDR) that ensure complete adherence to compliance related issues, at all times. UniBox can also track real-time User Activity, adding on top of that, you can isolate users to check their website access logs. Sometimes, one policy cannot be arbitrarily applied to all groups under a network. To eliminate this problem, UniBox can enforce Group Based Policies.

UniBox as an AP Controller

It is best practice to deploy UniBox along with UniMax Access Points. UniMax Access Points surrender total control to the UniBox allowing the UniBox to function as an AP Controller. All of your network here can be controlled through a Single Console. As an AP controller, UniBox performs the following functions:

- AP Management
- Configuration Management
- Firmware upgrades
- RF Management
- Automatic Channel Selection
- AP Monitoring and inbuilt NMS
- Bandwidth and Usage Analytics
- Wireless Meshing
- IPv6 compatibility
- Traffic Analysis
- Device Profiling and Identification
- Rogue AP Detection

Leverage UniBox.

End-to-end integrability and interoperability makes the UniBox stand out from other products of the similar category in the market today. We have helped craft many growth stories with the UniBox. From retailers to one of the largest airports in the world, UniBox has proven to be an industry-leading product at an astonishing price point.

Connect with our sales team to learn more about UniBox and how it can benefit you.

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