

## Slash support costs, boost revenue and make smarter strategic decisions when you upgrade your Wi-Fi insights with AirTies Remote Manager

**A cloud-based Wi-Fi network management solution that gives broadband service providers secure, real-time visibility of in-home connectivity for their entire subscriber network and for individual households.**

The dramatic growth of connected devices per household is an ongoing challenge for broadband service providers worldwide. Support calls are rising, but in-home Wi-Fi typically remains a blind spot for ISPs. They don't know about issues until a subscriber calls for help, and customer satisfaction is impacted because care agents can't find and fix issues without visibility beyond the router or gateway.

### 360° visibility and self-optimizing networks

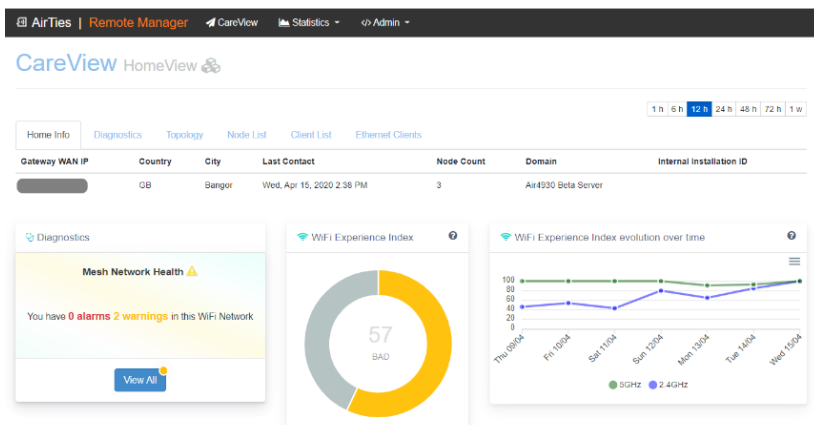
AirTies Remote Manager removes in-home blind spots and gives service providers a vast array of data about the device and Wi-Fi usage across their entire subscriber base. This insight not only revolutionizes the customer care function, it can enable hugely positive impact on ARPU and churn.

If your target is to drive upgrades to high-ARPU superfast services, you can generate an instant report of all households suffering from over-stretched Wi-Fi. To kick-start sales of additional Mesh extenders, retrieve a list of all subscribers who have coverage issues. And if you're still unsure when your market will be ready for Wi-Fi 6, keep a daily watch on the Remote Manager dashboard to track the spread of high-end devices in your base.

Remote Manager's unique combination of detailed data and cloud-based artificial intelligence enable permanently self-optimizing home networks. Drive up customer satisfaction and reduce churn as wireless access points adjust themselves to improve the Wi-Fi experience. See it happening in real time with Key Performance Indicator (KPI) Dashboards covering your entire installed base and the exclusive AirTies "Wi-Fi Experience Index".

### Faster, more effective support at lower cost

Remote Manager maps the kinds of connected devices used and tracks Wi-Fi consumption over time. Customer care agents immediately become Wi-Fi specialists able to drill-down into individual homes and devices to remotely identify, diagnose and fix flaws at the touch of a button.



## Airties Remote Manager Business Benefits

### Supercharge customer support

Fast and easy remote troubleshooting enables rapid resolution of subscriber issues, minimizing customer frustration.

### Guide strategy with vital business metrics

KPI dashboards allow you track the Wi-Fi experience of your customer base. Upgrade your insights to improve business-wide planning, from operations and engineering to marketing.

### Slash support costs

Efficient troubleshooting means better resolution rates and shorter calls. Expensive technician visits are dramatically reduced.

### Boost Mesh Activations

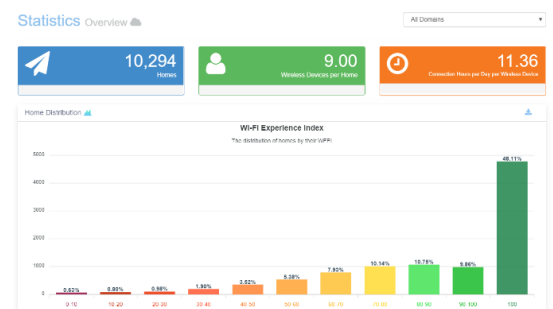
Choose from flexible provisioning options including fail proof, ultra-simple "Zero Touch" installations

### Drive ARPU and new sales

Visibility on which homes have Wi-Fi issues, bandwidth-hungry gamers, or sluggish legacy devices helps to target your marketing messages for premium products (mesh extenders, superfast broadband, new smartphones etc.)

### Reduce Churn

Proactive steps to improve the Wi-Fi Experience strengthen subscriber loyalty and NPS.

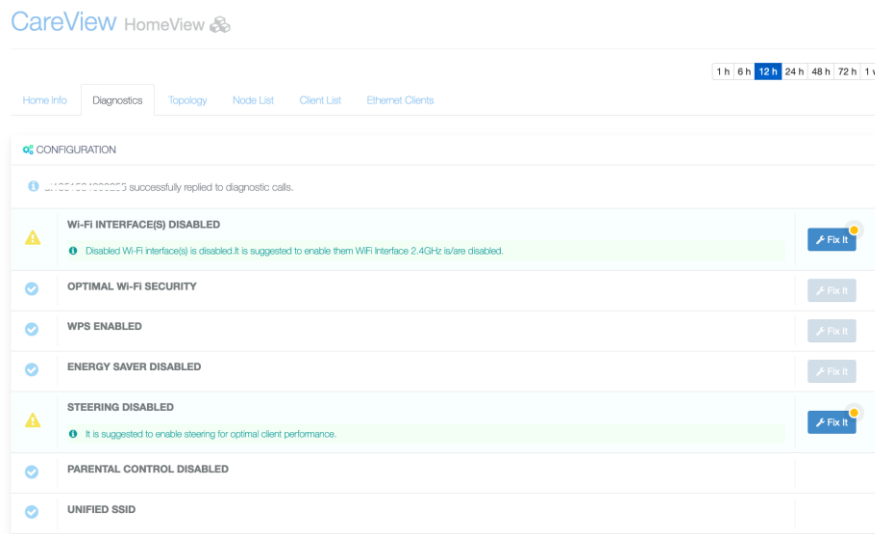


## Airties Remote Manager Features

### Real-time remote diagnostics turn care agents into Wi-Fi wizards

Remote Manager’s cloud interface offers role-based access to meet the different needs of first, second and third-line support teams. With a complete topological map of the household Wi-Fi and automated alerts for common problems, it’s easy to drill-down when necessary to find a wealth of data on each individual node and connected device. Historical data stored in the cloud allows comparisons with performance over the past week, helping to accurately pinpoint the root cause of problems during the very first call.

#### Fixes at the touch of a button



Common issues like a disconnected Mesh extender, disabled WLAN settings or forgotten parental controls are automatically flagged as alerts and can be resolved instantly. The care agent simply presses a single “fix it” button in the Remote Manager interface. They can also make recommendations (or refer to your retail sales department) where the data suggests issues are being caused by the poor performance of older, legacy devices.

Alerts are divided into “warnings” and “alarms” to indicate relative severity and are triggered automatically on recent Wi-Fi event activity within the home based on pre-determined conditions.

Agents can see how and where every device is connected. A “Bad Link Minutes” score reveals how long and how severely this device has suffered poor connectivity, expressed as a percentage of total usage time over a given period. In addition to interference levels, this figure contributes to the overall Wi-Fi Experience Index which is a metric defined to quantify the subscriber's user experience and measured for each household, each wireless extender and each Wi-Fi band used within that household.

#### Live Control of Wi-Fi Access Points

The CareView also provides direct, real-time access to individual Wi-Fi Access Points (WAPs) via cloud APIs, including temporary live monitoring of all mesh extenders. Support staff can query each WAP to determine its current status and configuration, adjust settings and issue commands to relevant parameters. This feature includes support for the Broadband Forum’s TR-181 data model.



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Home Info Diagnostics Topology Node List Client List Ethernet Clients

Friendly Name	Vendor	MAC Address	LAN IP	Capabilities	Max Phyrate	AP Connected	Estimated Throughput	Data Usage	Bad Link Minutes
Unknown	Hon	[REDACTED]	192.168.1.152	2x2 M 2.4 GHz	300 Mbps	Bedroom	50.62 Mbps	58.80 GB	33 (0.42%)
Apple-TV-4k	Apple	[REDACTED]	192.168.1.84	2x2 AC 11v Dual	867 Mbps	Living Room	249.13 Mbps	31.90 GB	23 (0.25%)
Harrys-iPhone	Apple	[REDACTED]	192.168.1.184	2x2 AC 11v Dual	867 Mbps	Bedroom	97.69 Mbps	21.16 GB	21 (0.3%)
Samsung	Samsung	[REDACTED]	192.168.1.174	2x2 AC Dual	867 Mbps	Living Room	122.44 Mbps	1.16 GB	15 (0.17%)
Georgias-iPhone	Apple	[REDACTED]	192.168.1.145	2x2 AC 11v Dual	867 Mbps	Living Room	211.83 Mbps	1.07 GB	9 (0.19%)

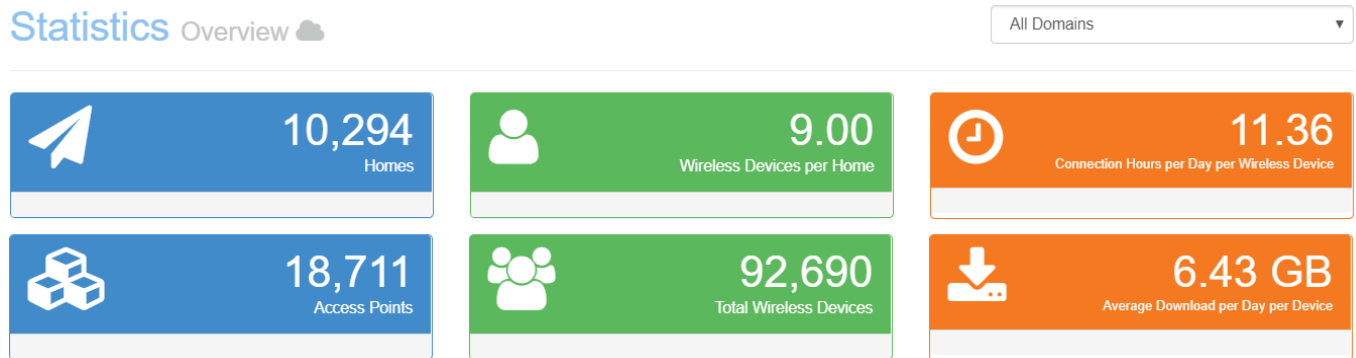
## Self-optimizing networks resolve issues before they become problems

Remote Manager’s cloud-based analytics combine with the Airties steering algorithm to deliver maximum benefit from the wealth of data available in each subscriber home. Current and historical information on every Mesh extender, wireless and wired client is analyzed alongside network performance data from the service provider’s full subscriber base. Artificial intelligence in the Airties cloud servers identifies trends, evaluates performance and provides recommendations to improve configuration.

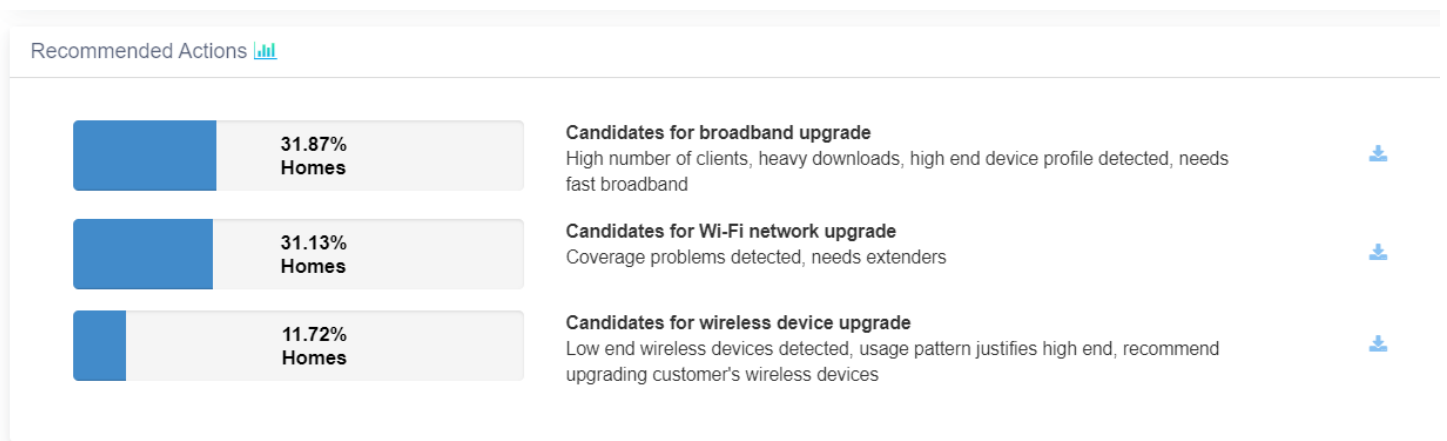
Proactive channel planning (prioritizing traffic over DFS channels where possible), band steering and client steering are employed to optimize the use of network resources for each household.

The overall result is a Wi-Fi experience that improves dynamically for every user in every household – all day, every day.

## Powerful analytics enable continuous performance monitoring



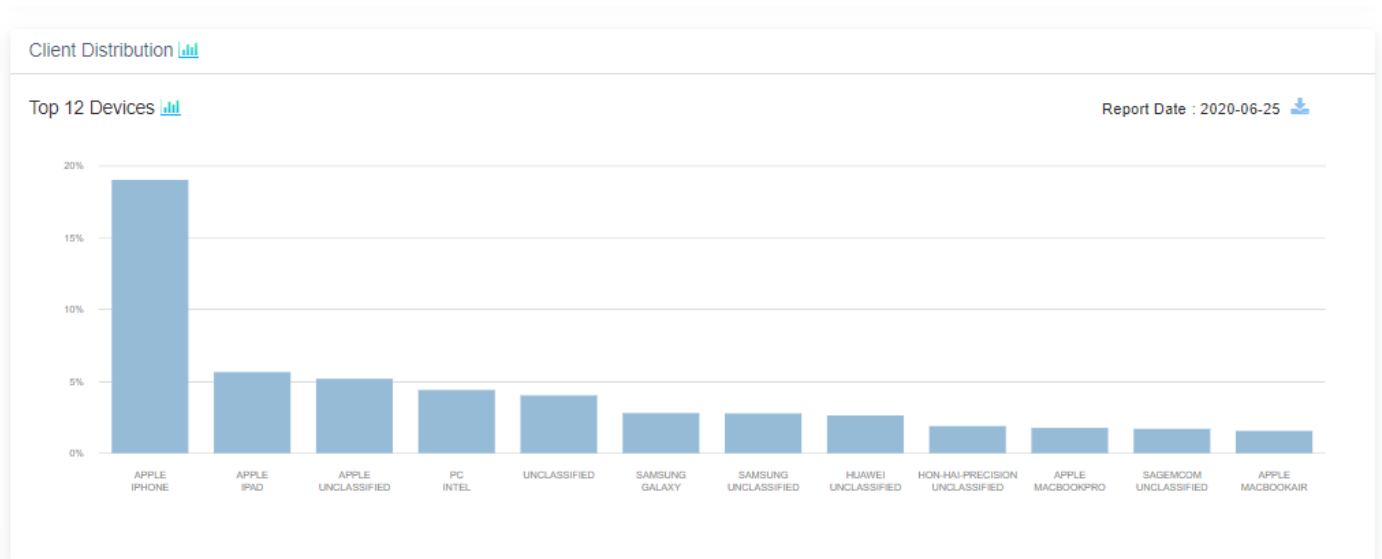
Remote Manager’s KPI dashboards update every few minutes with the latest data across the full deployed base. Role-based access provides executives with ongoing access to a rich set of data on Wi-Fi consumption to inform their business planning and strategic decisions. From the overall Wi-Fi Experience Index to the average number of connected devices in your subscriber homes, Remote Manager provides the visibility to ensure the health of your business.



Results can be filtered by gateway/router model to see how connectivity varies or viewed as an aggregate picture of all subscriber homes. Click-through to see a summary of which client devices are most popular among your subscribers. Armed with data on which devices are trending and how consumption patterns are changing, service providers can more accurately forecast future demand. It becomes easier to predict whether that investment in Wi-Fi 6 or a new generation of gateways is a timely strategy.

KPIs also help service providers to measure the impact of Airties steering technology on the broadband speeds enjoyed by their subscribers. Wi-Fi coverage, Mesh installation setup and interference levels are tracked per household and across the entire network.

Standard reports can be generated at the touch of a button. Ad-hoc reports can be easily customized to the specific needs of your business. Generate instant lists of subscribers to target with marketing messages for upgrades of broadband service, Wi-Fi network or client devices.



## Zero touch Mesh deployments increase uptake and reduce complexity

As a growing number of households discover the benefits of wall-to-wall mesh Wi-Fi, service providers need a smooth deployment process for extenders which is quick and effortless for both subscribers and installation teams. A “zero touch” activation can be achieved using the Remote Manager platform, improving uptake and installation rates for this popular premium offering.

Flexible provisioning options mean new routers and extenders can be registered with Remote Manager in the warehouse or a retail location so they will simply “plug and play” once the subscriber gets them home. Alternatively, technicians can access the interface to register devices on-site, or the subscriber can self-register via the cloud-connected mobile app (utilizing the Remote Manager APIs) or by scanning a QR code on the device packaging.

By combining pre-provisioning through Airties Live Controls with the Wi-Fi Alliance’s Device Provisioning Protocol (DPP), service providers can give subscribers a fuss-free route to better Wi-Fi within the home.

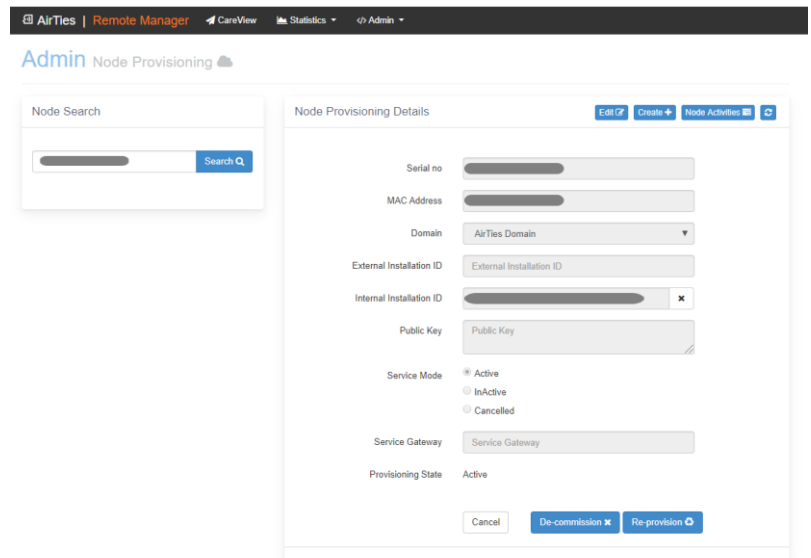


## De-provisioning and de-activation options make hardware work harder for you

Remote Manager’s provisioning screens aren’t only useful when Mesh extenders are first deployed, they can also be used to get the best value out of existing hardware.

When customer lapse on payment for their premium Wi-Fi service, the Admin screens can be used to remotely deactivate individual Airties Wireless Access Points (without interrupting overall broadband supply to the home) until payments are resumed.

This can also be used to “lock” devices to an individual gateway so that Mesh extenders sold or given to one subscriber cannot be used in another household. Finally, Remote Manager supports de-provisioning of individual Airties Mesh extenders and re-provisioning to factory default settings for replacement and refurbishment purposes.



## Easy Start, Easy Scaling

Remote Manager brings great business benefits, but without major disruption. It has been designed for fast, low-impact deployments and to support businesses of all sizes.

## Flexible APIs for Rapid Integration

Service providers can get started straight away using Remote Manager as a standalone platform. Or they can choose to fully integrate it with their existing first-level support, OSS, BSS and business intelligence tools via the Remote Manager cloud APIs. These secure, stateless RESTFUL resource APIs are organized as groups of related functions:

- Authentication and authorization
- Home level Wi-Fi history statistics/analytics
- Entire population Wi-Fi history statistics / analytics
- Access Point Provisioning
- Real Time Access Point View and Controls
- Firmware Management Raw Data access
- System Administration

Secure authentication and authorization mechanisms ensure access to API groups is restricted based on user roles:

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• User Roles</li> <li>• Administrator</li> <li>• Executive</li> <li>• Engineering</li> <li>• Provisioning</li> </ul> | <ul style="list-style-type: none"> <li>• Careview</li> <li>• CareviewReadOnly</li> <li>• UserAdmin</li> <li>• Rebooter</li> <li>• BulkDataUser</li> </ul> |
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## High Scalability and Availability

There’s no limit to the number of Mesh extenders that can be connected to Airties Remote Manager, making it ideal for both large and small scale deployments. Components are built as micro-services and deployed as independent clusters to support scalability.

Both AWS Horizontal scaling and Auto Scaling are supported. If required, Airties Remote Manager can be deployed across multiple regions and availability zones to support high availability.