

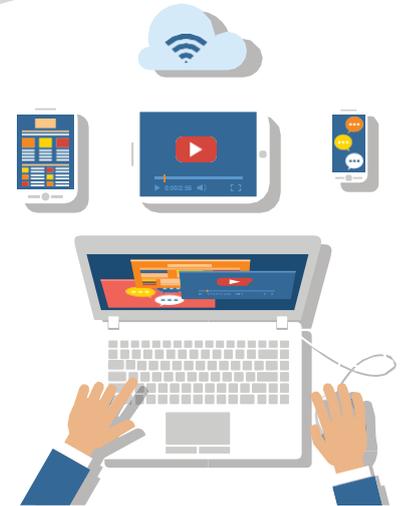
Personal Area Network (PAN) Module

Is it possible to get a private, secure, home-like network connectivity while connected to public guest networks?

It may sound like an oxymoron, but it is possible to get a private, secure, home-like network connectivity while connected to public guest networks such as those that are found in hotels, condos, dormitories, serviced suites, and co-working or shared working spaces. We created the **PAN (Personal Area Network)** for our Service Gateways for this very reason: good high-speed Internet access and privacy for each user in a guest network.

Let's picture this scenario: You just arrived at your hotel straight from the airport and you just want to relax by watching your saved shows on Netflix or play games on your Nintendo Switch on the Smart TV in your hotel room.

When you are in a hotel guest network, that scenario is not usually as straightforward as sitting down on your couch and finding your own devices in your own home network, and then connecting these devices so they could 'talk' to one another. What would most likely happen is that you would search for the SSID of the access point (AP) where you are supposed to connect to, connect to that, and after that, you do the same thing for your other devices, and search for the ones that you want to connect to the Smart TV. Unlike your home network where you only see the devices that you own, you would most likely be also shown other people's devices that are also connected to that AP—and that is usually a very long list. Convenience is one thing, but security is another very significant concern.



Increased security

Protection from privacy intrusion

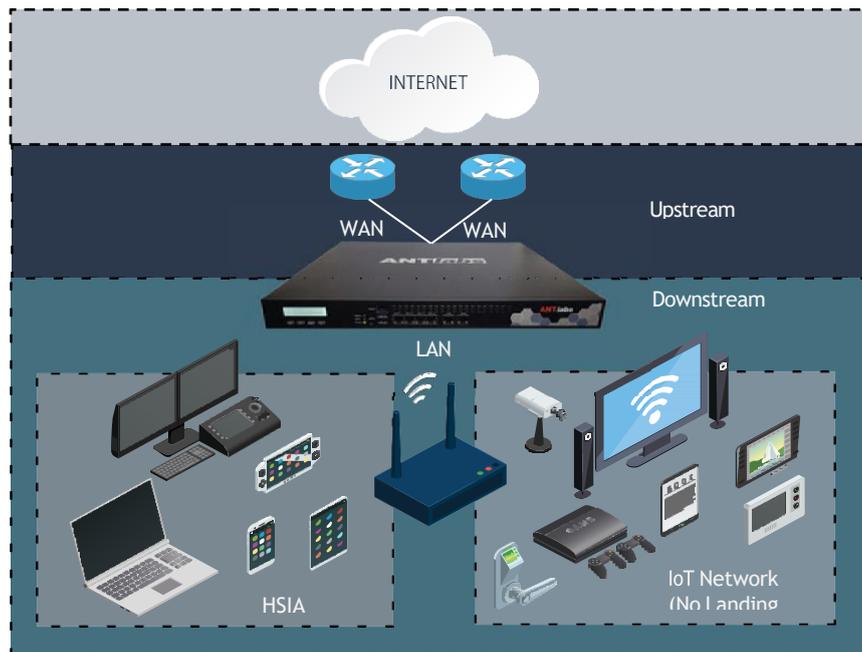
Manage & control your own smart devices



In the age of the IoT (Internet of Things) and digital nomads, the need for us and our personal devices to stay connected virtually everywhere is ever-increasing daily. Free, fast, and easy—that is how the ideal WiFi connectivity is for most people. How many people are there who think this way? Let's get to the numbers.

Out of the world's total population of 7.676 billion, 4.388 billion are Internet users, and 5.112 billion are unique mobile users¹. That is a lot of users and that data does not even include the other devices users own that also need to connect to the Internet daily (i.e. IoT devices). According to Gartner's forecast² the average number of users or devices supported per deployed WLAN AP will increase by approximately 20% to 30% from 2018 through 2023. With those figures, it is even more crucial to have privacy, especially when connected to guest networks and transferring sensitive data (e.g. personal data or work files) over the Internet. Can hotels, serviced suites, or co-working spaces provide that kind of privacy for each user? For service providers, is providing each guest with private networks affordable and easy to implement? At present, creating numerous SSIDs for each location and providing multiple Internet links for each IoT device type are the most commonly used methods for addressing these concerns but both neither exactly answer privacy concerns nor are they easy and cheap to implement. Your guests can still see other devices on the network and the reality is not all guests are Internet security-conscious enough to safeguard their own devices before connecting to public networks. A security or data breach that happens on your network is the last thing you want to happen.

On top of that, the hotel staff must repeatedly adjust or create plans for Internet access provisioning, especially during peak seasons or times when there are big events. The cost of training and maintenance is also added to your existing Internet service expenses.



ANTlabs, with more than 20 years of experience in visitor-based network technology creation and innovation, had these concerns in mind when PAN module was created. This module allows service providers to give a multitude of users with multiple devices their own private networks, where they can manage their devices on their own during their stay, and it works well with ANTLabs' innovative 3-stage Advanced QoS. When these two modules are working together, your hotel staff's devices, guest room IoT devices and guests' personal devices can co-exist without sacrificing quality and user privacy. For example, you can set it in a way that with your hotel's 10G pipe, each VIP gets a private network with guaranteed 1G bandwidth while your premium guests also get their own private network with 200M. Your hotel staff and offices each get a private network with 500M while non-staying visitors get 200M to share among themselves. Giving your guests peace of mind on knowing that they have their own private networks is one big plus to their total experience.

With PAN Module, there is no more need for multiple Internet links for different IoT device types and your guests shall not see other guests' devices on your network. This is not only applicable for hotels but also for long-stay serviced apartments, dormitories, condos, shared offices, and other multi-dwelling units. PAN Module will potentially increase network security, protect your staff and guests from privacy intrusion, simplify operations support, and therefore improve overall user experience in your hotel. Last but not least, the solution is designed to integrate perfectly with your existing infrastructure, supporting a wide range of industry-leading wireless gear from vendors like Ruckus, Aruba, Cisco, Meraki, Ubiquiti, Xirrus and Cambium Networks demonstrating true flexibility.

¹ WeAreSocial and HootsuiteTM (2019) 'Essential Insights Into How People Around the World Use the Internet, Mobile Devices, Social Media, and E-Commerce' [PowerPoint presentation]. Available at: <https://datareportal.com/reports/?tag=Digital+2019> (Accessed: 7 July 2019).

² Naresh Singh, Christian Canales, Joe Skorupa, Evan Zeng. (2019). Forecast Analysis: Enterprise Network Equipment, Worldwide. Connecticut: Gartner.

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