Outdoor Edge Equipment Wireless Applications

- **APX-120N5 – Preconfigured Wireless Bridge**
- **APX-110N5 – All-in-One Wireless Access Point / Client / Bridge**

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APX-120N5

Outdoor IP67 IEEE802.11a/n (Preconfigured) Wireless Bridge, w/Built-in 19dBi@5GHz Antenna

APX-110N5

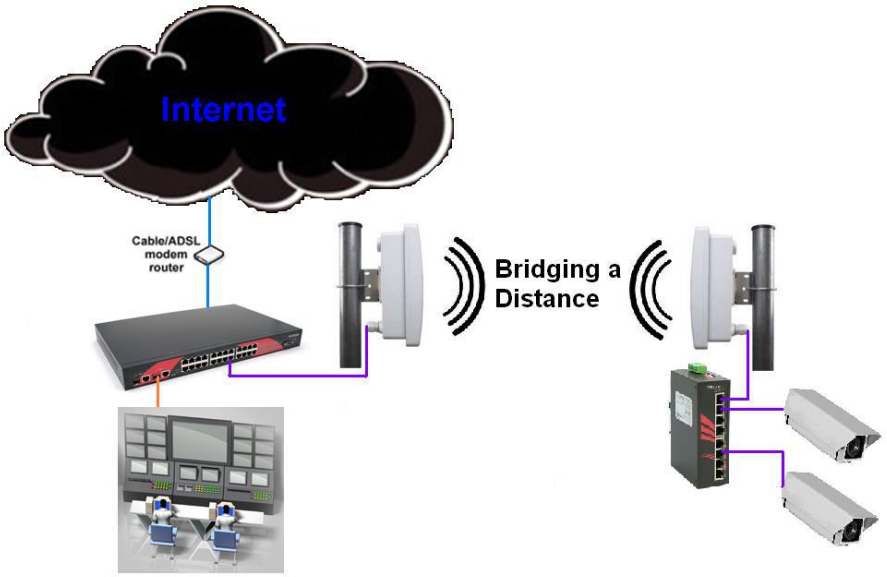
Outdoor IP67 IEEE802.11a/n Wireless AP/Client/Bridge, w/Built-in 19dBi@5GHz Antenna

Introduction

Wireless IEEE 802.11 communication has been fully integrated into the consumer and industrial markets as a standard form of communication for some time now. With a constant percentage rise of devices operating on a wireless network like computers, security cameras, sensors, printers and phones; a strong wireless infrastructure will only become more-and-more important as time progresses. With more demand for longer range capabilities, more throughput, unique uncrowded frequencies and enhanced security are some of the challenges that new installations are facing.

Some of the challenges with respect to setting up a wireless network begin with selecting the correct radios and the appropriate antennas. One must make sure all of the correct cables are used between the radios and antennas, as well as making sure the mounting requirements for all the components are verified. Then comes setting up the software, which has a plethora of different options to choose from.

Wireless networks are typically setup as an access point, bridge or client combination. The major difference is the access point allows multiple individual wireless devices to connect to the access point. A wireless bridge is used to link a smaller network of devices to the main network through a single wireless connection. A wireless bridge will also typically allow for further communication as compared with an access point.

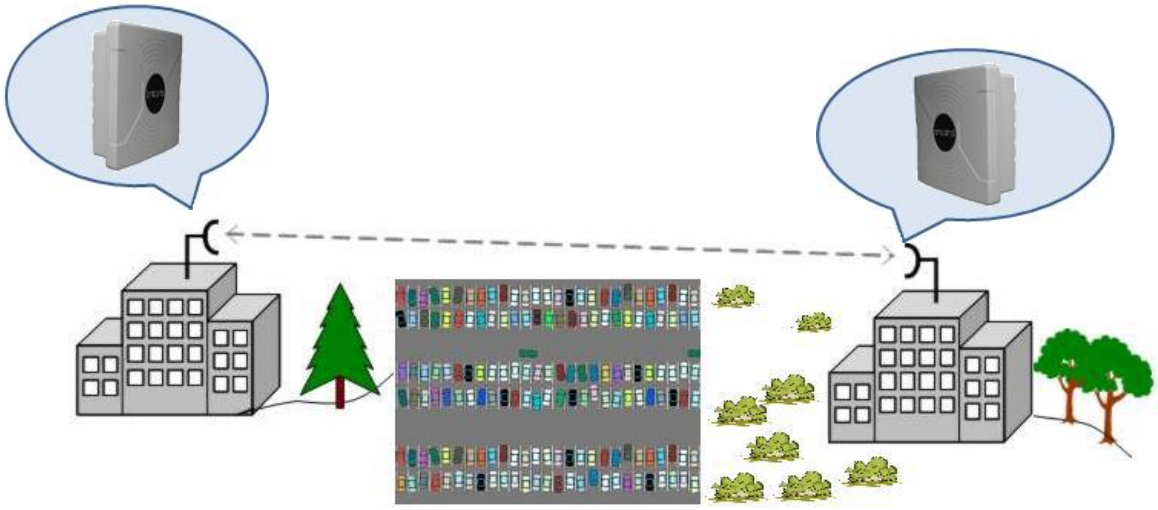


Setting up a wireless bridge would typically be done when the distance is too far for standard Ethernet cable or when trenching to lay fiber is not an option. With an all-in-one package design, simple installation process and preconfigured software, the APX-120N5 can be easily deployed to a variety of different usages.

For example, one could install cameras to a guard building at a front gate and would be able to send the video stream directly back to the main building. Another possibility would be to provide internet access to a temporary building on the property.

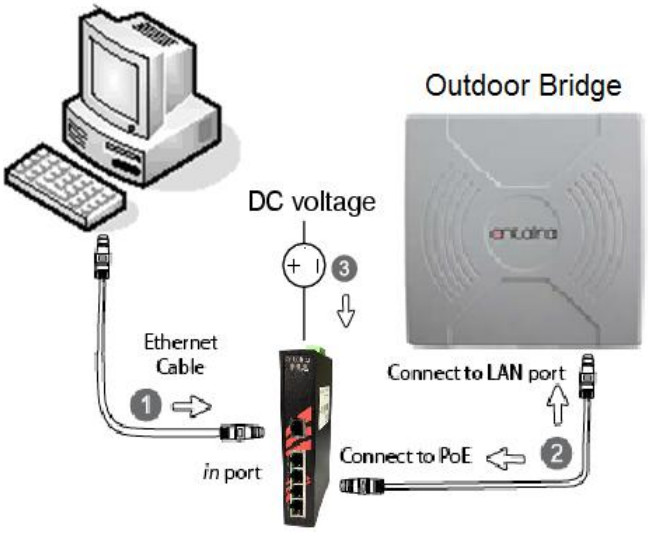
Antaira Point-to-Point Wireless Bridge

The APX-120N5 is a preconfigured pair of units for rapid deployment. The radio and panel antenna are conveniently built into the same housing reducing the amount of components that need to be installed at each location. The wireless bridge pair will have a preset ESSID (Extended Service Set Identification) as well as WPA2 security encryption as the standard setup. The units are fully managed, thus the user is not limited to the preset configuration and can log into the unit to make changes or enable advanced settings.



Setting up a typical access point requires the user to match their computer IP address to the subnet of the device. The user will then need to setup the software features of the access point. The minimum settings that will need to be setup are the IP address, SSID, monitoring and security settings but there are many other settings and options that can be utilized. The user will then need to configure the IP address and security settings of all the individual client devices that are going to be connecting to the access point.

The APX-120N5 is a preconfigured bridge allowing for rapid deployment. Settings such as the IP address, SSID and WPA2 security settings have already been set up on the devices. The user only needs to power on the devices and the units will automatically link up and be ready to pass data. The units have management capabilities if the user was interested in making adjustment to some of the settings.



Antaira's APX-110N5 & APX-120N5 series high performance Wireless Bridge is a management capable device that supports IEEE-802.11a/n wireless communication standards. The units uses PoE (Power-over-Ethernet) to power the device, capable of being powered from either the 24 or 48 volt PoE standard. With an 800mW radio the wireless bridge is able to support long range high speed communication of up to 150Mbps. The antennas of the units are built-in using a 5GHz 19dBi dual-polarization antenna. These units have an operating temperature of -20°C ~ 70°C and have an IP67 water resistant rating which is suitable for outdoor locations.

Security features on the units can be used to increase the protection of the user's information which includes: hidden SSID, MAC address filtering, WEP (Wired Equivalent Privacy) in 64 and 128 bit as well as IEEE 802.11i and 802.1x security authentication.

Pre-Existing Environmental Considerations

Prior to instillation the user should be well aware of the environment the units will be deployed in to prevent unexpected circumstances. For instance, both end units should have a clear line of sight for optimum performance. Objects such as thick steel buildings, rock formations and trees will reduce the efficiency of the units. Be aware of locations with electromagnetic interference such as power sub stations or high power lines which can also reduce the overall performance of the wireless bridge.

The wireless bridge units are the ideal point-to-point solution that can provide a network connection to a location that was previously not on a network.

About Antaira Technologies, LLC

Antaira Technologies is a leading developer and supplier of Industrial Device Networking and Industrial Communication products. Antaira's Turnkey Industrial Network Connectivity Solutions include Industrial Ethernet Switches, Industrial Ethernet Media Converters, Industrial Wireless 802.11, Industrial Serial Communications, and Industrial Embedded Computing and provide reliable communication amongst the specialized devices and protocols in Industrial Automation applications.