

Wireless Network Infrastructure for Large-Scale Outdoor Events



Z-COM SP420 Access Point (AP) and Wireless LAN Controller (WLC)

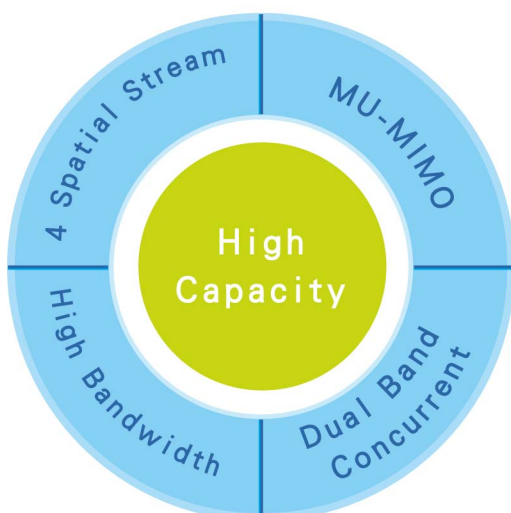
With the explosive growth of mobile devices and large-scale outdoor events lasting from hours to days, there needs to be a wireless network capable of supporting these demands. Event planners need to consider the following questions:

- How do you provide sufficient Wi-Fi coverage in both owned and rented venues?
- How do you choose an AP to provide Wi-Fi for outdoor events?
- How do you provide a seamless connection for a large number of users as they move around the venue?
- How do you efficiently manage APs distributed over a large area?
- Can Wi-Fi be used for marketing purposes as well?
- Can IP cameras be used to monitor the event?
- How do you guarantee traffic flow for users at peak times?



Suitable for high density user applications

With more than 10,000 users at large-scale outdoor events, such as music concerts and sport events, deploying a Wi-Fi system to support a high number of users in a short space of time has become one of the main challenges with temporary events.



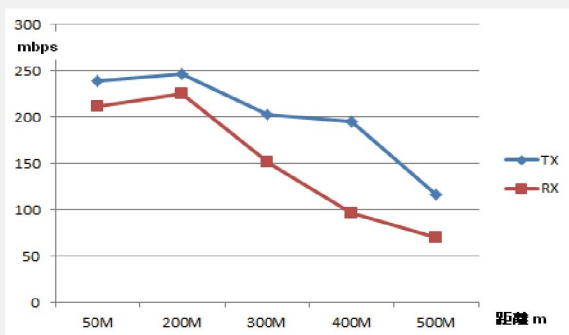
The Z-COM SP420 utilizes the IEEE802.11ac Wave2 standard to provide:

- Support for up to 512 simultaneous user equipments (UE)
- 5GHz speeds of up to 1733Mbps, and 2.4GHz speeds of up to 600 Mbps
- MU-MIMO, increasing throughput and allowing multiple clients to send and receive simultaneously
- Dual 2.4 GHz and 5 GHz bands
- Band steering

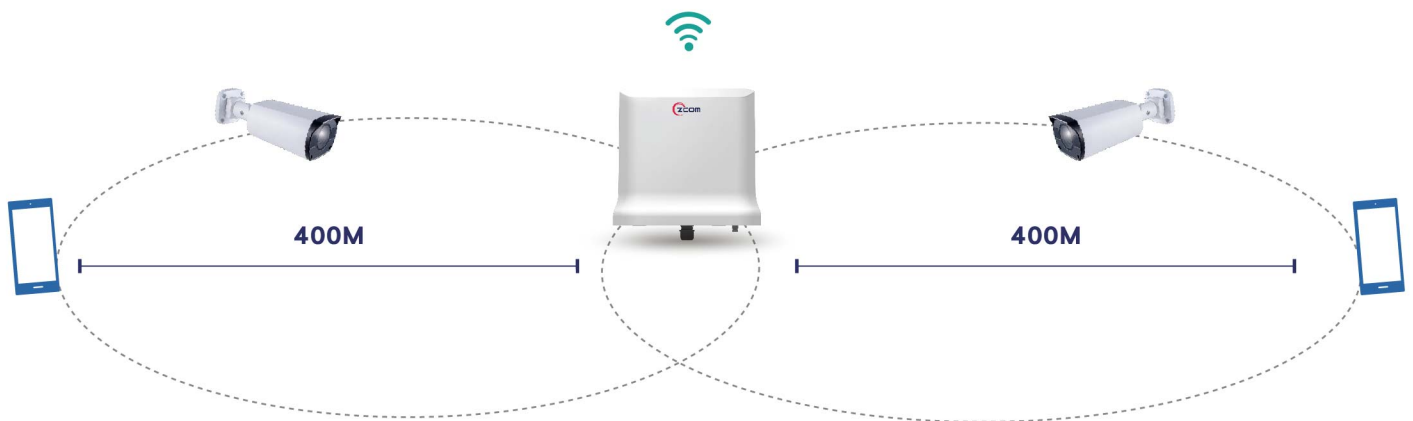
Z-COM has been dedicated to hardware and software R&D and the manufacture of wireless networking equipment for decades. Specializing in RF (Radio Frequency) R&D and network integration software, Z-COM has worked with international telecoms companies to successfully deploy millions of APs worldwide.

Hardware specifications designed for outdoor environments

In outdoor event spaces, with large distances and changeable weather conditions, how do you choose a suitable AP?

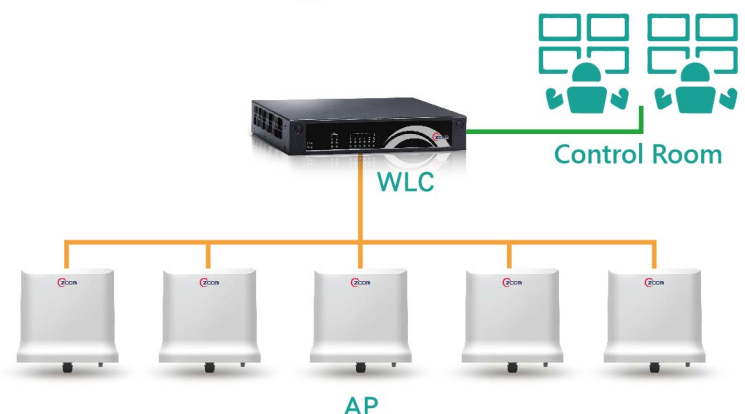


- Internal antennas capable of high Effective Isotropic Radiated Power (EIRP), providing a minimum of 100 Mbps at 400m (2.4GHz=31dBm, 5GHz=31dBm)
- Waterproof and dust proof design, compliant with the Ingress Protection (IP) 67 standard
- An Integrated antenna design to provide the best coverage for outdoor applications
- In-built surge suppression of up to 6Kv, to protect against lightning strikes
- Tolerance of temperatures, from -40 to +70 degrees
- Salt water resistance and wind speed protection up to 150~166 km/h



Fast deployment with centralized AP management

In large venues, APs can be widely distributed and located in hard-to-reach places, making management difficult. The Z-COM WLC can be used to manage all SP420 APs from one interface, providing user management, AP status and traffic flow information, all from one device. The WLC can also automatically diagnose network problems and detect low-interference channels, adjusting coverage automatically to compensate.



With the increased demands of the Internet of Things (IoT) and to satisfy the wireless needs of enterprise users, the Z-COM SP420 AP+WLC solution combines industrial-grade product design, centralized management of APs and multiple integration options to provide a flexible solution for many deployment scenarios.

Fast roaming with centralized authentication

How do you provide a large number of users over a large area with a secure and responsive connection?

The Z-COM WLC can integrate with centralized Authentication, Authorization and Accounting (AAA) services such as RADIUS, providing seamless logins to users once connected to the network. Fast roaming allows clients to move between APs with little to no delay, improving the user experience and minimizing disruption for time-sensitive applications such as VoIP calls and video streaming.

Using Wi-Fi for on-site marketing

The Z-COM WLC can be integrated with the event venue's captive portal, so that advertising can be displayed on the Wi-Fi login page.



Guarantee user throughput

The Z-COM WLC can manage bandwidth on a per-user level, allowing upload and download limits to be set, and providing a minimum guaranteed throughput per user, to ensure the quality of the experience for all connected users.

Combine with IP cameras for on-site monitoring

The Z-COM SP420 APs provide an integrated PoE out port, allowing the APs to supply power and data to a connected device, extending the reach of your existing network. It can also act in client mode, allowing wired IP cameras to connect to the wireless network for video transmission.



Product selection guide

Wireless LAN Controller (WLC)

1



WS10G2



WS7G2



WS5G2

2

Access Point (AP)



SP420

3

IP-CAM



SUR-110



SUR-121



SUR-122

Wireless LAN Controller



	WS10G2	WS7G2	WS5G2
CPU	Intel Atom(8 Cores)	Intel Atom(4 Cores)	Intel Celeron
Memory	DDR4 32G	DDR4 16G	DDR3 8G
Storage	SSD 64G	SSD 64G	SSD 64G
1GbE RJ45	6 Ports	6 Ports	4 Ports
10GbE SFP+	4 Ports	2 Ports	-
40GbE QSFP	-	-	-
Chassis / Dimension	1U (44 x 231 x 197)	1U (44 x 231 x 197)	1U (44 x 232 x 152)
Power Supply	12V/7A DC Adapter	12V/5A DC Adapter	12V/5A DC Adapter
AP Capacity	512	256	128

