

High-Speed WiFi at the Fair



WELCOME TO WELLINGTON, OHIO - HOME OF THE ACCLAIMED LORAIN COUNTY

Fair, a week of festivities celebrating Ohio's vibrant agricultural traditions. Music, demolition derbies, fireworks, and activities dedicated to family-oriented education and community enrichment swell Wellington's population annually, drawing crowds of up to 130,000.



North Coast Wireless, a local Internet service provider whose offices overlook the fairgrounds, has been supplying the fairground's WiFi coverage for years. In recent years, the connectivity needs of the fair expanded to include electronic ticketing for admission and events, vendors conducting sales transactions, software that manages livestock auctions, and animal tracking. As a result, the fairgoers' data use rose dramatically. The fair board needed new communications solutions and consulted North Coast Wireless to plan a permanent wireless network.

Considering the fair board's budgetary concerns, Ohio's seasonal weather extremes, and the rigors of the fair itself, North Coast Wireless' President, Matt Fridenstine, explains "With the high demand of WiFi and limited and overloaded 4G network, the fair board requested something more modern. They were willing to invest into the technology, so we presented a Cambium *cnPilot*™ outdoor enterprise WiFi solution."

The network covering Wellington's fairgrounds connects about 650 users at any given time, with unique connections of over 3000 daily and a weekly average of around 18000.



The *cnPilot* deployment had to provide not only communications infrastructure, but also offers Wellington businesses advertising opportunities that North Coast leverages by channeling public access to free WiFi through signup portals. Describing the optimal system, Fridenstine says "The ultimate goal is to offer a free level of service and a pay level of service as well as supporting communications for business, such as credit card readers, telecommunications for all fair board directors and staff, emergency communications for police and security, and integrating a security camera system."

"We created a technology-friendly environment for fairgoers and allows people to better communicate."

- MATT FRIDENSTINE, PRESIDENT NORTH COAST WIRELESS

Distribution

ePMP 1000 Distribution Network Solution	
Frequency	2.4 and 5 GHz
Throughput	100 Mbps in a 20 MHz channel

WiFi Access

cnPilot™ E400 Indoor Enterprise WiFi Access Point	
802.11ac dual band access point with MIMO	
16 SSIDs supporting 256 concurrent users	
Cloud-managed via cnMaestro. on-site controller option available	

cnPilot™ ePMP 1000 Outdoor WiFi Hotspot	
802.11ac single band access point with MIMO	
8 SSIDs supporting 128 concurrent users	
Cloud-managed via cnMaestro. on-site controller option available	



TO CONFIGURE THE NEW ALL-WIRELESS NETWORK, North Coast Wireless selected the *cnPilot* E400 indoor WiFi solution and the outdoor ePMP 1000 Hotspot, supported by a network infrastructure comprised of ePMP Force 180 and PTP wireless backhaul links, all integrated within the *cnMaestro*™ management system. Initially, users on the open network didn't need to authenticate and were mostly unrestricted. Customer connections were limited to 4 Mbps downlink and 1 Mbps uplink.

North Coast Wireless Communications and the Lorain County Fair board are very happy with the Cambium wireless broadband network they customized for Wellington's local needs and the fair's annual demands.

The response amongst fair participants since its installation has been enthusiastic, as Matt Fridenstine concludes "It created a technology-friendly environment for fairgoers and allows people to better communicate. Vendors love it because they can easily stay in touch and order supplies."

"People really appreciated the WiFi connectivity," says Fridenstine. "One day near the end of the fair, I was asked to extend the connectivity so that the organizers could stream the tractor pull live to the Internet. With *cnPilot* and *cnMaestro*, I was able to create a wireless network on the fly just for them, secure it, limit bandwidth for others, and give them a solid link to stream the video. I love it."