

Wireless CCTV Surveillance Protects Industrial Facilities



“The Cambium infrastructure for our CCTV video surveillance system allowed for the consistently clear HD images and reliable connectivity necessary for high-profile security.”

- DATTA WAJPEY,
PROJECT MANAGER,
ENDEAVOUR AFRICA
GROUP

Challenge

WITH MORE THAN 3,000 CLIENTS ACROSS THE AFRICAN CONTINENT, the Endeavour Africa Group is one of the region’s leading business solution providers. Their security division designs, installs, and maintains fully integrated electronic security solutions, including video surveillance systems.

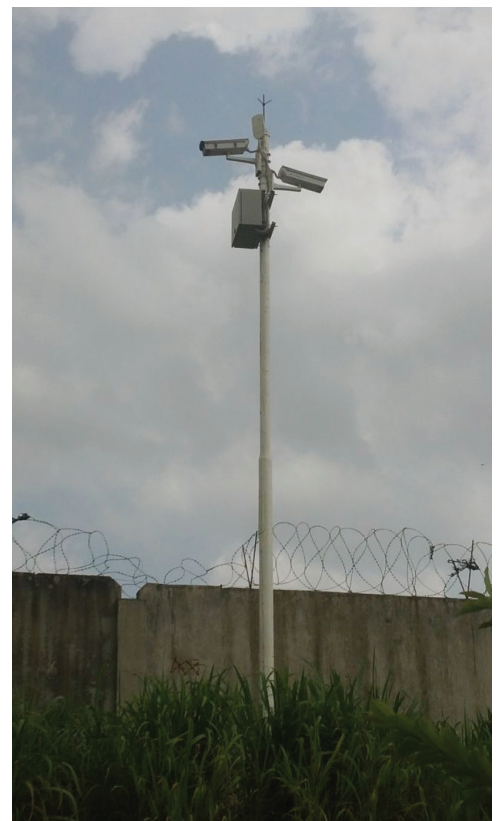
Endeavour was approached by one of Africa’s most esteemed companies to provide a video surveillance solution covering a six kilometer perimeter at each of their three different factory locations. “Our extensive range of CCTV cameras offers a valuable security and loss prevention solution but requires an increasingly reliable connection,” says Datta Wajapey, Project Manager, Endeavour.

Endeavour’s plan called for 150 HD IP cameras to be installed on poles along the facility perimeter (two per pole), and connectivity soon became the concern. “Our original proposal was to deploy cables to connect the cameras,” says Wajapey. “However, we knew that such a cable system would be expensive and time consuming to install, and require future maintenance.”

Once copper cables were determined to be unfeasible for this high-profile project, Endeavour contacted Cambium Networks for a reliable wireless connectivity solution.

Solution

A HUB-AND-SPOKE COMMUNICATIONS ARCHITECTURE was selected at each of the locations. The three clusters would be interconnected with high-speed wireless backhaul links.



At each of the three factory locations, an ePMP™ wireless broadband distribution network solution was necessary to connect the 75 subscriber units using multiple access points installed on high-rise buildings. After considering the available options, Endeavour selected the following equipment for each location:

- ePMP Force 110 PTP – to provide the 130 Mbps backhaul links as an infrastructure to interconnect the access points.
- 8 ePMP Access Point (AP) modules with GPS Synchronization equipped with 120 Degree Sector Antennas – to provide the distribution access hub connectivity.
- ePMP Subscriber Modules (SM) – providing 6-10 Mbps throughput at each of the pole locations that were equipped with two megapixel cameras.



Installation was simple and straightforward. Because there were multiple cameras at the pole locations, two FE ports were required for connecting the cameras to the radios. “Based on the design model, the auxiliary port on the ePMP SM helped to eliminate the need for a switch at each pole and also provide relay to cover blank spots,” says Wajapey.

ePMP 1000 DISTRIBUTION NETWORK SOLUTION	
Frequency	2.4 and 5 GHz
Throughput	100 Mbps in a 20 MHz channel

Results

THE NETWORK WAS DEPLOYED SWIFTLY AND IMMEDIATELY PROVIDED HIGH-DEFINITION, around-the-clock video surveillance of the perimeter of each factory. Wajapey says, “Our client was greatly satisfied with the final product. Not only was the installation rapid, but the connectivity has been extremely reliable with excellent throughput. Each subscriber module was able to transmit up to 10 Mbps to its access point without any breaks. Additionally, the support we received from Cambium was exceptional and gave us confidence in the product.”

Overall, the ePMP wireless network system easily outperforms the copper cable alternative for Endeavour. Wajapey summarizes his satisfaction: “Each radio provides two ports for camera connectivity, and there is no need to use a switch at each pole. Furthermore, the PTP links saved many potential costs involved in the laying of OFC needed for backhauling.”

Next Steps

ENDEAVOUR’S REPUTATION IN AFRICA HAS IMPROVED SIGNIFICANTLY after successfully completing this security project for such a high-profile client. Endeavour plans to leverage the success of this project by employing additional Cambium products for future applications. “We deliver cost-effective solutions that are reliable, and that satisfies our customers,” says Wajapey. “And that leads to the growth for our company we strive for.”