“Our previous system was expensive to maintain and management of the hardware/software was becoming an issue. The cnPilot™ technology recommended and backed by Cambium Networks and Southern Rework is so easy to deploy and manage with cnMaestro™, that changes can now be made remotely – sparing costly site visits and downtime.”

- RIK CROWDER, WAREHOUSE MANAGER, ANNEX

Overview

ANNEX IS A DRY FOOD AND CONTRACT PACKING specialist partnering with some of Australia’s leading food, FMCG, pharmaceutical and retail companies. ANNEX provides innovative solutions for food systems, including single serve portion control, sourcing and product development capabilities – complementing their extensive experience in contract packing and assembly.

Operating from a 20,000 square meter facility in Clayton South, Victoria, Annex offers:
- Portion control food packing (flexible and carton)
- Product development and ingredient sourcing
- Extensive capability in contract packing
- General assembly and packing
- Quality assurance - including HACCP and BRC accreditation
- 3PL capability including temperature controlled storage
- Outstanding service

The facility uses state-of-the-art automation, relying heavily on communications infrastructure. There are an average of 40-60 mobile users utilizing the Wi-Fi network, with applications supporting 24/7 connectivity of mobile computers, laptops/PCs, and Automatic Guided Vehicles (AGV). The entire facility requires complete coverage, with the capacity to support the needs of all personnel and connected equipment. Any gaps reduce efficiency and cost time and money.

“We were experiencing slow network speeds and dropouts around our facility with our existing Wi-Fi network while using mobile devices,” said Rik Crowder, Warehouse Manager, Annex. “With the new deployment of our Automatic Guided Vehicles we needed to consider our network upgrade options to rectify any issues with the Wi-Fi that would impact the AGV’s performance and reliability.”
Annex reached out to Southern Rework. Formed in 1995 and based in Melbourne, Southern Rework specializes in Point of Sale, scanning RF technology, hardware installation, and maintenance. Focused on customer satisfaction, Southern Rework has expanded service offerings to include:
- Warehousing
- Data/communications cabling
- Software installation
- Project management

Southern Rework currently deals with a diverse number of organizations both large and small, locally and across Australia. These include retail and technology organizations throughout all industries.

Solution

SOUTHERN RERWORK PROPOSED REPLACING THEIR EXISTING
Wi-Fi network with a new cnPilot indoor and outdoor connectivity solution. In addition to the capacity and coverage increases, cnPilot solutions work with the cnMaestro management system from Cambium Networks.

“Annex could not afford down time, and they needed clear and uninterrupted communication between in-line PLC and AGV while rectifying the coverage and speed issues they were experiencing,” said Evan Boyack, Wireless Architect, Southern Rework.

Annex also had budgetary parameters to consider. “The expense of rectifying the existing network was outweighed by the cost and benefit of moving over to the Cambium cnPilot & cnMaestro platforms,” said Crowder. “What we needed to do was prove the technology’s potential by measuring the results.”

Wi-Fi Access

| cnPilot Indoor Enterprise Wi-Fi Access Point Portfolio |
|---------------------------------|----------------|----------|---------------|-----------------|
| **Model** | **Standard** | **Frequency** | **SSID** | **Max Users** | **Technology** |
| e600 | 802.11ac wave 2 | 2.4 & 5 GHz | 16 | 512 | 4x4 MU-MIMO |
| e410 | 802.11ac wave 2 | 2.4 & 5 GHz | 16 | 256 | 2x2 MU-MIMO |
| e400 | 802.11ac | 2.4 & 5 GHz | 16 | 256 | 2x2 MIMO |

| cnPilot Outdoor Enterprise Wi-Fi Access Point Portfolio |
|---------------------------------|----------------|----------|-----------------|
| **Model** | **Standard** | **Frequency** | **SSID** | **Max Users** | **Coverage** |
| e500 | 802.11ac | 2.4 & 5 GHz | 16 | 256 | 360° omni |
| e501S | 802.11ac | 2.4 & 5 GHz | 16 | 256 | 120° sector |
| e502S | 802.11ac | 2.4 & 5 GHz | 16 | 256 | 30° sector |
Results

22 CAMBIUM CNPILOT E500 OUTDOOR ACCESS POINTS WERE deployed across two sites as a direct replacement to the legacy Wi-Fi network.

“The installation time was done over two days with negligible impact to the production network,” said Crowder. “All hardware was pre-staged and tested with our legacy Wi-Fi settings as well as the new WLANs to allow for a seamless migration. We now have RF Scanners connected to our WMS, the AGVs are connected to in-line PLC’s, and all PC’s throughout the building are connected to the server. In addition, there are now more options for us to leverage on the new Wi-Fi deployment.”

Equally important, the transition was completed without interrupting operations. “We had zero loss of transactional data that results in inefficiencies (no time loss investigating and searching for stock). We also had zero drop outs, which improves user satisfaction,” said Crowder.

“Our previous system was expensive to maintain and management of the hardware/software was becoming an issue. The cnPilot technology recommended and backed by Cambium Networks and Southern Rework is so easy to deploy and manage with cnMaestro, that changes can now be made remotely – sparing costly site visits and downtime.”

Why Annex chose Cambium Networks technology:

- **Reliability and Speed** – Business needs rely on a consistent, high-capacity network.
- **Coverage** – Operations demand complete, facility-wide coverage with no dead zones.
- **Ease of Management and Support** – The system needs to provision equipment to support rapid installation and be manageable from a remote location.