



# ALE

Where  
Everything  
Connects

**MARKET**  
PROCESS INDUSTRIES

**REGION**  
BELGIUM

**COMPANY**  
CMI GROUP



## Engineering a network for the future

Cockerill Maintenance & Ingenierie manages corporate expansion and futureproofs IT across 50 sites for 4600 employees worldwide using Alcatel-Lucent Enterprise technology.

Cockerill Maintenance & Ingenierie is a leading engineering and services group based in Seraing, Belgium. With a reputation for industrial expertise and innovation since 1817 plus an expanding business and workforce, CMI looked to stay ahead of the growing demand on its communications network by updating its core network infrastructure.

With Alcatel-Lucent Enterprise networking technology and ALE business partner Shinka IT, CMI Group has implemented a tailored solution to secure the full network and provide low latency, high bandwidth access for users located worldwide. The new core network is based on the latest Alcatel-Lucent OmniSwitch® 6900 Stackable LAN switches.

## Growth without the growing pains

CMI Group, the international engineering and services group headquartered in Belgium, has developed a reputation for high quality, effective design and close customer assistance in a wide range of industrial markets over a rich 200-year history. Working in sectors such as energy, defense, industry, environment and services, CMI employs a workforce with diverse and highly advanced technical skillsets. The group has continued to grow as the organization successfully expands into new markets, adding about 200 new staff to the workforce each year.

With 50 sites and 4600 employees worldwide, reliable communication and collaboration is essential. CMI needed an infrastructure that could provide the network resources to support employees carrying out data-heavy tasks, such as modeling and sharing detailed CAD designs worldwide. To take advantage of the industry move towards the deployment of connected devices in manufacturing – the Industrial Internet of Things – CMI also required a network infrastructure capable of reliably feeding back continuous, real-time data streams from multiple machines and assets, without loss of performance, and able to properly handle the security for such a sensitive task.

A key requirement was the ability to manage all IT operations from a single centralized location to eliminate the need to deploy IT support staff at CMI's many global sites. This prompted CMI to look at plans for an upgraded core network centered in Belgium. Security was also a major consideration in the new project. With many third-party users and external contractors connecting to the network daily, CMI recognized the need to protect sensitive data, industrial expertise and user information at a time when cybersecurity has come to the fore as a major IT management concern.

## CMI Group

CMI is a mechanical engineering and services group based in Seraing, Belgium, operating in 19 markets from 50 sites worldwide.

CMI designs and produces equipment for many industrial sectors, employing a 4600-strong workforce in Africa, Brazil, China, Europe, India, New Caledonia, Russia and the United States.

CMI operations are grouped into five main sectors:

- CMI Energy
- CMI Defense
- CMI Industry
- CMI Environment
- CMI Services

For more information, visit: [www.cmigroupe.com](http://www.cmigroupe.com)

## Planning for the future

CMI has a long-term relationship with ALE and business partner Shinka IT, having used ALE hardware for over 14 years to implement most of its global IT infrastructure. Centralized management of CMI worldwide IT is done via the main company site in Belgium, allowing corporate devices to be configured centrally while minimizing the global IT support footprint.

The latest upgrade for the network spanning 50 CMI sites worldwide includes five major worldwide sites and numerous smaller locations worldwide with 200-300 users each. These sites include two Belgian data centers – one redundant – approximately 15 kilometers apart.

Shinka, ALE network portfolio specialists, proposed the deployment of OmniSwitch 6900s to build a new network core, boost performance and increase security through the deployment of the 802.1X standard for user authentication. Having put forward an attractive plan to supersede the existing proven ALE networking hardware, the upgrade commenced in January 2017.

## Secured, stackable switches

Shinka IT fully implemented the new solution for all 50 CMI sites by July, with no disruption to business operations. The legacy CMI chassis was replaced with the latest high-density, stackable OmniSwitch 6900 LAN switches from Alcatel-Lucent Enterprise. These are high performance, low latency switches capable of supporting highly demanding operations such as handling data from automation tools and 3D modeling applications. Ten OmniSwitch 6900 switches form the upgraded core network.

The new network provides a total of 7000 ports for users, mostly provided by existing OmniSwitch 6450 LAN switches. The OmniSwitch 6850 stackable Ethernet switches currently deployed at the network edge are being upgraded to the latest OmniSwitch 6860 line to introduce advanced quality of service (QoS), user authentication and deep packet inspection.

“The OmniSwitch 6900 delivers an increase in efficiency and performance at a lower cost than the old chassis,” says Pascal Sebenello (CMI). “The switches fit right into the existing network topology, so the upgrade did not have the disruption of a traditional ‘rip and replace.’” The ALE hardware also uses open standards, making it highly interoperable with future deployments.

The 802.1X network standard has been adopted for additional security, and prevents unauthorized users from connecting to the network. “We chose 802.1X primarily to boost our network security and user authentication,” says Pascal Sebenello. “We now have peace of mind that only authorized users can access our core network, and then only the specific areas they require.”

**“It was vital that we had a network capable of supporting our ambitious growth plans,” says Pascal Sebenello at CMI. “We opted for a core network upgrade to ensure we could continue to meet our constantly evolving business needs and continue to manage our global IT operations centrally from Belgium. The proposal from Shinka addressed all our major pain points when compared to rival vendor solutions.”**

PASCAL SEBENELLO, IT MANAGER

### Shinka IT

Shinka IT is a Belgian integrator operating across the Benelux region. Since formation in 2011, Shinka has brought expertise and professionalism to the fields of networks, IT security and flow analysis.

Shinka has been an Alcatel-Lucent Enterprise Accredited Business Partner since 2011.

For more information, visit: [www.shinka.be](http://www.shinka.be)

This was especially important considering the large numbers of third-party users and external contractors that connect to the network daily.

The new network infrastructure supports a greatly improved user mobility as well. Employees can connect to the main CMI network no matter which global site they are located. Employee devices are set up and configured for global use, with no geographical limitations. It is also simpler to onboard new users and devices, which is ideal to properly support a growing business that regularly adds users and assigns and changes roles.

### Forward-looking functionality

With the new solution, CMI can roll out future expansions of connected industrial devices. The existing OmniSwitch 6450 Stackable LAN switches offer high modularity and can be easily upgraded to 10Gig uplink ports when required, while the extra capacity and bandwidth of the new OmniSwitch 6900 core provides the opportunity to introduce new data-heavy Industrial Internet of Things deployments, such as automation tools and connected devices in the production environment.

“Close co-operation and support from ALE and Shinka was a major factor in ensuring this project went smoothly, and with our existing good relationship in place, completely met our expectations,” says Pascal Sebenello of CMI. “We have been satisfied users of ALE networking products for over 14 years, so upgrading our core network with the advanced ALE switches was the perfect choice.”

“We strongly advised CMI to opt for the next generation of ALE hardware, as it comfortably meets the project requirements for security, scalability and flexibility,” says Nicolas Daems at Shinka IT. “The installation has been a complete success with no operational disruptions. Despite the challenges of implementing 802.1X across so many sites, we achieved this at a migration rate of 1-2 company locations per week.”

### CHALLENGES

- Continually expanding workforce required suitable bandwidth and network resources for all users
- Need to secure sensitive corporate data and projects

### PRODUCTS

- Alcatel-Lucent OmniSwitch 6450 Stackable Gigabit Ethernet LAN switch
- Alcatel-Lucent OmniSwitch 6860 Stackable LAN switch
- Alcatel-Lucent OmniSwitch 6900 Stackable LAN switch

### SOLUTION

- Mobile campus

### BENEFITS

- Low latency, high bandwidth
- Cost savings vs. legacy chassis
- Capability to support future IoT deployments
- Enhanced network security
- Easier user and device onboarding and authentication
- High modularity/scalability