

FusionModule1000A Container Data Center Strikes Gold



Background

Hatch Ltd. is an industry-leading consulting firm that provides technical and strategic professional services in IT, engineering, process development, and project and construction management to the mining, metallurgical, energy, and infrastructure industries.

In 2010, Kinross Gold, one of the world's biggest gold mining companies, paid US\$7.1 billion for a 91% stake in the owner of a gold mine in Tasiast, Mauritania. As part of the purchase, Kinross planned to improve exploration efficiency at the mine. In 2011, they hired Hatch to help.

Challenges

Since the 1960s, the mining industry has used IT technology in mining-related scientific computing, data processing, automatic control, operation, and management. IT is increasingly important in improving mining resource usage, protecting mining operation security, and lowering production costs.

Kinross wanted to make their in-place exploration points more efficient plus find new ones. They also wanted to cut production costs and improve ROI for competitive reasons.

The old data center for the Tasiast mine used a traditional fixed-mode equipment room. Hatch determined the age of the facility and a need to expand demanded more of the IT infrastructure than the existing data center could provide.

"We carefully assessed the data center and found that the equipment room was already at full capacity and no more free space was available for new devices," Hatch said.

"Traditionally, when we need to construct a new equipment room, it involves civil engineering, power supply, air conditioning, fire control, and cabling. These systems and operations not only significantly raise investment costs, but also require a longer data center construction period," Hatch said.

"In most mining projects, we need to relocate devices and personnel frequently to support exploration at different sites. However, the desert environment is quite different. If we construct permanent and semi-permanent data center facilities, we will face challenges not only in site selection at present, but also device relocation in the future," they said.

Solution

Huawei worked with Hatch to design a complete solution that eliminated the risk of a single point of failure and ensure service continuity. They based it on the Huawei FusionModule1000A All-in-One Container Data Center.

The FusionModule1000A complies with Tier 3 standards and more than 100 are in use around the world. By integrating all components into a single standard shipping container, customers can easily deploy the FusionModule1000A to any environment based on their specific needs. It has a built-in power supply and distribution system, cooling system, cabinets, cables, fire control module, and security protection system to help on-site workers communicate and collaborate more easily. The containerized center also comes with a maximum of eight 19-inch IT cabinets to meet the mine's service requirements for the next five years.

The FusionModule1000A also has rigorous environment adaptation capability. The Tasiast mine lies in a harsh desert with huge temperature changes and frequent sand storms. Huawei's containerized FusionModule1000A solves these problems by meeting IP55 protection standards. It has a working temperature range of -40°F to 131°F (-40°C to 55°C), which was perfect for Hatch's needs.

The one-stop design impressed Hatch, "We no longer need to worry about the design and operation of the data center equipment room because Huawei has already solved these problems ahead of time. This mobile container data center can be easily deployed any place where a power supply and network connection are available." Hatch was so impressed with the IDS1000-A it will become their standard mobile data center over the next few years.

Benefits

The FusionModule1000A Container Data Center offered Hatch and Kinross several important benefits:

- One-stop design, no civil engineering, one-week installation, and 40% lower initial investment costs
- Tailored, natural-cooling design and Power Usage Efficiency (PUE) reduction to less than 1.5
- Intelligent O&M and data center management, offering 24/7 unattended operation and 30% lower O&M costs
- Highly adaptable to almost any environment and simple to relocate, meeting most mobile operation requirements for mines