

Centiel
Protects
Power at
Indonesian
Paper and
Packaging
Manufacturer

**Case
Study**

Indonesia
Paper and Packaging
Manufacturing Facility

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Segment

Paper and Packaging Manufacturing Facility

Location

Kudus, Indonesia

Challenge

The installation took place during the COVID-19 Delta Variant outbreak in Kudus.

Results

CumulusPower™ now protects the critical power for a large paper and packaging manufacturing facility based in Indonesia from daily power outages. CumulusPower™ manages the high-inrush current and dynamic load of the manufacturing equipment providing a continuous power supply.

Power Protection Solution

1 x 300kW CumulusPower™ frame with top cable entry, populated with 6 x 50kW intelligent UPS Modules + 2 Strings of 40 x 12V150AH batteries



Our Customer

Centiel's local partner was invited to tender for the supply, installation, and maintenance of a UPS system to protect the power for PT Bukit Muria Jaya, an Indonesian based paper and packaging manufacturer located in Kudus. Daily power outages meant that the customer required a UPS system that was capable of handling high-inrush currents and a dynamic load to protect their expensive control panels and manufacturing equipment.

The Project

The project specification was written around a 300kVA standalone UPS system, with system availability as a key area for consideration. Achieving the highest level of availability means that the mean time between failure (MTBF) should be as high as possible, and the meantime to repair (MTTR) should be as low as possible. However, due to the remote location of Kudus, the response time for onsite technical support would dramatically increase the meantime to repair (MTTR) of a single standalone UPS system. The most common way to improve availability is to add redundancy. A single standalone UPS has no redundancy. To create

a redundant system, the standalone UPS must be replicated with a second unit. Although inexpensive to purchase one standalone UPS, introducing redundancy by adding a second is therefore expensive, effectively you are doubling the price of the system.

Centiel's local partner worked closely with the client to propose an alternative true modular UPS solution that would offer the highest level of availability, with redundancy at component level. Centiel's true modular UPS, CumulusPower™ is designed with each module containing all the components of a UPS. Its Distributed Active Redundant Architecture (DARA) provides industry-leading availability of 9 nines (99.999999999%), on a practical level this means downtime is reduced significantly to milliseconds per year.

The new proposal included 1 x CumulusPower™ 300kW frame populated with 5 x 60kW Modules. The system would also include top level cable connection, 2 strings of 40 x 12V 150ah batteries and an external maintenance bypass panel. CumulusPower™ has also been designed with safe-hot-swap capability, allowing modules to be swapped in a live frame. Service modules can also be left on site for a local technician to use in case of a system failure, redundancy can still be maintained, and any module being added to a system can be fully isolated and tested before it accepts any load.



The Challenge

The main challenge for this project came from the outbreak of the COVID-19 Delta variant. During the project, the area of Kudus had the largest number of positive cases and fatalities, which added risk and complexity to the project. Travel restrictions and additional safety measures were put into place to reduce the spread of the virus. Due to the nature of the project, Centiel's local partners were classified as key workers and the project continued. Close communication with the client meant that the UPS room could undertake its initial design phase using schematics and diagrams. The placement of the UPS and batteries were outlined using these diagrams and finalised following a site survey undertaken with extra safety measures. In addition, materials including the batteries and cables were sent to the site ahead of the UPS installation and commissioning engineers, reducing the number of people on-site during deliveries.



The Solution

The tender was awarded to Centiel's local partner due to the quality of product specified in the proposal. Centiel's 99.999999% (9,nines) availability and Distributed Active Redundant Architecture, removes any single points of failure. In unlikely events of module failure, the module can be easily replaced without compromising the rest of the system. Centiel's true modular UPS, CumulusPower™ also offers >97.1% efficiency, and the lowest total cost of ownership.



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continuous power availability

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