

## CENTIEL: In Pursuit of Technical Excellence

### Article

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CENTIEL is an innovative, high quality UPS manufacturer with a long heritage. The innovators behind the company were pioneers of the industry, previously developing the first three-phase transformerless UPS and the first three-phase modular UPS solutions.

Filippo Marbach, Founder, CEO and Chairman of the Board of CENTIEL was the COO of Newave and led the research and development team that introduced the many of the innovations that revolutionised the UPS industry. Shortly after ABB acquired Newave, Filippo left the company and set up CENTIEL with Newave's Head of R&D, Gerardo Lecuona, to continue to push the boundaries of UPS product development and pursue technical excellence for the next generation.

The new Swiss based CENTIEL team focused on developing new technologies that further improved both system availability and operating efficiency. The result was a brand new UPS solution, CumulusPower™, the 4th generation of truly modular UPS solution known for its 99.9999999% (nine-nines) availability, high levels of efficiency and low total cost of ownership (TCO). CumulusPower™ achieved this by enhancing Decentralised Parallel Architecture to create Distributed Active-Redundant Architecture (DARA) which further increased system intelligence and resilience and thereby system availability.

CumulusPower™ is unique because of its ability to deliver a combination of class leading availability, and efficiency in a reduced footprint. Furthermore, CumulusPower™ was developed using highly flexible frame sizes and module ratings enabling facilities to “pay as they grow”. Indeed, CumulusPower™ modules are so robust they can even be re-deployed as necessary if an organization moves or requires a module at a different location.

System availability is further increased by CENTIEL's Triple Mode communications bus, a patented technology which increases system availability even further by increasing the speed and resilience of the system's internal communication infrastructure. It's just another example of where we have worked to remove single points of failure to increase availability even further and provide a very high quality solution.

CENTIEL was fortunate because people knew the innovators behind CENTIEL and wanted access to the latest UPS technologies. The phone quickly started to ring and within its first 3 years CENTIEL had established the UK subsidiary, a subsidiary in Singapore covering the Asia Pacific market and had more than 50 channel partners across the world. Our aim is to add 4-5 channel partners in strategic locations each year, eventually having 100 channel partners in all the key markets across the globe.



CumulusPower™ has now been installed in datacenters and comms rooms in over 60 countries across five continents. Hundreds of Megawatts of critical power loads are now protected with CumulusPower™ in locations including the UK, Singapore, Australia, Germany, Spain, the Czech Republic and the Channel Islands.

To manage the demand, since start-up the CENTIEL factory in Lugano, Switzerland has more than doubled in size with the capability of doubling in size again in the near future as the company continues to grow.

Our vision as an organisation is to eliminate all power quality problems. The power generating companies do a great job in producing good quality power but this power will never be perfect by the time it reaches the end user because of random events such as spikes caused by lightning strikes and harmonic distortion caused by other power users. At home, if the lights flicker or go out it's not a very big deal, however, in a typical datacentre the value of the IT equipment and the data it is processing is often incalculable. In addition to costly IT servers the delicate equipment used in medical facilities and laboratories, for example, need perfect power all the time which is why very high quality UPS solutions are needed.

Why would you install a cheap UPS using inferior components with a higher risk of failure in these critical environments? The answer is you wouldn't.

It is for this reason that many facilities are increasingly appreciating the need to move to a higher quality UPS solution to protect their critical power.

The majority of our customers are datacentres and IT facilities but we also supply to the healthcare and the banking and finance world, amongst others. In reality, almost every company needs a UPS as they almost all have some form of IT infrastructure. Tiny companies with small servers and a few terminals need a small, cost effective UPS. Companies with a network room/micro datacentre through to huge data halls of the biggest datacentres in the world all need CENTIEL UPS products.

With businesses moving towards a more agile approach to work life balance, more staff are now

working remotely. All needing technology based communication methods which will create more data that needs to be processed and stored. Furthermore, the continued growth of the Internet of Things (IoT) and 5G will result in even more data and so our market is certain to grow in the future.

Currently, we are marketing our 4th generation solution but, as innovators, our research and development team is working behind the scenes and developing our next generation of UPS, so watch this space!

Our elevator pitch would be: "to minimise the risk of power protection problems we supply UPS systems of the highest availability possible which are flexible enough to do the specific job required and agile enough to evolve as a business develops for the lowest cost possible". I'm not talking about the purchase price here, but TCO where increased efficiency, reliable quality components and the ability to constantly right-size the system minimises whole life costs for CENTIEL's end-users.

Thirty years ago, I was asked to write an article about the perfect UPS. At the time I allowed my imagination to run riot and said "the perfect UPS never fails, is 100% efficient, takes up no space, presents a perfect load to the mains and costs nothing to purchase. Back then a typical 30kVA (24kW) UPS was 85% efficient, cost £30K, was the size of a wardrobe and weighed ¾ tonne. Now for a few thousand pounds the same rating of UPS can be picked up with one hand and is more than 97% efficient. Over the years we have got very much closer to the perfect UPS, however, in the future, we will go smaller and lighter with an even higher power density. Imagine a 600kW UPS the size of a desktop printer? We are a long way off that yet, but one day it may be possible if we keep pushing the boundaries and innovating.

CENTIEL is focused on driving technology forwards. Our honest, experienced approach is trusted by organisations around the world to protect their critical power. It's an approach which is already proving popular and we aim to be pursuing technical excellence for many more years to come.



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