

# Designed with the future in mind











# centiel StratusPower<sup>TM</sup> The ultimate UPS for net-zero data centers StratusPower is an innovative uninterruptible power supply (UPS), specifically designed to meet the rigorous demands of today's IT infrastructure. Designed and manufactured in Switzerland, StratusPower's superior topology, referred to as DARA, ensures full availability with **no single point of failure**, providing data center operators with complete peace of mind.

Furthermore, installation of StratusPower is straightforward and maintenance is simple and non-intrusive.

Minimise your total cost of ownership while achieving the highest levels of availability and reliability for your data center.

97.6% VFI efficiency
Reliable semiconductor technology

1 MW/m² Space-saving footprint









99.999999 % availability No single point of failure

Fully redundant DARA - fault-tolerant architecture

Fully connected

multi-protocol and a full range of communication channels available From 10 kW - 3.75 MW

In cabinets from 10 kW to 1.5 MW

Non-intrusive maintenance 15+ years caps and smart fans

**Smart energy** peak-shaving, self-test

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### When it comes to availability, it's what's inside that counts

With DARA, each UPS module is independent, redundant and interconnected. Each module is a complete UPS system in its own right, with three independent power converters, a static bypass and all the hardware devices needed to safely isolate a fault without impacting the load. This maximises the mean time between failures (MTBF) and safeguards the power to your critical applications.

DARA's Distributed Decision Making technology, referred to as DDM™, elevates redundancy by enabling collaborative decision-making among all modules. This ensures the continuous power supply to your load, even during crucial decision-making moments. With DDM, the UPS can make distributed decisions, eliminating the single point of failure typically associated with masterslave technology. As a result, downtime is minimised, and critical loads remain protected.

# Maximised availability at module, frame and system level



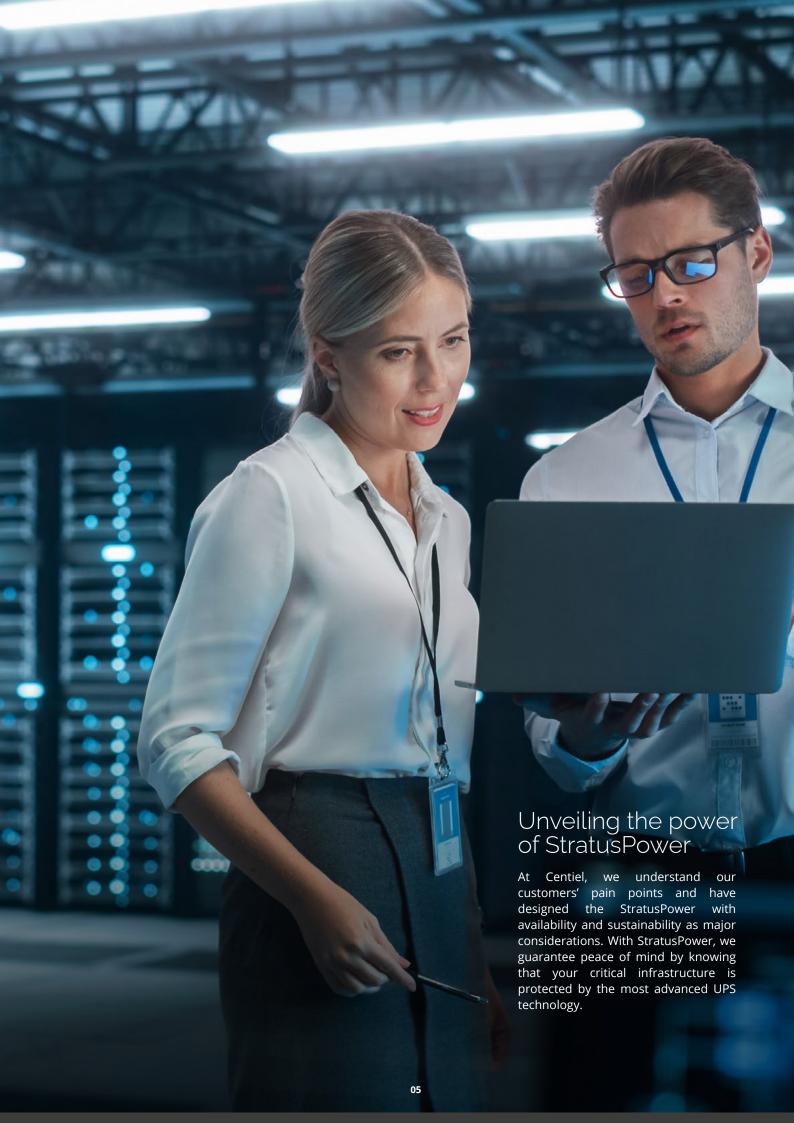




### Mean time to repair (MTTR)

DARA's technology on the frame level has been designed to accommodate **non-intrusive maintenance** and to **minimise mean time to repair (MTTR)**, ensuring that any downtime is kept to an absolute minimum. For example, in the event of a power failure, frontal access to components avoids the need for removing modules, thereby reducing the risk of human error.





# The future-ready UPS





# **Advanced computing power**

Multi-core
Trigonometric math unit
Control law accelerator
Parallel processing
IEEE 754 double-precision math



# **100+ Measuring points**

At the module level



### **External ambient monitoring**

Temperature Humidity Hydrogen Water leak



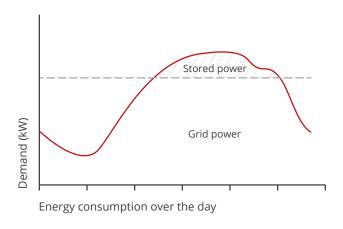
# **Cybersecure connection**

Compliant IEC-4-62443-2

# Advanced energy management

StratusPower provides **peak-shaving capabilities** to help businesses manage electricity usage and reduce costs. By utilising StratusPower's peak-shaving feature,

businesses can reduce their energy consumption during peak hours when electricity rates are typically at their highest. This results in significant cost savings.



# StratusPower's peak-shaving capabilities

At times of peak consumption, grid operators may charge higher prices for their power. To minimise costs for the user, a portion of the energy stored locally in the UPS can be utilised during these times, thereby reducing the amount drawn from the grid.

The UPS batteries can then be recharged with power during off-peak times.

# With the future in mind

StratusPower is **future-ready** and can connect to a variety of power generation sources. It is equipped to

provide grid support and manage energy efficiently based on the specific requirements of each application.





# DC Flex technology



# Robust and reliable semiconductor technology



Our unique DCFlex© technology offers unparalleled flexibility when it comes to battery storage installation and configuration, as well as preparing the infrastructure to manage both current and future energy sources.

Our UPS solution is compatible with various battery storage devices, allowing you to reuse the DC supply or to choose the option that best suits your needs and budget.

The StratusPower battery charging current capability is 500 percent higher than our closest competitors, meaning faster charging times and more efficient use of your batteries.

The StratusPower incorporates proprietary technology for inverter physical isolation in the event of an IGBT failure, ensuring maximum uptime for your critical infrastructure.

The **triple-mode parallel** bus provides an extra layer of redundancy, eliminating any single point of failure in communication between frames and modules.

At Centiel, we take reliability very seriously. That's why we designed our technology with extra-safe power of 24%, ensuring a higher level of reliability and redundancy. With continuous operating capacity, each module can operate at 75 kW even under overload conditions. The 750 kW StratusPower UPS has the ability to operate in online mode, supporting loads up to 900 kW.





75 W UPS module capacity at continuous overload

# Predictive and remote health monitoring



**Exceeding performance** expectations



With its computing capabilities and more than 100 measurement points, StratusPower does the work for you, ensuring that maintenance is performed promptly and accurately. This not only saves time and effort but also improves your system's overall reliability and safety.

Bluetooth connectivity allows technicians for easy, non-intrusive monitoring via mobile devices, with the Centiel app providing real-time status updates and alerts.

StratusPower provides advanced cybersecurity features in compliance with IEC-4-62443-2, making certain that your critical data and systems are protected from cyber threats.

With a THDi of less than 1 percent, StratusPower provides excellent performance that exceeds regulatory requirements.

The UPS is able to handle 124% of continuous overload and 125% overload for 2 minutes, ensuring uninterrupted power delivery during times of peak demand.

A **short circuit capability above 3xIn** safeguards your equipment and system integrity despite electrical faults.



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# The versatile Universal Rack UPS solution

Available as a Universal Rack UPS, StratusPower offers a blend of technical and commercial benefits tailored to meet a variety of power protection needs. This adaptable system includes the UPS, communication components, battery breakers and output switches, making it ideal for integrated IT, telecom or other critical processes. The UPS integrates seamlessly into **any 19-inch rack**, regardless of the rack manufacturer.

With its versatile design, StratusPower simplifies the engineering and deployment of custom power protection solutions. System integrators can leverage their expertise and implement unique solutions to meet specific design requirements. The UPS can be seamlessly integrated into weatherproof enclosures, making it ideal for applications in harsh environments.

The Universal Rack Solution provides **efficient heat management** by directing warm air to the rear of the cabinet for optimal cooling without affecting the entire enclosure.

For system integrators, the Universal Rack solution offers efficient **customisation with standard products** and the opportunity to add significant local value to their power protection solutions.

The Universal Rack offers **versatile battery placement** From 600mm **options**, allowing either top or bottom customisation to suit specific preferences and operational requirements. deep cabinets Thanks to the minimal size of the 10/20/25 and 30kW modules, the Universal Rack UPS solution is available in compact depths from 600 mm, providing a spacesaving solution without compromising performance. **UPS** modules Flexible integration of **n-battery** modules in any frame position



# Universal Rack UPS solution

# **Available UPS power rating configurations**







| Power per rack             | From 10 to 30 kW | From 10 to 60 kW | From 10 to 120 kW |
|----------------------------|------------------|------------------|-------------------|
| Power per module (kVA =KW) | 10/20/25/30 kW   | 10/20/25/30 kW   | 10/20/25/30 kW    |
| N-modules                  | 1                | 1 to 2           | 1 to 4            |
| Height                     | 8 HU             | 12 HU            | 21 HU             |

### The Universal Rack UPS includes

Fits seamlessly into any 19" rack

Up to four UPS modules online double conversion

Individual module display

**Electrical distribution** 

DC battery MCB protection 1 x module

Bypass fuses

3 x module

Output parallel isolator

System manual bypass

**Connectivity board** 5x dry output, 5x dry input, RS232, RS485,Bluetooth, Ethernet, slot for SNMP

Up to four battery modules in a single cabinet

Free placement of internal battery modules

bottom or top

Available in depth from 600 mm





# Unmatched flexibility and scalability for diverse power needs

### Comprehensive options for StratusPower modules

Designed to meet a variety of applications, StratusPower offers a range of modules to meet your needs, including compact modules up to 30 kW and more powerful modules up to 62.5 kW. The adaptability extends further with the capability to consolidate power in a single cabinet, spanning from 10 kW to an impressive 1500 kW. Scaling doesn't stop there—StratusPower cabinets can be seamlessly expanded to a staggering 3.75 MW.

### Available models



| Module type                | SM10 / SM20 / SM25 / SM30 |
|----------------------------|---------------------------|
| Power per module (kVA =KW) | 10/20/25/30 kW            |
| Weight (kg)                | 19                        |
| Dimensions h x w x d (mm)  | 132 x 443 x 490           |



# SM50 / SM62 50 / 62.5 kW 38 / 42 132 x 581x 800

### **StratusPower**

### SM10/SM20/SM25/SM30



| Model                     | SP060-l080-A1       |
|---------------------------|---------------------|
| Modules                   | 2 x SM10/20/25/30   |
| Maximum power / cabinet   | 60 kW               |
| Internal battery capacity | 80 x (7/9Ah)        |
| Dimensions h x w x d (mm) | 1315 x 510 x 815    |
| Footprint                 | 0.41 m <sup>2</sup> |



| SP060-l240-A1       |  |
|---------------------|--|
| 2 x SM10/20/25/30   |  |
| 60 kW               |  |
| 240 x (7/9Ah)       |  |
| 1980 x 510 x 815    |  |
| 0.41 m <sup>2</sup> |  |



| SP120-l320-B0                |
|------------------------------|
| 4 x SM10/20/25/30            |
| 120 kW                       |
| 320 x (7/9Ah) or 80 x (28Ah) |
| 1980 x 730 x 815             |
| 0.59 m <sup>2</sup>          |



| Model                     | SP120-E-A1          |
|---------------------------|---------------------|
| Modules                   | 4 x SM10/20/25/3    |
| Maximum power / cabinet   | 120 kW              |
| Internal battery capacity | External            |
| Dimensions h x w x d (mm) | 1315 x 510 x 815    |
| Footprint                 | 0.41 m <sup>2</sup> |



| SP180-E-A0          |
|---------------------|
| 6 x SM10/20/25/30   |
| 180 kW              |
| External            |
| 1980 x 510 x 815    |
| 0.41 m <sup>2</sup> |



|   | SP300-E-B0          |
|---|---------------------|
|   | 10 x SM10/20/25/30  |
|   | 300 kW              |
|   | External            |
|   | 1980 x 730 x 815    |
| ١ | 0.59 m <sup>2</sup> |

# **StratusPower**

# SM50/SM62.5

Up to

1.5 MW

per frame





# Ultra-compact model



| Model                     | CAB-SP625T-E-K         | CAB-SP1250T-E-2K       |
|---------------------------|------------------------|------------------------|
| Modules                   | Up to 10 x SM50 / SM62 | Up to 20 x SM50 / SM62 |
| Nom. power / cabinet      | 625 kW                 | 1250 kW                |
| Dimensions h x w x d (mm) | 1982 x 656 x 900       | 1982 x 1312 x 900      |
| Footprint                 | 0.59 m <sup>2</sup>    | 1.18 m <sup>2</sup>    |



| Model                     | CAB-SP375(B/T)-E-K                 | CAB-SP750(B/T)-E-2K |
|---------------------------|------------------------------------|---------------------|
| Modules                   | Up to 6 x SM 10/20/25/30 and 50/62 | Up to 12 x SM50/62  |
| Nom. power / cabinet      | 375 kW                             | 750 kW              |
| Dimensions h x w x d (mm) | 1982 x 656 x 900                   | 1982 x 1312 x 900   |
| Footprint                 | 0.59 m <sup>2</sup>                | 1.18 m <sup>2</sup> |



| Model                     | CAB-SP1125(B/T)-E-3K |
|---------------------------|----------------------|
| Modules                   | Up to 18 x SM50/62   |
| Nom. power / cabinet      | 1,125 kW             |
| Dimensions h x w x d (mm) | 1982 x 1968 x 900    |
| Footprint                 | 1.77 m <sup>2</sup>  |



| CAB-SP1500(B/T)-E-4K |
|----------------------|
| Up to 24 x SM50/62   |
| 1,500 kW             |
| 1982 x 2624 x 900    |
| 2.36 m <sup>2</sup>  |





# Technical Datasheet

|              |           | Model                                | CAB-SP060-I080-A1   | CAB-SP120-E-A1                       |                     |                     |  |  |
|--------------|-----------|--------------------------------------|---|--------------------------------------|---------------------|---------------------|--|--|
|              |           | Model                                | CAB-SP060-I240-A0   | CAB-SP120-I320-B0                    | CAB-SP180-E-A0      | CAB-SP300-E-B0-S2   |  |  |
|              |           | Module type                          | SM10/SM20/SM25/SM30   | SM10/SM20/SM25/SM30                  | SM10/SM20/SM25/SM30 | SM10/SM20/SM25/SM30 |  |  |
|              |           | Nom. power per module [kVA = kW]     | 10 / 20 / 25 / 30   | 10 / 20 / 25 / 30                    | 10 / 20 / 25 / 30   | 10 / 20 / 25 / 30   |  |  |
| _            |           | Cont. overload per module [kVA = kW] | 12 / 24 / 30 / 36   | 12 / 24 / 30 / 36                    | 12 / 24 / 30 / 36   | 12 / 24 / 30 / 36   |  |  |
| al Data      |           | Nom. power per frame [kVA = kW]      | 60  | 120                                  | 180                 | 300                 |  |  |
| General Data |           | Cont. overload per frame [kVA = kW]  | 74  | 149                                  | 223                 | 372                 |  |  |
| 8            |           | Number of modules per frame          | 1-2   | 1-4                                  | 1-6                 | 1-10                |  |  |
|              |           | Max. power per system [kVA = kW]     | 3600  | 7200                                 | 10800               | 18000               |  |  |
|              |           | Topology / technology                | Online double conversion / DARA (Distributed Active Redundant Architecture)                   |                                      |                     |                     |  |  |
|              |           | Input wiring                         | 3 Ph + N + PE   |                                      |                     |                     |  |  |
|              | Rectifier | Rated voltage                        | 380/400/415Vac  |                                      |                     |                     |  |  |
|              |           | Voltage range                        | For loads <100% (-25%, +20%), <80% (-32.5%, +20%), <60% (-35%, +20%)                          |                                      |                     |                     |  |  |
|              |           | Input frequency                      | 30-70 Hz  |                                      |                     |                     |  |  |
|              |           | Total Harmonic Distortion            | THDi<0.8% for linear load, THDi<3% for nonlinear load   |                                      |                     |                     |  |  |
|              |           | Input power factor                   | 0,99  |                                      |                     |                     |  |  |
| Input        | Bypass    | Input wiring                         | 3 Ph + N + PE   |                                      |                     |                     |  |  |
|              |           | Rated voltage                        | ±30±10% (Voltage) (According to VFI-SS-111)   |                                      |                     |                     |  |  |
|              |           | Input frequency                      | 50/60 ±2/4% (selectable)  |                                      |                     |                     |  |  |
|              | Battery   | Rated voltage                        | 280 - 480 Vdc (the number of batteries can be selected )                                      |                                      |                     |                     |  |  |
|              |           | Internal batteries (7/9Ah)           | 1080: 80<br>1240: 240   | E: External<br>1320: 320             | E: External         | E: External         |  |  |
|              |           | Туре                                 | Lead-Acid / NiCad / Lithium / Zink / Salt / others  |                                      |                     |                     |  |  |
|              |           | Blocks[LA]                           | 20-50   |                                      |                     |                     |  |  |
|              | Inverter  | Output wiring                        | 3Ph+N+PE  |                                      |                     |                     |  |  |
|              |           | Voltage                              | 380/400/415 Vac   |                                      |                     |                     |  |  |
|              |           | Frequency                            | Tracking the bypass input (Online Mode); 50 / 60 Hz $\pm$ 0.05% (Battery Mode)                |                                      |                     |                     |  |  |
| Output       |           | Output power factor                  | 1   |                                      |                     |                     |  |  |
| O            |           | Efficiency                           | 97,6%   |                                      |                     |                     |  |  |
|              |           | Overload capacity                    | Inverter: 124% continuous, 125% for 10min, 150% for 60 sec                                    |                                      |                     |                     |  |  |
|              | Bypass    | Efficiency                           | 99,4%   |                                      |                     |                     |  |  |
| ent          |           | Operating temperature                | 0-40°C (No power derating)  |                                      |                     |                     |  |  |
| Environment  |           | Storage temperature                  | -40-70°C  0%-95% (No condensing)  1000 m. above 1000 m, derating 1% for each additional 100 m |                                      |                     |                     |  |  |
| nvire        |           | Relative humidity                    |   |                                      |                     |                     |  |  |
| ш            |           | Maximum operating altitude           |   |                                      |                     |                     |  |  |
| ers          |           | Dimensions (H x W x D) [mm]          | 1315 x 510 x 815<br>1980 x 510 x 815  | 1315 x 510 x 815<br>1980 x 730 x 815 | 1980 x 510 x 815    | 1980 x 730 x 815    |  |  |
| Others       |           | Certifications                       | EN/IEC 62040-1   EN/IEC 62040-2   EN/IEC 62040-3   CE   UKCA   EAC   RoHS                     |                                      |                     |                     |  |  |
|              |           | Communications                       |   |                                      |                     |                     |  |  |

# Technical Datasheet

|              |           | Model  | CAB-SP375B-E-K   | CAB-SP750B-E-2K   | CAB-SP1125B-E-3K | CAB-SP1500B-E-4K |  |  |
|--------------|-----------|--|--|-------------------|------------------|------------------|--|--|
|              |           | Thousand the second sec | CAB-SP375T-E-K   | CAB-SP750T-E-2K   | CAB-SP1125T-E-3K | CAB-SP1500T-E-4K |  |  |
|              |           | Module type  | SM50 / SM62  | SM50 / SM62       | SM50 / SM62      | SM50 / SM62      |  |  |
|              |           | Nom. power per module [kVA = kW]   | 50 / 62.5  | 50 / 62.5         | 50 / 62.5        | 50 / 62.5        |  |  |
| General Data |           | Cont. overload per module [kVA = kW]   | 60/75  | 60/75             | 60/75            | 60/75            |  |  |
|              |           | Nom. power per frame [kVA = kW]  | 375  | 750               | 1125             | 1500             |  |  |
|              |           | Cont. overload per frame [kVA = kW]  | 450  | 900               | 1350             | 1800             |  |  |
|              |           | Number of modules per frame  | 1-6  | 1-12              | 1-18             | 1-24             |  |  |
|              |           | Max. power per system [kVA = kW]   | 3750   | 3750              | 3750             | 3750             |  |  |
|              |           | Topology / technology  | Online double conversion / DARA (Distributed Active Redundant Architecture)    |                   |                  |                  |  |  |
|              | Rectifier | Input wiring   | 3 Ph + N + PE  |                   |                  |                  |  |  |
|              |           | Rated voltage  | 380/400/415Vac   |                   |                  |                  |  |  |
| Input        |           | Voltage range  | For loads <100% (-25%, +20%), <80% (-32.5%, +20%), <60% (-35%, +20%)           |                   |                  |                  |  |  |
|              |           | Input frequency  | 30-70 Hz   |                   |                  |                  |  |  |
|              |           | Total Harmonic Distortion  | THDi<0.8% for linear load, THDi<3% for nonlinear load                          |                   |                  |                  |  |  |
|              |           | Input power factor   | 0,99   |                   |                  |                  |  |  |
|              | Bypass    | Input wiring   | 3 Ph + N + PE  |                   |                  |                  |  |  |
|              |           | Rated voltage  | ±30±10% (Voltage) (According to VFI-SS-111)                                    |                   |                  |                  |  |  |
|              |           | Input frequency  | 50/60 ±2/4% (selectable)   |                   |                  |                  |  |  |
|              | Battery   | Rated voltage  | 240 - 600 Vdc (the number of batteries can be selected )                       |                   |                  |                  |  |  |
|              |           | Internal batteries (7/9Ah)   | E: External  |                   |                  |                  |  |  |
|              |           | Туре   | Lead-Acid / NiCad / Lithium / Zink / Salt / others                             |                   |                  |                  |  |  |
|              |           | Blocks[LA]   | 20-50  |                   |                  |                  |  |  |
|              |           | Charger (Amps per module)  | 50   |                   |                  |                  |  |  |
|              |           | Output wiring  | 3Ph+N+PE   |                   |                  |                  |  |  |
|              |           | Voltage  | 380/400/415 Vac±1%   |                   |                  |                  |  |  |
|              |           | Frequency  | Tracking the bypass input (Online Mode); 50 / 60 Hz $\pm$ 0.05% (Battery Mode) |                   |                  |                  |  |  |
| Output       | Inverter  | Output power factor  | 1  |                   |                  |                  |  |  |
|              |           | Efficiency   | 97,6%  |                   |                  |                  |  |  |
|              |           | Overload capacity  | Inverter: 124% continuous, 125% for 15min, 150% for 120 sec                    |                   |                  |                  |  |  |
|              | Bypass    | Efficiency   | 99,4%  |                   |                  |                  |  |  |
| ţ            |           | Operating temperature  | 0-40°C (No power derating)   |                   |                  |                  |  |  |
| nme          |           | Storage temperature  | -40-70°C   |                   |                  |                  |  |  |
| Environment  |           | Relative humidity  | 0%-95% (No condensing)   |                   |                  |                  |  |  |
|              |           | Maximum operating altitude   | 1000 m. above 1000 m, derating 1% for each additional 100 m                    |                   |                  |                  |  |  |
| Others       |           | Dimensions (H x W x D) [mm]  | 1982 x 1968 x 900  | 1982 x 2624 x 900 |                  |                  |  |  |
|              |           | Certifications   | EN/IEC 62040-1  EN/IEC 62040-2   EN/IEC 62040-3   CE   UKCA   EAC   RoHS       |                   |                  |                  |  |  |
|              |           | Communications   | RS485, USB, Dry contacts, Ethernet, Bluetooth                                  |                   |                  |                  |  |  |





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