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LITHIUM READY

AI READY

centiel
continuous power availability

CumulusPower™ 480V

Modular UPS 50kW to 3.6MW

SWISS MADE

CumulusPower™ 480V

CumulusPower™ is a Swiss-made three-phase, online double-conversion and fully decentralized modular Uninterruptible Power Supply.

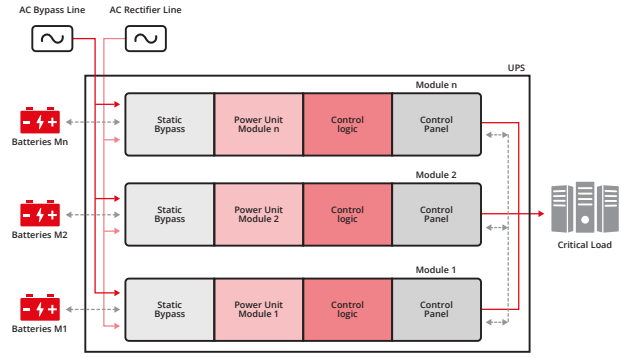
Delivering power protection from **50kW – 3.6MW at 480V**, CumulusPower provides a truly flexible solution for small and mid-sized data centres, as well as other mission critical applications.

Using Decentralized Active-Redundant Architecture (DARA™) and a distributed modular design, CumulusPower is built for high availability and serviceability, helping reduce maintenance time and operational risk.

The Technology

Distributed Active-Redundant Architecture (DARA™)

The architecture of the CumulusPower™ was designed to respond to the highest availability requirements, through the implementation of the system's distributed decision-making in an event of a critical failure, and a correct management of the load sharing.
The communication between the Intelligent Modules is accomplished by means of a redundant **TripleMode™** communication bus.



High Efficiency
up to 97.1% in VFI mode

Hot Swappable Modules
Fast Replacement of Intelligent Modules

Proven Reliability
30 years of experience

Distributed Architecture
No Single Point of Failure

Pay-as-you-grow scalability
Series of frame sizes

Unity Power Factor
kVA = kW

Up to 9-nines availability
High-availability architecture

Low Total Cost of Ownership
Reduced Component Count Simplifies Maintenance

Up to **97.1%** **Efficiency**
VFI

Intelligent Module

IM 50/60

Module (IM)

Each module is a complete UPS. Building on Centiel's experience in module design,, the CumulusPower™ Intelligent Modules are equipped with three independent power converters, one static bypass, all hardware and all software (intelligence and monitoring) functions, making them independent and capable of safely isolating from the multi-module system if an internal fault occurs.

Flexibility

Scalability of up to 3.6MW

The pay-as-you-grow and hot-swap capability of the CumulusPowerhelps avoid system oversizing. Additional UPS modules and frames can be added to accommodate future growth. Scalable both vertically and horizontally, this Truly modular system can be extended to 3.6 MW of power.

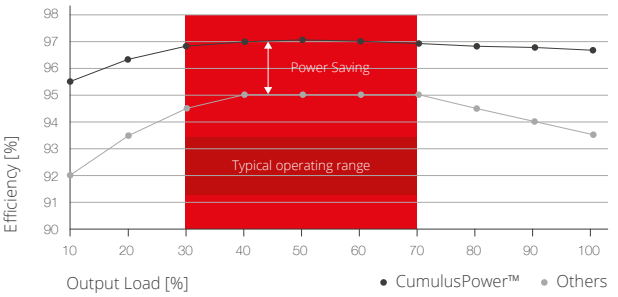
Battery Flexibility 30 to 50 blocks

Batteries represent a substantial part of a project cost structure. With CumulusPower™ you have the flexibility to select the number and type of battery blocks on a case-by-case basis to find the best way to optimize total system cost.

Low Total Cost of Ownership

High Efficiency 97.1% (VFI)

With efficiency of 97.1% in double conversion mode (VFI), CumulusPower™ provides the lowest Total Cost of Ownership and lowest carbon footprint.



Maximum Efficiency Management (MEM)

CumulusPower™ incorporates an Intelligent MEM function which matches the number of modules to the load demand by monitoring the level of optimum energy efficiency. At low load levels, any modules no longer required to maintain redundancy are placed into Active-Sleep mode, reducing overall energy consumption. Active-Sleep modules can return online quickly when load increases, supporting high availability as load increases.

Ease of service

Modular design and plug-and-play internal components minimize mean time to repair (MTTR) and simplifies routine maintenance.

> 10-year DC capacitor design life + “plug-and-play” AC capacitors

- Helps reduce TCO
- Simplifies maintenance
- Lower cost in spare parts(MTTR) and simplifies routine maintenance.

Hot-swappable modules

CumulusPower™ modules can be swapped without the need to switch over the load to bypass. Besides that, a per-module parallel isolator physically isolates the module from the system helping reduce the risk of human error and supporting system availability.

30 to 50

Flexible Battery Blocks

CumulusPower™

IM 50/60

Bottom cable entry

From 50kW
to 3.6MW

Model	CP300-E-B0	CP600-E-2B0
Module Type	5 x IM50/IM60	10 x IM50/IM60
Max Power	300kW	600kW
Batteries	External	External
H x W x D mm	1,982x730x845	1,982x1,462x845
Footprint	0.62 m^2	1.23 m^2

CumulusPower™

IM 50/60

Top cable entry

From 50kW
to 3.6MW

Model	CP300T-E-B0	CP600T-E-2B0
Module Type	5 x IM50/IM60	10 x IM50/IM60
Max Power	300kW	600kW
Batteries	External	External
H x W x D mm	1,992x730x845	1,992x1,462x845
Footprint	0.62 m^2	1.23 m^2

Technical Datasheet

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		Model	CAB-CP300-E-B0 CAB-CP300T-E-B0	CAB-CP600-E-D0 CAB-CP600T-E-2B0
General Data		Module type	IM50/IM60	IM50/IM60
		Nom. power per module [kVA = kW]	50/60	50/60
		Max. power per frame [kVA = kW]	300	600
		Number of modules per frame	1-5	1-10
		Max. power per system [kVA = kW]	3600	3600
		Connection Type	Bottom / Top	Bottom / Top
		Topology / technology	Online double conversion/DARA (Distributed Active-redundant Architecture)	
Input	Mains	Input wiring	3 Ph + N + PE	
		Rated voltage	480Vac	
		Voltage range	For loads <100% (−25%, +20%) | <80% (−32.5%, +20%) | <60% (−35%, +20%)	
		Input frequency	40-70 Hz	
		Total Harmonic Distortion	THDi<3% for linear load, THDi<5% for nonlinear load	
		Input power factor	0,99	
	Bypass	Input wiring	3 Ph + N + PE	
		Rated voltage	480Vac	
		Input frequency	50/60 ±2/4% (selectable)	
	Battery	Rated voltage	360-600 Vdc (the number of batteries can be selected)	
		Internal Batteries (7/9Ah)	**E** External	
		Type	Lead-Acid/NiCd/Lithium.	
		Blocks [LA]/Cells[NicAd]	IM50/IM60: 30-50	
		Charger (Amp/module)	40	
Output	Inverter	Output wiring	3Ph+N+PE	
		Voltage	400/480 Vac±1%	
		Frequency	Tracking the bypass input (Online Mode) | 50/60 Hz±0,05% (Battery Mode)	
		Waveform	Sine wave (THDv<1% for linear load | THDv<3% for non-linear load)	
		Output power factor	1	
		Efficiency	**97,1%**	
		Overload capacity	**Inverter 124% continuous** | 125% overload for 10 min | 150% overload for 1 min **Bypass** 135% overload for long term | <1000% overload for 100ms	
		Short circuit capability	3 x IN	
	Bypass	Efficiency	**99,4%**	
Environment		Operating temperature	0-40°C (No power derating)	
		Storage temperature	-40-70°C	
		Relative humidity	0%-95% (No condensing)	
		Maximum operating altitude	1000 m. above 1000 m, derating 1% for each additional 100 m	
		Audible Noise	< 65dB	
Others		Dimensions (H x W x D) [mm]	1,982x730x845	1,982x1,462x845
		Weight [Kg] without modules	209	396
		Certifications	EN/IEC 62040-1 | EN/IEC 62040-2 | EN/IEC 62040-3 | CE | RoHS	
		Communications	**Basic** RS485 | RS232 | 2 Dry Input. **Pro** Basic + Dry contacts | Ethernet | Bluetooth	

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