

# centiel

*continuous power availability*



## CumulusPower™

Modular UPS 10kW to 3.6MW

**LITHIUM  
READY**



SWISS  
MADE

[www.centiel.com](http://www.centiel.com)



# CumulusPower™

**CumulusPower™** is a Swiss made 3-phase, online double-conversion and fully decentralized modular Uninterruptible Power Supply.

From **10kW to 3.6MW** CumulusPower™ provides the maximum flexibility to adapt to any application. By eliminating any single point of failure, Adding Distributed Active-redundant technology (DARA™), preventing human error and reducing the time to maintain and repair, CumulusPower™ delivers an industry leading Availability of 9 nines to fulfill the needs of the most critical power applications.

## Highest Efficiency

+97.1%

## Hot Swappable Modules

Fast Replacement of Intelligent Modules

## Proven Reliability

30 years of experience

## Distributed Architecture

No Single Point of Failure

## Flexibility to Pay as You Grow

Series of frame sizes

## Unity Power Factor

kVA = kW

## 9 Nines Availability

Zero Downtime

## Lowest Total Cost of Ownership

Reduced Component Count Simplifies Maintenance

# Lowest Total Cost of Ownership

## High Efficiency 97.1% (VFI)

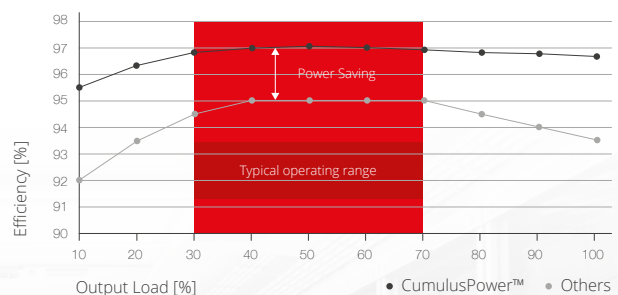
With the best in class efficiency of 97.1% in double conversion mode (VFI), CumulusPower™ provides the lowest Total Cost of Ownership and lowest carbon footprint.

## 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 are instantly online when load increases, maintaining maximum availability at all times.



## >10 years DC capacitor life + "plug-and-play" AC capacitors

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

## Serviceability

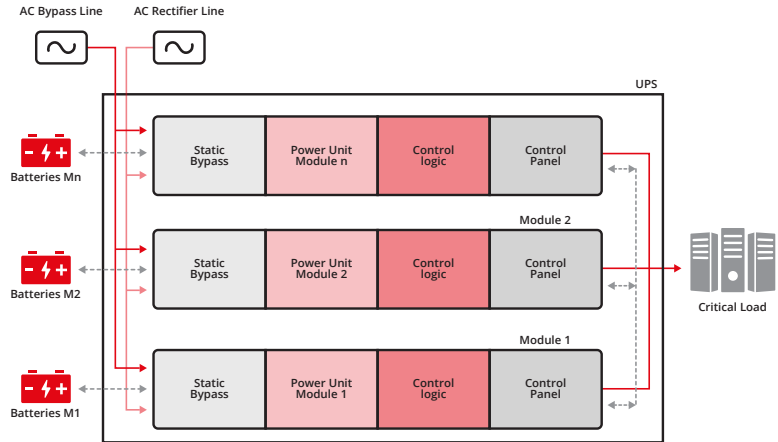
Modular design allows fast replacement of Intelligent Modules, reducing Mean Time to Repair (MTTR), maximising availability and reducing costs.



# 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 fully redundant TripleMode™ communication BUS.



### IM 10/20/25



### IM 50/60



## Flexible Intelligent Module (IM)

Each module is a complete UPS. Thanks to Centiel's long 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 fully independent and capable of safely isolating from the multi-module system whenever an internal fault occurs.

## CumulusPower™ IM 10/20/25 UPS with internal batteries

From 10kW  
to 100kW



Model	CP050-I080-A1	CP050-I240-A0	CP100-I320-B0
Module Type	2 x IM10/IM20/IM25	2 x IM10/IM20/IM25	4 x IM10/IM20/IM25
Max Power	50kW	50kW	100kW
Internal Batteries Capacity	80 x (7/9Ah)	240 x (7/9Ah)	320 x (7/9Ah) or 80 x (28Ah)
H x W x D mm	1,315x510x815	1,980x510x815	1,980x730x815
Footprint	0.41 m <sup>2</sup>	0.41 m <sup>2</sup>	0.59 m <sup>2</sup>



## CumulusPower™ IM 10/20/25 UPS for External batteries

From 10kW  
to 250kW



Model	CP100-E-A1	CP150-E-A0	CP251-E-B0
Module Type	4 x IM10/IM20/IM25	6 x IM10/IM20/IM25	10 x IM10/IM20/IM25
Max Power	100kW	150kW	250kW
Batteries	External	External	External
H x W x D mm	1,315x510x815	1,980x510x815	1,980x730x815
Footprint	0.41 m <sup>2</sup>	0.41 m <sup>2</sup>	0.59 m <sup>2</sup>

## CumulusPower™ IM 10/20/25 19" Universal Rack

From 10kW  
to 100kW



Model	CAB-UR025-E-CO	CAB-UR050-E-CO	CAB-UR100-E-CO	Battery Shelf KIT
Module Type	1 x IM10/IM20/IM25	2 x IM10/IM20/IM25	4 x IM10/IM20/IM25	-
Batteries	External	External	External	1 x 40 (7/9ah)
Max Power	25 kW	50 kW	100 kW	-



Universal Rack  
Frame

Universal Rack  
Battery KIT

### All Universal Racks include:

- Electrical distribution
- DC Battery MCB protection (1 x module)
- Bypass fuses (3 x module)
- Output parallel isolator (1 x module)
- System Manual Bypass
- Connectivity board (5x Dry output, 5x Dry Input, RS232, RS485, Bluetooth, Ethernet, Slot for SNMP)



# 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	1,980x730x845	1,980x1,460x845
Footprint	0.61 m <sup>2</sup>	1.19m <sup>2</sup>

# 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	1,980x730x845	1,980x1,460x845
Footprint	0.61 m <sup>2</sup>	1.19 m <sup>2</sup>

MODEL	CAB-CP050-I080-A1 CAB-CP050-I240-A0 CAB-UR050-E-C0	CAB-CP100-E-A1 CAB-CP100-I320-B0 CAB-UR100-E-C1	CAB-CP150-E-A0	CAB-CP251-E-B0
<b>GENERAL DATA</b>				
Module Type	IM10/IM20/IM25	IM10/IM20/IM25	IM10/IM20/IM25	IM10/IM20/IM25
Nominal power per module [kVA=kW]	10/20/25	10/20/25	10/20/25	10/20/25
Max Power per Frame [kVA=kW]	50	100	150	250
Number of modules per frame	1-2	1-4	1-6	1-10
Max power per system [kVA=kW]	1500	1500	1500	1500
Connection Type	Bottom	Bottom	Bottom	Bottom
Topology/Technology	Online double conversion/DARA (Distributed Active-redundant Architecture)			
<b>INPUT</b>				
<b>MAINS</b>				
Input Wiring	3Ph+N+PE			
Rated Voltage	380/400/415Vac			
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			
<b>BYPASS</b>				
Input Wiring	3Ph+N+PE			
Rated Voltage	360/400/420 Vac			
Input Frequency	50/60 ±2/4% (selectable)			
<b>BATTERY</b>				
Rated Voltage	360-480 Vdc (the number of batteries can be selected )			
Internal Batteries (7/9Ah)	I080: 80   I240: 240	<b>E</b> External I320: 320	<b>E</b> External	<b>E</b> External
Type	Lead-Acid/NiCad/Lithium			
Blocks [LA]/Cells[NiCad]	20-50   IM20/IM25: 30-50			
Charger (Amp/module)	20			
<b>OUTPUT</b>				
<b>INVERTER</b>				
Output Wiring	3Ph+N+PE			
Voltage	380/400/415 Vac±1%			
Frequency	Tracking the bypass input (Online Mode)			
Waveform	Sine wave (THDv<1% for linear load   THDv<3% for non-linear load)			
Output Power Factor	1			
Efficiency	<b>97,1%</b>			
Overload Capacity	<b>Inverter 124% continuous</b>   125% overload for 10 min   150% overload for 1 min <b>Bypass</b> 135% overload for long term   <1000% overload for 100ms			
Short circuit capability	3 x IN			
<b>BYPASS</b>				
Efficiency	<b>99,4%</b>			
<b>ENVIRONMENT</b>				
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			
<b>OTHERS</b>				
Dimensions (H x W x D) [mm]	1,315x510x815 1,980x510x815	1,315x510x815 1,980x730x815	1,980x510x815	1,980x730x815
Weight [Kg] without modules	125 180	107 225	148	210
Certifications	EN/IEC 62040-1   EN/IEC 62040-2   EN/IEC 62040-3   CE   RoHS			
Communications	<b>Basic</b> RS485   RS232   2 Dry Input. <b>Pro</b> Basic + Dry contacts   Ethernet   Bluetooth			

MODEL	CAB-CP300-E-B0 CAB-CP300T-E-B0	CAB-CP600-E-D0 CAB-CP600T-E-2B0
<b>GENERAL DATA</b>		
Module Type	IM50/IM60	IM50/IM60
Nominal 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)	
<b>INPUT</b>		
<b>MAINS</b>		
Input Wiring	3Ph+N+PE	
Rated Voltage	380/400/415Vac	
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	
<b>BYPASS</b>		
Input Wiring	3Ph+N+PE	
Rated Voltage	360/400/420 Vac	
Input Frequency	50/60 ±2/4% (selectable)	
<b>BATTERY</b>		
Rated Voltage	360-480 Vdc (the number of batteries can be selected )	
Internal Batteries (7/9Ah)	<b>E</b> External	
Type	Lead-Acid/NiCad/Lithium	
Blocks [LA]/Cells[NiCad]	20-50   IM50/IM60: 30-50	
Charger (Amp/module)	40	
<b>OUTPUT</b>		
<b>INVERTER</b>		
Output Wiring	3Ph+N+PE	
Voltage	380/400/415 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	<b>97,1%</b>	
Overload Capacity	<b>Inverter 124% continuous</b>   125% overload for 10 min   150% overload for 1 min <b>Bypass</b> 135% overload for long term   <1000% overload for 100ms	
Short circuit capability	3 x IN	
<b>BYPASS</b>		
Efficiency	<b>99,4%</b>	
<b>ENVIRONMENT</b>		
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	
<b>OTHERS</b>		
Dimensions (H x W x D) [mm]	1,980x730x845	1,980x1,460x845
Weight [Kg] without modules	209	396
Certifications	EN/IEC 62040-1   EN/IEC 62040-2   EN/IEC 62040-3   CE   RoHS	
Communications	<b>Basic</b> RS485   RS232   2 Dry Input. <b>Pro</b> Basic + Dry contacts   Ethernet   Bluetooth	

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## CumulusPower™



Distributed by



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