



UPS IN UNIFIED
COMMUNICATION APPLICATIONS





Innovation - the secret of an all-Italian success story

Riello UPS offers an award-winning range of 24 uninterruptible power supplies (UPS) and standby power systems developed using the latest, state-of-the-art technologies.

Thanks to our two cutting-edge research centres in Legnago (Verona) and Cormano (Milan), world-class centres of excellence for the design, development, and testing of uninterruptible power supplies, Riello UPS constantly innovates and evolves our product portfolio to keep it at the pinnacle of performance, reliability, and competition.

Riello UPS designs and manufactures our UPS in Italy so we can maintain direct control over the quality and reliability.

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Unified Communication and Collaboration

Better known as UCC (*Unified Communications and Collaboration*), **unified communications is versatile conferencing architecture and software that coordinates various communications channels** such as telephones, video, instant messaging, email, file sharing etc. and makes them available through a single interface.

Without the appropriate protection provided by a UPS, organisations are exposed to the serious risk of interruptions to their strategic telecommunications systems because of the sensitivity of electronic devices such as routers, gateways, switches, and IP private branch exchanges (IP PBXs).



In the specific case of VoIP applications it is essential that the data line, the active devices, and the voice traffic remain in operation and are safeguarded in order to maintain the active service. This is true for cloud-based PBXs as well as more common IP PBXs. The quality of the power supply to the equipment directly impacts the quality of the service. Fluctuations can increase latency and cause packet loss, which in turn lead to interference, delays, or in the worst cases, interruptions.



POWER QUALITY

Networking systems are subject to the same factors that affect electronic equipment in general, so an uncontrolled power supply can cause:

- Restarting of devices;
- Loss of programming parameters;
- Excessive latency;
- Degradation and breakdown of equipment.

These problems are exacerbated with real-time applications or applications that have higher bit rates.

Modern video-conferencing systems include devices prone to electrical disturbances, such as audio-video control devices, monitors, multi-media boards and projectors. The latter are equipped with mercury vapor lamps with special internal resistances that can easily be damaged with sudden changes in running speed.

Network operators often repeatedly turn on and off the power during maintenance, which in addition to compromising devices' electronic components, could lead to corruption with bootloaders, operating systems, and/or firmware, making them

virtually unusable and beyond repair. Ultimately a UPS is the only solution to ensure complete continuity of service – **including emergency calls** – in the event of a network failure. That's why all manufacturers of UCC equipment highly recommend the use of a reliable uninterruptible power supply.

Which group to choose?

Now you understand the importance of continuous power to ensure a reliable unified communications system, it is time to choose the most suitable UPS. On the whole, unified communications systems have a fairly low power consumption. As a result, the protection they need against network disturbances is straightforward enough, with Line Interactive UPS, also known as **Voltage Independent (VI)**, usually adequate to ensure power continuity. With these types of systems, if there's a blackout or voltage fluctuation, the UPS intervenes after a few milliseconds (2-4 ms), latency

perfectly acceptable to ensure the continuity of the system.

In addition, Line Interactive UPSs are equipped with an automatic voltage regulation device (AVR) capable of handling small voltage fluctuations, meaning they only need to transfer to battery power as a last resort. Value for money, ease of use, and simple 'plug and play' installation are three of the main reasons why Line Interactive systems are often the ideal solution for most typical UCC configurations. For more sophisticated systems made up of several IT components or where a level of redundancy is required, a UPS with double





conversion online technology, also known as Voltage and **Frequency Independent (VFI)** is a more appropriate choice.

In normal operating mode with an Online UPS, the load is powered by a combination of the rectifier and the inverter. This ensures perfect power quality, both in terms of voltage and frequency, independent of the mains supply. In the event of a power failure, the UPS instantaneously (0ms) switches to battery backup.

When specifying a UPS, the first thing to work out is the power of the system, which can be done by adding the nominal values of each load the UPS will be protecting in watts and applying a 20% tolerance. The other main consideration that influences the choice of UPS is the desired autonomy, in other words how long the batteries need to power the system. Depending on the installation, this can be for just a few minutes or for several hours.

A leader in the manufacturing of uninterruptible power supplies, Riello UPS offers a wide range of solutions, along with a complete end-to-end service of maintenance, training, repairs, and spare parts to ensure your UCC system is protected now and into the future.



Our Solutions

Vision (VST)



- Automatic Voltage Regulation (AVR)
- LCD Display
- Sine wave
- Cold Start function
- Low power consumption
- Communication Slot



Vision Rack (VSR)



- Automatic Voltage Regulation (AVR)
- LCD Display
- Sine wave
- Cold Start function
- Communication Slot



Vision Dual (VSD)



- High Power Factor 0.9
- Automatic Voltage Regulation (AVR)
- Flexibility of installation
- Sine wave
- Communication Slot
- Expandability of autonomy



Sentinel Dual SDH



- High Power Factor 0.9
- Maximum protection
- Flexibility of installation
- Sine wave
- Communication Slot
- ER versions for extended autonomy



ONLINE



TowerRack



USB
plug



Plug & Play
installation



Hot swap
battery



Energy
Share

Sentinel Dual SDU



- Power factor 1 kW = kVA
- Paralleable up to 3 unit
- Simplified installation
- Operating mode selection
- High quality output voltage
- ER versions for extended autonomy



ONLINE



TowerRack



USB
plug



Hot swap
battery



Energy
Share

NetMan 208 & Environmental sensors



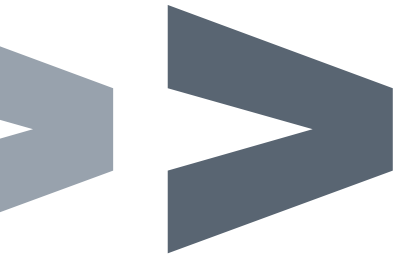
NetMan 208 allows UPS directly connected over LAN 10/100/1000 Mb connections to be managed using the main network communication protocols (TCP/IP, HTTP and SNMP). Environmental sensors monitor and record environmental conditions, allowing extensive control and management of the environment around the UPS.

Backup time table (in minutes)

		LOAD [W]					
		100	200	300	500	750	
VST	VST 800	61	29	16	12		
	VST 1100	90	40	21	15		
	VST 1500	163	82	46	30	13	
	VST 2000	168	83	52	42	16	
VSR	VSR 800	50	25	16			
	VSR 1100	66	32	20	11		
VSD	VSD 1100	66	32	20	13		
	VSD 1500	110	50	35	20	12	
	VSD 2200	145	75	50	30	18	
	VSD 2200 + BB72 A3	250	160	110	65	45	
	VSD 2200 + BB72 M1	380	235	180	115	70	
	VSD 3000	145	75	50	30	18	
	VSD 3000 + BB72 A3	240	160	110	75	55	
	VSD 3000 + BB72 M1	350	240	175	110	75	
SDH	SDH 1000	58	33	20			
	SDH 1000 + BB 36 A3	140	74	50			
	SDH 1000 + BB 36 M1	220	120	80			
	SDH 1500	75	40	27	15		
	SDH 2200	95	55	40	25	16	
	SDH 2200 + BB72 A3	210	140	95	55	35	
	SDH 2200 + BB72 M1	365	220	160	95	60	
	SDH 3000	110	70	50	30	20	
	SDH 3000 + BB72 A3	220	140	100	65	42	
	SDH 3000 + BB72 M1	330	220	160	100	65	
	ER Version						
		SDH 2200 ER + BB 72 M1	249	169	122	82	52
		SDH 3000 ER + BB 72 M1	206	148	112	74	50
		SDH 3000ER + 2xBB72-M1	470	279	202	137	95
	SDH 3000ER + 3xBB72-M1	827	511	369	211	150	
SDU	SDU 5000	415	190	118	77	53	
	SDU 5000 + BB 180-A3	356	494	331	166	104	
	SDU 5000 + 2xBB 180-A3		831	528	303	172	
	SDU 5000 + 3xBB 180-A3		1124	769	448	266	

LOAD [W]

1000	1250	1500	2000	2500	3000	4000	5000
8.5							
11	7						
13							
30							
56							
13							
38	30						
60	42						
16	13	10	7	5			
30	22	18	13	9			
50	41	30	21	17			
37	27	21					
35	26	20					
72	57	48	32	24			
113	90	76	55	45			
39	28	23	16	12	9	6	
80	64	55	40	29	23	16	12
118	95	81	60	50	41	27	20
175	130	108	82	65	55	41	29



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