

Multi Power2 - 208V



DATACENTER



E-MEDICAL



INDUSTRY



TRANSPORT



3:3 20-136 kVA

Input 208-220 V
three-phase + N, 60 Hz

Output 208/220 V
three-phase + N, 60 Hz



ONLINE



Modular



Service
1st start



USB
plug



TAA
compliant



MET[®]
US

HIGHLIGHTS

- **Ultra-high efficiency**
- **Ultimate availability**
- **Easy and quick scalability**
- **Silicon Carbide Technology**
- **Modules firmware alignment**
- **Smart Modular Architecture (SMA)**

Riello UPS's Multi Power modular range has been efficiently protecting the supply of critical applications around the world for almost a decade. With countless of power modules deployed across the globe, it is recognised as a high performing and ultra-reliable system.

Treasuring the previous experience and deeply understanding our customers' needs, we conceived a new generation of modular solutions specifically designed for US market and dedicated to critical computing environments and any other essential power application.

Riello Multi Power2- 208V (M2U) aims to offer higher power density, simpler integration to both existing and new installations and last but not least enhanced operating efficiency and global flexibility to

reduce both the upfront investment and the day-to-day operational costs.

It is the result of our efforts to provide a more sustainable, compact and reliable power supply suitable for the most demanding applications, not only in IT environments, but wherever energy continuity is a must and has to be ensured without any compromise in terms of performance.

Thanks to its modular architecture, the system can be adapted to the load demands to avoid any oversizing and provide the best performance in every working condition.

With a new extremely high-density power module, our solution reaches up to 136 kW in a single UPS (M2U 140 PC0) and up to 544 kW with 4 systems in parallel.

EFFICIENT AND SUSTAINABLE

M2U works with the best-in-class power modules based on the latest silicon carbide technology (SiC), which reduces cooling requirements and allows for more compact, more reliable and more robust solutions. Our modules reach an efficiency up to 97% in ON LINE double conversion, providing the best power supply to critical equipment whilst minimising operating costs and energy losses. Moreover M2U units are able to work at PF 1 in temperatures up to 40 °C (without any power derating), minimising the demand and consumption of cooling systems.

up to
97%
Efficiency

ON LINE double conversion

FLEXIBLE AND SCALABLE

The Multi Power2 - 208V has been conceived to be fully customisable to meet the specific needs of each installation and quickly adapt to the load increase. Thanks to the hot-swappable features, the increase of power can be done while the unit is working in ON LINE double conversion without any disruption to the load. All the major components of the UPS are modular and can be easily added and/or replaced by the engineer, minimising the site intervention costs.

M2U is available in two main different configurations:

- PCO - Power cabinet up to 136 kW;
- CBC - Combo cabinet up to 68 kW.

The Power cabinet can accommodate either 20 kW (PM 20 BLUE) or 34 kW Power Modules (PM 34 BLUE), both based on Silicon Carbide technology.

The available UPS power and redundancy level can be expanded vertically from:

- 20 to 100 kW in one single Power cabinet (M2U 140 PCO with PM 20 BLUE)
- 34 to 136 kW plus redundancy in one single Power cabinet (M2U 140 PCO with PM 34 BLUE).

M2U Combo, instead, is built combining Power Modules and Battery Units.

This solution can be utilised within extremely compact areas requiring a small footprint with maximum power density. This modular and reliable solution is perfect for any small to medium business applications.

The Combo Cabinet (M2U 68 CBC 6) has three slots for PMs and 6 battery shelves (up to 12 battery strings) and it can expand vertically from 20 to 60 kW (with PM 20 BLUE) or 34 to 68 kW plus redundancy (with PM 34 BLUE).

The PMs are designed to be independent, hot-swappable, mechanically segregated and with embedded selective disconnection at both the input and output stage. The Bypass is fully rated according to the maximum power of the UPS, enabling it to clear higher short circuit currents.

The units have been designed with several **standard features:**

- Air filter;
- Fans monitoring;
- Backfeed detection circuit and protection;
- Power walk-in;
- Separate or common batteries.

A full set of options is available to fit the requirements of each installation, in both IT and non-IT environment:

- Parallel kit;
- Cold start kit;
- Top cable entry for M2U Power Cabinet;
- Top Ventilation;
- Top cable entry and/or I/O side cabinet for M2U 140 PCO.

SMART MODULAR ARCHITECTURE (SMA)

- M2U is the result of a new design approach focused on a deep interconnection between hardware and software.
- Intelligence is distributed to ensure the protection of the equipment even on the off chance of a failure.
- Internal communication structure is based on two separate and fully redundant high speed buses.
- Automatic health-checks are performed during the plug-in of each module to verify its status and avoid defective components. Operation is completely risk-free and enables the user to increase the power or redundancy of the system while the UPS is protecting the load. If a module has a different firmware version, the system aligns it to one of the other modules.
- Continuous monitoring via several sensors embedded in each module: to check the status of the UPS and analyse the running and environmental parameters to ensure the best operating performances.
- Embedded interleaving technology grants a significant reduction of the ripple current values and extends the lifespan of the batteries and DC capacitors.

 **multipower**



Power Module BLUE
M2U 34 PM BLUE or M2U 20 PM BLUE



Battery Units - 2xBU

RELIABLE AND RESILIENT

To provide the highest level of quality and process control, each component of the system, from the modules to the cabinet, is designed and manufactured in Italy; moreover, all suppliers are carefully selected through a strict process of approval. At the end of our production line, all modules and full units undergo specific tests to grant rated performances and product integrity.

All collected measurements and data are analysed to keep improving our products and provide our customers with the most updated technologies.

To enhance the lifespan of the UPS, each module incorporates status counters, as well as temperature and humidity sensors, providing real-time analytics for operators.

USER FRIENDLY

The Multi Power2 - 208V is equipped with a 10" colour touch screen display that simultaneously provides information, measurements and operating states of the entire system and of each individual power module.

The user interface also includes a LED bar which delivers immediate and clear information regarding the current status of the UPS. To ensure a simple, quick and full connection to the existing infrastructure, by default all Multi Power2 - 208V units are equipped with:

- network card NetMan 208;
- embedded configurable In/Out signals (5 inputs and 4 outputs);
- 2 free slots for the installation of optional communication accessories such as

network adaptors and extra volt free contacts;

- R.E.P.O. Remote Emergency Power Off.
- The units are also compatible with:
- PowerShield³ monitoring and shutdown software included for Windows operating systems 11, 10, 8, Server 2022, 2019, 2016 and previous versions, Windows Server Virtualization Hyper-V, macOS, Linux, Citrix XenServer and other Unix operating systems.

ULTRA SERVICEABILITY

The unit was carefully engineered to simplify positioning, installation and maintenance operations. Connection terminals are easily accessible for a safe and simple installation of the UPS. Thanks to the embedded intelligence, powerful computing capacity and outstanding connectivity, we can monitor remotely the status of the UPS and provide dynamic and dedicated services to increase its lifespan.



OPTIONS

SOFTWARE

PowerShield³
PowerNetGuard

PRODUCT ACCESSORIES

Parallel Kit
Battery temperature sensor
Programmable relay board
MULTICOM 392
NETMAN 208
Top Ventilation
I/O side Cabinet (M2U Power Cabinet)
Top Cable Entry (M2U Power Cabinet)

OVERVIEW

**M2U 140
Power Cabinet**



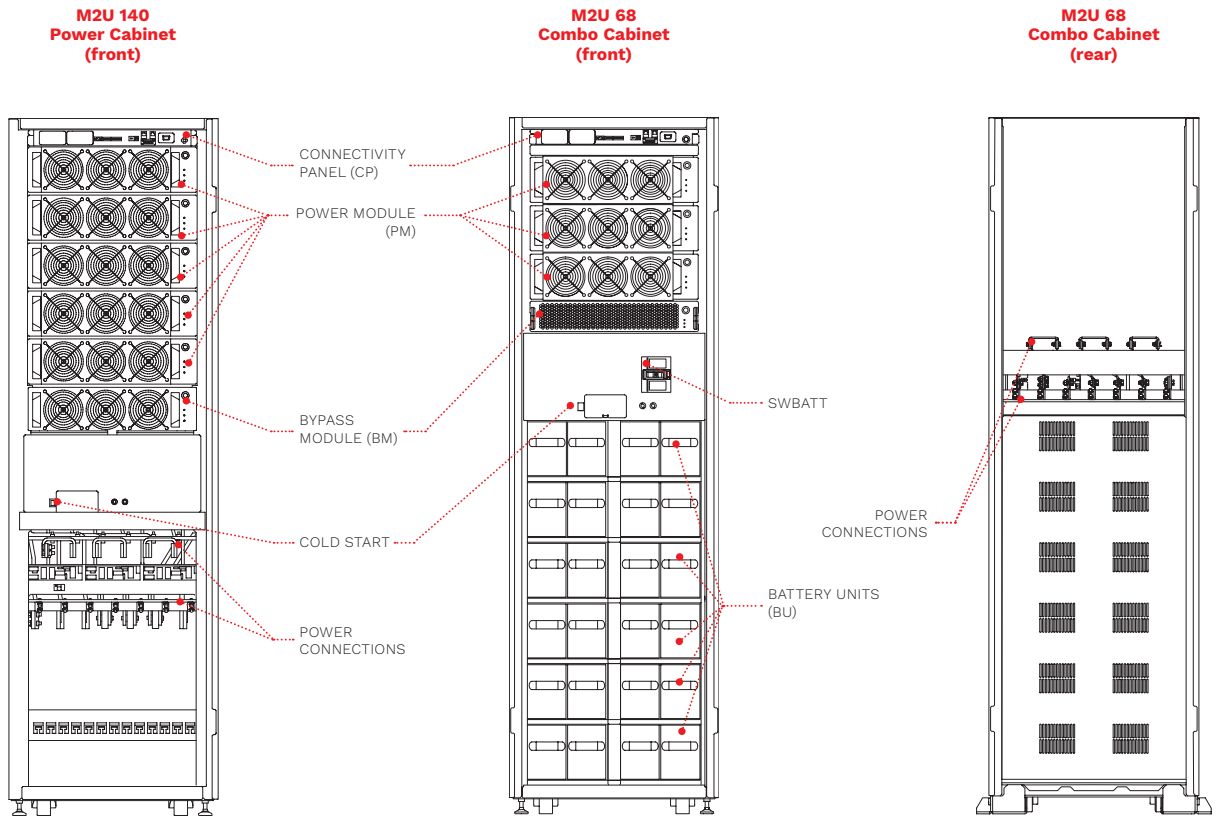
**M2U 68
Combo Cabinet**



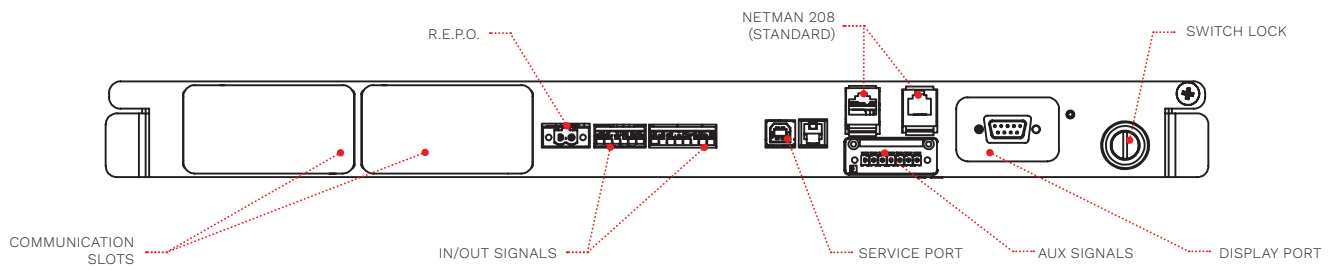
- 1.** 34 kW - 3U Power Modules.
- 2.** Modular static bypass.
- 3.** Battery Units (2 BU per each string).
- 4.** Connectivity Panel with:
 - In/Out signals (5 input, 4 output);
 - NetMan 208;
 - 2 extra communication slots;
 - R.E.P.O.

- 5.** Battery switch, standard for all M2U 68 Combo Cabinet.
- 6.** Power Connection:
 - M2U 140: Front access - bottom (top with optional side cabinet);
 - M2U 68: Rear side either top or bottom.

DETAILS



Connectivity Panel



| MODEL | Multi Power2 68-136 kW | |
|---|--|---|
| INPUT | | |
| Rated voltage [V] | 208 - 220 three-phase + neutral | |
| Rated frequency [Hz] | 60 / 50 | |
| Voltage tolerance [V] | 124 ¹ - 250 | |
| Frequency tolerance [Hz] | 40 - 72 | |
| Power factor | 0.99 | |
| THDI | <3% | |
| BYPASS | | |
| Nominal current [A] | 200 - 500 (According to system power configuration) | |
| Rated voltage [V] | 208 / 220 three-phase + neutral | |
| Voltage tolerance [V] | from 162 (adjustable) to 239 (adjustable) | |
| Rated frequency [Hz] | 60 or 50 | |
| Frequency tolerance | ±5% (selectable) | |
| Overload | 125% for 10 min; 150% for 1 min | |
| BATTERIES | | |
| Battery arrangement (parallel systems) | Separate/common | |
| Type | VRLA | |
| Recharging method | One level, Two level, Cyclic recharge (selectable) | |
| OUTPUT | | |
| Rated voltage [V] | 208 / 220 three-phase + neutral | |
| Rated frequency [Hz] | 60 or 50 | |
| Voltage stability | ±1% | |
| Dynamic stability | EN62040-3 class performance 1 non linear load | |
| OVERALL SPECIFICATIONS | | |
| Cabinet type | M2U 140 Power Cabinet | M2U 68 Combo Cabinet |
| UPS Nominal Power ² [kW] | 136 | 68 |
| Bypass Power [kW] | 136 | 68 |
| Power factor [pf] | 1 | |
| Cabinet layout description | 5x M2U 34 PM (1 redundant) 5x M2U 20 PM | 3x M2U 34 PM (1 redundant) 3 x M2U 20 PM +6x battery shelves (12 strings max) |
| Parallelable up to | 4 units | |
| Max power expandability [kW] | 544 | 272 |
| Dimensions (WxDxH) [in/mm] and weight [lb/kg] PC0 ³ Type | 23.6x37.0x78.5 / 600x940x1995 1190 / 540 | N.A. |
| Dimensions (WxDxH) [in/mm] and weight [lb/kg] CBC ³ Type | N.A. | 23.6x41.3x78.5 / 600x985x1995 2582 / 1171 |
| System Noise Level [dBA±2] ¹ | <66 | <62 |
| Cabinet IP rating | IP20 | |
| Efficiency ON LINE Mode | up to 97% | |
| Cable Input | Front access - bottom (top with optional side cabinet) | Rear side either top or bottom |
| Color | RAL 9005 | |
| Ambient temp. for the UPS | 32 – 104 °F / 0 – 40 °C | |
| Ventilation | Front to rear (Top on request) | |
| Range of relative humidity | 5-95% non-condensing | |
| Standards | UL 1778 5th Edition CSA C22.2 107.3 -14, FCC Part 15 Subpart B class A - IEC 62040-3 | |
| Moving UPS cabinet types | Wheels (cabinets shipped without PM and BU) | |

¹ Conditions apply.

² Power rating between 68 kW and 136 kW can be settled with a selected number of Power Modules.

³ Weight including Power Modules to reach nominal full power and batteries (only for CBC configurations).