

INGENIO MAX XT SCALABLE HI-POWER 3-PHASE UPS



English





INGENIO MAX XT BROCHURE

YOUR CRITICAL POWER SOLUTION PARTNER.

The Borri Group has been developing and building uninterruptible power systems since 1932 and is a global provider of power electronics systems and solutions for harsh industrial and demanding critical power requirements.

— Borri's R&D vast expertise in all facets of firmware, power electronics and mechanical design provides innovative solutions for tomorrow's problems in Industrial and Critical Power applications.

— The company prides itself on its first-class service and superior engineering disciplines. To ensure sustained quality, Borri manages all its processes in house from feed studies to design, production and after sales service technology.

— Based in Bibbiena, Italy with over 15,000 m² production area, Borri operates across all five continents with subsidiaries in USA, Canada, Germany, UAE, India and Malaysia.

— It has also established a strong distributor network, able to deliver on site support and technical guidance indicative of our own capabilities.



Critical Power Solutions

Designing and building mission critical UPS's 1- and 3-Phase up to 21 MW.



Industrial Power Solutions

Designing, engineering and building customised AC and DC power supply systems for harsh industrial applications.



Service

Borri team of experts support you to the highest standards no matter where you are in the world.



SCALABLE HI-POWER
3-PHASE UPS

INGENIO MAX XT

from **750 kW** ——— to **2.1 MW**



Applications



Large
data centre



Industrial
controls & process
automation

High Efficiency

Online double conversion
VFI with the highest efficiency
thanks to the patented
3-Level Green Conversion
technology.

Scalable Modules

Scalable modules
up to a 2.1 MW UPS
to grow with your needs.

Reduced TCO

High power density in a
minimum space maximizing
the number of racks and
servers installed in your data
centres.

Scalable, high efficiency UPS system supplying reliable uninterrupted quality power to all critical applications. High efficiency operating modes and easy hot maintenance allow for lowest Capex and Opex. Flexible configuration and positioning make it totally adaptable to your facility and business.

Ingenio Max XT: scalable, flexible and efficient solution for both data centre and critical applications.

Features and benefits

- 250 kW or 300 kW MPM scalable power modules rated at 40°C operating temperature, for lower TCO and high flexibility to grow on demand.
- Patented 3-Level Green Conversion technology for highest efficiency with optimal component count to increase reliability.
- Selectable hi-efficiency modes of operation.
- >96% VFI online efficiency starting from 40% load for very low TCO and meeting local regulations for subsidies (applies in some countries).
- Up to 99% high efficiency mode.
- Scalable up to 2.1 MW unit power, for N+1 and A+B redundant configurations.
- Available in Central or Distributed Static Bypass and Common or Modular Battery.
- Hot maintainable modules (VFI), reducing mean time to repair and ensuring no system downtime.
- Innovative design, resulting in reduced footprint, ease of maintenance and low audible noise levels.
- Hot scalability (in VFI mode) option to increase the availability of your system.
- Flexible and customisable mechanical features like top or bottom connections, L- or back to back configuration ensuring maximum system design flexibility.
- Centralised 10" colour touch screen display providing all user info and history information at a glance.
- Green Conversion Battery Care (GCBC) for extended battery service life.
- Lithium Battery compatible.



Main options

- Manual Bypass Module.
- Hot-Scalable Extension module.
- Input Protection (Input and Bypass).
- 50 kA and 100 kA Input SC withstand.
- Peak Shaving.
- Load-sync option.
- Backfeed protection trip coil.

Fully Scalable System

Power expansion or redundancy can be implemented at a later stage by installing additional MPM modules up to 2.1 MW.



DAY 1 : 1200 kW

DAY 2 : 1500 kW

DAY 3 : 1800 kW

DAY 4 : 2100 kW

INGENIO MAX XT technical data

Rating (kVA)	750	900	1000	1200	1250	1500	1800	2100
N Nominal Power (kW)	750	900	1000	1200	1250	1500	1800	2100
N+1 Nominal Power (kW)	500	600	750	900	1000	1200	1500	1800
MPM module size (kW)	250	300	250	300	250	300	300	300
UPS dimensions WxDxH (mm) *	4090x970x2100		4970x970x2100	5370x970x2100	6250x970x2100		7580x1200x2100	8460x1200x2100
UPS weight (kg) *	3150	3300	4000	4250	4900	5200	6400	7300
Battery configuration		External 360 to 372 cells, VRLA (other options)						
Input								
Connection type	Hardwired 4w (rectifier), 4w (bypass)							
Nominal voltage	400 Vac 3-phase with neutral (rectifier), 380/400/415 Vac 3-phase with neutral (bypass)							
Voltage tolerance	-20%, +15% (rectifier); ±10% (bypass)							
Frequency and range	50/60 Hz, 45 to 65 Hz							
Power factor	0.99							
Current distortion (THDi)	<3%							
Output								
Connection type	Hardwired 4w							
Nominal voltage	380/400/415 Vac 3-phase with neutral							
Frequency	50/60 Hz							
Voltage regulation	Static: ±1%; Dynamic: IEC/EN 62040-3 Class 1							
Power factor	Up to 1, without power derating							
Overload capacity**	Inverter: 110% for 10 min, 125% for 5 min, 150% for 30 s ; bypass: 125% continuous, 1000% for 1 cycle							
Efficiency (AC/AC)***	Up to 99%							
Classification by IEC/EN 62040-3	VFI-SS-11							
Connectivity and function extensions								
Front panel	10" colour touch screen display, 1024x600 pixels							
Remote communication	Included: serial RS232 and USB; input terminal block (remote emergency power off, battery circuit breaker aux. cont., external maintenance bypass circuit breaker aux. cont., diesel mode aux. cont., external output circuit breaker aux. cont., remote transfer to bypass mode); SPDT contact relay board; ModBus-RTU (RS485). Optional: ModBus-TCP/IP (Ethernet); ModBus-RTU to PROFIBUS DP adapter							
Optional features	Isolation transformer; custom battery cabinets; battery thermal probe; load-sync; other options on request							
System								
Protection degree	IP 20							
Colour	RAL 9005							
Installation layout	Wall, back to back and side by side installation allowed							
Accessibilty	Front and top access, bottom and top cable entry							
Scalability	Up to 2.1 MW							

*dimensions may vary with configuration. Contact our sales team for confirmation **conditions apply ***according to IEC/EN 62040-3

Other features

Environmental	
Operating temperature range	0°C to +40°C with no power derating
Storage temperature range	-10°C to +70°C
Altitude (AMSL)	< 1000 m without power reduction, > 1000 m with reduction of 0.5% per 100 m
Audible noise at 1 m (dBA)	65
Standards and certifications	
Quality assurance, environment, health and safety	ISO 9001:2015, ISO 14001:2015, BS OHSAS 18001:2007
Safety	IEC/EN 62040-1
EMC	IEC/EN 62040-2
Environment aspects	IEC/EN 62040-4
Test and performance	IEC/EN 62040-3
Protection degree	IEC 60529
Marking	CE

SERVICE

Customer's expectation defines Borri's priority from the early analysis of the project requirements to a worldwide commissioning and service. Many thousands of systems have been successfully installed and maintained globally, with continuous support from a highly trained team of expert, certified technicians and engineers. From the professional set-up of Borri's training centre or on site, the training and service team stand ready to provide support and contribute to tailored training at Borri or on site. You can be assured of Borri support to the highest standards no matter where in the world you are.



Planning, installation, commissioning

Borri assist you in every single step of your project. Our R&D team can analyse and develop solutions to a wide range of edge system requirements.



Analytical tests

Borri undertakes a series of analytical tests in order to guarantee higher efficiency and continuity to your system operation.



Repair & spare parts

All spare parts supplied by Borri are original, tested and guaranteed to be fully compliant with Borri solutions.



Remote monitoring

Guardian Net remote monitoring system allows you to detect any deviation from optimum operation and trigger proper and immediate response, so that anomalies don't evolve into issues.



Maintenance

Preventive maintenance guarantees uninterrupted operations and optimised system efficiency.



Battery tests

Batteries have a limited time life and their proper maintenance is of high importance to guarantee efficiency to the UPS and avoid potential failures. Borri delivers high quality and performing batteries to assure smooth operations.



Training

Borri offers distributors and customers a service training structured in 3 levels. Courses can be held in Borri training centres or on-site.

Since 1932,
securing your
power with passion
and commitment.





www.borri.it

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