JLCPCB at Formnext 2023: Customized 3D Printing in One-Stop Electronic and Mechanical Manufacturing Ecosystem

Shenzhen, Guangdong Sheng Dec 5, 2023 (Issuewire.com**)** - In November 2023, Formnext 2023 in Frankfurt brought together global experts from additive manufacturing and modern industrial production to delve into the future of the digital industry. JLCPCB, a prominent player in one-stop electronic and mechanical manufacturing, was invited to deliver an impressive speech at Formnext's seminar, focusing on industrialized custom 3D printing within a flexible manufacturing ecosystem and sharing efforts to co-create a more efficient digital industrial future.

JLCPCB at Formnext 2023

As the epicenter of additive manufacturing, Formnext attracts attention from global industrial 3D printing experts and manufacturing professionals. In its ninth year, the exhibition hosted 32,851 experts and managers, along with 859 exhibitors, over half of whom were international, reaffirming its substantial influence in additive manufacturing.

At Formnext 2023, JLCPCB highlighted how its service model empowers additive manufacturing, offering industrialized custom 3D printing with irresistible advantages amid the Industry 4.0 evolution.

Renowned for rapid turnover, cost-effectiveness, flexible customization, and user-friendly features in PCB manufacturing, these advantages seamlessly extend to JLC's 3D Printing.

JLCPCB's Speech at Formnext Seminar

This year, JLCPCB showcased its expanded business landscape, broadening from electronics to mechanics. Originating in 2006 with a focus on PCB small-batch manufacturing, JLCPCB leveraged integrated supply chain advantages and embraced digital manufacturing, extending services to EDA/CAM software, PCB prototyping, mass production, component sourcing, stencil/fixtures customization, and PCB assembly. This successful expansion solidified a one-stop electronic manufacturing platform. Building on this foundation, JLC continued its venture into the mechanical domain by introducing JLC3DP, a subsidiary dedicated to 3D printing and CNC machining, and JLCMC , a sub-brand for the sale of electromechanical parts. This marks a substantial advance in JLC Group's establishment of a comprehensive ecosystem for intelligent flexible manufacturing. At the seminar, JLCPCB shared its recent achievements in enhancing additive manufacturing and the ongoing efforts to establish one-stop mechanical manufacturing.

I. JLC Digitization of Operation Processes

JLCPCB emphasized a crucial aspect of JLC's 3D printing service: the complete digitization of the operation process. Like JLCPCB, JLC3DP uses a robust online order management system for efficient ordering, production control, and shipment tracking, ensuring full digitization, automation, and intelligence. Once the 3D model is ready, users can easily upload it to the JLC3DP website to get instant quotes by selecting manufacturing parameters, and then complete the payment process online. After a successful feasibility review, orders are promptly sent to the production line. Users can effortlessly track the entire production process through JLC's transparent order management system. The online ordering experience with JLC is as straightforward as shopping on Amazon, exemplifying the streamlined transition from digital design to tangible reality, as highlighted by the spokesperson at the seminar.

II. JLC Flexible Manufacturing Advantages

"JLC's 3D printing service is grounded in the PCB/PCBA service model," stated the JLCPCB spokesperson. Adhering to flexible manufacturing principles, JLC3DP adeptly adjusts to diverse printing needs, swiftly responding to market changes and customer demands. Its flexibility in handling production volumes allows JLC3DP to manage prototyping, small batches, and large-volume orders concurrently, serving a varied clientele, including individuals, enterprises, and educational institutions. Capitalizing on flexibility and customization, JLC3DP provides 3D printing across five processes and over 14 materials, alongside CNC machining, all available for orders starting from just one piece.

JLC exclusively practices in-house production, excelling in balancing production management and costs through efficient line layouts. Users enjoy exceptional cost-effectiveness, stable quality control, rapid production turnover, and a broad spectrum of manufacturing options. JLC's 3D printing services begin at only $0.3, covering five processes—SLA, SLS, SLM, MJF, FDM—with materials such as Resin, Nylon-MJF, Nylon-SLS, Stainless Steel, and Plastic, offering a total of over 14 materials, catering to diverse manufacturing needs.

III. JLC Manufacturing Ecosystem

JLCPCB also discussed the rich manufacturing ecosystem JLC working on. 3D printing is commonly used in hardware development for casing design and validation, closely integrated with electronic

design and manufacturing. In this context, JLC's service ecosystem provides more comprehensive coverage. Beginning with PCB design, it can be finished on EasyEDA, an EDA tool under JLCPCB, and smoothly move to place orders with JLCPCB. JLCPCB also handles PCB assembly, offering component sourcing within its PCBA service, encompassing 430k+ in-stock parts and supporting global parts sourcing with a million-grade of SKUs. For PCB enclosures, users can swiftly opt for JLC3DP's 3D printing services tailored for faster and more suitable additive manufacturing with complex structures. JLC3DP also provides the option to experience subtractive manufacturing CNC based on users' production needs. Electromechanical components for projects can be sourced from JLCMC, the electromechanical parts sales platform, where users can purchase or customize suitable components.

It's worth noting that JLC maintains the service model and strict quality standards in 3D printing and CNC machining similar to PCB/PCBA. This means that the high-quality service refined through the experience of millions of JLCPCB users seamlessly integrates into JLC3DP, laying a solid foundation for delivering excellent experiences to millions of JLC3DP customers.

At the event, JLC provided a detailed comparison between its two strategic directions: one-stop electronic manufacturing and one-stop mechanical manufacturing. The objective is to establish comprehensive service ecosystems in both domains, integrating resources to facilitate users' innovation more conveniently and efficiently. The spokesperson from JLCPCB remarked, "Certainly, the ecosystem for JLC's one-stop mechanical manufacturing is gradually maturing, and in the future, it will achieve a comprehensive coverage similar to one-stop electronic manufacturing."

JLCPCB One-Stop Manufacturing for the Future of Industry

In the landscape of Industry 4.0, JLCPCB's one-stop intelligent flexible manufacturing actively shapes the digital industry's future amid dynamic human-technology developments. JLCPCB emphasizes, "JLC's mission is to accelerate global tech innovation, and uniquely influence the manufacturing sector." Using 3D printing implementation as an example, a JLCPCB spokesperson stated, "Internal production for enterprises often involves substantial investments and complexities in operations, but JLC changes the game. With its streamlined one-stop service, JLC facilitates online ordering, allowing businesses to concentrate on 3D design, and eliminating concerns about equipment, maintenance, and filaments storage. This not only simplifies operations but also mitigates investment risks, savings on labor and time costs."JLC's comprehensive manufacturing ecosystem covers most aspects of tech development, freeing up valuable time from non-value-added tasks to direct energy towards more impactful endeavors.

At Formnext, JLC's endeavors in additive manufacturing and smart production have received recognition. The future holds vast prospects for JLC in the field of mechanics, evoking anticipation within the evolving landscape of manufacturing.

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